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**Hoosier Energy REC  
2011 Integrated Resource Plan  
Volume I: Main Report**

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**Section 1: Introduction**

## **1 Introduction**

This *2011 Integrated Resource Plan* (the Plan or the IRP) is submitted by Hoosier Energy Rural Electric Cooperative Indiana 106 Statewide (“Hoosier Energy”) pursuant to the requirements of Rule 170 of the Indiana Administrative Code 4-7 (hereinafter referred to as the Rule). The Plan consists of three volumes. Volume I contains the executive summary, the peak demand and energy forecasts, and the resource assessment, as required by the Rule. Volume II contains the appendices with information required under the Rule.

The IRP contains five subsections. The first section (Section 1.0) provides an overview of Hoosier Energy and the Hoosier Energy member systems. The second subsection (Section 2.0) summarizes Hoosier Energy’s energy and demand forecasts and the methodology used to develop the forecasts. The third subsection (Section 3.0) describes Hoosier Energy’s existing assets, including supply-side assets such as power plants, power purchase and power sales and demand-side assets. The fourth and fifth subsections (Section 4.0 and 5.0) review new resources (both supply-side and demand-side) and the integration of those resources, respectively. As a response to recent and proposed environmental regulations, Hoosier Energy is currently performing an analytical review of its potential long-term resource options. Following approval by its Board of Directors, Hoosier Energy expects to file this assessment, along with Section 5.0, with the IURC in March 2012.

### **1.1 Hoosier Energy REC Operational Description**

#### **1.1.1 Hoosier Energy Member Systems**

Hoosier Energy is comprised of seventeen member distribution cooperatives located in central and southern Indiana and one member distribution cooperative located in south-eastern Illinois. Table 1 shows the member systems that comprise Hoosier Energy.

Rural Utilities Service Designation	Name of Cooperative	Location of Headquarters
Indiana 1	Utilities District of Western Indiana REMC	Bloomfield
Indiana 16	Henry County REMC	New Castle
Indiana 21	Bartholomew County REMC	Columbus
Indiana 26	Daviess-Martin County REMC	Washington
Indiana 27	Decatur County REMC	Greensburg
Indiana 38	Johnson County REMC	Franklin
Indiana 47	Orange County REMC	Orleans
Indiana 52	Southeastern Indiana REMC	Osgood
Indiana 60	South Central Indiana REMC	Martinsville
Indiana 72	Clark County REMC	Sellersburg
Indiana 83	Dubois REC, Inc.	Jasper
Indiana 89	Harrison REMC	Corydon
Indiana 92	Jackson County REMC	Brownstown
Indiana 99	Southern Indiana REC, Inc.	Tell City
Indiana 109	Whitewater Valley REMC	Liberty
Indiana 110	WIN Energy REMC	Vincennes
Indiana 111	RushShelby Energy REC	Shelbyville
Illinois 002	Wayne-White Counties Electric Coop	Fairfield, IL

**Table 1: Hoosier Energy Member Systems**

Hoosier Energy began supplying power to Wayne-White Counties Electric Cooperative (WWCEC) on January 1, 2011.

**1.1.2 Location and Service Territory Characteristics**

Hoosier Energy’s headquarters facility is located on State Road 37, just north of Bloomington, Indiana. Hoosier Energy operates power plants in Petersburg, Merom, Worthington, Lawrence County, Indiana and Beecher City, Illinois (detailed further in Section 3.1.1) and has transmission crews stationed in Bloomington, Seymour, Rushville, Worthington, Petersburg, Napoleon, and English. Hoosier Energy is in the process of adding a crew to be stationed in Poseyville, IN.

The approximate boundaries for the Indiana portion of Hoosier Energy’s service territory are as follows:

- NORTH– A line drawn across central Indiana from a point south of Terre Haute east to the counties immediately south of Indianapolis (Morgan, Johnson and Shelby), then northward to include Henry County, then east-northeast to the Ohio State line.
- EAST – The Indiana and Ohio State line.
- SOUTH – The Ohio River, which is the Indiana and Kentucky border.
- WEST – The Wabash River, which is the Indiana and Illinois border.



The above map shows the approximate boundaries of Hoosier Energy's member systems, which serve 48 counties in rural central and southern Indiana and 11 counties in southeastern Illinois. The service territory includes portions of the suburban areas adjacent to the metropolitan cities of Indianapolis, Cincinnati, Louisville, Evansville, Terre Haute, Columbus, Bloomington and Vincennes. The major interstate highways serving these cities and Hoosier Energy's service territory are I-65, I-74, I-70 and I-64. Several major airports serve the Hoosier Energy service territory including the Indianapolis International Airport, which is located near the northern boundary of the service territory. Several railroads also cross the service area.

The terrain in Hoosier Energy's service area varies from flat to rolling farmland to heavily forested hills containing many deep ravines. This terrain is used in a variety of ways:

- Agriculture for the growing of corn, soybeans, wheat and tobacco.
- Animal husbandry for the raising of hogs, beef cattle, dairy cattle and poultry.
- Stone quarries.
- Coal mining (both strip and underground).
- Hardwood forests for logging.

Dozens of Indiana State parks, forests and fish and wildlife areas as well as portions of the Hoosier National Forest are found in Hoosier Energy’s service territory. There are also three large, manmade reservoirs in the service territory, Patoka, Brookville and Monroe, which are used for recreation, water supply and flood control.

The climate in this service area is continental, with warm summers and moderately cold winters. There are four distinct seasons with an adequate growing and harvest season for most farm crops. On the northern perimeter of the service area, the monthly average temperatures range from about 28.1°F to 75.4°F, with record temperatures ranging from -27°F to 106°F.<sup>1</sup> The southernmost edge of the service area has monthly mean temperatures ranging from 31.0°F to 78.6°F, with extremes ranging from -23°F to 108°F.<sup>2</sup> The normal heating and cooling degree-days throughout the area vary as shown in Table 2.

City	Heating Degree Days	Cooling Degree Days
Indianapolis, IN	5,521	1,042
Louisville, KY	4,352	1,443
Evansville, IN	4,612	1,422
Cincinnati, OH	5,200	1,053

**Table 2: Normal Heating and Cooling Degree-Days<sup>3</sup>**

The normal annual precipitation for this area is approximately 42.5 inches per year.<sup>4</sup> Table 3 shows the National Oceanic and Atmospheric Administration (NOAA) Weather Divisions that encompass the Hoosier Energy service area, and the out-of-state weather divisions that border the Hoosier Energy service area.

Indiana	Illinois	Kentucky	Ohio
West Central-4	East Southeast-7	Western-1	West Central-4
Central-5	Southeast-9	Central-2	Southwest-8
East Central-6		Blue Grass-2	
Southwest-7			
South Central-8			
Southeast-9			

**Table 3: NOAA Weather Stations for the Hoosier Energy Service Territory**

<sup>1</sup> National Weather Service website <http://www.crh.noaa.gov/ind/?n=localcli#h1>

<sup>2</sup> National Weather Service website <http://www.crh.noaa.gov/pah/climate/evvclimo.php>

<sup>3</sup> National Weather Service websites <http://www.ncdc.noaa.gov/oa/climate/online/ccd/nrmhdd.html> and <http://www.ncdc.noaa.gov/oa/climate/online/ccd/nrmcdd.html>.

<sup>4</sup> National Weather Service website [http://www.nws.noaa.gov/climate/local\\_data.php?wfo=ind](http://www.nws.noaa.gov/climate/local_data.php?wfo=ind).

### **1.1.3 Consumer Class Breakdown<sup>5</sup>**

The consumer mix on the Indiana portion of the Hoosier Energy system changed slightly over the 1999- 2009 period. In 1999, 95.2% of the system's consumers were residential, while in 2009, 94.9% were residential. The number of residential consumers increased from 209,962 in 1999 to 265,137 in 2009. By the year 2030, the number of residential consumers is forecast to increase 27.3 percent to 337,521. The percentage of total residential consumers served is forecast to remain about the same in the year 2030 (94.3%).

In 2009, 5.1% were Commercial and Other consumers compared to 4.7% in 1999. The total number of consumers in this sector grew from 10,455 to 14,117 during this period, representing a growth of 35.0%. The percentage of Commercial and Other sector in the year 2030 is forecast to be 5.7 percent, similar to the present mix. The number of consumers in this class is forecast to increase 44.4% to 20,391 in 2030.

The total number of consumers from the Industrial sector, which is defined as loads requiring transformation greater than 1,000 kVA, increased from 112 to 191 during the 1999 through 2009 period, for a net gain of 71%. The forecast number of 198 consumers in the year 2030 indicates an annual increase of 0.1 percent.

The proportions of the aggregated member energy sales are different from the consumer mix. The residential class proportion of sales decreased from 67.9% in 1999 to 63.4% in 2009 due primarily to a large increase in sales to the Industrial Sector. The actual member system residential energy sales increased 36.3% from 2,864 GWh in 1999 to 3,904 GWh in 2009. The year 2030 residential sales forecast is 5,369 GWh – 61.5% of total sales.

Hoosier Energy experienced significant growth in sales to the Industrial classification between 1999 and 2009. Energy sales increased 93.8% from 727 GWh in 1999 to 1,408 GWh in 2009. The portion of total sales to this sector increased from 17.2% in 1999 to 22.4% in 2009. Total energy sales proportion is forecast to be 24.0% (2,093 GWh) for the year 2030.

The proportion of sales to the Commercial and Other sector decreased from 14.9% in 1999 to 13.8% in 2009. Actual sales increased from 629 GWh in 1999 to 881 GWh in 2009, for an overall increase of 35.3 percent. Total energy sales of this class are forecast to be 1,276 GWh in 2030 or 14.6percent of total sales.

In aggregate, member-system energy sales increased 69.8 percent from 4,220 GWh in 1999 to 6,163 GWh in 2009. The member-system energy sales forecast of 8,739 GWh for 2030 represents an increase of 41.8% from the 2009 value.

## **1.2 Summary of the Planning Process**

As described in 170 IAC 4-7, the objective of the integrated resource planning process is to give the Indiana Utility Regulatory Commission a regulatory model to ensure that the resource initiatives considered by Hoosier Energy conform with the Indiana Legislature's policy goals. The rule requires that the IURC and Hoosier Energy consider conservation, load management, co-

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<sup>5</sup> Historical statistics do not include the addition of Wayne-White Counties Electric Cooperative in 2011. Future forecasts include the addition of Wayne-White.

generation, refurbishment of an existing facility and purchase of power as alternatives to the construction, purchase or lease of an electrical generating facility.

In accordance with the Rule, the objective of the Hoosier Energy planning process was to develop a strategy for the planning period to afford Hoosier Energy flexibility and latitude in providing electric energy service to its customers. The first step in the IRP process was to prepare an analysis of the historical and forecast levels of peak demand and energy usage. Section 2 of the Plan presents Hoosier Energy's forecast of peak loads and energy consumption. The next step in the resource planning process was to assess the resources existing and potentially available to meet the energy and demand over the planning period. Section 3 details this resource assessment.

The third step in the planning process was to eliminate nonviable resource alternatives through an initial screening of all future resources identified in the resource assessment. Section 4 presents the supply-side and the demand-side resource screening processes. The fourth step was the selection of the best combination of resources that is consistent with the objectives of the IRP. Section 5 describes the resource integration and selection process.

### **1.3 Executive Summary of the Resource Plan**

This IRP will enable Hoosier Energy to expect the lowest possible power supply cost, at a targeted level of low market and business risk, for its member distribution systems, while seeking a high degree of generation and transmission reliability. In developing this resource plan, Hoosier Energy considered alternative types of generation (supply-side) and end-consumer usage modification (demand-side) alternatives to seek an optimal blend of capacity resources.

This process has led to a plan that seeks to minimize member-system power supply costs and risks while maintaining a high degree of system reliability. In addition, the Hoosier Energy Plan seeks to maintain sufficient flexibility to react to changes in member system needs, load forecasts, legislative and regulatory mandates, new technologies and market price volatilities. This Plan will be reevaluated periodically to ensure that the recommended courses of action are having the desired effect and continue to be the best alternatives.

#### **1.3.1 Public Policy Considerations**

A major factor in the development of the Plan was the effect of potential legislation and/or regulatory changes. For example, additional environmental restrictions have the potential to dramatically affect cost assumption tradeoffs between the type, quality and availability of fuel burned and the allowable emissions level at Hoosier Energy's existing and future generating stations. The Plan was structured to be flexible enough to incorporate not only existing regulations but also possible further restrictions.

In terms of future retail choice, recent events in the industry have slowed down the momentum to embrace a fully deregulated environment. Therefore, this plan contemplates no significant impact of a fully deregulated retail market to Hoosier Energy and its members. However, the plan does consider the relatively high risk environment created by a deregulated wholesale market and its impact on a utility's obligation to serve retail load.

### ***1.3.2 Supply-Side Resource Considerations***

In addition to the forecast demand and energy requirements, which dictates the type of generation resource required, and a capital and operating cost analysis, which determines the most cost effective resource for the required need, Hoosier Energy considers additional factors during the evaluation of generation alternatives. For example, Hoosier Energy uses a mix of owned-resources and power purchases and sales to attempt to mitigate risks, such as operating, ownership and market risks.

In addition, Hoosier Energy must consider environmental regulations, permit requirements, construction timelines, and numerous site-specific issues. Besides these considerations, the overall level of generation reserves required to maintain the desired level of system integrity and reliability must be considered.

### ***1.3.3 Demand-Side Resource Considerations***

In 2009, Hoosier Energy completed an extensive analysis of energy efficiency and demand-side management programs. This work, which was performed by GDS Associates and Summit Blue Consulting was titled Energy Efficiency & Demand Response Potential Report for the Hoosier Energy Member Territory. The Report provided detailed descriptions and analysis of all demand-side programs considered and recommended for Hoosier Energy and was included as Appendix A1 in the 2009 IRP. Hoosier Energy continues to use that report to manage existing and develop new programs. For this IRP, Hoosier Energy has provided its 2011 Demand Side Management Report, which is included as Appendix A1.

### ***1.3.4 Conclusions***

As a result of Hoosier Energy's load forecasting and existing and future resource assessment, Hoosier Energy expects to continue to fulfill its future resource needs through a combination of company-owned generation, long-term power purchases and sales, and short-term purchases and sales. While the Midwest ISO has brought liquidity and transparency to the wholesale market, the availability and price of market power can be volatile especially during peak periods as electricity requires instantaneous production/consumption and there is currently no capability to effectively store it. Therefore, while power purchases may, at times, be a least-cost alternative, ownership of generation is a necessary component of this least cost plan.

Hoosier Energy will continue to offer member systems a menu demand-side measures to promote the more efficient use of supply-side resources. This includes the new wholesale tariff, which was implemented in April of 2010, that provides incentives for both demand response program participation and load shifting. Hoosier Energy's recently completed demand response and energy efficiency market potential study remains an integral part of Hoosier Energy's integrated resource plan.

In compliance with the Hoosier Energy Board adopted policy to pursue the incorporation of renewable resources, Hoosier Energy has included several renewable resources within the integrated resource plan. Consistent with the overall portfolio approach to resource planning, Hoosier Energy has both owned and purchased power from renewable resources.

#### **1.4 Hoosier Energy's Short-Term Action Plan**

Section 9 of the Rule requires inclusion of a short-term action plan if Hoosier Energy anticipates taking action or incurring expenses on a specific resource option prior to the filing of the next integrated resource plan. As discussed in more detail within this integrated resource plan, based upon the current load forecast and supply-side and demand-side resource mix, Hoosier Energy expects to have sufficient resources for the immediate future.

In anticipation of future needs and consistent with a desire to continue to diversify the resource mix with cost-effective resources, Hoosier Energy will continue efforts to add demand-side and renewable resources as follows:

1. Continued implementation and penetration of the demand response and energy efficiency programs identified as cost effective in the 2011 Demand Side Management Report, which is attached as Appendix A2 to this IRP.
2. Hoosier Energy will continue to pursue cost-effective, renewable resources in the future including landfill gas, hydro and coalbed methane generation facilities. These resources are smaller than typical supply-side resources, which provide diversity and risk mitigation advantages. By the end of 2016, Hoosier Energy expects to have 110 MW of renewable generation capacity in its portfolio.
3. As a response to recent and proposed environmental regulations, Hoosier Energy is currently performing an analytical review of its potential long-term resource options. Following approval by its Board of Directors, Hoosier Energy expects to file this assessment with the IURC in March 2012.

In addition, the wholesale power market remains an integral part of Hoosier Energy's resource plan. Purchases from and sales into the market will continue to be an appropriate and economical complement to Hoosier Energy existing resource mix.

## **Section 2: Energy and Demand Forecasts**

## 2 Energy and Demand Forecasts

Pursuant to 170 IAC 4-7 Sections 4 and 5, this section presents the energy and demand forecasts for Hoosier Energy. The section is broken into five subsections, and is supported by several appendices. As an introduction, Section 2.1 describes the Hoosier Energy forecasting process. Section 2.2 presents the methodology used to create the forecasts. Section 2.3 and Appendices D through H present the base, high, low, base-mild and base-extreme forecasts. Section 2.4 presents the data used to develop the forecast. Section 2.5 and Appendix I present the load shape and electricity consumption patterns for the Hoosier Energy system.

### 2.1 Forecasting Process

Hoosier Energy compiles a *Power Requirements Study* (PRS) on a two-year cycle. The PRS meets all requirements as established in the Hoosier Energy Power Requirements Study Work Plan and the Rural Utilities Service Rule 1710, sub-part E, sections 1710.200 through 1710.210. The PRS fully documents the forecast of electric energy sales and peak demand for Hoosier Energy. The development of the PRS is a joint effort between the staff at Hoosier Energy and its member systems, with contributions and review from RUS.

The PRS provides an empirical basis for forecasting generation capacity, forecasting substation capacity and planning transmission facilities. The PRS formalizes the analysis of the need for electric energy and demand for the territory served by the Hoosier Energy member systems over a 20-year period. The PRS provides a systematic investigation of the historical growth experienced by the member systems served by Hoosier Energy. This analysis gives a better understanding of the unique features of the individual member system service areas, which allows for a better background for forecasting electrical load growth, and a more accurate perspective on the status of the member systems.

In the end, this study allows for the development of a forecast that meets three specific needs. These needs are to:

- Provide a basis for determining generation, transmission and distribution system modifications and capital investments;
- Develop a consistent framework for Hoosier Energy and the member systems to plan and project system-wide requirements and improvements; and
- Satisfy the requirement made by RUS that generation and transmission cooperatives provide empirical studies of each distribution cooperative that are consistent with system projections, and that reflect an understanding of the system, its loads, its member systems, and its power supply.

Before 1992, RUS allowed Hoosier Energy to develop a full PRS every three years, with annual updates in other years. A full PRS would entail the redevelopment of all models and information. The annual updates would include use of the models developed during the full PRS, with updated annual information. In 1992, RUS issued new rules that allowed Hoosier Energy to develop a full PRS every two years, with no annual updates.

According to RUS rules, Hoosier Energy completed a full PRS in December 1991. After the completion of the December 1991 PRS, RUS revised its filing requirements. As a result of the

transition to the new filing requirements, no PRS updates were necessary, or compiled during 1992 and 1993. Since then, Hoosier Energy has developed a PRS in 1994, 1997, 1999, 2001, 2003, 2005, 2007, 2009 and 2011. At this time all the member distribution boards have approved their individual 2011 PRS documents and Hoosier Energy's 2011 PRS dated October 2011 was officially approved by the Hoosier Energy Board of Directors at the November 2011 meeting. For this IRP study the numbers as presented are based upon the 2011 PRS, which is the active PRS.

The approval process for the PRS includes approval of each member system's PRS by its board of directors, approval of the Hoosier Energy PRS by its board of directors, and review of the PRS by RUS.

## 2.2 Methodology

This section recapitulates the basic methodology used for the Hoosier Energy demand and energy forecast development. A full explanation of the methodology can be found in the PRS.

### 2.2.1 Description of the Energy Models

#### Residential

The Hoosier Energy Residential Energy Sales Model (HERESID) is simply the summation of the results from the individual member system's econometric Residential Model (RESID). Equation (2.1) shows this summation.

$$\text{HERES}_t = \sum_i \text{RESALES}_{it} \quad (2.1)$$

Where:

- $i$  = A subscript representing the member system;
- $t$  = A subscript representing annual data;
- HERES = Annual Hoosier Energy Total Member Residential Energy Sales; and,
- RESALES = Annual Individual Member System's Residential Energy Sales.

Each member system's Residential Energy Model (RESID) is represented by three equations. The values of average residential energy use per consumer per month, real average residential price of electricity, and the number of residential consumers are determined by the operation of the simultaneous solution of this system of three equations. In other words, these three variables are determined within the model, and the three-equation system will allow for the development of forecasts for all three.

The three-equation system is shown in Equations (2.2) through (2.4).

$$\ln \text{RAUSE}_{it} = a_0 + a_1 \ln \text{RAUSE}_{i,t-1} + a_2 \ln \text{RRPE}_{it} + a_3 \ln \text{RPCI}_{it} + a_4 \ln \text{HDD}_{it} + a_5 \ln \text{CDD}_{it} + a_6 \text{XR}_{it} \quad (2.2)$$

$$\ln RRPE_{it} = b_0 + b_1 \ln RAUSE_{it} + b_2 \ln RADSK_{it} + b_3 \ln RAWPC_{it} + b_4 YR_{it} \quad (2.3)$$

$$\ln RC7_{it} = c_0 + c_1 \ln POP_{it} + c_2 ZR_{it} \quad (2.4)$$

Where:

- i = A subscript representing the member system;
- t = A subscript representing annual data;
- RAUSE = Average electricity use per consumer per month in the residential sector;
- RRPE = Real average price of electricity in the residential sector;
- RPCI = Real average per capita income earned by the people living in the service area;
- HDD = Annual value of service area heating degree-days;
- CDD = Annual value of service area cooling degree-days;
- XR = Other variables that influence average use, such as alternative fuel prices and agricultural production;
- RADSK = The actual real distribution system cost to operate and maintain the distribution system excluding wholesale power costs;
- RAWPC = The average real wholesale cost of electricity paid by the cooperative;
- YR = Other variables that may affect price;
- RC7 = Number of residential consumers;
- POP = Population in the service area;
- ZR = Other variables that may affect the number of consumers.

**Commercial, Industrial and Other**

The Hoosier Energy Commercial, Industrial and Other Energy Sales Model (HECIO) is the summation of the individual member system's results for these classes. The HECIO is shown in Equation (2.5).

$$HECIO_t = \sum_i MCiOS_{it} \quad (2.5)$$

Where:

- i = A subscript representing the member system
- t = A subscript representing annual data;
- HECIO = Annual Hoosier Energy Total Member System Commercial/ Industrial/Other Energy Sales
- MCiOS = Annual Individual Member System Commercial/ Industrial/Other Energy Sales

For each of the member system's Commercial, Industrial and Other class forecast, a judgmental approach was employed. The judgmental approach was selected for the following four reasons:

1. RUS recommended to Hoosier Energy that each cooperative contribute a realistic potential growth estimate. These estimates were developed through a review of past patterns, existing and near-term developments, and expected future growth patterns.
2. The erratic nature of the historical data and the composition of the varied types of loads in this class make it difficult to explain the growth in sales for the Commercial, Industrial and Other class accurately using an econometric model.
3. The growth in the Commercial, Industrial and Other class is highly dependent upon new business developments rather than past patterns of growth.
4. In the past, RUS has recognized that growth of the Commercial, Industrial and Other class can be best estimated by those most familiar with the area, such as the REMC Managers and Hoosier Energy's representatives. Therefore, even if an econometric model were used, the results would be largely dependent upon information regarding new businesses and industries locating in the service area.

The strategy used in developing forecasts for the Commercial, Industrial, and Other sectors included three steps:

1. Request each REMC Manager or PRS representative to review current and expected sales and consumers conditions for each of these classifications. In addition, staff persons from each member system compiled industrial data to allow completion of Hoosier Energy's RUS Form 345<sup>6</sup>.
2. Meet individually with each member system to exchange ideas and information. Historical growth patterns of the Commercial, Industrial, and Other sectors were examined in detail to develop future expected growth potential for each member system.
3. The final step was to compile the expected growth potential values, calculate the future values, and determine if these values represent a realistic future of these sectors. The values for the individual member system's Commercial, Industrial and Other classifications were reviewed by each member system for final approval.

### ***2.2.2 Description of the Demand Models***

#### **Hoosier Energy System Demand**

To develop a Hoosier Energy demand forecast, information from each member system was combined with Hoosier Energy information. This information includes:

1. Member system non-coincidental peak—winter season,
2. Member system non-coincidental peak—summer season,
3. Member system coincident peak—winter season,
4. Member system coincident peak—summer season,
5. Hoosier Energy actual 30-minute coincident demands,

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<sup>6</sup> These forms were developed for all accounts having a transformation greater than 1,000 kVA.

6. Hoosier Energy actual 60-minute coincident demands without losses, and
7. Hoosier Energy actual 60-minute coincident demands with losses.

Once the collection of these variables is completed, the Hoosier Energy demand forecasts can be developed. First, the member system demands are aggregated. Next, the total is adjusted by the Hoosier Energy estimated demand loss factor and the Hoosier Energy 60-minute to 30-minute time ratio adjustment factor (the 60/30 time factor ratio). Equations (2.6) through (2.9) were used to aggregate the member systems' forecast 30-minute demands.

$$HENWP_t = \sum_i FWINPEAK_{it} \quad (2.6)$$

$$HENSP_t = \sum_i FSUMPEAK_{it} \quad (2.7)$$

$$HECWP_t = \sum_i FCWINPEAK_{it} \quad (2.8)$$

$$HECSP_t = \sum_i FCSUMPEAK_{it} \quad (2.9)$$

Where:

- i = A subscript representing the member systems;
- t = A subscript representing annual data;
- FWINPEAK = Member system winter season non-coincident peak;
- FSUMPEAK = Member system summer season non-coincident peak;
- FCWINPEAK = Member system winter season coincident peak;
- FCSUMPEAK = Member system summer season coincident peak;
- HENWP = Hoosier Energy winter season 30-minute non-coincident peak without losses;
- HENSP = Hoosier Energy summer season 30-minute non-coincident peak without losses;
- HECWP = Hoosier Energy winter season 30-minute coincident peak without losses; and
- HECSP = Hoosier Energy summer season 30-minute coincident peak without losses.

Once the aggregation of the member systems' coincident demands is completed, the historical Hoosier Energy 60/30 time factor ratio is developed using Equation (2.10).

$$HETIME_t = ACT60HE_t \div ACT30HE_t \quad (2.10)$$

Where:

- t = A subscript representing annual data;
- HETIME = Hoosier Energy 60-minute to 30-minute time ratio adjustment factor;
- ACT60HE = Actual Hoosier Energy 60-minute metered coincident demand without losses;

ACT30HE = Actual Hoosier Energy 30-minute metered coincident demand without losses.

Through a judgmental process and analysis of the historical Hoosier Energy 60/30 time factor ratio, a value for this ratio is projected for the forecast years and applied to the aggregated member systems' future 30-minute demand values. This process yields a 60-minute Hoosier Energy coincident and non-coincident demand value without transmission losses. These demands are developed using Equations (2.11) through (2.14).

$$HE60NWP_t = HETIME_t * HENWP_t \quad (2.11)$$

$$HE60NSP_t = HETIME_t * HENSP_t \quad (2.12)$$

$$HE60CWP_t = HETIME_t * HECWP_t \quad (2.13)$$

$$HE60CSP_t = HETIME_t * HECSP_t \quad (2.14)$$

Where:

- t = A subscript representing annual data;
- HE60NWP = Hoosier Energy winter season NCP without losses;
- HE60NSP = Hoosier Energy summer season NCP without losses;
- HE60CWP = Hoosier Energy winter season CP without losses;
- HE60CSP = Hoosier Energy summer season CP without losses.

Next, a future annual demand loss factor is predicted through examination of the historical annual demand loss factors. Historical demand loss factors represent the annual average demand loss factors which occurred, calculated as the annual average of the monthly demand losses experienced. Monthly demand loss factors are determined by dividing the difference between the 60-minute demands with losses and actual 60-minute demands without losses by the actual 60-minute demands with losses. After the 60-minute demand values without losses are calculated and a demand loss factor is determined, the final Hoosier Energy 60-minute peak demand with losses included is determined by applying Equation (2.15).

$$HEFPEAK_{xt} = HEPEAK_{xt} * [1/(1 - HELOSS_t)] \quad (2.15)$$

Where:

- t = A subscript representing annual data;
- x = A subscript representing the various types of demands.

When:

- x = 1 it represents the non-coincident winter season;
- x = 2 it represents the non-coincident summer season;
- x = 3 it represents the coincident winter season; and,
- x = 4 it represents the coincident summer season;

- HEPEAK = The various peak values developed via aggregation without losses included (example dependent upon “x”, HE60NWP, HE60NSP, HE60CWP or HE60CSP);
- HELOSS = Hoosier Energy demand loss factor due to member system load;
- HEFPEAK = Hoosier Energy 60-minute peak demand with losses included.

The equations (2.6) through (2.15) are also used to forecast Hoosier Energy peak seasonal demands created by single temperature extremes. The forecast Hoosier Energy peak seasonal demands created by single temperature extremes represent the “Extreme Case” demand forecast. In contrast, the forecast Hoosier Energy peak seasonal demands created by expected, or normal, temperatures represent the “Normal Case” demand forecast.

**Individual System Demands**

To develop a peak demand forecast for each member system, relevant historical information was collected. This information was used to determine the relationship between kWh sales and kW demands. The analysis included the following information:

- Non-coincident peak winter season (October through March);
- Non-coincident peak summer season (April through September);
- Coincident peak winter season (October through March);
- Coincident peak summer season (April through September); and
- Total annual electric energy sales.

Non-coincident peak is the sum of the maximum demand recorded at each substation. Coincident peak is the member systems’ contribution to Hoosier Energy’s peak demand. Accordingly, coincident peak demand is the sum of demands recorded at each of the member system substations during the same hour of Hoosier Energy’s peak. This data was applied in the calculation of the coincident factor analysis.

The first step in the coincident factor analysis is to calculate the member systems’ historical load factors, which are found by using Equation (2.16).

$$ALF = [TP / (PEAK * HRS)] * 100 \tag{2.16}$$

Where:

- ALF = Annual load factor;
- TP = Total member system energy purchases;
- PEAK = Annual non-coincident member system peak kW; and
- HRS = Number of hours in the year.

The second step is to determine the relative seasonal adjustment factor, which is the percentage of summer peak value to winter peak. The relative seasonal factor is found by using Equation (2.17).

$$RSF = (SUMPEAK / WINPEAK) * 100 \tag{2.17}$$

Where:

- RSF = Member systems' relative seasonal factor;
- SUMPEAK = Member systems' summer seasonal non-coincident peak value (April through September in year t);
- WINPEAK = Member systems' winter seasonal non-coincident peak value (October in year t-1 through March in year t).

The third step is calculation of the historical coincident factor, which is found by using Equation (2.18).

$$CF_i = (CPEAK_i / NCPEAK_i) * 100 \quad (2.18)$$

Where:

- i = Season (winter or summer);
- CF = Coincident factor;
- CPEAK = Member systems' coincidental peak in the month of Hoosier Energy's coincidental peak;
- NCPEAK = Member systems' non-coincidental peak in the month of Hoosier Energy's coincidental peak.

The load factor, the seasonal adjustment factor, and the coincident factors are used as a basis to forecast the system peak demand for each member system. The system peak demand values are based upon the historical patterns seen in these variables in conjunction with information provided by the REMC/REC representative.

The first step in determining the member systems' forecast system peak demand values is to project the future system winter seasonal non-coincidental peak. Equation (2.19) is used to determine the future system winter seasonal non-coincidental peak by applying future annual load factors and energy purchases.

$$FWINPEAK = FTP / [(FALF/100) * HRS] \quad (2.19)$$

Where:

- FWINPEAK = Forecast member system winter season non-coincident peak;
- FTP = Forecast member system total energy purchases;
- FALF = Forecast member system annual load factor, based on the interpretation of historical trends;
- HRS = Number of hours in the year.

The next step is calculating the future summer seasonal non-coincident peak demand for each system using a forecast relative seasonal factor and the estimated non-coincident winter peak demand from Equation (2.19). Equation (2.20) shows this formula.

$$\text{FSUMPEAK} = \text{FWINPEAK} * (\text{FRSF}/100) \quad (2.20)$$

Where:

- FSUMPEAK = Forecast member system summer seasonal non-coincident peak;  
 FRSF = Forecast relative seasonal factor input based on expected future trends;  
 FWINPEAK = As defined above.

Finally, the coincident seasonal peaks are found by applying the summer and winter coincident factors to the calculated non-coincident peaks. These formulas are listed below as Equations (2.21) and (2.22).

$$\text{FCWINPEAK} = \text{CF}_w * \text{FWINPEAK} \quad (2.21)$$

$$\text{FCSUMPEAK} = \text{CF}_s * \text{FSUMPEAK} \quad (2.22)$$

Where:

- FCWINPEAK = Forecast member system coincident winter seasonal peak;  
 $\text{CF}_i$  = Member system coincident factor when:  
     i=w denotes winter  
     i=s denotes summer  
 FCSUMPEAK = Forecast coincident summer seasonal peak;  
 FWINPEAK = As defined above;  
 FSUMPEAK = As defined above.

### 2.2.3 Alternative Forecast Scenarios

As a part of Hoosier Energy's forecasting process (the PRS), several alternative forecast scenarios are developed. The first is development of a forecast range, rather than a single value forecast. This allows review of the model's sensitivity to different economic input assumptions. For the most recent PRS, Hoosier Energy developed five alternative energy forecasts: *Base*, *Low*, *High*, *Base-Severe* and *Base-Mild Cases*. For the residential sector, the scenarios are differentiated based upon fluctuation of population, real per capita income and fuel prices. For the commercial and industrial sectors, the scenarios were differentiated based upon variation in the number of consumers and energy growth rates.

The following factors were considered in order to determine the magnitude of changes to the variables to produce the alternative cases:

- The observed change in the variables over the historical period that the forecast is based;
- The range of variation that exists for the variable;
- The elasticity of the driving variables in the models (i.e., the size of the coefficient compared with the coefficient of the other variables included in the model).

Hoosier Energy's ultimate goal in making changes to the variable assumptions was to establish alternative scenarios that represent conditions that could realistically occur. This pragmatic approach was also used in determining the magnitude of fluctuation for the commercial and industrial classes' alternative scenarios.

The most probable energy case is called the *Base Case*. The Base Case was developed using the most likely input assumptions. These assumptions are based on extensive research involving the member systems' knowledge of the area, utility operational databases and forecasts for variables provided by many external sources. After the Base Case is completed, the alternative scenario cases are developed.

The first alternative scenario, the *Low Case*, represents the forecast under poor economic development conditions. The Low Case scenario was developed for the residential sector by a) reducing the real per capita income and fuel price growth rates by 1 percent and b) assuming the population growth to be 0.5 percent lower than under the Base Case. To determine the Low Case scenario forecast for the commercial class, the base case growth rates for both the number of consumers and energy growth were reduced by 0.5 percent with a lower bound to be zero. To determine the Low Case scenario forecast for the industrial class, the number of consumers for each system was reduced by one for the entire forecast period, with a lower bound to be zero. Under this scenario the energy for the industrial class was decreased in the initial year using a step function. The energy was decreased by an amount equal to the average industrial consumer's energy use in the calibration year. In addition, the energy was decreased by 0.5 percent annually over the remaining forecast period.

The *High Case* scenario represents robust economic development conditions and is a mirror image of the Low Case. In the High Case, the residential sector was forecast assuming the real per capita income and fuel price growth rates increased by a full percentage point greater than the Base Case and the population growth was 0.5 percent greater than under the Base Case. For the commercial class High Case scenario, the number of consumers and energy growth were increased by 0.5 percent over the Base Case. For the industrial class High Case scenario, the number of consumers for each system was increased by one for the entire forecast period. The energy for the industrial class was increased in the initial year using a step function.

*Base-Severe* and *Base-Mild* scenarios represent the economic Base Case conditions under varying weather conditions. The Base-Severe case represents the economic Base Case conditions under extreme cold and hot weather conditions. The Base-Severe Case was developed through use of the maximum annual heating and cooling degree-day values recorded during the historical period for the service area. The Base-Mild Case was created using the economic base conditions under mild weather conditions. Mild weather conditions were defined as the annual minimum heating and cooling degree-day values for the service area during the historical period. The primary benefit of five different scenarios is the allowance for both economic and weather model sensitivity analyses.

For each energy scenario, two demand scenarios are examined. These are based upon historical average and extreme annual system load factors. The demand scenarios represent the effects of typical weather and extreme single temperature weather conditions on the system under the various energy scenarios established. As with the energy forecasts, the variety of demand scenarios allows weather sensitivity analysis of the system demand.

To date these various scenarios have only been developed and analyzed within the PRS econometrics model structure used by Hoosier Energy. The only case scenario that has been extended to an end-use load shape is the Base Case scenario. This scenario has been used in the development of the existing Hoosier Energy IRP analysis.

**2.2.4 Evaluation of Model Performance**

Having the models backcast the period from which they were developed validates how well the residential energy models perform. Once developed, the backcast and the actual data are plotted and visually examined. This analysis assists in determination of whether the model can replicate historical patterns. Examining the model R<sup>2</sup> values and performing a root mean square percent error (RMSPE) analysis then statistically validates the residential energy model. The R<sup>2</sup> for each model reflects the variation in the dependent variable explained by the independent variables being used. This reflects the goodness of fit of the regression models. The RMSPE gives a summary of how close the model's predicted values are to the actual, assuming no error in the input assumptions. The RMSPE is calculated using the Equation (2.23).

$$RMSPE = \left\{ (1/n) \sum_i [(Y_i - Y_i')^2 / Y_i^2] \right\}^{(1/2)} \tag{2.23}$$

Where:

- n = The number of observations;
- Y<sub>i</sub> = The actual value of the variable projected under the modeling framework, i=1, . . . , n;
- Y<sub>i</sub>' = The predicted value.

RMSPE was calculated for the historical period from which the econometric models are developed. The RMSPE as illustrated in Table 4 shows the performance of the econometric model.

Within Sample Period (1975-2009)		
Region 1	2.64%	to 4.52%
Region 2	2.98%	to 3.27%
Region 3	2.52%	to 3.53%
Region 4	1.93%	to 2.59%
Region 5	2.01%	to 3.11%
Overall Average	2.91%	

**Table 4: Average Estimated Root Mean Square Percent Error**

The methodology employed to forecast the Commercial, Industrial and Other Sectors relies on individual member system growth rates, and empirical evidence supplied by the member systems. As such, the methodology does not lend itself to verification of the method's performance. However, Hoosier Energy does have confidence in the Commercial, Industrial and Other Sector

forecasting method. The veracity of the approach is confirmed through the comparison of the RUS Form 7 energy and demand breakdowns. Historically, the Hoosier Energy forecast has fallen well between the High and the Low Scenarios.

### ***2.2.5 Justification of Forecasting Approach***

Hoosier Energy prefers an econometric modeling approach to forecast the Member Systems' residential energy sales. Other forecast modeling methodologies, such as trend-line analysis, time series models, and end-use models, have strengths and weaknesses. Trend-line and time series methods are entirely based on past trends of electric energy sales. As such, these approaches do not incorporate the impact of a changing population, such as the changing average incomes, in influencing these trends. End-use models are theoretically appealing because they focus on appliance use at the consumer level. However, end-use models require an extensive investment in consumer surveys over several years. Once these sizable databases have been developed, an understanding of the appliance usage patterns and events shaping them is necessary before an accurate forecasting model can be developed.

An econometric model simultaneously considers the historical impact of certain variables on residential electric energy sales. These variables can include population, per capita income, weather, alternate fuel prices, average residential electric price, and system costs. Although the development data for an econometric model is time consuming, the information required for the econometric approach is available, at low cost, from published government sources and the consumer billing records.

As with all econometric models, the Residential Sub-model equations will be re-estimated to incorporate new data as it becomes available. This process will involve updating the database and exploring the need to include additional variables to reflect changes in average residential use and the number of consumers. The member systems and Hoosier Energy will continue to cooperate to insure that the PRS review, data development and revisions reflect a consensus. Hoosier Energy will also continue to evaluate possible alternative methodologies for both energy and demand forecasting.

### ***2.2.6 Weather Normalization***

Hoosier Energy uses several methods to analyze the effects of weather upon forecast energy, forecast demand, historical energy and historical demand. The incorporation of the effects of weather into the future Hoosier Energy forecast is officially completed within the PRS. Hoosier Energy has also established a second methodology that allows examination of weather upon future forecasts on an hourly load shape basis. Currently this hourly load shape methodology is strictly used to support the Production Model needs and to allow for the testing of the weather sensitivity of demand. This load shape method is driven by the PRS energy results.

In the PRS, the effects of weather on future energy and demand are composed of two distinct processes. The energy forecast is developed using econometric modeling and is accomplished on a per member system basis. Hoosier Energy forecast energy is an aggregated result of each individual system's econometrics energy forecast. Within each system model the two important variables are heating and cooling degree-days (HDD and CDD, respectively). These variables represent the relationship, as established in the modeling process, between energy and weather for the service area being forecast.

Hoosier Energy, as with most companies, develops its Base Case forecast based upon “normal” weather conditions. Hoosier Energy defines “normal” weather conditions as the average weather that has occurred over a past period. This follows the general definition as established by the NOAA and published in their monthly and annual weather reports. To drive the member systems’ econometric models, “normal” HDD and “normal” CDD variables are developed for each of the service areas. This is accomplished by determining which NOAA defined weather divisions border or cover the various service areas being reviewed. Historical average HDD and CDD across the selected weather divisions are developed by using NOAA values and are then defined as the “normal” weather condition. These defined “normal” HDD and CDD values, specific to the various service areas, drive the econometric models to yield an energy forecast. The individual member system energy forecasts are then aggregated to produce a Hoosier Energy total system “normal” weather energy forecast.

Similarly, demand is temperature normalized. The demand temperature normalization process is completed on a per system basis and aggregated to obtain demand at the Hoosier Energy level. The demand methodology uses a combination of forecast energy values and forecast annual system load factors. Accordingly, no specific weather variable is used directly in the development of the demand value. Weather impacts are incorporated by reviewing the historical annual load factors for each system to determine a typical and an extreme load factor. Since the typical load factor represents what is most likely to happen, it also represents a “normal” weather demand. The extreme load factor represents demand conditions that may exist on the system under single-temperature, extreme weather conditions, and represents the “extreme” weather scenario. Through this method, a demand range is established representing normal and extreme demands under varying weather conditions.

The hourly load shape methodology allows for the testing of weather sensitivity of the hourly demand, and uses the Electric Power Research Institute (EPRI) software package HELM. This software allows Hoosier Energy to establish future total system hourly load shapes based upon:

- Forecast annual energy values;
- Defined hourly load shape models based upon seasons, day types and temperature bands;
- Defined calendars; and
- Defined “typical” weather year database.

The defined HELM “typical” weather (i.e., the “most likely to happen” weather condition) is developed using a different method than used in the PRS, since the database consists of average daily maximum and minimum temperatures. This weather database was developed monthly by selecting the actual month’s weather that best represents “typical” weather over the study period. The database is representative of the Hoosier Energy service area and was not created for the individual member system service areas.

Listed below are the five steps that were used to develop the typical weather year. (January is shown as the example month.)

1. Total Degree-days (TDD) [i.e., the sum of the Heating and Cooling Degree-days] were calculated for each January in the study period. TDDs were used as a proxy for energy use.

2. The median January TDD value was determined from the sample data, and all of the January TDDs were reviewed and ranked based upon their deviation from the median value.<sup>7</sup>
3. The maximum, minimum, and the daily average of the maximum and minimum temperatures for each January in the study period were determined. As with TDD, temperature was used as a proxy for peak demand.
4. The mean January temperature value was determined from the sample data, and all of the January temperature values were reviewed and ranked based upon their deviation from the mean.<sup>8</sup>
5. The final decision on the “typical” January weather month was then made by the combination of best fitting median TDD and mean temperature values.

Because each of the steps was performed for all twelve months (in order to create a typical weather year), this process required a great amount of time and detailed analysis<sup>9</sup>. After the “typical” weather year, seasonal calendar and total system load shape models were developed, an hourly load forecast was developed by using the driving input variable of annual energy.<sup>10</sup>

This annual energy represents the “most likely” energy forecast obtained from the PRS under “normal” weather conditions. The resultant energy matches the PRS forecast energy, while the forecast peak hourly demand may vary from the PRS seasonal peak demand due to the alternative manner in which it is developed. With these benchmarks, “typical” weather, energy and demand values established, alternative weather scenarios can be developed and tested by varying the inputted weather conditions. Therefore, use of this process yields an informational database that supports the functioning of the Hoosier Energy production model, along with supplying a tool in which to study weather sensitivity on the Hoosier Energy system forecast hourly demands.

The methodology used to examine the effects of weather on historical energy and demand includes use of the HELM software package and is based on a similar process as discussed with the hourly load shape methodology. However, this process is much more complex, because the gap between the modeled and actual values of energy and demand must be bridged to allow for the actual weather effects on historical energy and demand to be examined. This process to examine the effects of weather does the following:

- Replicates what actually occurred in a modeled environment;
- Simulates the results that a model would produce under “typical” weather conditions by matching the defined typical weather database to the actual weather pattern;
- Calculates the hourly variation ratio between modeled actual and typical hourly demand values (weather adjustment factor); and
- Applies the hourly weather adjustment factor to the actual hourly load values that occurred.

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<sup>7</sup> The median value was used as a first test because it represented a midpoint of what had occurred over the sample period, and the median value does not suffer from skewing problems associated with a sample mean in the case of radical swings in temperatures.

<sup>8</sup> In evaluating the months for “typical” peak demand, the mean temperature value was used, and not the median, because you want to choose the temperature variable so that extreme values are reached. Mean values reflect extreme conditions.

<sup>9</sup> EPRI has updated the HELM software package to include an automated process that performs an analysis that defines a “typical” weather year.

<sup>10</sup> This weather normalization can now be performed within the HELM software, which should make the process easier and more accurate. In the future, Hoosier Energy will utilize this new capability.

The end result is an engineered hourly load pattern that shows the energy and demand values without the actual weather extremes. Hoosier Energy defines this process as “Weather Normalization” and it reveals the “true growth” experienced by the system over time. It also exposes the historical effects of weather on the system.

### **2.2.7 Potential Self-Generation Analysis**

In 1998, Hoosier Energy and the member systems surveyed the retail customers to determine the number and magnitude of self-generation facilities on the system. The survey found a total of 31 generators with a total rated capacity of 12,022 kVA. The majority of the units were diesel fired (24 units), with a rated capacity of less than 200 kVA (17). Only two units had a rated capacity of greater than 1,000 kVA and only eight had the capability to be synchronized with another power source.

Given the lack of self-generation currently found on the Hoosier Energy system, the potential for customer development of self-generation during the planning period is considered low. Accordingly, Hoosier Energy does not anticipate self-generation to have any impact on generation, transmission, and distribution planning, or forecasting.

## **2.3 Forecasts**

The forecasts generated by the PRS can be found in Appendices D through H.

Appendix D contains the Base Case demand and energy forecasts for a 20-year period for the Hoosier Energy System, and for its individual member systems. These forecasts are divided based upon Hoosier Energy customer class, the member systems’ customer classes and the member systems in aggregate. In addition, the Base DSM Case scenario is included.

Appendices E and F, respectively, contain the Base-Mild and Base-Severe Case demand and energy forecasts for a 20-year period for the Hoosier Energy System. These two forecasts incorporate weather variations rather than load growth variations. In addition, the Base-Mild DSM Case and Base-Severe DSM Case scenarios are included.

Appendix G contains the High Case demand and energy forecasts for a 20-year period for the Hoosier Energy System. These include forecasts by Hoosier Energy customer class and the member systems in aggregate. In addition, the High DSM Case scenario is included.

Appendix H contains the Low Case demand and energy forecasts for a 20-year period for the Hoosier Energy System. These include forecasts by Hoosier Energy customer class and the member systems in aggregate. In addition, the Low DSM Case scenario is included.

Energy values shown in Appendices E, G and H assume normal weather conditions.

## **2.4 Forecasting Data**

An integral part of the development of a database for the analysis of electricity sales is the construction of the demographic, economic, and weather variables for each member system’s service area. Since operating statistics are already recorded for the service area, the database

begins with this reliable set of historical information. The challenge is compiling the remaining variables, which are gathered from external sources (e.g., the U.S. Census Bureau) and not differentiated on the same basis (i.e., the same geographic definition) as the member system data. Rather, the auxiliary information is collected on a county, state, or weather division basis. Therefore, compilation of this information requires extensive manipulation to reflect the activity in the service area, usually a combination of sub-county regions.

The data needed to produce the forecasts can be broken down into these categories:

- Operating Statistics
- Income Information
- Weather Data
- Fuel Prices
- Agricultural Variables
- Other Variables

Each of the following sections describes the data development in detail.

#### **2.4.1 Operating Statistics**

Operating statistics reflecting historical sales, revenues, and consumers of each member system were collected from two major sources – RUS Form 7 and Bulletin 1-1. Monthly and annual data are reported on RUS Form 7 and annual figures are reported in the United States Department of Agriculture Rural Electrification Administration Informational Publication 201-1 (formally identified as Bulletin 1-1) entitled Annual Statistical Report, Rural Electric Borrowers. Two sources of operating statistics allowed for the implementation of a validation methodology. If substantial differences between the two sources existed, the cooperative's records were checked to identify the reason for the discrepancy.

For previous PRS studies, each member system provided monthly kWh sales, revenues, and the number of consumers by class. The consumer categories include:

- Residential (includes year-round and seasonal residential);
- Commercial/Industrial Small (non-residential customers with transformation less than or equal to 1,000 kVA);
- Industrial (non-residential customers with transformation greater than 1,000 kVA);  
and,
- Other electric service (irrigation sales, public street and highway lighting sales, and other unclassified sales).

This data is reported in a format similar to that used on RUS Form 7.

While the PRS Energy Model was estimated using annual data, the collection of monthly data was also important to allow identification of reclassifications and annexations. The monthly data also provided another source of data to check whether or not observed annual outliers represented an incorrect data entry or an unusual occurrence. In addition, RUS required this monthly data report as part of the PRS document.

Several variables reported are given in nominal dollar values, such as operating deductions, the cost of power, actual distribution system costs and revenues received from the consumer class. Nominal dollar values reflect inflation and the real change in price levels. Therefore, in Equations (2.2) and (2.3), all dollar values have been deflated by the Consumer Price Index (CPI), with a base period of 1982-1984, to reflect real rather than nominal relationships.

#### **2.4.2 Population and Real Per Capita Income**

Population and real per capita income were estimated for each member system's service area through the use of county-level data with the consumer class per county breakdown developed by the member system. Calculation procedures to estimate the two variables were similar with the initial requirement of the development of factors identified as the "county weights." This methodology used in the creation of the county weights, along with the defined service area values, is the same as used by the State Utility Forecasting Group (SUF) and the Center for Econometric Model Research (CEMR) established within the Kelley School of Business at Indiana University.

The number of people living in a county is estimated and reported annually by a number of public and private agencies. Because each of the member systems serves only a portion of the respective counties, simply adding the total population of the served counties would not have been accurate in representing the member system consumers served. Instead, an estimate was made of the proportion of the county served by the cooperative. This process in determining the proportion of the county served by the distribution system involves the development of a "county weight" for each county served by the system. This "county weight" can be interpreted as the share of the county households served by the member system in that specific county. This interpretation is valid based upon the hypothesis that the average household served by the member system has the same average size as the average household found in the county. The development of these "county weights" involve the establishment of a ratio between the total number of households found in the counties within the service territory and the number of residential consumers (households) actually served by the member system in each of the counties.

The number of households located within each county is obtained through the various public and private agencies which publish this information. The number of consumers (households) served by the member distribution system in each county is obtained directly from the operating statistics of the system. The "county weight" for each individual county served by the member system is then established on an annual basis via the ratio of these values over the historical time period in review. In order to determine the "county weights" to be used for the forecast period, it is theorized that the weighting, which is occurring in the most recent historical year, will be held constant and carry forward into the forecast time period.

Once all the county weights are developed for each of the counties served, the county level databases for both population and income, which are readily available from the various agencies, can then be transformed into what is known as "service area" population and income database. This is accomplished through the development of the product of the total county variables and the "county weights." Service area databases are developed for each of the Hoosier Energy member systems. These databases are established not only for the historical time period in review, but also for the forecast time period.

With the population and income service area databases created, the real personal income variable can be developed. This variable is calculated by dividing the service area personal income by the

CPI. The nominal dollar value for this variable is converted into constant 1982-1984 dollars. The average annual real per capita income is then calculated as the ratio of real personal income to population. For further explanation and the detailing of the various equations used in this process, refer to the actual Power Requirements Study document developed by Hoosier Energy.

#### **2.4.3 Weather**

Weather is one of the most significant factors in the determination of the variability of electricity sales. Therefore, heating degree-day and cooling degree-day figures are essential variables. A heating degree-day is a unit representing one degree of deviation below 65 degrees Fahrenheit in the mean temperature for one day. Similarly, a cooling degree-day reflects average temperatures above 65 degrees. These degree-day indices provide a measure of how much space heating or air conditioning would have been used over a month.

The weather data used by Hoosier Energy is a weighted average of the readings from the weather stations in the region. The weighting is reflective of the average Hoosier Energy population surrounding the weather station. Data on both monthly and annual heating and cooling degree-days for the weather divisions and/or weather stations in Indiana, Kentucky, Illinois and Ohio are published by the National Oceanic and Atmospheric Administration. Weather information is required from the surrounding states since they also border several of Hoosier Energy's service areas.

#### **2.4.4 Fuel Prices**

Another important factor affecting the use of electricity is the price of alternative fuels. For example, if the price of fuel oil or LP gas is high, people who are installing new space heating systems (either replacement systems or equipment for new homes) may decide to heat with electricity rather than oil or gas. To capture the potential fuel substitution effects, historical data on fuel prices were collected at the national, regional and state levels. These variables in the past were collected at the specific service area region level within the state; however, these detailed values are no longer available.

The various data on fuel prices are obtained from publications produced by the Energy Information Administration, U.S. Department of Energy and the American Gas Association. The data in the PRS database included the average prices of:

1. Total energy by residential consumers (primary energy and electricity)
2. Coal
3. Natural gas
4. Petroleum products
5. Distillate fuel
6. Kerosene, liquid petroleum gas, and ethane.

All data was reported in dollars per million Btu.

#### **2.4.5 Agricultural Variables**

Twelve agricultural variables were collected for the database to reflect the use of electricity on the farms served by the member systems. When possible these variables were collected at the county level, with estimates developed for the service area using the county weighting procedures. In some instances, where county-level data was unavailable, state-level data was used.

Corn, milk, hay, oats, soybeans, wheat, cattle, beef cattle, chickens, turkeys and hogs represent major agricultural products in southern Indiana. Data was collected on these variables from various sources produced by Purdue University and the U.S. Department of Agriculture.

Various procedures are used in the development and analysis of these variables. These procedures include reviewing the variables through a simple sum of production in all counties served by the member systems; a county weighted production number summation representing the service area value; and the variable production magnitudes at the state level. The simple sum of production process involves the adding of the county-level production values incurred across each county for each variable. The county weight process is similar to what was described in the population and income sector of this report. This process involves applying a county weight factor to county-level information in order to develop a number more representative of the true member system service area. In addition to review of the number at a county and/or service area level, the variable can also be reviewed at the state level.

Theoretically, if the service area agricultural production is correlated to the state's production trends, these agricultural data are strong proxies for reflecting agricultural activity for the service area. The cost of collecting these state-level variables for the database is also much lower.

#### **2.4.6 Other Variables**

Many other variables are available for the database. These variables can provide a basis for possible future extensions of the PRS Energy Model. The Indiana University STATS INDIANA computer network provides an excellent resource in gathering county, state and U.S. economic data. Unemployment rates, number of establishments, personal income, and number of people employed are a few examples of the type of information available to users. Future use of this data will help in understanding the characteristics of the various areas served by the Hoosier Energy member systems.

### **2.5 Load Shapes and Other Consumption Pattern Databases**

#### **2.5.1 Hoosier Energy Customer Databases**

Hoosier Energy currently maintains a database of monthly and annual energy sales by customer class. The database was developed for use in the econometric forecast models of the Power Requirements Study and is maintained through the annual collection of member system RUS Form 7s. The customer class breakdowns in the data set are based upon the RUS Form 7 definitions, and are as follows:

1. Residential - includes year-round and seasonal residential.
2. Commercial and Small Industrial - non-residential consumers with transformation less than or equal to 1,000 kVA.

3. Industrial - non-residential consumers with transformation greater than 1,000 kVA.
4. Other - irrigation, public street and highway lighting, and other unclassified sales.

With respect to rate classes and SIC codes, data is not collected either through regulatory forms or metering, and databases of such consumption patterns have not been developed.

Hoosier Energy, in conjunction with the National Rural Electric Cooperative Association-Rural Electric Research (NRECA-RER), the Electric Power Research Institute's Center for Electric End-Use Data (EPRI's CEED), and the private consulting firm ICF Resources, Inc., developed load shapes for twenty-six (26) residential end-uses, and hourly load patterns for commercial and industrial class consumers in 1995. These load shapes were developed from end-use metered data and studies obtained from other utilities, along with engineering models.

### **2.5.2 Total System Load Curves**

Appendix I contains various load shapes for the total Hoosier Energy system. These include the Hoosier Energy load duration curve, winter and summer peak day load curves, typical winter, summer, spring and fall load curves, for weekdays and weekend days. These load curves are historically based. While Hoosier Energy expects the magnitude of the loads to increase, at this time Hoosier Energy does not expect the fundamental shape of these curves to change over the planning period.

### **2.5.3 Disaggregated Load Shapes**

Hoosier Energy does not have the resources to disaggregate the historical total system load shape. However, Hoosier Energy can construct its total system forecast load shape by customer class (i.e., residential, commercial, and industrial) and by certain end-uses. At this time, there is a very limited amount of interruptible load on the Hoosier Energy system.

To study the feasibility of economical DSM programs, Hoosier Energy in 1995 undertook a project to develop end-use load shapes. Hoosier Energy, in conjunction with EPRI, focused its efforts on development of 26 specific residential end-uses. Table 5 shows the forecast residential end-use load shapes available to Hoosier Energy.

Class	End-Use
Residential	Water Heating
	Cooking
	Refrigerator Primary
	Refrigerator Secondary
	Freezer Primary
	Freezer Secondary
	Dishwasher
	Clothes Washer
	Clothes Dryer
	Lighting-Regular
	Lighting-Compact Fluorescent
	Television
	Microwave
	Waterbed Heater
	Residual
	Central Air Conditioner
	Room Air Conditioner
	Heat Pump, Air to Air
	Heat Pump, Air Primary
	Heat Pump, Air Secondary
	Heat Pump, Geothermal
	Heat Pump, Dual Fuel
	Electric Heat-Furnace Primary
Electric Heat-Furnace, Secondary	
Electric Thermal Storage	
Ventilation (for fossil fuels)	

**Table 5: Hoosier Energy End-Use Load Shapes**

The residential class and end-use load forecast load curves are not based on metering. Rather, they are gained through information based on EPRI's CEED and customized to represent the Hoosier Energy service territory.

For the Commercial and Industrial classes, Hoosier Energy decided to develop composite curves.

For the Industrial class load curve, an industrial load shape model was developed, through use of the HELM software package, from actual end-use metering data obtained from eleven Hoosier Energy member system industrial consumers. The predominant type of manufacturing operation was two-shift, automobile-related manufacturing. Of the eleven consumers from which this metered data was obtained, eight have manufacturing output directly related to the automobile industry. This relationship introduces strong patterns of usage that are inherent to automobile manufacture-type loads. Therefore, at this time the best available industrial model for the Hoosier Energy system primarily represents an automobile manufacturing, two-shift operation type consumer.

The energy forecast for the Industrial class consumer in this study comes from the Power Requirements Study (PRS). This forecast is developed and supported by the member system

managers and PRS representatives, and the RUS reported Form 345 documentation. The forecast numbers represent the future load requirements for the entire industrial class at the end-consumer level. The industrial sector comprises less than 1% of all consumers served. The industrial sector contributes approximately 23% of the total annual Hoosier Energy sales to the end consumers.

The Commercial and Other load shape curve was obtained from CEED. This curve was modified to agree with the intuitively correct Hoosier Energy commercial load shape. Similar to the industrial sector, the commercial sector energy forecast driving the commercial load shape is developed within the PRS. This forecast is based upon historical growth patterns experienced by this class, and knowledge of the immediate personnel who work for the member systems.

#### ***2.5.4 Future End-Use Surveys***

Hoosier Energy conducted a residential end-use survey in 2009 – the twelfth survey since 1979. The structure of the survey remained the same as that of the most recent survey, which was strictly an end-use, consumer characteristic survey that did not incorporate member system specific questions. Traditionally, Hoosier Energy has conducted its surveys over the telephone. However, as changing technologies have eroded the representativeness of surveying by telephone only, this survey was conducted via telephone and e-mail, assuring a more representative and expanded sample.

The residential survey is used to support the RUS-required PRS, to develop the energy and demand forecasts, and to support Marketing programs. The survey also provides end-use/consumer characteristic knowledge to the distribution system and Hoosier Energy staffs.

Samples for the more recent surveys have been constructed to produce results that are accurate to within approximately  $\pm 5\%$  at a 95% confidence level at the member system level, in accordance with RUS recommendations. At the Hoosier Energy level, the results are therefore accurate to within approximately  $\pm 1.25\%$  at a 95% confidence level.

### **Section 3: Resource Assessment**

### **3 Resource Assessment**

As required by 170 IAC 4-7-6, Section 3 of this IRP describes Hoosier Energy's existing resources, including generation, transmission, environmental factors and demand-side management. Sections 3.2 Future DSM Resource Assessment and 3.3 Future Supply-Side Resource Assessment present the future demand-side and future supply-side resource assessments.

The 2009 Hoosier Energy Integrated Resource Plan was developed to enable Hoosier Energy to seek the lowest power supply cost possible for member distribution systems for a targeted level of low market and business risk, while maintaining a high degree of generation and transmission reliability. Through this IRP, Hoosier Energy has attempted to include all economic and reliable resources, both traditional supply-side resources and demand-side resources, to meet future electric service requirements.

#### **3.1 Resources**

##### **3.1.1 Generation Facilities**

Hoosier Energy operates five generating stations with a total summer production capacity of approximately 1,900 MW.

The Frank E. Ratts Generating Station is located near Petersburg, Indiana and began operation in 1970. The facility consists of two coal-fired steam generating units. Over the planning period, Hoosier Energy has not planned any significant changes to this facility (i.e., retirements, derates, plant life extensions, re-powering, or refurbishing).

The Merom Generating Station is a two-unit, coal-fired steam generating facility located in Sullivan County. Unit One became operational in 1983 and Unit Two became operational in 1982. Except for those changes required by more stringent environmental restrictions, Hoosier Energy has not included any planned changes to this facility in the IRP analysis.

The Worthington facility consists of four General Electric LM6000s with a net summer rating of 172 MW. Worthington is directly interconnected to the Hoosier Energy transmission system. The LM6000 combustion turbines are more efficient than "frame-type" combustion turbines with a heat rate of approximately 10,000 Btu per kWh. LM6000s also have quick start capability and their relatively small individual size allows significant scheduling and ramping flexibility.

The Lawrence generation facility became operational in May of 2005. Lawrence consists of six General Electric LM6000s combustion turbines with a net summer capacity rating of 264 MW. Hoosier Energy owns two-thirds of the facility and the output while Wabash Valley Power Association owns one-third. The CTs have a heat rate of approximately 10,000 Btu per kWh and have quick start capability.

In January of 2009, Hoosier Energy took possession of 50% ownership interest in the Holland generation facility. Holland is a gas-fired, combined cycle facility located in Effingham County, Illinois. Holland is a 2x1 CC with two GE 7FA combustion turbine generators and a single Toshiba steam turbine generator. The facility is also equipped with two Nooter/Eriksen Heat Recovery Steam Generators with NO<sub>x</sub> selective catalytic reduction (SCR) and 75 MW duct burners for each HRSG. Total plant heat rate is approximately 7,500 Btu per kWh.

Clark-Floyd generating station is a baseload, landfill methane gas-fired facility. This project was commissioned in October 2007 as a 2 MW project. Capacity was increased in June of 2009 to 3.5 MW. The sole source of fuel for the project is methane gas collected from the Clark-Floyd Landfill in southern Indiana.<sup>11</sup>

Table 6 summarizes Hoosier Energy's owned generation facilities.

Unit	Summer Capacity
Ratts 1	120
Ratts 2	121
Merom 1	500
Merom 2	498
Clark-Floyd	3.5
Holland	314
Worthington	172
Lawrence	176
Total Rated Capacity	1,905

**Table 6: Hoosier Energy's Owned Generation Summary**

### **3.1.2 Power Purchases**

In addition to owned generation resources, Hoosier Energy uses a mix of long-term and short-term power purchases to provide least-cost service to member systems. Hoosier Energy purchases 200 MW from Duke Energy Indiana under two separate, cost-based, long-term purchase agreements. Both agreements are for 100 MW and contain load factor requirements that qualify them as baseload generation resources. These purchases provide better diversity and less operating risk characteristics than an owned resource. The first agreement runs through 2017 and the second runs through 2023. Hoosier Energy recently signed an agreement to purchase an additional 50 MW of capacity and energy for the period beginning January 2016.

### **3.1.3 Unit Power Sales**

Hoosier Energy sells unit contingent power to Wabash Valley Power Association (WVPA). This unit contingent sale includes both Merom units (100 MW off each) and the Ratts units (25 MW off each) for a summer total of 250 MW of unit contingent power through 2013. The sale increases to 300 MW (120 MW off each Merom unit and 30 MW off each Ratts unit) in 2014. The WVPA sale runs through 2017.

### **3.1.4 Firm Power Sales**

Hoosier Energy serves a single municipal customer, Troy Municipal. The Troy Municipal agreement is a full-requirements contract.

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<sup>11</sup> In Cause No. 43140, the IURC granted Hoosier Energy a certificate of public convenience and necessity to install up to 20 MW of methane gas-fired generation including the Clark-Floyd facility.

Table 7 compares the Summer Peak Demand requirements, as determined through Hoosier Energy's load forecasting, to Hoosier Energy's existing capacity resources. Table 7 also shows that Hoosier Energy does not expect any impact on its generation capacity as a result of retirements, derating, plant life extensions, repowering or refurbishment.

### **3.1.5 Renewable Resources**

The Hoosier Energy Board of Directors adopted a Renewable Energy Program (Board Policy 5-2) that defines targets and evaluation criteria for renewable projects. Hoosier Energy's policy sets a goal to secure 2% of total energy generated from renewable resources by 2011 with additional resources going forward matching 5% of member energy growth.

The first project under the Renewable Energy Program was development of the Clark-Floyd Landfill methane gas project. This 2 MW project was commissioned in October 2007. Capacity was increased in June of 2009 to 3.4 MW. The sole source of fuel for the project is methane gas collected from the Clark-Floyd Landfill in southern Indiana. This project was built under IURC certificate of need authority granted in Cause No. 43140

Hoosier Energy's second project under the Renewable Energy Program was the Story County wind project. Story County is a 150 MW wind farm developed by FPL Energy, which became operational in November of 2008. Hoosier Energy has rights to 25 MW through a 10-year purchased power agreement for energy, capacity, and renewable energy credits. Hoosier Energy is participating in conjunction with other cooperatives with coordination provided by ACES Power Marketing.

Hoosier Energy is in the process of constructing the Woodland Meadows landfill gas generation facility in Wayne County, Michigan. This facility is 10.8 MW and is expected to be commercial on June 1, 2012. This project is being built under IURC certificate of need authority granted in Cause No. 43140.<sup>12</sup>

In Cause No. 43893, the IURC granted Hoosier Energy's certificate of need request to build and operate the Merom coalbed methane (Merom CBM) generation facility. The Merom CBM is designed to be a baseload generation facility fueled by the combustion of coal bed methane gas collected through an underground collection system linking several CBM wells on the Merom property. The methane, which would otherwise be released into the atmosphere naturally over time, contains between 95% and 97% methane – comparable to natural gas. Hoosier Energy expects Phase I of the Merom CBM to be on-line in January 2013, producing roughly 12 MW. Tentatively, Phase 2 would increase capacity an additional 12-15 MW by Summer 2014.

Hoosier Energy is developing a third landfill gas generation facility in Davis Junction, Illinois. This facility, known as Orchard Hills, is projected to provide 13.9 MW of capacity and energy with an online date of February 1, 2012. This project is being built under IURC certificate of need authority granted in Cause No. 43987.

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<sup>12</sup> In Cause No. 43140, the IURC granted Hoosier Energy a certificate of public convenience and necessity to install up to 20 MW of methane gas-fired generation including the Clark-Floyd facility.

Hoosier Energy was the successful bidder on a 10 MW low head hydro facility to be located near Marseilles, IL. Hoosier Energy will purchase all capacity and energy output of the facility through a PPA. The developer is currently awaiting FERC approval. The facility is expected to be in-service by mid-year 2013.

In 2011, Hoosier Energy purchased a 15.6 MW landfill gas facility near Pontiac, IL. Hoosier Energy expects to begin receiving generation output from this facility in early 2012.

Hoosier Energy has the rights to purchase 3.6 MW of generation from Dayton Hydro facility in Dayton, IL through a 10-year PPA. Hoosier Energy began to receive power from the facility during August 2011.

Other renewable initiatives include:

- The development of six small-scale solar facilities and two small-scale wind facilities across Hoosier Energy's southern Indiana service territory. The solar facilities are located in the following counties: Decatur, Johnson, Sullivan, Bartholomew, Rush and Dubois. The wind facilities are located in Sullivan and Dubois Counties. Interested persons can track the output of each facility at the following website: <http://www.hepn.com/renewables/pilot.asp>.
- Joined EPA's Landfill Methane Outreach Program (LMOP) and the American Council on Renewable Energy (ACORE).
- Participation in the National Renewable Cooperative. This organization will focus on developing large-scale renewable projects on a national or regional level.
- Completed a biomass feasibility study focusing on using wood waste as the primary fuel. Efforts are focused on development of biomass generation within southern Indiana.
- Developed a renewable program called EnviroWatts. This program allows Hoosier Energy's member cooperatives to offer their retail customers the option of buying power from a renewable resource.

### **3.1.6 Demand-Side Resources**

As defined by 170 IAC 4-7-1 Hoosier Energy operates several DSM measures.<sup>13</sup>

#### New Wholesale Tariffs

In April of 2010, Hoosier Energy implemented new wholesale tariffs designed to encourage demand response participation by the member systems and to introduce time-of-use energy pricing. Below is a description of the changes to the Standard Wholesale Tariff:

- 1) Production Demand Charge - To support residential control programs, significant changes were made for recovering production demand-related costs. The new Standard Wholesale Tariff better aligns the G&T tariff and system capacity costs through higher seasonal demand charges that more accurately reflect the greater cost of capacity in summer and winter peak months. The tariff bases production demand in off-peak periods

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<sup>13</sup> 170 IAC 4-7-1(j) defines DSM resource as a resource (i.e., a project used by a utility to provide electric energy service to the customer) that reduces the demand for electrical power by applying a DSM program to implement a DSM measure(s).

on average use in peak periods. Charges are calculated based on metered demand in June, July and August with demand in September, October and November based on the average of these three peak months. To better ensure that the members are able to earn a return on their load control investment, the metered, coincident demands used for member billing will be based on the Hoosier monthly system maximum load during which load control was operated. A similar mechanism at a lower rate was developed for the peak winter months of December, January and February with demand in March, April and May based on averages from the three peak months.

Although not explicitly referenced in the new Standard Wholesale Tariff, the proposed load control program is controlled by Hoosier Energy. Control criteria is primarily based upon reduction in Hoosier Energy system peaks demands, but load control will also be operated for purposes of emergency demand response within MISO and opportunities to avoid costly market energy purchases. Load control protocols will also consider the impact on consumer satisfaction. Based on these load control criteria, the primary mechanism for the flow through of power supply benefits to the members is through the Production Demand Charge.

The new Standard Wholesale Tariff better supports load control by reducing the number of months in which load must be controlled to achieve savings, increases the number of months in which members benefit from peak load reductions, restricts control to months when reductions will most likely produce system benefits, mitigates impacts on consumers, and provides additional protection from cost shifting to members that don't participate in load control programs.

2) Energy Charge - The new Standard Wholesale Tariff includes both on-peak and off-peak energy charges, with the on-peak charges set much higher than the off-peak energy charges. On-peak periods for energy charges are narrowly defined as including ten hours per day on summer weekdays and two, three-hour periods on winter weekdays. All weekend days and all days in "valley" months of March through May and September through November are defined as off-peak for energy charges.

The differentiation between on and off-peak energy charges is intended to recover energy costs in a manner more consistent with the market price signals. In addition, this differentiation provides an incentive to members and end consumers to shift load to off-peak periods.

3) Transmission Demand Charge - Costs related to 69 kV radial transmission lines were shifted from transmission to substation/radial line demand charges to achieve a more consistent treatment of radial line costs. Transmission charges remain unbundled in the new Standard Wholesale Tariff. Current transmission charges are based on non-coincidental (NCP) demand at each point of delivery during the highest "rolling 30-minute interval" in the month. Charges in the new Standard Wholesale Tariff are based upon system coincident demand (CP) or the 60-minute clock hour during the month between 7:00 a.m. and 11:00 p.m. (EST) in which total system demand reaches its highest point.

The revision in the Transmission Demand Charge can reduce the members' cost to serve Electric Thermal Storage (ETS) heating loads under certain circumstances. Under

the old tariff, it was possible for a member to incur additional cost under the Transmission Demand Charge if the ETS load on a delivery point causes a monthly peak demand on the substation during the over-night hours when the heating system is charging the bricks for heat storage. Under the new Standard Wholesale Tariff, the billing demand has been modified to a demand coincident with the Hoosier system monthly peak, which is very unlikely to occur during the hours that the ETS is charging.

#### Optional Wholesale Tariffs

Hoosier Energy offers four optional wholesale tariffs that are intended to provide consumers with options to manage energy costs. The tariffs are also designed to provide the G&T with tools to better manage costs during periods of high demand and market prices and to promote consumer-owned distributed generation, including the purchase of consumer power by Hoosier Energy. While not required by the Energy Policy Act of 2005, the provisions of these tariffs are consistent with key principles of that legislation. The tariffs reflect the G&T's continuing effort to develop efficiency and demand response/demand-side management (DSM) options for consumers. Tariff provisions are summarized below.

#### Interruptible Power Tariff No. 2

- 500 kW minimum demand and 500 kW minimum interruptible demand
- Customer contracts for "firm" load; remainder subject to interruption
- No buy-through provision
- Interrupt from 7:00 to 11:00 p.m. daily, 1-hour notice, 500 hours per year

#### Distributed Generation Purchase Tariff

- Consumers with qualifying distributed generation facilities
- 15 kW to 2,000 kW nameplate rating
- Interconnection and other requirements
- G&T will pay \$0.046 per kWh

#### Voluntary Curtailment Rider to Industrial Power Tariff (IPT)

- Available to IPT customers; annual enrollment
- Customer voluntarily agrees to curtail or reduce demand upon request
- Proposed levels are \$0.15, \$0.25 and \$0.40 per kWh
- One hour notice for up to 12 hours of curtailment
- No penalties for non-participation

#### Standby Service Rider to Industrial Power Tariff (IPT)

- Intended for few customers who generate own power on continuing basis
- Service option and rates for back-up, supplemental, or standby service
- Requires minimum annual contract demand

#### Interruptible Power Tariff

The Interruptible Power Tariff provides a demand charge discount in exchange for either load curtailment by the retail customer or the purchasing of buy-thru power at market prices by the retail customer. Although the Interruptible Power Tariff has been available since 1994 and Hoosier Energy has consistently marketed the Tariff to customers, only one customer has elected to take service under this Tariff. As required by the tariff, this customer has designated 3 MW of load as interruptible. Because the customer has elected to purchase buy-thru power at market

prices, the interruptible load is not included as a resource. Due to the offering of Interruptible Power Tariff No. 2, this Interruptible Power Tariff is no longer available for new customers.

DSM Programs

Hoosier Energy has developed a number of demand response and energy efficiency programs. These programs are detailed in the 2011 DSM Report attached as Appendix A-2.

Electric Thermal Storage (ETS)

Some Hoosier Energy members promote ETS devices to take advantage of the off-peak provision of Hoosier Energy's current and prior Standard Wholesale Tariff. ETS is a clean, safe, and reliable method of heating that operates during off-peak hours to generate and store heat in ceramic bricks contained in an insulated cabinet. When the thermostat calls for heat, a fan blows air across the bricks to release heat into the home. Because the heating system of the ETS unit operates only during off-peak hours, the heating load is shifted to the off-peak period.<sup>14</sup>

In summary, Hoosier Energy offers member systems a menu of wholesale tariffs that constitute a demand-side measure and have provided, and will continue to provide, price signals that promote the more efficient use of supply-side resources.

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<sup>14</sup> As described in Section 3.2 Future DSM Resource Assessment, load shifting is an appropriate load shape objective for Hoosier Energy.

Capacity Expansion Plan - Summer Peak										
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
<b>2011 PRS w/ DSM</b>										
Summer Peak w/ DSM (1)	1,394	1,415	1,416	1,428	1,428	1,434	1,439	1,444	1,454	1,463
Reserve Requirement (2)	70	71	71	71	71	72	72	72	73	73
2011 PRS Peak w/ DSM	1,464	1,486	1,487	1,499	1,499	1,506	1,511	1,516	1,527	1,536
<b>2011 PRS w/o DSM</b>										
Summer Peak w/o DSM (1)	1,424	1,462	1,479	1,522	1,537	1,558	1,576	1,593	1,611	1,628
Reserve Requirement (2)	71	73	74	76	77	78	79	80	81	81
2011 PRS Peak w/o DSM	1,495	1,535	1,553	1,599	1,614	1,636	1,654	1,673	1,691	1,710
<b>Resources (MW)</b>										
Merom	980	962	967	967	972	972	972	972	972	972
Ratts	236	236	236	236	236	236	236	236	236	236
Power Purchase	200	200	200	200	250	250	150	150	150	150
Holland	310	310	310	310	310	310	310	310	310	310
Worthington	174	174	174	174	174	174	174	174	174	174
Lawrence	172	172	172	172	172	172	172	172	172	172
Renewables (3)	35	72	96	104	110	110	110	107	107	107
Unit Contingent Sales	(250)	(250)	(300)	(300)	(300)	(300)	0	0	0	0
Adj. for Forced Outage Rate (4)	(110)	(103)	(99)	(99)	(100)	(100)	(126)	(126)	(126)	(126)
Total Resources Adjusted	1,746	1,773	1,756	1,764	1,824	1,824	1,999	1,995	1,995	1,995
<b>Capacity Excess / (Capacity Deficiency)</b>										
w/ DSM	283	287	269	264	325	318	488	479	469	459
w/o DSM	251	239	203	165	210	189	344	323	304	286

1 2011 Power Requirements Study Base Case Summer Peak Demand

2 Assumed long-term Midwest ISO reserve requirement @ 5.00%

3 Estimated Renewable Resources

4 Based upon current MISO capacity rules and plant performance both of which are subject to future changes.

Table 7: Summer Peak Demand Requirements and Planned Resources

Source: PRS and Integrated Resource Plan

Table 8 compares the total energy requirements to Hoosier Energy's generation and other system resources.

	<b>Year</b>	<b><u>2012</u></b>	<b><u>2013</u></b>	<b><u>2014</u></b>	<b><u>2015</u></b>	<b><u>2016</u></b>
<b><u>Energy Requirements (GWh)</u></b>						
Members		7,311	7,482	7,613	7,789	7,934
Unit Power Sale to WVPA		1,351	1,313	1,564	1,594	1,723
Surplus Sales		1,197	1,144	1,071	1,169	1,650
Total Energy Required		9,859	9,939	10,248	10,552	11,307
<b><u>Energy Resources (GWh)</u></b>						
Merom		6,309	6,299	6,288	6,375	6,833
Ratts		596	421	306	345	426
Power Purchase		1,342	1,338	1,372	1,420	1,739
Holland		399	372	439	448	540
Worthington		52	48	66	66	85
Lawrence County		81	72	94	94	119
Clark-Floyd Landfill		26	26	26	26	26
Story County Wind		72	72	72	72	72
Other/Future Renewables		197	493	637	715	763
Spot Purchases		786	797	949	992	704
Total Resources		9,859	9,939	10,248	10,552	11,307

**Table 8: Energy Requirements and Planned Resources**

*Source: PRS and Integrated Resource Plan*

Table 7 and Table 8 demonstrate that Hoosier Energy has sufficient resources to serve member and contract needs.

### 3.2 Significant Issues Affecting Resources

#### 3.1.7 Environmental Factors

##### SO<sub>2</sub> and NO<sub>x</sub> Emission Reduction Requirements under CSAPR

On August 8, 2011, the Cross-State Air Pollution Rule (CSAPR) was finalized to replace the Environmental Protection Agency's Clean Air Interstate Rule (CAIR). Unlike CAIR, CSAPR designates an overall state cap for annual emissions for SO<sub>2</sub> and NO<sub>x</sub>, as well as individual allocations on a unit by unit basis. This means that trading allowances outside of an individual state increases the risk of EPA determining that the state has exceeded its cap and those who have traded allowances will be held liable at a 2-1 penalty.

Indiana is one of the 3 top states for required emission reductions due to its dependence on coal fired generation. CSAPR requires Indiana to reduce SO<sub>2</sub> emissions beginning in 2012 by

approximately 80% by January 1, 2014. The availability of SO<sub>2</sub> allowances for sale/trade is questionable under such a stringent cap, particularly in the first few years as Indiana utilities decide when to decommission less efficient facilities. Although Indiana utilities are discussing cooperating on providing real-time information on allowance utilizations within Indiana, there is significant risk in relying on any “agreement” that is not developed with legal safeguards.

*Consent Decree with Environmental Protection Agency*

On November 4, 2010, Hoosier Energy finalized a consent decree with the EPA and the state of Indiana that requires reduction in primary pollutants commencing in 2011. Under the terms of the Consent Decree, Hoosier Energy is required to limit the level of SO<sub>2</sub> and NO<sub>x</sub> emissions on system-wide basis, as well as on a unit basis. Hoosier Energy is also required to limit Particulate Matter emissions on a unit basis at both Merom and Ratts and limit H<sub>2</sub>SO<sub>4</sub> emissions at Merom on a unit basis.

The reduction in SO<sub>2</sub> emissions mandated by the CSAPR standards are more stringent than required by the Consent Decree, while the NO<sub>x</sub> emissions reductions mandated by the Consent Decree are more stringent than the CSAPR standards. Hoosier Energy must comply with the more stringent of the individual requirements.

Hoosier Energy’s fundamental strategy for environmental compliance is rooted in a least cost philosophy through a coordinated effort encompassing fuel selection, installation and operation of environmental control systems, and reliance on emission markets. Environmental control technologies are evaluated on an ongoing basis for potential benefits to reduce the overall cost of compliance.

Table 9 summarizes the SO<sub>2</sub> emission reduction requirements under CSAPR.

Hoosier Energy REC, Inc. Summary of SO <sub>2</sub> Emission Reduction Requirements Under CSAPR									
SO <sub>2</sub> Allowances				2012 Requirements			2014 Requirements		
Unit	SO <sub>2</sub> Emission Rate (lbs/MWh)	Expected Annual Emissions (tons)	CAIR Emissions per Consent Decree - 2011	CSAPR Allowances	Reduction Required	% Reduction	CSAPR Allowances	Reduction Required	% Reduction
Ratts	23.750	7,305	14,000	4,017	(9,983)	71%	2,222	(11,778)	84%
Merom	1.728	8,620	14,500	16,864	2,364	0%	9,328	(5,172)	36%
<b>Total</b>		<b>15,925</b>	<b>28,500</b>	<b>20,881</b>	<b>(7,619)</b>	<b>27%</b>	<b>11,550</b>	<b>(16,950)</b>	<b>59%</b>

Assumptions for Expected Generation			
Average Forecast			
Unit	Capacity Factor	Capacity (MW)	Generation (MWh)
Ratts	28%	241	595,603
Merom	73%	980	6,795,224

**Table 9: Summary of SO<sub>2</sub> Emission Reduction Requirements Under CSAPR**

Table 10 summarizes the NO<sub>x</sub> emission reduction requirements under the Consent Decree.

Hoosier Energy REC, Inc. Summary of NO <sub>x</sub> Emission Reduction Requirements Under Consent Decree									
NO <sub>x</sub> Allowances				2013 - 2014 Requirements			2015 Requirements		
Unit	NO <sub>x</sub> Emission Rate (lbs/MWh)	Expected Annual Emissions (tons)	Nox System Emissions per Consent Decree - 2012	Nox System Emissions per Consent Decree - 2013 - 2014	Reduction Required	% Reduction	Nox System Emissions per Consent Decree - 2015	Reduction Required	% Reduction
Ratts	1.995	682	-	-	-	-	-	-	-
Merom	0.960	3,221	-	-	-	-	-	-	-
<b>Total</b>		<b>3,903</b>	<b>5,869</b>	<b>5,395</b>	<b>(474)</b>	<b>-8%</b>	<b>4,800</b>	<b>(1,069)</b>	<b>18%</b>

Assumptions for Expected Generation			
Average Forecast			
Unit	Capacity Factor	Capacity (MW)	Generation (MWh)
Ratts	28%	241	595,603
Merom	73%	980	6,795,224
<b>Total</b>			

**Table 10: Summary of NO<sub>x</sub> Emission Reduction Requirements Under the Consent Decree**

Mercury Emission Reduction Requirements Under CAMR

On March 15, 2005, EPA issued the Clean Air Mercury Rule (CAMR) to permanently cap and reduce mercury emissions from coal-fired power plants for the first time. Indiana, through IDEM, is also in the process of developing a state rule to implement CAMR. CAMR requires individual states to adopt rules by November 2006. Indiana has the option of deviating from CAMR and adopting a more stringent mercury reduction requirement, such as the one proposed by the Hoosier Environmental Council (HEC), which calls for a 90% reduction at each facility with no cap and trade. The current expectation is that Indiana will model its state rule after CAMR; however, there is strong public support for HEC's proposal as well. Because of the competing mercury reduction proposals, IDEM has indicated it will likely not meet the November 2006 rule development deadline.

On February 8, 2008, the U.S. Court of Appeals for the District of Columbia ruled that EPA's 2005 Clean Air Mercury Rule violates the Clean Air Act by evading mandatory cuts in mercury pollution from coal-burning power plants. The Clean Air Act requires the EPA to identify sources and develop the most stringent standards to control emissions from those sources. The court ruled that the EPA erred when it took power plants off the list of hazardous pollution sources when issuing the Clean Air Mercury Rule. The decision invalidates the EPA's controversial cap-and-trade approach to regulating mercury emissions that would not have taken full effect until well beyond 2020. The EPA, perhaps with additional guidance from Congress and/or the Courts, will now determine the timeframe to develop mercury emissions standards for existing power plants.

Going forward, EPA has begun to develop new, more stringent hazardous air pollutant regulations that rely on maximum achievable control technology or the so-called MACT standard. The final rule is expected to be issued in late 2011. EPA could potentially look at more pollutants, i.e. arsenic, acid aerosols, dioxin, etc., and determine if they should be included.

Solid Waste Disposal

Annually, Hoosier Energy files Form EIA 923 with the United States Department of Energy Information Administration. On page 2 of Form 923, the Coal Combustion By-Products (CCBP) quantities generated for the year are listed. The quantity of CCBP generated in a given year is a function of the amount of coal burned and its quality.

<b>2010 Data</b>	<b>Ratts</b>	<b>Merom</b>	<b>Total</b>
Fly Ash Generated (Tons)	46,800	264,600	311,400
Bottom Ash Generated (Tons)	8,600	29,500	38,100
FGD Sludge Generated (Tons)	0	566,100	566,100
Stabilizing Additive Used	0	11,500	11,500
<b>Total CCBP (Tons)</b>	<b>55,400</b>	<b>871,800</b>	<b>927,200</b>

**Table 11: Hoosier Energy By-Products Summary**

Despite Hoosier Energy's interest in promoting utilization of its CCBP materials, onsite disposal is the destination for the vast majority of the combustion by-products generated by Hoosier Energy's facilities. The Merom Station disposes of its CCBP in an onsite landfill regulated by IDEM. The current active disposal area, as approved, is capable of providing volumetric capacity for 18 years of station operation. An additional area of the plant site is being developed over the next two years to provide an additional 25 years of disposal capacity.

The Ratts Station disposes of its CCBP in wet impoundments (ash ponds). Four ash ponds have been constructed to date. Two ponds are currently active. In 2011, an on-site landfill was developed on top of one of the inactive ash ponds. The ash ponds are dredged and removed as is allowed to be dewatered prior to placement in the new landfill. IDEM regulates the wastewater discharge from the ash ponds under the National Pollution Discharge Elimination System permit program and the landfill through its solid waste program.

For both plants, the most significant environmental effect associated with onsite disposal of CCBP is groundwater contamination. At Merom, as a condition of the solid waste disposal permit issued by IDEM, a groundwater-monitoring program has been in service for over 26 years and will continue until well after the disposal operation is discontinued. Thus far there has been no indication of off-site groundwater contamination. With the addition of the landfill at Ratts, the plant has begun to monitor groundwater also.

#### Hazardous Waste

Per the Resources Conservation and Recovery Act (RCRA), each of Hoosier Energy's generating stations is considered a "conditionally exempt small quantity generator of hazardous wastes." To qualify for this exemption, each of Hoosier Energy's generating stations produce less than 100 kilograms of hazardous waste per month. Hazardous wastes are accumulated onsite and transported off site for disposal as necessary. All applicable regulatory requirements are followed. Also, as allowed under RCRA, both stations burn used oil generated onsite for energy recovery.

### **3.1.8 Economic Factors**

#### Fuel Prices and Fuel Practices

Hoosier Energy fuel procurement activities are essentially made up of the following material acquisitions:

- Coal
- Natural gas
- Lime (for flue gas desulfurization sludge stabilization)
- Limestone (a reagent for SO<sub>2</sub> removal)
- Fuel oil (for unit start up)
- Chemical additives for FGD
- Ammonia for SCRs

An assessment of the present cost and availability shows that coal has the most significant impact on Hoosier Energy costs – equal to roughly 85% of fuel-related program costs. Table 12 shows Hoosier Energy’s recent historical coal costs.

Fuel Cost (\$ per MWh)	2008	2009	2010
Ratts	14.38	16.93	25.03
Merom	15.67	15.12	16.49

**Table 12: Recent Historical Fuel Costs**

Currently, Hoosier Energy acquires all of its annual coal requirements under a blend of short-term and longer-term contracts. Historically, a limited percentage of annual requirements have been acquired on the spot market.

Fuel inventory practice is based on target, minimum inventories subject to prevailing market conditions. Hoosier Energy currently maintains a target minimum of a 20-day supply at the Ratts generation facility, and a 45-day supply at the Merom generating facility.

Hoosier Energy has the option of receiving coal shipments either by rail or truck at the Merom generating facility, while the Ratts generation facility is currently 100% truck delivery.

Natural Gas and Transportation

Summer and Winter gas service to the Worthington, Lawrence County and Holland stations are secured on a short-term basis. Adequate pipeline capacity is available to serve the requirements of all gas fired generating facilities.

Hourly System Lambda and Hourly Demands

Appendix B contains Hoosier Energy’s actual demand for all hours of 2010.

Following the implementation of the MISO Day 2 market, the hourly system lambda is not a meaningful calculation. As an alternative, Hoosier Energy has provided its Day Ahead load zone price for all hours of 2010 as these prices are consistent with a system lambda. These prices have been provided for both the LMP price, including congestion and losses, and the energy component only. These LMPs are provided in Appendix C.

Avoided Cost Calculation

Table 13 presents the avoided costs for 2011 in dollars per kW-month and dollars per MWh. These rates are developed consistent with the IURC’s QF calculation.

	Avoided Fixed Cost (\$/kW-mo)	Avoided Energy Cost (\$/MWh)
<b>2011</b>	3.34	31.0

**Table 13: Avoided Costs**

### **3.1.9 Transmission Resources**

#### Analysis of Existing Utility Transmission System

Hoosier Energy cooperates with all utilities within the Midwest ISO as well as our regional reliability council, ReliabilityFirst Corporation (RFC), to ensure that system changes are compatible with an orderly, economic and reliable development of the entire grid.

Hoosier Energy currently has physical interconnections with the following utilities:

- Big Rivers Electric Corp. (Big Rivers)
- Duke Energy Indiana
- Vectren
- Indianapolis Power & Light Company (IPL)

Hoosier Energy's transmission system consists of more than 1,500 miles of transmission line at 69 kilovolts (kV), 138 kV, 161 kV, and 345 kV. Approximately 55 percent of the member systems' power requirements are delivered to Hoosier Energy substations and delivery points using the transmission facilities of Duke Energy Indiana, Vectren, IPL, American Electric Power (AEP) and LG&E Energy. The remainder is delivered through Hoosier Energy's transmission facilities.

Hoosier Energy's system presently includes twenty-one primary substations and 366 distribution substations/delivery points. The distribution substations that serve the member systems are owned in part by Hoosier Energy and the member system. Hoosier Energy owns all the high voltage equipment, transformers, regulators, metering, the low voltage bus disconnect, all associated structures, the property and all in-ground fixtures (foundations, grounding, fencing, etc.). The member systems own the low voltage equipment and structures used for the service to the distribution circuits. Hoosier Energy performs the required maintenance on the entire substation and is responsible for upgrading of the transformer, etc., to meet increased requirements.

Per FERC Form 715, Hoosier Energy's bulk transmission facilities (138 kV and above) are expected to perform well in the future as most of the bulk transmission facilities are currently about 50% or less of the transmission line rating. Any interchange purchase or sale that would appear to jeopardize the reliability of the transmission system would not be considered without detailed analysis.

The Worthington and Lawrence resources were sited to avoid expensive transmission system upgrades.

Hoosier Energy included the potential avoided transmission cost in the evaluation of DSM resources. The methodology is detailed in the Energy Efficiency and Demand Response Potential Report attached as Appendix A1.

Hoosier Energy has installed capacitor banks on the 69kV, 138kV and 161kV transmission system to improve voltage levels, reduce var flow among interconnected systems and reduce system losses. Hoosier Energy makes every effort to implement loss reduction practices in daily operating practice.

Future Transmission Resources

Hoosier Energy is a founding transmission owning member of the Midwest Independent Transmission System Operator (ISO). The Midwest ISO now has over 30 electric utility transmission owning members, who have voluntarily established this independent system operator. The Midwest ISO began transmission system administration operations in December of 2001. Transmission services are now administered by the MISO and service is governed by the Midwest ISO tariff.

As required by PART VI of the FERC Form 715 Annual Transmission Planning and Evaluation Report, Hoosier Energy performed an evaluation of its transmission system performance. This evaluation concluded that “the Hoosier Energy bulk transmission system (138 kW and above) is expected to perform well under currently anticipated load levels and power transfer levels. No bulk transmission constraints have been identified.”

As a part of this filing, Hoosier Energy also completed an Indiana specific power flow study and an evaluation of the reliability criteria of Hoosier Energy’s transmission facilities. The descriptions of the reliability criteria for transmission planning and the assessment practice used in transmission planning are contained in FERC Form 715. In addition, an evaluation of the reliability criteria in relation to present performance and the expected performance of Hoosier Energy’s transmission can also be found within this report. FERC Form 715 is attached to this IRP as Appendix J.

## **Section 4: Selection of Future Resources**

## 4 Selection of Future Resources

Pursuant to 170 IAC 4-7 Section 7, this section presents the process that Hoosier Energy uses to select future resources. The section is broken into two subsections. The first subsection describes the screening of the supply-side resources. The second subsection describes the DSM screening.

### 4.1 Resource Screening

Table 14:14 shows the supply-side resources that are generally considered. These possible capacity alternatives were evaluated based on cost, reliability and a maturity of technology bases. The cost information in this section was obtained from various industry and market resources, the State Utility Forecasting Group, the EPRI Technical Assessment Guide and Hoosier Energy consultants.

<b>Supply-Side Resources</b>
Market Power Purchases
Long-Term Power Purchases
Combustion Turbines
Combined Cycle
Baseload (Coal)
Distributed Generation
Non-Utility Generation
Renewable Resources
New Technologies
Demand-Side Resources

**Table 14: Supply-Side Resources Considered**

Initially to consider each of these technologies, a qualitative screening analysis was performed, where Hoosier Energy identified those supply-side options suited to the Hoosier Energy system, and eliminated those supply-side options that were inappropriate based on the following criteria:

- Does the capacity resource match Hoosier Energy's need? (How well does the technology meet Hoosier Energy's load shape objectives, as defined in Section 3.2 Future DSM Resource Assessment?)
- Is the supply-side addition appropriate for Hoosier Energy's service territory?
- Is the technology commercially available and reliable?
- Are the costs and reliability of the technology quantifiable?

Any supply-side option that passed the qualitative screening was then promoted to a second step where it was quantitatively evaluated. For the quantitative screening, the capacity alternatives were evaluated based on the previously mentioned items of cost, reliability, and the maturity of technology.

The quantitative screening can be thought of as a series of three tests as illustrated below.

1. **Installed Cost:** Computation of installed cost in \$/kW for each supply-side option.
2. **Monthly Fixed Costs:** The fixed cost to install the technology which includes debt service costs. This value is then leveled to arrive at a monthly cost on a present value basis.

3. **Equivalent Average Cost:** The average annual cost in \$/MWh which includes both fixed (capital and O&M) and variable costs to generate electric power at a certain capacity factor. The computation represents a “levelized” rate so that costs are presented on a present value basis.

The supply-side resources are then compared against the aforementioned tests to arrive at the least cost supply-side resource plan.

#### **4.1.1 Market Power Purchases**

The wholesale power market has developed standard products that are commonly traded by market participants. Purchases/sales are usually in increments of 50 MW for specific hours of the day or week, such as on-peak hours (5x16), around-the-clock (7x24), weekend peak hours (2x16), and off-peak only (7x8). Forwards and options are generally traded for the following periods of the year:

- Winter (January and February)
- March and April
- May
- June
- Summer (July and August)
- September
- Fourth quarter (October, November, December)

Products for an individual month generally begin trading within 30 days of delivery (i.e., April may be secured in late February).

The two most common products are 5x16 monthly forwards and options. Under a monthly forward contract, energy is on a take-or-pay basis every peak day of the month (usually 20 or 21 days) for the 16 peak hours of the day. This amounts to a capacity factor of approximately 45% making forwards an intermediate resource. Daily options are available for the same 16-hour peak period, but the buyer has a day-ahead option on whether to take the power or not. Therefore, options are more of a peaking resource but still lack the intra-day flexibility and require a longer daily take period (16 hours) than a combustion turbine.

With the Midwest ISO Market development, the industry continues to transition to financial products and these market power purchases are now primarily risk management tools.

Hoosier Energy actively purchases both forward and spot market power to serve member and contract load. Hoosier Energy also actively sells power in the wholesale market to maximize the value of resources. Hoosier Energy is a member of ACES Power Marketing (APM), which acts as Hoosier Energy’s agent for wholesale transactions. APM has 18 cooperative members and therefore has a working knowledge of the power market. APM uses this knowledge to develop proprietary market pricing information for a variety of forward products, including forwards and options. In addition, APM monitors the internet-based market exchanges to track the power market. Hoosier Energy uses information from APM and other sources to make resource decisions.

#### **4.1.2 Long-Term Power Purchases**

Long-Term Power Purchases represent purchases that are at least one year in length and up to 20-25 years. Long-Term Purchases allow for a more diverse portfolio of generation assets, which tends to reduce overall risk (operating, unit contingent, etc.). Long-Term Purchases can reduce operating risk, unit contingent risk, and diversify fuel and power supplies. Long-Term Purchases also provide the opportunity to add a resource without taking on construction and operating risk.

Hoosier Energy recognizes the value of purchases as part of a diverse portfolio of generation resources. Hoosier Energy will continue to seek power purchases as not simply an alternative but also as a complimentary component to owned generation assets.

#### **4.1.3 Combustion Turbines**

Combustion turbines (CT) are generally used for peaking needs and to satisfy capacity requirements. The primary fuel for CT is natural gas with some potential for diesel as a back-up fuel. The key characteristics of CTs include low capital costs, quick start capability, short construction time and somewhat high variable cost. A shorter decision-making lead-time of three years (for procurement, licensing and construction) makes CTs an attractive option from a flexibility standpoint.

Hoosier Energy monitors the capacity and variable costs of the most likely CT resources, including General Electric's LM6000, 7EA and 7FA machines. Hoosier Energy's research is based upon quotes from vendors and consultants as well as industry publications.

#### **4.1.4 Combined-Cycle Generation**

Combined-cycle (CC) capacity is generally favorable for providing intermediate energy needs. While variable operating costs are generally lower than CTs due to greater efficiency, capital costs are higher. CCs require a larger footprint and much greater amounts of water for cooling, and CCs experience significant efficiency degradation if cycled. Therefore, in order to recoup higher fixed costs, CCs are likely to be economical with annual capacity factors above 30%.

One key feature of CCs is their ability to be "staged-in" meaning that CTs that are already on the system may be converted to CC through the addition of a steam recovery cycle. This not only improves the efficiency but also adds capacity. Generally, two CTs are combined with a steam recovery unit to make a CC unit.

Combined-cycle resources have traditionally been at a disadvantage in the Midwest region because the existing resource fleet is significantly weighted in coal-fired, baseload units. The incremental cost of the older and less-efficient coal facilities in the Midwest has tended to drive the forward market and supply the region's intermediate resource needs. This created a negative spark spread for CCs where the price for a 5x16 forward was less than the cost to generate that power from a gas-fired, combined cycle resource. However, due to environmental regulations and coal cost increases these older, less-efficient coal facilities are no longer inexpensive. In addition, demand has outpaced the addition of new baseload resources. These factors have forced natural gas-fired facilities to become increasingly on the margin in the forward markets of the Midwest region.

Future environmental regulations are likely to improve the economics of natural gas-fired combined-cycle facilities due to the CO<sub>2</sub> emission advantage versus coal generation.

#### **4.1.5 Baseload Coal Generation**

Baseload coal generation is a supply-side option for consistent, baseload demand and energy needs. Baseload coal units are characterized by high capital costs with low operating and fuel costs.

A new pulverized coal unit must be built with Best Available Control Technology. Nitrogen oxide (NO<sub>x</sub>) emissions will likely be controlled through the use of low-NO<sub>x</sub> burners, an over-fire air system, and a selective catalytic reduction (SCR) system. Sulfur dioxide (SO<sub>2</sub>) emissions will likely be controlled through the installation of a wet limestone forced oxidation flue gas desulfurization system or wet FGD. A baghouse would likely be installed upstream of the wet FGD system for particulate matter (PM) control. Other potential emission control devices include activated carbon injection (ACI) for mercury control and a wet electrostatic precipitator (ESP). ACI may not be required due to the relatively high chlorine content of Illinois Basin Coal. The need for the wet ESP is dependent upon the sulfur level of the coal. If required, the wet ESP would be placed downstream of the wet FGD system to control H<sub>2</sub>SO<sub>4</sub> emissions.

The economics of baseload coal versus combined cycle is highly dependent upon a number of factors, including environmental costs, transmission conditions, siting issues and, most importantly, the price of natural gas, which has again experienced unprecedented volatility. In general, coal-fired generation can be competitive with CC generation at capacity factors greater than 45% assuming no carbon legislation. The potential for carbon legislation, which will likely weigh heavier on the cost of coal-fired generation, dramatically changes the economic cross-over point. For example, a \$50 per ton carbon tax allows new CC generation to remain competitive with coal-fired generation at capacity factors as high as 75-85%.

#### **4.1.6 Distributed Generation**

Diesel generators and small gas turbines are the primary technology for distributed generation alternatives to meet Hoosier Energy's peaking power requirements. The cost of distributed generating capacity is estimated to be about \$2,000 per kW depending upon a number of factors, including the type of engine (diesel reciprocating engine or gas turbine), size, manufacturer, emission level, efficiency, etc. Hoosier Energy uses vendor quotes as well as participation in industry organizations, such as EPRI, as sources for this data.

Given the higher capital cost, the economics of distributed generation does not compare favorably to central station power without a customer specific need for increased reliability and/or an economically advantageous fuel source. Landfill and/or coalbed methane gas projects, which have an economic fuel source and may qualify for renewable benefits (such as renewable energy credits or RECs) can be economic versus central station power.

#### **4.1.7 Non-Utility Generation**

As discussed in Section 2.2.7, Hoosier Energy does not anticipate any significant amount of Non-Utility Generation to be added to the system. Hoosier Energy has investigated cogeneration

projects with several large industrial customers in the past and none proved to be economic. At this time, this potential resource remains too uncertain to include in the IRP.

#### **4.1.8 Renewable Resources**

Renewable resources are technologies that draw energy from the sun, wind, oceans and rivers (hydro), plant matter and geothermal heat; in other words, use of the resources does not change their future availability. Other resources considered renewable are technologies fueled by landfill gas, coalbed methane and biomass. These technologies hold promise as generation alternatives in localized applications or for specific regions of the country as continued technological advances and experience reduce the risk related to their use and improve their efficiencies.

The Energy Policy Act of 2005 places significant emphasis on preserving scarce natural resources and protecting the environment. This cause is gaining national attention as new technological advancements and subsidies drive down the cost of some renewable resources. Hoosier Energy is committed to renewable energy as part of our corporate resource planning effort in support of environmental awareness and national energy issues facing the country.

24 states plus the District of Columbia have adopted a requirement that utilities include a certain percentage of renewable resources within the total resource mix. This is known as a Renewable Portfolio Standard (RPS). Legislation requiring Indiana utilities to adopt a RPS has been proposed in the Indiana Legislature the last few years and debate continues.

Energy from wind resources has become a prominent component of most RPS discussions as cost reductions due to technology improvements and increases in traditional generation costs have combined to allow wind to be more competitive with fossil fuel resources. The problem with wind generation, especially in Indiana, is the intermittent nature of the resource. Although the cost of wind generation is becoming more competitive with coal-fired generation, the value of wind generation is significantly lower due to the intermittent and unpredictable nature. Another hurdle for wind resources is the availability and expense of sufficient transmission infrastructure to move the wind energy from the appropriate resource region to the load centers. This is a challenge that both utilities and the regional transmission organizations must solve.

The Hoosier Energy Board of Directors adopted a Renewable Energy Program (Board Policy 5-2) that defines targets and evaluation criteria for renewable projects. Hoosier Energy's policy sets a goal to secure 2% of total energy generated from renewable resources by the end of 2011 with additional resources going forward matching 5% of member energy growth. Currently, Hoosier Energy is pursuing renewable resource opportunities not only within the Hoosier Energy service territory but also within the Midwest ISO footprint and within neighboring states.

Incorporating additional economically viable renewable energy resources will be considered in conjunction with least cost and reliability priorities of the integrated resource plan. Likewise, alternative energy projects such as cogeneration and coal waste technologies may or may not qualify as renewable energy but could prove to economically provide supply-side diversification.

#### **4.1.9 New Technologies**

New technologies that may be viable in the future include fuel cells and battery storage. A fuel cell is a device that produces direct current electricity through an electrochemical process using a

hydrogen rich gas such as natural gas or propane. No combustion of fuel takes place during the process, which makes the technology environmentally attractive. The only by-products are heat (via hot water or steam) and carbon dioxide which is not considered a regulated pollutant.

Fuel cells are an emerging technology and there are very few commercial applications. Fuel cells can be classified based upon the electrolyte materials used and the cell's operating temperatures.

- Phosphoric Acid Fuel Cell (PAFC). This type of cell is the only type that is commercially available for purchase. ONSI Corp. (a subsidiary of United Technology) is the only manufacturer. PAFC operate at 400 degrees F and can produce hot water or low pressure steam. PAFC is the most proven of all fuel cells. Disadvantages include high capital cost, low efficiency, and lack of sustainable market dominance.
- Polymer Electrolyte Membrane (PEM) Fuel Cell. PEM fuel cells are smaller than most fuel cells, operate at lower temperatures (about 200 degrees F), and have lower capital costs than all fuel cells (target price of \$1,000/kW). These fuel cells will likely be used in residential applications and find niches in the automobile transportation market. Ballard Power (Burnaby, Canada) is the technical leader. PEM fuel cells suffer from too low efficiencies, unproven fuel reformers, and cost challenges similar to PAFC.
- Carbonate Fuel Cells. These fuel cells operate at very high temperatures (>1,200 degrees F) because of the molten lithium potassium carbonate electrolyte. This high temperature environment obviates the need for an external fuel reformer (which lowers the cost); however, the molten carbonate presents design challenges (which increases cost). Carbonate fuel cells have higher efficiencies than PAFC or PEM fuel cells. Carbonate fuel cells will be well suited for large industrial applications where cogeneration of steam is needed. ERC based in Danbury, Connecticut is the technical leader. Gas Research Institute predicts commercialization may take another 3 or 6 years.
- Solid Oxide Fuel Cells. These fuel cells operate at very high temperatures (>1,800 degrees F) and use ceramics and very rare metals as the electrolyte. Solid Oxide fuel cells are more efficient (60-80%) and will likely be targeted for residential or small commercial applications. Westinghouse is leading the effort in research and development.

Fuel cells have a great deal of technical challenges to overcome before successful commercialization takes place. One challenge in particular is the development of a cost effective fuel reformer that converts the fossil fuel into hydrogen. While research looks promising, the fuel reformer is not perfect and sometimes fails and poisons the fuel cell by passing carbon monoxide and carbon dioxide through the electrolyte.

Another significant challenge is cost. Fuel cells require expensive and sometimes rare earth metals such as yttrium and zirconium. Furthermore, fuel cells are difficult and time-consuming to manufacture. While costs may decline in the future as research continues, fuel cells remain an expensive technology for most applications. At this time, it is not prudent for Hoosier Energy to commit a significant amount of financial resources on technologies that are not "mature."

#### **4.1.10 Demand-Side Resources**

Hoosier Energy completed an extensive analysis of energy efficiency and demand-side management programs in 2009. This work was performed by GDS Associates and Summit Blue Consulting. Attached as Appendix A1 is the Energy Efficiency & Demand Response Potential Report for the Hoosier Energy Member Territory. This Report provides detailed descriptions and analysis of all demand-side programs considered and recommended for Hoosier Energy. Hoosier Energy's 2011 Demand Side Management report is attached as Appendix A2. This annual report provides an overview of Hoosier Energy's Demand Side Management programs along with a summary of the effectiveness of these programs during the most recent year. As is reflected in the report, Hoosier Energy's DSM efforts helped its customers save over 34,000 MWh in 2011 and reduced Summer peak demand by 9.4 MW.

#### **4.2 Future Resource Assessment**

As a response to recent and proposed environmental regulations, Hoosier Energy is currently performing an analytical review of its potential long-term resource options. Following approval by its Board of Directors, Hoosier Energy expects to file this assessment with the IURC in March 2012.

#### **4.3 Future Resource Planning Criteria**

##### **4.3.1 Reserve Margin**

Reserve margin is likely the most common reliability measure. Reserves are a necessary addition to the resource requirement plan and are used to offset the effects of contingencies that arise either because of generation unavailability or changes in load (e.g. weather effects, customer mix and usage). Reserve margin is defined as follows:

$$\text{Reserve Margin} = \frac{(\text{Total Resources} - \text{Total Load})}{\text{Total Load}}$$

As a member of ReliabilityFirst (RFC), Hoosier Energy is required to adhere to specific standards regarding resource adequacy. Specifically, RFC requires the calculation of a planning reserve margin that will result in the sum of the probabilities for loss of load for the integrated peak hour for all days of each planning year being equal to 0.1. This is commonly referred to as a Loss of Load Expectation (LOLE) analysis based upon a one day in 10 years criterion.<sup>15</sup>

There have been several subsequent filings incorporating various changes to the Midwest ISO's RAR and refinements continue to be made. Generally, that portion of the TEMT became effective in June 2009. The Midwest ISO requires that each load serving entity meet a Planning Reserve Margin that is assigned on a ICAP (installed capacity) basis. This reserve requirement is then adjusted for load diversity within MISO to provide each entity with its reserve margin on a UCAP (unforced capacity) basis. While the Midwest ISO requires Hoosier Energy to meet a reserve margin of 3.81% on a UCAP basis for the 2011 – 2012 Planning Year, Hoosier Energy believes that it is appropriate for it to use a higher reserve margin for longer-term planning periods. For purposes of this IRP, Hoosier Energy is assuming a reserve margin of 5.0%.

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<sup>15</sup> ReliabilityFirst standard BAL-502-RFC-02.

Each generation resource maximum capacity value must be adjusted based upon the unit's historical forced outage rate as supported by GADS data.

The reserve margin requirement is therefore subject to change in the future due to modifications to either the Midwest ISO's LOLE analysis and/or to the historical forced outage rates of the generation resources. The capacity figures found in Table 7 reflect values for the planning year beginning June 2011. As a response to recent and proposed environmental regulations, Hoosier Energy is currently performing an analytical review of its potential long-term resource options. Following approval by its Board of Directors, Hoosier Energy expects to file this assessment with the IURC in March 2012.

#### **4.3.2 Environmental Analysis**

As Congress proceeds with the development and implementation of a comprehensive national energy policy, it is clear that a key component will be the establishment of a long-term strategy for addressing climate change with particular focus on electric power generation. In the face of growing energy demands and aging power infrastructure, electric utilities need a clear understanding of future emission reduction obligations in order to make the right investment decisions. This includes further reductions of SO<sub>2</sub> and NO<sub>x</sub> as well as future regulatory restrictions on carbon, mercury, particulate and other pollutants.

If a new generation facility is selected through the integrated resource planning process and then proposed, Hoosier Energy will comply with all then-current state and federal environmental regulations.

#### **4.3.3 Transmission Analysis**

From a reliability perspective, Hoosier Energy's preference is to interconnect any new supply-side resource to the Hoosier Energy transmission system. Hoosier would be required to follow Midwest ISO rules for generation interconnections. The Midwest ISO tariff includes rules for both large and small generation interconnection projects. From a market perspective, membership in the Midwest ISO allows consideration of supply-side options that are within the Midwest ISO footprint, with emphasis on options that are both economical and correlated with the locational marginal prices of Hoosier Energy's loads.

Hoosier Energy annually performs an analysis of its transmission network to determine whether the system can reliably support the loads and resources placed upon the network. This analysis, FERC Form 715 Annual Transmission Planning and Evaluation Report (see Appendix J), concludes that "the Hoosier Energy bulk transmission system (138 kW and above) is expected to perform well under currently anticipated load levels and power transfer levels. No bulk transmission constraints have been identified."

A description of the principal planning criteria upon which the design of the transmission network is based can be found in FERC Form 715, which can be found in Appendix J. The evaluation of the reliability criteria in relation to present performance and the expected performance of Hoosier Energy's transmission can also be found within this report.

Hoosier Energy continues to expand the bulk transmission network to meet local and regional system needs as well as changing RFC criteria. Any bulk expansion plans require review and approval of the Midwest ISO through the Midwest ISO's Transmission Expansion Plan (MTEP) process.

Hoosier Energy continuously monitors the need for additional transmission facilities. At the time the need for additional facilities is identified, the timing, type and approximate costs of additional facilities will be developed.

#### ***4.3.4 Reliability Analysis***

At this time Hoosier Energy has not evaluated the impact of each potential resource on system-wide reliability, either transmission or generation. It is clear that resources have varying impacts on system reliability. Generation resources may be used for voltage control and reactive support, spinning reserves, and quick and/or black-start capabilities. In addition, properly sited and operated generation resources are more capable of enhancing or increasing available transfer capability (ATC) or total transfer capability (TTC) than purchased power.

#### ***4.3.5 Market Analysis***

Hoosier Energy is an active participant in many of the Midwest ISO committees and working groups. Hoosier Energy will continue to monitor the LMP market and the potential impact on resource planning.

## **Section 5: Resource Integration**

## **5 Resource Integration**

As a response to recent and proposed environmental regulations, Hoosier Energy is currently performing an analytical review of its potential long-term resource options. Following approval by its Board of Directors, Hoosier Energy expects to file this assessment with the IURC in March 2012.

## **Appendix A1**

# **Energy Efficiency and Demand Response Potential Report**



ENERGY EFFICIENCY & DEMAND RESPONSE POTENTIAL  
REPORT FOR THE HOOSIER ENERGY MEMBER TERRITORY

---

**FINAL REPORT**

*Prepared for:*  
**HOOSIER ENERGY**

*By:*  
**GDS ASSOCIATES  
SUMMIT BLUE CONSULTING**

*November 2009*

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## 1 EXECUTIVE SUMMARY

In January 2008, Hoosier Energy commissioned GDS Associates and Summit Blue Consulting to conduct a study of the potential for electric energy efficiency and demand response programs to reduce electric consumption and peak demand throughout the Hoosier Energy member territory. Recent forecasts predict total sales and summer peak demand in the Hoosier Energy member territory to increase at an average annual rate of more than 1.9% from 2009 through 2028. Improving energy efficiency and lowering electric demand in homes, businesses, and industries can be a cost effective way to address the challenges of high energy prices and the increasing demand for more energy. Consequently, energy efficiency and demand response potential studies are important and helpful tools for building the policy case for demand side management (DSM), evaluating efficiency and demand response as an alternative to supply side resources, and for the development of detailed energy efficiency and demand response program plans.

The detailed report presents results from the evaluation of additional opportunities for energy efficiency and demand response programs in the Hoosier Energy member territory. Estimates of technical potential, economic potential, and achievable potential by the year 2028 (a 20-year period) are provided for the 1) residential and 2) commercial/industrial sectors. Results from a program potential scenario are also presented to estimate the portion of the achievable potential that might be achieved given a specific funding level and program design.

All results were developed using customized residential and commercial/industrial sector-level potential assessment computer models and Hoosier Energy-specified cost effectiveness criteria including the most recent avoided cost projections for electricity and alternate fuels. To help inform these models, actual customer information was collected through site visits with random samples of residential and commercial/industrial facilities. These surveys provided valuable insight regarding the current saturation of electrical equipment and baseline levels of energy efficiency throughout the service area.

The results of this study (summarized herein) provide detailed information on the energy efficiency and demand response measures that are most cost effective and have the greatest potential kWh and kW savings. The data used for this report was based on the best available at the time the models were run – but given the demands and time limits for this project, it is possible that some sources were overlooked. As building and appliance codes and standards change and as energy prices fluctuate, additional opportunities for energy efficiency and demand response may occur while current practices may become out-dated.

Actual energy and demand savings will depend upon the level and degree of voluntary Hoosier Energy member system participation in the DSM programs offered by Hoosier Energy. In addition, the estimated savings are based upon the current forecast of Hoosier Energy budget amounts for DSM programs over the 10 year period of 2009-2018. The budget amounts are subject to annual Hoosier Energy Board review and approval. Therefore, while the figures presented in this report represent best current estimates of savings and costs, actual results will be different.

### 1.1 STUDY SCOPE

The study examines the potential to reduce electric consumption and peak demand through the implementation of energy efficiency and demand response (EE&DR) technologies and practices in residential, commercial, and industrial facilities. The study assessed DSM potential throughout the Hoosier Energy member territory over 20 years, from 2009 through 2028.

The study had six main objectives:

- Evaluate the electric energy efficiency technical potential savings for the Hoosier Energy member territory;
- Calculate the results for the Total Resource Cost (TRC) benefit costs test and determine the electric energy efficiency economic potential savings for the HE member territory;
- Evaluate the potential for achievable savings through electric efficiency programs over a 20 year horizon (2009-2028) for three long term market penetration scenarios (low, base, and high);
- Calculate the potential for achievable peak demand savings through cost-effective demand response programs over a 20 year horizon (2009-2028)
- Examine electric efficiency and demand response program designs and recommend programs for implementation;
- Estimate the potential savings over a ten-year period from the delivery of a portfolio of recommended efficiency and demand response programs based on a targeted savings and budget level. The portfolio of programs has been designed based on an allowable total budget of roughly \$82 million dollars from 2009-2018.

The scope of this study distinguishes among four types of energy efficiency potentials; (1) technical, (2) economic, (3) achievable, and (4) program potential. The definitions used in this study for energy efficiency potential estimates are as follows:

- **Technical Potential** is defined in this study as the complete penetration of all measures analyzed where they were deemed to be technically feasible from an engineering perspective.
- **Economic Potential** is the subset of technical potential resources that are cost-effective based on the Total Resource Cost (TRC) Test.
- **Achievable Potential** is the realistic penetration of energy efficiency measures taking into account real-world market and adoption barriers. This study provides a base case achievable potential scenario as well as a low case and high case. *All achievable figures reported in this study are for the base case unless explicitly stated as low or high.*
- **Program Potential** is the achievable potential possible given specific funding levels and program designs. In the report, program potential results are discussed for a 10-year time period only.<sup>1</sup>

*Limitations to the scope of study:* As with any assessment of energy efficiency potential, this study necessarily builds on a large number of assumptions, from average measure lives, savings and costs, to the discount rate for determining the net present value of future savings. While the authors have sought to use the best available data, there are many assumptions where there may be reasonable alternative assumptions that would yield somewhat different results. Furthermore, while the lists of measures examined in this study represent most commercially available measures, they are not exhaustive. Finally there was no attempt to place a dollar value on some difficult to quantify benefits that may result from the installation

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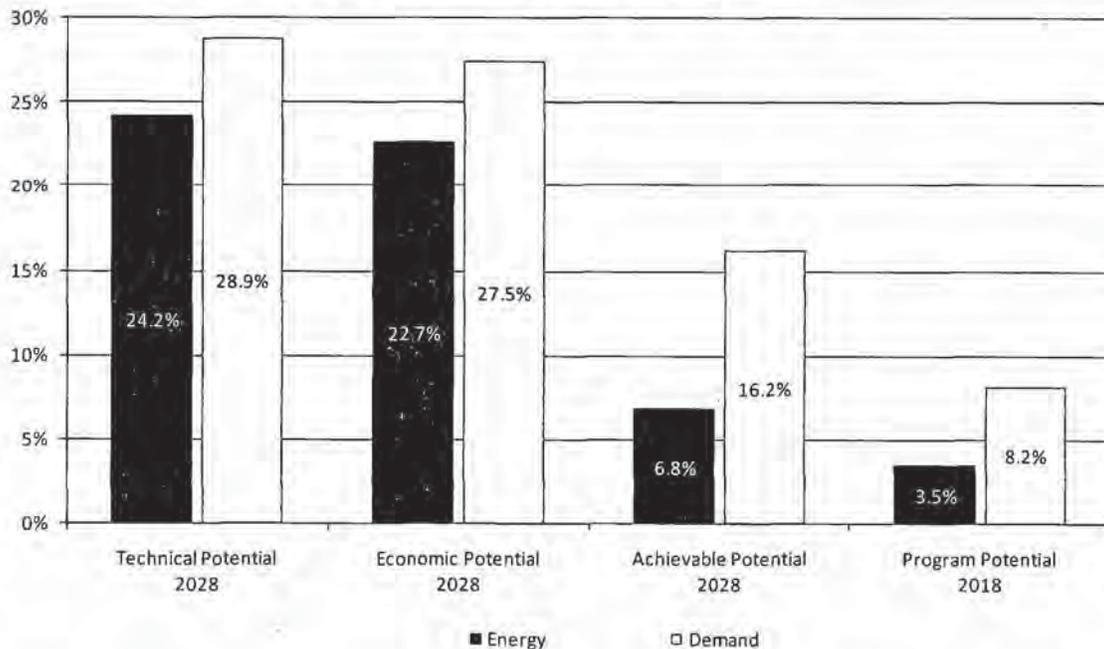
<sup>1</sup> It is necessary for program plans to adapt over time to pursue new goals and promote new technologies. As a result, program potential estimates and recommended program plans were limited to 10 years in this analysis due to the uncertainty associated with forecasting actual savings and utility budgets out into the future.

of some measures, such as increased comfort, which may in turn support some personal choices to implement particular measures that may otherwise not be cost-effective or only marginally so.

## 1.2 RESULTS OVERVIEW

Figure 1-1 shows that cost effective electric demand-side management resources, such as energy efficiency and demand response, can play a significantly expanded role in Hoosier Energy's energy resource mix over the next two decades.

Figure 1-1: DSM Potential Savings Summary



This study examined over 170 energy efficiency measures and 7 demand response programs in the residential and commercial/industrial sectors combined. The findings suggest that Hoosier Energy could save up to 23% of total energy sales and 27.5% of summer peak demand by pursuing *“Economic Potential”* energy efficient technologies.<sup>2</sup> In the base case *“Achievable Potential”* scenario savings of approximately 7% of total energy sales (624,440 MWh) and 16% of peak demand (297 MW) are possible by 2028 when DSM strategies include both energy efficiency and demand response programs.<sup>3</sup>

The *“Program Potential”* is a subset of the *“achievable potential”* and has been designed to aggressively target the most cost-effective measures/programs. This scenario is based on a targeted budget of \$5 and \$7 million in 2009 and 2010, followed by an increase of 5% annually from 2011-2018. In total, the combined budget from 2009-2018 under this scenario is approximately \$81.4 million. This scenario achieves estimated savings in 2018 of 269,350 MWh and summer peak load reductions of 126 MW. This represents approximately 3.5% of total energy sales and 8.2% of summer peak demand in

<sup>2</sup> The demand response analysis was limited to estimates of achievable and program potential, and was based on experience from other utilities. Therefore, technical and economic potential estimates are not available for these programs and only include savings from energy efficient measures.

<sup>3</sup> All energy and demand savings are presented in this report are at the end-consumer level unless specifically noted in this report. Tables 1-1, 10-8, 10-9, and 12-1 all include generation level savings estimates.

2018. The recommended DSM programs discussed in the following section represent the programs included in the program potential.

### 1.3 RECOMMENDED DSM PROGRAMS

A wide assortment of residential and commercial/industrial energy efficiency measures and demand response programs were found to be cost-effective and as a result, Hoosier Energy has numerous options regarding a DSM portfolio. In addition to high efficiency lighting, Hoosier Energy should consider expanding existing offerings or target areas, such as the heating and cooling market, where there is a significant potential for energy efficiency gains. In total, 13 recommended programs were detailed in this analysis.

Table 1-1, presented below, provides the energy savings, demand savings, dollar benefits, and costs for each recommended program. Costs included in this table represent all costs included in the Total Resource Cost test, including all measure costs paid by the utility and/or participant as well as any administrative or overhead costs. Combined, the portfolio of programs is expected to achieve 269,351 MWh in energy savings in 2018, or 3.5% of the 2018 forecasted total energy sales. In addition, the programs are expected to save approximately 126 MW in 2018 (7.5% of summer peak demand).

**Table 1-1: Recommended Program Summary**

	Cumulative Annual MWh Savings - 2018	Cumulative Annual MW Savings - 2018	NPV Benefits \$2009	NPV Costs (Utility + Participants) \$2009	TRC B/C Ratio
<i>\$ in millions</i>					
<b>1 Residential Energy Efficiency Programs</b>					
Residential Lighting Program	72,482	7.4	\$52.4	\$8.0	6.59
Heating & Cooling Program (SH&C/WH)	23,418	17.0	\$90.3	\$43.0	2.10
Home Energy Audit & Weatherization	40,898	9.5	\$38.3	\$18.3	2.09
Touchstone Energy Homes (New Construct	13,432	3.1	\$14.1	\$7.6	1.86
Second Appliance Turn-In Program	12,438	1.0	\$4.6	\$2.3	2.02
Education Campaign	0	0.0	\$0.0	\$3.1	N/A
<b>2 Commercial/Industrial Programs</b>					
C/I Prescriptive - Existing Buildings	89,510	23.9	\$68.1	\$28.8	2.37
C/I Prescriptive - New Construction	3,170	0.9	\$2.3	\$0.8	2.96
C/I Custom	14,002	3.5	\$10.4	\$4.0	2.61
<b>3 Residential Demand Response Programs</b>					
Residential Air Conditioning Control	-	25.3	\$7.2	\$3.1	2.37
Residential Water Heating Control	-	18.1	\$5.4	\$5.5	0.99
<b>4 C/I Demand Response Programs</b>					
Commercial/Industrial AC Load Control	-	5.6	\$1.6	\$1.0	1.70
Commercial/Industrial Interruptible Rates	-	10.9	\$3.3	\$0.4	8.06
<b>Total Savings (End-Consumer)</b>	<b>269,351</b>	<b>126.2</b>	<b>\$298.2</b>	<b>\$125.7</b>	<b>2.37</b>
<b>Total Savings (@ Generation)</b>	<b>294,921</b>	<b>139</b>			

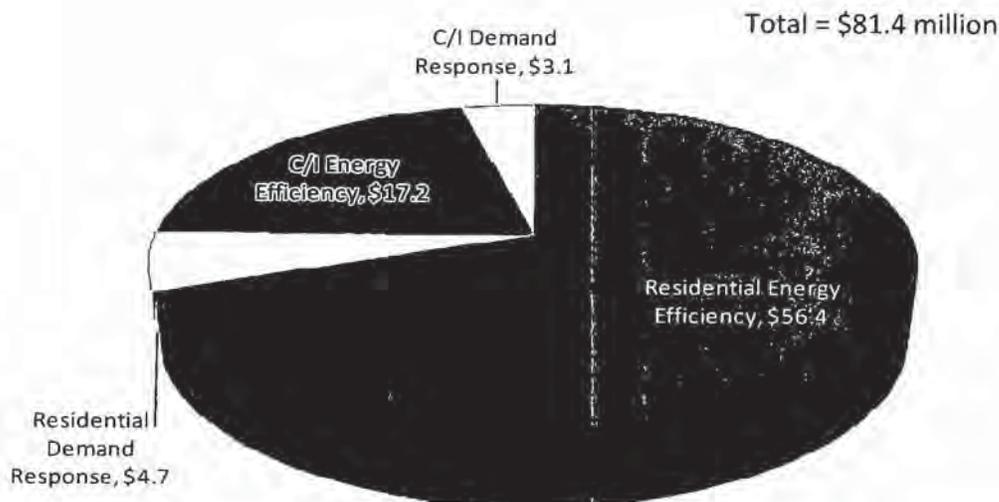
In the residential sector, the recommended programs focus primarily on improving lighting and upgrading HVAC equipment and building shell efficiency. The lighting program, as designed by Hoosier Energy, will provide Compact Fluorescent Light (CFL) bulbs to their members at no cost in exchange for incandescent bulbs. The Home Heating and Cooling Equipment program and Energy Audit and Weatherization program look to improve HVAC, water heating, and building shell efficiency by offering incentives of 35% (or greater) of incremental measure cost for replacing (or adding) efficient technologies in lieu of standard equipment. A portion of the financial burden associated with operating a home weatherization program is expected to be offset by federal stimulus bill funding. In addition, installing load control devices on water heating and air conditioning equipment is expected to help reduce the system summer peak by more than 43 MW in 2018.

In the commercial and industrial sector, a prescriptive program is proposed that includes incentives for purchasing and installing efficient equipment in existing facilities. Prescriptive incentives are offered for a schedule of measures in each end use (i.e. lighting, motors, hot water, HVAC). The prescriptive program is followed by a custom program offering incentives for the installation of innovative and non-standard energy-efficiency equipment and controls in existing facilities. A commercial new construction program is recommended to encourage the energy efficient technology during the construction of new buildings. Finally, there are two commercial/industrial demand response programs that are designed to encourage the reduction of electric consumption during times of high summer demand.

#### 1.4 PROGRAM BUDGET SUMMARY

The 2009-2018 combined Hoosier budget (see figures 1-2 and Table 1-2 below) for the 13 recommended programs is approximately \$81.4 million. The recommended budget is set at \$4.5 million in the first program year, and grows annually, reaching \$10 million in 2018. As shown in Figure 2, energy efficiency programs in the residential sector represent Hoosier's greatest investment in demand-side management, followed by commercial/industrial energy efficiency. The four recommended residential and commercial/industrial demand response programs are estimated to cost approximately \$7.8 million over the next decade. On average, incentives account for 75% of the total budget, while administrative costs (marketing, delivery, outside contractors, and evaluation) account for the remaining 25%.

Figure 1-2: 2009-2018 Hoosier Energy Budget by Sector Based on the 15 Recommended Programs (dollars in millions)





ENERGY EFFICIENCY & DEMAND RESPONSE POTENTIAL  
REPORT FOR THE HOOSIER ENERGY MEMBER TERRITORY

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**FINAL REPORT**

*Prepared for:*  
HOOSIER ENERGY

*By:*  
GDS ASSOCIATES  
SUMMIT BLUE CONSULTING

*November 2009*

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## 1 EXECUTIVE SUMMARY

In January 2008, Hoosier Energy commissioned GDS Associates and Summit Blue Consulting to conduct a study of the potential for electric energy efficiency and demand response programs to reduce electric consumption and peak demand throughout the Hoosier Energy member territory. Recent forecasts predict total sales and summer peak demand in the Hoosier Energy member territory to increase at an average annual rate of more than 1.9% from 2009 through 2028. Improving energy efficiency and lowering electric demand in homes, businesses, and industries can be a cost effective way to address the challenges of high energy prices and the increasing demand for more energy. Consequently, energy efficiency and demand response potential studies are important and helpful tools for building the policy case for demand side management (DSM), evaluating efficiency and demand response as an alternative to supply side resources, and for the development of detailed energy efficiency and demand response program plans.

The detailed report presents results from the evaluation of additional opportunities for energy efficiency and demand response programs in the Hoosier Energy member territory. Estimates of technical potential, economic potential, and achievable potential by the year 2028 (a 20-year period) are provided for the 1) residential and 2) commercial/industrial sectors. Results from a program potential scenario are also presented to estimate the portion of the achievable potential that might be achieved given a specific funding level and program design.

All results were developed using customized residential and commercial/industrial sector-level potential assessment computer models and Hoosier Energy-specified cost effectiveness criteria including the most recent avoided cost projections for electricity and alternate fuels. To help inform these models, actual customer information was collected through site visits with random samples of residential and commercial/industrial facilities. These surveys provided valuable insight regarding the current saturation of electrical equipment and baseline levels of energy efficiency throughout the service area.

The results of this study (summarized herein) provide detailed information on the energy efficiency and demand response measures that are most cost effective and have the greatest potential kWh and kW savings. The data used for this report was based on the best available at the time the models were run – but given the demands and time limits for this project, it is possible that some sources were overlooked. As building and appliance codes and standards change and as energy prices fluctuate, additional opportunities for energy efficiency and demand response may occur while current practices may become out-dated.

Actual energy and demand savings will depend upon the level and degree of voluntary Hoosier Energy member system participation in the DSM programs offered by Hoosier Energy. In addition, the estimated savings are based upon the current forecast of Hoosier Energy budget amounts for DSM programs over the 10 year period of 2009-2018. The budget amounts are subject to annual Hoosier Energy Board review and approval. Therefore, while the figures presented in this report represent best current estimates of savings and costs, actual results will be different.

### 1.1 STUDY SCOPE

The study examines the potential to reduce electric consumption and peak demand through the implementation of energy efficiency and demand response (EE&DR) technologies and practices in residential, commercial, and industrial facilities. The study assessed DSM potential throughout the Hoosier Energy member territory over 20 years, from 2009 through 2028.

The study had six main objectives:

- Evaluate the electric energy efficiency technical potential savings for the Hoosier Energy member territory;
- Calculate the results for the Total Resource Cost (TRC) benefit costs test and determine the electric energy efficiency economic potential savings for the HE member territory;
- Evaluate the potential for achievable savings through electric efficiency programs over a 20 year horizon (2009-2028) for three long term market penetration scenarios (low, base, and high);
- Calculate the potential for achievable peak demand savings through cost-effective demand response programs over a 20 year horizon (2009-2028)
- Examine electric efficiency and demand response program designs and recommend programs for implementation;
- Estimate the potential savings over a ten-year period from the delivery of a portfolio of recommended efficiency and demand response programs based on a targeted savings and budget level. The portfolio of programs has been designed based on an allowable total budget of roughly \$82 million dollars from 2009-2018.

The scope of this study distinguishes among four types of energy efficiency potentials; (1) technical, (2) economic, (3) achievable, and (4) program potential. The definitions used in this study for energy efficiency potential estimates are as follows:

- **Technical Potential** is defined in this study as the complete penetration of all measures analyzed where they were deemed to be technically feasible from an engineering perspective.
- **Economic Potential** is the subset of technical potential resources that are cost-effective based on the Total Resource Cost (TRC) Test.
- **Achievable Potential** is the realistic penetration of energy efficiency measures taking into account real-world market and adoption barriers. This study provides a base case achievable potential scenario as well as a low case and high case. *All achievable figures reported in this study are for the base case unless explicitly stated as low or high.*
- **Program Potential** is the achievable potential possible given specific funding levels and program designs. In the report, program potential results are discussed for a 10-year time period only.<sup>1</sup>

*Limitations to the scope of study:* As with any assessment of energy efficiency potential, this study necessarily builds on a large number of assumptions, from average measure lives, savings and costs, to the discount rate for determining the net present value of future savings. While the authors have sought to use the best available data, there are many assumptions where there may be reasonable alternative assumptions that would yield somewhat different results. Furthermore, while the lists of measures examined in this study represent most commercially available measures, they are not exhaustive. Finally there was no attempt to place a dollar value on some difficult to quantify benefits that may result from the installation

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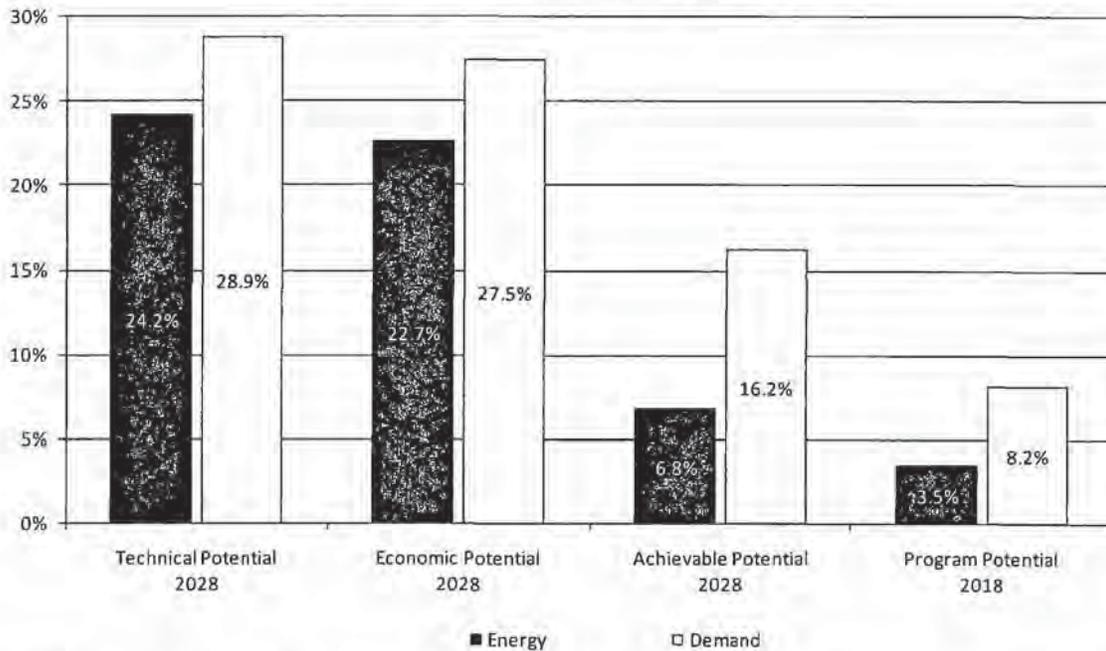
<sup>1</sup> It is necessary for program plans to adapt over time to pursue new goals and promote new technologies. As a result, program potential estimates and recommended program plans were limited to 10 years in this analysis due to the uncertainty associated with forecasting actual savings and utility budgets out into the future.

of some measures, such as increased comfort, which may in turn support some personal choices to implement particular measures that may otherwise not be cost-effective or only marginally so.

## 1.2 RESULTS OVERVIEW

Figure 1-1 shows that cost effective electric demand-side management resources, such as energy efficiency and demand response, can play a significantly expanded role in Hoosier Energy's energy resource mix over the next two decades.

Figure 1-1: DSM Potential Savings Summary



This study examined over 170 energy efficiency measures and 7 demand response programs in the residential and commercial/industrial sectors combined. The findings suggest that Hoosier Energy could save up to 23% of total energy sales and 27.5% of summer peak demand by pursuing ***“Economic Potential”*** energy efficient technologies.<sup>2</sup> In the base case ***“Achievable Potential”*** scenario savings of approximately 7% of total energy sales (624,440 MWh) and 16% of peak demand (297 MW) are possible by 2028 when DSM strategies include both energy efficiency and demand response programs.<sup>3</sup>

The ***“Program Potential”*** is a subset of the ***“achievable potential”*** and has been designed to aggressively target the most cost-effective measures/programs. This scenario is based on a targeted budget of \$5 and \$7 million in 2009 and 2010, followed by an increase of 5% annually from 2011-2018. In total, the combined budget from 2009-2018 under this scenario is approximately \$81.4 million. This scenario achieves estimated savings in 2018 of 269,350 MWh and summer peak load reductions of 126 MW. This represents approximately 3.5% of total energy sales and 8.2% of summer peak demand in

<sup>2</sup> The demand response analysis was limited to estimates of achievable and program potential, and was based on experience from other utilities. Therefore, technical and economic potential estimates are not available for these programs and only include savings from energy efficient measures.

<sup>3</sup> All energy and demand savings are presented in this report are at the end-consumer level unless specifically noted in this report. Tables 1-1, 10-8, 10-9, and 12-1 all include generation level savings estimates.

2018. The recommended DSM programs discussed in the following section represent the programs included in the program potential.

### 1.3 RECOMMENDED DSM PROGRAMS

A wide assortment of residential and commercial/industrial energy efficiency measures and demand response programs were found to be cost-effective and as a result, Hoosier Energy has numerous options regarding a DSM portfolio. In addition to high efficiency lighting, Hoosier Energy should consider expanding existing offerings or target areas, such as the heating and cooling market, where there is a significant potential for energy efficiency gains. In total, 13 recommended programs were detailed in this analysis.

Table 1-1, presented below, provides the energy savings, demand savings, dollar benefits, and costs for each recommended program. Costs included in this table represent all costs included in the Total Resource Cost test, including all measure costs paid by the utility and/or participant as well as any administrative or overhead costs. Combined, the portfolio of programs is expected to achieve 269,351 MWh in energy savings in 2018, or 3.5% of the 2018 forecasted total energy sales. In addition, the programs are expected to save approximately 126 MW in 2018 (7.5% of summer peak demand).

**Table 1-1: Recommended Program Summary**

	Cumulative Annual MWh Savings - 2018	Cumulative Annual MW Savings - 2018	NPV Benefits \$2009	NPV Costs (Utility + Participants) \$2009	TRC B/C Ratio
<i>\$ in millions</i>					
<b>1 Residential Energy Efficiency Programs</b>					
Residential Lighting Program	72,482	7.4	\$52.4	\$8.0	6.59
Heating & Cooling Program (SH&C/WH)	23,418	17.0	\$90.3	\$43.0	2.10
Home Energy Audit & Weatherization	40,898	9.5	\$38.3	\$18.3	2.09
Touchstone Energy Homes (New Construct	13,432	3.1	\$14.1	\$7.6	1.86
Second Appliance Turn-In Program	12,438	1.0	\$4.6	\$2.3	2.02
Education Campaign	0	0.0	\$0.0	\$3.1	N/A
<b>2 Commercial/Industrial Programs</b>					
C/I Prescriptive - Existing Buildings	89,510	23.9	\$68.1	\$28.8	2.37
C/I Prescriptive - New Construction	3,170	0.9	\$2.3	\$0.8	2.96
C/I Custom	14,002	3.5	\$10.4	\$4.0	2.61
<b>3 Residential Demand Response Programs</b>					
Residential Air Conditioning Control	-	25.3	\$7.2	\$3.1	2.37
Residential Water Heating Control	-	18.1	\$5.4	\$5.5	0.99
<b>4 C/I Demand Response Programs</b>					
Commercial/Industrial AC Load Control	-	5.6	\$1.6	\$1.0	1.70
Commercial/Industrial Interruptible Rates	-	10.9	\$3.3	\$0.4	8.06
<b>Total Savings (End-Consumer)</b>	<b>269,351</b>	<b>126.2</b>	<b>\$298.2</b>	<b>\$125.7</b>	<b>2.37</b>
<b>Total Savings (@ Generation)</b>	<b>294,921</b>	<b>139</b>			

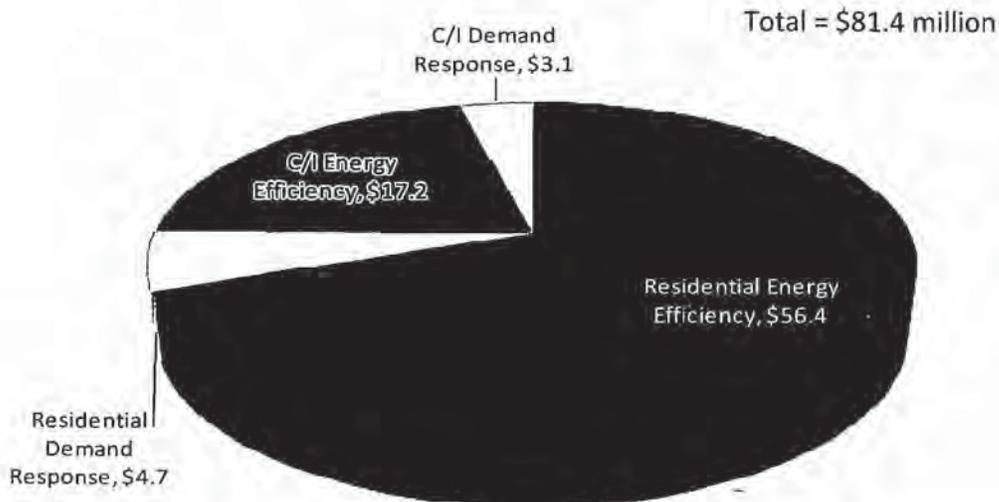
In the residential sector, the recommended programs focus primarily on improving lighting and upgrading HVAC equipment and building shell efficiency. The lighting program, as designed by Hoosier Energy, will provide Compact Fluorescent Light (CFL) bulbs to their members at no cost in exchange for incandescent bulbs. The Home Heating and Cooling Equipment program and Energy Audit and Weatherization program look to improve HVAC, water heating, and building shell efficiency by offering incentives of 35% (or greater) of incremental measure cost for replacing (or adding) efficient technologies in lieu of standard equipment. A portion of the financial burden associated with operating a home weatherization program is expected to be offset by federal stimulus bill funding. In addition, installing load control devices on water heating and air conditioning equipment is expected to help reduce the system summer peak by more than 43 MW in 2018.

In the commercial and industrial sector, a prescriptive program is proposed that includes incentives for purchasing and installing efficient equipment in existing facilities. Prescriptive incentives are offered for a schedule of measures in each end use (i.e. lighting, motors, hot water, HVAC). The prescriptive program is followed by a custom program offering incentives for the installation of innovative and non-standard energy-efficiency equipment and controls in existing facilities. A commercial new construction program is recommended to encourage the energy efficient technology during the construction of new buildings. Finally, there are two commercial/industrial demand response programs that are designed to encourage the reduction of electric consumption during times of high summer demand.

**1.4 PROGRAM BUDGET SUMMARY**

The 2009-2018 combined Hoosier budget (see figures 1-2 and Table1-2 below) for the 13 recommended programs is approximately \$81.4 million. The recommended budget is set at \$4.5 million in the first program year, and grows annually, reaching \$10 million in 2018. As shown in Figure 2, energy efficiency programs in the residential sector represent Hoosier’s greatest investment in demand-side management, followed by commercial/industrial energy efficiency. The four recommended residential and commercial/industrial demand response programs are estimated to cost approximately \$7.8 million over the next decade. On average, incentives account for 75% of the total budget, while administrative costs (marketing, delivery, outside contractors, and evaluation) account for the remaining 25%.

**Figure 1-2: 2009-2018 Hoosier Energy Budget by Sector Based on the 15 Recommended Programs (dollars in millions)**



**Table 1-2: 2009-2018 Energy Efficiency and Demand Response Program Budgets (Combined)**  
(dollars in thousands)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	TOTAL	NPV (\$2009)
<i>Residential Energy Efficiency</i>												
Incentives	\$3,298	\$4,284	\$4,299	\$4,315	\$4,046	\$3,909	\$4,305	\$4,813	\$5,225	\$5,784	\$44,278	\$33,852
Administrative Costs	\$804	\$993	\$1,128	\$1,085	\$1,095	\$1,223	\$1,254	\$1,367	\$1,592	\$1,603	\$12,143	\$9,177
<i>Hoosier Subtotal</i>	<i>\$4,102</i>	<i>\$5,277</i>	<i>\$5,427</i>	<i>\$5,400</i>	<i>\$5,141</i>	<i>\$5,131</i>	<i>\$5,559</i>	<i>\$6,180</i>	<i>\$6,817</i>	<i>\$7,387</i>	<i>\$56,421</i>	<i>\$43,029</i>
Participant Costs	\$3,540	\$4,523	\$4,479	\$4,458	\$4,346	\$4,379	\$5,187	\$6,096	\$7,015	\$8,211	\$52,232	\$39,222
<b>Total Costs</b>	<b>\$7,641</b>	<b>\$9,799</b>	<b>\$9,906</b>	<b>\$9,858</b>	<b>\$9,487</b>	<b>\$9,511</b>	<b>\$10,745</b>	<b>\$12,276</b>	<b>\$13,382</b>	<b>\$15,598</b>	<b>\$108,653</b>	<b>\$82,250</b>
<i>Commercial Energy Efficiency</i>												
Incentives	\$497	\$524	\$630	\$840	\$1,216	\$1,481	\$1,403	\$1,272	\$1,193	\$1,148	\$10,204	\$7,161
Administrative Costs	\$346	\$356	\$474	\$611	\$886	\$962	\$933	\$834	\$812	\$756	\$6,971	\$4,913
<i>Hoosier Subtotal</i>	<i>\$843</i>	<i>\$880</i>	<i>\$1,104</i>	<i>\$1,451</i>	<i>\$2,102</i>	<i>\$2,443</i>	<i>\$2,336</i>	<i>\$2,106</i>	<i>\$2,005</i>	<i>\$1,904</i>	<i>\$17,145</i>	<i>\$12,073</i>
Participant Costs	\$1,492	\$1,571	\$1,891	\$2,520	\$3,647	\$4,442	\$4,209	\$3,816	\$3,579	\$3,444	\$30,612	\$21,482
<b>Total Costs</b>	<b>\$2,335</b>	<b>\$2,451</b>	<b>\$2,995</b>	<b>\$3,972</b>	<b>\$5,749</b>	<b>\$6,885</b>	<b>\$6,545</b>	<b>\$5,922</b>	<b>\$5,584</b>	<b>\$5,348</b>	<b>\$47,786</b>	<b>\$33,555</b>
<i>Residential Demand Response</i>												
Incentives	\$0	\$477	\$477	\$477	\$477	\$477	\$477	\$477	\$477	\$477	\$4,295	\$2,899
Administrative Costs	\$0	\$247	\$23	\$23	\$24	\$25	\$26	\$26	\$27	\$28	\$449	\$338
<i>Hoosier Subtotal</i>	<i>\$0</i>	<i>\$724</i>	<i>\$500</i>	<i>\$501</i>	<i>\$501</i>	<i>\$502</i>	<i>\$503</i>	<i>\$504</i>	<i>\$504</i>	<i>\$505</i>	<i>\$4,744</i>	<i>\$3,227</i>
Member System Costs	\$0	\$102	\$315	\$528	\$741	\$955	\$1,170	\$1,384	\$1,599	\$1,815	\$8,610	\$5,290
<b>Total Costs</b>	<b>\$0</b>	<b>\$826</b>	<b>\$815</b>	<b>\$1,029</b>	<b>\$1,243</b>	<b>\$1,457</b>	<b>\$1,672</b>	<b>\$1,888</b>	<b>\$2,104</b>	<b>\$2,320</b>	<b>\$13,354</b>	<b>\$8,517</b>
<i>Commercial Demand Response</i>												
Incentives	\$0	\$37	\$46	\$70	\$135	\$173	\$161	\$149	\$138	\$128	\$1,036	\$703
Administrative Costs	\$0	\$68	\$85	\$131	\$254	\$330	\$313	\$296	\$280	\$265	\$2,021	\$1,365
<i>Hoosier Subtotal</i>	<i>\$0</i>	<i>\$105</i>	<i>\$130</i>	<i>\$201</i>	<i>\$389</i>	<i>\$504</i>	<i>\$473</i>	<i>\$445</i>	<i>\$418</i>	<i>\$393</i>	<i>\$3,057</i>	<i>\$2,068</i>
Member System Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Costs</b>	<b>\$0</b>	<b>\$105</b>	<b>\$130</b>	<b>\$201</b>	<b>\$389</b>	<b>\$504</b>	<b>\$473</b>	<b>\$445</b>	<b>\$418</b>	<b>\$393</b>	<b>\$3,057</b>	<b>\$2,068</b>
<b><i>EE &amp; DR Programs COMBINED</i></b>												
Incentives	\$3,795	\$5,322	\$5,452	\$5,703	\$5,874	\$6,040	\$6,346	\$6,711	\$7,033	\$7,357	\$59,813	\$44,604
Administrative Costs	\$1,150	\$1,664	\$1,709	\$1,851	\$2,259	\$2,540	\$2,525	\$2,524	\$2,712	\$2,652	\$21,584	\$15,792
<i>Hoosier Subtotal</i>	<i>\$4,495</i>	<i>\$6,986</i>	<i>\$7,161</i>	<i>\$7,553</i>	<i>\$8,132</i>	<i>\$8,580</i>	<i>\$8,871</i>	<i>\$9,235</i>	<i>\$9,745</i>	<i>\$10,189</i>	<i>\$81,397</i>	<i>\$60,397</i>
Participant Costs	\$5,031	\$6,094	\$6,370	\$6,978	\$7,993	\$8,821	\$9,396	\$9,911	\$10,593	\$11,656	\$82,844	\$60,703
Member System Costs	\$0	\$102	\$315	\$528	\$741	\$955	\$1,170	\$1,384	\$1,599	\$1,815	\$8,610	\$5,290
<b>TOTAL COSTS</b>	<b>\$9,976</b>	<b>\$13,182</b>	<b>\$13,846</b>	<b>\$15,059</b>	<b>\$16,867</b>	<b>\$18,356</b>	<b>\$19,436</b>	<b>\$20,530</b>	<b>\$21,938</b>	<b>\$23,660</b>	<b>\$172,850</b>	<b>\$126,390</b>

## 2 GLOSSARY OF TERMS<sup>4</sup>

The following list defines many of the key energy efficiency and demand response terms used throughout this study.

**Achievable potential:** the amount of energy use that efficiency can realistically be expected to displace assuming the most aggressive program scenario possible (e.g., providing end-users with payments for the entire incremental cost of more efficient equipment). This is often referred to as maximum achievable potential. Achievable potential takes into account real-world barriers to convincing end-users to adopt efficiency measures, the non-measure costs of delivering programs (for administration, marketing, tracking systems, monitoring and evaluation, etc.), and the capability of programs and administrators to ramp up program activity over time.

**Applicability factor:** the fraction of the applicable dwelling units that is technically feasible for conversion to the efficient technology from an *engineering* perspective (e.g., it may not be possible to install CFLs in all light sockets in a home because the CFLs may not fit in every socket in a home).

**Base Case Equipment End Use Intensity:** the electricity used per customer per year by each base-case technology in each market segment. This is the consumption of the electric energy using equipment that the efficient technology replaces or affects. For example purposes only, if the efficient measure were a high efficiency light bulb (CFL), the base end use intensity would be the annual kWh use per bulb per household associated with an incandescent light bulb that provides equivalent lumens to the CFL.

**Base Case Factor:** the fraction of the end use electric energy that is applicable for the efficient technology in a given market segment. For example, for residential lighting, this would be the fraction of all residential electric customers that have electric lighting in their household.

**Coincidence factor:** the fraction of connected load expected to be “on” and using electricity coincident with the system peak period.

**Cost-effectiveness:** a measure of the relevant economic effects resulting from the implementation of an energy efficiency measure. If the benefits outweigh the cost, the measure is said to be cost-effective.

**Cumulative annual:** refers to the overall savings occurring in a given year from both new participants and savings continuing to result from past participation with measures that are still in place. Cumulative annual does not always equal the sum of all prior year incremental values as some measures have relatively short measure lives and, as a result, their savings drop off over time.

**Demand response:** The ability to provide peak load capacity through demand management (load control) programs. This methodology focuses on curtailment of loads during peak demand times thus avoiding the requirement to find new sources of generation capacity.

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<sup>4</sup> Potential definitions taken from “National Action Plan for Energy Efficiency (2007). Guide for Conducting Energy Efficiency Potential Studies. Prepared by Philip Mosenthal and Jeffrey Loiter, Optimal Energy, Inc.

**Early replacement:** refers to an efficiency measure or efficiency program that seeks to encourage the replacement of functional equipment before the end of its operating life with higher-efficiency units

**Economic potential:** the subset of the technical potential screen that is economically cost-effective as compared to conventional supply-side energy resources. Both technical and economic potential screens are theoretical numbers that assume immediate implementation of efficiency measures, with no regard for the gradual “ramping up” process of real-life programs. In addition, they ignore market barriers to ensuring actual implementation of efficiency.

**End-use:** a category of equipment or service that consumes energy (e.g., lighting, refrigeration, heating, process heat).

**Energy efficiency:** using less energy to provide the same or an improved level of service to the energy consumer in an economically efficient way. Sometimes “conservation” is used as a synonym, but that term is usually taken to mean using less of a resource even if this results in a lower service level (e.g., setting a thermostat lower or reducing lighting levels). This recognizes that energy efficiency includes using less energy at any time, including at times of peak demand through demand response and peak shaving efforts.

**Free Driver:** individuals or businesses that adopt an energy efficient product or service because of an energy efficiency program, but are difficult to identify either because they do not receive an incentive or are not aware of exposure to the program.

**Free Rider:** participants in an Energy Efficiency program who would have adopted an energy efficiency technology or improvement in the absence of a program of financial incentive.

**Incremental:** savings or costs in a given year associated only with new installations happening in year.

**Lost-opportunity:** refers to an efficiency measure or efficiency program that seeks to encourage the selection of higher-efficiency equipment or building practices than would typically be chosen at the time of a purchase or design decision.

**Measure:** any action taken to increase efficiency, whether through changes in equipment, control strategies, or behavior. Examples are higher-efficiency central air conditioners, occupancy sensor control of lighting, and retro-commissioning. In some cases, bundles of technologies or practices may be modeled as single measures. For example, an ENERGY STAR™ home package may be treated as a single measure.

**MW:** a unit of electrical output, equal to one million watts or one thousand kilowatts. It is typically used to refer to the output of a power plant.

**MWh:** one thousand kilowatt-hours, or one million watt-hours. One MWh is equal to the use of 1,000,000 watts of power in one hour.

**Net-to-gross ratio:** a factor representing net program savings divided by gross program savings that is applied to gross program impacts to convert them into net program load impacts

**Portfolio:** Either a collection of similar programs addressing the same market, technology, or mechanisms; or the set of all programs conducted by one organization.

**Program:** a mechanism for encouraging energy efficiency. May be funded by a variety of sources and pursued by a wide range of approaches. Typically includes multiple measures.

**Program potential:** the efficiency potential possible given specific program funding levels and designs. Often, program potential studies are referred to as “achievable” in contrast to “maximum achievable.”

**Remaining factor:** the fraction of applicable units that have not yet been converted to the electric energy efficiency measure; that is, one minus the fraction of units that already have the energy efficiency measure installed.

**Replace on burnout:** a DSM measure is not implemented until the existing technology it is replacing fails. An example would be an energy efficient water heater being purchased after the failure of the existing water heater.

**Retrofit:** refers to an efficiency measure or efficiency program that seeks to encourage the replacement of functional equipment before the end of its operating life with higher-efficiency units (also called “early retirement”) or the installation of additional controls, equipment, or materials in existing facilities for purposes of reducing energy consumption (e.g., increased insulation, low flow devices, lighting occupancy controls, economizer ventilation systems).

**Savings factor:** the percentage reduction in electricity consumption resulting from application of the efficient technology used in the formulas for technical potential screens.

**Technical potential:** the theoretical maximum amount of energy use that could be displaced by efficiency, disregarding all non-engineering constraints such as cost-effectiveness and the willingness of end-users to adopt the efficiency measures. It is often estimated as a “snapshot” in time assuming immediate implementation of all technologically feasible energy saving measures, with additional efficiency opportunities assumed as they arise from activities such as new construction.

**Useful Life:** The number of years (or hours) that the new energy efficient equipment is expected to function. Useful life is also commonly referred to as “measure life.”

### 3 INTRODUCTION

The Hoosier Energy member territory is growing. From 1998 to 2007, the number of total consumers grew at a rate of 2.8% annually. This growth in consumers has been accompanied by rising electricity sales and demand (over 5% per year). The current forecast expects that the number of consumers will continue to increase at an average rate of 1.6% from 2009 through 2028 (the timeframe for this study) creating further growth in system electricity sales and demand. This report assesses the potential for energy efficiency and demand response programs to assist Hoosier Energy and its member systems in meeting future energy service needs.

#### 3.1 INTRODUCTION TO ENERGY EFFICIENCY

Efficient energy use, often referred to as energy efficiency, is using less energy to provide the same level of energy service. An example would be insulating a home or business to use less heating and cooling energy to achieve the same temperature. Another example would be installing fluorescent lighting in place of incandescent lights to attain the same level of illumination. In general, energy efficiency is achieved primarily through more efficient technologies and/or processes rather than by changes in individual behavior.

##### 3.1.1 ENERGY EFFICIENCY ACTIVITY

Making homes and buildings more energy efficient is seen as a largely untapped resource for addressing global warming, energy security, and fossil fuel depletion. Faced with rapidly increasing energy prices, constraints in energy supply and demand, and energy reliability concerns, states are turning to energy efficiency as the most reliable, cost-effective, and quickest resource to deploy. For example, the state of California began implementing energy-efficiency measures in the mid-1970s, including building code and appliance standards with strict efficiency requirements. During the following years, California's energy consumption has remained approximately flat on a per capita basis while national U.S. consumption doubled.<sup>5</sup> As part of its strategy, California implemented a three-step plan for new energy resources that puts energy efficiency first, renewable electricity supplies second, and new fossil-fired power plants last.

In 2004, The American Council for an Energy Efficient Economy (ACEEE) reviewed 11 studies on the technical, economic, and achievable potential for energy efficiency in the U.S. Overall, the findings suggest that substantial potential savings remain throughout the nation; the technical energy efficiency savings potential was estimated at 33% of total U.S. electric consumption. In early 2009, Electric Power Research Institute (EPRI) estimated the maximum achievable potential for energy savings at 8% of total U.S. electric consumption.<sup>6</sup> Table 3.1, below, provides the results from a review of several potential studies conducted throughout the Midwest.

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<sup>5</sup> Mufson, Steven. "In Energy Conservation, California Sees the Light." Washington Post. February 17, 2007. Page A01.

<sup>6</sup> Assessment of Achievable Potential from Energy Efficiency and Demand Response Programs in the U.S. (2010-2030). Completed by the Electric Power Research Institute (EPRI). January 2009.

Table 3.1: Potential Savings in Other Areas of the Midwest

Organization	State	Year	Fuel	# Years	Technical Potential	Achievable Potential	Achievable Potential/Yr
Duke Energy	IN	2007	Electric	20	NA	15.0%	0.8%
Iowa Utility Assn	IA	2008	Electric	10	46.0%	NA	
Midwest EE Alliance	IL	2003	Electric	10	NA	5.0%	0.5%
Xcel Energy	MN	2003	Electric	20	3.9%	0.7%	0.0%
Utility Collaborative	MO	2006	Electric	10	NA	9.5%	1.0%
Energy Center of WI	WI	2005	Electric	5	NA	.9%-1.9%	0.2%-0.4%
Midwest EE Alliance	IL	2006	Electric	20	21.4%	8.9%	0.4%
Midwest EE Alliance	IN	2006	Electric	20	24.9%	10.9%	0.5%
Midwest EE Alliance	IA	2006	Electric	20	24.1%	10.3%	0.5%
Midwest EE Alliance	KY	2006	Electric	20	30.3%	14.2%	0.7%
Midwest EE Alliance	MI	2006	Electric	20	22.0%	9.6%	0.5%
Midwest EE Alliance	MN	2006	Electric	20	20.1%	8.3%	0.4%
Midwest EE Alliance	MO	2006	Electric	20	26.8%	12.3%	0.6%
Midwest EE Alliance	OH	2006	Electric	20	23.3%	10.1%	0.5%
Midwest EE Alliance	WI	2006	Electric	20	19.8%	8.2%	0.4%
<b>Medians</b>					<b>23.3%</b>	<b>9.5%</b>	<b>0.5%</b>

A more recent study by ACEEE offers information regarding the current savings and spending related to energy efficiency by state.<sup>7</sup> Based on self-reported data, the top states spend roughly 2% of electric sales revenue on energy efficiency programs. In addition, the top states are currently achieving annual energy efficiency savings of roughly 1% of total electric sales. In the same report, Indiana is reported as spending 0.1% of revenue, and saving 0.01% of sales from energy efficiency. These findings suggest additional opportunities remain for energy efficiency in the state of Indiana and throughout the U.S.

### 3.1.2 GENERAL BENEFITS OF ENERGY EFFICIENCY

There are a number of benefits for organizations that pursue energy efficiency programs. These benefits include energy and capacity cost savings, non-electric benefits such as water and heating fuel savings, environmental benefits, economic stimulus, job creation, risk reduction, and energy security.

Avoided energy and capacity costs are the costs an electric utility would generate, construct itself, or purchase from another source. These include both fixed and variable costs that can be directly avoided through a reduction in electricity usage. The energy component includes the costs associated with the production of electricity, while the capacity component includes costs associated with the capability to deliver energy and consists primarily of the capital costs of facilities.

At the consumer level, energy efficient products typically cost more than their standard efficiency counterparts, but this additional cost is balanced by lower energy bills. Over time, the money saved from energy efficient products will pay consumers back for their initial investment

<sup>7</sup> The 2008 State Energy Efficiency Scorecard. Report #E086. ACEEE. October 2008.

as well as save them money. Typical investments in energy efficiency can recoup the upfront costs invested in energy efficiency in less than five years, while payback period of one to two years are common. Although some energy efficient technologies are involved and expensive, such as installing new efficient windows or a high efficiency boiler, many are simple and inexpensive. Installing compact fluorescent lighting or low-flow water devices can be done by most individuals.

Although the reduction in energy and capacity costs is the primary benefit to be gained from investments in energy efficiency; the utility, its consumers, and society as a whole can also benefit in other ways. Many electric efficiency measures also deliver non-energy benefits. For example, low flow water devices and efficient clothes washers also reduce water consumption. Similarly, weatherization measures that improve the building shell not only save on air conditioning costs in the summer, but can save the customer money on heating fuels, such as natural gas or propane. Reducing electricity consumption also reduces harmful emissions, such as SO<sub>x</sub>, NO<sub>x</sub>, and CO<sub>2</sub>, into the environment.

Energy efficiency creates both direct and indirect jobs, and because the focus of the effort is not only on manufacturing, but also in research and development, service, and installation, these are skilled positions that are not easily outsourced to other states and countries. The indirect jobs are more difficult to quantify, but result in households and businesses experiencing increased discretionary income from reduced energy bills. The savings produce increased investment in other goods and services, driving job creation in other market areas.

Energy efficiency reduces risks associated with fuel price volatility, unanticipated capital cost increases, more stringent regulations, supply shortages, and energy security. Aggressive energy efficiency helps eliminate or postpone the risk associated with committing to huge investments for generation facilities a decade or more before they are needed. Energy efficiency is also not subject to the same supply and transportation constraints that impact fossil fuels. Finally, energy efficiency reduces competition between states and utilities for fuels, and dependence on imported foreign oil, to support electricity production. Energy efficiency can help meet future demand increases and reduce dependence on out-of-state or overseas resources.

### 3.2 INTRODUCTION TO DEMAND RESPONSE

In an August 2006 report by staff to the Federal Energy Regulatory Commission (“FERC”), a definition of “demand response” was adopted by the Commission. This definition was used by the U.S. Department of Energy (“DOE”) in its February 2006 report to Congress:

*Changes in electric usage by end-use customers from their normal consumption patterns in response to changes in the price of electricity over time, or to incentive payments designed to induce lower electricity use at times of high wholesale market prices or when system reliability is jeopardized.<sup>8</sup>*

The changes in electricity use are designed to be short-term in nature, centered on critical hours when demand or market prices are high, or when reserve margins are low. This is contrasted to energy efficiency programs that are focused on longer-term responses or reduction in consumption through the investment in energy efficient equipment. In other words, demand

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<sup>8</sup> U.S. Department of Energy, Benefits of Demand Response in Electricity Markets and Recommendations for Achieving Them: A Report to the United States Congress Pursuant to Section 1252 of the Energy Policy Act of 2005, February 2006 (February 2006 DOE EPAAct Report).

response programs provide the mechanisms necessary to inform customers about market conditions, either through pricing or communications, in order for the customer to choose how much electricity they elect to use given such information. Demand response programs benefit all consumers by promoting efficiency and stability in electricity markets.

### 3.2.1 DEMAND RESPONSE ACTIVITY

Although national figures are inconsistent among the multitude of sources, there is no doubt that traditional load management, which includes direct load control programs as well as interruptible rates, provide a significant resource to reduce peak demand. Such peak demand reduction can provide the long-term benefit of reducing the need for future generation construction, and provide the short-term benefits of reduced demand charges under purchased power arrangements as well as lower energy costs.

In a report released September 7, 2007 FERC said that demand response activities have increased across the nation. In its "2007 Summer Assessment," the North American Electric Reliability Corp. concluded that application of demand response programs increased to about 21,900 MW from the 2006 summer assessment estimate of about 20,700 MW. Using the 2006 peak demand of about 851 GW, FERC said this suggests that about 3% of peak demand in the United States and Canada can be reduced from interruptible demand and direct load control<sup>9</sup>.

The National Rural Electric Cooperative Association (NRECA) estimates that nationwide, cooperatives can control approximately 6% of their peak load through demand response programs, including 1,440 MW of residential load control<sup>10</sup>.

Interest in demand response has increased significantly in recent years, although programs have existed for decades. Two of the oldest forms of demand response have been interruptible and TOU rates. Since the late 1970's and early 1980's programs that provided the utility with direct control of certain end-uses such as air conditioning and water heaters have been in place. Demand-side management ("DSM") programs have been used by many utilities as a means to shape customer demand according to the needs of the system. DSM encompasses a broad spectrum of technologies and strategies designed to achieve specific load shape objectives including peak clipping, load shifting and reduction in the overall use of energy through improved efficiency.

A significant factor driving the emphasis on demand response today seem to revolve around the restructuring of the electric industry, as well as significant concerns being raised by environmental and consumer groups in regards to the construction of new generation facilities. Most importantly, many utilities recognize that demand response can provide an economic alternative to certain amounts of peaking generation and be an integral part of the overall mix of resources.

There is no doubt that environmental concerns that must be addressed with the construction of new generation are as significant as ever, and many groups are simply opposed to new construction. Further, the costs of material and labor have increased significantly in recent years

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<sup>9</sup> Kathleen Hart, SNL Financial LC, September 2, 2007

<sup>10</sup> FERC Docket AD06-2-000, Statement of Jay Morrison, Senior Regulatory Counsel, NRECA for the Technical Conference on Demand Response and Advanced Metering

causing construction costs to be much higher than plants completed in the 1990's. Given these factors of new construction, it is certainly prudent for utilities to consider cost-effective demand response programs that can help defer the need for new generation construction for utilities that purchase capacity to meet their load growth requirements, demand response can reduce the size of capacity purchases and reduce exposure to market price volatility providing increased certainty in the cost of power supply.

As noted above, demand response programs, except for emergency operations, are focused on reducing load only during peak demand periods. Thus, the generation resources impacted by the implementation of demand response programs are peaking resources, such as natural gas-fired combustion turbines or capacity purchases with limited call option rights.

Demand response programs do not have a significant impact on the need for baseload generation; however, any impact may actually somewhat increase the need for intermediate and possibly base resources due to load shifted out of peak periods into shoulder or non-peak periods. The actual impact of demand response programs on baseload resources, if any, can only be evaluated with detailed production cost analysis.

### **3.2.2 TYPES OF DEMAND RESPONSE**

Most of the literature describes two primary categories of demand response programs – incentive-based response and price-based response.

- Incentive-based demand response
- Price-based demand response

For incentive-based programs, generally the goal is for the load reduction to act as a resource, i.e., the demand reduction occurs via dispatch by the system operator. With this treatment, the demand reduction capability can be included in the resource portfolio. The resources can be dispatched for a number of reasons including peak load, low reserves, high energy costs, and transmission line loading concerns.

The goal with price-based incentives is to provide a price signal that is reflective of current market conditions and the demand reductions occur as a voluntary response to the price signal. Generally, these types of responses are embedded in the load forecast, and not explicitly modeled. While it is often a concern that the load response is not as “firm” as with incentive-based programs, the response can become more predictable based on weather, foreknowledge of prices, and experience.

### **3.2.3 GENERAL BENEFITS OF DEMAND RESPONSE**

As a result of the information or signal provided by the utility under demand response programs, customer responses can either shift (load shifting) or reduce consumption (peak clipping) during high cost periods. Load-shifting and peak-clipping differ because the former shifts much of the energy use from one time to another, whereas the latter eliminates load without shifting it to another time period.

Also in the August 2006 report to FERC, it was noted that to a limited extent, generation, transmission, and demand response are substitutes, depending on the location of the generation or demand response. As a substitute for generation, demand response can serve as a local peaking resource and thereby assist resource adequacy. However, it should be recognized that besides location issues, demand response may not be perfectly interchangeable with a generation resource with differences including:

- Seasonal unavailability of demand response; e.g., direct control of air conditioners is limited to summer periods vs. generation with planned and forced outages
- The number of hours of demand response is ordinarily limited by the agreement with the customer, vs generation run-hours that is likely limited by the environmental permit for the resource or the limit on the number of call hours according to the terms and conditions of a capacity purchase.
- Demand response under utility control is often considered to be as firm and dependable as a generation resource, but price-incentive demand response usually is not as firm.

As a substitute for transmission and distribution infrastructure, demand response can reduce the need for new transmission or distribution expansion. The report also points out that demand response is typically only indirectly included in the transmission planning process by modifications to expected system loads. Generally, if demand response is explicitly considered, it may be a temporary solution until a permanent transmission enhancement is in place.

Under conditions of tight electricity supply, demand response also has the potential to reduce energy supply costs and, in general, electricity price volatility. For load shifting programs, energy cost savings are the difference between avoided energy cost during peak periods and the incurred energy cost during the energy recovery periods.

Demand response can also serve as operating reserves. Several demand response programs such as certain interruptible industrial load and direct load control can provide the timely response necessary to provide these reserves. The eligibility of demand response resources to provide operating reserves has been limited in most regions and typically is restricted to providing supplemental (non-spinning) reserves.

### **3.3 PROJECT HISTORY**

In recent years Hoosier Energy has experienced rapid growth in electric demand of approximately 5% to 6% per year, although this rate of growth has slowed in 2009 due to the national economic recession. While HE currently has adequate power supply resources to meet electric demand, HE forecasts a need for baseload generation in the future. The HE system summer and winter peak loads are approximately 1,400 MW and 1,525 MW respectively. While HE is not regulated by the State, the State of Indiana and the Indiana Utility Regulatory Commission encourage the development and implementation of demand-side programs. HE has implemented both energy efficiency and primarily tariff-based demand response programs in the past, and HE believes that such programs make sense from a business perspective, so long as they are cost effective. HE's strategic objective is to provide incentives for end use customers to manage their power consumption and power costs. HE must also complete a new Integrated

Resource Plan (IRP) during 2009 and energy efficiency and demand response programs will be reflected in this new Plan.

HE will continue to rely upon coal generating resources to meet customer needs for electricity over the next decade. The installed cost for new coal-fired generating stations is now projected to be as much as \$3,500 per kW installed, compared to just \$1,200 just a few years ago. This cost increase heightens the need to assess the costs and feasibility of other energy resources, including demand response programs and energy efficiency programs.

HE issued an RFP on November 21, 2007 for an outside contractor to use a systematic process to develop the short and long range integrated resource plans for Hoosier Energy by 2009. HE envisioned that this systematic process would ensure that supply and demand-side resources would be evaluated on a "level playing field" basis and would ensure that the energy resource plan meets the needs of Hoosier Energy members and the expectations of the State of Indiana and other key stakeholder groups. The RFP explained that HE desired to retain a contractor that would make this project a top priority, and who would manage the development of the new Integrated Resource Plan, and would provide technical support and analytical capabilities to HE throughout this integrated planning process. After reviewing the proposal that were submitted, HE selected GDS Associates to complete this IRP project.

The GDS Team included Summit Blue Consulting as a subcontractor. The GDS Team attended the project kick-off meeting at HE headquarters on January 11, 2008. At that meeting, GDS Team members worked with HE management to finalize the project objectives, scope of work, list of deliverables and the project schedule.

Data Collection: The GDS team worked with HE staff during all of 2008 to develop and collect the key data inputs including: costs of new supply-side resources, fuel costs, load forecasts, emissions and ancillary market costs, external energy and capacity market costs, demand side program impacts and costs, renewable portfolio standards requirements, inflation rate, discount rate, line losses, reserve margin for planning purposes, and corporate financial structure components. Significant coordination was needed between internal utility departments at HE and external consulting resources that were charged with developing or collecting much of this data.

Develop Resource Alternatives: The GDS Team worked with HE staff during 2008 to define the scope of supply and demand side alternatives to be explored through the IRP process. The characteristics and costs for these options were developed jointly by internal and external personnel participating in the project.

Portfolio Optimization: Integration of the supply and demand side resource alternatives was a key component of this project. This included the development of load and resource balances, modeling the alternative's operational and cost parameters, defining and modeling the optimization criteria and constraints, and conducting the resource expansion optimization. Ventyx's Strategist Resource Planning model was used to perform this integration.

Risk Assessment: The GDS Team worked with HE and Ventyx staff to identify sensitivity runs to be performed on the base case IRP scenario.

This stand alone energy efficiency and demand response report summarizes the results of the technical, economic and achievable potential analyses and summarizes the programs that the GDS Team recommends for implementation in the HE service area.

### **3.4 2008 RESIDENTIAL & COMMERCIAL ON-SITE SURVEYS**

As part of the larger Hoosier Energy IRP project, Hoosier Energy commissioned GDS and Summit Blue to conduct 375 residential and 68 commercial on-site surveys in the first half of 2008. These surveys are a major enhancement to a majority of the technical potential studies that have been conducted across the country in the past. Rather than relying on best available information from existing secondary sources to estimate current levels of energy using equipment saturations and penetration of energy efficiency measures, significant primary data collection efforts were undertaken to help inform and derive Hoosier Energy-specific values. The results of the residential on-site surveys are detailed in a stand-alone report entitled "Hoosier Energy Residential On-Site Survey Report"; the results of the commercial and industrial surveys can be found in the report, "Hoosier Energy Non-Residential On-Site Survey Report."

In the residential survey, data was collected on the baseline energy efficiency characteristics of the home, space heating, space cooling, water heating, kitchen appliances, clothes washers and dryers, lighting, insulation, windows, and doors and miscellaneous appliances, as well as data on occupant demographics and conservation decision-making behavior. The findings from these surveys, paired with data collected from the Hoosier Energy 2007 Residential End-Use Survey (a telephone survey of 6,350 residential members), allowed for a detailed breakdown of appliance and other equipment saturations as well as an increased understanding of the current saturation of energy efficient equipment throughout the Hoosier Energy service area. The sample was a fair representation of Hoosier Energy customers with electric-powered heating, fossil-fuel powered heating, and new and existing construction.

The goal of the commercial and industrial customer survey was to gather on-site data from a sufficient number of customers to identify representative data on baseline energy efficiency levels and customer characteristics with 90 percent confidence and a margin of error of 10 percent at the non-residential sector level. Reaching this goal required that 68 non-residential customers receive an on-site survey. The population of non-residential customers is extremely diverse and care was taken to ensure that this diversity was captured within the approximately 68 on-site surveys. The purpose of the surveys was to gather virtually complete inventories of customers' major energy using equipment, to profile the customer facility building shells, and to collect information on customers' energy efficiency decision making practices. In general, the surveys collected data on all measure energy end-uses including: lighting, HVAC, cooking, refrigeration, motors and air compressors.

The results of these surveys present a wealth of information for the Hoosier Energy service area regarding the current saturation of energy efficient technologies in residential and commercial buildings and the availability of future opportunities through education and Energy Efficiency programs. Too often, this valuable information is unavailable and an analysis must rely on any available regional or national data to estimate building and equipment characteristics. The benefit of these on-site surveys permitted the development of more accurate Energy Efficiency potential estimates and the targeting of opportunities that are unique to the Hoosier member territory.

### 3.5 REPORT ORGANIZATION

The remainder of this report is organized in the following seven sections as follows:

*Section 4: Characterization of Hoosier Energy Member Territory* provides an overview of the Hoosier Energy member territory and a brief discussion of the historical and forecasted electric energy sales as well as peak demand.

*Section 5: Overall Project Implementation Approach* details the development of technical, economic, and achievable potential for energy efficiency and demand response savings

*Section 6: Residential Energy Efficiency Potential Estimates (2009-2028)* provides a breakdown of the technical, economic, and achievable potential in the residential sector

*Section 7: Residential Demand Response Potential Estimates (2009-2028)* presents detailed results on the peak demand savings and economics of load control on residential equipment.

*Section 8: Commercial/Industrial Energy Efficiency Potential Estimates (2009-2028)* provides a breakdown of the technical, economic, and achievable potential in the commercial/industrial sector

*Section 9: Commercial/Industrial Demand Response Potential Estimates (2009-2028)* reviews the potential for cost-effective demand savings from demand response programs designed for commercial and industrial facilities

*Section 10: Recommended Programs and Program Potential Savings (2009-2018)* provides program design summaries, implementation recommendations, and a discussion of the results for the program potential analyses

*Section 11: Consideration of Revisions to the Hoosier Tariff to Support the Implementation of Demand Response Programs* proposes revisions to the current wholesale rate tariff structure in an effort to ensure that the tariff contains appropriate incentives to the members for the implementation of DSM programs.

*Section 12: Conclusions* presents the final discussion regarding potential for EE&DR savings through 2028.

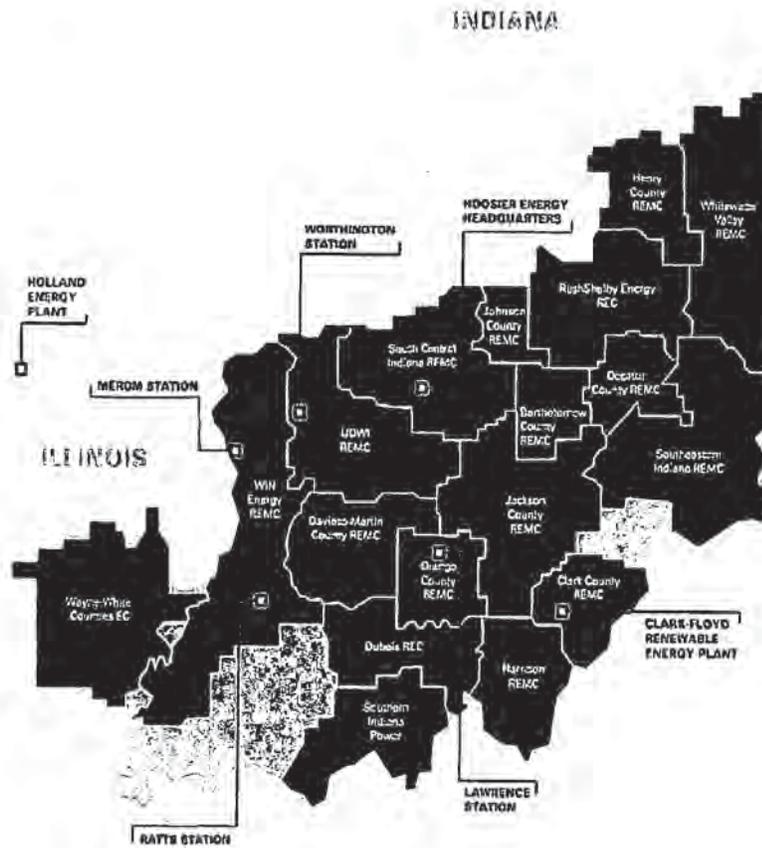
## 4 CHARACTERIZATION OF HOOSIER ENERGY MEMBER TERRITORY

DSM potential studies and other market assessment studies that have reappeared over the last five years are valuable sources of information for planning energy efficiency programs. In order to develop estimates of electricity savings potential, it is important to understand the extent to which electricity is used by households and businesses. This section provides a brief overview of the Hoosier Energy member territory, the historical and forecasted electric energy sales and system's peak demand, and the on-going DSM efforts of Hoosier Energy and the member systems.

### 4.1 HOOSIER ENERGY MEMBER SERVICE TERRITORY

Hoosier Energy, a Touchstone Energy cooperative, is a generation and transmission cooperative (G&T) providing wholesale electric power and services to 17 member electric distribution cooperatives in 48 central and southern Indiana counties and one cooperative in southeastern Illinois. As shown in Figure 4.1, the 18 member cooperatives serve a 15,000-square-mile service territory in the southern half of Indiana, and 11 southeastern Illinois counties. Collectively, Hoosier Energy provides electricity and related services to nearly 800,000 residents, businesses, industries and farms.

Figure 4.1: The Hoosier Energy Member Territory Map



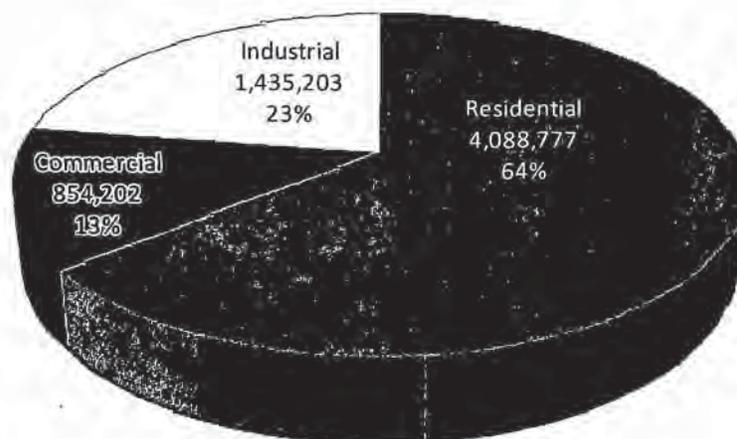
Headquartered in Bloomington, Ind., Hoosier Energy owns and operates two coal-fired electric power production facilities - the 1,000-megawatt Merom Generating Station and the 250-megawatt Ratts Generating Station. The G&T owns a 50% interest in the Holland generating station - a 600-megawatt combined cycle facility. Hoosier also owns and operates a 174-megawatt peaking plant at Worthington and 2/3 of the 258-megawatt natural gas-fired Lawrence County generating facility. Hoosier Energy owns and operates a 3.6-megawatt renewable energy landfill methane gas generation facility at the Clark-Floyd Landfill in Clark County.

High-voltage electric power is delivered over a system of 1,450 miles of transmission lines, 17 primary substation facilities and more than 300 distribution substations and delivery points. Interconnections link Hoosier Energy with other major utilities in Indiana and neighboring states.

#### 4.2 CUSTOMER CLASS OVERVIEW

According to 2007 historical sales data, the residential sector accounts for 64% of total energy sales while the commercial and industrial sectors account for 13% and 22%, respectively. Although the residential sector constitutes the greatest portion of total kWh sales, the industrial sector consumes the most energy on a per customer basis. The average industrial facility consumes roughly 7.6 million kWh annually. Comparatively, the average commercial consumer uses approximately 70,000 kWh per year, while residential consumers use 15,500 kWh per year on average.

Figure 4.2: 2007 Historical Energy Sales by Customer Class (MWh)

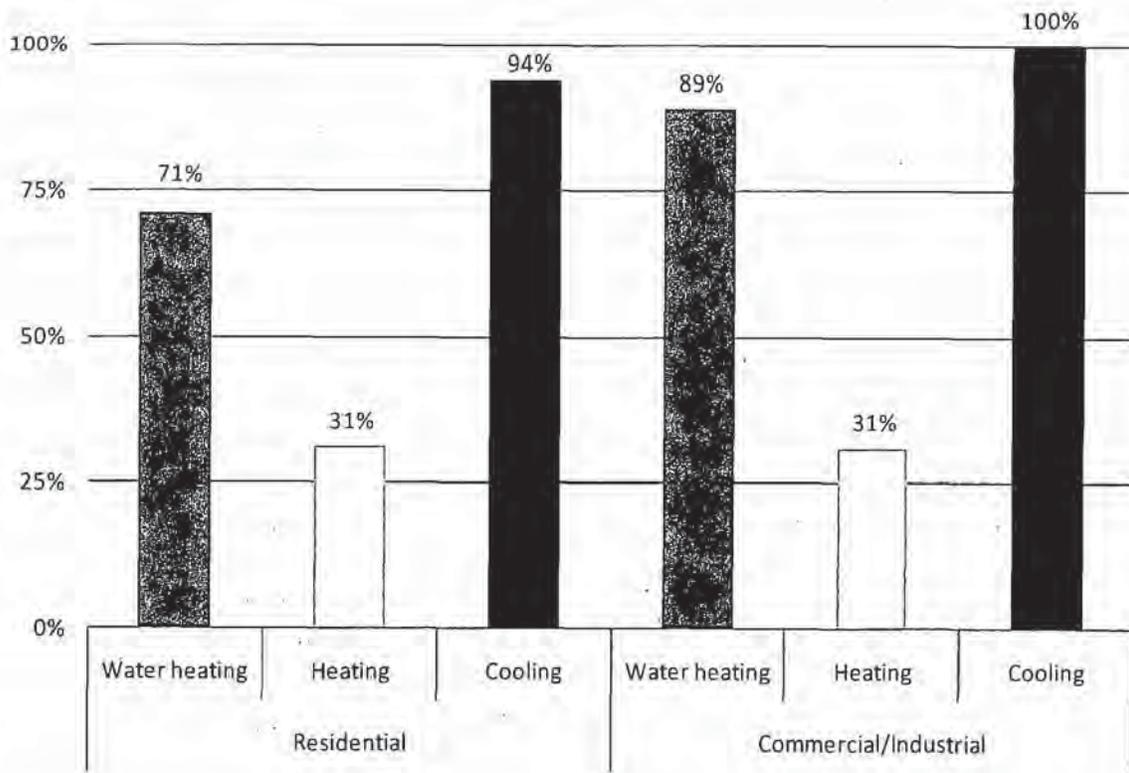


The residential sector is dominated by single-family household consumers. According to the Hoosier Energy 2007 Residential End-Use Survey 82% reside in single family homes, 16% in mobile or manufactured homes and 3% in multi-family homes. Electric cooling systems are present in 93.6% of all households. The most common type of electric cooling unit is the Central AC, representing 74.7% of homes; 6.3% are heat pumps; 7.5% are individual room AC units serving the whole household and 5.1% serve one room. Remaining households (6.5%) have no AC unit.

Meanwhile, only 31% of households report electric heating as the primary fuel source for space heating in the Hoosier Energy member territory.<sup>11</sup> However, the percent of homes using electricity as the primary heating fuel source has steadily grown since 2001. The two major electric heating appliances are electric furnaces (14.1%) and electric heat pumps (6.9%). Nearly 56% of homes are heated with either propane or natural gas. 71% of all homes use electric water heating.

According to the results of the Commercial-Industrial on site surveys, the end use saturation of electric water heaters is 89% and the saturation of electric space heating systems is 31%. Almost all (93%) of sites have direct expansion cooling equipment and 7% have chillers.

**Figure 4.2: Major Electric End-Use Saturations for the Hoosier Energy Member Territory**



### 4.3 HISTORICAL ENERGY SALES & PEAK DEMAND

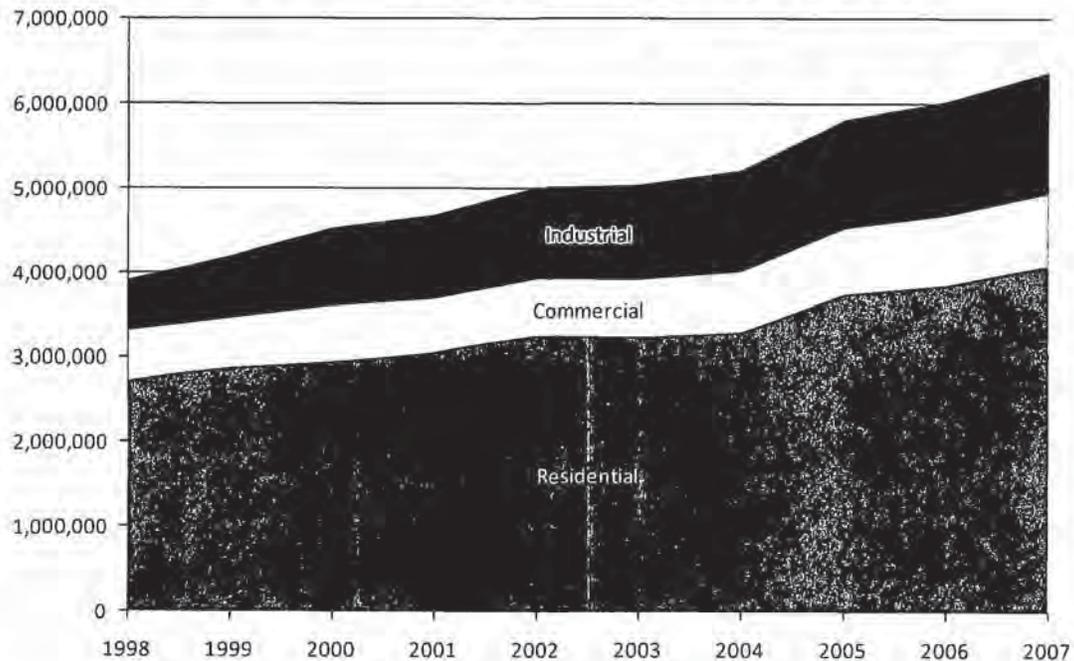
Figure 4.2 presents the combined historical MWh sales of all sectors for the member coops in the Hoosier Energy member territory.<sup>12</sup> Total sales increased from 3,940,800 MWh in 1998 to 6,412,400 MWh in 2007. Residential sales represent the biggest portion of total sales; 69% in 1998 and 64% in 2007. Industrial sales grew from 15% to 22% of total sales over the same time

<sup>11</sup> 2007 Residential End-Use Survey for the Hoosier Energy Power Network. Completed by Strategic Marketing and Research, Inc. 2007.

<sup>12</sup> Actual and forecasted consumer and sales figures are derived from the 2007 Hoosier Energy Power Requirements Study, 2006-2026. Appendix D: HEREC "Base" Case Scenario Tables, Page 8. Forecasted numbers are adjusted, beginning in 2011, to account for the introduction of the Wayne-White system.

period, and commercial represents between 13% and 15% of total sales. On average, total sales grew 5.6% annually from 1998 through 2007. Over the same time period, summer peak demand increased from 911 MW to 1,397 MW, or 4.9% annually.

**Figure 4.3: Historical Sales Data from 1998 through 2007 (MWh)**



#### 4.4 FORECAST OF CONSUMERS, ENERGY SALES & PEAK DEMAND (2009-2028)

Table 4.1 displays a reference case of forecasted data for the number of electric consumers and Table 4.2 presents annual MWh sales by sector. In these tables, MWh sales for the commercial sector refer to small commercial/industrial loads. MWh sales for the industrial sector refer to large commercial/industrial loads, but exclude irrigation, public lighting, and other loads since those categories are outside the scope of this report. The Hoosier Energy load forecast for the member territory projects that total MWh sales will grow by 2,788,780 MWh over the next two decades, at a compound average annual growth rate of 1.93% a year (Table 4.2). The residential and commercial sectors are projected to grow at 2.07% a year and the industrial sector will grow at .83% a year.

Table 4.1: Forecast Number of Customers from 2009 through 2018

Year	Residential	Commercial	Industrial	Other	Total
2009	267,465	12,138	194	1,833	281,630
2010	269,661	12,234	197	1,833	283,925
2011	284,342	13,581	205	2,202	300,330
2012	286,840	13,681	204	2,202	302,927
2013	289,616	13,781	203	2,202	305,802
2014	293,101	13,982	202	2,202	309,487
2015	296,573	14,183	202	2,202	313,160
2016	300,117	14,384	202	2,202	316,905
2017	303,748	14,585	202	2,202	320,737
2023	330,817	16,201	202	2,202	349,422
2028	357,553	17,916	202	2,202	377,873
<i>Compound Annual Average Rate of Growth</i>	1.54%	2.07%	0.21%	0.97%	1.56%

Table 4.2: Forecast Sales Data from 2009 through 2018 (MWh)

Year	Residential	Commercial	Industrial	Other	Total	@ Generation
2009	4,096,465	865,953	1,362,053	33,198	6,357,669	6,961,766
2010	4,132,349	873,411	1,455,056	33,198	6,494,014	7,110,654
2011	4,332,337	924,241	1,579,654	38,844	6,875,076	7,528,257
2012	4,393,148	932,849	1,602,532	38,844	6,967,373	7,629,069
2013	4,463,276	944,085	1,672,506	38,844	7,118,711	7,794,592
2014	4,546,098	959,825	1,683,182	38,844	7,227,949	7,914,329
2015	4,629,253	975,594	1,688,449	38,844	7,332,140	8,028,505
2016	4,714,213	991,398	1,694,051	38,844	7,438,506	8,145,085
2017	4,801,351	1,007,228	1,700,006	38,844	7,547,429	8,264,473
2018	4,891,663	1,032,670	1,773,675	38,844	7,736,852	8,471,327
2023	5,401,581	1,143,556	1,784,279	38,844	8,368,260	9,162,593
2028	6,044,388	1,278,937	1,784,279	38,844	9,146,448	10,015,734
<i>Compound Annual Average Rate of Growth</i>	2.07%	2.07%	1.43%	0.83%	1.93%	1.93%

Electric system peak load, as shown in Table 4.3, is projected to grow from approximately 1,398 MW in 2009 to 2,012 MW by the year 2028 (an annual rate of 2.4 percent). The residential sector has the highest peak demand, approximately 74% (1,034 MW) in 2009, and an annual growth rate of 2.02 percent. During 2009 through 2028, demand is estimated to increase by 477 MW in the residential sector, with an additional 138 MW increase attributed to the C&I sector.

**Table 4.3: Forecast Summer Peak Demand from 2009-2028 (MW)**

Year	Residential	Commercial	Industrial	Other	Total	@ Generation
2009	934	141	194	3	1,272	1,398
2010	946	142	208	3	1,299	1,426
2011	991	151	225	3	1,370	1,505
2012	1,002	152	229	3	1,386	1,522
2013	1,016	154	239	3	1,412	1,551
2014	1,037	157	240	3	1,437	1,578
2015	1,055	159	241	3	1,458	1,602
2016	1,074	162	242	3	1,480	1,626
2017	1,093	164	243	3	1,502	1,650
2018	1,115	168	253	3	1,540	1,691
2023	1,225	186	255	3	1,669	1,832
2028	1,367	209	255	3	1,833	2,012
<i>Compound Annual Average Rate of Growth</i>	2.02%	2.07%	1.43%	0.83%	1.94%	1.94%

#### 4.5 CURRENT DSM OFFERINGS

Hoosier Energy has previously offered rebate programs promoting energy efficient equipment such as air-source heat pumps, geothermal heat pumps, electric water heaters, and electric thermal storage systems. In addition, Hoosier Energy has also supported the Touchstone Energy Home program, which encourages the construction of efficient homes through improved building shell construction, energy efficient heating/cooling systems, and high efficient appliances throughout the home. Participation in the rebate and Touchstone Energy Home programs are at the discretion of the individual member systems. In addition, educational materials regarding simple energy efficient practices are provided to members through individual cooperative websites.

Currently, Hoosier Energy and member systems are actively pursuing research in other Energy Efficiency and demand response programs at the residential, commercial, and industrial levels. Some programs being examined include compact fluorescent lighting, commercial/industrial lighting improvements, consumer education, establishment of DSM-based tariffs, smart-thermostat use, appliance load control, power cost/load monitoring systems, and the replacement/removal of inefficient appliances. The results of this study will further guide Hoosier Energy and its member systems toward this goal.

## 5 OVERALL PROJECT IMPLEMENTATION APPROACH

This section describes the overall methodology used to conduct this study and explains the general steps and methods used at each stage of the analytical process necessary to produce the various estimates of energy efficiency and demand response potential. Specific changes in methodology from one sector, or between energy efficiency and demand response, have been noted throughout the report.

DSM potential studies involve carrying out a number of analytical steps to produce estimates of each type of potential. This study utilizes both the GDS Benefit/Cost Screening model and the Summit Blue DSM Resource Assessment model (DSM-RAM). Both models are Excel-based models that integrate technology-specific impacts and costs, customer characteristics, utility load forecasts, utility avoided forecasts and more. Excel was used as the modeling platform to provide transparency to the estimation process and allow for simple customization based on Hoosier Energy's unique characteristics and the availability of specific model input data.

### 5.1 MEASURE LIST DEVELOPMENT

DSM measure lists were based on the analysis team's existing knowledge and current databases of electric end-use technologies and energy efficiency measures, and were supplemented as necessary to include other technology areas of interest to Hoosier Energy staff and its members. The study scope was restricted to DSM measures and practices that are currently commercially available. These are measures that are of most immediate interest to Energy Efficiency and demand response program planners.

In addition, this study focused on measures that could be relatively easily substituted for or applied to existing technologies on a retrofit or replace on burnout basis. Replace on burnout applies to equipment replacements that are made normally in the market when a piece of equipment is at the end of its useful life. A retrofit measure is eligible to be replaced at any time in the life of the equipment or building. Replace on burnout measures are generally characterized by incremental measure costs and savings (e.g. the costs and savings of a high-efficiency versus standard efficiency air conditioner); whereas retrofit measures are generally characterized by full costs and savings (e.g. the full costs and savings associated with retrofitting ceiling insulation into an existing attic.)

Table 5.1 provides a basic overview of the building types and electric end-uses recognized throughout the analysis. In total, 171 energy efficiency technologies and 6 demand response programs were included in this analysis.

**Table 5.1: Summary of Building Types and Energy End-Uses Analyzed**

<b>Sector</b>	
Residential	Commercial/Industrial
<b>Building Types/Considerations</b>	
Single Family	Commercial - Existing
Mobile Homes	Commercial - New Construction
Multi-Family	Industrial
New Construction	
<b>End-Use Measures</b>	
Appliances/Electronics	Lighting
Lighting	HVAC & Shell
Space Conditioning (heating/cooling)	Motors
Building Shell Improvements	Hot Water
Water Heating	Custom
Other (ex: Pools)	
<b># of Unique Measures</b>	
Energy Efficiency: 114	Energy Efficiency: 57
Demand Response: 4	Demand Response: 2

## 5.2 MEASURE CHARACTERIZATION

A significant variety of data is needed to estimate the average and total savings potential for individual measures or demand response programs across the entire existing residential, commercial and industrial populations. To this extent, a considerable amount of effort was expended to identify, review, and document all available data sources in order to develop reasonable assumptions regarding measure lives, installed incremental and full costs (where appropriate), and electric energy and demand savings associated with each of the measures included in the final lists.

*Savings:* Estimates of annual measure savings as a percentage of base equipment usage were developed from a variety of sources, including:

- Building energy modeling software and engineering analyses
- Secondary sources such as ACEEE, DOE, EIA, Energy Star and other technical potential studies
- Customer meter data

*Measure Costs:* Measure cost represent either incremental or full cost, and typically include the cost of installation. Cost estimates were derived from:

- California DEER database adjusted to the Southern Indiana area by regional cost factors from RS Means Cost Data.
- Retail store pricing and industry experts
- Evaluation reports

*Measure Life:* Represents the number of years (or hours) that energy-using equipment is expected to operate. Useful life estimates were derived from:

- Manufacturer data
- Savings calculators and Life-cycle cost analyses
- Secondary sources such as ACEEE, Energy Star, and other technical potential studies
- California DEER database
- Evaluation reports

*Baseline and Efficient Technology Saturations:* In order to assess the amount of energy efficiency savings still available, estimates of the current saturation of baseline equipment and energy efficiency measures are necessary. Rather than relying on best available information from existing secondary sources to estimate the current market saturation levels of electric energy using equipment and the penetration of energy efficiency measures, the significant primary data collection efforts of the residential and commercial/industrial on-site surveys and the 2007 residential telephone survey helped to inform and derive technology saturations that were specific to the Hoosier Energy member territory.

Further detail regarding the development of measure assumptions for energy efficiency and demand response practices in the residential and commercial/industrial sectors can be found later in this report.

### 5.3 POTENTIAL SAVINGS OVERVIEW

Potential studies often distinguish between four different types of efficiency potential: technical, economic, achievable, and program. However, because there are often important definitional issues between studies, it is important to understand the definition and scope of each potential estimate as it applies to this analysis.

Figure 5.1: Types of DSM Potential<sup>13</sup>

Not Technically Feasible	Technical Potential			
Not Technically Feasible	Not Cost Effective	Economic Potential		
Not Technically Feasible	Not Cost Effective	Market and Adoption Barriers	Achievable Potential	
Not Technically Feasible	Not Cost Effective	Market and Adoption Barriers	Program Design, Budget, Staffing, and Time Constraints	Program Potential

<sup>13</sup> Reproduced from "Guide to Resource Planning with Energy Efficiency November 2007" written by the US EPA. Figure 2-1.

The first two types of studies- technical and economic- provide a theoretical upper bound for energy savings. Still, even the best designed portfolio of programs is unlikely to capture 100 percent of the technical or economic potential. Therefore, achievable and program potential tend to be more useful in that they attempt to estimate what may realistically be achieved, when it can be captured, and how much it would cost to do so. Figure 5.1 illustrates the four different types of efficiency potential. In this report, technical and economic savings potential estimates were developed solely for energy efficiency technologies and are not provided for demand response programs.<sup>14</sup> The estimates of achievable potential and program potential include both energy efficiency and demand response initiatives.

## 5.4 TECHNICAL POTENTIAL

Technical potential is the maximum amount of energy use that could be saved by efficiency measures, assuming immediate implementation of all energy saving measures that are technically feasible from an engineering standpoint. For example, this would include the replacement of every incandescent bulb with a compact fluorescent lamp or high-efficiency fixture, regardless of cost. Considerations of performance, willingness of end users to adopt the technology, initiative strategies, or budget do not affect this potential estimate.

In general, this study uses a “bottom-up” approach to calculating the potential of an energy efficiency measure or set of measures. A bottom-up approach first starts with the savings and costs associated with replacing one piece of equipment with its efficient counterpart, and then multiplies these values by the number of measures available to be installed throughout the life of the program. The bottom-up approach is often preferred in the residential sector because of better data availability and greater homogeneity of the building and equipment stock to which measures are applied, and was possible in the C&I sectors due to the results of the on-site surveys conducted in 2008. The savings estimates per base unit are determined by comparing the high efficiency equipment to current installed equipment for existing construction retrofits or to current equipment code standards for replace-on-burnout and new construction scenarios.

### 5.4.1 CORE EQUATION FOR THE RESIDENTIAL SECTOR

The core equation used in the residential sector technical potential analysis for each individual efficiency measure is shown below in Figure 5.2.

**Figure 5.2: Core Equation for Residential Sector Technical Potential**

$$\begin{array}{cccccccc} \text{Technical} & & & \text{Base Case} & & & & \\ \text{Potential of} & = & \text{Total Number} & \text{Equipment End} & \times & \text{Base Case} & \times & \text{Remaining} & \times & \text{Applicability} & \times & \text{Savings} \\ \text{Efficient Measure} & & \text{of Households} & \text{Use Intensity} & & \text{Factor} & & \text{Factor} & & \text{Factor} & & \text{Factor} \\ & & \text{or Buildings} & \text{[kWh/unit]} & & & & & & & & \end{array}$$

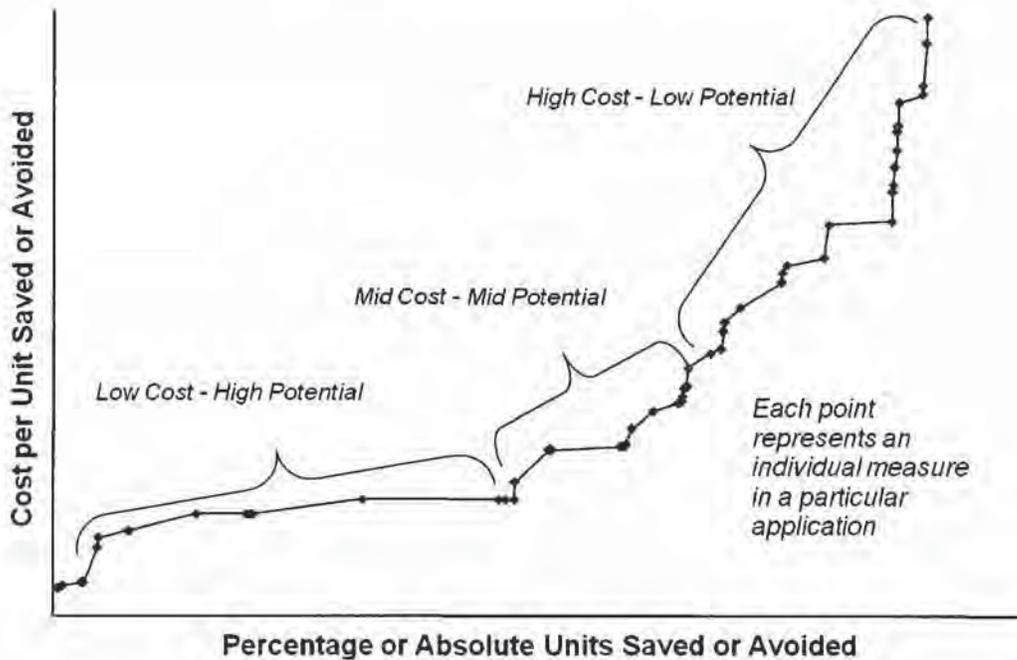
Technical energy efficiency potential in the residential sector is calculated in two steps. In the first step, all measures are treated *independently*; that is, the savings of each measure are not reduced or otherwise adjusted for overlap between competing or interacting measures. By analyzing measures independently, no assumptions are made about the combinations or order in

<sup>14</sup> For demand response, there is not sufficient data available to estimate technical and economic potential. The information relied upon for the achievable potential is based on the experience of other utilities throughout the United States, therefore the demand response analysis solely estimates an achievable potential.

which they might be installed in customer buildings. However, the cumulative technical potential cannot be estimated by adding the savings from the individual savings estimates because some savings would be double-counted. For example, the savings from a measure that reduces heat loss from a building, such as insulation, are partially dependent on other measures that affect the efficiency of the system being used to heat the building, such as a high-efficiency furnace; the more efficient the furnace, the less energy saved from the installation of the insulation.

In the second step, cumulative technical potential is estimated using an energy efficiency supply curve approach. This method eliminates the double-counting problem mentioned above. A generic example of a supply curve is shown in Figure 5.3. As shown in the figure, a supply curve typically consists of two axes; one that captures the cost per unit of saving a resource (e.g., dollars per kWh saved) and another that shows the amount of savings that could be achieved at each level of cost. The curve is typically built up across individual measures that are applied to specific base-case practices or technologies by market segment. Savings measures are sorted on a least-cost basis and total savings are calculated incrementally with respect to measures that precede them. Supply curves typically, but not always, end up reflecting diminishing returns, i.e., costs increase rapidly and savings decrease significantly at the end of the curve.

**Figure 5.3: Generic Example of a Supply Curve**



As noted above, the cost portion of this energy-efficiency supply curve is represented in dollars per unit of energy savings. Cost are annualized (often referred to as levelized) in supply curves. For example, energy-efficiency supply curves usually present levelized costs per kWh saved by multiplying the initial investment in an efficient technology or program by the capital recovery rate (CRR):

Therefore,

$$\text{Levelized Cost per kWh Saved} = \text{Initial Cost} \times \text{CRR} / \text{Annual kWh Savings}$$

### 5.4.2 CORE EQUATION FOR THE COMMERCIAL SECTOR

The core equation used to conduct the technical potential analysis in the commercial and industrial sectors for each individual efficiency measure is fundamentally the same as the equation used for the residential sector. There are differences, however, in how some of the data is represented. For example, instead of establishing baselines by “Total Number of Households or Buildings,” the commercial and industrial sectors are aggregated by total buildings square footage. Additionally, instead of the “Base Case Equipment End-Use Intensity” being described as kWh per unit as it is throughout the residential sector for all end-uses, the commercial and industrial sectors end-use intensities are represented as either kWh per unit, kWh per horsepower (motors), or kWh per ton of cooling (HVAC&Shell). Figure 5.4 below is the core equation used to determine the technical potential for the commercial and industrial sectors.

**Figure 5.4: Core Equation for Commercial Sector Technical Potential**

$$\text{Technical Potential of Efficient Measure} = \text{Total Building Sq. Footage} \times \left( \frac{\text{Remaining Factor}}{1,000 \text{ sq. ft.}} \right) \times \text{Savings Factor} \times \text{Applicability Factor}$$

## 5.5 ECONOMIC POTENTIAL

Economic potential is typically used to refer to the subset of the technical potential that is cost effective when compared to either supply-side alternatives or the price of energy. Economic potential, like technical potential, is a theoretical number that assumes immediate implementation of measures with no regard for the time it takes to ramp-up a program. Economic potential takes into account the fact that many energy efficiency measures cost more to purchase initially than standard-efficiency equipment.

In practice, most technical and economic potential estimates produce similar results. Many analysts generally pre-screen possible efficiency technologies and practices based on an understanding of which measures are likely to be cost-effective and an interest in conserving time and effort for other aspects of the analysis. All measures that were not found to be cost-effective, based primarily on the results of the Total Resource Cost Test (TRC), were excluded from future analysis. The TRC Test is defined in greater detail in Section 5.8.

## 5.6 ACHIEVABLE POTENTIAL

Achievable potential is the amount of energy use that efficiency and demand response can realistically be expected to save assuming an aggressive market penetration and budget scenarios. Achievable potential takes into account real-world barriers that hinder consumer adoption of EE&DR measures, the administrative and marketing costs associated with efficiency programs, and the capability of programs and administrators to ramp up activity over time.

Achievable potential can also vary with DSM program parameters, such as the magnitude of rebates or incentives offered to customers for installing DSM measures and thus, many different scenarios can be modeled.

For new construction, energy efficiency measures can be implemented when each new home or building is constructed, thus the rate of availability is a direct function of the rate of new construction. For existing homes and buildings, determining the annual rate of available savings is more complex. Achievable savings potential in the existing stock of buildings can be captured over time through two principle processes:

- 1) As equipment replacements are made normally in the market when a piece of equipment is at the end of its useful life (referred to as replace on burnout)
- 2) At any time in the life of the equipment or building (referred to as the retrofit case)

For the replace on burnout measures, existing equipment is assumed to be replaced with high efficiency equipment at the time a consumer is shopping for a new appliance or other energy consuming equipment, or if the consumer is in the process of building or remodeling. Using this approach, only equipment that needs to be replaced in a given year is eligible to be upgraded to energy efficient equipment. For the retrofit measures, savings can theoretically be captured at any time; however, in practice, it takes many years to retrofit an entire stock of buildings, even with the most aggressive of energy efficiency programs.

Because achievable potential factors in the necessity for energy efficiency and demand response programs to operate and impact markets over time, it is also important to recognize changing standards to energy-consuming equipment. When equipment is scheduled for federal or state code upgrades, these improvements to equipment performance result in decreased savings potential for the year the code is to be enacted and for all subsequent years. Consequently, it is important that equipment code changes, particularly planned improvements to incandescent lighting, be reflected in all achievable potential models for all sectors.<sup>15</sup>

In general, demand response programs are modeled as retrofit processes. Load control technologies can typically be installed on all types of new and existing equipment. Savings can theoretically be captured at any time, and are more dependent on program parameters, such as effective marketing and incentives, than the natural turnover of existing equipment.

## 5.7 PROGRAM POTENTIAL

Program potential refers to the potential DSM savings that is possible given specific program funding levels and designs. Elements of both energy efficiency and demand response are present in program potential. The starting point for analyzing the savings and costs resulting from the implementation of the program scenario is the achievable potential. The following steps were used to estimate the program scenario potential:

- Defining eligible measures within each recommended program and projecting future measure penetrations
- Developing program incentive costs based on program incentive structure and designs and estimated participation rates for each measure

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<sup>15</sup> "The transition to more efficient lighting, largely due to the newly enacted standards, is estimated to exceed the combined energy and monetary savings of all 21 federal appliance standards since 2000." Alliance to Save Energy. H.R. 6, Energy Independence and Security Act of 2007: Summary of Key Provisions.

- Developing non-measure program budgets (costs for all programmatic activities except measure incentives)
- Analyzing the portfolio to develop estimates of overall costs, benefits, net benefits, and benefit cost ratios.

Program plans will include an overview of the program, the target market, eligible energy efficiency and demand response measures, and proposed financial incentives for participants. The plans also include program implementation and marketing strategies. These plans should also provide the following information for each program for the period:

- Incremental annual kWh and kW savings
- Cumulative annual kWh and kW savings
- Forecast of the number of program participants
- Annual financial incentive costs
- Annual administrative costs
- Total annual utility costs
- Total program benefits
- Program benefit/cost ratio

The program plans presented in this section are based on a targeted budget of \$5 and \$7 million in 2009 and 2010, followed by an increase of 5% annually from 2011-2018. It is important to note that the measure included in the program potential scenario are a subset of those included in the achievable potential and that measure penetrations, savings, and incentive levels are occasionally tailored to reflect the goals of the program design and fit the allowable budget. As a result, program assumptions may vary slightly from the assumptions utilized for the achievable base case scenario.

## **5.8 DETERMINING COST-EFFECTIVENESS**

For the economic and achievable potential, it is necessary to develop a method by which it can be determined that a measure or program is cost effective. There is a large body of literature debating the merits of different approaches to calculating whether an investment in DSM is cost effective. The test selected for a potential study should ensure that results are comparable to the criteria being used to evaluate other options, either for electric supply or public funds.

There are several tests for evaluating energy efficiency's cost-effectiveness, each reflecting a different stakeholder perspective on the impact of energy efficiency. The Total Resource Cost test, which measures the regional net benefits, is the most common test used to evaluate energy efficiency and is the appropriate test from a regulatory perspective. All energy efficiency that passes the TRC Test will reduce the total costs of energy in a region. In this report, we adopt a primary focus on the TRC Test as requested by Hoosier Energy.

In greater detail, the TRC Test measures the net costs of an energy efficiency measure or program as a resource option based on the total costs of the program, including both the participant's and the utility's costs. The benefits include the avoided electric supply costs, the reduction in transmission, distribution, generation, and capacity costs valued at marginal cost for the period when there is an electric load reduction, as well as savings of other resources such as

fossil fuels and water. The costs are the program costs paid both by the utility and the participants. All equipment costs, installation, operation and maintenance, cost of removal, and administration costs are included in this test. The TRC test includes only direct costs and benefits, not externalities or non-monetized factors. Results are typically expressed as either net benefits or a benefit-to-cost ratio.

The TRC Test estimates the total costs of obtaining efficiency savings without considering who pays these costs. This approach does not address distributional equity, such as how costs and benefits would be shared among or within groups. In this regard, the TRC Test differs from other benefit-cost perspectives such as the utility test, participant test, and RIM Test.<sup>16</sup>

The primary screening tool for demand response programs is also the TRC test in which the generation and transmission (G&T) cooperative and participating member cooperative are treated as a combined utility (thereby ignoring the wholesale tariff). If the benefits of a program outweigh the costs in this test, then the program is one that should be considered for further study and/or implementation. The table below delineates the benefits and costs for a TRC test from the combined perspective.

**Table 5.2: Benefits and Costs for Demand Response under a Combined Perspective (TRC Test)**

Benefits	Costs
Avoided Generation Demand Costs	Carrying Cost on Equipment
Avoided Transmission Demand Cost	Administration, Operating, Marketing Costs
Value of Shifting Energy to Lower Cost Hours	

## 5.9 AVOIDED COSTS

Below is a description of the methodology used by GDS to develop the benefits of the DSM programs. The description is intended to be a general discussion of the production, transmission and distribution-related benefits that were used across all programs and is not intended to be descriptive of the benefits for an individual program. Details regarding the specific benefits of a particular program are best addressed by viewing the actual calculations within the GDS and Summit Blue Benefit-Cost models.

### Generation Energy

Energy cost impacts for DSM programs were based on the MISO Locational Marginal Price (LMP) for the Cinergy Hub, provided by Hoosier, as well as projections of future market prices.

### Generation Capacity

Some utilities use the “Peaker Method” as the basis for establishing the avoided costs of future generation capacity in the analysis of DSM programs. This method generally uses the costs of a simple cycle combustion turbine (“CT”), or other applicable peaking resource to establish the avoided cost. The method is intended to be consistent with DSM being viewed within the context of long range generation planning and can consider multiple units that are contained in the planning horizon. For a utility that is planning for, and making commitments to, meeting its

<sup>16</sup> The utility test considers only avoided energy costs as benefits and counts only expenditures incurred by the utility. The participant test uses retail energy rates and incentives received to value the benefits of energy savings and count only costs paid directly by participants. The RIM Test uses the same benefits and costs as the utility test, but also counts the lost sales revenue as a cost.

future load requirements through the construction of new generation resources, the approach of comparing DSM programs to new generation is the appropriate comparison.

However, it was concluded the Peaker Method alone does not provide the best measure of avoided cost for Hoosier, especially in the short-term planning horizon. Hoosier anticipates that market capacity prices will be below CT construction costs for a number of years but could escalate to the cost of a newly constructed CT. After considerable discussion with Hoosier staff, it was agreed that the estimated costs of market capacity purchases should provide the basis for avoided generation capacity costs since the use of the Peaker Method would likely over-state the value of the load control, especially in the short-term.

An important element of the analysis was the determination that Hoosier's summer peak demands are the primary driver in determining the system's generation capacity requirements. While summer and winter peak demand are fairly balanced, differences in seasonal capacity prices cause summer to be the more critical period for generation planning. Due to the importance of the summer peak in generation planning, the Benefit-Cost analysis was conducted so that summer load reductions achieved an annual avoided cost benefit, while winter load reductions resulted in more limited, monthly capacity purchase reductions.

Also related to avoided generation capacity costs is the benefit of avoided planning reserve capacity. Planning reserve capacity is that additional capacity provided by the utility above the forecasted peak loads to ensure that load can be reliably served in the event that load is higher than anticipated and certain generation resources are unavailable. Planning reserve margins for the Hoosier system are currently 14-15%<sup>17</sup> of the summer peak demand. An additional benefit of avoided planning reserve capacity was included for programs with "firm" (utility controlled) load reductions such as direct load control. Other demand response programs, such as TOU rates, would not receive the benefit of avoided planning reserves. Since the TOU load reduction is a function of a voluntary reaction from the customer, it would not be considered to be a firm load reduction for purposes of this analysis.

In the residential demand response portion of the analysis, GDS also developed results for a second scenario ("Full Avoided Cost") using the Peaker Method as the methodology for determining avoided generation capacity cost.

#### Transmission

Most of Hoosier's load lies within two different MISO load areas – approximately 40% in the Hoosier load area and the remaining 60% in areas served by IOU's, with the greatest majority of that portion served in the Duke load area. In the Hoosier load area, the G&T provides network transmission service through the ownership of facilities. In the IOU load areas, Hoosier purchases transmission service under 12-CP billing demand methodologies.

Due to Hoosier's transmission arrangements, the avoided costs have been calculated as the combination of deferred investment on the Hoosier system and avoided purchases in the other load areas. Discussions with staff concluded that in the Hoosier load area, peak system demands in the summer are the primary determinant in the capacity requirement of the network transmission system. As a result, summer load reductions on the Hoosier system could result in the deferral of load-growth related transmission capacity additions, while winter load reductions

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<sup>17</sup> This figure is comprised of the MISO Reserve Margin requirement, which is currently 5.35% for the June 2009 Planning Year and could change in the future, plus the forced outage rate of the generation capacity.

would not provide any such benefit. Hoosier staff provided GDS with their transmission work plan, and load-growth related projects were separated from projects focused on reliability, environmental, or contingency purposes. Based on the projected levels of investment, GDS developed the avoided cost per kW on the Hoosier system.

The peak demands on the Duke system were examined, and it was concluded that due to the diversity between the Duke and Hoosier systems and the lack of real-time information regarding when the Duke system peaks are occurring, it would not be feasible to manage load during the Duke system peaks. However, after examination of the distribution of the historic Duke system peak loads, it was determined that by targeting Hoosier's peaks for load management, it could also coincidentally result in load being controlled during two summer monthly peaks and one winter peak on the Duke system, thus reducing Hoosier's transmission purchases.

As a result, the avoided transmission cost was determined as the weighted average of the value of the deferred load-growth related transmission investment on the Hoosier system and the value of three months of reduced transmission service purchases. The weighted average transmission avoided cost was escalated at 3% annually to project future rate levels.

#### Distribution Facilities

Some G&T cooperatives consider the potential impact that DSM programs could have in delaying the construction of new substation facilities. In discussions with Hoosier staff, it was determined that this impact was not significant enough to consider in the Benefit-Cost analysis.

### **5.10 FREE-RIDERSHIP VERSUS FREE-DRIVERS**

Free riders are defined as participants in a DSM program who would have implemented the program measure or practice in the absence of the program or monetary incentive. Free drivers, on the other hand, are those who adopt a program measure or practice as an indirect result of the program, but are difficult to identify either because they do not collect an incentive or are not aware of their exposure to the program. The presence of free riders in a program tends to overstate program energy savings results (because free riders would have taken the action in the absence of the program) and complicates the evaluation of the effectiveness of DSM programs. Conversely, if one does not assess the impact of free drivers, this can result in understating a program's energy savings and effectiveness. In determining whether a DSM program has had a direct impact on customer energy use, the focus should be on net savings – calculated by determining the share of free riders and free drivers and adjusting the associated energy savings accordingly.

Although the issue of free riders and free drivers is important, it is also one that is notoriously difficult to measure, and even more difficult to predict. Based on a review of the experiences and practices of energy efficiency program administrators and evaluators at NYSERDA, National Grid, Wisconsin Focus on Energy, the Minnesota Public Service Commission and other organizations, this analysis has adopted the approach that free-riders and free-drivers offset each other. The result is an assumed net to gross ratio of 1.0 for most measures or programs considered in this analysis, where the energy savings that are eventually measured and verified will align exactly with the savings claimed<sup>18</sup>. GDS has reviewed the results of free-rider

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<sup>18</sup> The commercial/industrial sector analysis used a net to gross ratio of .90 and .80 for lighting and HVAC/shell, respectively. A net to gross ratio of .80 was also used for CFL bulbs in the residential recommended program scenario. All other measures and program used a net to gross ratio of 1.0.

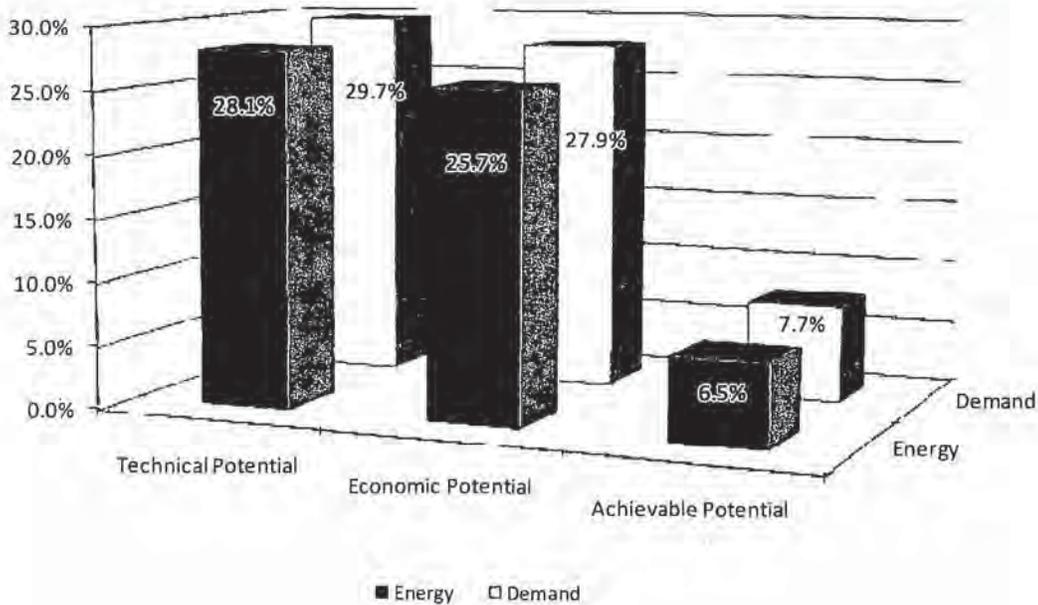
and free-driver studies at such organizations and recommends this approach until programs can be implemented in the Hoosier Energy service area and follow-up studies conducted to assess these issues.

## 6 RESIDENTIAL ENERGY EFFICIENCY POTENTIAL ESTIMATES (2009 TO 2028)

Figure 6.1 and Table 6.1 summarize the technical, economic, and achievable savings potential by 2028. The achievable potential estimates are based primarily on a market penetration scenario that targets the installation of energy efficient equipment in 40% of the available market by 2028. If 40% market penetration for all cost-effective measures can be reached over the next two decades, the achievable potential for electric energy efficiency savings in this sector is approximately 6.5% of projected residential sales (393,662 MWh). Energy efficiency measures and programs can also serve to lessen peak demand, creating a reduction of roughly 7.7% of 2028 summer peak in the base case achievable potential scenario.

Market penetration scenarios of 20% and 60% are included later in this section to demonstrate the impacts of lowered or increased energy efficiency measure adoption.

**Figure 5.10: 2028 Summary of Residential Energy Efficiency Potential**



**Table 6.1: 2028 Summary of Residential Energy and Demand Savings Potential**

	Energy		Demand	
	MWh	% 2028 MWh Sales	MW	% 2028 MW Summer Peak
Technical Potential	1,699,320	28.1%	406	29.7%
Economic Potential	1,555,909	25.7%	381	27.9%
Achievable Potential	393,662	6.5%	105	7.7%

## 6.1 ENERGY EFFICIENCY MEASURES EXAMINED

Thirty-six residential electric energy efficiency programs or measures were included in the energy savings analysis for the residential sector.<sup>19</sup> Table 6.2 provides a brief listing of the various residential energy efficiency programs or measures considered in this analysis. The list of energy efficiency measures examined was developed based on a review of the measures and programs included by other technical potential studies in similar climate regions as well other energy efficiency technical potential studies that have been conducted throughout the US. This study also includes energy efficiency measures suggested by Hoosier Energy staff. The set of energy efficiency programs or measures considered was pre-screened to only include those measures that are currently commercially available. Thus, emerging technologies, or technologies with extremely low market availability were not included in the analysis.

**Table 6.2: Measures and Programs Included in the Residential Sector Analysis**

End-Use Type	End-Use Description	Measures/Program Included
Appliances	Home Appliances and Electronics	*Energy Star Refrigerators, Freezers, and Dehumidifiers *Second Refrigerator and Second Freezer Turn-In *Consumer Electronics and Home Computers
Lighting	Lighting	*CFL Bulbs *LED Security Lighting
Hot Water	Water Heating Upgrades and Water Heating Equipment	*Water Heater Blanket and Pipe Wrap *Low Flow Showerheads and Faucet Aerators *Energy Efficient Water Heaters *Heat Pump Water Heaters *Solar Water Heating w/ Electric Back-Up *Clothes Washers and Dishwashers
HVAC & Shell	Building Envelope Upgrades and Heating/Cooling Equipment	* Insulation (Ceiling, Wall, Floor) and Radiant Barriers *Programmable Thermostats *Air Infiltration and Duct Sealing *Energy Star Windows *HVAC Tune Up * Energy Star Room AC, Central AC, and Heat Pumps *Ground Source Heat Pumps *Replacing Electric Furnaces with Electric Heat Pumps
New Homes	New Homes Construction	*Energy Efficient New Homes (Gas Heated Homes) *Energy Efficient New Homes (Electric Heat Pumps) *Energy Efficient New Homes (Electric Resistance Heat) *LED Security Lighting
Other	Miscellaneous Energy Consumptions	*Multi Family Homes Package (includes: air sealing, programmable t-stats, HVAC tune-up, and hot water savings devices, and 5 CFL bulbs) *High Efficiency Pool Pump Motors

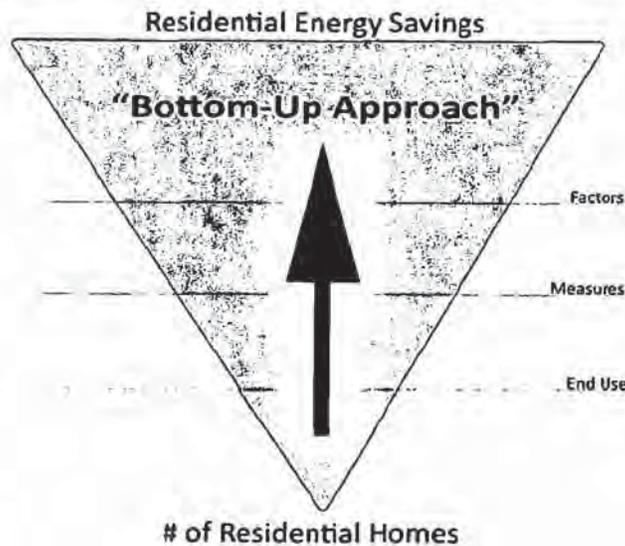
## 6.2 RESIDENTIAL SECTOR SAVINGS METHODOLOGY OVERVIEW

<sup>19</sup> After accounting for adjustments to different building types and housing characteristics, particularly for measures targeting the space heating and cooling end-use, the number grew to approximately 114 measure permutations.

The portfolio of measures includes retrofit and replace-on-burnout programmatic approaches to achieve energy efficiency savings. In the residential sector, retrofit measures are limited to the application of supplemental measures (such as the addition of a low-flow device to a showerhead), and do not include the replacement of operational equipment. Existing homes were divided into single family and mobile home markets in order to account for differing equipment saturations and heating/cooling consumption. Multi-family homes make up a small percent of the overall residential sector (2.6%) and were analyzed independently from rest of the existing housing stock. Finally, new homes were also included in the analysis based on a forecast of the number of new customers each year from Hoosier Energy. The analysis of the potential for energy efficiency savings is based on the most recent residential electric sales forecasts for the Hoosier Energy member territory for the years 2009 through 2028.

The residential sector analysis was modeled using what is considered a “bottom-up approach.” The methodology is shown visually in Figure 6.2 below:

**Figure 6.2: Residential Sector Savings Methodology – Bottom Up Approach**



As shown in this figure, the methodology started at the bottom based on the number of residential customers (splitting them into single-family and mobile home customers as well as existing vs. new construction). From that point, estimates of the size of the eligible market in the Hoosier Energy member territory were developed for each efficiency measure. For example, energy efficiency measures that affect electric space heating are only applicable to those homes in the Hoosier Energy member territory that have electric space heating. To obtain up-to-date appliance and end-use saturation data, the study made extensive use of the 2007 Residential End-Use survey completed by the Hoosier Energy. As noted earlier in the report, estimates of energy efficient equipment saturations were based on results from the 375 residential on-site surveys completed in 2008. The full formula to determine savings at the measure level is shown below.

$$\begin{array}{l}
 \text{Technical} \\
 \text{Potential} \\
 \text{of Efficient} \\
 \text{Measure}
 \end{array}
 =
 \begin{array}{l}
 \text{Total} \\
 \text{Number of} \\
 \text{Households} \\
 \text{or Buildings}
 \end{array}
 \times
 \begin{array}{l}
 \text{Base Case} \\
 \text{Equipment} \\
 \text{End Use} \\
 \text{Intensity} \\
 \text{[kWh/unit]}
 \end{array}
 \times
 \begin{array}{l}
 \text{Base Case} \\
 \text{Factor}
 \end{array}
 \times
 \begin{array}{l}
 \text{Remaining} \\
 \text{Factor}
 \end{array}
 \times
 \begin{array}{l}
 \text{Applicability} \\
 \text{Factor}
 \end{array}
 \times
 \begin{array}{l}
 \text{Savings} \\
 \text{Factor}
 \end{array}$$

The goal of the formula is to determine how many households this measure applies to (base case factor), then of that group, how many already have the efficient version of the measure being installed (remaining factor). In instances where technical reasons did not permit the installation of the efficient equipment in all eligible households the applicability factor was used to limit the potential. The last factor to be applied was the savings factor, which is the percentage savings achieved from installing the efficient measure over a standard measure.

In developing the overall potential electricity savings, the analysis also took steps to account for the interactive effects of measures designed to impact the same end-use. For instance, if a home were to install Energy Star windows the overall space heating and cooling consumption in that home would decrease. As a result, the remaining potential for energy savings derived from additional thermal envelope efficiency measures would be reduced. In this analysis, it was assumed that for those measures designed to impact the same end-use, the measure or program with the lowest levelized cost per lifetime kWh saved would typically be installed first, followed by the measures with the next lowest levelized cost.

In instances where there were two (or more) competing technologies for the same electric end use, such as heat pump water heaters and high efficiency electric storage water heaters, a percent of the available population was assigned to each measure. In the event that one of the competing measures was not found to be cost-effective, the homes assigned to that measure were transitioned over to the cost effective alternative (if any).

Solar water heating for the residential sector was treated as a unique measure in this analysis. The technical potential was limited to 40% of the eligible market due to both technical and non-technical factors, including: roof orientation, shading, minimum roof size and load bearing capability, aesthetics, as well as local building codes and ordinances.<sup>20</sup> Additionally, the achievable potential was assumed to be 10% of the eligible market.<sup>21</sup> Alternative water heating technologies (efficient water heater tanks and heat pump water heaters) were utilized to meet the remaining market potential.

### **6.3 TECHNICAL AND ECONOMIC POTENTIAL SAVINGS**

The technical potential represents the savings that could be captured if 100 percent of inefficient electric appliances and equipment were replaced instantaneously (where they are deemed to be technically feasible). As shown in Table 6.3, total technical potential savings for the Hoosier Energy residential sector are 1,699,320 MWh, or 28% of forecast residential MWh sales in 2028. HVAC and lighting represent the greatest technical potential for electric savings. The technical potential for summer peak demand savings is 406 MW, or 30% of 2028 forecast summer peak demand. The bulk of the demand savings opportunities could be achieved through HVAC or building shell improvements.

**Table 6.3: Technical Energy and Demand Potential and Percentage Share of Residential Forecast Energy Sales and Summer Peak Demand in 2028**

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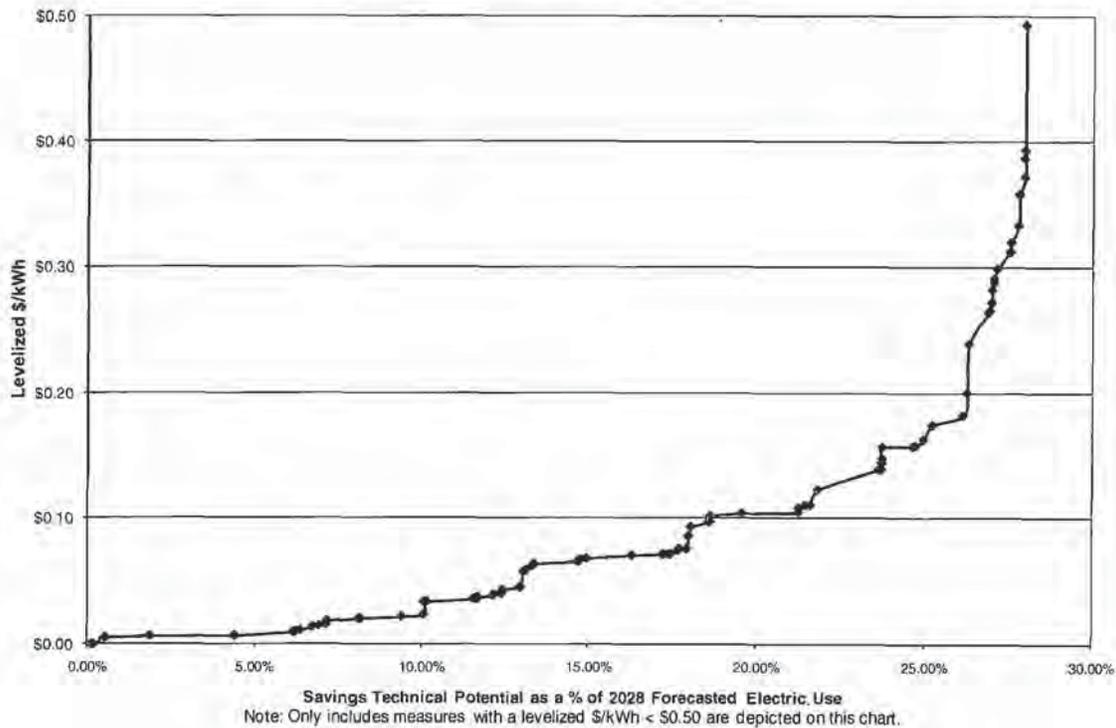
<sup>20</sup> The Technical Potential of Solar Water Heating to Reduce Fossil Fuel Use and Greenhouse Gas Emissions in the United States. National Renewable Energy Laboratory (NREL). March 2007. Pg. 8.

<sup>21</sup> GDS retained and held constant the 10% achievable potential for solar water heating in all three market penetration scenarios.

End Use	Technical Potential Energy (MWh)	Technical Potential Demand (MW)
HVAC & Shell	553,510	241
Lighting	370,375	54
Hot Water	283,175	25
New Homes	248,843	56
Appliances	224,971	24
Other	18,446	7
<b>Total</b>	<b>1,699,320</b>	<b>406</b>
<i>Total as a % of 2028 Forecast</i>	<i>28.1%</i>	<i>29.7%</i>

Figure 6.3 presents the electric energy efficiency technical potential results for the residential sector in the form of a supply curve. The supply curve demonstrates the technical potential savings (as a % of 2028 forecast kWh sales) at varied levelized costs per lifetime kWh saved amounts. For example, more than 17% savings can be achieved at a cost per lifetime kWh saved of \$0.10 or less. To obtain increased economic electric energy from efficiency resources, it is necessary to move to the right on the curve and choose progressively more costly resources. It should be noted that the levelized cost amounts are based on electric savings and do not factor in associated non-electric benefits, nor do they include program administrative costs.

**Figure 6.3: Residential Electric Efficiency Supply Curve for Hoosier Energy**



The economic potential calculations were conducted by incorporating the various measure assumptions (savings, cost, and useful life, etc) into the cost-effectiveness screening tool.<sup>22</sup> In the residential sector, any programmatic costs (e.g., marketing, analysis, and administration) were ignored in the economic potential screen analysis in order to screen whether energy efficient technologies were cost-effective on their own merit prior to any assistance or marketing endeavors from utilities or other organizations.<sup>23</sup> For the economic potential scenario, the study assumed 100% of all cost-effective measures eligible for installation were installed. This results in an economic potential of 26% of forecast residential MWh sales in 2028. Economic summer peak demand savings are 381 MW, or 28% of forecast residential summer peak demand.

**Table 6.4: Economic Energy and Demand Potential and Percentage Share of Residential Forecast Energy Sales and Summer Peak Demand in 2028**

End Use	Economic Potential Energy (MWh)	Economic Potential Demand (MW)
HVAC & Shell	498,552	218
Lighting	344,992	54
Hot Water	238,781	24
New Homes	238,212	56
Appliances	216,926	23
Other	18,446	7
<b>Total</b>	<b>1,555,909</b>	<b>381</b>
<i>Total as a % of 2028 Forecast</i>	<i>25.7%</i>	<i>27.9%</i>

## 6.4 ACHIEVABLE POTENTIAL SAVINGS

The achievable potential is a subset of the economic potential and is limited by various market and adoption barriers.

### 6.4.1 ESTIMATING ACHIEVABLE SAVINGS IN THE RESIDENTIAL SECTOR

In the residential base case scenario, achievable potential represents the attainable savings if the market penetration of high efficiency electric appliances and equipment reaches 40% of the eligible market between 2009 and 2028. The time-frame in which the market penetration target is met, however, differs between replace on burnout and retrofit measures.

- 1) For replace on burnout measures, a fraction of the 40% market penetration target is achieved annually over the course of the technology's useful life. For example, if a measure has a 10 year useful life, all existing units would be expected to burnout during the initial 10 years of the 20-year analysis timeframe; thus the market penetration target would be achieved by 2018. In this example, all efficient measures installed in the first 10 years would be reintroduced during the second decade of the analysis time-frame. This allows the savings (and costs) to persist throughout the entire 20 year study. Similarly, for a measure with a 20 year useful life, the 40% market penetration would not be met

<sup>22</sup> The cost-effectiveness of a measure is based on each measure's full savings potential, before any adjustments for interactive impacts. After identifying which measures passed screening, we made an additional adjustment for interactive effects in order to finalize estimates of overall economic potential.

<sup>23</sup> In calculating the cost-effectiveness of commercial and industrial measures to determine economic potential, administrative costs were included and estimated at 5¢ per kWh saved.

until 2028 and there would be no need to reintroduce efficient measures installed early in the analysis as they would not be expected to burnout before the end of analysis period.

- 2) For all retrofit measures the analysis assumes fewer adoption barriers, and the target market penetration is achieved by 2018 regardless of measure lifetime. In order to allow the same persistent introduction of savings realized by the replace on burnout approach, market penetration levels were allowed to exceed the 40% target in the second decade of the analysis. Retrofit measures continued to exceed the market penetration target until it was necessary to reintroduce measures that had been installed early in the analysis and reached the end of their useful life.

Another limiting factor in the residential achievable potential scenario is the current saturation of energy efficient equipment. In the base case scenario, the maximum market penetration for each measure targets 40% of eligible equipment. For example, if a measure currently has an energy efficient saturation of 20%, the remaining potential in the base case scenario by 2028 is limited to another 20%. Additionally, a measure with an energy efficient saturation greater than 40% is deemed no longer eligible for the base case achievable scenario and was excluded in this portion of the analysis.

The methodology for estimating energy efficiency measure adoption each year from 2009 through 2028 in the residential sector is based on the following core equation:

$$\text{Program Adoption} = [(Population * Base Case Factor * Market Penetration Factor) - (Population * Base Case Factor * Remaining Factor)] / (Measure Useful Life)$$

Where

- Population = Total number of single family or mobile homes in the Hoosier Energy member territory.
- Base Case Factor = Percent of population with measure (standard or high efficiency).
- Market Penetration Factor = Desired market penetration over time. In the base case scenario, this factor was assumed to be 40%.
- Remaining Factor = Percent of population currently equipped with energy efficient technology
- Measure Useful Life = Useful life of Measure

This equation was used to calculate the annual adoption rate of energy efficient measures based on the replace on burnout approach and was altered slightly for retrofit measures to ensure the desired market penetration was achieved over a period of 10 years regardless of actual measure life. Again, this is due to the idea that retrofit measures do not require original equipment to reach the end of its useful life prior to the energy efficient upgrade. In both the replace on burnout and retrofit approach, this equation creates a linear annual adoption rate to estimate achievable savings. Although this equation simplifies what an adoption curve would look like in practice, it succeeds in providing a concise method for estimating achievable savings potential over a specified period of time.

Finally, the residential achievable savings potential also takes into account scheduled federal upgrades to incandescent lighting. Recently enacted federal standards (*Energy Independence and Security Act of 2007*) require incandescent bulbs to be approximately 30% more efficient beginning in 2012.<sup>24</sup> These improvements to equipment performance result in decreased savings potential for the year the code is to be enacted and for all subsequent years.

#### 6.4.2 RESIDENTIAL BASE CASE SAVINGS POTENTIAL

Figure 6.4 is an area graph that illustrates the base case achievable potential over the 20 year study period and shows the shifting flow of measure group share over time. By 2028, the total residential energy efficiency achievable potential is 393,662 MWh, or 6.5% of forecast residential 2028 sales. Lighting represents the end-use with the highest initial potential for savings; HVAC and building shell improvements represent the largest opportunity for savings by 2028.

**Figure 6.4: Residential Achievable Potential Energy Savings under the Base Case Scenario- Cumulative Annual (MWh)**

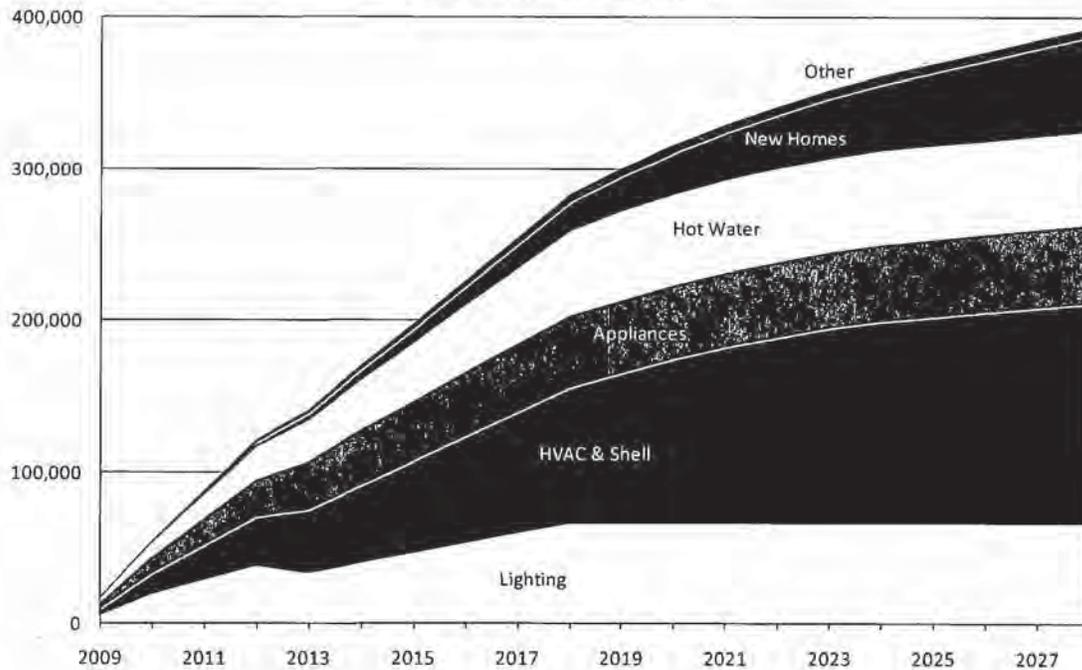
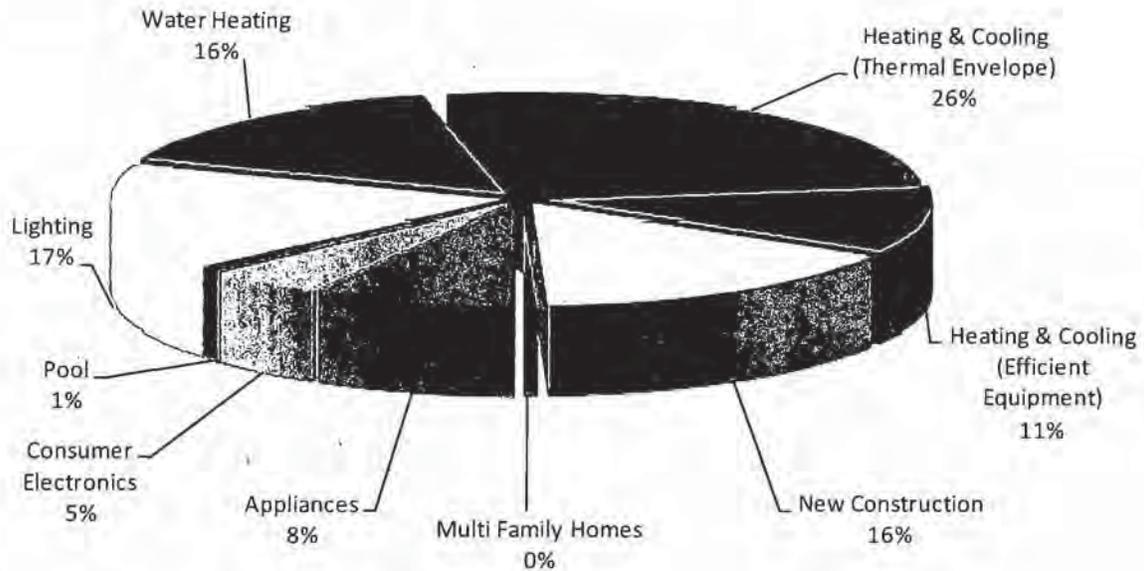


Figure 6.5 provides a more detailed breakdown of the electric end-use savings as a percent of the total achievable potential for the 40% market penetration scenario. The major opportunities for electricity efficiency resources are improved housing shell performance (i.e. insulation measures, reduced air infiltration, efficient windows, etc.) combined with more efficient heating and air conditioning equipment. As a fraction of total achievable savings potential in the residential sector, these efforts to reduce cooling and heating loads and improve HVAC system performance make up the largest majority – 37% of savings potential.

<sup>24</sup> The mandated increase in the efficiency of incandescent bulbs is phased in over a 3-year period: 100-watt bulbs must be 30% more efficient beginning in 2012, 75-watt bulbs in 2013, and 60-watt and 40-watt bulbs in 2014.

There is also a large potential for efficiency savings by replacing regularly used household incandescent light bulbs with more efficient compact fluorescent light bulbs (~ 17% of achievable potential in the residential sector), followed by water heating, new construction, home appliances and consumer electronics.

**Figure 6.5: Residential Sector End Use Savings as a % of Total Achievable Potential**



In addition to 393,662 MWh, the 40% market penetration base case scenario also achieves 105 MW savings, or 7.7% of the 2028 residential summer peak demand forecast. Similar to the technical and economic potential estimates, the bulk of the demand savings opportunities could be achieved through HVAC or building shell improvements.

**Table 6.5: Base Case Achievable Energy and Demand Potential and Percentage Share of Residential Forecast Energy Sales and Summer Peak Demand in 2028**

End Use	Achievable Potential Energy (MWh)	Achievable Potential Demand (MW)
HVAC & Shell	145,430	66
Lighting	66,497	12
New Homes	62,825	15
Hot Water	62,216	6
Appliances	51,385	6
Other	5,310	2
<b>Total</b>	<b>393,662</b>	<b>105</b>
<i>Total as a % of 2028 Forecast</i>	<i>6.5%</i>	<i>7.7%</i>

For the achievable potential, the 40% market penetration assumes that consumers would receive a financial incentive equal to approximately 35% of the incremental cost of the energy efficiency

measure for most technologies. In addition, an overall non-incentive or administrative cost per kWh saved was assigned to each measure in order to run the achievable cost-effectiveness tests. In the residential sector, a cost of \$0.06 per kWh saved was used for the first three years of the analysis for all appliances, water heating, and heating, ventilating, and air conditioning (HVAC) equipment measures. A cost of \$0.12 per kWh was used in each of the first three years for all building envelope efficiency measures, and \$0.40 per kWh was used in the first three years for new homes construction. These administrative costs were reduced by approximately 50% in years 4-10 for existing construction measures. In the second decade, administrative costs were estimated to be 1/3 of the first year costs. These costs per kWh saved are based on the experienced administrative costs of other energy efficiency programs in the US, but remain merely approximations used to examine the potential for cost-effective savings.

The overall benefit/cost screening results for the residential sector 40% market penetration scenario are shown below in Table 6.6. The net present value costs to Hoosier Energy of approximately \$114 million dollars include both total incentive payments as well as the associated costs (i.e. marketing, labor, monitoring, etc) of administering energy efficiency programs between 2009 and 2028. The net present value benefits of \$649.2 million dollars represent the lifetime benefits of all measures installed during the same time period. Although the base case achievable potential estimates would require a substantial investment in energy efficiency from both Hoosier Energy and its members (\$258.5 million), the resulting energy and demand savings would result in a net savings of over \$390 million dollars (present worth 2009).

**Table 6.6: Overall Residential Sector Cost Effectiveness Screening Results  
(dollars in millions)**

Benefit Cost Test	Present Value of Total Benefits (\$2009)	Present Value of Hoosier Costs (\$2009)	Present Value of Participant Costs (\$2009)	Present Value of Total Costs (\$2009)	Benefit/Cost Ratio
TRC Test	\$649.2	\$114.1	\$144.4	\$258.5	2.51

**6.4.3 RESIDENTIAL LOW/HIGH MARKET PENETRATION RESULTS VS. BASE CASE**

In addition to the 40% market penetration scenario reported above, this report also includes a low case and high case market penetration scenario. The low case scenario achieves approximately 20% market penetration by 2028, while the high case achieves 60% market penetration. As noted earlier, the 40% market penetration assumed financial incentives equal to 35% of the measure incremental cost. The high up-front cost of energy efficient technologies is an important adoption barrier and altering incentive levels is likely to have an impact on market potential estimates. The low and the high scenarios illustrate the impacts of changing the incentive level. Financial incentives equal to 50% and 20% of the measure incremental cost were used in most programs for the 60% and 20% market penetration scenarios, respectively.

Table 6.8 (following page) presents the measure-level achievable savings, sorted by end-use, for all three market penetration scenarios by 2028. For each scenario, only energy efficiency measures that proved to be cost effective based on the results of the TRC test were included. As the target market potential was raised, the number of measures included in each scenario also increased. Meanwhile, Figure 6.6 illustrates the low and high case achievable savings by year, and compares it to the equivalent base case scenario savings.

**Figure 6.6: 2028 Potential Savings Results for all Market Penetration Scenarios**

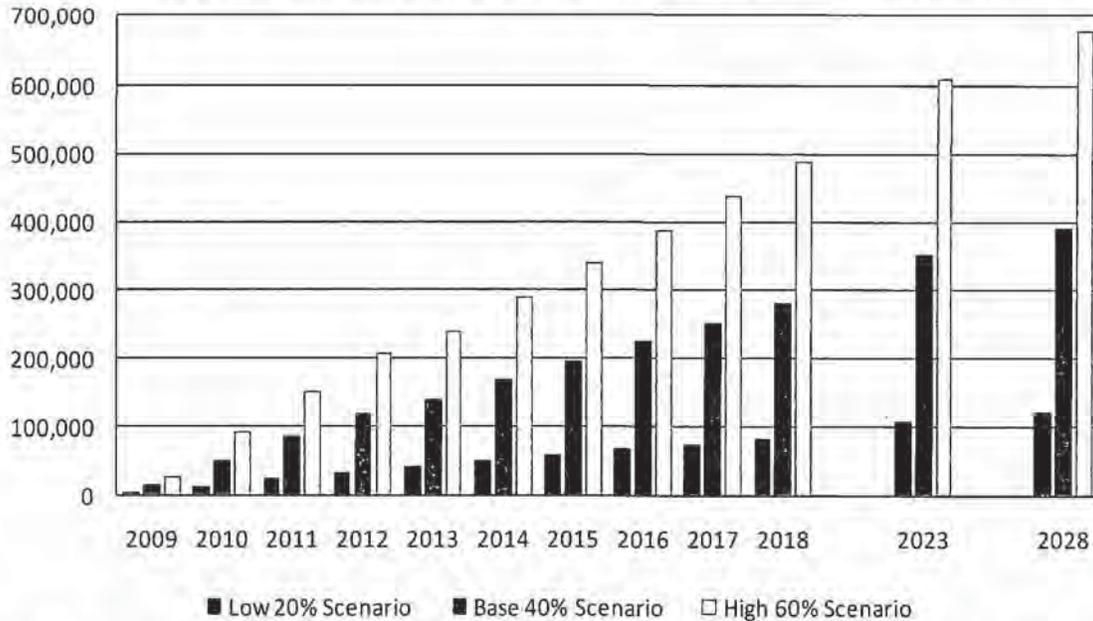


Table 6.7 shows that the achievable potential savings by 2028 range from a low of 2% in the low market penetration scenario to a high of 11.2% in the high market penetration scenario. Summer peak demand savings range from 35 MW in the low market penetration scenario to 184 MW in the high market penetration scenario. Table 6.7 also presents the total benefits and costs for the TRC Test in the 20%, 40%, and 60% market penetration scenarios. The net present value savings (benefits – costs) range from approximately \$119 million in the 20% market penetration scenario to \$687 million in the 60% market penetration scenario.

**Table 6.7: Benefit/Cost Ratios for all Market Penetrations Using the TRC Test (dollars in millions)**

Market Penetration Scenario	MWH Savings in 2028	% of Forecasted 2028 Res. Sales	Summer Peak MW Savings in 2028	Present Value of Total Benefits (\$2009)	Present Value of Total Costs (\$2009)	Benefit/Cost Ratio
Low Case - 20%	123,407	2.0%	35.04	\$214.4	\$95.0	2.26
Base Case - 40%	393,662	6.5%	104.83	\$649.2	\$258.5	2.51
High Case - 60%	679,909	11.2%	184.28	\$1,131.3	\$444.0	2.55

**Table 6.8: Low, Base, and High Scenario Residential Achievable Potential Savings in 2028, by Measure (MWh)**

Measure Name	Achievable Potential (Low)	Achievable Potential (Base)	Achievable Potential (High)
<b>Appliances and Electronics</b>			
Second Refrigerator Turn In	7,328	16,213	25,094
Home Electronics	3,498	17,485	31,471
Second Freezer Turn In	3,235	6,467	9,702
Energy Star Compliant Refrigerator	1,704	8,022	14,338
Energy Star Dehumidifer	767	2,301	3,835
Energy Star Dishwasher	0	2,749	5,803
Energy Star Compliant Personal Computer	0	897	2,094
Energy Star Freezer	0	0	0
<b>Hot Water</b>			
Heat Pump Water Heater	16,823	44,866	72,911
Efficient Water Heater	1,937	5,166	8,394
Energy Star Clothes Washer	1,119	9,435	17,749
Low Flow Faucets	0	0	0
Low Flow Showerhead	0	0	0
Pipe Wrap	0	0	0
Solar Water Heating	0	0	0
Water Heater Blanket	0	0	0
<b>HVAC &amp; Shell</b>			
Equipment Swapping: Electric Furnace to HP	18,613	34,619	42,405
Radiant Barriers	13,937	30,244	47,521
Energy Star Windows	11,327	37,547	64,472
Insulation - Wall	4,789	9,570	14,358
Insulation-Floor	4,402	8,769	13,172
High Efficiency Heat Pump	1,573	2,277	2,358
Insulation -Ceiling	1,083	2,014	2,748
High Efficiency Central AC	815	5,726	9,729
Programmable Thermostats	0	14,664	41,792
Duct Sealing	0	0	4,376
HVAC Tune-Up	0	0	3,578
Air Infiltration	0	0	1,310
Energy Star Room A/C	0	0	0
Equipment Swapping: Electric HP to Geothermal HP	0	0	0
<b>Lighting</b>			
CFL Bulbs	10,026	66,497	124,830
LED Exterior Lighting	0	0	0
<b>New Homes</b>			
Efficient New Construction	19,500	62,825	106,157
New Construction - LED Dusk til Dawn Lighting	0	0	0
<b>Other</b>			
Multi Family Homes Package	0	2,512	5,038
Pool Pump and Motor	932	2,797	4,675
<b>Grand Total</b>	<b>123,407</b>	<b>393,662</b>	<b>679,909</b>

Note: Measures with no achievable savings in all three market penetration scenarios were either 1) not cost effective, or 2) excluded due to competing technologies. Conversely, when measure savings are absent in only one or two of the market penetration columns, this represents that the energy efficient measure had already achieved the targeted penetration and no additional savings opportunities existed in that scenario.

## 7 RESIDENTIAL DEMAND RESPONSE POTENTIAL ESTIMATES (2009 TO 2028)

The achievable potential for peak demand savings in the residential sector from demand response programs is approximately 100 MW. Air conditioning and standard tank (40/50 gal) water heating load control combine to represent roughly 92 MW of controlled load, while large tank (70 gal.) water heating and pool pump load control represent the remaining 7.5 MW of achievable demand response potential. These four programs result in approximately \$44.5 million of avoided capacity, transmission, and distribution costs to Hoosier and its member systems.

**Table 7.1: Residential Sector Demand Response Potential Summary**  
(dollars in millions)

	MW Savings in 2028	% of 2028 Residential Peak Demand	NPV Benefits (\$2009)	NPV Costs (\$2009)	TRC Benefit/Cost Ratio
Residential DR Programs Combined	99.7	7.3%	\$44.5	\$31.9	1.39

### 7.1 DEMAND RESPONSE PROGRAMS EXAMINED

The initial step in a demand response study is to determine from a wide list of potential programs which are of interest to study. Since Hoosier's demand response efforts are currently limited to its interruptible rates and the Members' voluntary peak load control programs, it was decided that this study would focus only on several programs that have the largest potential impact on peak demand. The programs studies include<sup>25</sup>:

- 1) Direct control of air conditioners with a 33% cycling strategy
- 2) Direct control of air conditioners with a 50% cycling strategy
- 3) Direct control of standard water heaters (40/50 gallons)
- 4) Direct control of large capacity water heaters (80 gallons)
- 5) Direct control of residential swimming pool pumps

Load impacts for residential programs were developed using models that estimate average diversified consumption by appliance. Inputs into those models include average home size, weather, number of people per household, and appliance efficiencies. The models for air conditioning and space heating are from the Air Conditioner Contractors of America<sup>26</sup> ("ACCA") and models for water heating are from the Gas Appliance Manufacturers Association ("GAMA"). Home size and people per household data came from the residential surveys. Average device efficiencies on the Hoosier system were estimated using on-site survey data and information from the Energy Information Administration's *Annual Energy Outlook 2008*. Furthermore, the demand response analysis assumes implementation of energy efficiency replacement programs. For instance, the air conditioner efficiency assumed for load impacts is increased over time assuming an energy efficiency program is replacing old lower-SEER units with higher SEER units. The result is that the demand response analysis is conservative with respect to load impacts.

<sup>25</sup> Electric Thermal Storage is not included in the main body of this report due to its characterization as a load building program.

<sup>26</sup> "Manual S – Residential Equipment Selection." Air Conditioning Contractors of America.

Avoided cost assumptions are the key input into a demand response benefit/cost analysis. Therefore, development of these assumptions has been discussed in more detail in section 5.9 of this report.

Most of the programs considered in this study were load control programs, requiring purchase and installation of a physical control switch that can be “called” upon by Hoosier to interrupt (or cycle on and off) load to a specific appliance. There are several technologies available to control load that receive their instructions through various means. Radio control switches can be activated via a radio or pager transmission system. If a utility has implemented Advanced Metering Infrastructure (“AMI”), then the digital meter can be programmed and wired to run load control. Not all of Hoosier’s member cooperatives have implemented or soon plan to implement AMI. Therefore, Hoosier would require a communications system capable of delivering control instructions to various technologies. Hoosier hired an independent consultant, through the NRECA – National Consulting Group, to investigate the technical and cost considerations for such a mixed system. The report from that study provided GDS Associates and Summit Blue with the average capital and install cost per control device specifically for the Hoosier System. We assumed a carrying cost factor of 21.76% per year on the cost of the equipment. The carrying cost factor includes interest, depreciation, O&M, and margins.

Administrative, marketing, and operating costs of the system (excluding incentives) were estimated on a per switch basis and escalated at 3%. The estimate (~\$15 per switch) is based on GDS’ knowledge of such costs from other establish G&Ts.

Incentives are excluded from the residential benefit/cost analysis because there are a myriad of ways in which a cooperative can incentivize its customers to join a particular program (in fact, some success can be had with no incentive by reflecting on the “cooperative spirit”). Therefore, the analysis is conducted with no incentive and the net value of the program in this way (benefits less costs) provides a level of “headroom” that is available to incent customers.

Like the energy efficiency potential approach, the demand response potential approach includes several analytical steps. However, due to the different nature of the two programs, the demand response approach focuses on benefits/cost analysis primarily and then analyzes achievable potential. Therefore, there are no sector-level estimates of technical and economic demand potential included in this report.

## **7.2 DEMAND RESPONSE PROGRAM COST-EFFECTIVENESS**

The table below summarizes the benefit/cost analysis results under the base case avoided cost assumptions. The standard water heater control program is the only program to not pass the base case screening analysis. Obviously, the 50% cycling strategy provides more benefit for air conditioners than does a 33% cycling strategy. For the 33% cycling case, only a NPV of \$98 is available for incentives. Therefore, GDS recommends Hoosier Energy test cycling strategies during its load management pilot program to see what level is tolerable to homeowners.

**Table 7.2: Benefit/Cost Ratios under Base Case Avoided Cost Assumptions (TRC Test)**

Program	NPV Benefits	NPV Costs	Net Savings	Ben/Cost Ratio
AC – 33% Cycling	\$553	\$455	\$98	1.22
AC – 50% Cycling	\$831	\$455	\$376	1.83
Standard WH (40/50 Gal)	\$410	\$497	(\$87)	0.82
Large Cap WH (70/80 Gal)	\$601	\$497	\$104	1.21
Swimming Pool Pump	\$1,221	\$605	\$616	2.02

As described in Section 5.9 of the report, a full-avoided cost scenario was developed to see screening analysis results if the avoided cost of a CT were assumed for all years. The higher avoided cost leads to greater benefit/cost ratios, however, the standard water heater is still not quite worth pursuing in this scenario with a benefit/cost ratio (without incentives) of 0.99.

**Table 7.3: Benefit/Cost Ratios under Full-Cost Avoided Cost Assumptions (TRC Test)**

Program	NPV Benefits	NPV Costs	Net Savings	Ben/Cost Ratio
AC – 33% Cycling	\$674	\$455	\$219	1.48
AC – 50% Cycling	\$1,013	\$455	\$558	2.23
Standard WH (40/50 Gal)	\$493	\$497	(\$4)	0.99
Large Cap WH (70/80 Gal)	\$684	\$497	\$187	1.38
Swimming Pool Pump	\$1,523	\$605	\$918	2.52

### 7.3 ACHIEVABLE POTENTIAL SAVINGS

Once programs that are economically viable are identified, penetrations for program participation can be estimated. Performances of other utilities with mature programs (e.g. in place for 15-20 years) have been used to estimate potential impacts on the Hoosier system. This analysis assumed that demand response programs would not initiate until 2010, allowing additional time for proper program implementation. Estimated demand response penetrations and load impacts are presented below.

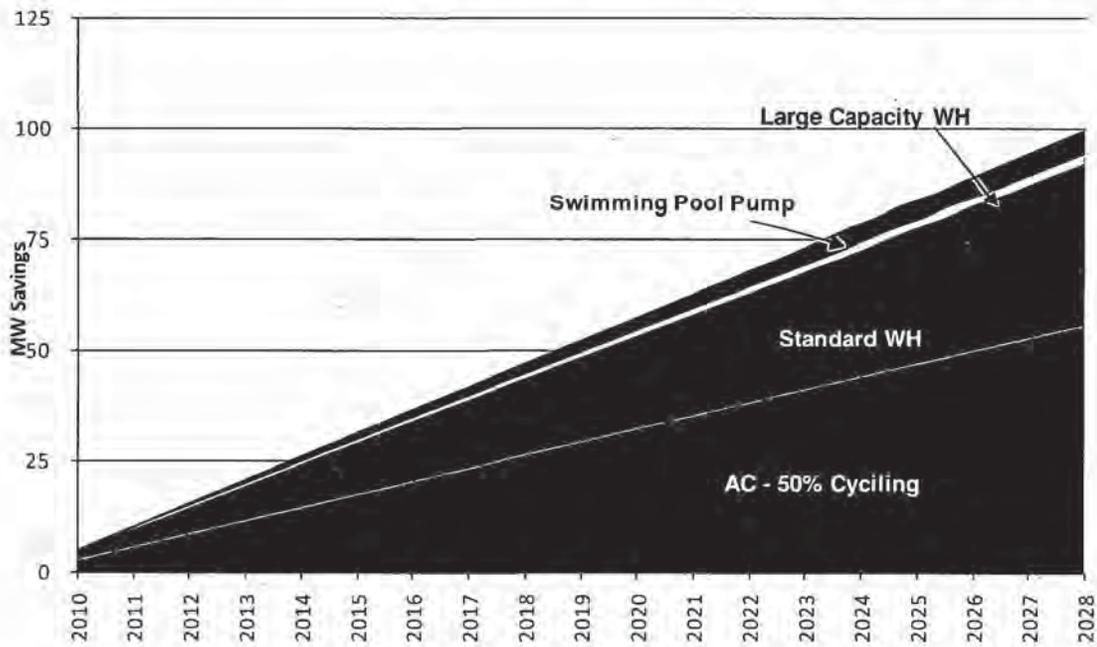
**Table 7.4: Achievable Potential Savings for Residential Demand Response (2010-2028)**  
(dollars in millions)

Program	Number Controlled	MW Savings	NPV Benefits (\$2009)	NPV Costs (\$2009)	Benefit/Cost Ratio
AC - 50% Cycling	56,305	56.0	\$24.3	\$11.7	2.07
Standard WH (40/50 Gal)	79,316	36.2	\$16.8	\$18.4	0.91
Large Cap WH (70/80 Gal)	4,219	1.9	\$1.3	\$1.0	1.32
Swimming Pool Pump	3,275	5.5	\$2.1	\$0.8	2.76
<b>Program Totals</b>		<b>99.7</b>	<b>\$44.5</b>	<b>\$31.9</b>	<b>1.39</b>

In total, the four residential demand response programs result in 99.7 MW of achievable savings potential, or 7.3% of the forecasted 2028 summer peak demand in the residential sector. Note that the 50% cycling strategy was chosen to estimate the achievable potential in the Hoosier Energy member territory due to larger demand savings than those that would be achieved through the 33% cycling strategy. If the load management pilot suggests homeowners would be unwilling to participate at the 50% cycling level, the achievable savings and overall benefits would diminish somewhat under the 33% cycling strategy.

Also, the standard water heater (40/50 gal) was retained in the achievable potential scenario despite a benefit cost ratio below 1.0. Standard water heater load control is still recommended to allow Hoosier to have control over a greater proportion of their peak loads. With a benefit/cost ratio so close to one, the economic value of the standard water heaters may become apparent as key inputs to the analysis change, especially the value of avoided peak demand.

**Figure 7.1: Achievable Potential Savings for Residential Demand Response by Year**



## 8 COMMERCIAL/INDUSTRIAL ENERGY EFFICIENCY POTENTIAL ESTIMATES (2009 TO 2028)

Figure 8.1 and Table 8.1 summarize the technical, economic, and achievable savings potential by 2028. Both technical and economic potential estimate about 17% of the expected energy sales and about 25% of the expected peak demand by the year 2028. The achievable potential presented here is for the base case market penetration scenario which assumes that incentives are set at 25% of the DSM measure incremental cost and is calibrated to achieve savings that are similar to other high performing municipal and cooperative DSM programs in the Midwest. If Hoosier Energy can achieve similar levels of success, the achievable savings potential from energy efficient resources is estimated to be 7.5% of expected energy sales and 13.3% of peak demand for 2028.

Figure 8.1: 2028 Summary of Commercial/Industrial Energy Efficiency Potential

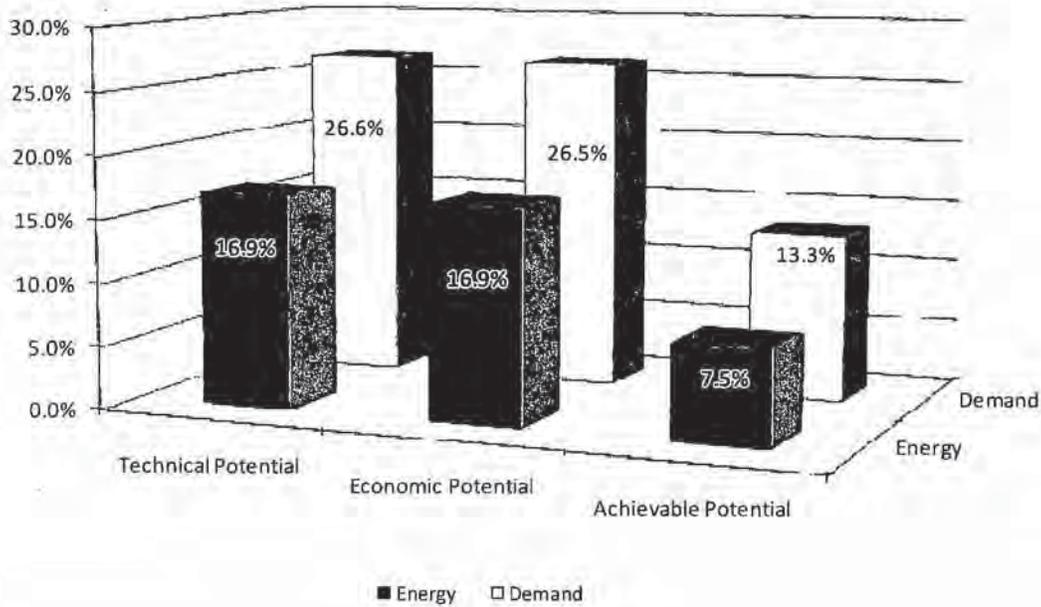


Table 8.1: 2028 Summary of Commercial/Industrial Energy and Demand Savings Potential

	Energy		Demand	
	MWh	% 2028 MWh Sales	MW	% 2028 MW Summer Peak
Technical Potential	518,162	16.9%	123	26.6%
Economic Potential	517,388	16.9%	123	26.5%
Achievable Potential	230,778	7.5%	61	13.3%

## 8.1 ENERGY EFFICIENCY MEASURES EXAMINED

Thirty-seven prescriptive commercial/industrial electric energy efficiency programs or measures were included in the energy savings analysis for the commercial/industrial sector. In addition, a custom measure category was included in the analysis to cover any further energy efficiency upgrades that may be possible in the commercial and industrial facilities that are not captured by the traditional measures. Table 8.2 provides a brief listing of the various commercial/industrial energy efficiency programs or measures considered in this analysis. The list of energy efficiency measures examined was constrained by what we found in the field with our 65 on-site surveys. For example, fluid chillers for process cooling and space conditioning were very rare and mostly less than 20 tons of capacity. The overall potential savings for this class of equipment is relatively small; therefore, the analysis focused on measures with greater overall potential. In the cases where high-efficiency fluid chillers might be installed we included their potential in the generic 'Custom Measures.'

**Table 8.2: Measures and Programs Included in the Commercial/Industrial Sector Analysis**

<b>End-Use Type</b>	<b>Measures/Program Included</b>
<b>Lighting</b>	*T8 and T5 Lamps and Electronic Ballasts *Screw-In CFL Bulbs and Fixtures *Occupancy and Daylight Sensors *Delamping *LED Exit Signs *High Bay Fluorescent Lights and Pulse-Start HID's
<b>Motor &amp; Other</b>	*Motors < 10 HP *Motors > 10 HP *Compressed Air
<b>Hot Water</b>	*Efficient Water Heaters *Tankless Water Heaters *Heat Pump Water Heaters
<b>HVAC &amp; Shell</b>	*Variable Frequency Drives (VFDs) *Efficient Packaged Commercial A/C Systems *Economizers *Programmable Thermostats
<b>Custom</b>	*Any additional conservation measures not covered above

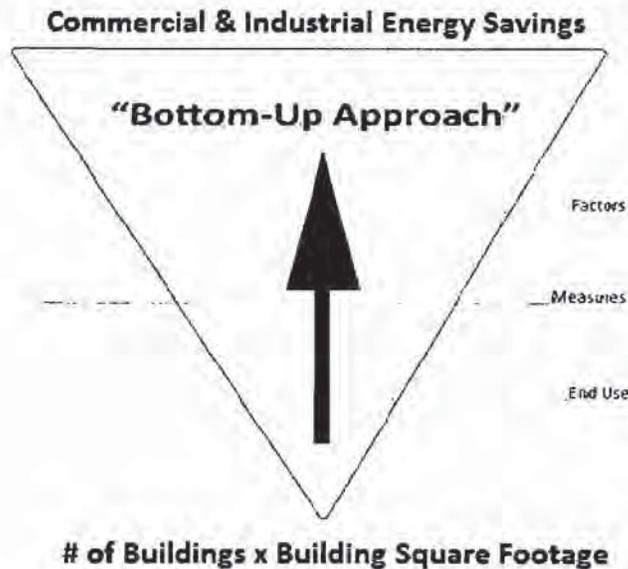
Prescriptive measures are generally simple measures that have largely uniform energy and peak demand savings on a per unit basis from application to application. However, even prescriptive measures' savings will have some variability, depending on the specific application and baseline equipment replaced. For this study, measure data has been based on a typical retail building with non-residential lighting fixtures and HVAC equipment.

Custom Measures have more variable energy and peak demand savings on a per unit basis from application to application. Calculating energy and peak demand savings for custom measures on a site-specific basis will significantly improve the accuracy of the energy and peak demand savings estimates, versus using standard per unit estimates for custom measures. In addition to the previously mentioned fluid chillers, custom measures might include process or control improvements and holistic renovations of systems.

## 8.2 COMMERCIAL/INDUSTRIAL SECTOR SAVINGS METHODOLOGY OVERVIEW

Similar to the residential sector, the portfolio of measures includes retrofit and replace-on-burnout programmatic approaches to achieve energy efficiency savings and impacts both existing structures and new construction. The analysis utilizes a “bottom-up” approach in that the starting points are the study area building stocks (by number and square footage) and equipment saturation estimates derived from the results of the on-site audits, and then utilizes forecasts of building stock decay and new construction, DSM technology data, past DSM program accomplishments, and decision maker variables that help drive the market potential scenarios to determine overall savings potential over the 20 year analysis period.

Figure 8.2: Commercial & Industrial Sector Savings Methodology – Bottom Up Approach



As shown Figure 8.2, the bottom-up method started with the number of commercial and industrial customers (each sector individually assessed and further segregated by existing and new construction building stock) and the average building square footage. Average building square footage was developed from the results of the on-site surveys. From there the customer numbers, average square footage, and saturation data were used to estimate the size of the eligible market in the Hoosier Energy member territory for each efficiency measure by sector. For example, energy efficiency measures that affect electric space heating are only applicable to those commercial and/or industrial customers in the Hoosier Energy member territory that have electric space heating. To obtain up-to-date equipment and end-use saturation data, the study made extensive use of the commercial on-site surveys completed by Hoosier Energy. As noted earlier in the report, estimates of energy efficient equipment saturations were based on results from the 368 commercial on-site surveys completed in 2008. Similar to the formula used in the residential sector, the full formula to determine savings at the measure level is shown below.

$$\text{Technical Potential of Efficient Measure} = \text{Total Building Sq. Footage} \times \left( \frac{\text{Remaining Factor}}{\text{Inefficient Units per 1,000 sq. ft.}} \right) \times \text{Savings Factor} \times \text{Applicability Factor}$$

The goal of the formula is to determine the overall technical potential for electric savings by first determining the total building square footage in the commercial and industrial sectors, then how many inefficient units (fixtures/motor horsepower/tons of cooling) per 1,000 sq ft. remain (remaining factor). In instances where technical reasons did not permit the installation of the efficient equipment in all eligible households the applicability factor was used to limit the potential. The last factor to be applied was the savings factor, which is the savings achieved from installing the efficient measure over a standard measure. In the commercial/industrial sector, the economic potential was determined by comparing the economic benefit of a measure's energy and demand savings to the cost (measure cost and administrative costs) of implementing each measure. Only measures that were cost-effective, or the total benefits were greater than the total costs, were included in the economic potential.

### 8.3 TECHNICAL AND ECONOMIC POTENTIAL SAVINGS

The total technical potential savings for the Hoosier Energy commercial/industrial sector is 518,162 MWh, or 17% of forecast commercial and industrial MWh sales in 2028. As shown in Table 8.3, the greatest share of energy savings technical potential is expected from the Motors & Other category of measures and the Custom category of measures, providing 33% 28% of the technical potential respectively. HVAC and Shell measures are expected to constitute 21% of the technical potential, and lighting 18%. Hot Water measures are expected to constitute less than 1% of the technical energy potential.

The share of technical potential for peak demand savings from energy efficiency resources by measure group is relatively similar to that of energy savings. For peak demand savings, the greatest share of technical potential is provided by the Custom category of measures at 30%. The Motors & Other and Lighting categories of measures provide the second largest share at approximately 25% each. Hot Water measures provide less than 1% of the technical peak demand potential.

**Table 8.3: Technical Energy and Demand Potential and Percentage Share of Commercial/Industrial Forecast Energy Sales and Summer Peak Demand in 2028**

<b>End-Use</b>	<b>Technical Potential Energy (MWh)</b>	<b>Technical Potential Demand (MW)</b>
Total Lighting	92,988	31
Total Motor & Other	169,222	31
Total Hot Water	806	1
Total HVAC & Shell	109,453	24
Total Custom	145,695	36
<b>Total All</b>	<b>518,162</b>	<b>123</b>
<i>Total as % of C&amp;I Sales</i>	<i>16.9%</i>	<i>26.6%</i>

For the economic potential scenario, the study assumed 100% of all cost-effective measures eligible for installation were installed. Cost-effectiveness was determined as all measures with a TRC benefit-cost ratio greater than 1.0. The economic potential, based on the result of the individual measure TRC tests, is 517,388 MWh, or 16.9% of forecast commercial and industrial MWh sales in 2028. Economic summer peak demand savings is 123 MW, or 26.5% of forecast commercial and industrial summer peak demand.

Note that the economic potential practically equals the technical potential because measures that were known to typically fail the TRC cost-effectiveness by wide margins were prescreened out of the list of measures analyzed for the technical potential; thus, almost every measure analyzed for technical potential passed the TRC test.

**Table 8.4: Economic Energy and Demand Potential and Percentage Share of Commercial/Industrial Forecast Energy Sales and Summer Peak Demand in 2028**

<b>End-Use</b>	<b>Economic Potential Energy (MWh)</b>	<b>Economic Potential Demand (MW)</b>
Total Lighting	92,573	31
Total Motor & Other	169,222	31
Total Hot Water	446	0
Total HVAC & Shell	109,453	24
Total Custom	145,695	36
<b>Total All</b>	<b>517,388</b>	<b>123</b>
<i>Total as % of C&amp;I Sales</i>	<i>16.9%</i>	<i>26.5%</i>

## 8.4 ACHIEVABLE POTENTIAL SAVINGS – BASE CASE SCENARIO

### 8.4.1 ESTIMATING ACHIEVABLE SAVINGS IN THE COMMERCIAL/INDUSTRIAL SECTOR

In the base case scenario, the commercial/industrial achievable potential represents the attainable savings if the market penetration is calibrated so that by the fifth or sixth year, the programs achieve annual energy savings, as a percentage of sales, which approximate the savings achieved by the better DSM programs in the Midwest, specifically 0.4% as identified in the benchmarking analysis. The process of calibrating on benchmarks produces a realistic starting point; intending to spend more initially may not be effective or practical. In other words, on the basis of benchmarking other Midwest DSM programs and from experience with new Midwest DSM programs and the years required to ramp up participant numbers, it is reasonable to expect that Hoosier Energy achieve 0.4% energy savings as a percentage of sales by year 6, and it is unlikely that Hoosier Energy can achieve that level of savings from year 1. The base market scenario also assumes that the initial DSM measure incentives are set at 25% of incremental capital cost, which is typical in the Midwest; for example, Xcel Energy (MN)'s 2007 incentives amounted to 23% of incremental capital cost for all its electric DSM programs.

The methodology for estimating energy efficiency measure adoption each year from 2009 through 2028 is based on an adoption curve formula that takes the following form:

$$\text{Program Adoption} = \text{Remaining Available Applications} * \text{Market Factor} * \exp(0.0 - \text{Beta} * \text{measure payback}) * (\text{Consumer Awareness} * \text{Consumer Willingness} + (1 + \text{Consumer Awareness} * \text{Consumer Willingness}) / (1 + \exp(-1 + \exp(-1 * \text{Beta} * \text{Payback} * (\text{current program year} - \text{curve inflection point year}))))$$

Where:

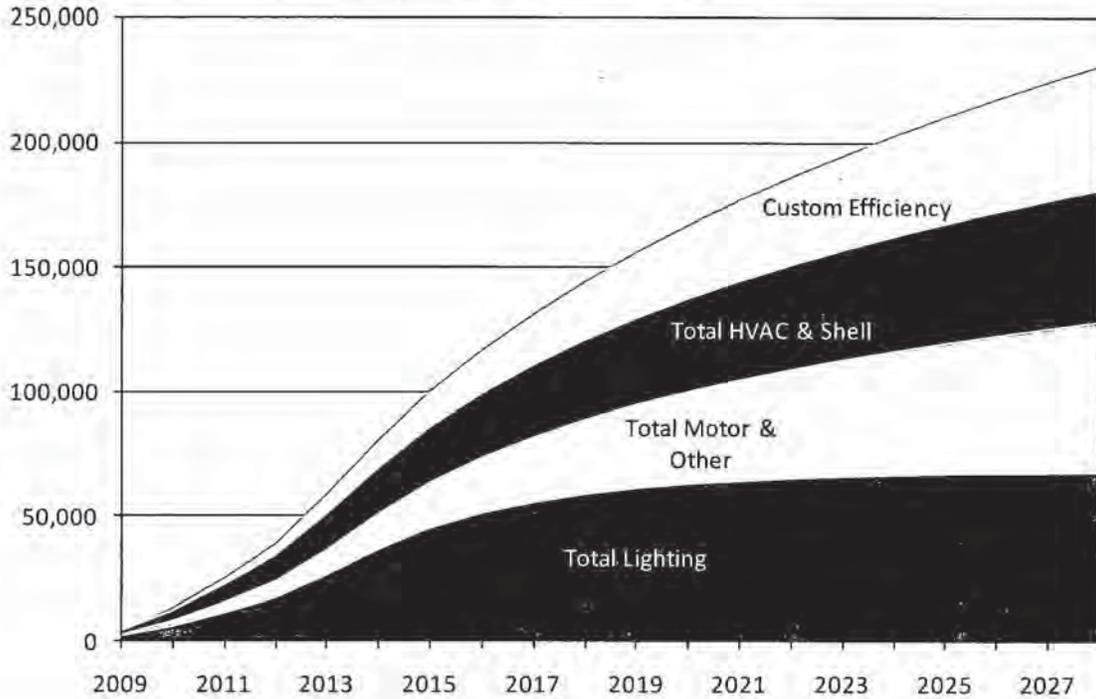
- Remaining available applications = Maximum saturation per adoption unit less the current saturation.
- Market Factor = Calibration factor based either on currently achieved levels of savings, or some appropriate starting value, such as “Best Practices” results or results from similar programs.
- Beta = Constant that changes the shape of the curve. A smaller Beta, such as 0.1, gives slower adoptions while a larger Beta, such as 0.4, gives faster adoptions.
- Measure payback = (Measure cost) / (incentive & value of energy savings)
- Consumer Awareness = Percent of the population of eligible consumers who are aware of the technology.
- Consumer Willingness = Percent of the population of eligible consumers who are both aware of the technology and willing to purchase it.
- Program year = Year after program inception
- Curve inflection point year = Within a program’s lifetime, the point of time on an “S” curve where the curve stops accelerating upward and starts decelerating toward saturation.

This formula creates an “S” curve adoption pattern for each measure that typically presents with low initial participation that ramps up over time before leveling off. With new technologies, there is often low awareness of the technology among consumers and there may be a hesitancy to purchase the technology because of its newness. A program could then be designed to not only provide incentives, but to increase awareness and promote the technology’s reliability. In contrast, a mature technology may already have high willingness and awareness values and, thus, the adoption curve would likely follow a flatter trend over time.

#### **8.4.2 COMMERCIAL/INDUSTRIAL BASE CASE SAVINGS POTENTIAL**

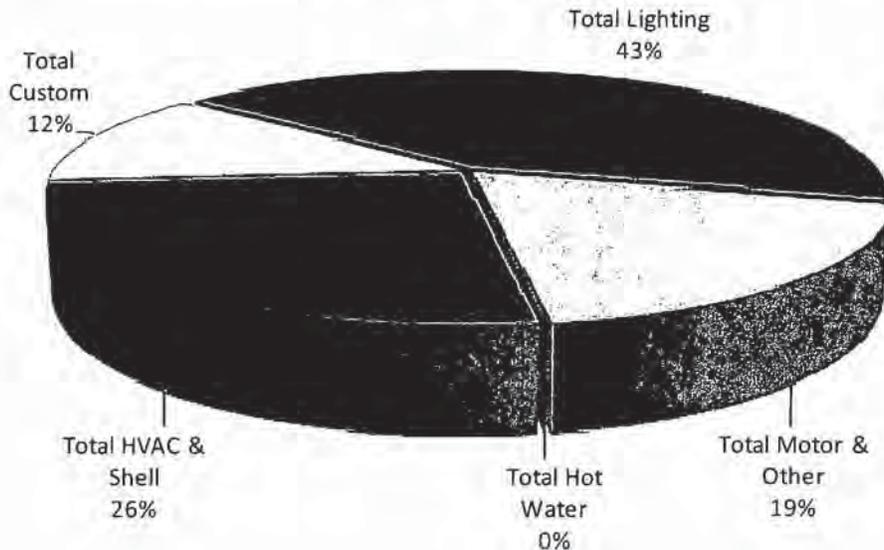
Figure 8.3 is an area graph that illustrates the base case achievable potential over the 20 year study period and shows the shifting flow of measure group share over time. By 2028, the total commercial/industrial energy efficiency achievable potential is 230,778 MWh, or 7.5% of forecasted commercial/industrial 2028 sales. While the estimated savings may seem modest in the initial years, they are in line with Summit Blue’s experience with new DSM programs.

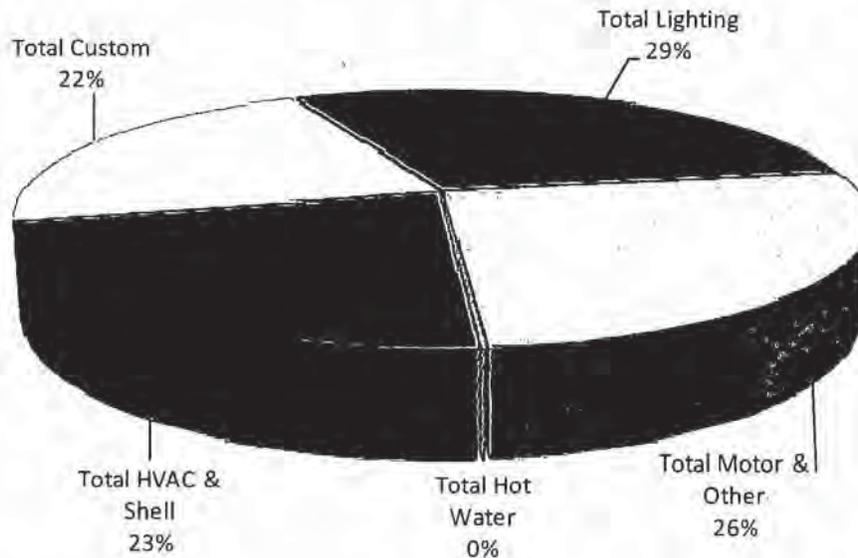
**Figure 8.3: Commercial/Industrial Achievable Potential Energy Savings under the Base Case Scenario- Cumulative Annual (MWh)**



To illustrate the expected changing shares provided by each measure group over time, Figure 8.4 shows the measure group shares of the base case scenario potential in 2009, and Figure 8.5 shows these shares in 2028.

**Figure 8.4: Commercial/Industrial Sector End Use Savings as a % of Total Achievable Potential - 2009**



**Figure 8.5: Commercial/Industrial Sector End Use Savings as a % of Total Achievable Potential - 2028**

The shares provided by the lighting measures show the greatest change. In 2009, they contribute 43% of the potential for the Base scenario. By 2028, the light share fall to 29%; this reflects the model's accounting for expected market saturation and known upcoming energy efficient standards for lighting. Correspondingly, the share provided by the Motor & Other group of measures grows from 19% in 2009 to 26% in 2028. The group of Custom measures shows similar gains in share growing from 12% in 2009 to 22% in 2028. The contribution provided by the HVAC and Shell measures remains relatively constant: 26% in 2009 and 23% in 2028.

In addition to 230,778 MWh annual energy savings, the base case scenario also achieves 61 MW savings, or 13.3% of the 2028 commercial/industrial summer peak demand forecast. In contrast to the technical and economic potential estimates where custom measures provided the greatest opportunity for peak demand savings, the largest share of demand savings in the achievable base case scenario could be achieved through lighting efficiency measures.

**Table 8.5: Base Case Achievable Energy and Demand Potential and Percentage Share of Commercial/Industrial Forecast Energy Sales and Summer Peak Demand in 2028**

End-Use	Achievable Potential Energy (MWh)	Achievable Potential Demand (MW)
Total Lighting	67,612	23
Total Motor & Other	59,904	13
Total Hot Water	299	0
Total HVAC & Shell	51,934	12
Total Custom	51,029	13
<b>Total All</b>	<b>230,778</b>	<b>61</b>
<i>Total as % of C&amp;I Sales</i>	<i>7.5%</i>	<i>13.3%</i>

**Table 8.6: Existing Commercial, New Commercial, and Industrial Sector Achievable Potential Savings in 2028, by Measure (MWh)**

Measure Name	Commercial -Existing-	Commercial -New-	Industrial
<b>Lighting</b>			
9-24W Screw-in CFL	3,822	568	2,357
Over 24W Pin-Based CFL	4	1	0
Premium T8/T5 w/Electronic Ballast	11,351	1,509	8,012
Delamping w/Reflectors (2 lamp)	18,509	2,549	5,939
LED Exit	876	121	128
Occupancy Sensor (8 hrs/day)	2,075	283	0
Daylighting (perimeter zone)	7,462	968	0
175W PS MH HID Indoor	232	32	0
250W PS MH HID Indoor	42	6	148
250W PS MH HID Outdoor	0	176	442
<b>Motor &amp; Other</b>			
Prem Motor < =10 HP	506	25	6,560
Prem Motor > 10HP	7,820	285	32,303
Variable Speed Drives Added to HVAC Motors	3,057	429	0
Compressed Air	0	0	8,918
<b>Hot Water</b>			
High Efficiency Water Heater	0	0	0
Heat Pump Water Heater	0	0	0
Tankless Water Heat	143	3	153
<b>HVAC &amp; Shell</b>			
Packaged Terminal A/C 12.2 EER	150	66	4,720
Programmable Thermostat	2,039	102	0
Integrated Economizer Control	19,925	1,004	0
High Efficiency HP 12.2 EER	22,789	1,120	19
<b>Custom</b>			
Custom Efficiency	12,717	705	37,606
<b>Grand Total</b>			
	<b>113,519</b>	<b>9,953</b>	<b>107,306</b>

Note: Measures with no achievable savings in all three market penetration scenarios were either 1) not cost effective, or 2) excluded due to competing technologies. Not all measures were included in both commercial and industrial facilities.

For the achievable potential, the base case market penetration assumes that consumers would receive a financial incentive equal to approximately 25% of the incremental cost of the energy efficiency measure for most technologies. In addition, an overall non-incentive or administrative cost per kWh saved was assigned to each measure in order to run the achievable TRC cost-effectiveness tests. A cost of \$0.05 per kWh saved was used for all measures included in the commercial/industrial analyses. These costs per kWh saved are based on the experienced administrative costs of other energy efficiency programs in the US, but remain merely approximations used to examine the potential for cost-effective savings.

The overall benefit/cost screening results for the base case is shown below in Table 8.7. The net present value costs to Hoosier Energy of approximately \$23.5 million include both total incentive payments as well as the associated costs (i.e. marketing, labor, monitoring, etc) of administering energy efficiency programs between 2009 and 2028. The net present value benefits of \$154.8 million represent the lifetime benefits of all measures installed during the same time period. Although the base case achievable potential estimates would require a substantial investment in energy efficiency from both Hoosier Energy and its commercial and industrial members (\$66 million), the resulting energy and demand savings would result in a net savings of over \$89 million (present worth 2009).

**Table 8.7: Overall Commercial/Industrial Sector Cost Effectiveness Screening Results**  
(dollars in millions)

<b>Benefit Cost Test</b>	<b>Present Value of Total Benefits (\$2009)</b>	<b>Present Value of Hoosier Costs (\$2009)</b>	<b>Present Value of Participant Costs (\$2009)</b>	<b>Present Value of Total Costs (\$2009)</b>	<b>Benefit/Cost Ratio</b>
TRC Test	\$154.8	\$23.5	\$42.3	\$65.9	2.35

#### 8.4.3 LOW/HIGH MARKET PENETRATION RESULTS IN THE C&I SECTOR

In addition to the base case market penetration scenario reported above, this report also includes a low case and high case market penetration scenario. The low case scenario assumes that incentives are set at 10% of energy efficient measure incremental costs. First year measure adoption is calibrated to achieve slightly less than one-half the adoption rate in the base case scenario. After the first year, the methodology utilizes the lower incentive level and corresponding higher payback. This results in lower levels of estimated measure implementation. Similarly, the high market penetration scenario assumes that incentives are set at 50% of energy efficiency measure costs. Although first year savings are calibrated to achieve measure adoption rates similar to the base case scenario, all remaining years utilize the higher incentive level and corresponding lower payback, resulting in higher levels of estimated measure implementation. Again, the base case market penetration assumed financial incentives equal to 25% of the measure incremental cost. As in the case of the residential sector, the low and the high scenarios reflects the impacts of changing the incentive level on measure adoption rates. Figure 8.6 illustrates the low and high case achievable savings by year, and compares it to the equivalent base case scenario savings.

**Figure 8.6: 2028 Potential Savings Results for all Market Penetration Scenarios**

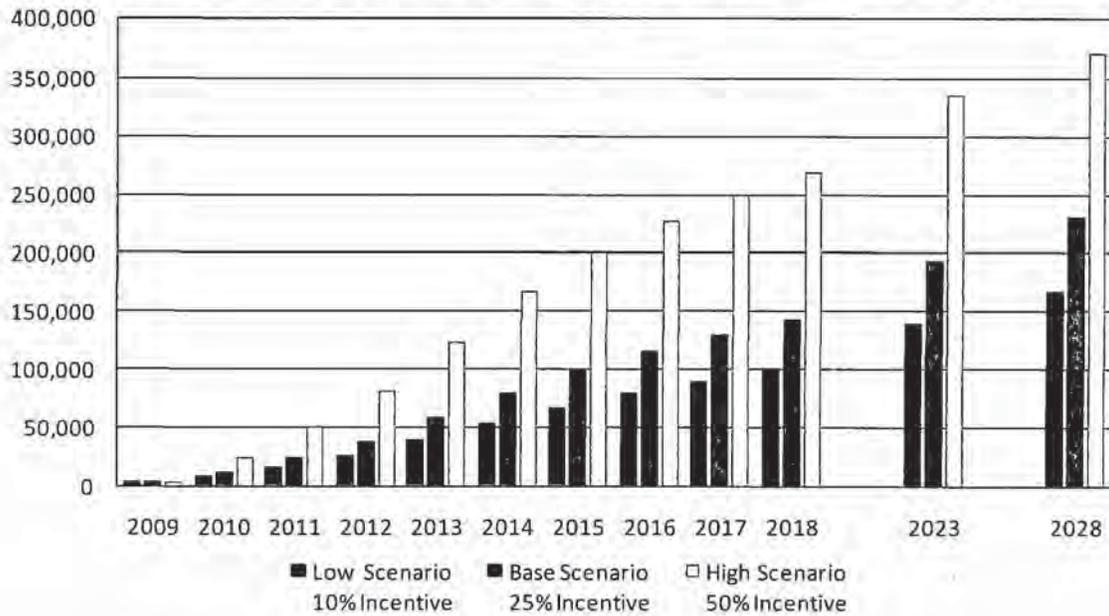


Table 8.8 shows that the achievable potential savings by 2028 range from a low of 5.5% in the low market penetration scenario to a high of 12.1% in the high market penetration scenario. Summer peak demand savings range from a low of 46 MW to a high of 95 MW. Table 8.8 also presents the total NPV benefits and costs for the three different market penetration scenarios.

The low market penetration case has the highest TRC benefit-cost ratio of 2.51, or \$2.51 in avoided energy and demand costs for every \$1 invested in energy efficiency programs. At 2.14, the high case has the lowest benefit cost-ratio. This suggests that without significant utility investment, commercial and industrial consumers will adopt energy efficient measures at a conservative rate and choose those technologies that maximize their economic investment. Conversely, as utility incentives are raised commercial/industrial consumers may be more likely to not only adopt energy efficient measures at a quicker adoption rate, but also invest in slightly less cost-effective energy efficient technologies.

Finally, Table 8.9 (following page) provides the achievable savings at the measure level for the low, base, and high market penetration scenarios. Whereas low-cost lighting measures appear to perform consistently across all three scenarios, motors and other custom projects appear to benefit most from increased incentive levels and adoption rates.

**Table 8.8: Benefit/Cost Ratios for all Market Penetrations Using the TRC Test**  
(dollars in millions)

Market Penetration Scenario	MWH Savings in 2028	% of Forecasted 2028 Res. Sales	Summer Peak MW Savings in 2028	Present Value of Total Benefits (\$2009)	Present Value of Total Costs (\$2009)	Benefit/Cost Ratio
Low Case - 10% Incentive	168,366	5.5%	46.36	\$110.2	\$43.8	2.51
Base Case - 25% Incentive	230,778	7.5%	61.42	\$154.8	\$65.9	2.35
High Case - 50% Incentive	371,710	12.1%	94.96	\$271.2	\$126.7	2.14

Table 8.9: Low, Base, and High Scenario Residential Achievable Potential Savings in 2028, by Measure (MWh)

Measure Name	Achievable Potential (Low)	Achievable Potential (Base)	Achievable Potential (High)
<b>Lighting</b>			
9-24W Screw-in CFL	6,592	6,746	7,312
Over 24W Pin-Based CFL	5	5	5
Premium T8/T5 w/Electronic Ballast	20,196	20,872	22,366
Delamping w/Reflectors (2 lamp)	26,158	26,997	28,985
LED Exit	1,090	1,126	1,187
Occupancy Sensor (8 hrs/day)	2,280	2,359	2,475
Daylighting (perimeter zone)	8,101	8,430	8,831
175W PS MH HID Indoor	255	264	277
250W PS MH HID Indoor	191	196	211
250W PS MH HID Outdoor	588	618	637
<b>Motor &amp; Other</b>			
Prem Motor < =10 HP	3,849	7,092	14,155
Prem Motor > 10HP	22,437	40,408	78,682
Variable Speed Drives Added to HVAC Motors	2,130	3,486	8,155
Compressed Air	4,860	8,918	17,216
<b>Hot Water</b>			
High Efficiency Water Heater	0	0	0
Heat Pump Water Heater	0	0	0
Tankless Water Heat	208	299	378
<b>HVAC &amp; Shell</b>			
Packaged Terminal A/C 12.2 EER	4,176	4,936	5,610
Programmable Thermostat	1,724	2,141	2,729
Integrated Economizer Control	16,871	20,930	26,610
High Efficiency HP 12.2 EER	19,061	23,928	31,119
<b>Custom</b>			
Custom Efficiency	27,595	51,029	114,771
<b>Grand Total</b>			
	<b>168,366</b>	<b>230,778</b>	<b>371,710</b>

Note: Measures with no achievable savings in all three market penetration scenarios were either 1) not cost effective, or 2) excluded due to competing technologies. Not all measures were included in both commercial and industrial facilities.

## 9 COMMERCIAL/INDUSTRIAL DEMAND RESPONSE POTENTIAL ESTIMATES (2009 TO 2028)

The achievable potential for peak demand savings in the residential sector from demand response programs is approximately 31 MW. Interruptible rates (providing a rate incentive to reduce load during times of high demand) represent roughly 19.7 MW of controlled load, while the Direct AC Load Control represents the remaining 11.5 MW of achievable demand response potential. These two programs result in approximately \$11.5 million of avoided capacity, transmission, and distribution costs to Hoosier and its member systems.

**Table 9.1: Commercial/Industrial Sector Demand Response Potential Summary**  
(dollars in millions)

	MW Savings in 2028	% of 2028 Residential Peak Demand	NPV Benefits (\$2009)	NPV Costs (\$2009)	TRC Benefit/Cost Ratio
C/I DR Programs Combined	31.2	6.7%	\$11,524,397.0	\$2,205,990.2	5.22

### 9.1 DEMAND RESPONSE PROGRAMS EXAMINED

Two demand response programs were modeled. The first, an Interruptible/Curtailable Program, includes fixed rate discounts for non-residential customers who contract to reduce their loads to a specific and pre-determined level during peak demand periods. An incentive of approximately \$86 per peak kW reduction is offered to participating members.

The second is a Direct Load Control (DLC) program to non-residential customers with central air conditioning or heat pump systems, specifically targeting small and medium sized C&I customers. This program is patterned after Xcel Energy Minnesota's Business Saver Switch program and offers customers a \$5/ton summer time rate discount for each air conditioner that customers enroll in the program.

Similar to the residential sector, the demand response potential approach includes several analytical steps, but focuses on benefits/cost analysis primarily and then analyzes achievable potential. Therefore, there are no sector-level estimates of technical and economic demand potential included in this report.

### 9.2 DEMAND RESPONSE PROGRAM COST-EFFECTIVENESS

The table below summarizes the benefit/cost analysis results under the base case assuming a single participant in each demand response program. Benefits are based on peak demand savings of approximately .46 kW per ton in the Direct AC Load Control program and 2.1 kW per participant in the Interruptible Rate program. Costs include the administrative cost associated with program implementation and operation. Incentive payments are viewed as a transfer payment and are not included in the measure costs. The net savings (benefits – costs) per participant are approximately \$176 for the Direct AC Load Control program and nearly \$1,235 per participant in the Interruptible Rates program.

**Table 9.2: Benefit/Cost Ratios under Base Case Assumptions (TRC Test)**

Program	NPV Benefits	NPV Costs	Net Savings	Ben/Cost Ratio
Direct AC Load Control	\$292	\$116	\$176	2.52
Interruptible Rates	\$1,350	\$116	\$1,234	11.69

### 9.3 ACHIEVABLE POTENTIAL SAVINGS

Once programs that are economically viable are identified, penetrations for program participation can be estimated. Similar to the commercial/ industrial energy efficiency measures, the commercial/industrial achievable potential for demand response represents the attainable savings if the market penetration is calibrated so that by the fifth or sixth year, the programs achieve annual demand savings which approximate the savings achieved by the better DSM programs in the Midwest. This analysis assumed that demand response programs would not initiate until 2010, allowing additional time for proper program implementation. Estimated demand response penetrations and load impacts are presented below.

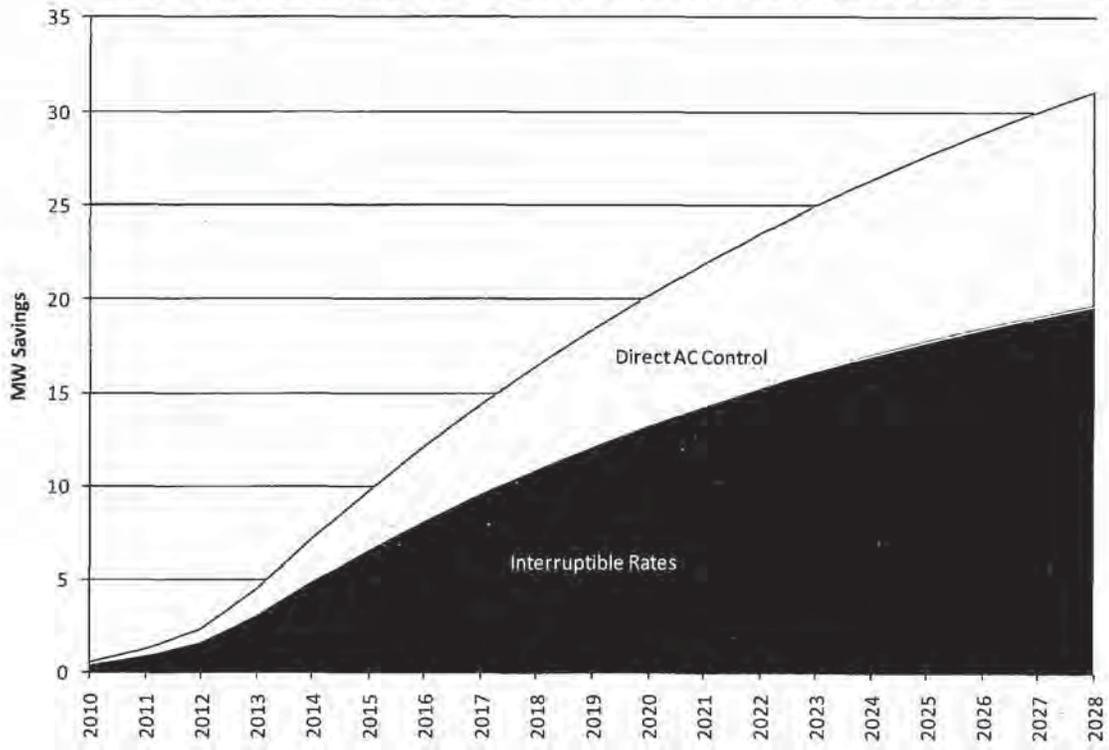
**Table 9.3: Achievable Potential Savings for C/I Demand Response (2010-2028)**

(dollars in millions)

Program	Number Controlled	MW		Benefit/Cost Ratio	
		Savings	NPV Benefits	NPV Costs	Ratio
Direct AC Load Control	25,314	11.5	\$3.9	\$1.6	2.45
Interruptible Rates	9,370	19.7	\$7.6	\$0.6	12.45
<b>Program Totals</b>		<b>31.2</b>	<b>\$11.5</b>	<b>\$2.2</b>	<b>5.22</b>

In total, the two commercial/industrial demand response programs result in 31.2 MW of achievable savings potential, or 6.7% of the forecasted 2028 summer peak demand in the commercial/industrial sector. The Interruptible Rates program contributes the largest portion of kW savings and associated benefits, and has lower overall costs based on the TRC Test. Again, not reflected in the TRC costs are total incentive payments, which are significantly higher for the Interruptible Rates program than the Direct AC Load Control based on the projected participation. Figure 9.1 illustrates the annual growth in achievable demand savings as a result of the two load control programs.

Figure 9.1: Achievable Potential Savings for C/I Demand Response by Year



## **10 RECOMMENDED PROGRAMS AND PROGRAM POTENTIAL SAVINGS (2009 TO 2018)**

Based on the results of the DSM savings potential analysis, and based on a review of energy efficiency programs currently offered by other electric cooperatives, investor-owned electric utilities and energy efficiency organizations (e.g., Wisconsin Focus on Energy, Duke Energy, Midwest Energy Efficiency Alliance) located in the Midwest, GDS recommends that Hoosier Energy consider the following thirteen cost effective DSM programs for implementation:

### **Residential Energy Efficiency Programs**

- 1) Residential Lighting Program
- 2) Home Efficient Heating and Cooling Equipment Program
- 3) Residential Home Weatherization and Audit Program
- 4) Residential Touchstone Energy Home Program (New Homes)
- 5) Residential Appliance Round-Up Program
- 6) Residential Energy Efficiency Education Campaign

### **Residential Demand Response Programs**

- 7) Residential Water Heating Load Control Program
- 8) Residential Central A/C Load Control Program

### **Commercial/Industrial Energy Efficiency Programs**

- 9) Commercial/Industrial Prescriptive Measures Program
- 10) Commercial/Industrial Custom Measures Program
- 11) Commercial New Construction Program

### **Commercial/Industrial Demand Response Programs**

- 12) Commercial/Industrial Direct A/C Load Control
- 13) Commercial/Industrial Interruptible Rates

For each of the above programs GDS has developed a program plan that includes an overview of the program, the target market, eligible energy efficiency measures, and proposed financial incentives for participants, as well as implementation and marketing strategies. These plans also provide the following information for each program for the period 2009 through 2018:

- Incremental annual kWh and kW savings
- Cumulative annual kWh and kW savings
- Forecast of the number of program participants
- Annual financial incentive costs
- Annual administrative costs
- Total annual utility costs
- Total program benefits
- Program benefit/cost ratio

For most programs, financial incentives for eligible energy efficiency measures are based upon a percentage of the assumed incremental cost of purchasing and installing energy efficient equipment in lieu of the standard efficiency equipment. The program plans presented here are based upon a beginning allowable annual budget of \$5 million in 2009. The budget increases to \$7 million in 2010 and then increases annually by approximately 5% through 2018. Overall, this

budget level is significantly less than the budget levels that would be needed to achieve the savings detailed in the base case achievable potential scenario reported in previous sections. It is important to note, then, that the program potential scenario is a subset of the achievable potential and that measure penetrations, savings, and incentive levels have occasionally been tailored to reflect the goals of the program design and fit the allowable budget. GDS has developed a customized projection of participation for each program, and has not used an “across the board” penetration assumption at the program level. As a result, program assumptions may vary slightly from the assumptions utilized for the base market penetration scenario in the residential and commercial/industrial sectors.

In addition this report acknowledges that current energy efficiency technologies may become standard practice over time and that there will be new advancements in energy efficiency. As a result, the recommended programs below may need to adapt over time by changing the specific measures that are currently recommended for each program. As an example, compact fluorescent lighting may achieve high levels of market penetration over the next few years, but the emergence of LED lighting would allow for the continued operation of a residential lighting program.

Finally, Hoosier Energy should perform on-going program impact evaluations over the life of each program. An in-depth evaluation should be conducted once the program has been operating for a period of time so that energy savings can be reasonably and accurately evaluated. Other limited process evaluations should also be conducted to examine issues such as: the awareness level among residential members relating to each program and the included technologies, program adoption rates, changes in the market baseline and program ally and participant satisfaction with the program. Results from evaluations should be used to refine the program and increase program savings, participation and cost effectiveness.

## 10.1 RECOMMENDED RESIDENTIAL ENERGY EFFICIENCY PROGRAM PLANS

### 10.1.1 RESIDENTIAL LIGHTING PROGRAM

A Residential Lighting Program for homeowners in the Hoosier Energy service territory that encourages the installation of compact fluorescent light bulbs (CFL) is highly recommended. This program should be a top priority for Hoosier because efficient lighting is very cost effective, the electric energy savings potential is relatively large, and all households in the service area can benefit from such a program. Numerous other electric cooperatives, municipal utilities, and investor-owned electric utilities offer this program to their customers.<sup>27</sup>

**Measure description:** The objective of this program is to encourage residential customers to install high efficiency bulbs in their homes, replacing incandescent bulbs. The incentive for residential customers to install compact fluorescent bulbs is the lower energy use and lower operating costs over the life of the bulb and the much longer life of the CFL bulb.

CFL bulbs range in size and shape, and their appearance can be a spiral shaped fluorescent tube or they can appear as a standard shape, such as the R-30 floodlight for use in recessed cans. Dimmable CFL bulbs and 3-way CFL bulbs are also available. All lighting sockets not currently

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<sup>27</sup> GDS has collected data on the program participation and electricity savings achieved by residential lighting programs across the US. GDS will provide this data to Hoosier Energy upon request.

equipped with halogen, CFL or other fluorescent tube lighting is eligible for compact fluorescent lighting.

LED holiday lighting markdowns will also be offered seasonally under the lighting program. In later years, LED bulbs are also expected to be offered as part of the Residential Lighting Program. LED bulbs present several advantages over both incandescent and CFL bulbs, including lower energy consumption, longer lifetimes, and smaller size. To date, however, they are relatively expensive and current bulb models are most suited for recessed or accent lighting and are not ideal for other residential applications. Over time, the initial cost of LED lighting and the number of residential applications are expected to become more palatable to consumers signifying this technology as a likely candidate for promotion through the lighting program.

**Program incentives:** There are various methods of promoting energy efficient lighting products. Incentives can be available at the point of sale, and can be in the form of mail-in rebates, instant rebates, and “at point-of-sale” markdowns. Of those programs providing incentives for the purchase of efficient lighting and other products the incentive for CFL bulbs are typically between \$1 and \$2 per bulb. In lieu of lighting rebate coupons or in-store markdowns, Hoosier Energy has chosen to offer a limited supply of CFL bulbs to their members at no cost. Under this design scenario, the incentive is the full cost of the compact fluorescent light bulb. In addition, Hoosier will begin to promote LED holiday lighting and LED bulbs (when available) through the use of partial incentives.

Measure	Annual Energy Savings (kWh)	Summer Peak Savings (kW)	Measure Cost (per unit)	Utility Incentive (per unit)
Compact Fluorescent Lighting	53	0.01	\$1.85	\$1.85
LED Holiday Lighting	17	0.00	\$10.00	\$3.00
LED Bulbs	62	0.01	\$30.00	\$10.00

**Projected Program Participation:** Approximately 350,000 CFL bulbs are expected to be moved as a direct result of a Residential Lighting Program during the first year of program operation. Beginning in 2012, the program is expected to slowly shift from the promotion of compact fluorescent technology to newer, more efficient technologies, such as LED lighting.

Year	Program Participants		
	Compact Fluorescent Lighting	LED Holiday Lighting	LED Bulbs
2009	350,000	1,300	0
2010	420,000	1,600	0
2011	455,000	2,000	0
2012	490,000	2,000	2,000
2013	420,000	2,000	3,500
2014	350,000	2,000	6,000
2015	280,000	2,000	10,000
2016	262,500	2,000	18,000
2017	245,000	2,000	25,000
2018	210,000	2,000	35,000

In total, nearly 3.5 million CFL bulbs are expected to be moved through the program from 2009 through 2018. An additional 19,000 LED holiday lights and 100,000 LED bulbs are also expected to be sold through the program in from 2009-2018.

**Program Design and Implementation:** Although offering CFL bulbs at no cost to residential members is not the most utilized programmatic approach (residential lighting program design commonly employs coupons or markdowns), there are several benefits that can be achieved from this blueprint. First, the primary market barrier to widespread consumer acceptance- the initial cost of a CFL bulb - is negated. Eliminating the cost significantly reduces the risk to a consumer trying an unfamiliar product, which helps overcome the barrier of performance uncertainties. Second, Hoosier Energy and its member systems eliminate the need to count coupons to determine sales and subsequent reimbursements to the retailer. This can result in lowered administrative costs and increased program cost-effectiveness. One caveat to this approach, however, is that offering CFL bulbs at no cost to residential consumers is essentially the utility purchasing load reduction. This may hinder the eventual goal of market transformation by confusing consumers as to the appropriate price points for energy-efficient products. This confusion could lead consumers to undervalue the energy-efficient features of the CFL bulbs and lead them to wait until additional “no-cost” CFL bulbs become available before purchasing the product through normal market channels. Consequently, it is also recommended that Hoosier Energy consider supplemental program strategies, such as advertising and education that can lead to market transformation and reach a greater number of consumers per dollar than full-cost rebates.

One way to implement a residential lighting program is to develop and issue an RFP for a lighting supplier to provide Hoosier Energy with a range of CFL bulbs at a fixed cost. The RFP solicitation allows Hoosier Energy to acquire significant quantities of CFL bulbs at competitive wholesale prices. After securing the desired quantity and price from the selected supplier, the bulbs can be distributed equitably to the member systems so that they are conveniently available to residential consumers throughout the member territory. In exchange for the compact fluorescent lighting, Hoosier Energy should encourage residential consumers to turn-in their incandescent lighting, resulting in high rates for installation for the CFL bulbs.

Hoosier Energy should also consider a “point of sale” markdown approach for its seasonal LED holiday lighting promotion. Under a markdown approach, consumers do not need any type of coupon or rebate form to buy the discounted products. The LED holiday lights are already marked down by the retailer when they are stocked. Once again, consumers do not need any type of coupon or rebate form to buy the discounted products. The LED lights are already marked down by the retailer when they are stocked on the shelves and the need to count coupons to determine retailer reimbursement is eliminated.

Effective media and marketing approaches are also a vital component for a residential lighting program in the Hoosier service territory. It is recommended that Hoosier Energy increase consumer awareness and education of high efficiency residential lighting products through strategically placed advertising messages in the following media: cooperative newsletters, local cable shows, public service announcements, radio, newspaper, trade shows, special events, community group presentations, advisory neighborhood commission meetings, booths at local county fairs and other events, Mayor’s remarks (e.g., as introduction to a news conference), trade association newsletters, home shows, etc. The Hoosier web site (and the web sites of member distribution cooperatives) can also be updated to provide information on the range and effectiveness of the latest available high efficiency residential lighting products.

The December 2004 National Energy Efficiency Best Practices Study recommends that the following steps be taken to ensure control over the data collected in the program and to ensure customer satisfaction:

- Verify accuracy of rebates, coupons, and/or invoices to ensure that the reporting system is recording actual lighting product purchases by the target market
- Assure quality of rebated bulbs through independent testing procedures, such as PEARL
- Assess customer satisfaction with lighting product quality through evaluation activities

This study provides considerable information on the lessons learned from other successful residential lighting programs across the US.

**Program Allies:** For the CFL give-away being used by Hoosier, it is not necessary to involve program allies other than to inform such allies of this program through regular distribution cooperative marketing and communication channels.

**Projected Savings:** Approximately 72,500 MWh will be saved on a cumulative annual basis (once all bulbs are distributed and installed) based on the projected participation, with nearly 15,000 MWh saved in the first year. The MWh savings in 2018 reflect recently enacted federal standards that mandate incandescent bulbs to become 30% more efficient beginning in 2012. Additionally, projected participation will also result in a summer peak saving of 7.4 MW after 10 years.

Additional detail, including annual energy and demand savings for this program can be found in Section 10.3.

**Projected Cost Effectiveness:**

Program	MWh Savings in 2018	Summer Peak MW Savings in 2018	Present Value of Total Benefits (\$2009)	Present Value of Total Costs (\$2009)	Benefit/Cost Ratio
Residential Lighting Program	72,482	7.4	\$52,423,265	\$7,956,474	6.59

**Projected Budgets:** The Residential Lighting program has been assigned a budget of approximately \$8.4 million from 2009-2018. As noted earlier, offering compact fluorescent lighting at no cost to consumers reduces some of the administrative costs associated with more traditional lighting programs that utilize point-of-sale coupons and/or instant markdowns. As a result, the incentives represent a larger fraction of the overall costs than traditional rebate programs. Nonetheless a portion of the budget (\$880,000) is reserved for educating consumers about the energy and environmental benefits of efficient lighting and promoting the program through various media and marketing campaigns, associated labor, and program evaluation.

Section 10.3 provides additional detail.

Program	10 Year Totals			
	Utility Incentives	Administrative Costs	Total Hoosier Costs	% of Total DSM Budget
Residential Lighting Program	\$7,494,325	\$879,900	\$8,374,225	10.3%

### 10.1.2 EFFICIENT HOME HEATING & COOLING EQUIPMENT PROGRAM

Hoosier Energy should consider offering an Efficient Home Heating and Cooling Equipment Program to homeowners, heating contractors, and plumbers in the Hoosier Energy service territory and include incentives for installing measures designed to decrease the overall electric consumption of electric heating, cooling, and water heating in the home. Homes in the service territory with electric heating, electric cooling, and/or electric water heating are eligible to participate in this program.

**Measure description:** The objective of this program is to encourage residential customers to purchase high efficiency air conditioners, heat pumps, and/or electric water heaters in lieu of standard efficiency electric space and water heating equipment.

*High Efficiency Electric Storage Water Heaters:*

Homeowners can receive an incentive for purchasing and installing a high efficiency electric storage water heater in their homes. In order to qualify, electric water heaters must have an Energy Factor (EF) of .95 or greater. Qualifying electric water heaters will range from 50 gallons to 80 gallons in capacity.

*Energy Efficient Central Air Conditioners:*

Homeowners can receive an incentive for installing a properly sized energy efficient central AC having a Seasonal Energy Efficiency Rating (SEER) of 15 or greater.

*Energy Efficient Electric Air Source Heat Pumps:*

Homeowner receives an incentive for purchasing and installing a properly sized efficient heat pump with a Heating Season Performance Factor (HSPF) of 9.0 and a SEER of 15 or greater.

*Electric Furnace Replacement:*

Homeowner may be eligible to receive an incentive for purchasing and installing efficient a heat pump with a HSPF of 9.0 and a SEER of 15 or greater in lieu of their current central air conditioning/electric furnace system. The efficient heat pump would run more efficiently than a standard central air conditioning unit in the summer, and provide more efficient heating than an electric furnace system throughout much of the winter.

*Dual Fuel Heat Pump:*

Homeowner receives an incentive for purchasing and installing efficient a heat pump with a HSPF of 9.0 and a SEER of 15 or greater in homes traditionally equipped with non-electric heating systems. The efficient electric heat pump would run more efficiently than a standard central air conditioning unit in the summer, and provide the majority of the heating needs during the winter. The non-electric heating system would operate during periods where the outside temperature is below 25 degrees Fahrenheit.

Note that although the efficient heat pump would provide energy and demand savings in the summer in comparison to a standard central AC unit, this measure produces an overall increase in annual electric consumption. This increase in electric consumption is offset by a decrease in fossil fuel consumption during milder winter conditions.

**Program incentives:** Incentives are paid to the homeowner after all completed documentation for the measure is received by the program administrator and after the measure is installed. The

incentive is paid in the form of a check. Incentives range from \$75 for an efficient 50 gallon electric storage water heater to approximately \$1000 for installing a high efficiency electric heat pump in lieu of a new electric furnace.

Measure	Annual Energy Savings (kWh)	Summer Peak Savings (kW)	Measure Cost (per unit)	Utility Incentive (per unit)
80 gal. Water Heater - High Efficiency	82	0.03	\$200.00	\$200.00
50 gal. Water Heater - High Efficiency	172	0.03	\$75.00	\$75.00
Central A/C (15 SEER)	357	0.26	\$555.00	\$200.00
Central A/C (16 SEER)	502	0.37	\$835.00	\$250.00
Central A/C (17 SEER)	630	0.46	\$1,110.00	\$300.00
Central A/C (17+ SEER)	744	0.55	\$1,390.00	\$300.00
Heat Pump (15 SEER)	985	0.26	\$625.00	\$300.00
Heat Pump (16 SEER)	1,195	0.37	\$935.00	\$350.00
Heat Pump (17 SEER)	1,275	0.46	\$1,250.00	\$400.00
Heat Pump (18 SEER)	1,460	0.55	\$1,560.00	\$400.00
Heat Pump (15 SEER) - Elec. Furnace Repl.	3,135	0.26	\$2,325.00	\$800.00
Heat Pump (16 SEER) - Elec. Furnace Repl.	3,345	0.37	\$2,630.00	\$900.00
Heat Pump (17 SEER) - Elec. Furnace Repl.	3,425	0.46	\$2,950.00	\$1,000.00
Heat Pump (17+ SEER) - Elec. Furnace Repl.	3,610	0.55	\$3,260.00	\$1,000.00
Heat Pump (15 SEER) - Dual Fuel Heat	-3,004	0.26	\$880.00	\$300.00
Heat Pump (16 SEER) - Dual Fuel Heat	-2,859	0.37	\$1,190.00	\$350.00
Heat Pump (17 SEER) - Dual Fuel Heat	-2,629	0.46	\$1,505.00	\$400.00
Heat Pump (17+ SEER) - Dual Fuel Heat	-2,362	0.55	\$1,815.00	\$400.00

**Projected Program Participation:** In the first year, the participation in the Home Heating and Cooling Equipment Program is projected to include approximately 3,000 electric storage tank water heaters, 1,600 central air conditioning units, and 1,300 heat pump units. Participation is expected to increase steadily on an annual basis. Over a ten year period, the program is estimated to reach over 46,000 electric water heaters (26% of remaining market) and 41,000 central air conditioning and electric heat pump systems (23% of remaining market).

Year	Program Participants					
	80 gal. Water Heater - High Efficiency	50 gal. Water Heater - High Efficiency	Energy Efficient Central A/C Units	Energy Efficient Air Source Heat Pump	Electric Furnace to Heat Pump Upgrade	Dual Fuel Heat Pump Installs
2009	750	2,250	1,600	400	400	500
2010	1,000	3,000	1,950	475	475	610
2011	1,000	3,000	1,950	475	475	610
2012	1,000	3,000	1,950	475	475	610
2013	1,000	3,000	1,950	475	475	610
2014	1,000	3,000	1,950	475	475	610
2015	1,200	3,600	2,340	570	570	730
2016	1,400	4,200	2,730	670	665	855
2017	1,500	4,500	3,125	715	715	980
2018	1,700	5,100	3,510	830	835	1,190

**Program Design & Implementation:** Under this program HVAC contractors and plumbers would perform the installations and submit all necessary paperwork while program staff would oversee the administration and outreach components. Promotion of the high efficiency equipment incentives should be done cooperatively with HVAC and water heating supply houses, distributors and contractors. To ensure the quality of installations and to increase awareness of high efficiency equipment, periodic training sessions would be provided by Hoosier Energy to the HVAC and water heating distributors, contractors, retailers, and consumers focusing on the benefits to the consumer of the high efficiency equipment and installation procedures.

Program staff should randomly sample and inspect a subset of installations to ensure that eligible equipment has been properly installed. The model numbers for each invoice should be checked to verify that the equipment meets the eligibility requirements.

Hoosier Energy should also undertake efforts to increase consumer awareness and education about high efficiency space heating and cooling equipment through strategically placed advertising messages in the following media: cooperative newsletters, local cable shows, public service announcements, radio, newspaper, trade shows, special events, community group presentations, advisory neighborhood commission meetings, booths at local county fairs and other events, Mayor's remarks (e.g., as introduction to a news conference), trade association newsletters, home shows, etc. The Hoosier Energy web site (and the web sites of member distribution cooperatives) can also be updated to provide information on the range and effectiveness of the latest available high efficiency heating and cooling equipment.

**Program Allies:** Partners and allies, referred to as program allies, are an important asset to any successful program. These allies assist the member systems with advertising and product promotion. Allies for this program include supply houses, distributors and contractors. These program allies are vital to long-term viability of program implementation. An emerging best practice is to leverage program ally resources with energy efficiency organization funds to facilitate product or retailer specific campaigns that increase efficient HVAC sales. Well maintained relationships with program allies can keep the program staff apprised of what is happening in the market and ensures that the marketing messages are effective and clear. Incentive applications would be processed and fulfilled by program staff.

**Projected Savings:** Approximately 23,400 MWh will be saved in 2018 based on the projected participation, with an estimated 1,600 MWh saved in the first year alone. Additionally, projected participation will also result in a summer peak saving of 17.1 MW after 10 years.

Additional detail, including annual energy and demand savings for this program can be found in Section 10.3.

**Projected Cost Effectiveness:**

Program	MWh Savings in 2018	Summer Peak MW Savings in 2018	Present Value of Total Benefits (\$2009)	Present Value of Total Costs (\$2009)	Benefit/Cost Ratio
Home Heating & Cooling Equipment Program	23,418	17.0	\$90,281,699	\$42,986,389	2.10

**Projected Budgets:** The Efficient Home Heating and Cooling Equipment Program has been assigned a budget of approximately \$23 million dollars. The program has an initial budget of approximately \$1.6 million in 2009 and increases annually to an estimated budget of approximately \$3.6 million in 2018. In total, incentives account for roughly \$20.2 million over 10 years with the remaining \$2.8 million utilized for marketing, labor, and evaluation costs. The administrative budget will also allow Hoosier Energy to provide technical assistance to customers, program outreach with allies, data tracking and reporting, and incentive fulfillment. There is additional budget for a qualified HVAC and plumbing contractor to verify a sub-sample of installations through on-site visits and to engage in the training and education of program allies regarding qualifying technologies.

Section 10.3 provides additional detail.

Program	10 Year Totals			
	Utility Incentives	Administrative Costs	Total Hoosier Costs	% of Total DSM Budget
Home Heating & Cooling Equipment Program	\$20,207,000	\$2,830,200	\$23,037,200	28.3%

### 10.1.3 HOME ENERGY AUDIT AND WEATHERIZATION PROGRAM

Hoosier Energy should consider offering a Home Energy Audit and Weatherization Program to their members and include financial incentives for installing energy efficiency measures designed to increase the thermal efficiency of a home's building envelope. This program is recommended for Hoosier Energy because this program is cost effective, the electric energy savings potential is relatively large, and all households in the service territory with electric heating and/or cooling can benefit from such a program.

**Measure description:** The objective of this program is to encourage residential customers to upgrade and install energy efficient building shell measures in homes that are currently inadequately insulated or weatherized. This program includes two primary components: home energy audits and rebates for weatherization measures. The most important energy efficiency measures for this program include air infiltration, sealing of heating/cooling ducts, HVAC tune-up, installing CFL bulbs, and installing water saving measures. In addition, Energy Star programmable thermostats are also encouraged through this program.

Over time, the individual components of this program may be altered, based on experience and evaluation, to maximize overall cost-effectiveness and target aspects of the building envelope that are likely to benefit the most from efficient technologies and practices.

*Compact Fluorescent Light Bulbs:*

Light bulbs currently equipped with incandescent light bulbs are replaced with compact fluorescent light bulbs. In total, 20 CFL light bulbs will be installed throughout the household targeting high (5 hr/day or more) and medium use sockets (~ 3 hr/day), followed by low use sockets (1 hr/day or less).

*Air Sealing/Duct Sealing:*

This measure includes air sealing and duct sealing to improve the loss of heated air through the building shell and space conditioning ductwork. Diagnostic tests are not included in this program as a means of keeping installation costs low and palatable. Additional energy efficiency improvements that homeowners might wish to address and information on how to contract with a qualified company are recommended by the contractor prior to leaving the residence.

*Attic Insulation:*

This measure includes installing attic insulation in homes that currently have either inadequate levels or no ceiling insulation. The installed insulation will meet an R-value of R-38 or greater.

*HVAC Tune-Up:*

A Tune-Up by a service professional can improve unit efficiency by as much as 20%. An annual HVAC tune-up includes: checking the unit's refrigerant pressure and tubing, checking and

adjusting belt tension, cleaning and lubricating the indoor blower unit, cleaning inside the “A” coil, and checking the thermostat, wiring, and other electric parts.

The HVAC Tune-Up is offered to homes with central air conditioning or an electric air-source heat pump. Eligible homes are offered an incentive of \$100 to receive a tune-up by a qualified HVAC technician.

*Programmable Thermostats:*

Programmable thermostats automatically adjust the home’s temperature setting on a set schedule, allowing for daily energy conservation during periods when normal heating is unnecessary (i.e. when the house is unoccupied, or when occupants are sleeping at night). However, programmable thermostats have to be set and used properly to deliver the advertised energy savings. Routine deviation from the programmed default settings and schedules can significantly lower actual energy savings.

*Low Flow Showerheads:*

This program includes the installation of low flow showerheads if a home does not currently have these devices. A low flow showerhead uses 2.5 gallons per minute or less.

*Low Flow Faucet Aerators:*

Existing faucets are retrofitted with a faucet aerator with a low-flow rate (< 1.0 gallon/minute).

**Program incentives:** Any incentives are paid to the homeowner after all completed documentation is received by the program administrator. The incentive is paid in the form of a check. Hoosier Energy will also assume the full cost of the CFL bulbs, water savings devices, attic insulation (if necessary) and HVAC Tune-Up. In addition, the program design also covers nearly all of initial energy audit contractor labor costs. Finally, incentives for the air sealing/duct sealing and optional programmable thermostat represent approximately 35% of the install cost.<sup>28</sup> In total, Hoosier Energy incentives can total up to \$1,370 per home. The assumed installation cost for the efficiency upgrades is approximately \$2,200.

Measure	Annual Energy Savings (kWh)	Summer Peak Savings (kW)	Measure Cost (per unit)	Utility Incentive (per unit)
CFLs (High Use) ; Qty.=5 bulbs	445	0.03	\$9.25	\$9.25
CFLs (Medium Use); Qty.=10 bulbs	530	0.05	\$18.50	\$18.50
CFLs (Low Use); Qty.=5 bulbs	90	0.03	\$9.25	\$9.25
Air Sealing/Duct Sealing	1,999	0.47	\$1,150.00	\$400.00
Attic Insulation	1,050	0.24	\$600.00	\$600.00
HVAC Tune-up	196	0.14	\$100.00	\$100.00
Programmable Thermostats	521	0.12	\$92.00	\$35.00
Low Flow Showerheads	263	0.03	\$14.00	\$14.00
Low Flow Faucets	105	0.03	\$10.00	\$10.00
Home Energy Audit	0	0.00	\$200.00	\$175.00

**Projected Program Participation:** The Home Energy Audit and Weatherization Program has aggressive participation targets, beginning in 2009 and extending through 2018. Assuming that the anticipated program goals and savings are met, the program is estimated to reach more than 13,000 homes; approximately 17% of all electrically heated and cooled homes, over the 10-year

<sup>28</sup> Hoosier may also elect to cover the full cost of installing air sealing/duct sealing and programmable thermostats in some, or all, participating homes based on the availability of federal stimulus funds.

period. It was estimated that only 10% of homes would possess inadequate levels of insulation and be eligible for the attic insulation component of the program. In addition, the analysis assumed 50% of homes would already be equipped with low flow faucet aerators and/or showerheads. Finally, only 50% of homes were assumed to agree to the installation of a programmable thermostat with a \$35 incentive.

Year	Program Participants						
	CFL Bulbs (20 per program participant)	Air Sealing/Duct Sealing	Attic Insulation	HVAC Tune-up	Programmable Thermostats	Low Flow Showerheads & Faucets	Home Energy Audit
2009	1,300	1,300	260	1,300	650	650	1,300
2010	1,800	1,800	360	1,800	900	900	1,800
2011	1,650	1,650	330	1,650	825	825	1,650
2012	1,500	1,500	300	1,500	750	750	1,500
2013	1,250	1,250	250	1,250	625	625	1,250
2014	1,100	1,100	220	1,100	550	550	1,100
2015	1,100	1,100	220	1,100	550	550	1,100
2016	1,100	1,100	220	1,100	550	550	1,100
2017	1,100	1,100	220	1,100	550	550	1,100
2018	1,100	1,100	220	1,100	550	550	1,100

**Program Design and Implementation:** The program is designed to help customers save energy and money by making their homes more energy-efficient. Independent contractors will deliver the program in a way that maximizes participation and energy saving goals. The cooperatives and contractors will cooperatively market the program, address customer intake, schedule work, conduct the initial home visit, install energy efficient measures, and perform quality assurance.

Members who request an in-home audit may be requested to complete a basic questionnaire providing basic customer information and/or usage patterns. Audits may be screened and prioritized based on historical electric usage, income, or any other metric identified by Hoosier Energy if audit requests exceed the capabilities or funding levels predetermined by Hoosier Energy. The in-home audit will collect the following information:

- Building Shell Information (i.e. insulation levels, square footage, windows, air leakage)
- Electric appliance information (age, quantity, efficiency levels, etc.)
- Usage patterns (number of occupants, temperature set points, etc.)
- Heating/Cooling equipment information (age, size, model number, efficiency levels, etc.)
- Infiltration reduction opportunities (i.e. sealing, vents, electrical outlets, doors) identified through visual inspection.

Contractor selection can come from numerous sources, including: private for profit companies that provide home energy ratings and weatherization services or private/public companies that provide weatherization services to publicly-funded rehab programs or low income homes. Participating contractors are then trained with a focus on:

- Duct sealing
- Air sealing in the attic
- Observational diagnostics to create a list of possible energy efficiency measures the homeowner might want to address in the near future.

The program should also have a strong educational component designed to help customers better understand their home and the factors that affect energy use. Auditors will present

homeowners with a short report that identifies the major opportunities for reducing energy consumption. Individuals who participate should also receive feedback on actual energy savings.

Auditors will install up to 20 compact fluorescent light bulbs throughout the house, and water savings devices when applicable. The auditors will also ensure proper air sealing and duct sealing throughout the house and upgrade attic insulation levels in homes that currently have little to no insulation protecting the roof of the home. Homes that qualify for an HVAC Tune-Up will receive instructions and a rebate form for receiving a \$100 incentive upon completion of a tune-up by a qualified HVAC technician.

GDS also recommends increasing consumer awareness and education relating to the significant electricity savings due to weatherization and insulation measures by using strategically placed advertising messages in the following types of media: cooperative newsletters, local cable shows, public service announcements, radio, newspaper, trade shows, special events, community group presentations, advisory neighborhood commission meetings, booths at local county fairs and other events, Mayor’s remarks (e.g., as introduction to a news conference), trade association newsletters, home shows, etc. The Hoosier web site (and the web sites of member distribution cooperatives) can also be updated to provide information on the range and effectiveness of the insulation and weatherization practices.

**Program Allies:** Allies for this project include energy service companies, Community Action Program agencies, the home builders association of Indiana, manufacturers and installers of weatherization products, and home remodeling contractors.

**Projected Savings:** Approximately 41,000 MWh will be saved in 2018 based on the projected participation, with an estimated 5,100 MWh saved in the first year alone. Additionally, projected participation will also result in a summer peak saving of 9.5 MW after 10 years.

Additional detail, including annual energy and demand savings for this program can be found in Section 10.3.

**Projected Cost Effectiveness:**

Program	MWh Savings in 2018	Summer Peak MW Savings in 2018	Present Value of Total Benefits (\$2009)	Present Value of Total Costs (\$2009)	Benefit/Cost Ratio
Home Energy Audit and Weatherization Program	40,898	9.5	\$38,330,748	\$18,342,950	2.09

**Projected Budgets:** The cost associated with a Home Energy Audit and Weatherization program can be extensive. The Home Energy Audit and Weatherization program has been assigned a budget of approximately \$12.5 million over a 10-year timeframe. Incentives account for roughly \$12.2 million with the remaining budget utilized for administrative costs. Program staff will function to enlist interested participants in the Hoosier Energy member territory and coordinate the scheduling for qualified contractors to install all measures included in the program. The program administrative budget also includes: providing technical assistance to customers, reporting, and incentive fulfillment.

Section 10.3 provides additional annual detail.

Program	10 Year Totals			
	Utility Incentives	Administrative Costs	Total Hoosier Costs	% of Total DSM Budget
Home Energy Audit and Weatherization Program	\$11,199,500	\$1,319,500	\$12,519,000	15.4%

#### 10.1.4 RESIDENTIAL TOUCHSTONE ENERGY HOMES PROGRAM

Another potential program that Hoosier Energy should consider would expand the existing Touchstone Energy New Homes Construction program that serves to support energy efficient design and the installation of energy efficient appliances during the construction of new residences. The program will be targeted to the residential new construction market, particularly to residential customers and home builders in the process of designing and constructing new homes. The target for this program is to build new homes so that they are significantly more energy efficient than a standard new home built to meet the specifications of the current residential energy code in Indiana.

**Measure description:** The objective of this program is to help reduce customer energy consumption through the building of energy efficient new homes.

##### *Touchstone Energy Homes:*

Builders would also receive an incentive for constructing new homes designed to Energy Star standards: at least 15 percent more energy efficient than those built to the 2004 International Residential Code (IRC). Touchstone Energy Homes also incorporate other energy savings features that typically make them 20–30% more efficient than standard homes. The US Environmental Protection Agency reports that over 3,500 home builders have partnered with EPA to construct more than 750,000 Energy Star qualified homes across the US. By the end of the decade, more than 2 million homes are expected to earn the Energy Star rating across the US.

Energy savings are based on heating, cooling, and hot water energy use and are typically achieved through a combination of the following: high performance windows, controlled air infiltration, upgraded heating and air conditioning systems, tight duct systems, high efficiency water heating equipment, and high efficiency building envelope standards. Touchstone Energy Homes also encourage the use of energy-efficient lighting and appliances. These features contribute to improved home quality and homeowner comfort, and to lower energy demand and reduced air pollution.

Homes with both electric heating/cooling only are eligible to participate in the new homes program.

**Program incentives:** Incentives are paid to the homeowner after all completed documentation for the measure is received by the program administrator. The incentive is paid in the form of a check. The incentive is assumed to cover the full cost of receiving a HERS home rating, and approximately 35% of the incremental cost of installing efficient space and water heating equipment. In addition, the incentive also allows for installing compact fluorescent light bulbs in up to 50 light sockets.

Measure	Annual Energy Savings (kWh)	Summer Peak Savings (kW)	Measure Cost (per unit)	Utility Incentive (per unit)
Touchstone Energy Homes	4,259	0.99	\$2,725.00	\$1,242.50

In addition, Energy Star Home programs typically provide the following types of services to residential homeowners at no charges:

*Design assistance:*

The program administrator (Hoosier Energy) reviews building plans for new homes and shows the homeowner the projected energy use and costs for heating, cooling, hot water, lights and appliances for the planned home. Then the program administrator recommends ways to lower those costs with state-of-the art energy efficient construction techniques and by installing high efficiency HVAC equipment, high efficiency lighting and Energy Star rated appliances. The program administrator provides technical assistance with selecting energy-efficient HVAC equipment, lights and appliances.

*Testing:*

After the new home is built, the program administrator tests it for air-tightness. Building a tight home reduces drafts, heat loss, ice dams, energy costs and maintenance costs.

*Home Energy Rating:*

After testing is done, the program administrator develops a home energy rating (HERS rating) for the new home. The HERS rating provides the homeowner with confirmation of the quality and energy efficiency of the new home. Homes must achieve a Home Energy Rating score of 83 points or better to qualify as a Touchstone Home.

**Projected Program Participation:** The proposed program will attempt to re-energize the existing Touchstone Energy Homes program by increasing awareness and annual participation. In the first year, 100 homes are expected to be certified as Touchstone Energy Homes. In total 3,850 all-electric homes will be built to the Touchstone Energy Homes standards from 2009-2018, or approximately 15% of all electrically heated and cooled homes built over the next 10 years.

Year	Program Participants
	Touchstone Energy Homes
2009	100
2010	160
2011	210
2012	250
2013	290
2014	360
2015	450
2016	520
2017	590
2018	640

**Program Design and Implementation:** The key components for program implementation include training for architects, home builders and contractors, technical assistance provide to

homeowners and home builders, and the use of a home energy rating system (HERS) to ensure that participating homes meet program energy efficiency performance requirements.

The Touchstone Energy Homes program is a whole-house performance based program where the home is viewed and assessed as a single unit assembled from multiple energy-related components. This is opposed to a solely prescriptive program that only offers incentives to install individual components. Through the home energy rating (HERS Indexing) process, trade-offs are allowed. For example, a home's energy performance may be set back by using more glazing on one side of the home to take advantage of a view, but may compensate for this by installing a thicker layer of insulation in the attic or by installing a heat system with a higher efficiency.

In addition, a ventilation requirement should be included in the program. While the program should encourage builders, owners and architects to design buildings that are very tight and very well insulated, there is also a need to make sure that the homes are properly ventilated to avoid creating indoor air quality problems. Other benefits of Touchstone new home are the assurance of better building comfort, health and durability particularly when it includes the aforementioned ventilation requirement.

Builder training can be addressed through more than one venue. Training is often implemented through the initial meeting with a builder to explain the details of compliance with the program which will inevitably involve some explanation of building science (the basis for the program requirements). However, there are other opportunities to address training with builders in groups. Workshops and training sessions may also be coordinated with other meetings and conferences regularly attended by builders, developers, architects (e.g. AIA meetings, home builder association meetings and meetings of other trade allies).

Other strategies proposed to help reach potential customers and builders include participating in trade shows, attending and participating in home builder and home buyer seminars, presentations by program staff at meetings of home builder and electrician associations, sponsoring building code training sessions, leveraging of trade allies, and most importantly, direct outreach to builders (face-to-face meetings and contact). In addition, the program could be promoted through bill messages, customer newsletters, Company website, home shows, and other potential regional trade ally events and training sessions.

Major market barriers that could be addressed by this proposed program include:

- higher first cost of energy efficiency measures;
- builders reluctance to adopt newer building technologies;
- lack of knowledge by consumers, builders, appraisers, lenders, and other key actors of the full range of benefits of building energy efficient homes;
- lack of a competitive market for companies that provide Home Energy Ratings;
- lack of consideration of the value of efficiency in financing;
- limited access to education regarding technologies or benefits;
- limited product awareness by consumers, plumbing and heating contractors, supply houses, and other market actors;
- reluctance of consumers and contractors to purchase and install high efficiency equipment and/or consider new technologies; and

- incorrect installation techniques that result in suboptimal performance of energy efficient products.

The December 2004 National Energy Efficiency Best Practices Study recommends that the following steps be taken to ensure the reliability of energy savings from such a program:

- Treat inspection visits as partnership-building and learning events rather than just regulatory enforcement activities
- Require builder or builder's representative to be on-site during inspection
- Encourage home inspectors to organize their own professional organization to provide quality control for this program.
- Encourage home inspectors to organize their own professional organization
- Provide timely feedback to builders, home inspectors, and other parties
- Ensure that inspectors have plenty of hands-on construction experience
- Establish a streamlined inspection scheduling process
- Recognize the different inspection needs of experienced builders and builders who are new to the program
- Host pre-construction meetings with the builder, key subcontractors, and suppliers to review project specifications and program requirements

**Program Allies:** The primary program allies are homebuilders and contractors, residential electricians, residential architects, HVAC contractors and plumbers. However, the consumer market (end-users) is an important driver of participation. Based on experience gathered from the Energy Star Homes program, builders have commented that they would seek Energy Star certification for their homes if their buyers' were requesting this certification.

**Projected Savings:** Approximately 13,400 MWh will be saved in 2018 based on the projected participation, with an estimated 425 MWh saved in the first year alone. Additionally, projected participation will also result in a summer peak saving of 3.1 MW after 10 years. The participation levels and assumed demand and energy savings represent aggressive targets based upon actual experience with Touchstone Energy Homes. These figures will be updated in the future based upon actual experience with the revised program.

Additional detail, including annual energy and demand savings for this program can be found in Section 10.3.

**Projected Cost Effectiveness:**

Program	MWh Savings in 2018	Summer Peak MW Savings in 2018	Present Value of Total Benefits (\$2009)	Present Value of Total Costs (\$2009)	Benefit/Cost Ratio
Touchstone Energy Homes Program	13,432	3.1	\$14,120,787	\$7,588,209	1.86

**Projected Budgets:** In the first year, the Touchstone Energy Homes (new construction) program has been assigned a budget of approximately \$145,000 dollars. Both program participation and budget increase annually with an estimated budget of nearly \$920,000 in 2018. Incentives account for roughly \$4.8 million of the total budget with the remaining \$935,000 utilized for marketing, labor, and evaluation costs. The program administrative budget is

reserved for providing technical assistance to members, program outreach with home builders, education, on-site inspection, marketing, and incentive fulfillment.

Section 10.3 provides additional annual detail.

Program	10 Year Totals			
	Utility Incentives	Administrative Costs	Total Hoosier Costs	% of Total DSM Budget
Touchstone Energy Homes Program	\$4,435,725	\$857,700	\$5,293,425	6.5%

### 10.1.5 APPLIANCE ROUND-UP

Hoosier Energy may also offer an Appliance Round-Up program to homeowners in the Hoosier service territory and include incentives for the removal of second (or more) refrigerators and/or freezers from a household. All homes with secondary refrigerators in the service territory are eligible to participate in this program.

**Measure description:** The objective of this program is to remove underutilized but operational second refrigerators and/or freezers out of service and ensure they are properly dismantled.

#### *Refrigerator Turn-In:*

Homeowners can receive an incentive for coordinating the removal of their secondary refrigerators from their homes. Only operational and utilized units that are greater than 10 years old qualify for an incentive.

#### *Freezer Turn-In:*

Homeowners can receive an incentive for coordinating the removal of their secondary freezers from their homes. Only operational and utilized units that are greater than 10 years old qualify for an incentive.

**Program incentives:** The participant is paid an incentive of \$50 for every old refrigerator/freezer that is turned in. Hoosier Energy would also pay all costs to have the old unit hauled away (estimated to be \$100 per refrigerator/freezer).

Measure	Annual Energy Savings (kWh)	Summer Peak Savings (kW)	Measure Cost (per unit)	Utility Incentive (per unit)
2nd Refrigerator	976	0.08	\$50.00	\$50.00
2nd Freezer	774	0.06	\$50.00	\$50.00

**Projected Program Participation:** Approximately 34% of homes in the Hoosier Energy member territory have second refrigerators, and 17% have secondary freezers. In the first year, the participation in the pilot program is limited to include approximately 400 second refrigerators. Assuming the pilot program achieves all anticipated savings goals and benefit-cost requirements, the program is expected to include secondary freezers in 2010. In total, the program is estimated to reach 15,700 refrigerators and just over 3,000 freezers from 2009-2018. This is equal to approximately 20% of all second refrigerators and 7.5% of all secondary freezers.

Year	Program Participants	
	2nd Refrigerator	2nd Freezer
2009	400	0
2010	800	100
2011	1,040	175
2012	1,200	240
2013	1,360	300
2014	1,520	330
2015	2,000	420
2016	2,240	450
2017	2,400	500
2018	2,800	550

**Program Design and Implementation:** The program should be designed to educate consumers concerning the increased inefficiency of older appliances and the corresponding cost associated with this inefficiency over time. For example, many refrigerators that were manufactured over 10 years ago use more than 1,000 kWh a year, while new refrigerators of the same size consume less than 500 kWh a year. Education would occur through the promotion of the program as well as at retailer stores.

The program could be marketed through member cooperative websites, newspapers, public relations efforts and through displays at retailers. Initial marketing may also be done with a direct mailing to explain the refrigerator turn-in offer, including details such as eligibility requirements, incentive to participate, and next step action. Residents who are interested in participating will be directed to contact a Hoosier Energy representative.

The representative will follow-up with a set of pre-screening questions to determine if the customer was eligible and likely had a high use refrigerator and/or freezer. Eligibility to participate in the second appliance turn-in program includes: being a resident in the Hoosier Energy service area, having an operational second refrigerator/freezer, and the unit must be 10 years of age or greater. If all eligibility requirements are met, the Hoosier Energy representative will provide the participants' information to the appliance removal contractor.

The program will subcontract (through a competitive bid) an appliance removal/recycling company to fulfill all other aspects of the program, including scheduling, collecting, transporting, and the recycling of old appliances. Hoosier Energy should seek a strong partnership with the local recycling vendors to ensure that the program is executed efficiently. Thus, an understanding concerning turn-around time from first contact by an interested party to final appliance pick-up, and then to incentive payout and finally recycling verification must be established.

In the first year, the program may be designed as a pilot program. This will allow Hoosier Energy to evaluate the program goals and partnerships. Additionally, Hoosier Energy may want to consider expanding the program to include additional "second" appliances existing in residences, such as freezer units.

**Program Allies:** Key program allies for this program include the State of Indiana Energy Office, appliance retailers, and energy service companies.

**Projected Savings:** Approximately 12,400 MWh will be saved in 2018 based on the projected participation, with an estimated 390 MWh saved in the pilot year. Additionally, projected participation will also result in a summer peak saving of 1.0 MW after 10 years.

Additional detail, including annual energy and demand savings for this program can be found in Section 10.3.

**Projected Cost Effectiveness:**

Program	MWh Savings in 2018	Summer Peak MW Savings in 2018	Present Value of Total Benefits (\$2009)	Present Value of Total Costs (\$2009)	Benefit/Cost Ratio
Appliance Round Up Program	12,438	1.0	\$4,621,715	\$2,289,982	2.02

**Projected Budgets:** Between 2009 and 2018, the Appliance Round Up program has been assigned a budget of approximately \$3.2 million. Incentives account for roughly \$940,000. In addition to the incentives, there is an administrative budget for outreach with allies, data tracking and reporting, and fulfillment. Program staff will also be responsible for and verifying that the second refrigerators and/or freezers meet all eligibility requirements. Outside contractor responsible for appliance pick-up, removal, and recycling are included as part of the administrative budget, and receive \$100 per appliance from the utility for their services. In total, these administrative costs represent approximately \$2.2 million over the next 10 years.

Section 10.3 provides additional annual detail.

Program	10 Year Totals			
	Utility Incentives	Administrative Costs	Total Hoosier Costs	% of Total DSM Budget
Appliance Round Up Program	\$941,250	\$2,243,100	\$3,184,350	3.9%

**10.1.6 RESIDENTIAL ENERGY EFFICIENCY EDUCATION CAMPAIGN**

Finally, Hoosier Energy should also invest annually in an on-going energy efficiency education campaign that promotes a culture of conservation throughout the member systems. The educational campaign should define specific goals and actions that can lead to an efficient use of energy that can be sustained over time. In general, any education effort should:

- Brand a consistent and clear message
- Be objective and should not endorse any specific product brands
- Tie directly to actions that can most easily be taken by the largest number of consumers
- Include information related to the environmental benefits of conserving energy consumption.
- Provide education to children in schools
- Support existing energy efficiency programs, but also promote additional opportunities and energy efficient technologies
- Borrow heavily from what has already been proven to work. Determine the “best practice” of other energy efficiency education campaigns that have been able to deliver successful education programs and follow their advice
- Coordinate with grassroots organizations that have credibility and knowledge of local communities

Finally, an energy efficiency education campaign should also possess a consistent and reliable funding stream. To this end, Hoosier Energy has reserved \$370,000 as an educational budget in 2009. This figure increases annually by 3%, growing to approximately \$390,000 in 2011. As more programs are offered (i.e. the Energy Star appliances program) and more measures are included in the initial portfolio of residential energy efficiency programs (i.e. heat pump water heaters, LED bulbs, etc.), the education campaign budget can be scaled back to an estimated \$200,000 for the remaining 7 years.

## 10.2 RECOMMENDED RESIDENTIAL DEMAND RESPONSE PROGRAM PLANS

### 10.2.1 AIR CONDITIONING LOAD CONTROL WITH 50% CYCLING STRATEGY

Hoosier Energy should pursue an Air Conditioning Load Management program, offering to install load control devices on residential central electric air conditioners. Incentives can be paid by Hoosier to member cooperatives that enroll households and install the equipment. The member cooperatives may then incentivize the homeowners through various means including rate reductions, one-time upfront payments, or a schedule of payments. Homes in the service territory with central electric air conditioning are eligible to participate in the program, and Hoosier should also pursue marketing the load control switches in coordination with the Efficient Home Heating & Cooling Program.

**Measure description:** The objective of the program is to encourage residential homeowners to allow their electric cooperative to install a load control switch on their air conditioner. The switch (either through the AMI system or through a radio-controlled device) allows the member cooperative and Hoosier to control the load during peak loading conditions. With a 50% cycling strategy, the unit will be turned off 15 minutes out of every 30 minutes during a control hour. Hoosier should establish guidelines on how much control they will call on during a month and a season and the maximum number of continuous hours of control they will require. These guidelines are essential for marketing the program to homeowners and to continued participation in the program with minimal customer complaints.

**Program incentives:** Hoosier Energy will pay a one-time \$65 to a participating member cooperative to help offset the capital cost of the control device. Incentives by the cooperatives to the homeowners are left up to the discretion of the cooperative management. This incentives can take on many forms including a one-time upfront payment (e.g., \$50), a schedule of monthly payments (e.g., \$3 per month), or even special rate reductions. Furthermore, some utilities have had success at attracting some participants in such a program with no incentive, by appealing to the “cooperative way” and to a sense of civic duty.

Measure	Summer Peak Savings (kW) (per unit)	Hoosier Incentive to Member Coop (per unit)
Existing Central AC	1.00	\$65
Central A/C (15 SEER)	0.93	\$65
Central A/C (16 SEER)	0.88	\$65
Central A/C (17 SEER)	0.96	\$65
Central A/C (18 SEER)	0.87	\$65

**Projected Program Participation:** There is a high market-share of homes with central air conditioners, 82% in 2008; however there is typically some resistance to controlling air conditioners as people generally fear a lack of comfort on particularly hot summer days. Given the success of other mature programs at cooperatives throughout the U.S., an aggressive program should be able to attain 15% participation in 20 years. Given this assumption, Hoosier can expect to add roughly 3,000 AC switches per year over a 20-year horizon, totaling 26,500 by 2018 (if the program is implemented in 2010). Hoosier member cooperatives have had success in attracting residential homeowners to control both their air conditioners and their water heaters in a pilot program. Therefore, Hoosier can continue to expect to gain a high proportion of homes that control both appliances, thereby reducing the installation cost per appliance considerably.

**Projected Savings:** Given the level of penetration expected each year, Hoosier will gain control over an additional 2.8 MW every year. Therefore, 25.5 MW will be under control by 2018. These savings are the effective savings assuming half the switches are installed on homes with existing air conditioners and half are install on new air conditioners with higher efficiency ratings through the Efficient Home Heating & Cooling Equipment Program.

Additional detail, including annual demand savings for this program can be found in Section 10.3

#### Projected Cost Effectiveness:

Program	MWh Savings in 2018	Summer Peak MW Savings in 2018	Present Value of Total Benefits (\$2009)	Present Value of Total Costs (\$2009)	Benefit/Cost Ratio
Residential Air Conditioning Control	-	25.3	\$7,242,295	\$3,059,270	2.37

**Projected Budgets:** Hoosier's budget for the program totals \$1.9 million, starting at \$300,000 in year 1 and then averaging \$203,000 in each subsequent year through 2018. \$100,000 in the first year is for central communication equipment cost. The cost of the \$65 incentive to member cooperatives totals nearly \$200,000 per year and the balance is administrative, operating, and marketing costs. The member cooperatives will have costs totaling \$4.8 million through 2018, \$1.7 million of which is offset by payments from Hoosier.

Section 10.3 provides additional detail.

Program	10 Year Totals			
	Hoosier Incentive to Members	Administrative Costs	Total Hoosier Costs	% of Total DSM Budget
Residential Air Conditioning Control	\$1,723,215	\$180,217	\$1,903,432	1.6%

### 10.2.2 WATER HEATER CONTROL STRATEGY

Hoosier Energy should pursue a Water Heater Load Management program, offering to install load control devices on residential electric water heaters. Incentives can be paid by Hoosier to member cooperatives that enroll households and install the equipment. The member cooperatives may then incentivize the homeowners through various means including rate reductions, one-time upfront payments, or a schedule of payments. Homes in the service

territory with electric water heaters with tank sizing ranging between 40 and 80 gallons are eligible to participate in the program, and Hoosier should also pursue marketing the load control switches in coordination with the *Efficient Home Heating & Cooling Program*.

**Measure description:** The objective of the program is to encourage residential homeowners to allow their electric cooperative to install a load control switch on their electric water heater. The switch (either through the AMI system or through a radio-controlled device) allows the member cooperative and Hoosier to control the load during peak loading conditions. The heating element would be turned off during the entire duration of a control hour. Hoosier should establish guidelines on how much control they will call on during a month and a season and the maximum number of continuous hours of control they will require. These guidelines are essential for marketing the program to homeowners and to continued participation in the program with minimal customer complaints. Two programs should be pursued simultaneously: a program for standard size water heaters and large capacity water heaters. Standard water heaters include 40 and 50 gallon tanks. Large capacity water heaters include 70 and 80 gallon tanks. Large capacity water heaters can be controlled for longer continuous durations and therefore have more value to Hoosier and in fact have higher benefit/cost ratios because of this additional value.

**Program incentives:** Hoosier Energy will pay a one-time \$65 to a participating member cooperative to help offset the capital cost of the control device. Incentives by the cooperatives to the homeowners are left up to the discretion of the cooperative management. This incentives can take on many forms including a one-time upfront payment (e.g., \$50), a schedule of monthly payments (e.g., \$3 per month), or even special rate reductions. Furthermore, some utilities have had success at attracting some participants in such a program with no incentive, by appealing to the “cooperative way” and to a sense of civic duty.

Measure	Summer Peak Savings (kW) (per unit)	Hoosier Incentive to Member Coop (per unit)
50g WH	0.46	\$65
80g WH	0.46	\$65

**Projected Program Participation:** Roughly 68% of homes have standard electric water heaters and only 4% have large capacity electric water heaters. An aggressive marketing effort can be expected to sign up 30% of standard water heaters and 25% of large capacity water heaters over 20 years. Given these rates, Hoosier can target adding 4,175 standard switches and 220 large capacity switches to the system each year. By 2018, participation is expected to total to 37,600 standard water heaters and 2,000 large capacity water heaters.

**Projected Savings:** Given the level of penetration expected each year, Hoosier will gain control over an additional 1.9 MW for standard water heaters and 0.1 MW for large capacity water heaters every year. Therefore, a total of 18.1 MW will be under control by 2018 (17.2 MW for standard water heaters and 0.9 MW for large tank water heaters).

Additional detail, including annual demand savings for this program can be found in Section 10.3

**Projected Cost Effectiveness:**

Program	MWh Savings in 2018	Summer Peak MW Savings in 2018	Present Value of Total Benefits (\$2009)	Present Value of Total Costs (\$2009)	Benefit/Cost Ratio
Residential Water Heating Control	-	18.1	\$5,425,857	\$5,457,467	0.99

The benefit/cost ratio is less than one for a couple of reasons. First, the ratio for standard water heaters was just below one in the prior analysis noted in the potential study (see Section 7). Still, Hoosier should pursue this program because there are so few large capacity water heaters (for which the single unit benefit/cost ratio is greater than one). Standard water heaters are recommended to allow Hoosier to have control over a greater proportion of their peak loads. Further, a pilot study of demand response has indicated that as many as 2/3 of homes that agree to control of a water heater also agree to control of an air conditioner. The combined installation cost is \$230, which is roughly half of the cost to control two appliances individually. The recommended program cost effectiveness assumes 2/3 of homes with a standard water heater control will also have air conditioning control.

With a benefit/cost ratio so close to one, the economic value of the standard water heaters may become apparent as key inputs to the analysis change, especially the value of avoided peak demand. A second reason the benefit/cost ratio for this program is less than one is that the full benefits of switches in later years are not realized by 2018 and the water heaters, with lower load impacts, accrue a high proportion of their benefits in the later years of the program.

**Projected Budgets:** Hoosier’s budget for the program totals \$2.8 million, starting at \$430,000 in year 1 and then averaging \$301,000 in each subsequent year through 2018. \$145,000 in the first year is for central communication equipment cost. The cost of the \$65 incentive to member cooperatives totals \$285,000 per year and the balance is administrative, operating, and marketing costs. The member cooperatives will have costs totaling \$8.3 million through 2018, \$2.6 million of which is offset by payments from Hoosier.

Section 10.3 provides additional detail.

Program	10 Year Totals			
	Hoosier Incentive to Members	Administrative Costs	Total Hoosier Costs	% of Total DSM Budget
Residential Water Heating Control	\$2,571,994	\$268,967	\$2,840,961	2.4%

### 10.3 RESIDENTIAL ENERGY EFFICIENCY AND DEMAND RESPONSE PROGRAM POTENTIAL SUMMARY

The following tables present detailed information regarding the annual participation, energy savings, demand savings, and Hoosier Energy budgets for each of the six recommended residential energy efficiency and two demand response programs. In total, the 8 residential DSM programs result in 162,668 MWh of annual energy savings in 2018, or 3.3% of forecasted residential energy sales. The programs are also estimated to achieve summer peak demand savings of 81.4 MW, or 7.3% of the forecast residential summer peak.

The Hoosier Energy budget for the complete portfolio of recommended residential DSM programs ranges from \$4.1 million in 2009 to \$7.9 million in 2018. The annual growth in budget

dollars is impacted by a variety of factors including increased participation over time, new program offerings, and periodic program evaluation. In total, incentives account for 80% of the total budget, while administrative costs (marketing, program delivery, incentive fulfillment, and evaluation) account for the remaining 20%.

The benefits from the combined residential energy efficiency and demand response programs are greater than the total costs by a ratio of \$2.34 to \$1.

**Table 10.1: Residential Energy Efficiency Program Portfolio Detail: Annual Participation, Savings, and Budgets by Program**

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
<b>Residential Lighting Program</b>										
Incremental Annual Bulbs	351,300	421,600	457,000	494,000	425,500	358,000	292,000	282,500	272,000	247,000
Cumulative Annual Bulbs	351,300	772,900	1,229,900	1,723,900	2,149,400	2,507,400	2,799,400	2,731,900	2,583,900	2,375,900
Cumulative Annual MWh Savings	15,048	33,106	52,673	73,867	64,550	75,362	84,245	82,431	78,291	72,482
% of Annual Residential Sales	0.37%	0.80%	1.22%	1.68%	1.45%	1.66%	1.82%	1.75%	1.63%	1.46%
Cumulative Annual MW Savings	1.5	3.4	5.4	7.5	6.6	7.7	8.6	8.4	8.0	7.4
% of Annual Residential Summer Peak Demand	0.16%	0.36%	0.54%	0.75%	0.65%	0.74%	0.81%	0.78%	0.73%	0.66%
Incentives	\$651,400	\$761,800	\$847,750	\$932,500	\$818,000	\$713,500	\$624,000	\$671,625	\$709,250	\$744,500
Administration	\$72,400	\$86,900	\$108,300	\$103,600	\$91,000	\$94,300	\$69,300	\$74,700	\$98,700	\$82,700
<b>Total Program Costs</b>	<b>\$723,800</b>	<b>\$868,700</b>	<b>\$956,050</b>	<b>\$1,036,100</b>	<b>\$909,000</b>	<b>\$807,800</b>	<b>\$693,300</b>	<b>\$746,325</b>	<b>\$807,950</b>	<b>\$827,200</b>
<b>Home Heating &amp; Cooling Equipment Program</b>										
Incremental Annual Participants	5,900	7,510	7,510	7,510	7,510	7,510	7,780	10,520	11,535	13,165
Cumulative Annual Participants	5,900	13,410	20,920	28,430	35,940	43,450	53,230	62,980	74,515	87,680
Cumulative Annual MWh Savings	1,632	3,620	5,607	7,585	9,583	11,570	13,979	16,830	19,927	23,418
% of Annual Residential Sales	0.04%	0.09%	0.13%	0.17%	0.21%	0.25%	0.30%	0.36%	0.42%	0.48%
Cumulative Annual MW Savings	1.2	2.8	4.0	5.4	6.8	8.2	9.9	11.9	14.3	17.0
% of Annual Residential Summer Peak Demand	0.12%	0.27%	0.40%	0.54%	0.67%	0.79%	0.94%	1.11%	1.31%	1.53%
Incentives	\$1,382,500	\$1,707,750	\$1,707,750	\$1,707,750	\$1,707,750	\$1,707,750	\$2,053,500	\$2,412,750	\$2,690,250	\$3,129,250
Administration	\$188,500	\$232,800	\$262,800	\$232,800	\$232,800	\$257,800	\$280,000	\$329,100	\$396,800	\$426,800
<b>Total Program Costs</b>	<b>\$1,571,000</b>	<b>\$1,940,550</b>	<b>\$1,970,550</b>	<b>\$1,940,550</b>	<b>\$1,940,550</b>	<b>\$1,965,550</b>	<b>\$2,333,500</b>	<b>\$2,741,850</b>	<b>\$3,087,050</b>	<b>\$3,556,050</b>
<b>Home Energy Audit and Weatherization Program</b>										
Incremental Annual Participants	1,300	1,800	1,650	1,500	1,250	1,100	1,100	1,100	1,100	1,100
Cumulative Annual Participants	1,300	3,100	4,750	6,250	7,500	8,600	9,700	10,800	11,900	13,000
Cumulative Annual MWh Savings	5,089	12,135	18,594	24,466	26,558	29,951	33,137	35,789	38,363	40,898
% of Annual Residential Sales	0.12%	0.29%	0.43%	0.56%	0.60%	0.68%	0.72%	0.76%	0.80%	0.84%
Cumulative Annual MW Savings	1.1	2.7	4.1	5.4	6.2	7.0	7.7	8.3	8.9	9.5
% of Annual Residential Summer Peak Demand	0.12%	0.28%	0.41%	0.54%	0.61%	0.68%	0.73%	0.77%	0.81%	0.85%
Incentives	\$1,119,950	\$1,550,700	\$1,421,475	\$1,292,250	\$1,076,875	\$947,650	\$947,650	\$947,650	\$947,650	\$947,650
Administration	\$124,400	\$172,300	\$178,000	\$143,600	\$119,700	\$130,300	\$105,300	\$105,300	\$135,300	\$105,300
<b>Total Program Costs</b>	<b>\$1,244,350</b>	<b>\$1,723,000</b>	<b>\$1,599,475</b>	<b>\$1,435,850</b>	<b>\$1,196,575</b>	<b>\$1,077,950</b>	<b>\$1,052,950</b>	<b>\$1,052,950</b>	<b>\$1,082,950</b>	<b>\$1,052,950</b>
<b>Touchstone Energy Homes Program</b>										
Incremental Annual Participants	100	160	210	250	290	360	450	520	590	640
Cumulative Annual Participants	100	260	470	720	1,010	1,370	1,820	2,340	2,930	3,570
Cumulative Annual MWh Savings	426	1,107	2,002	3,066	3,800	5,155	6,848	8,804	11,024	13,432
% of Annual Residential Sales	0.01%	0.03%	0.05%	0.07%	0.09%	0.11%	0.15%	0.19%	0.23%	0.27%
Cumulative Annual MW Savings	0.1	0.3	0.5	0.7	0.9	1.2	1.6	2.1	2.6	3.1
% of Annual Residential Summer Peak Demand	0.01%	0.03%	0.05%	0.07%	0.09%	0.12%	0.15%	0.19%	0.24%	0.28%
Incentives	\$124,250	\$198,800	\$260,925	\$310,625	\$360,325	\$447,300	\$559,125	\$646,100	\$733,075	\$795,200
Administration	\$21,800	\$35,200	\$65,100	\$54,800	\$63,700	\$103,800	\$98,600	\$114,000	\$159,400	\$140,300
<b>Total Program Costs</b>	<b>\$146,050</b>	<b>\$234,000</b>	<b>\$326,025</b>	<b>\$365,425</b>	<b>\$424,025</b>	<b>\$551,100</b>	<b>\$657,725</b>	<b>\$760,100</b>	<b>\$892,475</b>	<b>\$935,500</b>

**Table 10.1 (cont'd): Residential Energy Efficiency Program Portfolio Detail: Annual Participation, Savings, and Budgets by Program**

Appliance Round Up Program	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Incremental Annual Participants	400	900	1,215	1,440	1,660	1,850	2,420	2,690	2,900	3,350
Cumulative Annual Participants	400	1,300	2,515	3,955	5,615	7,065	8,585	10,060	11,520	13,210
Cumulative Annual MWh Savings	390	1,249	2,399	3,756	5,316	6,664	8,083	9,467	10,840	12,438
% of Annual Residential Sales	0.01%	0.03%	0.06%	0.09%	0.12%	0.15%	0.17%	0.20%	0.23%	0.25%
Cumulative Annual MW Savings	0.0	0.1	0.2	0.3	0.4	0.6	0.7	0.8	0.9	1.0
% of Annual Residential Summer Peak Demand	0.00%	0.01%	0.02%	0.03%	0.04%	0.05%	0.06%	0.07%	0.08%	0.09%
Incentives	\$20,000	\$45,000	\$60,750	\$72,000	\$83,000	\$92,500	\$121,000	\$134,500	\$145,000	\$167,500
Administration	\$46,600	\$105,000	\$153,700	\$168,000	\$193,600	\$230,800	\$282,400	\$313,800	\$358,400	\$360,800
<b>Total Program Costs</b>	<b>\$66,600</b>	<b>\$150,000</b>	<b>\$214,450</b>	<b>\$240,000</b>	<b>\$276,600</b>	<b>\$323,300</b>	<b>\$403,400</b>	<b>\$448,300</b>	<b>\$503,400</b>	<b>\$558,300</b>
<b>Energy Efficiency Education Campaign</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Incremental Annual Participants	-	-	-	-	-	-	-	-	-	-
Cumulative Annual Participants	-	-	-	-	-	-	-	-	-	-
Cumulative Annual MWh Savings	-	-	-	-	-	-	-	-	-	-
% of Annual Residential Sales	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Cumulative Annual MW Savings	-	-	-	-	-	-	-	-	-	-
% of Annual Residential Summer Peak Demand	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Incentives	-	-	-	-	-	-	-	-	-	-
Administration	\$350,000	\$360,500	\$371,315	\$382,454	\$393,928	\$405,746	\$417,918	\$430,456	\$443,370	\$456,671
<b>Total Program Costs</b>	<b>\$350,000</b>	<b>\$360,500</b>	<b>\$371,315</b>	<b>\$382,454</b>	<b>\$393,928</b>	<b>\$405,746</b>	<b>\$417,918</b>	<b>\$430,456</b>	<b>\$443,370</b>	<b>\$456,671</b>

**Table 10.2: Residential Demand Response Program Portfolio Detail: Annual Participation, Savings, and Budgets by Program**

Residential Water Heating Control	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Incremental Annual Participants	0	4,397	4,397	4,397	4,397	4,397	4,397	4,397	4,397	4,397
Cumulative Annual Participants	0	4,397	8,793	13,190	17,586	21,983	26,379	30,776	35,173	39,569
Cumulative Annual MWh Savings	-	-	-	-	-	-	-	-	-	-
% of Annual Residential Sales	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Cumulative Annual MW Savings	0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.1	18.1
% of Annual Residential Summer Peak Demand	0.00%	0.21%	0.40%	0.60%	0.79%	0.97%	1.14%	1.31%	1.47%	1.62%
Incentives (to member systems)	\$0	\$285,777	\$285,777	\$285,777	\$285,777	\$285,777	\$285,777	\$285,777	\$285,777	\$285,777
Administration	\$0	\$147,938	\$13,611	\$14,019	\$14,439	\$14,872	\$15,319	\$15,778	\$16,251	\$16,739
<b>Total Program Costs</b>	<b>\$0</b>	<b>\$433,716</b>	<b>\$299,388</b>	<b>\$299,796</b>	<b>\$300,216</b>	<b>\$300,649</b>	<b>\$301,096</b>	<b>\$301,555</b>	<b>\$302,028</b>	<b>\$302,516</b>
<b>Residential Air Conditioning Control</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Incremental Annual Participants	0	2,946	2,945	2,946	2,946	2,946	2,945	2,946	2,946	2,945
Cumulative Annual Participants	0	2,946	5,891	8,837	11,783	14,729	17,674	20,620	23,566	26,511
Cumulative Annual MWh Savings	-	-	-	-	-	-	-	-	-	-
% of Annual Residential Sales	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Cumulative Annual MW Savings	0.0	2.8	5.6	8.4	11.2	14.0	16.9	19.7	22.5	25.3
% of Annual Residential Summer Peak Demand	0.00%	0.30%	0.57%	0.84%	1.11%	1.35%	1.60%	1.83%	2.06%	2.27%
Incentives (to member systems)	\$0	\$191,490	\$191,425	\$191,480	\$191,490	\$191,490	\$191,425	\$191,490	\$191,490	\$191,425
Administration	\$0	\$99,129	\$9,119	\$9,392	\$9,674	\$9,965	\$10,263	\$10,571	\$10,889	\$11,215
<b>Total Program Costs</b>	<b>\$0</b>	<b>\$290,619</b>	<b>\$200,544</b>	<b>\$200,882</b>	<b>\$201,164</b>	<b>\$201,455</b>	<b>\$201,688</b>	<b>\$202,061</b>	<b>\$202,379</b>	<b>\$202,640</b>

**Table 10.3: Combined Residential Energy Efficiency and Demand Response Program Portfolio Detail: Annual Participation, Savings, and Budgets by Program**

All Residential DSM (EE & DR) Combined	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Incremental Annual Participants	359,000	439,313	474,927	512,043	443,553	376,163	313,092	304,673	295,468	272,597
Cumulative Annual Participants	359,000	798,313	1,273,239	1,785,282	2,227,534	2,601,497	2,912,038	2,863,226	2,736,004	2,550,840
Cumulative Annual MWh Savings	22,585	51,216	81,275	112,750	109,806	128,702	146,292	153,321	158,445	162,668
% of Annual Residential Sales	0.55%	1.24%	1.88%	2.57%	2.46%	2.83%	3.16%	3.25%	3.30%	3.33%
Cumulative Annual MW Savings	3.9	13.8	23.7	33.8	40.1	48.8	57.4	65.2	73.1	81.4
% of Annual Residential Summer Peak Demand	0.42%	1.46%	2.39%	3.37%	3.95%	4.70%	5.44%	6.07%	6.69%	7.30%
Incentives	\$3,298,100	\$4,761,317	\$4,775,852	\$4,792,392	\$4,523,217	\$4,385,967	\$4,782,477	\$5,289,892	\$5,702,492	\$6,261,302
Administration	\$803,700	\$1,239,767	\$1,150,944	\$1,108,666	\$1,116,842	\$1,247,683	\$1,279,100	\$1,393,705	\$1,619,110	\$1,630,525
<b>Total Program Costs</b>	<b>\$4,101,800</b>	<b>\$6,001,084</b>	<b>\$5,926,796</b>	<b>\$5,901,058</b>	<b>\$5,642,059</b>	<b>\$5,633,550</b>	<b>\$6,061,577</b>	<b>\$6,683,597</b>	<b>\$7,321,602</b>	<b>\$7,891,827</b>
Total NPV Benefits (\$2009) for Residential DSM:	\$212,448,366									
Total NPV Costs (\$2009) for Residential DSM:	\$90,767,016									
TRC Benefit Cost Ratio:	2.34									

## 10.4 RECOMMENDED COMMERCIAL/INDUSTRIAL ENERGY EFFICIENCY PROGRAM PLANS

### 10.4.1 COMMERCIAL/INDUSTRIAL PRESCRIPTIVE MEASURES PROGRAM

Summit Blue is proposing a Commercial and Industrial Prescriptive Program (CIP) to commercial and industrial (C&I) customers in the Hoosier Energy service territory that includes incentives for purchasing and installing efficient commercial equipment in existing facilities only<sup>29</sup>. The end-uses addressed in the CIP program include:

- Lighting & Controls
- Motors, VFDs, and Compressed Air systems
- Hot water heating
- HVAC & Shell

Prescriptive incentives are offered for a schedule of measures in each of these categories.

This program should be a top priority for Hoosier because replacing equipment at the end of its useful life or retrofitting inefficient equipment with high efficiency units is very cost effective, the electric energy savings potential is relatively large, and all commercial and industrial facilities in the service area can benefit from such a program. Numerous other electric cooperatives, municipal utilities, and investor-owned electric utilities offer this program to their customers.<sup>30</sup>

The objective of this program is to encourage commercial and industrial customers to purchase and install high efficiency equipment when replacing existing systems. The incentive for commercial and industrial customers to purchase high efficiency commercial equipment is the lower energy use and lower operating costs over the useful equipment life and equal or improved performance.

**Measure Descriptions:** A brief description for each measure included in the prescriptive measures program is presented below.

#### Lighting

##### *Compact Fluorescent Lamp – Hard-Wired and Fixtures:*

Compact fluorescent lamps (CFLs) are the most common alternatives to standard incandescent lamps. CFLs are generally about four times as efficient as incandescent lamps, and last about 10 times as long. CFLs can either be screw-in replacements for incandescent lamps or plug-in lamps in fixtures specifically designed around CFL technology. Only hard-wired CFLs or CFLs installed in special fixtures qualify for the program.

##### *T8 Lamps and Electronic Ballasts- Premium:*

Premium T8 lamps and electronic ballasts have the same market as regular T8 systems. They gain efficiency over regular T8 systems by the co-development of lamps and ballasts that optimize the efficiency of both when used together.

##### *T5 Lamps and Electronic Ballasts:*

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<sup>29</sup> Innovative and custom measures will be covered as part of the separate C&I Custom Program. New Construction measures are covered by a separate Commercial New Construction Program.

<sup>30</sup> See Summit Blue Consulting Benchmarking Analysis and Best Practices Assessment, for Hoosier Energy, September 2008.

T5 lamps and electronic ballasts are a newer alternative linear fluorescent lighting system. T5 fluorescent lamps are 5/8 of an inch in diameter, thinner than both T8 lamps and T12 lamps. T5 lighting systems are primarily used in new construction, and are not appropriate for most retrofit situations, as the lamps are only generally available in metric lengths.

*Lighting Reflectors/Delamping:*

The definition of delamping used for this project is replacing a four lamp, four foot fluorescent lighting fixture with a similar two lamp or three lamp fixtures. This measure is intended for areas that are currently over-lit. Lighting reflectors are often used as part of delamping projects.

*LED Exit Signs:*

Light emitting diode (LED) exit signs are one of the most efficient types of exit signs on the market. They generally only draw about two to three watts of power, compared to 10 watts or more for CFLs, or 20 watts or more for incandescent exit signs.

*Occupancy Sensors:*

Occupancy sensors automatically turn off the lights in a room or an area when the area is unoccupied. Occupancy sensors are an alternative to standard wall mounted on/off lighting switches.

*Daylight Sensors:*

Lighting systems are designed assuming no contribution from ambient daylight. In areas where daylight is available, artificial light is unnecessary and possibly detrimental to occupant comfort. Daylight sensors measure the contribution of ambient daylight and either turn-off or dim the lamps of the artificial lighting system.

*Pulse-Start Metal Halide and High Pressure Sodium Systems:*

Metal Halide pulse-start technology is a slightly more efficient type of HID lighting compared to traditional metal halide and high-pressure sodium high intensity discharge systems. High pressure sodium systems are very efficient, but the yellow/orange light color produced by the lamps is not suitable for most indoor applications. Special lamps and ballasts generate equivalent illumination in the same light fixture at lower power requirements.

*High-Bay Fluorescent Lights:*

High-bay lighting is used in industrial settings for general ambient light. T5 and T8 fluorescent lamps can be used in place of more traditional high-intensity discharge (HID) lamps in specially designed fixtures. The advantages include higher efficacy (lumens/Watt), greater lumen maintenance over the lamp life and better controllability. Savings are determined with engineering calculations, no interactive effects and 20% fewer operating hours due to control benefits.

Motors & Other

*Premium Efficiency Motors:*

Motor efficiency improvements can be achieved effectively during system specification and installation when new motors are purchased. Premium efficiency motors can be installed in place of motors that only meet minimum federal efficiency standards detailed in the Energy Policy Act (EPACT). Since many larger motors (greater than 30 HP) are rewound after failure rather than replaced, an additional opportunity exists by ensuring rewinds are performed to maintain motor efficiency. Steps like close control of baking temperatures, careful winding removal, and use of

high-quality materials will help ensure that efficiency will not diminish during rewinds. Premium efficiency motors typically exceed mandated EPACT efficiencies by 1-3% depending on the motor size.

*Variable Speed Drives Added to HVAC Motors:*

VFDs for HVAC applications are listed separately because they take advantage of the fluid affinity laws that show a cube relationship between speed and power. These applications also have a more predictable use pattern than VFDs in industrial processes and conveyance applications. The latter examples would be included with custom measures. The baseline technologies for HVAC VFDs are flow throttling for liquid systems and vortex dampers for air applications.

*Compressed Air:*

Frequently call the fourth utility (after electricity, gas, and water), compressed air systems have many savings opportunities, including: leak repair, efficient motors and compressors, pressure optimization and receiver installation. These measures could be legitimately included in "Custom" due to the site specific nature of savings. We have estimated savings for Compressed air with benchmarks from the Compressed Air Challenge program run by the U.S. Department of Energy, and on a Midwestern utility custom compressed air program results and conservation plan<sup>31</sup>. Savings are listed per system horsepower.

Hot Water

*Efficient Water Heaters:*

Traditional electric water heaters have an overall efficiency of about 90% including standby and distribution losses. High efficiency units achieve 94% efficiency with improved insulation and heat traps that minimize convection into under insulated distribution pipes. The savings estimate for the high-efficiency unit is calculated from the total hot water energy use and the unit efficiencies.

*Heat Pump Water Heaters:*

Heat pump water heaters use compressed refrigerants to extract heat from ambient air (or water) and move that heat to stored hot water. During warm weather these machines can move four units of heat for every one comparable unit of input energy, thus achieving a coefficient of performance (COP) up to 4.0. COP decreases as ambient air temperature decreases. At about 10-20°F, heat pumps become ineffective. At cold ambient temperatures, traditional electric resistance heating elements back-up the heat pump compressor. Savings was determined using engineering estimates with a linear relationship between COP and outdoor air temperature until 20°F at which point we assumed electric resistance heat would take over. Because refrigerant coils are cooler than electric resistance coils, the heat pump equipment lasts longer than a traditional heater.

*Tankless Water Heaters:*

Tankless water heaters are more efficient than standard water heaters since they avoid the energy lost from the hot water that is stored in conventional tanks. Tankless water heaters have "energy factors" of about 98%. The savings estimate for the high-efficiency unit is calculated from the total hot water energy use and the unit efficiencies. This equipment is likely replaced with another tankless heater because of the cost hurdle for re-piping water distribution for reverting to the standard tank water heater.

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<sup>31</sup> Xcel Energy – Minnesota Conservation Improvement Plan 2007-2009.

### HVAC & Shell

#### *Efficient Packaged Commercial Air Conditioning Systems (Rooftop Air Conditioners):*

Standard efficiency units are specified as units with EER ratings of 9.0. Efficient units are specified as units with EER ratings of 10.4-13.0 depending on the equipment size. Summit Blue characterized a high efficiency unit with an EER of 12.2.

#### *Efficient Heat Pumps:*

Air source heat pumps have the same efficiency requirements as air conditioners. Standard efficiency units are specified as units with EER ratings of 9.0. Efficient units are specified as units with EER ratings of 10.4-13.0 depending on the equipment size. Summit Blue characterized a high efficiency unit with an EER of 12.2. For ground source heat pumps, efficient units are defined as having minimum EERs of 16.2 EER for closed loop systems and 14.1 EER for open loop systems.

#### *Efficient Chillers:*

Efficient chillers cover efficient reciprocating, screw, and centrifugal units. Air cooled units with condensers will have a minimum efficiency of 1.25 kW/unit to qualify. Water cooled units with minimum efficiencies of 0.58 kW/ton to 0.70 kW/ton (depending on size) will be required to qualify.

#### *Packaged Terminal Air Conditioners and Heat Pumps:*

Packaged terminal air conditioners (PTAC) and heat pumps units are most commonly used in hotel rooms. Efficient units are defined as those having an efficiency of 10.5 EER or higher.

#### *Economizers:*

Economizers use outside air for cooling instead of operating the air conditioning compressors on mild days, particularly during the spring and early fall seasons. The analysis assumed an integrated economizer where 100% outdoor air is used up to 65°F ambient temperature. During peak summer conditions economizers produce no peak demand savings.

#### *Programmable Thermostats:*

Programmable thermostats allow temperatures to be automatically set warmer or colder during unoccupied periods to reduce heating and cooling energy use when facilities are unoccupied. We analyzed 5°F setbacks (set-ups in the summer). Since the impact of set-backs is typically off-peak, these thermostats do not have discernable peak benefits.

**Program Incentives:** The CIP program is a customer incentive program that provides incentives for the installation of energy efficiency measures in existing non-residential facilities. The following table outlines the incentive structure, set at 25% of the incremental measure cost, for each of the measures available under the CIP program.

Measure	Units	Annual Energy Savings (kWh) (per unit)	Summer Peak Savings (kW) (per unit)	Measure Cost (per unit)	Utility Incentive (per unit)
<b>Lighting</b>					
9-24W Screw-in CFL	lamp	229	0.08	\$6.00	\$1.50
Over 24W Pin-Based CFL	lamp	280(C)	0.09(C)	\$10.50	\$2.63
Premium T8/T5 w/Electronic Ballast	fixture	157(C) / 188(I)	0.05(C) / 0.06(I)	\$51.00	\$12.75
Delamping w/Reflectors (2 lamp)	fixture	174	0.06	\$30.00	\$7.50
LED Exit	fixture	206(C) / 181(I)	0.03(C) / 0.02(I)	\$40.00	\$10.00
Occupancy Sensor (8 hrs/day)	sensor	443(C)	0.11(C)	\$85.00	\$21.25
Daylighting (perimeter zone)	sensor	1545(C)	0.82(C)	\$800.00	\$200.00
175W PS MH HID Indoor	fixture	1189(C)	0.40(C)	\$197.00	\$49.25
250W PS MH HID Indoor	fixture	651	0.22	\$220.00	\$55.00
250W PS MH HID Outdoor	fixture	651	0.00	\$220.00	\$55.00
T5 High Bay Fluorescent	fixture	570(I)	0.06(I)	\$580.00	\$145.00
<b>Motor &amp; Other</b>					
Prem Motor <=10 HP	horsepower	75(C) / 57(I)	0.02	\$50.00	\$12.50
Prem Motor > 10HP	horsepower	35(C) / 40(I)	0.01	\$30.00	\$7.50
Variable Speed Drives Added to HVAC Motors	horsepower	760(C)	0.00(C)	\$199.00	\$49.75
Compressed Air	horsepower	375(I)	0.08(I)	\$199.00	\$49.75
<b>Hot Water</b>					
High Efficiency Water Heater	tank	55	0.06	\$83.00	\$20.75
Heat Pump Water Heater	tank	105(C)	0.11(C)	\$910.00	\$227.50
Tankless Water Heat	tank	359	0.36	\$300.00	\$75.00
<b>HVAC &amp; Shell</b>					
Packaged Terminal A/C 12.2 EER	ton of cooling	196(C) / 235(I)	0.18	\$101.00	\$25.25
Programmable Thermostat	per 1,000 sq.ft	891(C)	0.00(C)	\$80.00	\$20.00
Integrated Economizer Control	ton of cooling	582(C)	0.00(C)	\$12.00	\$3.00
High Efficiency HP 12.2 EER	ton of cooling	675(C) / 810(I)	0.23	\$170.00	\$42.50

Note: (C) refers to commercial measures only; (I) refers to industrial measures only

**Projected Program Participation:** In the commercial sector, the lighting end-use is projected to have the highest amount of program participation. Nearly 191,000 different fixtures, lamps, or sensors are expected to become energy efficient units from 2009-2018. In the industrial sector, motors and other is the end-use with the highest projected participation. However, note that the approximate 420,000 units refer to horsepower, and not individual motor systems. Similarly, the projected participation for the HVAC and Shell end-use is provided in tons of cooling and not individual HVAC systems.

Measure End-Use	Units	10-year Program Participants	
		Commercial	Industrial
Lighting	lamps/fixtures	190,924	130,383
Motor & Other	horsepower	73,412	418,777
Hot Water	tanks	122	123
HVAC & Shell	tons of cooling	35,932	10,701

**Program Design and Implementation:** The primary goal of the program is to encourage Hoosier Energy's C&I customers to install energy efficient equipment in existing facilities. More specifically, the program is designed to:

- Provide incentives to facility owners and operators for the installation of high-efficiency equipment and controls.
- Provide a marketing mechanism for equipment contractors and distributors to promote energy efficient equipment to end users.

- Overcome market barriers, including:
  - Customers' lack of awareness and knowledge about the benefits and costs of energy efficiency improvements.
  - Performance uncertainty associated with energy efficiency projects.
  - Additional first costs for energy efficient measures.
- Ensure that the participation process is clear, easy to understand and simple.

Certain barriers exist to the adoption of energy efficiency measures, including lack of investment capital, competition for funds with other capital improvements, lack of awareness/knowledge about the benefits and costs of energy efficiency measures, high transaction and information search costs, and technology performance uncertainties. This program is designed to help overcome these market barriers and encourage greater adoption of energy efficiency measures in the C&I market.

In addition to helping customers reduce and manage their energy costs, this program provides other societal and customer benefits. These include reduced greenhouse gas emissions, improved levels of service for energy expenditures, and lower overall rates and energy costs compared to other resource options.

The program is structured as a broadly applicable commercial/industrial prescriptive program since the energy and demand savings for many common energy efficiency measures are similar across many C&I market segments. Having a simple program structure and incentive schedule provides customers with certainty and ease of use regarding the incentives they will receive for installing a wide variety of efficiency measures.

The program's actual energy and demand savings will be determined through the program evaluation strategy discussed in a subsequent section. Evaluation activities should be planned at the same time as overall program planning, and implemented when the overall program is being implemented, as will be discussed in more detail in the evaluation section.

The C&I Prescriptive program is a customer incentive program that provides incentives for the installation of energy efficiency measures in existing non-residential facilities. More specifically, the program offers the following products and services:

- Education and promotional materials aimed at building owners and operators about the benefits of energy efficiency improvements and improved systems performance, including educational brochures, program promotional material, and website content.
- Educational and promotional efforts aimed at trade allies such as equipment contractors, installers, building supply firms, and equipment distributors to help them promote efficiency measures to their customers.
- Incentives for building owners and managers to adopt the measures recommended by the program. Specific incentives for each size and type of DSM measure will be developed.

Designated Hoosier Energy staff person(s) will provide program administration, marketing, vendor referrals, application and incentive processing, coordination of education and training activities, participation tracking and reporting, quality control, and technical support. Hoosier Energy account representatives are expected to promote the program to their customers. Alternatively, Hoosier Energy could outsource the program to an "implementation contractor".

**Program Allies:** The program includes customer educational and promotional pieces designed to assist facility owners, operators and decision makers with the information necessary to improve the energy efficiency of the systems in their facilities. The program also includes customer and trade ally education to assist with understanding the technologies that are being promoted, the incentives that are offered, and how the program functions.

The marketing and communications strategy will be designed to inform customers of the availability and benefits of the program and how they can participate in the program. The strategy will include outreach to key partners and trade allies including the architecture/engineering and contractor community, relevant professional and trade associations and other parties of interest in the market. An important part of the marketing plan will be content and functionality on the Hoosier Energy website, which will direct customers to information about the program. More specifically, the marketing and communications plan will include:

- Education seminars implemented in each market to provide details about how to participate in the program. The seminars will be tailored to the needs of business owners, building managers, architects, engineers, vendors, and contractors;
- A combination of strategies including major media advertising, outreach and presentations at professional and community forums and events, and through direct outreach to key customers and customer representatives. Marketing activities will include:
  - Brochures that describe the benefits and features of the program including program application forms and worksheets. The brochures will be mailed upon demand and distributed through the call center and the Hoosier Energy website and will be available for various public awareness events (presentations, seminars etc).
  - Targeted direct mailings used to educate customers on the benefits of the program and explaining how they can apply.
  - Customer and trade partner outreach and presentations (e.g. BOMA and other customer organizations) informing interested parties about the benefits of the program and how to participate.
  - Print advertisements to promote the program placed in selected local media including area newspapers and trade publications.
  - Hoosier Energy website content providing program information resources, contact information, downloadable application forms and worksheets, and links to other relevant service and information resources.
  - Hoosier Energy customer account representatives trained to promote the program to their customers.
  - Presence at conferences and public events used to increase general awareness of the program and distribute program promotional materials.
  - Presentations by the program manager to key customers and customer groups to actively solicit their participation in the program.
- The marketing strategy will identify key customer segments and groups for target marketing, and will prepare specific outreach activities for these customers.
- Hoosier Energy will design and develop the content, messaging, branding, and calls to action of all of the marketing and collateral materials used to promote the program.

**Projected Savings:** Approximately 89,500 MWh will be saved after 10 years based on the projected participation, with approximately 4,980 MWh saved in the first year. Additionally,

projected participation will also result in a summer peak saving of 24 MW after 10 years. Summit Blue conducted a DSM benchmarking analysis for Hoosier Energy, including C&I prescriptive programs, and used the benchmarking results to set the DSM potential calibration MWh energy savings targets as a percent of sector sales.<sup>32</sup>

Additional detail, including annual energy and demand savings for this program can be found in Section 10.6.

**Projected Cost Effectiveness:**

Program	MWh Savings in 2018	Summer Peak MW Savings in 2018	Present Value of Total Benefits (\$2009)	Present Value of Total Costs (\$2009)	Benefit/Cost Ratio
Commercial/Industrial Prescriptive Program	89,510	23.9	\$68,128,525	\$28,782,516	2.37

**Projected Budgets:** In the first year, the Commercial and Industrial Prescriptive program has been assigned a budget of approximately \$672,000. As program participation rises, the budget also increases. In 2018, the commercial and industrial prescriptive program budget is estimated at nearly \$1.6 million. Over the 10 year program period, the total budget for the C/I Prescriptive program is expected to total nearly \$14.8 million. Incentives account for roughly 60% of the overall budget (\$8.8 million). The remaining \$6 million is utilized for program administration and management, marketing, labor, data tracking and reporting and evaluation costs. A base program administration (for non-incentive costs) cost of \$0.05 per kWh was used based on the DSM benchmarking analysis conducted by Summit Blue for Hoosier Energy.<sup>33</sup> Suggested initial Hoosier Energy staffing might include a program manager, an administrative/data support person, a trade ally liaison, and the equivalent of about one FTE of account representative time to promote the program to their customers.

Section 10.6 provides additional annual detail.

Program	10 Year Totals			% of Total DSM Budget
	Utility Incentives	Administrative Costs	Total Hoosier Costs	
Commercial/Industrial Prescriptive Program	\$8,753,819	\$6,020,905	\$14,774,724	18.2%

**10.4.2 COMMERCIAL/INDUSTRIAL CUSTOM MEASURES PROGRAM**

Summit Blue is proposing a Commercial and Industrial Custom Program (CICP) to commercial and industrial (C&I) customers in the Hoosier Energy service territory that includes custom incentives for the installation of innovative and non-standard energy-efficiency equipment and controls in existing facilities only<sup>34</sup>. This program should be a top priority for Hoosier because installing efficient custom equipment is very cost effective, the electric energy savings potential is relatively large, and large commercial and industrial facilities in the service area can benefit from

<sup>32</sup> Ibid.

<sup>33</sup> Ibid.

<sup>34</sup> Standard equipment replacement in existing facilities (except for major remodeling projects) will be covered by the C&I Prescriptive program. New Construction measures will be covered by a separate C&I New Construction Program.

such a program. Numerous other electric cooperatives, municipal utilities, and investor-owned electric utilities offer this program to their customers.<sup>35</sup>

The objective of this program is to encourage large commercial and industrial customers to install high efficiency custom equipment in existing facilities. The incentive for commercial and industrial customers to purchase high efficiency commercial equipment is the lower energy use and lower operating costs over the useful equipment life and equal or improved performance.

**Program incentives:** The C&I Custom program is a customer incentive program that provides incentives for the installation of energy efficiency measures in existing non-residential facilities. The following table summarizes the program incentive structures which is set at 25% of the incremental measure cost or capped at \$1,750 per customer for custom projects.

Measure	Units	Annual Energy Savings (kWh) (per unit)	Summer Peak Savings (kW) (per unit)	Measure Cost (per unit)	Utility Incentive (per unit)
Custom Efficiency	per application	20000	5.00	\$7,000.00	\$1,750.00

**Projected Program Participation:** In total, 700 custom projects are expected to be completed as part of the Custom Measures program between 2009 and 2018. Participation is expected to start slowly (15 commercial and 44 industrial projects in 2009) and ramp up over time.

Measure End-Use	Units	10-year Program Participants	
		Commercial	Industrial
Custom Efficiency	per application	112	588

**Program Design and Implementation:** Designated Hoosier Energy staff person(s) will provide program administration, marketing, vendor referrals, application and incentive processing, coordination of education and training activities, participation tracking and reporting, quality control, and technical support. Hoosier Energy account representatives are expected to promote the program to their customers. Alternatively, Hoosier Energy could outsource the program to an “implementation contractor”.

The primary goal of the program is to encourage Hoosier Energy’s C&I customers to install energy efficient process, refrigeration, and controls measures in existing facilities. More specifically, the program is designed to:

- Provide incentives to facility owners and operators for the installation of high-efficiency process, refrigeration and other equipment and controls.
- Provide a marketing mechanism for consulting engineers, process and refrigeration vendors and distributors to promote energy efficient equipment to end users.
- Overcome market barriers, including:
  - Customers’ lack of awareness and knowledge about the benefits and cost of energy efficiency improvements.
  - Performance uncertainty associated with energy efficiency projects.
  - Additional first costs for energy efficient measures.

<sup>35</sup> See Summit Blue Consulting Benchmarking Analysis and Best Practices Assessment, for Hoosier Energy, September 2008.

- Ensure that the participation process is clear, easy to understand and simple.

The C&I Custom program includes customer educational and promotional pieces designed to assist facility owners, operators and decision makers with the information necessary to improve the energy efficiency of the process, refrigeration and other energy using systems in their facilities. The program also includes customer and trade ally education to assist with understanding the technologies that are being promoted, the incentives that are offered, and how the program functions.

Certain barriers exist to the adoption of energy efficiency measures, including lack of investment capital, competition for funds with other capital improvements, lack of awareness/knowledge about the benefits and costs of energy efficiency measures, high transaction and information search costs, and technology performance uncertainties. This program is designed to help overcome these market barriers and encourage greater adoption of process, refrigeration, and other types of energy efficiency measures in the C&I market.

In addition to helping customers reduce and manage their energy costs, this program provides other societal and customer benefits. These include reduced greenhouse gas emissions, improved levels of service from energy expenditures, and lower overall rates and energy costs compared to other resource options.

The program is structured as a broadly applicable C&I custom incentive program since the energy and demand savings for many common energy efficiency measures vary considerably across C&I market segments and between customers. Having a simple program structure and incentive schedule provides customers with ease of use regarding the incentives they will receive for installing a wide variety of efficiency measures.

The program offers the following products and services:

- Education and promotional materials aimed at building owners and operators about the benefits of energy efficiency improvements and improved systems performance, including educational brochures, program promotional material, and website content.
- Educational and promotional efforts aimed at trade allies such as consulting engineers, process and refrigeration vendors and distributors to help them promote efficiency measures to their customers.
- Incentives for building owners and managers to adopt the measures recommended by the program.

**Program Allies:** The marketing and communications strategy will be designed to inform customers of the availability and benefits of the program and how they can participate in the program. The strategy will include outreach to key partners and trade allies including consulting architects and engineering firms, process and refrigeration contractors and distributors, relevant professional and trade associations and other parties of interest in the market. An important part of the marketing plan will be content and functionality on the Hoosier Energy website, which will direct customers to information about the program. More specifically, the marketing and communications plan will include:

- Education seminars implemented in each market to provide details about how to participate in the Program. The seminars will be tailored to the needs of business owners, building managers, architects, engineers, vendors, and contractors;
- A combination of strategies including major media advertising, outreach and presentations at professional and community forums and events, and through direct outreach to key customers and customer representatives. Marketing activities will include:
  - Brochures that describe the benefits and features of the program including program application forms and worksheets. The brochures will be mailed upon demand and distributed through the call center and the Hoosier Energy website will be available for various public awareness events (presentations, seminars etc).
  - Targeted direct mailings used to educate customers on the benefits of the program and explaining how they can apply.
  - Customer and trade partner outreach and presentations (e.g. BOMA and other customer organizations) informing interested parties about the benefits of the program and how to participate.
  - Print advertisements to promote the program placed in selected local media including area newspapers and trade publications.
  - Hoosier Energy website content providing program information resources, contact information, downloadable application forms and worksheets, and links to other relevant service and information resources.
  - Hoosier Energy customer account representatives trained to promote the program to their customers.
  - Presence at conferences and public events used to increase general awareness of the program and distribute program promotional materials.
  - Presentations by the program manager to key customers and customer groups to actively solicit their participation in the program.
- The marketing strategy will identify key customer segments and groups for target marketing, and will prepare specific outreach activities for these customers.
- Hoosier Energy will design and develop the content, messaging, branding, and calls to action of all of the marketing and collateral materials used to promote the program.

**Projected Savings:** Approximately 14,000 MWh will be saved after 10 years based on the projected participation, with approximately 1,200 MWh saved in the first year. Additionally, projected participation will also result in a summer peak saving of 3.5 MW in 2018. Summit Blue conducted a DSM benchmarking analysis for Hoosier Energy, including C&I custom programs, and used the benchmarking results to set the DSM potential calibration MWh energy savings targets as a percent of sector sales.<sup>36</sup>

Additional detail, including annual energy and demand savings for this program can be found in Section 10.6.

**Projected Cost Effectiveness:**

Program	MWh Savings in 2018	Summer Peak MW Savings in 2018	Present Value of Total Benefits (\$2009)	Present Value of Total Costs (\$2009)	Benefit/Cost Ratio
Commercial/Industrial Custom Program	14,002	3.5	\$10,409,138	\$3,986,885	2.61

<sup>36</sup> Ibid.

**Projected Budgets:** In the first year, the Commercial and Industrial Custom program has been assigned a budget of approximately \$163,000. Incentives account for 64% of the overall budget (\$104,000). The remaining \$59,000 is utilized for program administration. A base program administration (for non-incentive costs) cost of \$0.05 per kWh was used based on the DSM benchmarking analysis conducted by Summit Blue for Hoosier Energy.<sup>37</sup> As program participation rises, the budget also increases. In total, the 10-year commercial and industrial custom program budget is estimated at \$1.9 million.

Section 10.6 provides additional annual detail.

Program	10 Year Totals			
	Utility Incentives	Administrative Costs	Total Hoosier Costs	% of Total DSM Budget
Commercial/Industrial Custom Program	\$1,225,216	\$701,216	\$1,926,432	2.4%

### 10.4.3 COMMERCIAL NEW CONSTRUCTION PROGRAM

Summit Blue is proposing a Commercial New Construction (CNC) Program to commercial customers in the Hoosier Energy service territory that includes incentives to commercial customers for building more efficient new buildings, additions to existing buildings, and major remodeling projects, and installing energy-efficient commercial equipment and controls that are not required by building energy codes.<sup>38</sup>

Although the potential savings from commercial new construction are relatively minor compared to the opportunities that exist from existing commercial and industrial facilities, this program should be considered because initially installing high efficiency equipment is very cost effective, it may be cost prohibitive to retrofit existing equipment at a later date, and all newly-constructed commercial and industrial facilities in the service area can benefit from such a program. Numerous other electric cooperatives, municipal utilities, and investor-owned electric utilities offer this program to their customers.<sup>39</sup>

The objective of this program is to encourage commercial customers to design and construct more efficient buildings, and install high efficiency equipment in new facilities, additions to existing facilities and major remodeling projects. The incentive for commercial customers to purchase high efficiency commercial equipment is the lower energy use and lower operating costs over the useful equipment life and equal or improved performance.

**Program incentives:** The Commercial New Construction program is a customer incentive program that provides design assistance for architects and engineers designing new buildings and customer incentives for the installation of energy efficiency measures in new commercial facilities. The following table summarizes the incentives available for the energy efficiency measure covered under the CNC program.

<sup>37</sup> Ibid.

<sup>38</sup> Equipment replacement in existing facilities (except for major remodeling projects) will be covered by the C&I Prescriptive and C&I Custom programs.

<sup>39</sup> See Summit Blue Consulting Benchmarking Analysis and Best Practices Assessment, for Hoosier Energy, September 2008.

Measure	Units	Annual Energy Savings (kWh) (per unit)	Summer Peak Savings (kW) (per unit)	Measure Cost (per unit)	Utility Incentive (per unit)
<b>Lighting</b>					
9-24W Screw-in CFL	lamp	229	0.08	\$6.00	\$1.50
Over 24W Pin-Based CFL	lamp	280	0.09	\$10.50	\$2.63
Premium T8/T5 w/Electronic Ballast	fixture	157	0.05	\$51.00	\$12.75
Delamping w/Reflectors (2 lamp)	fixture	174	0.06	\$30.00	\$7.50
LED Exit	fixture	206	0.03	\$40.00	\$10.00
Occupancy Sensor (8 hrs/day)	sensor	443	0.11	\$85.00	\$21.25
Daylighting (perimeter zone)	sensor	1545	0.82	\$800.00	\$200.00
175W PS MH HID Indoor	fixture	1189	0.40	\$197.00	\$49.25
250W PS MH HID Indoor	fixture	651	0.22	\$220.00	\$55.00
250W PS MH HID Outdoor	fixture	651	0.00	\$220.00	\$55.00
<b>Motor &amp; Other</b>					
Prem Motor < =10 HP	horsepower	75	0.02	\$50.00	\$12.50
Prem Motor > 10HP	horsepower	35	0.01	\$30.00	\$7.50
Variable Speed Drives Added to HVAC Motors	horsepower	760	0	\$199.00	\$49.75
<b>Hot Water</b>					
High Efficiency Water Heater	tank	55	0.06	\$83.00	\$20.75
Heat Pump Water Heater	tank	105	0.11	\$910.00	\$227.50
Tankless Water Heat	tank	359	0.36	\$300.00	\$75.00
<b>HVAC &amp; Shell</b>					
Packaged Terminal A/C 12.2 EER	ton of cooling	196	0.18	\$101.00	\$25.25
Programable Thermostat	per 1,000 sq.ft	891	0	\$80.00	\$20.00
Integrated Economizer Control	ton of cooling	582	0	\$12.00	\$3.00
High Efficiency HP 12.2 EER	ton of cooling	675	0.23	\$170.00	\$42.50

**Projected Program Participation:** The following table summarizes the projected participation for the commercial new construction program, by end-use, from 2009-2018.

Measure End-Use	Units	10-year Program Participants Commercial New Construction
Lighting	lamps/fixtures	13,063
Motor & Other	horsepower	4,030
Hot Water	tanks	9
HVAC & Shell	tons of cooling	1,769

**Program Design and Implementation:** Designated Hoosier Energy staff person(s) will provide program administration, marketing, vendor referrals, application and incentive processing, coordination of education and training activities, participation tracking and reporting, quality control, and technical support. Hoosier Energy account representatives are expected to promote the program to their customers. Hoosier Energy should strongly consider outsourcing building simulation modeling to a firm that specializes in providing this service. Several of the top-performing utility new construction DSM programs in the Midwest also outsource a lot of program promotion and marketing to architects and engineers at the modeling firm.

The C&I New Construction program is designed to:

- Provide design assistance to the architects and engineers that are designing new buildings. The key design assistance tool is building simulation modeling of more efficient building designs.

- Provide incentives to new facility owners for the installation of high-efficiency lighting, HVAC, building envelope, refrigeration and other equipment and controls.
- Provide a marketing mechanism for architects and engineers to promote energy efficient new buildings and equipment to end users.
- Overcome market barriers, including:
  - Customers' lack of awareness and knowledge about the benefits and costs of energy efficiency improvements.
  - Performance uncertainty associated with energy efficiency projects.
  - Additional first costs for energy efficient measures.
- Ensure that the participation process is clear, easy to understand and simple.

**Program Allies:** The program offers the following products and services:

- Education and promotional materials aimed at building owners and operators about the benefits of energy efficiency improvements and improved systems performance, including educational brochures, program promotional material, and website content.
- Educational and promotional efforts aimed at trade allies such as architect and engineers to help them promote efficiency measures to their customers.
- Incentives for building owners and managers to adopt the measures recommended by the program.

The program includes customer educational and promotional pieces designed to assist facility owners, operators and decision makers with the information necessary to improve the energy efficiency of the lighting, HVAC, building envelope, refrigeration, and other energy using systems in their new facilities. The program also includes customer and trade ally education to assist with understanding the technologies that are being promoted, the incentives that are offered, and how the program functions.

The marketing and communications strategy will be designed to inform customers of the availability and benefits of the program and how they can participate in the program. The strategy will include outreach to key partners and trade allies including architects and engineering firms, contractors and distributors, relevant professional and trade associations and other parties of interest in the market. An important part of the marketing plan will be content and functionality on the Hoosier Energy website, which will direct customers to information about the program. More specifically, the marketing and communications plan will include:

- Education seminars implemented in each market to provide details about how to participate in the program. The seminars will be tailored to the needs of business owners, building managers, architects, engineers, vendors, and contractors.
- A combination of strategies including major media advertising, outreach and presentations at professional and community forums and events, and through direct outreach to key customers and customer representatives. Marketing activities will include:
  - Brochures that describe the benefits and features of the program including program application forms and worksheets. The brochures will be mailed upon demand and distributed through the call center and <http://www.hepn.com/> and will be available for various public awareness events (presentations, seminars etc).
  - Targeted direct mailings used to educate customers on the benefits of the program and explaining how they can apply.

- Customer and trade partner outreach and presentations (e.g. BOMA and other customer organizations) informing interested parties about the benefits of the program and how to participate.
- Print advertisements to promote the program placed in selected local media including local area newspapers and trade publications.
- Hoosier Energy website content providing program information resources, contact information, downloadable application forms and worksheets, and links to other relevant service and information resources.
- Hoosier Energy customer account representatives trained to promote the program to their customers.
- Presence at conferences and public events used to increase general awareness of the program and distribute program promotional materials.
- Presentations by the program manager to key customers and customer groups to actively solicit their participation in the program.
- The marketing strategy will identify key customer segments and groups for target marketing, and will prepare specific outreach activities for these customers.
- Hoosier Energy will design and develop the content, messaging, branding, and calls to action of all of the marketing and collateral materials used to promote the program.

**Projected Savings:** Approximately 3,170 MWh will be saved after 10 years based on the projected participation, with approximately 65 MWh saved in the first year. Additionally, projected participation will also result in a summer peak saving of 0.9 MW after 10 years. Summit Blue conducted a DSM benchmarking analysis for Hoosier Energy, including C&I new construction programs, and used the benchmarking results to set the DSM potential calibration MWh energy savings targets as a percent of sector sales.<sup>40</sup>

Additional detail, including annual energy and demand savings for this program can be found in Section 10.6.

**Projected Cost Effectiveness:**

Program	MWh Savings in 2018	Summer Peak MW Savings in 2018	Present Value of Total Benefits (\$2009)	Present Value of Total Costs (\$2009)	Benefit/Cost Ratio
Commercial New Construction	3,170	0.9	\$2,322,549	\$785,281	2.96

**Projected Budgets:** In the first year, the Commercial New Construction program has been assigned a small budget of approximately \$8,000 that reflects relatively light levels of initial program participation. As program participation rises, the budget also increases. Over the 10 year program period, the total budget for the Commercial New Construction program is expected to total nearly \$475,000. Incentives account for roughly 47% of the overall budget (\$225,000). The remaining \$249,000 is utilized for program administration (i.e. management, marketing, labor, data tracking and reporting and evaluation costs). A base program administration (for non-incentive costs) cost of \$0.05875 per kWh was used based on the DSM benchmarking analysis conducted by Summit Blue for Hoosier Energy.<sup>41</sup>

Section 10.6 provides additional annual detail.

<sup>40</sup> Ibid.

<sup>41</sup> Ibid.

Program	10 Year Totals			% of Total DSM Budget
	Utility Incentives	Administrative Costs	Total Hoosier Costs	
Commercial New Construction	\$224,824	\$248,762	\$473,586	0.6%

## 10.5 RECOMMENDED COMMERCIAL/INDUSTRIAL DEMAND RESPONSE PROGRAM PLANS

### 10.5.1 COMMERCIAL/INDUSTRIAL DIRECT LOAD CONTROL PROGRAM

Hoosier Energy should consider offering a Commercial and Industrial Direct Load Control (DLC) program to non-residential customers in the Hoosier service territory with central air conditioning or heat pump systems, specifically targeting small C&I customers, with Key Account customers being the secondary target market.

**Program incentives:** The DLC program provides rate discounts to participants who allow Hoosier Energy to cycle its customer’s air conditioners or heat pumps during periods of peak system demand. A rate discount of approximately \$5 per ton of air conditioning per summer month is the primary incentive for this program, although specific cycling strategies that achieve higher savings and provide a higher incentive may be arranged.

Measure	Units	Summer Peak	Utility Incentive
		Savings (kW) (per unit)	(per unit)
Business Saver Switch (AC Load Control)	Tons	0.93	\$5

**Program Design and Implementation:** Designated Hoosier Energy staff person(s) will provide program administration, marketing, vendor referrals, application and incentive processing, coordination of education and training activities, participation tracking and reporting, quality control, and technical support. Hoosier Energy account representatives are expected to promote the program to their customers. Alternatively, Hoosier Energy could outsource the program to an “implementation contractor”. Hoosier Energy will likely want to sub-contract the DLC switch installations to HVAC or electrical contractors.

The primary goal of the program is to encourage Hoosier Energy’s C&I customers to both shift their load away from peak demand periods and to reduce overall demand on the system during that peak period. This program also aims to increase the knowledge of the benefits of demand response within the non-residential customer base.

More specifically, the program is designed to:

- Install the enabling technologies used for this program, including installed switches to the air conditioning system and/or enhanced programmable thermostats.
- Provide incentives to facility owners and operators for the installation of the enabling technologies.
- Provide a marketing mechanism for HVAC equipment vendors, distributors and contractors to promote direct load control technologies to end users.
- Overcome market barriers, including:
  - Customers’ lack of awareness and knowledge about the benefits and cost of DLC.
  - Performance uncertainty associated with DLC projects.
- Ensure that the participation process is clear, easy to understand and simple.

Certain barriers exist to the adoption of DLC equipment, including lack of awareness/knowledge about the benefits and costs of DLC technologies and technology performance uncertainties. This program is designed to help overcome these market barriers and encourage greater adoption of DLC equipment in the C&I market.

In addition to helping customers reduce and manage their demand costs, this program provides other societal and customer benefits. These include reduced greenhouse gas emissions, improved levels of service from energy expenditures, and lower overall rates and energy costs compared to other resource options.

The program is structured as a broadly applicable C&I DLC program since the demand savings for HVAC equipment is similar across many C&I market segments. Hoosier Energy could make participating in this program a condition of service for new construction customers. Having a simple program structure and rate discount provides customers with certainty and ease of use regarding the rate discount they will receive for installing an enabling technology.

The program's actual demand and energy savings will be determined through the program evaluation strategy discussed in a subsequent section. Evaluation activities should be planned at the same time as overall program planning, and implemented when the overall program is implemented, as will be discussed in more detail in the evaluation section.

The C&I DLC program includes customer educational and promotional pieces designed to assist facility owners, operators and decision makers with the information necessary to install DLC in their facilities. The program also includes customer and trade ally education to assist with understanding the enabling technologies that are being promoted, the incentives that are offered, and how the program functions. More specifically, the program offers the following products and services:

- Education and promotional materials aimed at building owners and operators about the benefits of DLC, including educational brochures, program promotional material, and website content.
- Educational and promotional efforts aimed at trade allies such as consulting engineers, HVAC vendors, distributors and contactors to help them promote DLC technologies to their customers.
- Rate discounts for building owners and managers to adopt the DLC technologies recommended by the program.

In addition to helping customers reduce and manage their demand costs, this program provides other societal and customer benefits. These include reduced greenhouse gas emissions, and lower overall rates and demand costs.

The program's actual demand savings will be determined through the program evaluation strategy discussed in the subsequent section. Evaluation activities should be planned at the same time as overall program planning, and implemented when the overall program is implemented, as will be discussed in more detail in the evaluation section.

Designated Hoosier Energy staff person(s) will provide program administration, marketing, vendor referrals, application and incentive processing, coordination of education and training

activities, participation tracking and reporting, quality control, and technical support. Hoosier Energy account representatives are expected to promote the program to their customers. Alternatively, Hoosier Energy could outsource the program to an “implementation contractor”.

**Program Allies:** The program includes customer educational and promotional pieces designed to assist facility owners, operators and decision makers with the information necessary to promote enlisting their facilities in the program. The program also includes customer education to assist with understanding the equipment needed to participate in the program, the rate discounts that are offered, and how the program functions.

The marketing and communications strategy will be designed to inform customers of the availability and benefits of the program and how they can participate in the program. The strategy will include outreach to customers directly and via HVAC companies. The Hoosier Energy website will direct customers to information about the program. More specifically, the marketing and communications plan will include:

- Direct mail and outreach to customers and customer representatives. Marketing activities will include:
  - Brochures that describe the benefits and features of the program including program application forms and worksheets. The brochures will be mailed upon demand.
  - Targeted direct mailings used to educate customers on the benefits of the program and explaining how they can apply.
  - Hoosier Energy website content providing program information resources, contact information, downloadable application forms and worksheets, and links to other relevant service and information resources.
  - Presentations by the program manager to key customers and customer groups to actively solicit their participation in the program.
- The marketing strategy will identify key customer segments and groups for target marketing, and will prepare specific outreach activities for these customers.
- Hoosier Energy will design and develop the content, messaging, branding, and calls to action of all of the marketing and collateral materials used to promote the program.

**Projected Savings:** Approximately 5.6 MW will be saved based on the projected participation, with 0.2 MW saved in the first year (2010). Summit Blue conducted a DSM benchmarking analysis for Hoosier Energy, including C&I demand response programs, and used the benchmarking results to set the DSM potential calibration MW energy savings targets as a percent of sector sales.<sup>42</sup>

Additional demand savings detail for this program can be found in Section 10.6.

**Projected Cost Effectiveness:**

Program	MWh Savings in 2018	Summer Peak MW Savings in 2018	Present Value of Total Benefits (\$2009)	Present Value of Total Costs (\$2009)	Benefit/Cost Ratio
Commercial/Industrial AC Load Control	-	5.6	\$1,629,332	\$959,048	1.70

<sup>42</sup> See Summit Blue Consulting Benchmarking Analysis and Best Practices Assessment, for Hoosier Energy, September 2008.

**Projected Budgets:** In 2010 the Commercial and Industrial Direct Load Control program has been assigned a budget of approximately \$50,000 and \$1.5 million from 2010-2018. Rate discounts account for about 7% of the overall budget (\$100,000). The remaining \$1.4 million is utilized for program administration and management, marketing, labor, data tracking and reporting and evaluation costs. A base program administration (for non-incentive costs) cost of \$255 per kW was used based on the Xcel Minnesota's program costs.<sup>43</sup>

Program	10 Year Totals			% of Total DSM Budget
	Utility Incentives	Administrative Costs	Total Hoosier Costs	
Commercial/Industrial AC Load Control	\$100,461	\$1,423,191	\$1,523,651	1.3%

## 10.5.2 COMMERCIAL/INDUSTRIAL INTERRUPTIBLE RATE

A Commercial and Industrial Interruptible/Curtailable Rates Program is proposed for non-residential customers in the Hoosier Energy service territory that includes fixed rate discounts for non-residential customers who contract to reduce their loads to a specific and pre-determined level during peak demand periods. This program should be a top priority for Hoosier because successful DR programs act as a cost-effective (and often less expensive) resource alternative to traditional supply-side peak capacity, and the program helps to provide customers with greater control over their electricity bills. Numerous other electric cooperatives, municipal utilities, and investor-owned electric utilities offer this program to their customers.

Hoosier Energy's existing Interruptible Power Tariffs and Voluntary Curtailment Rider that is available to member cooperative customers shall continue as a part of Hoosier Energy's DR portfolio, although modification or incorporation vis-à-vis new programming may be recommended. The current programs offer a discounted rate in order to compensate voluntary customer service interruption or to incite the customer to curtail load to a specified level when determined necessary by the utility. The following table shows Hoosier's current DR programs and incentive levels.

**Table 10.4: Hoosier Energy Existing DR Programs<sup>44</sup>**

Program	Customer Class	Demand Charge	Energy Charge	Pricing Level
Interruptible Power Tariff 1	Min. 30-minute rolling demand of 1000 kW	\$8.94/kW of Billing Demand \$6.54/kW of Interruptible Demand	\$0.033/kWh for all kWh	N/A
Interruptible Power Tariff 2	Min. 30-minute rolling demand of 500 kW	\$8.94/kW of Firm Contract Demand \$4.94/kW of Interruptible Demand	\$0.03268/kWh for all kWh	N/A
Voluntary Curtailment Rider	Min. 30-minute rolling demand of 500 kW	N/A	N/A	Level A: \$0.15 Level B: \$0.25 Level C: \$0.40

**Program incentives:** The primary incentive is an electric rate(s) that is lower than the traditional rate paid by the non-residential customer. This discounted rate is only available during times of system peak demand, as determined in the contract between Hoosier Energy and the participant.

<sup>43</sup> See Summit Blue Consulting Benchmarking Analysis and Best Practices Assessment, for Hoosier Energy, September 2008.

<sup>44</sup> Current programs approved by the Hoosier Energy Board of Directors. November 2006 & 2007. Hoosier Energy REC, Inc.

Of those programs providing discounted (time-differentiated) rates, the median IR rate discount is about \$36/kW-year, or \$3/kW-month, a bit higher than Hoosier is currently offering.

Measure	Units	Summer Peak Savings (kW) (per unit)	Utility Incentive per kW
Interruptible Rates	per application	0.87	\$86

**Program Design and Implementation:** The primary goal of the program is to encourage Hoosier Energy’s C&I customers to agree to reduce their electricity load to a pre-determined level during times of utility-determined system peak demand, in exchange for a discount in its electricity rates during that same period. This program also aims to educate and raise awareness on the benefits of demand response within the non-residential customer base.

Participating customers will sign contracts committing their companies to meeting the requirements for the programs they sign up for. Customers will initiate the load reductions themselves, and customers’ loads will be monitored with interval data recorders to verify that they reduced their loads to the contracted levels.

This program would entail a discount rate during times of peak system demand and a default rate, used if participants decide to “opt-out” during times of a contracted “peak event”. The utility determines when to call a “peak event” and the customer reduces their load accordingly.

Highly targeted marketing approaches are also a vital component for an Interruptible/Curtailable Rates program in the Hoosier service territory. Summit Blue recommends education and promotional efforts aimed at Hoosier Energy’s Key Account customers about the benefits of demand response programs, including educational brochures and program promotional material to be distributed by key account representatives. The Hoosier web site (and the web sites of trade associations) can also be updated to provide information on the program.

Certain barriers exist to the enactment of interruptible/curtailable rates, including lack of awareness/knowledge about the benefits of reducing loads during specified times, and performance uncertainty associated with reducing loads when directed to do so by Hoosier Energy. Based on the surveys conducted by Summit Blue on behalf of Hoosier Energy’s key account customers, only 20% knew about the IR programs, so awareness building should be a major initial program focus. This program is designed to help overcome these market barriers and encourage greater adoption of interruptible/curtailable rates in the C&I market. Hoosier Energy should ensure that the participation process is clear, easy to understand and simple.

In addition to helping customers reduce and manage their demand costs, this program provides other societal and customer benefits. These include reduced greenhouse gas emissions, and lower overall rates and demand costs.

The program’s actual demand savings will be determined through the program evaluation strategy discussed in a subsequent section. Evaluation activities should be planned at the same time as overall program planning, and implemented when the overall program is implemented, as will be discussed in more detail in the evaluation section.

Designated Hoosier Energy staff person(s) will provide program administration, marketing, application and rate processing, determining when to call a “peak event”, participation tracking

and reporting, quality control, and technical support. Hoosier Energy account representatives are expected to promote the program to their customers.

**Program Marketing:** The program includes customer educational and promotional pieces designed to assist facility owners, operators and decision makers with the information necessary to promote enlisting their facilities in the program. The program also includes customer education to assist with understanding the equipment needed to participate in the program, the rate discounts that are offered, and how the program functions.

The marketing and communications strategy will be designed to inform customers of the availability and benefits of the program and how they can participate in the program. The strategy will include outreach to customers directly and via their key account representative. The Hoosier Energy website will direct customers to information about the program. More specifically, the marketing and communications plan will include:

- Seminars to provide details about how to participate in the program.
- Direct outreach to key customers and customer representatives. Marketing activities will include:
  - Brochures that describe the benefits and features of the program including program application forms. The brochures will be provided upon demand and distributed through key account representatives.
  - Hoosier Energy website content providing program information resources, contact information, downloadable application forms, and links to other relevant service and information resources.
  - Hoosier Energy customer account representatives trained to promote the program to their customers.
  - Presentations by the program manager to key customers and customer groups to actively solicit their participation in the program.
- The marketing strategy will identify key customer segments and groups for target marketing, and will prepare specific outreach activities for these customers by key account representatives.
- Hoosier Energy will design and develop the content, messaging, branding, and calls to action of all of the marketing and collateral materials used to promote the program.

**Projected Savings:** Approximately 11 MW will be saved after 10 years based on the projected participation, with approximately 0.4 MW saved in the first year of program implementation (2010). Summit Blue conducted a DSM benchmarking analysis for Hoosier Energy, including C&I demand response programs, and used the benchmarking results to set the DSM potential calibration MW energy savings targets as a percent of sector sales.<sup>45</sup>

Additional demand savings detail for this program can be found in Section 10.6.

**Projected Cost Effectiveness:**

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<sup>45</sup> See Summit Blue Consulting Benchmarking Analysis and Best Practices Assessment, for Hoosier Energy, September 2008.

Program	MWh Savings in 2018	Summer Peak MW Savings in 2018	Present Value of Total Benefits (\$2009)	Present Value of Total Costs (\$2009)	Benefit/Cost Ratio
Commercial/Industrial Interruptable Rates	-	10.9	\$3,274,711	\$406,131	8.06

**Projected Budgets:** In 2010, the Commercial and Industrial Interruptible/Curtailable Rates program has been assigned a budget of approximately \$55,000 and \$1.53 million from 2010-2018. Rate discounts account for more than 61% of the overall budget (\$935,000). The remaining \$600,000 is utilized for program administration and management, marketing, labor, data tracking and reporting and evaluation costs. A base program administration (for non-incentive costs) cost of \$55 per kW was used based on Xcel Minnesota's program costs.<sup>46</sup>

Program	10 Year Totals			
	Utility Incentives	Administrative Costs	Total Hoosier Costs	% of Total DSM Budget
Commercial/Industrial Interruptable Rates	\$935,454	\$598,256	\$1,533,710	1.3%

## 10.6 COMMERCIAL/INDUSTRIAL ENERGY EFFICIENCY AND DEMAND RESPONSE PROGRAM POTENTIAL SUMMARY

The following tables present detailed information regarding the annual participation, energy savings, demand savings, and Hoosier Energy budgets for each of the three recommended commercial/industrial energy efficiency and two demand response programs. In total, the 5 commercial/industrial DSM programs result in 106,683 MWh of annual energy savings in 2018, or 3.8% of forecasted C/I energy sales. The programs are also estimated to achieve summer peak demand savings of 44.8 MW, or 10.6% of the forecast C/I summer peak.

The Hoosier Energy budget for the complete portfolio of recommended commercial /industrial DSM programs ranges from \$843,000 in 2009 to \$2.3 million in 2018. The annual growth in budget dollars is impacted by a variety of factors including increased participation over time, new program offerings, and periodic program evaluation. In total, incentives account for approximately 55% of the total budget, while administrative costs (marketing, program delivery, incentive fulfillment, and evaluation) account for the remaining 45%.

The benefits from the combined commercial/industrial energy efficiency and demand response programs are greater than the total costs by a ratio of \$2.46 to \$1.

<sup>46</sup> See Summit Blue Consulting Benchmarking Analysis and Best Practices Assessment, for Hoosier Energy, September 2008.

Table 10.5: Commercial/Industrial Energy Efficiency Program Portfolio Detail: Annual Participation, Savings, and Budgets by Program

C/I Prescriptive Measures - Existing Buildings	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Incremental Annual Participants	35,795	43,160	54,607	67,105	101,010	124,007	120,433	108,819	104,382	101,056
Cumulative Annual Participants	35,795	78,955	131,181	195,285	288,537	404,518	512,905	610,287	699,950	787,535
Cumulative Annual MWh Savings	4,979	10,606	17,535	25,338	36,646	49,629	61,407	71,717	80,906	89,510
% of Annual C/I Sales	0.22%	0.46%	0.70%	1.00%	1.40%	1.88%	2.31%	2.67%	2.99%	3.19%
Cumulative Annual MW Savings	1.2	2.5	4.3	6.3	9.5	13.1	16.4	19.2	21.6	23.9
% of Annual C/I Summer Peak Demand	0.35%	0.72%	1.13%	1.66%	2.42%	3.30%	4.09%	4.75%	5.32%	5.67%
Incentives	\$389,882	\$462,651	\$542,584	\$689,902	\$1,042,724	\$1,305,954	\$1,228,999	\$1,102,047	\$1,013,585	\$975,511
Administration	\$282,137	\$315,620	\$415,243	\$511,916	\$775,240	\$849,672	\$819,225	\$721,553	\$690,099	\$640,200
<b>Total Program Costs</b>	<b>\$672,019</b>	<b>\$778,271</b>	<b>\$957,827</b>	<b>\$1,201,818</b>	<b>\$1,818,964</b>	<b>\$2,154,626</b>	<b>\$2,048,224</b>	<b>\$1,823,600</b>	<b>\$1,703,684</b>	<b>\$1,615,711</b>
<b>C/I Custom Measures</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Incremental Annual Participants	59	30	43	73	85	84	83	81	80	83
Cumulative Annual Participants	59	89	132	205	290	374	457	538	618	700
Cumulative Annual MWh Savings	1,185	1,790	2,649	4,099	5,798	7,478	9,139	10,750	12,352	14,002
% of Annual C/I Sales	0.05%	0.08%	0.11%	0.16%	0.22%	0.28%	0.34%	0.40%	0.46%	0.50%
Cumulative Annual MW Savings	0.3	0.4	0.7	1.0	1.4	1.9	2.3	2.7	3.1	3.5
% of Annual C/I Summer Peak Demand	0.09%	0.13%	0.18%	0.27%	0.37%	0.47%	0.57%	0.67%	0.76%	0.83%
Incentives	\$103,722	\$52,861	\$75,177	\$126,917	\$148,848	\$146,962	\$145,342	\$141,020	\$140,122	\$144,446
Administration	\$59,332	\$30,283	\$43,061	\$72,656	\$85,045	\$84,094	\$83,172	\$80,703	\$80,233	\$82,058
<b>Total Program Costs</b>	<b>\$163,054</b>	<b>\$83,124</b>	<b>\$118,238</b>	<b>\$199,572</b>	<b>\$233,893</b>	<b>\$231,056</b>	<b>\$228,514</b>	<b>\$221,723</b>	<b>\$220,355</b>	<b>\$227,102</b>
<b>Commercial New Construction</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Incremental Annual Participants	304	737	1,087	1,968	1,909	2,262	2,343	2,471	3,241	2,548
Cumulative Annual Participants	304	1,041	2,096	3,939	5,675	7,651	9,696	11,740	14,538	16,514
Cumulative Annual MWh Savings	65	219	438	793	1,117	1,491	1,879	2,266	2,796	3,170
% of Annual C/I Sales	0.00%	0.01%	0.02%	0.03%	0.04%	0.06%	0.07%	0.08%	0.10%	0.11%
Cumulative Annual MW Savings	0.0	0.1	0.1	0.2	0.3	0.4	0.5	0.6	0.8	0.9
% of Annual C/I Summer Peak Demand	0.00%	0.01%	0.03%	0.05%	0.08%	0.10%	0.13%	0.16%	0.19%	0.21%
Incentives	\$3,683	\$8,271	\$12,617	\$23,302	\$24,255	\$27,689	\$28,686	\$28,877	\$39,296	\$28,148
Administration	\$4,466	\$10,436	\$15,215	\$26,607	\$24,991	\$29,327	\$30,386	\$32,107	\$42,047	\$33,180
<b>Total Program Costs</b>	<b>\$8,149</b>	<b>\$18,707</b>	<b>\$27,832</b>	<b>\$49,909</b>	<b>\$49,246</b>	<b>\$57,016</b>	<b>\$59,071</b>	<b>\$60,984</b>	<b>\$81,343</b>	<b>\$61,328</b>

**Table 10.6: Commercial/Industrial Demand Response Program Portfolio Detail: Annual Participation, Savings, and Budgets by Program**

Commercial/Industrial AC Load Control	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Incremental Annual Participants	0	402	502	777	1,512	1,984	1,897	1,814	1,734	1,658
Cumulative Annual Participants	0	402	904	1,681	3,193	5,177	7,074	8,888	10,622	12,280
Cumulative Annual MWh Savings	-	-	-	-	-	-	-	-	-	-
% of Annual C/I Sales	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Cumulative Annual MW Savings	0.0	0.2	0.4	0.8	1.5	2.4	3.2	4.0	4.8	5.6
% of Annual C/I Summer Peak Demand	0.00%	0.05%	0.11%	0.20%	0.37%	0.59%	0.80%	1.00%	1.19%	1.32%
Incentives (to C/I Consumers)	\$0	\$3,288	\$4,110	\$6,354	\$12,367	\$16,233	\$15,521	\$14,839	\$14,187	\$13,562
Administration	\$0	\$46,576	\$58,225	\$90,021	\$175,202	\$229,963	\$219,875	\$210,220	\$200,976	\$192,132
<b>Total Program Costs</b>	<b>\$0</b>	<b>\$49,863</b>	<b>\$62,335</b>	<b>\$96,375</b>	<b>\$187,570</b>	<b>\$246,195</b>	<b>\$235,395</b>	<b>\$225,059</b>	<b>\$215,164</b>	<b>\$205,694</b>
Commercial/Industrial Interruptible Rates	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Incremental Annual Participants	0	185	230	353	679	869	988	972	1,038	1,312
Cumulative Annual Participants	0	185	415	768	1,447	2,316	3,119	3,861	4,546	5,180
Cumulative Annual MWh Savings	-	-	-	-	-	-	-	-	-	-
% of Annual C/I Sales	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Cumulative Annual MW Savings	0.0	0.4	0.9	1.5	3.0	4.9	6.5	8.1	9.5	10.9
% of Annual C/I Summer Peak Demand	0.00%	0.11%	0.23%	0.42%	0.77%	1.23%	1.64%	2.01%	2.35%	2.58%
Incentives (to C/I Consumers)	\$0	\$33,442	\$41,552	\$63,748	\$122,563	\$156,944	\$145,028	\$134,004	\$123,804	\$114,368
Administration	\$0	\$21,388	\$26,574	\$40,769	\$78,394	\$100,371	\$92,751	\$85,700	\$79,177	\$73,142
<b>Total Program Costs</b>	<b>\$0</b>	<b>\$54,830</b>	<b>\$68,126</b>	<b>\$104,517</b>	<b>\$200,947</b>	<b>\$257,315</b>	<b>\$237,779</b>	<b>\$219,704</b>	<b>\$202,981</b>	<b>\$187,510</b>

**Table 10.7: Combined Commercial/Industrial Energy Efficiency and Demand Response Program Portfolio Detail: Annual Participation, Savings, and Budgets by Program**

All C/I DSM (EE & DR) Combined	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Incremental Annual Participants	36,158	44,515	56,470	70,276	105,194	129,206	125,744	114,157	110,476	106,666
Cumulative Annual Participants	36,158	80,672	134,729	201,878	299,142	420,035	533,251	635,313	730,273	822,208
Cumulative Annual MWh Savings	6,230	12,614	20,622	30,230	43,561	58,598	72,424	84,734	96,053	106,683
% of Annual C/I Sales	0.28%	0.54%	0.82%	1.19%	1.66%	2.22%	2.72%	3.16%	3.55%	3.80%
Cumulative Annual MW Savings	1.5	3.6	6.3	9.9	15.7	22.6	28.9	34.6	38.9	44.8
% of Annual C/I Summer Peak Demand	0.44%	1.03%	1.68%	2.61%	4.01%	5.70%	7.23%	8.58%	9.80%	10.62%
Incentives (to C/I Consumers)	\$497,287	\$560,513	\$676,041	\$910,222	\$1,350,558	\$1,653,782	\$1,563,575	\$1,420,787	\$1,330,974	\$1,276,035
Administration	\$345,936	\$424,283	\$558,317	\$741,969	\$1,139,882	\$1,292,427	\$1,245,409	\$1,130,283	\$1,092,534	\$1,021,309
<b>Total Program Costs</b>	<b>\$843,222</b>	<b>\$984,795</b>	<b>\$1,234,358</b>	<b>\$1,652,191</b>	<b>\$2,490,420</b>	<b>\$2,946,209</b>	<b>\$2,808,985</b>	<b>\$2,551,071</b>	<b>\$2,423,508</b>	<b>\$2,297,344</b>

Total NPV Benefits (\$2009) for Comm/Ind DSM: \$85,764,256  
 Total NPV Costs (\$2009) for Comm/Ind DSM: \$34,919,851  
 TRC Benefit Cost Ratio: 2.46

## 10.7 ALL RECOMMENDED PROGRAMS – COMBINED PROGRAM POTENTIAL RESULTS AT GENERATION

The following tables present detailed information regarding the energy savings, demand savings, and Hoosier Energy budgets for all energy efficiency and demand response programs and include energy and demand savings at the generation level. In total, the DSM programs result in 269,351 MWh of annual energy savings in 2018, or 3.5% of forecasted total energy sales in 2018. Residential energy efficiency programs achieve approximately 163,000 MWh (58% of projected energy savings), while the three commercial energy efficiency programs are projected to save approximately 117,000 MWh in 2018. After accounting for system losses, the total energy savings at the generation level is 294,921 MWh.

The programs are also estimated to achieve summer peak demand savings of 126 MW (end-consumer level) / 139 MW (generation level). These savings represent 8.2% of the forecast 2018 summer peak. The residential and commercial/industrial energy efficiency programs combined to save nearly 66 MW of peak demand in 2018, and the residential and commercial/industrial demand response programs add an additional 60 MW of peak demand savings.

The Hoosier Energy budget for the complete portfolio of recommended DSM programs ranges from \$4.95 million in 2009 to \$10.2 million in 2018. Over the 10 year time period in which recommended programs were analyzed, the total budget for all DSM programs sums to \$81.4 million. The annual growth in budget dollars is impacted by a variety of factors including increased participation over time, new program offerings, and periodic program evaluation. In total, incentives account for approximately 75% of the total budget, while administrative costs (marketing, program delivery, incentive fulfillment, and evaluation) account for the remaining 25%.

Residential energy efficiency programs require the largest investment from Hoosier Energy. Roughly 69% of the Hoosier budget is reserved for residential energy efficiency initiatives. Approximately 21% of the Hoosier budget is reserved for commercial/industrial energy efficiency programs, with the remaining 10% invested in demand response programs.

While the initial investments in energy efficiency and demand response required by Hoosier and its members are significant, the benefits are even greater. In total, the benefits from the combined DSM energy efficiency and demand response programs are greater than the costs by a ratio of \$2.37 to \$1.

Table 10.8: Cumulative Annual MWh Savings by Program (Residential &amp; Commercial/Industrial Sectors) and Benefit/Cost Results

	Cumulative Annual MWh Savings by Program									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
<b>1 Residential Energy Efficiency Programs</b>										
Residential Lighting Program	15,048	33,106	52,673	73,867	64,550	75,362	84,245	82,431	78,291	72,482
Heating & Cooling Program (SH&C/WH)	1,632	3,620	5,607	7,595	9,583	11,570	13,979	16,830	19,927	23,418
Home Energy Audit & Weatherization	5,089	12,135	18,594	24,466	26,558	29,951	33,137	35,789	38,363	40,898
Touchstone Energy Homes (New Construction)	426	1,107	2,002	3,066	3,800	5,155	6,848	8,804	11,024	13,432
Second Appliance Turn-In Program	390	1,249	2,399	3,756	5,316	6,664	8,083	9,467	10,840	12,438
Education Campaign	0	0	0	0	0	0	0	0	0	0
<b>2 Commercial/Industrial Programs</b>										
C/I Prescriptive - Existing Buildings	4,979	10,606	17,535	25,338	36,646	49,629	61,407	71,717	80,906	89,510
C/I Prescriptive - New Construction	65	219	438	793	1,117	1,491	1,879	2,266	2,796	3,170
C/I Custom	1,185	1,790	2,649	4,099	5,798	7,478	9,139	10,750	12,352	14,002
<b>Program Savings Totals in MWh</b>										
Residential Energy Efficiency Programs	22,585	51,216	81,275	112,750	109,806	128,702	146,292	153,321	158,445	162,668
Commercial/Industrial Programs	6,230	12,614	20,622	30,230	43,561	58,598	72,424	84,734	96,053	106,683
<b>Subtotal MWh Savings</b>	<b>28,815</b>	<b>63,831</b>	<b>101,897</b>	<b>142,980</b>	<b>153,367</b>	<b>187,300</b>	<b>218,716</b>	<b>238,055</b>	<b>254,498</b>	<b>269,351</b>
<b>Subtotal MWh @ Generation</b>	<b>31,553</b>	<b>69,892</b>	<b>111,578</b>	<b>156,559</b>	<b>167,928</b>	<b>205,087</b>	<b>239,489</b>	<b>260,667</b>	<b>278,677</b>	<b>294,921</b>
Annual Sales Forecast @ Generation	6,961,766	7,110,654	7,528,257	7,629,069	7,794,592	7,914,329	8,028,505	8,145,085	8,264,473	8,471,327
Savings as a % of Annual Sales	0.5%	1.0%	1.5%	2.1%	2.2%	2.6%	3.0%	3.2%	3.4%	3.5%

Total NPV Benefits (\$2009) for All Sectors DSM:	\$298,210,622
Total NPV Costs (\$2009) for All Sectors DSM:	\$125,686,877
TRC Benefit Cost Ratio:	2.37

Table 10.9: Cumulative Annual Peak Demand Savings (MW) by Program (Residential &amp; Commercial/Industrial Sectors)

	Cumulative Annual Summer Peak Savings by Program									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
<b>1 Residential Energy Efficiency Programs</b>										
Residential Lighting Program	1.5	3.4	5.4	7.5	6.6	7.7	8.6	8.4	8.0	7.4
Heating & Cooling Program (SH&C/WH)	1.2	2.6	4.0	5.4	6.8	8.2	9.9	11.9	14.3	17.0
Home Energy Audit & Weatherization	1.1	2.7	4.1	5.4	6.2	7.0	7.7	8.3	8.9	9.5
Touchstone Energy Homes (New Construction)	0.1	0.3	0.5	0.7	0.9	1.2	1.6	2.1	2.6	3.1
Second Appliance Turn-In Program	0.0	0.1	0.2	0.3	0.4	0.6	0.7	0.8	0.9	1.0
Education Campaign	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>2 Commercial/Industrial Programs</b>										
C/I Prescriptive - Existing Buildings	1.2	2.5	4.3	6.3	9.5	13.1	16.4	19.2	21.6	23.9
C/I Prescriptive - New Construction	0.0	0.1	0.1	0.2	0.3	0.4	0.5	0.6	0.8	0.9
C/I Custom	0.3	0.4	0.7	1.0	1.4	1.9	2.3	2.7	3.1	3.5
<b>3 Residential Demand Response Programs</b>										
Residential Water Heating Control	0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.1	18.1
Residential Air Conditioning Control	0.0	2.8	5.6	8.4	11.2	14.0	16.9	19.7	22.5	25.3
Residential Pool Control	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>4 C/I Demand Response Programs</b>										
Commercial	0.0	0.2	0.4	0.8	1.5	2.4	3.2	4.0	4.8	5.6
Commercial	0.0	0.4	0.9	1.6	3.0	4.9	6.5	8.1	9.5	10.9
<b>Program Savings Totals in MW</b>										
Residential Energy Efficiency Programs	3.9	9.0	14.1	19.3	20.9	24.7	28.5	31.5	34.6	38.0
Commercial/Industrial Programs	1.5	3.0	5.0	7.6	11.3	15.4	19.2	22.5	25.5	28.3
Residential Demand Response Programs	0.0	4.8	9.6	14.4	19.3	24.1	28.9	33.7	38.5	43.4
C/I Demand Response Programs	0.0	0.6	1.3	2.4	4.5	7.2	9.8	12.1	14.4	16.5
<b>Subtotal Summer MW Savings</b>	<b>5.4</b>	<b>17.4</b>	<b>30.0</b>	<b>43.7</b>	<b>55.9</b>	<b>71.4</b>	<b>86.3</b>	<b>99.8</b>	<b>113.0</b>	<b>126.2</b>
<b>Subtotal MW @ Generation</b>	<b>5.9</b>	<b>19.1</b>	<b>33.0</b>	<b>48.0</b>	<b>61.4</b>	<b>78.4</b>	<b>94.8</b>	<b>109.7</b>	<b>124.1</b>	<b>138.6</b>
Annual Summer Peak Demand Forecast @ Generation	1,398	1,426	1,505	1,522	1,551	1,578	1,602	1,626	1,650	1,691
Savings as a % of Summer Peak Demand	0.4%	1.3%	2.2%	3.2%	4.0%	5.0%	5.9%	6.7%	7.5%	8.2%

Table 10.10: Annual Utility Budget Summary for Residential and Commercial/Industrial DSM Recommended Programs (Dollars in thousands)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total	NPV (\$2009)
<i>Residential Energy Efficiency</i>												
Incentives	\$3,298	\$4,284	\$4,299	\$4,315	\$4,046	\$3,909	\$4,305	\$4,813	\$5,225	\$5,784	\$44,278	\$33,852
Administrative Costs	\$804	\$993	\$1,128	\$1,085	\$1,095	\$1,223	\$1,254	\$1,367	\$1,592	\$1,603	\$12,143	\$9,177
<b>Hoosier Subtotal</b>	<b>\$4,102</b>	<b>\$5,277</b>	<b>\$5,427</b>	<b>\$5,400</b>	<b>\$5,141</b>	<b>\$5,131</b>	<b>\$5,559</b>	<b>\$6,180</b>	<b>\$6,817</b>	<b>\$7,387</b>	<b>\$56,421</b>	<b>\$43,029</b>
<i>C/I Energy Efficiency</i>												
Incentives	\$497	\$524	\$630	\$840	\$1,216	\$1,481	\$1,403	\$1,272	\$1,193	\$1,148	\$10,204	\$7,161
Administrative Costs	\$346	\$356	\$474	\$611	\$886	\$962	\$933	\$834	\$812	\$756	\$6,971	\$4,913
<b>Hoosier Subtotal</b>	<b>\$843</b>	<b>\$880</b>	<b>\$1,104</b>	<b>\$1,451</b>	<b>\$2,102</b>	<b>\$2,443</b>	<b>\$2,336</b>	<b>\$2,106</b>	<b>\$2,005</b>	<b>\$1,904</b>	<b>\$17,175</b>	<b>\$12,073</b>
<i>Residential Demand Response</i>												
Incentives	\$0	\$477	\$477	\$477	\$477	\$477	\$477	\$477	\$477	\$477	\$4,295	\$2,889
Administrative Costs	\$0	\$247	\$23	\$23	\$24	\$25	\$26	\$26	\$27	\$28	\$449	\$338
<b>Hoosier Subtotal</b>	<b>\$0</b>	<b>\$724</b>	<b>\$500</b>	<b>\$501</b>	<b>\$501</b>	<b>\$502</b>	<b>\$503</b>	<b>\$504</b>	<b>\$504</b>	<b>\$505</b>	<b>\$4,744</b>	<b>\$3,227</b>
<i>C/I Demand Response</i>												
Incentives	\$0	\$37	\$46	\$70	\$135	\$173	\$161	\$149	\$138	\$128	\$1,036	\$703
Administrative Costs	\$0	\$68	\$85	\$131	\$254	\$330	\$313	\$296	\$280	\$265	\$2,021	\$1,365
<b>Hoosier Subtotal</b>	<b>\$0</b>	<b>\$105</b>	<b>\$130</b>	<b>\$201</b>	<b>\$389</b>	<b>\$504</b>	<b>\$473</b>	<b>\$445</b>	<b>\$418</b>	<b>\$393</b>	<b>\$3,057</b>	<b>\$2,068</b>
<i>EE &amp; DR Programs COMBINED</i>												
Incentives	\$3,795	\$5,322	\$5,452	\$5,703	\$5,874	\$6,040	\$6,346	\$6,711	\$7,033	\$7,537	\$59,813	\$44,604
Administrative Costs	\$1,150	\$1,664	\$1,709	\$1,851	\$2,259	\$2,540	\$2,525	\$2,524	\$2,712	\$2,652	\$21,584	\$15,792
<b>Hoosier Subtotal</b>	<b>\$4,945</b>	<b>\$6,986</b>	<b>\$7,161</b>	<b>\$7,553</b>	<b>\$8,132</b>	<b>\$8,580</b>	<b>\$8,871</b>	<b>\$9,235</b>	<b>\$9,745</b>	<b>\$10,189</b>	<b>\$81,397</b>	<b>\$60,397</b>

## **11 CONSIDERATION OF REVISIONS TO THE HOOSIER TARIFF TO SUPPORT THE IMPLEMENTATION OF DEMAND RESPONSE PROGRAMS**

*(Note: The below discussion of the Hoosier Standard Tariff is reflective of the structure as approved by the Board of Directors at its March 31, 2009 meeting.)*

Concurrent with the screening evaluation of DSM measures and the IRP process, GDS worked with Hoosier to evaluate the structure of the Standard Tariff applicable for sales between Hoosier and its member systems. In addition to the “traditional” ratemaking objectives of meeting the G&T revenue requirements in a manner that is current, stable, predictable, and fair (matches cost recovery with cost causation), the primary purpose of GDS’ involvement in the effort was to ensure that the tariff contains appropriate incentives to the members for the implementation of DSM programs with a focus on demand response. The Hoosier members had determined that this evaluation should be conducted at this time to ensure that the right incentives were in place prior to their evaluation of the programs at the local level.

As described throughout this report, potential benefits from DSM programs have been quantified and compared to the expected costs for new generation resources. Selected DSM programs, with a focus on residential load control, were determined to offer the benefit of being a more economic alternative than building or buying capacity to meet some future needs. The evaluation of incentives was conducted to ensure that the benefits of the DSM measures are appropriately flowed through to the members.

Besides the evaluation of DSM incentives, other matters addressed in the process of revising the tariff structure included the update of the Cost of Service study as well as shifting costs to base rates from the power cost tracker. All of these issues created an opportunity in 2008 to begin a broad review of tariffs leading to an April 1, 2010 implementation date.

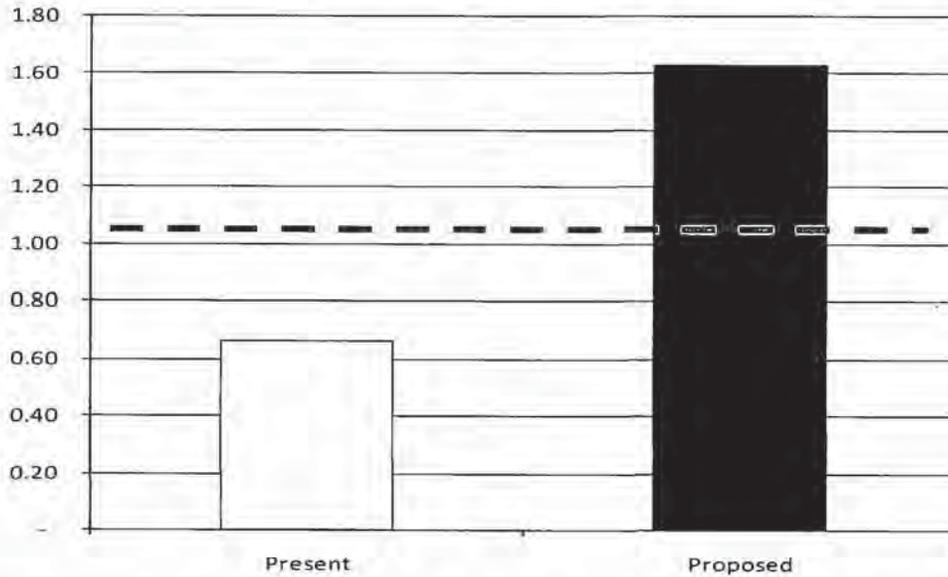
### **11.1 SUMMARY EVALUATION OF PRESENT TARIFF**

Efficiency programs can function well under current G&T wholesale tariffs but current tariffs offer less support to members for residential load control programs. Residential load control requires an investment in control technology. Member system participation is voluntary, and a program that successfully promotes participation requires a tariff design that enables members to recover investments over a reasonable period of time through wholesale cost savings, enables Hoosier Energy to recover related costs, and allows all members to collectively and proportionally share in savings from avoided generation costs. Current tariffs work well in many respects but were not designed to distribute load control benefits.

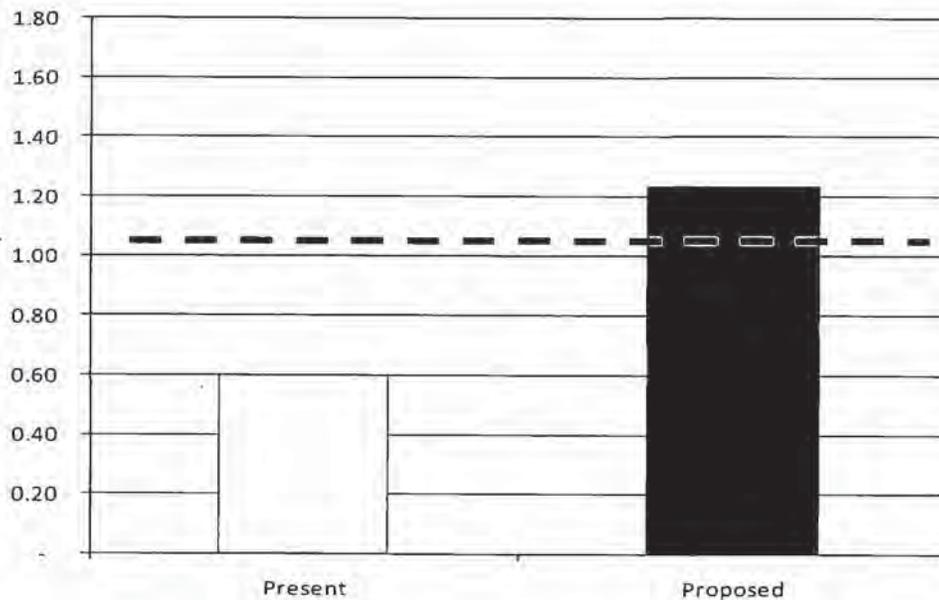
Analysis of Hoosier’s present tariff structure concluded that more of the power supply benefits resulting from the implementation of demand response should be provided to the member that has made the investment in the demand response measure. That is, under the present tariff most of the demand response benefits are shared among all of the Hoosier members and not flowed through to the individual member that has made the investment. Without sufficient incentive provided through the Standard Tariff structure, the members would be unlikely to make the investment in load control technology even though the programs are beneficial for the overall system. Figures 9.1 and 9.2 below demonstrate the estimated benefit-cost ratios from the perspective of the average REMC for the direct control of air conditioning and water heating

under the present tariff structure<sup>47</sup> and the revised tariff structure<sup>48</sup>. The charts clearly demonstrate that under the present tariff, the benefits are not sufficient to incent the member to pursue direct control programs, while under the revised tariff, the benefits are significantly improved.

**Figure 11.1: Benefit-Cost Ratio Average REMC: Direct Control AC – 50% Cycling**



**Figure 11.2: Benefit-Cost Ratio Average REMC: Direct Control of Water Heating**



<sup>47</sup> The Standard Tariff that became effective January 1, 2009

<sup>48</sup> The revised Standard Tariff structure as approved at the March 31, 2009 meeting of the Hoosier Board of Directors

## 11.2 PROCESS

Member CEO's/Managers and G&T staff worked closely in 2008 and early 2009 to determine how best to incorporate DSM considerations into the terms, conditions and rates in updated wholesale tariffs. During these meetings, a number of alternative tariff components and overall tariff structures were evaluated to determine their effectiveness in providing appropriate demand response incentives. In addition, meetings were held with the Marketing Committee, the Finance Committee and the Board of Directors to ensure that the process was open and provided the opportunity for all members to participate.

The Hoosier Board of Directors approved the revised tariff at its March 31, 2009 meeting, with tariff becoming effective April 1, 2010. Key revisions to the Standard Tariff related to the implementation of demand response programs are summarized below.

## 11.3 REVISED TARIFF STRUCTURE

It was concluded during the tariff evaluation that the tariff structure could be modified to provide more cost based signals than the present structure which in turn, would result in appropriate (and increased) incentives to the members. Cost-based price incentives not only provide the right price signal to the member that pursues load control but also helps ensure that some of the beneficial impacts of demand response are retained at the Hoosier level and are proportionally shared among all Members.

Although not explicitly referenced in revised tariffs, the proposed load control program shall be centrally controlled by Hoosier Energy. Control criteria will be primarily based upon reduction in Hoosier Energy system peaks demands, but load control will also be operated for purposes of emergency demand response within MISO and opportunities to avoid costly market energy purchases. Load control protocols will also consider the impact on consumer satisfaction. Based on these load control criteria, the primary mechanism for the flow through of power supply benefits to the members will be the Production Demand Charge. Revisions to the Energy Charge and Transmission Demand Charge also impact the benefits available to the member.

- 1) Production Demand Charge - To support residential control programs, significant changes have been developed for recovering production and demand-related costs in the new Standard Tariff design. Charges are currently based upon demand (kW) at a delivery point during each month's 60-minute coincident peak period (i.e. a "12-CP" basis). The \$/kW rate is the same in July when system peak loads and market costs may be highest and April or September when system loads costs may be very low. Maximizing load control savings under the current tariff, and supporting members ability to recover investments, would require that switches be operated in all 12 monthly peak hours including off-peak months when loads and market prices are low, load reduction has minimal system value, and with potential negative impacts on consumer satisfaction.

The revised tariff better aligns the G&T tariff and system capacity costs through higher seasonal demand charges that more accurately reflect the greater cost of capacity in summer and winter peak months. The tariff bases production demand in off-peak periods on average use in peak periods. Charges are calculated based on metered demand in June, July and August with demand in September, October and November based on the average of these three peak months. To better ensure that the members are

able to earn a return on their load control investment, the metered, coincident demands used for member billing will be based on the Hoosier monthly system maximum load during which load control was operated. A similar mechanism at a lower rate is developed for the peak winter months of December, January and February with demand in March, April and May based on averages from the three peak months.

The tariff revisions better support load control by reducing the number of months in which load must be controlled to achieve savings, increases the number of months in which members benefit from peak load reductions, restricts control to months when reductions will most likely produce system benefits, mitigates impacts on consumers, and provides additional protection from cost shifting to members that don't participate in load control programs.

- 2) Energy Charge - The revised tariffs also include significant changes in energy charges. Currently, all of Hoosier's tariffs include a standard, flat energy charge (plus tracker charges). Revised tariffs include new and different on-peak and off-peak energy charges (plus tracker charges) with on-peak rates set much higher than off-peak energy rates. On-peak periods for energy charges are narrowly defined as including ten hours per day on summer weekdays and two, three-hour periods on winter weekdays. All weekend days and all days in "valley" months of March through May and September through November are defined as off-peak for energy charges. This change is intended to recover energy costs in a manner more consistent with the way that they are incurred and provide a clear price signal and incentive to members and end consumers to support and promote load shifting to off-peak periods.
  
- 3) Transmission Demand Charge - Costs related to 69 kV radial transmission lines were shifted from transmission to substation/radial line demand charges to achieve a more consistent treatment of radial line costs. Transmission charges remain unbundled in the revised Standard Tariff. Current transmission charges are based on non-coincidental (NCP) demand at each point of delivery during the highest "rolling 30-minute interval" in the month. Charges in the new Standard Tariff are based upon system coincident demand (CP) or the 60-minute clock hour during the month between 7:00 a.m. and 11:00 p.m. (EST) in which total system demand reaches its highest point.

The revision in the Transmission Demand Charge can reduce the members' cost to serve Electric Thermal Storage (ETS) heating loads under certain circumstances. Under the present tariff, it is possible for a member to incur additional cost under the Transmission Demand Charge if the ETS load on a delivery point causes a monthly peak demand on the substation during the over-night hours when the heating system is charging the bricks for heat storage. Under the revised tariff, the billing demand has been modified to a demand coincident with the Hoosier system monthly peak, which is very unlikely to occur during the hours that the ETS is charging.

One of the significant outcomes of the revised tariff structure is that it results in minimal cost shifting between the Members. It was concluded during the rate development process that the amount of cost shifting was small enough to not cause the need for any special treatment, such as a phase-in period to the revised tariff structure. With no phase-in, the revised demand response incentives can be implemented in 2010 without delay.

## 12 OVERALL CONCLUSIONS AND RECOMMENDATIONS

In summary, the potential for electric energy efficiency and demand response in the Hoosier Energy member service territory by 2028 is significant. The estimated achievable potential electricity savings would amount to 624,440 MWh a year (a 7% reduction in projected 2028 MWh sales). Energy efficiency resources combined with expanded demand response can also serve to reduce the overall summer peak demand over the same period by 297 MW, or 15% of the forecasted 2028 summer peak.

Based on these results, a portfolio of DSM programs was designed for Hoosier Energy that could achieve significant energy and demand savings at a pre-determined level of spending. The program portfolio is based on a targeted budget of \$5 and \$7 million in 2009 and 2010, respectively, followed by an increase of 5% annually from 2011-2018. In total, the combined budget from 2009-2018 under this scenario is approximately \$81.4 million. The result is 13 suggested programs that demonstrate electric energy efficiency and demand response resources can play an expanded role in Hoosier Energy's resource mix over the next decade.

**Table 12.1: Recommended Program Summary**

	Cumulative Annual MWh Savings - 2018	Cumulative Annual MW Savings - 2018	NPV Benefits \$2009	NPV Costs (Utility+ Participants) \$2009	TRC B/C Ratio
<b>1 Residential Energy Efficiency Programs</b>					
<i>\$ in millions</i>					
Residential Lighting Program	72,482	7.4	\$52.4	\$8.0	6.59
Heating & Cooling Program (SH&C/WH)	23,418	17.0	\$90.3	\$43.0	2.10
Home Energy Audit & Weatherization	40,898	9.5	\$38.3	\$18.3	2.09
Touchstone Energy Homes (New Construct	13,432	3.1	\$14.1	\$7.6	1.86
Second Appliance Turn-In Program	12,438	1.0	\$4.6	\$2.3	2.02
Education Campaign	0	0.0	\$0.0	\$3.1	N/A
<b>2 Commercial/Industrial Programs</b>					
C/I Prescriptive - Existing Buildings	89,510	23.9	\$68.1	\$28.8	2.37
C/I Prescriptive - New Construction	3,170	0.9	\$2.3	\$0.8	2.96
C/I Custom	14,002	3.5	\$10.4	\$4.0	2.61
<b>3 Residential Demand Response Programs</b>					
Residential Air Conditioning Control	-	25.3	\$7.2	\$3.1	2.37
Residential Water Heating Control	-	18.1	\$5.4	\$5.5	0.99
<b>4 C/I Demand Response Programs</b>					
Commercial/Industrial AC Load Control	-	5.6	\$1.6	\$1.0	1.70
Commercial/Industrial Interruptable Rates	-	10.9	\$3.3	\$0.4	8.06
<b>Total Savings (End-Consumer)</b>	<b>269,351</b>	<b>126.2</b>	<b>\$298.2</b>	<b>\$125.7</b>	<b>2.37</b>
<b>Total Savings (@ Generation)</b>	<b>294,921</b>	<b>139</b>			

These programs achieve estimated savings in 2018 of 269,350 MWh and summer peak load reductions of 126 MW at the end-consumer level. This represents approximately 3.5% of total energy sales and 8.2% of summer peak demand in 2018. Table 12.1 also shows the present value of benefits and costs associated with implementing the program potential energy and demand savings as well as the overall Total Resource Cost Test benefit/cost ratio of 2.37. The potential net present value savings to Hoosier Energy member systems for implementation of cost-effective DSM programs over the next decade is approximately **\$172.5 million** in 2009 dollars.

The DSM potential estimates provided in this report are based upon the 2009 planning load forecast provided by Hoosier Energy as well as appliance saturation data, data on energy efficiency measure costs and savings, and measure lives available at the time of this study. Additional research was conducted through the collection of residential and commercial/industrial on-site surveys to attain a better understanding of the market saturation of various energy efficiency measures already being utilized throughout the territory. Over time, additional and emerging technologies may serve to increase the potential for additional energy and demand savings and warrant additional attention at the program level.

Actual energy and demand savings will depend upon the level and degree of voluntary Hoosier Energy member system participation in the DSM programs offered by Hoosier Energy. In addition, the estimated savings are based upon the current forecast of Hoosier Energy budget amounts for DSM programs over the 10 year period of 2009-2018. The budget amounts are subject to annual Hoosier Energy Board review and approval. Therefore, while the figures presented in this report represent best current estimates of savings and costs, actual results will be different.

## **Appendix A2**

### **2011 Demand Side Management Report**

Demand Side Management

# 2011



**HOOSIER**ENERGY

[www.hepn.com/DSM.asp](http://www.hepn.com/DSM.asp)

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## APPENDIX A

- 2011 Savings
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## APPENDIX B

- Analysis of Measures Installed 2009 – 2011
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## APPENDIX C

- Basic Program Assumptions



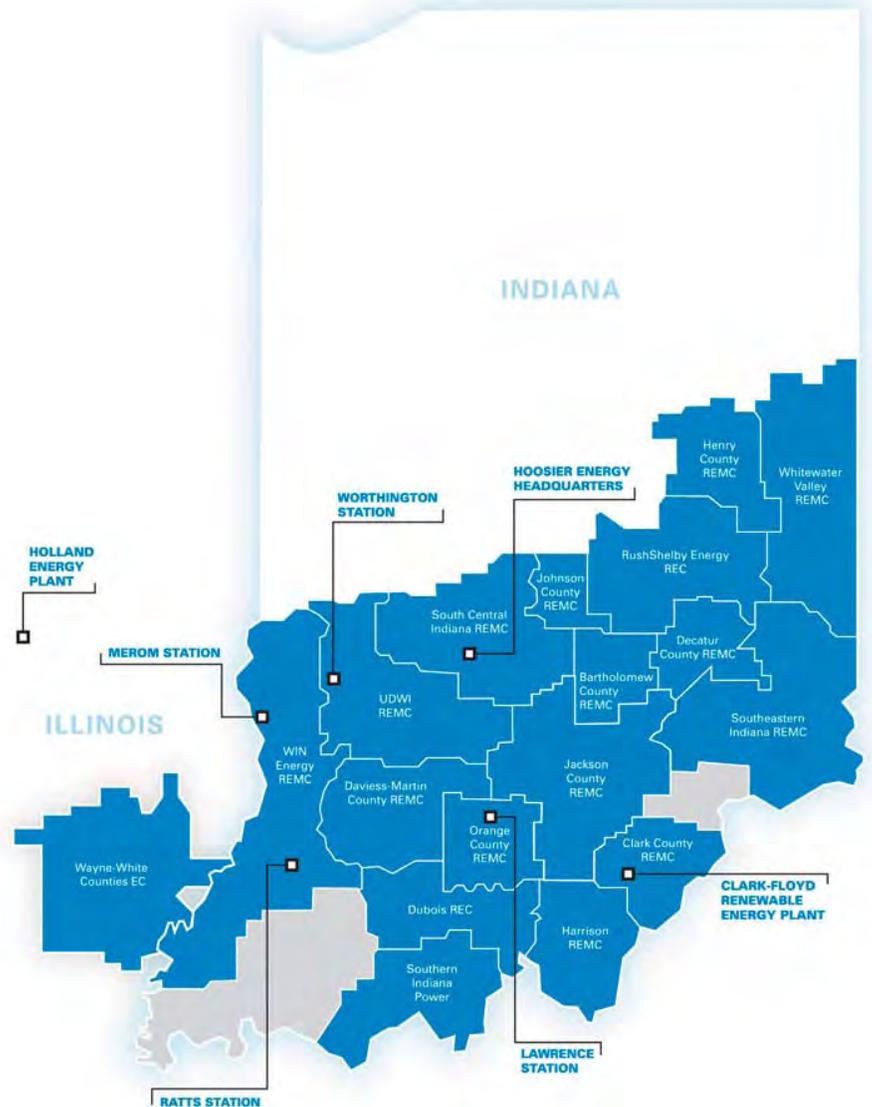
# Major milestones achieved in 2011

One energy-efficient compact fluorescent light (CFL) will help a homeowner save about \$30 in energy costs during its lifetime. Now imagine that times one million. That's enough to buy 520,000 Colts tickets or 6 million cups of coffee from Starbucks. Getting your coffee or going to the game would be easier as emissions reductions are equivalent to taking over 46,000 cars off the road for one year.

That's what 18 electric cooperatives in central and southern Indiana and southeastern Illinois accomplished by distributing one million CFL bulbs to consumers. That milestone was announced on August 8th by Hoosier Energy CEO Steve Smith to the Board of Directors. The CFL program is one of ten demand side management (DSM) programs that help meet member energy needs.

The past year was characterized by successful new program implementation, continued positive results of established programs and testing of new initiatives. DSM efforts helped member systems achieve a 38 percent increase in energy savings compared to 2010. With over 34,000 megawatt-hours (MWh) in annual savings, that's equivalent to powering nearly 73,000 televisions for one year.

Hoosier Energy develops a comprehensive portfolio of options to meet member power needs. The G&T utilizes DSM as an equivalent resource to more traditional power supply options. DSM initiatives include both end use energy efficiency and demand reduction activities.



Although DSM programs will not eliminate the need for future generation, they provide a viable, flexible option to meet a portion of member needs.

The Touchstone Energy Home Program has shown consistent growth since its 2005 inception, despite the economic downturn. Completed homes increased by 71 percent compared to 2010 indicating effective marketing to consumers.

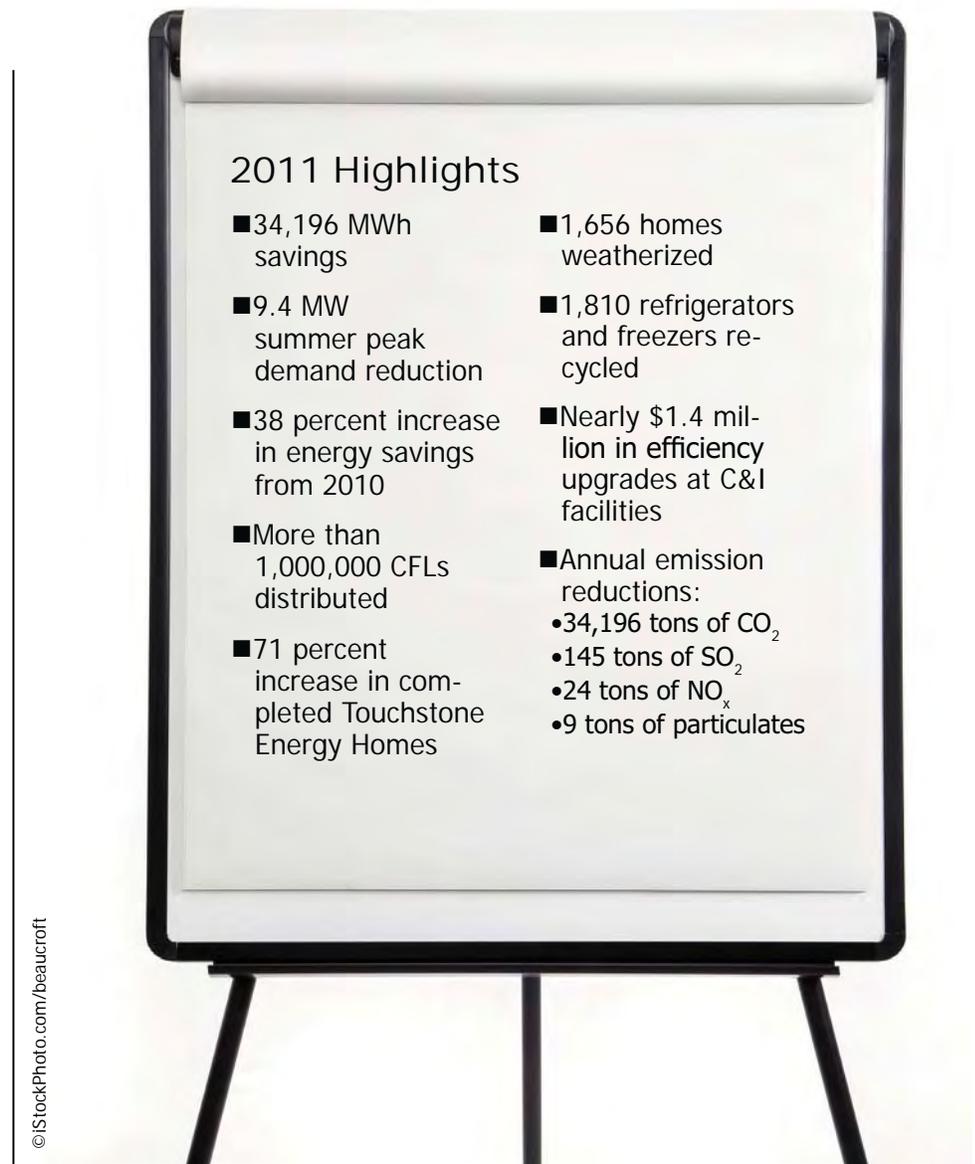
Commercial and industrial customers invested over \$1 million in efficiency upgrades in 2011 reflecting improved awareness and value of these programs. Hoosier Energy provided an additional \$350,000 to businesses for these projects bringing the total investment to nearly \$1.4 million.

Residential weatherization efforts through the American Recovery and Reinvestment Act (ARRA) and Hoosier Energy resulted in efficiency upgrades to 1,656 co-op served homes in 2011.

More than 1,800 older, less efficient refrigerators and freezers were collected in the Appliance Recycling Program. These results surpassed the 1,500 unit program goal for 2011.

### HVAC Incentives Program

Representing the largest component of residential energy usage, heating and cooling accounts for 35 to 60 percent of an average home's annual energy cost. HVAC incentives encourage installation of high efficiency heating, cooling and water heating equipment by offering rebates that offset the cost of higher efficiency equipment. All member systems participated in the program in 2011.



Compared to 2010, rebates were lower in 2011 due in part to the lack of federal incentives available last year.

Results remained strong however, with 2,149 incentives for high efficiency water heaters and 170 incentives for heat pump water heaters. Other 2011 results include 624 rebates for geothermal units, 362 rebates for efficient air conditioners and 1,294 rebates for air source heat pumps.

The 2011 HVAC incentives program is estimated to save 4,629 MWh of energy and 1.2 MW of summer peak demand annually.

### Residential Lighting Program Meets Milestone

Distribution of CFLs by member co-ops reached the 1,000,000 mark in July, a milestone achieved in just two and a half years. Savings are estimated at more than 280,000 MWh over the life of installed lighting.

The program provides free-of-charge CFLs including floods, candelabras, and 60-watt, 75-watt and 100-watt equivalent bulbs. Member co-ops use various distribution methods to reach consumers with a trade-in of incandescent bulbs for CFLs proving most popular.

For 2011, member co-ops received more than 380,000 CFLs for distribution to consumers. Based on a 70 percent installation rate, CFLs distributed in 2011 are estimated to reduce annual usage by 15,691 MWh and summer peak demand by 1.6 MW.

In addition to the CFL program, Hoosier Energy offered LED holiday lighting at a discounted price to members. Members sold 4,152 LED light sets resulting in annual energy savings of 71 MWh.

## Touchstone Energy Home Program

The Touchstone Energy Home Program supports design and construction of efficient new homes. The program targets residential customers and builders and provides incentives for homes that are significantly more efficient than units built to typical standards.

A Touchstone Energy Home costs about \$1 per square foot more to build than a typical new residential dwelling. Average energy use is 25 to 35 percent lower than Energy Star rated homes.

Energy savings are achieved through a combination of high performance windows, controlled air infiltration, upgraded HVAC and water heating systems, improved duct sealing, high efficiency building envelope standards and efficient lighting and appliances. In addition to financial incentives, the program offers design assistance, testing and a home energy rating.

Thirty-eight Touchstone Energy Homes were started in 2011 with 36 completed. Completed homes will realize 170 MWh in annual energy savings.

A 2011 Home Expo in Harrison



HE photo

Bob Geswein, Harrison REMC, hands out CFLs to attendees at a Touchstone Energy Home Expo. The expo showcased seven Touchstone Energy homes in Georgetown, Ind.



**one  
million  
and counting**

**the CFL exchange**

County featured all Touchstone Energy Homes. All seven houses were sold before the event began.

## ARRA Weatherization Program

Hoosier Energy was awarded a \$5.8 million ARRA grant to weather-

ize 926 homes in 23 southern Indiana counties. All grant-related work was completed by December 2011. Contractor efficiency resulted in 1,214 homes weatherized under the \$5.8 million grant. Nearly 70 percent or 838 units weatherized were co-op-served homes. It is estimated that member-served homes will realize 3,980 MWh of annual energy savings and 1 MW of summer peak demand reduction. Each weatherized home averaged \$5,000 of measures installed including ceiling and wall insulation, CFLs, low flow showerhead and faucet aerators.

This 2011 grant was the second of two grants awarded to Hoosier Energy totaling \$11.9 million to weatherize 1,759 homes during a two-year period. Efficiencies raised the number of homes weatherized to 2,040 units with

68 percent or 1,393 of those homes served by cooperatives.

## Hoosier Energy Weatherization Program

Hoosier Energy's self-funded weatherization program targets all electric, high usage homes. The program includes installation of CFL bulbs, attic insulation, and low-flow water saving devices as well as air and duct sealing. In-home energy audits determine the most cost effective measures to implement. The average cost per home was approximately \$4,000 or 20% less than the average cost in the ARRA-funded program.

Weatherization measures have the greatest impact on seasonal energy bills and consumers with high seasonal usage are given priority in the selection process.

All member co-ops were active in the program in 2011.

Results for 818 homes weatherized include estimated annual savings of 3,885 MWh and 1 MW of summer peak demand.

## Commercial and Industrial Efficiency Program

Commercial and industrial facilities in member territories represent a great opportunity to reduce demand and energy usage. To help manage the sector's significant consumption, participation expanded in 2011.

The program offers financial incentives to businesses that upgrade existing equipment or install efficient new equipment. End uses addressed in the program include lighting and controls, motors, variable frequency drives and



HE photo

Robert Cassel of Sherlock Homes Weatherization applies sealing tape to ductwork at a home near Bedford. Properly sealing ductwork is a common measure used in the weatherization process.

**“I want to thank you for the improvements made to our home under the Weatherization Program. The men were very polite and professional. the improvements made have drastically reduced my energy bill. This is a wonderful program and I hope it continues.”**

**Theresa Rose, Liberty, Ind.  
Whitewater Valley REMC**

HVAC systems. Custom applications for specific energy and demand reduction opportunities were introduced this year.

In 2011, 63 businesses invested more than \$1 million in energy efficiency upgrades, resulting in 3,434 MWh of annual savings. Lighting installations accounted for 95 percent of savings.

All member systems participated in the Commercial and Industrial Efficiency Program.

## Load Control Program

The load control program completed its second year in 2011. Eleven cooperatives participated in the program in which control devices were installed on water heaters and air conditioners.

The load control program uses a centralized communication platform to signal sessions to a cooperative's Advanced Metering Infrastructure (AMI) system, Internet gateway, or FM-radio data technology. Control sessions are conducted during peak months of June through August and December through February.

The year's continued strong performance resulted in 2,391 water heaters and 2,099 air conditioner/heat pumps under load control. Since program inception, load control devices have been installed

on nearly 10,000 water heaters and air conditioners/heat pumps, resulting in 7 MW of summer and 5 MW of winter load subject to control.

Members also provide control signals to irrigation loads, cold storage warehouses, ski resorts and other consumers resulting in additional load reductions. Efforts are in progress to better track these savings.

## Appliance Recycling Program

Hoosier Energy launched the Appliance Recycling Program in March at fifteen member co-ops. The program offers consumers \$30 per unit to retire and recycle inefficient refrigerators or freezers. Each retired refrigerator reduces consumption by approximately 976 kWh per year.

The 2011 goal of recycling 1,500 units was surpassed with 1,810 units collected. Estimated annual savings include 1,858 MWh and 0.15 MW of summer peak demand.

Projected environmental benefits are significant. The program has recycled 127 tons of metal, 18 tons of plastic and 2.7 tons of glass. In addition, 1,810 pounds of foam insulation, 127 gallons of used oil and 5.4 pounds of components with mercury have been properly disposed of or recycled.

## Opower Pilot Program

Hoosier Energy is working with Opower to implement a pilot energy efficiency report and web portal service for end consumers at four member co-ops.

Opower provides consumers with six mailers per year that compare the recipients energy usage to 100 homes



HE photo

The 2011 goal of recycling 1,500 refrigerators and freezers was surpassed with 1,810 units collected. Annual savings are estimated at 1,858 MWh.

of similar size and characteristics. In addition to rating the home's performance, the reports provide tips to improve energy usage.

Each consumer receives individual web portal access that allows them to view real time usage, sign up for high bill and system peak alerts, and explore other efficiency options.

The pilot program is set to begin with paper reports reaching consumers in the first quarter of 2012 and will continue for one year. The program may be offered systemwide in 2013.

Opower's reports are currently reaching 10 million customers at 57 utilities nationwide. Energy savings have been verified at an average of 2 percent per participating household. Additionally, the program has been shown to increase participation in other efficiency initiatives by up to 15 percent and improve customer satisfaction scores by up to 5 percent.

## 2011 DSM Program Goals

The Hoosier Energy Board established efficiency and demand reduction targets in 2008 calling for a 5% reduction in energy and demand by 2018 from participating cooperatives. Annual objectives for demand response and efficiency initiatives are established to meet the 2018 goals.

In 2011, Hoosier Energy staff met with each member system to determine demand and efficiency goals based upon expected participation through 2018. G&T staff currently estimates that demand will be reduced by 7.4 percent and energy by nearly 4 percent by 2018.

The G&T will continue to work with member systems to encourage participation in program initiatives and track accomplishments towards 2018 goals. Efforts to measure and verify demand and energy savings will continue in 2012.

# Hoosier Energy collaborates on LED lighting evaluations

Solid state lighting (SSL) is driving a transformation of the lighting industry. With high consumer interest in LEDs, members and the G&T are working together to evaluate program options related to this ultra-efficient light source.

With a proliferation of untested products and lack of standards, manufacturers' performance claims are difficult to believe. Hoosier Energy has established collaborative LED demonstrations supported by prudent testing, strategic messaging, and community outreach. Projects were undertaken to understand the impact of LEDs on electric load and to help members make decisions about LED technology.

Three SSL technology demonstrations were established: Rose Acres Farms egg laying operation in Seymour; a physics classroom with Blue River Valley Jr/Sr High School in New Castle; and a cold-storage facility with Interstate Warehousing in Franklin.

Demonstrations validated energy



HE photo

Martha Carney, chief executive officer of Outsourced Innovations, explains to Blue River Valley Junior/Senior High School students the technology of Light Emitting Diode (LED) fixtures installed in their classroom. The Henry County REMC-served school is participating in a program that helps students gain hands-on experience.

savings of between 38-50 percent, equal or improved lighting quality and a strong preference for LED lighting by employees and students. Unfortunately, LED prices are still a major market barrier with payback between four and ten years.

Of particular importance is new value that could be realized from solid state lighting at Rose Acres Farms. Early indicators of increased poultry weight gain and improved feed conversion rates could result in reduced technology payback periods from years to months.

## Solid state lighting technology demonstration sites

### Rose Acre Farms – Cort Acre Complex

A total of 360, 3-watt LED lighting system compared against the performance of 192, 9-watt CFLs produced a validated 6,285 annual kWh savings and matched illumination. This application could represent a potential 220,000 kWh savings if installed throughout the complex. Continued monitoring of light levels through 2012 is required to ensure LED reliability and sufficient light output in a harsh environment.

### Blue River Valley Jr/Sr High School

The installation of 54 high-performance, 18-watt LED tubes compared against 32-watt, fluorescent T8s produced a validated energy savings of 38 percent. Key to success was SSL education that resulted in a student presentation to the school board regarding conversion to LEDs. Two lamps failed and low power factor continue to be evaluated and corrected in collaboration with the manufacturer.

### Interstate Warehousing

The installation of 172, 166-watt intelligent LED lighting system with 2-minute occupancy sensing were compared against 290-watt fluorescent T5 tubes with 15-minute occupancy sensing. LED light output increased by 45 percent but low power factor and early light failure raises questions about the estimated 50,000 hour service life.

# APPENDIX A

## 2011 DSM Program Savings for Hoosier Energy Member Systems

Table 1

	Measures Installed in 2011	Annual MWh Savings in 2011	Summer Peak MW Savings in 2011	Winter Peak MW Savings in 2011
Residential Lighting Program	384795	15762	1.59	3.82
Commercial & Industrial Energy Efficiency Program	63	3434	0.67	0.68
Weatherization Program	1656	7864	1.96	1.34
Load Control Program	4490	0	3.39	2.13
Other Savings	1972	479	0.42	0.50
Residential HVAC Incentive Program	4599	4629	1.18	5.03
Touchstone Energy Home Program	36	170	0.04	0.02
Appliance Recycling Pilot Program	1810	1858	0.15	0.13
<b>2011 Total</b>	<b>399421</b>	<b>34196</b>	<b>9.42</b>	<b>13.65</b>

NOTES:

- Annual MWh savings and summer & winter peak MW savings are the savings accumulated for one year from measures installed in 2011.
- The weatherization program includes 838 ARRA and 818 Hoosier Energy weatherization homes.
- Residential lighting program includes the Residential CFL Program and the

LED Holiday Lighting Program.

- Measures for the C&I efficiency program are listed based upon rebates paid.
- Other savings are deferred weatherizations that received baseload measures and distribution cooperative efficiency and demand response initiatives.

## 2011 savings by Program & Member System

### 2011 Residential CFL Program

Table 2

Co-op	Total Measures Installed 2011	MWh Savings in 2011	Summer Peak MW Savings in 2011	Winter Peak MW Savings in 2011
Bartholomew County REMC	28390	1170	0.12	0.27
Clark County REMC	106234	4379	0.44	1.01
Daviess-Martin County REMC	12770	526	0.05	0.12
Decatur County REMC	5500	227	0.02	0.05
Dubois REC, Inc.	24090	993	0.10	0.23
Harrison REMC	11838	488	0.05	0.11
Henry County REMC	22650	934	0.09	0.22
Jackson County REMC	12351	509	0.05	0.12
Johnson County REMC	13240	546	0.06	0.13
Orange County REMC	13688	564	0.06	0.13
RushShelby Energy	14100	581	0.06	0.13
South Central Indiana REMC	800	33	0.00	0.01
Southeastern Indiana REMC	13040	538	0.05	0.12
Southern Indiana Power	38675	1594	0.16	0.37
Utilities District of Western Indiana REMC	21085	869	0.09	0.20
Wayne-White Counties Electric Coop	10000	412	0.04	0.10
Whitewater Valley	25800	1064	0.11	0.25
WIN Energy	6392	263	0.03	0.06
<b>Total</b>	<b>380643</b>	<b>15691</b>	<b>1.59</b>	<b>3.62</b>

## 2011 Residential LED Holiday Lighting Program

Table 3

Co-op	Total Measures Installed 2011	MWh Savings in 2011	Summer Peak MW Savings in 2011	Winter Peak MW Savings in 2011
Bartholomew County REMC	0	0	0.00	0.00
Clark County REMC	1488	25	0.00	0.07
Daviess-Martin County REMC	0	0	0.00	0.00
Decatur County REMC	0	0	0.00	0.00
Dubois REC, Inc.	0	0	0.00	0.00
Harrison REMC	0	0	0.00	0.00
Henry County REMC	0	0	0.00	0.00
Jackson County REMC	0	0	0.00	0.00
Johnson County REMC	0	0	0.00	0.00
Orange County REMC	0	0	0.00	0.00
RushShelby Energy	1128	19	0.00	0.05
South Central Indiana REMC	0	0	0.00	0.00
Southeastern Indiana REMC	1536	26	0.00	0.07
Southern Indiana Power	0	0	0.00	0.00
Utilities District of Western Indiana REMC	0	0	0.00	0.00
Wayne-White Counties Electric Coop	0	0	0.00	0.00
Whitewater Valley	0	0	0.00	0.00
WIN Energy	0	0	0.00	0.00
<b>Total</b>	<b>4152</b>	<b>71</b>	<b>0</b>	<b>0.20</b>

## 2011 C&I Energy Efficiency Program

Table 4

Co-op	Rebate Applications 2011	MWh Savings in 2011	Summer Peak MW Savings in 2011	Winter Peak MW Savings in 2011
Bartholomew County REMC	3	91	0.0223	0.0181
Clark County REMC	8	149	0.0286	0.0310
Daviess-Martin County REMC	1	38	0.0044	0.0044
Decatur County REMC	2	133	0.0175	0.0180
Dubois REC, Inc.	5	146	0.0274	0.0274
Harrison REMC	7	92	0.0135	0.0139
Henry County REMC	8	284	0.0571	0.0719
Jackson County REMC	6	376	0.0665	0.0601
Johnson County REMC	2	444	0.1528	0.1591
Orange County REMC	2	83	0.0152	0.0155
RushShelby Energy	3	892	0.1433	0.1421
South Central Indiana REMC	1	0	0.0000	0.0000
Southeastern Indiana REMC	4	23	0.0039	0.0043
Southern Indiana Power	4	46	0.0088	0.0110
Utilities District of Western Indiana REMC	4	148	0.0316	0.0335
Wayne-White Counties Electric Coop	1	123	0.0204	0.0182
Whitewater Valley	1	290	0.0331	0.0331
WIN Energy	1	77	0.0267	0.0178
<b>Total</b>	<b>63</b>	<b>3434</b>	<b>0.67</b>	<b>0.68</b>

## 2011 ARRA Weatherization Program

Table 5

Co-op	Homes Completed 2011	MWh Savings in 2011	Summer Peak MW Savings in 2011	Winter Peak MW Savings in 2011
Bartholomew County REMC	24	114	0.0284	0.0194
Clark County REMC	31	147	0.0367	0.0250
Daviess-Martin County REMC	36	171	0.0426	0.0290
Decatur County REMC	23	109	0.0272	0.0186
Dubois REC, Inc.	32	152	0.0379	0.0258
Harrison REMC	163	774	0.1931	0.1315
Henry County REMC	17	81	0.0201	0.0137
Jackson County REMC	55	261	0.0651	0.0444
Johnson County REMC	47	223	0.0557	0.0379
Orange County REMC	78	370	0.0924	0.0629
RushShelby Energy	45	214	0.0533	0.0363
South Central Indiana REMC	91	432	0.1078	0.0734
Southeastern Indiana REMC	76	361	0.0900	0.0613
Southern Indiana Power	0	0	0.0000	0.0000
Utilities District of Western Indiana REMC	78	370	0.0924	0.0629
Wayne-White Counties Electric Coop	0	0	0.0000	0.0000
Whitewater Valley	22	104	0.0261	0.0177
WIN Energy	20	95	0.0237	0.0161
<b>Total</b>	<b>838</b>	<b>3980</b>	<b>0.99</b>	<b>0.68</b>

## 2011 Hoosier Energy Weatherization Program

Table 6

Co-op	Homes Completed 2011	MWh Savings in 2011	Summer Peak MW Savings in 2011	Winter Peak MW Savings in 2011
Bartholomew County REMC	39	185	0.0462	0.0315
Clark County REMC	45	214	0.0533	0.0363
Daviess-Martin County REMC	32	152	0.0379	0.0258
Decatur County REMC	24	114	0.0284	0.0194
Dubois REC, Inc.	54	256	0.0640	0.0436
Harrison REMC	33	157	0.0391	0.0266
Henry County REMC	54	256	0.0640	0.0436
Jackson County REMC	88	418	0.1042	0.0710
Johnson County REMC	6	28	0.0071	0.0048
Orange County REMC	28	133	0.0332	0.0226
RushShelby Energy	42	199	0.0497	0.0339
South Central Indiana REMC	87	413	0.1030	0.0702
Southeastern Indiana REMC	34	161	0.0403	0.0274
Southern Indiana Power	43	204	0.0509	0.0347
Utilities District of Western Indiana REMC	61	290	0.0723	0.0492
Wayne-White Counties Electric Coop	28	133	0.0332	0.0226
Whitewater Valley	41	195	0.0486	0.0331
WIN Energy	79	375	0.0936	0.0637
<b>Total</b>	<b>818</b>	<b>3885</b>	<b>0.97</b>	<b>0.66</b>

## 2011 Load Control Program

Table 7

Co-op	Total Devices Controlled 2011	MWh Savings in 2011	Summer Peak MW Savings in 2011	Winter Peak MW Savings in 2011
Bartholomew County REMC	92	0	0.0762	0.0347
Clark County REMC	0	0	0.0000	0.0000
Daviess-Martin County REMC	170	0	0.1442	0.0596
Decatur County REMC	0	0	0.0000	0.0000
Dubois REC, Inc.	0	0	0.0000	0.0000
Harrison REMC	618	0	0.4920	0.2596
Henry County REMC	293	0	0.2416	0.1120
Jackson County REMC	0	0	0.0000	0.0000
Johnson County REMC	0	0	0.0000	0.0000
Orange County REMC	377	0	0.2596	0.2124
RushShelby Energy	582	0	0.4747	0.2293
South Central Indiana REMC	431	0	0.2149	0.3520
Southeastern Indiana REMC	892	0	0.6951	0.3947
Southern Indiana Power	487	0	0.3798	0.2151
Utilities District of Western Indiana REMC	540	0	0.4127	0.2498
Wayne-White Counties Electric Coop	0	0	0.0000	0.0000
Whitewater Valley	8	0	0.0042	0.0062
WIN Energy	0	0	0.0000	0.0000
<b>Total</b>	<b>4490</b>	<b>0</b>	<b>3.39</b>	<b>2.13</b>

## 2011 Other Savings

Table 8

Co-op	Total Measures Installed 2011	MWh Savings in 2011	Summer Peak MW Savings in 2011	Winter Peak MW Savings in 2011
Bartholomew County REMC	15	11	0.0011	0.0024
Clark County REMC	23	16	0.0016	0.0038
Daviess-Martin County REMC	23	16	0.0016	0.0038
Decatur County REMC	35	25	0.0025	0.0057
Dubois REC, Inc.	17	12	0.0012	0.0028
Harrison REMC	384	24	0.0802	0.0833
Henry County REMC	53	37	0.0038	0.0086
Jackson County REMC	74	52	0.0053	0.0121
Johnson County REMC	2	1	0.0001	0.0003
Orange County REMC	19	13	0.0014	0.0031
RushShelby Energy	78	55	0.0056	0.0127
South Central Indiana REMC	1018	52	0.2995	0.3285
Southeastern Indiana REMC	78	55	0.0056	0.0127
Southern Indiana Power	16	11	0.0011	0.0026
Utilities District of Western Indiana REMC	43	30	0.0031	0.0070
Wayne-White Counties Electric Coop	7	5	0.0005	0.0011
Whitewater Valley	44	31	0.0032	0.0072
WIN Energy	43	30	0.0031	0.0070
<b>Total</b>	<b>1972</b>	<b>479</b>	<b>0.42</b>	<b>0.50</b>

## 2011 Residential HVAC Incentives Program

Table 9

Co-op	Total Measures Installed 2011	MWh Savings in 2011	Summer Peak MW Savings in 2011	Winter Peak MW Savings in 2011
Bartholomew County REMC	221	195	0.05	0.12
Clark County REMC	559	512	0.23	0.42
Daviess-Martin County REMC	98	119	0.03	0.19
Decatur County REMC	69	123	0.02	0.23
Dubois REC, Inc.	258	236	0.06	0.34
Harrison REMC	357	373	0.14	0.29
Henry County REMC	80	111	0.02	0.13
Jackson County REMC	315	405	0.08	0.18
Johnson County REMC	266	273	0.07	0.22
Orange County REMC	121	63	0.02	0.05
RushShelby Energy	97	139	0.03	0.19
South Central Indiana REMC	698	554	0.10	0.68
Southeastern Indiana REMC	473	487	0.09	0.68
Southern Indiana Power	151	171	0.05	0.19
Utilities District of Western Indiana REMC	281	296	0.09	0.38
Wayne-White Counties Electric Coop	177	198	0.03	0.38
Whitewater Valley	120	142	0.03	0.21
WIN Energy	258	231	0.04	0.15
<b>Total</b>	<b>4599</b>	<b>4629</b>	<b>1.18</b>	<b>5.03</b>

## 2011 Touchstone Energy Home Program

Table 10

Co-op	Homes Completed 2011	MWh Savings in 2011	Summer Peak MW Savings in 2011	Winter Peak MW Savings in 2011
Bartholomew County REMC	0	0	0.0000	0.0000
Clark County REMC	0	0	0.0000	0.0000
Daviess-Martin County REMC	1	5	0.0011	0.0007
Decatur County REMC	1	5	0.0011	0.0007
Dubois REC, Inc.	6	28	0.0066	0.0041
Harrison REMC	13	62	0.0144	0.0089
Henry County REMC	0	0	0.0000	0.0000
Jackson County REMC	3	14	0.0033	0.0021
Johnson County REMC	0	0	0.0000	0.0000
Orange County REMC	0	0	0.0000	0.0000
RushShelby Energy	4	19	0.0044	0.0027
South Central Indiana REMC	1	5	0.0011	0.0007
Southeastern Indiana REMC	2	9	0.0022	0.0014
Southern Indiana Power	2	9	0.0022	0.0014
Utilities District of Western Indiana REMC	3	14	0.0033	0.0021
Wayne-White Counties Electric Coop	0	0	0.0000	0.0000
Whitewater Valley	0	0	0.0000	0.0000
WIN Energy	0	0	0.0000	0.0000
<b>Total</b>	<b>36</b>	<b>170</b>	<b>0.04</b>	<b>0.02</b>

# 2011 Appliance Recycling Program

Table 11

Co-op	Total Units Collected 2011	MWh Savings in 2011	Summer Peak MW Savings in 2011	Winter Peak MW Savings in 2011
Bartholomew County REMC	68	71	0.0060	0.0051
Clark County REMC	106	109	0.0091	0.0078
Daviess-Martin County REMC	67	70	0.0058	0.0050
Decatur County REMC	68	69	0.0057	0.0049
Dubois REC, Inc.	263	272	0.0226	0.0193
Harrison REMC	186	190	0.0158	0.0135
Henry County REMC	48	49	0.0041	0.0035
Jackson County REMC	190	193	0.0161	0.0137
Johnson County REMC	0	0	0.0000	0.0000
Orange County REMC	0	0	0.0000	0.0000
RushShelby Energy	155	157	0.0131	0.0111
South Central Indiana REMC	138	143	0.0119	0.0101
Southeastern Indiana REMC	194	200	0.0167	0.0142
Southern Indiana Power	53	54	0.0045	0.0039
Utilities District of Western Indiana REMC	109	111	0.0092	0.0079
Wayne-White Counties Electric Coop	76	79	0.0065	0.0056
Whitewater Valley	89	92	0.0076	0.0065
WIN Energy	0	0	0.0000	0.0000
<b>Total</b>	<b>1810</b>	<b>1858</b>	<b>0.15</b>	<b>0.13</b>

# APPENDIX B

## Analysis of measures installed 2009-2011

### DSM: A low cost energy resource

Hoosier Energy's cost of energy conserved to date is approximately \$0.02 per kWh, well below the cost to provide power from traditional resources.

DSM programs are also evaluated with a Total Resource Cost (TRC) test. The TRC ratio compares avoided energy and capacity savings to the costs of the efficiency measure or program. Benefits detailed in the TRC test include avoided supply costs — including reductions in capital and O&M costs for generation, transmission, and distribution facilities valued at marginal cost — as well as savings in fuel and other resources. Also included

are DSM program expenses for both Hoosier Energy and consumers.

All costs — equipment, installation, operation, maintenance, removal, and administrative — are included in this test. A TRC ratio value of 1.0 or higher indicates an efficiency program is cost effective.

For all programs to date, lifetime economic benefits from DSM measures — total dollar value of avoided electricity consumption from installed DSM measures — outweighed combined costs by a TRC Benefit-to-Cost Ratio of 3.21 to 1.

That ratio suggests that consumers avoided \$3.21 in long-term costs for each dollar invested in efficiency programs.

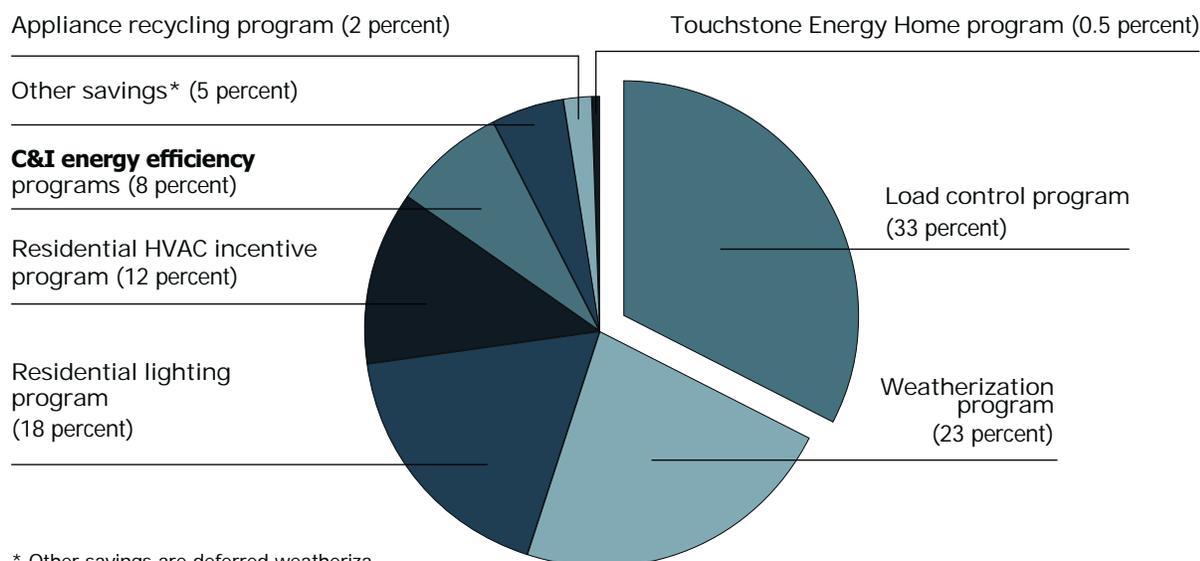
### Improving the environment

DSM initiatives have a direct impact on environmental emissions. Programs implemented from 2009 - 2011 will reduce carbon dioxide (CO<sub>2</sub>) emissions by 974,951 tons over the lifetime of installed measures. Reductions are equivalent to emissions from 4,534 railcars of coal or keeping 17,104 cars off the road for a decade.

Using less energy also reduces other emissions. Lifetime savings through 2011 are equivalent to the following reductions:

- 8.3 million pounds of SO<sub>2</sub>
- 1.36 million pounds of NO<sub>x</sub>
- 516,725 pounds of particulate matter

## 2009-2011 Summer Demand Savings by Program



\* Other savings are deferred weatherizations that received baseload measures and distribution cooperative efficiency and demand response initiatives.

# Estimated Benefit-Cost Analysis for All Measures Installed 2009 - 2011

Table 1

	Total Measures Installed to Date	Cummulative MWh Savings to Date	Estimated Lifetime MWh Savings	Cummulative Summer Peak MW Savings to Date	Cummulative Winter Peak MW Savings to Date
Residential Lighting Program	1188677	48557	287452	4.89	12.02
Commercial & Industrial Energy Efficiency Program	120	10330	165425	1.75	1.88
Hoosier Energy Weatherization Program	2438	11578	248106	2.89	1.97
Load Control Program	9367	0	0	6.90	4.68
Other Savings	3105	620	4338	0.68	0.80
Residential HVAC Incentive Program	14656	13963	239640	3.17	13.72
Touchstone Energy Home Program	171	809	16184	0.19	0.12
Appliance Recycling Pilot Program	2690	2761	13806	0.23	0.20
<b>Total</b>	<b>1221224</b>	<b>88618</b>	<b>974951</b>	<b>20.70</b>	<b>35.38</b>

	Hoosier Energy Costs	Participant Costs	Lifetime Economic Benefits	Cost/kWh	TRC Benefit-to-Cost Ratio
Residential Lighting Program	\$2,173,380	\$91,462	\$17,075,037	\$0.008	7.54
Commercial & Industrial Energy Efficiency Program	\$520,691	\$1,066,532	\$7,336,662	\$0.01	4.62
Hoosier Energy Weatherization Program	\$3,778,408	\$0	\$12,968,462	\$0.02	3.43
Load Control Program	\$1,719,405	\$0	\$5,544,328	N/A	3.22
Other Savings	\$313,220	\$0	\$738,893	N/A (1)	2.36
Residential HVAC Incentive Program	\$4,078,641	\$5,622,761	\$19,453,259	\$0.04	2.01
Touchstone Energy Home Program	\$205,718	\$245,455	\$877,151	\$0.03	1.94
Appliance Recycling Pilot Program	\$366,162	\$0	\$699,380	\$0.03	1.91
<b>Total</b>	<b>\$13,155,625</b>	<b>\$7,026,210</b>	<b>\$64,693,172</b>	<b>\$0.02</b>	<b>3.21</b>

NOTES:

- Cumulative MWh savings and summer and winter peak MW reductions reflect results of measures installed from program inception through November 2011.
- Hoosier Energy weatherization program includes 1,393 homes on member systems weatherized through the ARRA program.
- Residential lighting program includes residential CFL and LED holiday lighting.

- Measures for the C&I rebates program reflect rebates paid.
- Other savings are deferred weatherizations that received baseload measures and distribution cooperative efficiency and demand response initiatives.
- (1) Cost/kWh for Other Savings is an energy efficiency metric. Because demand response initiatives are captured in other savings, this would present an inaccurate result.
- Touchstone Energy Home data reflects completed homes.
- N/A = not applicable

Residential CFL Program  
Table 2

Co-op	Total Measures Installed	Cummulative MWh Savings	Estimated Lifetime MWh Savings	Cummulative Summer Peak MW Savings	Cummulative Winter Peak MW Savings	Hoosier Energy Costs	Participant Costs	Lifetime Economic Benefits	Cost/kWh	TRC Benefit-to-Cost Ratio
Bartholomew County REMC	70918	2923	16872	0.30	0.68	\$126,758	\$0	\$1,009,997	\$0.008	7.97
Clark County REMC	277613	11444	66127	1.16	2.64	\$496,867	\$0	\$3,959,152	\$0.008	7.97
Daviess-Martin County REMC	81426	3357	20105	0.34	0.78	\$151,756	\$0	\$1,214,008	\$0.008	8.00
Decatur County REMC	26282	1083	6401	0.11	0.25	\$48,227	\$0	\$385,111	\$0.008	7.99
Dubois REC, Inc.	63704	2626	15344	0.27	0.61	\$115,482	\$0	\$921,865	\$0.008	7.98
Harrison REMC	57352	2364	13908	0.24	0.55	\$104,720	\$0	\$835,610	\$0.008	7.98
Henry County REMC	55399	2284	13226	0.23	0.53	\$99,418	\$0	\$792,676	\$0.008	7.97
Jackson County REMC	62672	2583	15143	0.26	0.60	\$113,955	\$0	\$908,674	\$0.008	7.97
Johnson County REMC	51518	2124	12409	0.22	0.49	\$93,358	\$0	\$744,443	\$0.008	7.97
Orange County REMC	37675	1553	8997	0.16	0.36	\$67,620	\$0	\$538,940	\$0.008	7.97
RushShelby Energy	48406	1995	11677	0.20	0.46	\$87,880	\$0	\$701,155	\$0.008	7.98
South Central Indiana REMC	22915	945	5721	0.10	0.22	\$43,231	\$0	\$346,091	\$0.008	8.01
Southeastern Indiana REMC	61578	2538	14935	0.26	0.59	\$112,453	\$0	\$897,379	\$0.008	7.98
Southern Indiana Power	90399	3726	21557	0.38	0.86	\$162,023	\$0	\$1,291,812	\$0.008	7.97
Utilities District of Western Indiana REMC	54374	2241	12946	0.23	0.52	\$97,269	\$0	\$775,039	\$0.008	7.97
Wayne-White Counties Electric Coop	31472	1297	7528	0.13	0.30	\$56,589	\$0	\$450,968	\$0.008	7.97
Whitewater Valley	64092	2642	15310	0.27	0.61	\$115,092	\$0	\$917,682	\$0.008	7.97
WIN Energy	12535	517	2971	0.05	0.12	\$22,319	\$0	\$177,906	\$0.008	7.97
<b>Total</b>	<b>1170330</b>	<b>48244</b>	<b>281178</b>	<b>4.89</b>	<b>11.14</b>	<b>\$2,115,018</b>	<b>\$0</b>	<b>\$16,868,510</b>	<b>\$0.008</b>	<b>7.98</b>

Notes: Data reflects CFLs distributed from 1/1/2000 - 12/31/2011

LED Holiday Lighting Program  
Table 3

Co-op	Total Measures Installed	Cummulative MWh Savings	Estimated Lifetime MWh Savings	Cummulative Summer Peak MW Savings	Cummulative Winter Peak MW Savings	Hoosier Energy Costs	Participant Costs	Lifetime Economic Benefits	Cost/kWh	TRC Benefit-to-Cost Ratio
Bartholomew County REMC	276	5	94	0.00	0.01	\$925	\$1,449	\$3,203	\$0.03	1.35
Clark County REMC	5370	92	1837	0.00	0.26	\$17,059	\$26,734	\$60,419	\$0.02	1.38
Daviess-Martin County REMC	1524	26	521	0.00	0.07	\$4,878	\$7,644	\$17,195	\$0.02	1.37
Decatur County REMC	492	8	168	0.00	0.02	\$1,648	\$2,583	\$5,710	\$0.03	1.35
Dubois REC, Inc.	96	2	33	0.00	0.00	\$303	\$475	\$1,075	\$0.02	1.38
Harrison REMC	1284	22	439	0.00	0.06	\$4,192	\$6,570	\$14,665	\$0.02	1.36
Henry County REMC	516	9	176	0.00	0.02	\$1,631	\$2,556	\$5,777	\$0.02	1.38
Jackson County REMC	2520	43	862	0.00	0.12	\$8,108	\$12,706	\$28,523	\$0.02	1.37
Johnson County REMC	228	4	78	0.00	0.01	\$743	\$1,165	\$2,602	\$0.02	1.36
Orange County REMC	1140	19	390	0.00	0.05	\$3,705	\$5,807	\$12,984	\$0.02	1.37
RushShelby Energy	1128	19	386	0.00	0.05	\$3,363	\$5,271	\$12,275	\$0.02	1.42
South Central Indiana REMC	360	6	123	0.00	0.02	\$1,158	\$1,815	\$4,075	\$0.02	1.37
Southeastern Indiana REMC	1948	33	666	0.00	0.09	\$5,882	\$9,217	\$21,327	\$0.02	1.41
Southern Indiana Power	37	1	13	0.00	0.00	\$117	\$183	\$414	\$0.02	1.38
Utilities District of Western Indiana REMC	924	16	316	0.00	0.04	\$2,961	\$4,641	\$10,433	\$0.02	1.37
Wayne-White Counties Electric Coop	0	0	0	0.00	0.00	\$0	\$0	\$0	N/A	N/A
Whitewater Valley	504	9	172	0.00	0.02	\$1,688	\$2,646	\$5,849	\$0.03	1.35
WIN Energy	0	0	0	0.00	0.00	\$0	\$0	\$0	N/A	N/A
<b>Total</b>	<b>18347</b>	<b>314</b>	<b>6275</b>	<b>0</b>	<b>0.88</b>	<b>\$58,361</b>	<b>\$91,462</b>	<b>\$206,527</b>	<b>\$0.02</b>	<b>1.38</b>

Notes: Data reflects LED Holiday Lights purchased from 1/1/2009 - 12/31/2011

### C&I Energy Efficiency Program

Table 4

Co-op	Rebate Applications	Cummulative MWh Savings	Estimated Lifetime MWh Savings	Cummulative Summer Peak MW Savings	Cummulative Winter Peak MW Savings	Hoosier Energy Costs	Participant Costs	Lifetime Economic Benefits	Cost/kWh	TRC Benefit-to-Cost Ratio
Bartholomew County REMC	6	870	13918	0.1514	0.1471	\$67,004	\$90,735	\$622,179	\$0.011	3.94
Clark County REMC	13	1086	17497	0.1946	0.2101	\$44,442	\$46,044	\$798,596	\$0.005	8.83
Daviess-Martin County REMC	8	326	5045	0.0190	0.0192	\$22,155	\$46,943	\$147,923	\$0.014	2.14
Decatur County REMC	6	955	15277	0.1255	0.1300	\$47,801	\$91,825	\$608,946	\$0.009	4.36
Dubois REC, Inc.	8	1081	17318	0.1795	0.2376	\$64,995	\$112,850	\$801,659	\$0.010	4.51
Harrison REMC	18	641	10243	0.1205	0.1262	\$34,651	\$59,088	\$487,938	\$0.009	5.21
Henry County REMC	10	329	5269	0.0607	0.0810	\$44,546	\$42,789	\$254,210	\$0.017	2.91
Jackson County REMC	14	964	15524	0.1481	0.1529	\$43,337	\$49,310	\$682,692	\$0.006	7.37
Johnson County REMC	4	745	11910	0.1975	0.2038	\$60,237	\$192,483	\$596,844	\$0.021	2.36
Orange County REMC	2	83	1323	0.0152	0.0155	\$6,274	\$4,552	\$64,568	\$0.008	5.96
RushShelby Energy	3	905	14460	0.1433	0.1421	\$22,385	\$95,653	\$607,096	\$0.008	5.14
South Central Indiana REMC	3	113	1851	0.0180	0.0229	\$10,950	\$5,109	\$81,143	\$0.009	5.05
Southeastern Indiana REMC	10	1418	22700	0.2422	0.2509	\$16,490	\$20,893	\$1,015,737	\$0.002	27.17
Southern Indiana Power	7	161	2590	0.0225	0.0336	\$11,899	\$45,900	\$108,515	\$0.022	1.88
Utilities District of Western Indiana REMC	4	146	2402	0.0316	0.0335	\$7,640	\$26,893	\$116,402	\$0.014	3.37
Wayne-White Counties Electric Coop	1	123	1951	0.0204	0.0182	\$5,734	\$28,812	\$83,980	\$0.018	2.43
Whitewater Valley	2	307	4908	0.0352	0.0373	\$7,676	\$29,023	\$176,696	\$0.007	4.81
WIN Energy	1	77	1229	0.0267	0.0178	\$2,473	\$77,631	\$81,539	\$0.065	1.02
<b>Total</b>	<b>120</b>	<b>10330</b>	<b>165425</b>	<b>1.75</b>	<b>1.88</b>	<b>\$520,691</b>	<b>\$1,066,532</b>	<b>\$7,336,662</b>	<b>\$0.010</b>	<b>4.62</b>

Notes: 1) Data reflects applications submitted between 1/1/2009 - 12/31/2011

### ARRA Weatherization Program

Table 5

Co-op	Homes Completed	Cummulative MWh Savings	Estimated Lifetime MWh Savings	Cummulative Summer Peak MW Savings	Cummulative Winter Peak MW Savings	Hoosier Energy Costs	Participant Costs	Lifetime Economic Benefits	Cost/kWh	TRC Benefit-to-Cost Ratio
Bartholomew County REMC	26	123	1852	0.0308	0.0210	\$0	\$0	\$106,321	\$0.000	N/A
Clark County REMC	38	180	2707	0.0450	0.0307	\$0	\$0	\$155,607	\$0.000	N/A
Daviess-Martin County REMC	62	294	4416	0.0734	0.0500	\$0	\$0	\$254,655	\$0.000	N/A
Decatur County REMC	24	114	1710	0.0284	0.0194	\$0	\$0	\$98,098	\$0.000	N/A
Dubois REC, Inc.	70	332	4986	0.0829	0.0565	\$0	\$0	\$287,970	\$0.000	N/A
Harrison REMC	203	964	14460	0.2404	0.1638	\$0	\$0	\$831,409	\$0.000	N/A
Henry County REMC	17	81	1211	0.0201	0.0137	\$0	\$0	\$69,449	N/A	N/A
Jackson County REMC	118	560	8406	0.1398	0.0952	\$0	\$0	\$485,380	\$0.000	N/A
Johnson County REMC	48	228	3419	0.0569	0.0387	\$0	\$0	\$196,143	\$0.000	N/A
Orange County REMC	87	413	6197	0.1030	0.0702	\$0	\$0	\$355,888	\$0.000	N/A
RushShelby Energy	76	361	5414	0.0900	0.0613	\$0	\$0	\$312,112	\$0.000	N/A
South Central Indiana REMC	322	1529	22937	0.3814	0.2597	\$0	\$0	\$1,327,630	\$0.000	N/A
Southeastern Indiana REMC	77	366	5485	0.0912	0.0621	\$0	\$0	\$314,614	\$0.000	N/A
Southern Indiana Power	34	161	2422	0.0403	0.0274	\$0	\$0	\$140,692	\$0.000	N/A
Utilities District of Western Indiana REMC	116	551	8263	0.1374	0.0936	\$0	\$0	\$475,890	\$0.000	N/A
Wayne-White Counties Electric Coop	0	0	0	0.0000	0.0000	\$0	\$0	\$0	N/A	N/A
Whitewater Valley	22	104	1567	0.0261	0.0177	\$0	\$0	\$89,875	N/A	N/A
WIN Energy	53	252	3775	0.0628	0.0428	\$0	\$0	\$218,258	\$0.000	N/A
<b>Total</b>	<b>1393</b>	<b>6615</b>	<b>99228</b>	<b>1.65</b>	<b>1.12</b>	<b>\$0</b>	<b>\$0</b>	<b>\$5,719,991</b>	<b>\$0.000</b>	<b>N/A</b>

Notes: 1) Data reflects weatherizations completed between 1/1/2009 - 12/31/2011

Hoosier Energy Weatherization Program  
Table 6

Co-op	Home Completed	Cummulative MWh Savings	Estimated Lifetime MWh Savings	Cummulative Summer Peak MW Savings	Cummulative Winter Peak MW Savings	Hoosier Energy Costs	Participant Costs	Lifetime Economic Benefits	Cost/kWh	TRC Benefit-to-Cost Ratio
Bartholomew County REMC	52	247	7408	0.0616	0.0419	\$188,575	\$0	\$361,035	\$0.025	1.91
Clark County REMC	67	318	9545	0.0794	0.0540	\$244,124	\$0	\$465,866	\$0.026	1.91
Davies-Martin County REMC	41	195	5841	0.0486	0.0331	\$148,787	\$0	\$284,749	\$0.025	1.91
Decatur County REMC	33	157	4701	0.0391	0.0266	\$119,402	\$0	\$228,928	\$0.025	1.92
Dubois REC, Inc.	57	271	8121	0.0675	0.0460	\$203,560	\$0	\$393,828	\$0.025	1.93
Harrison REMC	33	157	4701	0.0391	0.0266	\$117,480	\$0	\$227,785	N/A	N/A
Henry County REMC	64	304	9118	0.0758	0.0516	\$229,975	\$0	\$443,035	\$0.025	1.93
Jackson County REMC	115	546	16384	0.1362	0.0928	\$416,071	\$0	\$797,825	\$0.025	1.92
Johnson County REMC	27	128	3847	0.0320	0.0218	\$100,832	\$0	\$189,185	\$0.026	1.88
Orange County REMC	37	176	5271	0.0438	0.0298	\$134,548	\$0	\$257,139	\$0.026	1.91
RushShelby Energy	48	228	6838	0.0569	0.0387	\$172,840	\$0	\$332,536	\$0.025	1.92
South Central Indiana REMC	113	537	16099	0.1338	0.0912	\$408,964	\$0	\$784,043	\$0.025	1.92
Southeastern Indiana REMC	51	242	7266	0.0604	0.0411	\$185,190	\$0	\$354,189	\$0.025	1.91
Southern Indiana Power	50	237	7123	0.0592	0.0403	\$180,174	\$0	\$346,468	\$0.025	1.92
Utilities District of Western Indiana REMC	75	356	10685	0.0888	0.0605	\$271,121	\$0	\$520,222	\$0.025	1.92
Wayne-White Counties Electric Coop	51	242	7266	0.0604	0.0411	\$186,472	\$0	\$354,951	N/A	N/A
Whitewater Valley	47	223	6696	0.0557	0.0379	\$169,280	\$0	\$325,634	\$0.025	1.92
WIN Energy	84	399	11967	0.0995	0.0678	\$301,012	\$0	\$581,053	\$0.025	1.93
<b>Total</b>	<b>1045</b>	<b>4963</b>	<b>148878</b>	<b>1.24</b>	<b>0.84</b>	<b>\$3,778,408</b>	<b>\$0</b>	<b>\$7,248,471</b>	<b>\$0.025</b>	<b>1.92</b>

Notes: Data reflects weatherizations completed between 1/1/2009 - 12/31/2011

Load Control Program  
Table 7

Co-op	Total Devices Controlled	Cummulative MWh Savings	Estimated Lifetime MWh Savings	Cummulative Summer Peak MW Savings	Cummulative Winter Peak MW Savings	Hoosier Energy Costs	Participant Costs	Lifetime Economic Benefits	Cost/kWh	TRC Benefit-to-Cost Ratio
Bartholomew County REMC	181	0	0	0.1358	0.0871	\$33,168	\$0	\$109,426	N/A	3.30
Clark County REMC	0	0	0	0.0000	0.0000	\$0	\$0	\$0	N/A	N/A
Davies-Martin County REMC	761	0	0	0.6456	0.2667	\$141,769	\$0	\$513,061	N/A	3.62
Decatur County REMC	200	0	0	0.0889	0.1778	\$37,736	\$0	\$69,989	N/A	1.85
Dubois REC, Inc.	0	0	0	0.0000	0.0000	\$0	\$0	\$0	N/A	N/A
Harrison REMC	1239	0	0	0.9780	0.5316	\$227,173	\$0	\$786,304	N/A	3.46
Henry County REMC	763	0	0	0.6151	0.3102	\$140,833	\$0	\$492,303	N/A	3.50
Jackson County REMC	0	0	0	0.0000	0.0000	\$0	\$0	\$0	N/A	N/A
Johnson County REMC	0	0	0	0.0000	0.0000	\$0	\$0	\$0	N/A	N/A
Orange County REMC	1032	0	0	0.7067	0.5867	\$190,691	\$0	\$564,986	N/A	2.96
RushShelby Energy	933	0	0	0.7553	0.3751	\$169,822	\$0	\$610,409	N/A	3.59
South Central Indiana REMC	1299	0	0	0.7060	0.9831	\$240,491	\$0	\$562,987	N/A	2.34
Southeastern Indiana REMC	969	0	0	0.7553	0.4284	\$173,304	\$0	\$617,687	N/A	3.56
Southern Indiana Power	873	0	0	0.6747	0.3938	\$159,516	\$0	\$543,760	N/A	3.41
Utilities District of Western Indiana REMC	1109	0	0	0.8336	0.5316	\$203,478	\$0	\$669,952	N/A	3.29
Wayne-White Counties Electric Coop	0	0	0	0.0000	0.0000	\$0	\$0	\$0	N/A	N/A
Whitewater Valley	8	0	0	0.0042	0.0062	\$1,424	\$0	\$3,464	N/A	2.43
WIN Energy	0	0	0	0.0000	0.0000	\$0	\$0	\$0	N/A	N/A
<b>Total</b>	<b>9367</b>	<b>0</b>	<b>0</b>	<b>6.90</b>	<b>4.68</b>	<b>\$1,719,405</b>	<b>\$0</b>	<b>\$5,544,328</b>	<b>N/A</b>	<b>3.22</b>

Notes: Data reflects switches installed between 1/1/2009 - 12/31/2011

Other Savings  
Table 8

Co-op	Total Measures Installed	Cummulative MWh Savings	Estimated Lifetime MWh Savings	Cummulative Summer Peak MW Savings	Cummulative Winter Peak MW Savings	Hoosier Energy/Co-op Costs	Participant Costs	Lifetime Economic Benefits	Cost/kWh	TRC Benefit-to-Cost Ratio
Bartholomew County REMC	33	23	163	0.002	0.005	6792	0	8978	N/A	1.32
Clark County REMC	39	28	193	0.003	0.006	7999	0	10605	N/A	1.33
Daviess-Martin County REMC	27	19	134	0.002	0.004	5431	0	7290	N/A	1.34
Decatur County REMC	42	30	208	0.003	0.007	8438	0	11331	N/A	1.34
Dubois REC, Inc.	35	25	173	0.003	0.006	7177	0	9508	N/A	1.32
Harrison REMC	397	33	232	0.001	0.005	9504	0	76517	N/A	8.05
Henry County REMC	53	37	262	0.004	0.009	10542	0	14251	N/A	1.35
Jackson County REMC	86	61	425	0.006	0.014	17262	0	23197	N/A	1.34
Johnson County REMC	13	9	64	0.001	0.002	2717	0	3555	N/A	1.31
Orange County REMC	40	28	198	0.003	0.007	8245	0	10893	N/A	1.32
RushShelby Energy	80	57	396	0.006	0.013	15962	0	21538	N/A	1.35
South Central Indiana REMC	1969	64	450	0.551	0.592	154486	0	462619	N/A	2.99
Southeastern Indiana REMC	84	59	416	0.006	0.014	16780	0	22619	N/A	1.35
Southern Indiana Power	24	17	119	0.002	0.004	4895	0	6513	N/A	1.33
Utilities District of Western Indiana REMC	65	46	322	0.005	0.011	13205	0	17604	N/A	1.33
Wayne-White Counties Electric Coop	7	5	35	0.001	0.001	1392	0	1882	N/A	1.35
Whitewater Valley	45	32	223	0.003	0.007	6976	0	12113	N/A	1.35
WIN Energy	66	47	326	0.005	0.011	13415	0	17879	N/A	1.33
<b>Total</b>	<b>3105</b>	<b>620</b>	<b>4338</b>	<b>0.68</b>	<b>0.80</b>	<b>\$313,220</b>	<b>\$0</b>	<b>\$738,893</b>	<b>\$0.072</b>	<b>2.36</b>

Notes: 1) Data reflects baseload measures installed between 1/1/2009 - 12/31/2011; 2) Other Savings are deferred weatherizations that still received baseload measures and distribution cooperative efficiency and demand response initiatives, 3) Cost/kWh for Other Savings is an energy efficiency metric. Because demand response initiatives are captured in other savings, this would present an inaccurate result. 4) N/A = not applicable

Residential HVAC Incentives Program  
Table 9

Co-op	Total Measures Installed	Cummulative MWh Savings	Estimated Lifetime MWh Savings	Cummulative Summer Peak MW Savings	Cummulative Winter Peak MW Savings	Hoosier Energy Costs	Participant Costs	Lifetime Economic Benefits	Cost/kWh	TRC Benefit-to-Cost Ratio
Bartholomew County REMC	727	696	12144	-0.17	0.41	\$198,325	\$296,147	\$969,488	\$0.041	1.96
Clark County REMC	1775	1361	21379	-0.52	0.75	\$346,520	\$513,997	\$1,744,396	\$0.040	2.03
Daviess-Martin County REMC	416	425	7239	-0.11	0.53	\$129,978	\$173,829	\$636,472	\$0.042	2.09
Decatur County REMC	221	417	7458	-0.06	0.65	\$133,737	\$195,119	\$635,562	\$0.044	1.93
Dubois REC, Inc.	894	834	14604	0.18	1.23	\$281,235	\$389,432	\$1,396,614	\$0.046	2.08
Harrison REMC	1149	1142	18803	0.34	0.59	\$286,588	\$423,429	\$1,387,219	\$0.038	1.95
Henry County REMC	295	414	7327	0.07	0.44	\$123,199	\$186,021	\$599,756	\$0.042	1.94
Jackson County REMC	958	1231	21723	0.22	0.61	\$321,628	\$477,033	\$1,481,768	\$0.037	1.86
Johnson County REMC	577	642	11447	0.16	0.62	\$191,721	\$240,664	\$888,332	\$0.038	2.05
Orange County REMC	461	272	4419	0.05	0.19	\$71,979	\$88,076	\$325,489	\$0.036	2.03
RushShelby Energy	434	535	9458	0.11	0.64	\$166,740	\$228,615	\$795,866	\$0.042	2.01
South Central Indiana REMC	2406	1670	28451	0.31	1.81	\$499,954	\$612,940	\$2,291,997	\$0.039	2.06
Southeastern Indiana REMC	1411	1370	23825	0.24	1.87	\$428,322	\$566,185	\$2,005,424	\$0.042	2.02
Southern Indiana Power	477	470	8042	0.12	0.39	\$134,487	\$192,161	\$649,463	\$0.041	1.99
Utilities District of Western Indiana REMC	821	833	14378	0.21	1.07	\$255,530	\$335,186	\$1,241,664	\$0.041	2.10
Wayne-White Counties Electric Coop	275	264	4620	0.05	0.48	\$90,909	\$119,922	\$422,332	\$0.046	2.00
Whitewater Valley	371	458	8116	0.08	0.71	\$150,423	\$201,651	\$712,770	\$0.043	2.02
WIN Energy	988	929	16207	0.17	0.73	\$267,364	\$382,354	\$1,268,645	\$0.040	1.95
<b>Total</b>	<b>14656</b>	<b>13963</b>	<b>239640</b>	<b>3.17</b>	<b>13.72</b>	<b>\$4,078,641</b>	<b>\$5,622,761</b>	<b>\$19,453,259</b>	<b>\$0.040</b>	<b>2.01</b>

Notes: Data reflects rebate claims from 1/1/2009 - 12/31/2011

Touchstone Energy Home Program  
Table 10

Co-op	Homes Completed	Cummulative MWh Savings	Estimated Lifetime MWh Savings	Cummulative Summer Peak MW Savings	Cummulative Winter Peak MW Savings	Hoosier Energy Costs	Participant Costs	Lifetime Economic Benefits	Cost/kWh	TRC Benefit-to-Cost Ratio
Bartholomew County REMC	3	14	284	0.0033	0.0021	\$3,728	\$4,448	\$15,555	\$0.029	1.90
Clark County REMC	14	66	1325	0.0155	0.0096	\$17,254	\$20,587	\$72,376	\$0.029	1.91
Daviess-Martin County REMC	3	14	284	0.0033	0.0021	\$3,450	\$4,117	\$15,156	N/A	N/A
Decatur County REMC	3	14	284	0.0033	0.0021	\$3,520	\$4,201	\$15,262	\$0.027	1.98
Dubois REC, Inc.	31	147	2934	0.0342	0.0213	\$37,416	\$44,643	\$159,189	\$0.028	1.94
Harrison REMC	25	118	2366	0.0276	0.0172	\$28,793	\$34,355	\$126,457	\$0.027	2.00
Henry County REMC	3	14	284	0.0033	0.0021	\$3,728	\$4,448	\$15,555	\$0.029	1.90
Jackson County REMC	25	118	2366	0.0276	0.0172	\$30,582	\$36,489	\$128,957	\$0.028	1.92
Johnson County REMC	0	0	0	0.0000	0.0000	\$0	\$0	\$0	N/A	N/A
Orange County REMC	2	9	189	0.0022	0.0014	\$2,344	\$2,797	\$10,158	\$0.027	1.98
RushShelby Energy	26	123	2461	0.0287	0.0179	\$31,688	\$37,809	\$133,956	\$0.028	1.93
South Central Indiana REMC	8	38	757	0.0088	0.0055	\$9,903	\$11,697	\$41,293	\$0.028	1.92
Southeastern Indiana REMC	7	33	663	0.0077	0.0048	\$8,354	\$9,967	\$35,815	\$0.028	1.95
Southern Indiana Power	12	57	1136	0.0132	0.0082	\$14,426	\$17,212	\$61,528	\$0.028	1.94
Utilities District of Western Indiana REMC	9	43	852	0.0099	0.0062	\$10,632	\$12,685	\$45,893	\$0.027	1.97
Wayne-White Counties Electric Coop	0	0	0	0.0000	0.0000	\$0	\$0	\$0	N/A	N/A
Whitewater Valley	0	0	0	0.0000	0.0000	\$0	\$0	\$0	N/A	N/A
WIN Energy	0	0	0	0.0000	0.0000	\$0	\$0	\$0	N/A	N/A
<b>Total</b>	<b>171</b>	<b>809</b>	<b>16184</b>	<b>0.19</b>	<b>0.12</b>	<b>\$205,718</b>	<b>\$245,455</b>	<b>\$877,151</b>	<b>\$0.028</b>	<b>1.94</b>

Notes: Data reflects homes completed between 1/1/2006 - 12/31/2011

Appliance Recycling Program  
Table 11

Co-op	Total Units Collected	Cummulative MWh Savings	Estimated Lifetime MWh Savings	Cummulative Summer Peak MW Savings	Cummulative Winter Peak MW Savings	Hoosier Energy Costs	Participant Costs	Lifetime Economic Benefits	Cost/kWh	TRC Benefit-to-Cost Ratio
Bartholomew County REMC	68	71	357	0.01	0.01	\$9,078	\$0	\$18,031	\$0.025	1.99
Clark County REMC	338	346	1732	0.03	0.02	\$46,981	\$0	\$88,150	\$0.027	1.88
Daviess-Martin County REMC	67	70	350	0.01	0.00	\$8,944	\$0	\$17,644	\$0.026	1.97
Decatur County REMC	68	69	344	0.01	0.00	\$9,078	\$0	\$17,350	\$0.026	1.91
Dubois REC, Inc.	263	272	1358	0.02	0.02	\$35,110	\$0	\$68,469	\$0.026	1.95
Harrison REMC	186	190	950	0.02	0.01	\$24,831	\$0	\$47,921	\$0.026	1.93
Henry County REMC	48	49	243	0.00	0.00	\$6,408	\$0	\$12,277	\$0.026	1.92
Jackson County REMC	190	193	965	0.02	0.01	\$25,365	\$0	\$48,674	\$0.026	1.92
Johnson County REMC	0	0	0	0.00	0.00	\$0	\$0	\$0	N/A	N/A
Orange County REMC	0	0	0	0.00	0.00	\$0	\$0	\$0	N/A	N/A
RushShelby Energy	155	157	784	0.01	0.01	\$20,692	\$0	\$39,556	\$0.026	N/A
South Central Indiana REMC	252	258	1288	0.02	0.02	\$34,555	\$0	\$65,344	\$0.027	1.89
Southeastern Indiana REMC	604	625	3126	0.05	0.04	\$83,918	\$0	\$159,104	\$0.027	1.90
Southern Indiana Power	177	181	905	0.02	0.01	\$24,623	\$0	\$46,063	\$0.027	1.87
Utilities District of Western Indiana REMC	109	111	553	0.01	0.01	\$14,551	\$0	\$27,882	\$0.026	1.92
Wayne-White Counties Electric Coop	76	79	393	0.01	0.01	\$10,146	\$0	\$19,821	\$0.026	1.95
Whitewater Valley	89	92	458	0.01	0.01	\$11,881	\$0	\$23,093	\$0.026	1.94
WIN Energy	0	0	0	0.00	0.00	\$0	\$0	\$0	N/A	N/A
<b>Total</b>	<b>2690</b>	<b>2761</b>	<b>13806</b>	<b>0.23</b>	<b>0.20</b>	<b>\$366,162</b>	<b>\$0</b>	<b>\$699,380</b>	<b>\$0.027</b>	<b>1.91</b>

Notes: Data reflects units collected from 3/1/2010 - 12/31/2011

# APPENDIX C

## Basic program assumptions

### Residential Lighting

Measure: CFL	
Annual kWh Saved:	53
Winter Demand Savings:	0.048
Summer Demand Savings:	0.048
Annual Avoided Maintenance Cost:	\$2.25
Winter Peak Coincidence Factor:	26%
Summer Peak Coincidence Factor:	11%
Installation Rate:	70%

### Measure: LED holiday lights

Annual kWh Saved:	17.1
Winter Demand Savings:	0.048
Summer Demand Savings:	0.000
Annual Avoided Maintenance Cost:	\$0
Winter Peak Coincidence Factor:	100%
Summer Peak Coincidence Factor:	0%
Installation Rate:	90%

### Appliance Recycling Program

#### Measure: Refrigerator/freezer

Annual kWh Saved:	976
Winter Demand Savings:	0.1114
Summer Demand Savings:	0.1114
Annual Avoided Maintenance Cost:	\$0
Winter Peak Coincidence Factor:	62.3%
Summer Peak Coincidence Factor:	73%
Installation Rate:	100%

### C&I Energy Efficiency Program

Lighting: All Commercial & Industrial lighting replacement savings are calculated for each individual rebate claim based on the estimated existing and replacement watt-ages and time used. Therefore, the savings estimates are more accurate than using an estimated average savings per replacement.

#### Measure: Agriculture lighting

Annual kWh Saved:	229
Winter Demand Savings:	0.076
Summer Demand Savings:	0.076
Annual Avoided Maintenance Cost:	\$0
Winter Peak Coincidence Factor:	100%
Summer Peak Coincidence Factor:	100%
Installation Rate:	100%

#### Measure: Occupancy sensors

Annual kWh Saved:	443
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Winter Demand Savings:	0.111
Summer Demand Savings:	0.111
Annual Avoided Maintenance Cost:	\$0
Winter Peak Coincidence Factor:	100%
Summer Peak Coincidence Factor:	100%
Installation Rate:	90%

#### Measure: Motors <= 10HP

Annual kWh Saved:	75
Winter Demand Savings:	0.019
Summer Demand Savings:	0.019
Annual Avoided Maintenance Cost:	\$0
Winter Peak Coincidence Factor:	100%
Summer Peak Coincidence Factor:	100%
Installation Rate:	100%

#### Measure: Motor >10HP

Annual kWh Saved:	35
Winter Demand Savings:	0.009
Summer Demand Savings:	0.009
Annual Avoided Maintenance Cost:	\$0
Winter Peak Coincidence Factor:	100%
Summer Peak Coincidence Factor:	100%
Installation Rate:	100%

#### Measure: Variable speed on motors

Annual kWh Saved:	760
Winter Demand Savings:	0.000
Summer Demand Savings:	0.000
Annual Avoided Maintenance Cost:	\$0
Winter Peak Coincidence Factor:	100%
Summer Peak Coincidence Factor:	100%
Installation Rate:	100%

#### Measure: Programmable thermostat

Annual kWh Saved:	891.5
Winter Demand Savings:	0.000
Summer Demand Savings:	0.000
Annual Avoided Maintenance Cost:	\$0
Winter Peak Coincidence Factor:	100%
Summer Peak Coincidence Factor:	100%
Installation Rate:	80%

#### Measure: Heat pump 12.2 SEER

Annual kWh Saved:	675
Winter Demand Savings:	0.232
Summer Demand Savings:	0.232
Annual Avoided Maintenance Cost:	\$0
Winter Peak Coincidence Factor:	100%
Summer Peak Coincidence Factor:	100%

#### Measure: Air conditioner 12.2

Annual kWh Saved:	196
Winter Demand Savings:	0.182
Summer Demand Savings:	0.182
Annual Avoided Maintenance Cost:	\$0
Winter Peak Coincidence Factor:	100%
Summer Peak Coincidence Factor:	100%
Installation Rate:	100%

### Weatherization Program (Hoosier Energy & ARRA)

#### Measure: Weatherized home

Annual kWh Saved:	4274
Winter Demand Savings:	.7260
Summer Demand Savings:	1.066
Annual Avoided Maintenance Cost:	\$0
Winter Peak Coincidence Factor:	100%
Summer Peak Coincidence Factor:	100%
Installation Rate:	100%

### Residential HVAC Incentives Program

#### Measure: 80 gallon hot water heater

Annual kWh Saved:	82
Winter Demand Savings:	0.03
Summer Demand Savings:	0.03
Annual Avoided Maintenance Cost:	\$0
Winter Peak Coincidence Factor:	100%
Summer Peak Coincidence Factor:	100%
Installation Rate:	100%

#### Measure: 50 gallon hot water heater

Annual kWh Saved:	172
Winter Demand Savings:	0.03
Summer Demand Savings:	0.03
Annual Avoided Maintenance Cost:	\$0
Winter Peak Coincidence Factor:	100%
Summer Peak Coincidence Factor:	100%
Installation Rate:	100%

#### Measure: Heat pump water heater

Annual kWh Saved:	1,943
Winter Demand Savings:	4
Summer Demand Savings:	4
Annual Avoided Maintenance Cost:	\$0
Winter Peak Coincidence Factor:	100%
Summer Peak Coincidence Factor:	100%
Installation Rate:	100%

Measure: 14/15 SEER air conditioner  
 Annual kWh Saved: 356.87  
 Winter Demand Savings: 0.358  
 Summer Demand Savings: 0.358  
 Annual Avoided Maintenance Cost: \$0  
 Winter Peak Coincidence Factor: 0%  
 Summer Peak Coincidence Factor: 73%  
 Installation Rate: 100%

Measure: 16 SEER air conditioner  
 Annual kWh Saved: 501.97  
 Winter Demand Savings: 0.504  
 Summer Demand Savings: 0.504  
 Annual Avoided Maintenance Cost: \$0  
 Winter Peak Coincidence Factor: 0%  
 Summer Peak Coincidence Factor: 73%  
 Installation Rate: 100%

Measure: 17 SEER air conditioner  
 Annual kWh Saved: 675.45  
 Winter Demand Savings: 0.678  
 Summer Demand Savings: 0.678  
 Annual Avoided Maintenance Cost: \$0  
 Winter Peak Coincidence Factor: 0%  
 Summer Peak Coincidence Factor: 73%  
 Installation Rate: 100%

Measure: 15 SEER heat pump  
 Annual kWh Saved: 985.21  
 Winter Demand Savings: 0.358  
 Summer Demand Savings: 0.358  
 Annual Avoided Maintenance Cost: \$0  
 Winter Peak Coincidence Factor: 45.4%  
 Summer Peak Coincidence Factor: 73%  
 Installation Rate: 100%

Measure: 16 SEER heat pump  
 Annual kWh Saved: 1,194.99  
 Winter Demand Savings: 0.325  
 Summer Demand Savings: 0.504  
 Annual Avoided Maintenance Cost: \$0  
 Winter Peak Coincidence Factor: 45.4%  
 Summer Peak Coincidence Factor: 73%  
 Installation Rate (Accounts for Free Rider-ship): 100%

Measure: 17 SEER heat pump  
 Annual kWh Saved: 1,348.99  
 Winter Demand Savings: 0.3160  
 Summer Demand Savings: 0.6780  
 Annual Avoided Maintenance Cost: \$0  
 Winter Peak Coincidence Factor: 45.4%  
 Summer Peak Coincidence Factor: 73%  
 Installation Rate: 100%

Measure: 15 SEER heat pump – Electric furnace replacement  
 Annual kWh Saved: 3,135.21  
 Winter Demand Savings: 5.09  
 Summer Demand Savings: 0.358  
 Annual Avoided Maintenance Cost: \$0  
 Winter Peak Coincidence Factor: 0%  
 Summer Peak Coincidence Factor: 73%  
 Installation Rate: 100%

Measure: 16 SEER heat pump – electric furnace replacement  
 Annual kWh Saved: 3,344.99  
 Winter Demand Savings: 5.15  
 Summer Demand Savings: 0.504  
 Annual Avoided Maintenance Cost: \$0  
 Winter Peak Coincidence Factor: 0%  
 Summer Peak Coincidence Factor: 73%  
 Installation Rate: 100%

Measure: 17 SEER heat Pump – electric furnace replacement  
 Annual kWh Saved: 3,498.99  
 Winter Demand Savings: 5.21  
 Summer Demand Savings: 0.678  
 Annual Avoided Maintenance Cost: \$0  
 Winter Peak Coincidence Factor: 0%  
 Summer Peak Coincidence Factor: 73%  
 Installation Rate: 100%

Measure: Geothermal heat pump  
 Annual kWh Saved: 2,248  
 Winter Demand Savings: 6.1  
 Summer Demand Savings: 0.3  
 Annual Avoided Maintenance Cost: \$0  
 Winter Peak Coincidence Factor: 100%  
 Summer Peak Coincidence Factor: 100%  
 Installation Rate: 100%

### Touchstone Energy Home Program

Measure: Touchstone Energy Home  
 Annual kWh Saved: 4,259  
 Winter Demand Savings: 0.726  
 Summer Demand Savings: 1.361  
 Annual Avoided Maintenance Cost: \$0  
 Winter Peak Coincidence Factor: 45.4%  
 Summer Peak Coincidence Factor: 73%  
 Installation Rate: 100%

### Load Control Program

Measure: <80 gallon water heater  
 Annual kWh Saved: 0  
 Winter Demand Savings: 0.8  
 Summer Demand Savings: 0.456  
 Annual Avoided Maintenance Cost: \$0  
 Winter Peak Coincidence Factor: 100%  
 Summer Peak Coincidence Factor: 100%  
 Installation Rate: 100%

Measure: >80 gallon water heater  
 Annual kWh Saved: 0  
 Winter Demand Savings: 0.8  
 Summer Demand Savings: 0.0456  
 Annual Avoided Maintenance Cost: \$0  
 Winter Peak Coincidence Factor: 100%  
 Summer Peak Coincidence Factor: 100%  
 Installation Rate: 100%

Measure: Air conditioner  
 Annual kWh Saved: 0  
 Winter Demand Savings: 0  
 Summer Demand Savings: 0.995  
 Annual Avoided Maintenance Cost: \$0  
 Winter Peak Coincidence Factor: 100%  
 Summer Peak Coincidence Factor: 100%  
 Installation Rate: 100%

Measure: Geothermal  
 Annual kWh Saved: 0  
 Winter Demand Savings: 0  
 Summer Demand Savings: 0.93  
 Annual Avoided Maintenance Cost: \$0  
 Winter Peak Coincidence Factor: 100%  
 Summer Peak Coincidence Factor: 100%  
 Installation Rate: 100%

Measure: Heat pump  
 Annual kWh Saved: 0  
 Winter Demand Savings: 0  
 Summer Demand Savings: 0.88  
 Annual Avoided Maintenance Cost: \$0  
 Winter Peak Coincidence Factor: 100%  
 Summer Peak Coincidence Factor: 100%  
 Installation Rate: 100%

### Other savings

Measure: Deferred weatherization (Received baseload measures)  
 Annual kWh Saved: 795  
 Winter Demand Savings: 0.72  
 Summer Demand Savings: 0.72  
 Annual Avoided Maintenance Cost: \$0  
 Winter Peak Coincidence Factor: 25.5%  
 Summer Peak Coincidence Factor: 11.2%  
 Installation Rate: 100%

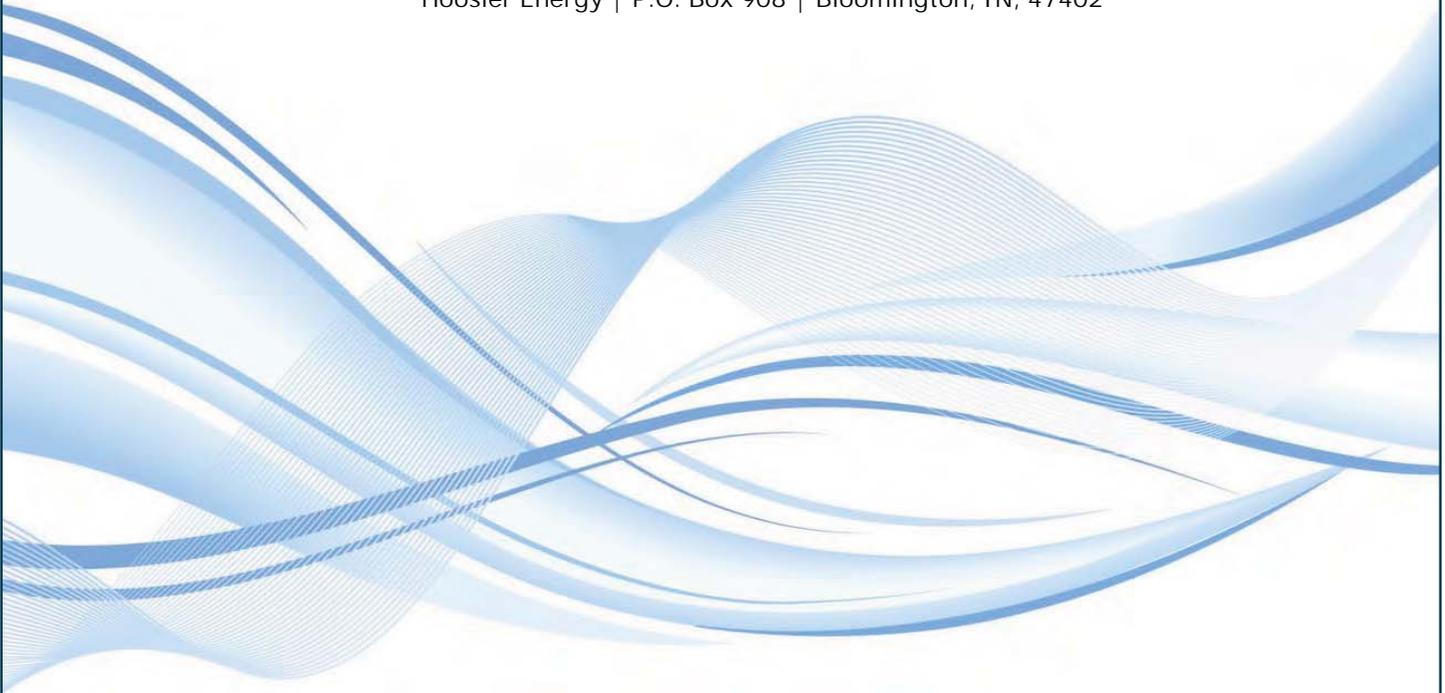


## The Hoosier Energy Power Network

Hoosier Energy is a generation and transmission cooperative providing electric power to 18 member electric distribution cooperatives in central and southern Indiana and one member cooperative in Illinois. Based in Bloomington, Hoosier Energy operates coal, natural gas and renewable energy power plants and delivers power through a 1,700-mile transmission network.

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**Hoosier Energy REC  
2011 Integrated Resource Plan  
Volume II: Appendices  
Redacted Version**

**December 2011**

*Prepared By:*

**Hoosier Energy Rural Electric Cooperative, Inc.  
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## **Appendix B**

### **Hourly System Demands**

## **Appendix B: Hourly System Demands**

Hourly System Demands

	HE1	HE2	HE3	HE4	HE5	HE6	HE7	HE8	HE9	HE10	HE11	HE12	HE13	HE14	HE15	HE16	HE17	HE18	HE19	HE20	HE21	HE22	HE23	HE24	
1/1/2010	883	902	897	897	930	954	977	1008	1026	1060	1060	1050	1022	981	960	940	938	1049	1116	1124	1118	1103	1079	1049	
1/2/2010	1030	1003	1010	1011	1026	1048	1082	1126	1159	1173	1178	1129	1081	1045	1014	1003	1015	1069	1179	1182	1175	1166	1161	1138	
1/3/2010	1103	1098	1089	1108	1128	1149	1182	1222	1249	1249	1192	1146	1098	1063	1009	1035	1089	1142	1213	1229	1220	1171	1113	1062	
1/4/2010	1035	1018	1021	1023	1060	1135	1237	1276	1247	1299	1197	1169	1143	1119	1091	1069	1097	1196	1216	1266	1236	1267	1204	1144	
1/5/2010	1115	1101	1086	1111	1140	1214	1319	1357	1307	1279	1240	1195	1163	1131	1097	1081	1104	1192	1275	1291	1280	1263	1254	1072	
1/6/2010	1087	1069	1056	1058	1060	1146	1259	1278	1237	1216	1189	1160	1133	1098	1066	1050	1088	1128	1216	1229	1203	1148	1082		
1/7/2010	1038	1010	984	987	1025	1078	1155	1177	1169	1178	1176	1173	1159	1151	1144	1136	1169	1267	1354	1335	1312	1271	1221	1179	
1/8/2010	1143	1125	1104	1118	1153	1201	1261	1302	1303	1304	1287	1259	1237	1202	1175	1161	1159	1208	1253	1229	1204	1154	1134	1091	
1/9/2010	1046	1031	1016	1023	1020	1047	1079	1126	1160	1186	1178	1149	1137	1073	1040	1043	1053	1107	1157	1154	1150	1128	1113	1080	
1/10/2010	1038	1028	1012	1033	1027	1041	1068	1114	1162	1161	1112	1062	1019	978	944	934	985	1056	1154	1190	1197	1160	1105	1060	
1/11/2010	1028	1020	1018	1013	1043	1100	1216	1239	1183	1176	1166	1116	1102	1063	1064	1056	1083	1134	1208	1206	1166	1159	1117	1031	
1/12/2010	1036	989	976	962	1004	1075	1162	1195	1147	1114	1063	1010	966	945	922	945	966	1038	1129	1155	1160	1139	1104	1054	
1/13/2010	1031	1028	1022	1039	1073	1188	1280	1287	1225	1161	1076	1037	970	940	897	860	900	972	1074	1099	1068	1067	1022	955	
1/14/2010	930	905	901	911	941	1017	1135	1164	1097	1035	995	940	906	875	854	838	859	910	951	1004	993	953	893	824	
1/15/2010	778	796	749	742	760	822	935	962	927	905	896	860	831	813	798	791	815	853	903	890	876	856	837	790	
1/16/2010	750	740	721	722	715	740	776	822	870	901	911	895	857	825	802	788	806	830	864	886	851	817	794	763	
1/17/2010	716	689	678	673	678	690	721	765	806	846	854	856	855	831	812	791	790	840	916	928	934	899	866	826	
1/18/2010	796	776	779	781	807	879	968	1015	1015	1026	1039	1031	1020	1016	988	952	984	1036	1084	1068	1035	1008	954	882	
1/19/2010	838	824	813	811	839	898	1007	1036	996	980	971	947	929	899	875	868	863	927	990	994	987	953	902	845	
1/20/2010	803	781	771	783	812	885	1014	1041	1006	987	996	998	976	960	973	982	1033	1072	1070	1049	1018	995	966		
1/21/2010	849	819	816	812	841	896	1004	1028	968	965	977	963	938	932	925	931	977	1010	1022	981	928	865	791		
1/22/2010	748	723	713	718	732	757	810	852	911	902	888	897	871	862	850	842	894	986	926	912	900	874	859	797	
1/23/2010	754	723	709	700	706	721	759	795	837	863	874	864	841	818	786	777	787	793	832	822	805	783	753	707	
1/24/2010	679	643	628	617	625	626	659	698	743	771	770	775	768	761	763	757	732	728	752	811	838	830	781	744	701
1/25/2010	666	655	656	673	712	802	927	994	990	957	952	950	950	955	959	966	990	1046	1103	1116	1102	1061	1011	947	
1/26/2010	507	481	478	485	466	1002	1091	1128	1120	1115	1106	1091	1050	1080	1060	1067	1081	1071	1121	1180	1197	1177	1141	1079	1028
1/27/2010	990	977	966	983	1018	1082	1198	1228	1161	1122	1064	1018	992	958	924	912	935	1005	1064	1076	1065	1056	978	910	
1/28/2010	871	840	816	830	856	947	1072	1126	1090	1052	1030	1004	981	968	946	938	957	1039	1148	1196	1211	1169	1144	1088	
1/29/2010	1055	1046	1040	1043	1081	1136	1237	1278	1229	1212	1209	1179	1160	1126	1104	1122	1155	1208	1193	1180	1159	1133	1080		
1/30/2010	1052	1035	1028	1016	1027	1040	1069	1105	1143	1146	1136	1085	1037	995	964	946	937	973	1055	1085	1079	1056	1041	1010	
1/31/2010	986	981	966	999	1023	1055	1089	1148	1179	1132	1054	1002	955	916	870	852	849	910	1024	1064	1060	1032	990	941	
2/1/2010	916	914	930	948	963	1062	1186	1216	1158	1104	1046	987	946	902	870	842	849	909	1014	1052	1041	1008	945	882	
2/2/2010	845	830	810	817	839	909	1025	1055	966	976	938	907	888	882	875	870	883	948	1013	1030	1012	981	926	869	
2/3/2010	832	810	797	806	834	908	1033	1075	1035	1018	1001	963	938	909	895	888	875	921	1033	1064	1080	1047	1003	947	
2/4/2010	914	894	881	896	918	967	1105	1127	1081	1052	1038	994	971	959	912	902	914	941	1010	1030	1019	989	933	873	
2/5/2010	830	809	792	811	815	891	963	1025	1004	991	1003	1000	968	993	987	975	988	1015	1055	1049	1023	992	935	811	
2/6/2010	886	867	845	860	871	895	908	975	1031	1067	1082	1075	1048	1017	1006	981	987	1000	1069	1079	1067	1049	1026	998	
2/7/2010	973	960	955	965	976	1003	1033	1095	1122	1107	1049	1005	969	948	909	904	917	952	1010	996	1021	1003	1007	960	
2/8/2010	923	915	918	938	971	1051	1175	1201	1168	1129	1073	1023	961	918	892	932	931	989	1021	1092	1118	1107	1070	1025	959
2/9/2010	500	512	497	493	827	970	1018	1042	1043	1056	1055	1028	1032	1010	1026	1026	1035	1010	1115	1196	1204	1186	1133	1082	1025
2/10/2010	1110	1098	1082	1071	1093	1108	1159	1176	1179	1186	1172	1166	1140	1113	1092	1070	1080	1119	1195	1204	1189	1143	1082	1025	
2/11/2010	591	569	562	569	591	1062	1143	1173	1178	1119	1077	1018	972	942	915	895	894	940	1046	1126	1129	1116	1098	1056	
2/12/2010	1039	1039	1045	1062	1106	1184	1275	1316	1280	1236	1125	1050	970	916	888	862	873	921	1013	1040	1048	1044	1033	968	
2/13/2010	973	961	948	949	962	977	1020	1074	1103	1101	1048	1002	948	898	869	857	860	895	972	1005	1018	1000	985	972	
2/14/2010	952	939	956	964	966	1018	1046	1086	1126	1095	1047	985	948	901	879	866	889	923	969	1019	1020	985	936	888	
2/15/2010	854	841	843	846	862	938	1025	1069	1093	1119	1130	1135	1138	1108	1084	1078	1089	1128	1189	1202	1167	1130	1081	1063	
2/16/2010	1001	976	955	955	977	1027	1074	1122	1128	1136	1129	1117	1098	1088	1074	1073	1073	1107	1161	1181	1149	1107	1043	988	
2/17/2010	949	934	913	933	941	996	1091	1112	1101	1082	1051	1018	979	965	957	954	961	1017	1084	1111	1108	1067	1020	958	
2/18/2010	926	900	891	900	928	996	1094	1120	1104	1081	1018	976	946	929	911	906	904	940	1010	1078	1082	1070	1016	974	
2/19/2010	927	899	904	900	937	1059	1191	1230	1174	1022	899	825	888	845	816	813	792	826	902	955	964	959	944	906	
2/20/2010	845	848	827	814	821	839	875	915	967	981	946	911	857	823	792	770	761	790	823	884	854	845	823	786	
2/21/2010	748	722	706	715	710	738	758	813	843	853	830	797	785	751	724	716	717	750	818	875	870	829	778	723	
2/22/2010	583	673	670	692	708	795	895	930	897	888	859	874	860	854	875	885	886	943	1002	1026	1012	978	918	853	
2/23/2010	823	805	790	795	823	887	1014	1036	987	981	985	956	946	935	929	938	947	981	1024	1054	1054	1022	964	901	
2/24/2010	868	844	843																						

Hourly System Demands

	HE1	HE2	HE3	HE4	HE5	HE6	HE7	HE8	HE9	HE10	HE11	HE12	HE13	HE14	HE15	HE16	HE17	HE18	HE19	HE20	HE21	HE22	HE23	HE24
1/1/2010	744	718	738	743	770	846	996	1005	954	934	922	894	891	879	862	866	865	811	865	1005	194	359	309	948
1/2/2010	823	806	786	820	852	918	1052	1079	1033	998	974	929	897	871	853	835	846	894	951	1033	1030	1000	948	889
1/3/2010	847	837	828	836	859	932	1066	1087	1016	982	970	951	920	919	902	899	915	961	994	1026	1029	995	943	887
1/4/2010	857	844	842	859	866	955	1099	1096	1016	958	911	860	827	802	772	752	740	785	852	859	880	973	931	882
1/5/2010	851	842	841	861	901	973	1106	1114	1024	957	893	835	806	772	746	717	714	729	784	857	885	888	877	847
1/6/2010	817	808	809	825	845	979	950	973	998	931	869	817	769	727	696	673	653	674	711	787	806	814	800	785
1/7/2010	763	761	763	776	796	812	857	885	921	883	813	756	729	683	661	641	668	705	752	617	811	771	706	656
1/8/2010	825	823	822	842	879	772	904	930	886	843	820	772	737	716	679	660	666	674	729	908	825	791	738	689
1/9/2010	862	857	850	888	894	777	916	919	882	809	763	744	719	715	705	690	701	694	761	817	829	780	730	648
1/10/2010	819	801	816	844	801	660	765	793	732	780	716	699	672	672	654	635	622	649	681	761	764	724	664	600
1/11/2010	555	531	514	518	550	611	740	737	695	730	723	703	680	672	663	658	661	688	717	775	776	746	692	630
1/12/2010	587	566	550	565	595	689	826	800	790	875	772	732	747	748	700	681	713	738	757	767	757	738	700	662
1/13/2010	621	576	574	569	577	601	639	696	726	760	771	768	754	733	726	734	725	752	766	781	765	744	702	654
1/14/2010	623	590	595	587	588	620	659	711	750	772	783	784	776	757	757	767	765	789	827	867	867	811	740	694
1/15/2010	639	628	633	653	722	840	892	858	852	865	843	823	806	788	784	819	851	860	823	892	811	740	694	694
1/16/2010	662	646	650	680	778	836	897	853	814	786	758	716	692	700	683	658	688	701	729	802	774	726	686	623
1/17/2010	606	586	612	640	715	854	937	884	832	784	754	733	724	700	682	654	650	672	699	786	780	730	673	633
1/18/2010	521	618	635	665	742	860	942	898	837	792	743	719	706	664	654	643	648	653	697	766	766	708	642	601
1/19/2010	585	576	593	626	696	828	885	845	776	731	693	665	649	664	629	618	620	629	639	701	697	665	615	574
1/20/2010	546	541	550	567	587	636	686	732	740	717	681	657	626	604	580	589	593	593	616	686	656	621	585	539
1/21/2010	518	518	520	520	543	583	620	677	699	693	692	684	662	638	632	642	667	681	708	743	719	664	617	577
1/22/2010	564	560	566	589	656	757	817	821	824	845	842	837	809	819	814	816	843	856	868	896	862	806	742	702
1/23/2010	683	666	674	700	760	855	904	883	854	830	791	758	732	695	672	640	652	658	693	755	755	704	647	621
1/24/2010	603	604	615	640	706	805	883	830	805	779	740	717	688	665	638	626	637	665	693	748	734	697	627	579
1/25/2010	554	527	540	559	619	715	754	745	743	751	740	732	732	730	705	714	798	908	837	894	844	802	750	743
1/26/2010	724	721	735	754	824	918	970	951	920	898	860	828	801	768	727	705	700	705	725	804	824	808	776	747
1/27/2010	726	717	731	741	766	799	848	872	857	822	771	723	677	641	618	608	611	623	640	685	679	637	592	546
1/28/2010	619	602	611	644	722	839	922	873	877	837	807	689	673	664	646	634	676	664	715	759	731	684	636	601
1/29/2010	593	583	602	642	713	851	902	871	873	854	835	807	781	751	720	689	688	710	731	813	894	747	699	664
1/30/2010	653	657	666	697	775	892	920	894	838	788	750	720	700	685	652	641	691	680	682	748	731	698	636	582
1/31/2010	578	572	587	621	684	816	853	805	772	735	700	685	668	648	630	629	638	638	672	729	735	667	595	546
2/1/2010	507	486	488	501	566	668	718	700	691	770	664	651	641	662	661	633	635	621	667	727	732	673	591	519
2/2/2010	484	461	450	458	477	554	600	603	608	613	608	596	604	601	582	602	611	603	600	642	647	614	547	487
2/3/2010	456	427	420	415	424	449	493	520	507	627	632	620	596	581	569	556	572	568	573	608	608	589	536	486
2/4/2010	435	438	433	443	464	515	563	623	642	605	604	580	549	516	509	514	524	530	565	644	653	588	511	466
2/5/2010	442	435	433	448	506	634	681	663	679	676	693	701	721	701	708	710	729	756	789	791	779	703	615	557
2/6/2010	507	487	473	493	544	659	708	677	699	698	704	708	718	714	732	729	744	755	750	798	815	791	627	563
2/7/2010	506	495	487	495	548	668	703	677	696	692	695	682	681	679	669	671	698	707	725	760	725	663	595	527
2/8/2010	493	475	468	483	548	674	721	703	699	708	707	705	706	686	686	669	709	708	706	781	807	742	657	613
2/9/2010	601	579	591	610	662	812	851	802	779	753	732	704	694	669	651	636	632	641	644	697	730	694	640	607
2/10/2010	581	577	578	595	627	864	715	735	713	699	650	619	597	579	576	575	587	577	582	617	636	601	542	491
2/11/2010	472	461	463	473	489	525	571	618	627	604	593	590	570	565	568	580	595	619	635	690	706	619	539	481
2/12/2010	460	446	451	471	536	668	702	682	694	654	679	676	675	674	674	674	694	695	693	751	766	676	577	516
2/13/2010	492	466	463	478	555	671	709	677	695	656	654	662	673	678	699	698	704	717	722	760	777	697	593	530
2/14/2010	484	487	454	475	532	656	695	670	683	589	673	681	698	707	714	727	724	760	757	732	811	719	617	538
2/15/2010	510	485	469	480	541	666	684	665	666	678	689	696	718	738	756	742	756	757	765	790	822	732	626	547
2/16/2010	511	481	480	487	541	655	687	674	682	690	696	712	713	706	702	680	672	664	642	666	666	617	551	503
2/17/2010	468	456	449	453	469	512	547	604	621	622	610	603	582	582	554	563	585	572	578	615	641	603	568	535
2/18/2010	517	494	499	510	530	567	614	654	662	634	616	596	582	552	549	552	577	595	617	666	667	614	547	498
2/19/2010	406	469	497	536	613	783	785	740	717	694	680	663	664	661	647	649	664	695	730	746	673	580	535	
2/20/2010	509	502	501	524	598	732	759	729	700	689	671	673	667	660	653	646	632	661	661	714	740	669	567	516
2/21/2010	506	496	502	522	598	737	772	718	698	687	667	660	657	640	644	646	632	661	661	714	740	669	567	516
2/22/2010	488	485	481	507	577	701	756	717	689	682	681	683	666	658	650	654	654	673	665	725	747	667	575	519
2/23/2010	469	482	480	517	559	654	676	699	693	697	683	686	678	659	650	653	667	648	653	683	689	643	609	511
2/24/2010	485	469	465	483	477	504	540	589	622	642	632	633	618	608	619	617	634	633	621	628	613	581	527	485
2/25/2010	458	443	433	437	447	465	498	560	600	600	619	627	618	605	608	612	631	651	653	685	679	612	545	494
2/26/2010	478	465	472	496	564	694	732	720	727	729	708	732	725	719	706	706	721	733	732	768	764	699	615	572
2/27/2010	553	532	535	560	674</																			

Hourly System Demands

	HE1	HE2	HE3	HE4	HE5	HE6	HE7	HE8	HE9	HE10	HE11	HE12	HE13	HE14	HE15	HE16	HE17	HE18	HE19	HE20	HE21	HE22	HE23	HE24
5/1/2010	523	492	483	460	472	492	504	585	615	609	652	648	636	626	624	624	617	611	608	629	648	611	548	493
5/2/2010	463	443	428	424	435	444	474	536	576	603	623	640	643	626	621	637	62	680	679	700	710	651	565	497
5/3/2010	460	459	447	459	522	636	681	676	688	710	715	728	736	738	730	734	746	759	759	772	784	694	599	532
5/4/2010	500	476	471	481	542	635	658	667	676	688	680	697	703	719	716	722	741	764	756	772	789	719	603	539
5/5/2010	500	476	470	484	542	654	679	671	679	692	695	732	748	755	763	776	802	795	799	816	835	760	641	570
5/6/2010	511	466	493	497	537	543	578	674	681	689	694	698	709	706	713	715	682	745	743	750	781	710	605	534
5/7/2010	497	475	479	486	556	642	698	696	678	696	715	721	770	769	776	781	738	745	736	740	763	692	607	529
5/8/2010	492	466	453	449	468	498	535	597	632	645	642	633	652	612	607	613	655	625	634	657	679	650	562	552
5/9/2010	532	511	517	523	541	572	616	663	667	644	625	600	572	552	537	545	555	572	595	638	684	635	562	523
5/10/2010	501	502	515	541	612	739	773	743	726	713	700	690	692	672	657	656	689	683	715	730	755	691	598	547
5/11/2010	519	511	510	527	595	706	735	707	703	704	711	704	695	690	692	684	700	714	724	747	772	711	616	552
5/12/2010	514	498	487	490	553	664	694	684	697	703	697	703	700	710	713	712	746	763	765	780	798	739	634	567
5/13/2010	529	507	496	505	568	691	700	704	731	749	766	772	783	795	802	796	805	822	822	839	875	806	699	611
5/14/2010	566	535	529	530	582	662	719	698	715	725	733	730	732	745	741	754	758	748	722	710	727	694	610	534
5/15/2010	496	479	457	461	471	505	540	591	630	630	634	644	638	632	634	646	636	641	627	631	651	627	542	488
5/16/2010	452	426	424	420	426	446	467	539	572	575	594	604	592	584	583	582	617	623	648	654	659	601	532	479
5/17/2010	453	446	442	469	521	630	681	685	696	702	705	713	700	690	687	706	718	725	735	729	673	575	523	
5/18/2010	494	474	475	486	545	660	684	676	672	674	673	677	685	655	658	655	676	684	695	696	718	658	578	513
5/19/2010	487	475	472	490	547	671	689	680	682	683	689	686	667	659	650	645	683	666	674	704	727	674	581	530
5/20/2010	524	498	498	508	566	686	711	700	695	689	692	689	700	673	679	670	687	683	700	730	740	672	601	526
5/21/2010	500	485	474	469	545	648	625	688	699	715	675	705	703	701	668	688	702	680	690	676	698	672	599	530
5/22/2010	500	471	455	460	489	491	538	597	645	658	659	664	675	679	689	714	731	736	726	707	730	695	599	
5/23/2010	497	458	448	435	448	448	488	488	560	519	649	690	739	781	807	842	886	916	946	945	948	961	877	755
5/24/2010	602	565	545	542	568	688	736	762	809	861	911	959	998	1026	1043	1080	1086	1116	1064	1043	1032	932	790	687
5/25/2010	628	578	562	561	607	703	752	780	776	803	890	930	978	1007	1021	1049	1064	1059	1034	1015	1015	917	786	679
5/26/2010	620	583	555	562	603	709	756	763	816	863	917	956	1016	1037	1052	1056	1099	1100	1061	1041	1039	948	807	696
5/27/2010	633	594	572	574	621	712	765	787	821	875	938	992	1037	1032	1014	987	993	927	897	867	886	834	723	643
5/28/2010	590	563	543	552	589	692	707	732	759	790	832	890	917	938	950	1012	1015	1013	977	938	922	871	781	652
5/29/2010	500	471	455	460	489	491	538	597	645	658	659	664	675	679	689	714	731	736	726	707	730	695	599	
5/30/2010	589	540	506	490	485	490	531	621	700	776	836	904	935	961	978	998	998	994	951	927	898	833	754	660
5/31/2010	599	554	532	521	517	519	546	558	625	723	786	823	842	858	878	974	969	951	907	913	852	794	694	604
6/1/2010	545	529	507	515	571	653	725	745	773	807	853	908	955	997	1035	1070	1100	1093	1074	1037	1025	946	901	691
6/2/2010	634	593	575	576	625	710	751	753	786	802	847	897	954	999	1031	1042	1048	1022	986	956	950	891	766	681
6/3/2010	653	581	559	563	604	675	716	712	763	809	864	908	948	985	1017	1041	1033	1028	1009	977	960	905	789	692
6/4/2010	627	590	569	581	598	673	725	798	857	884	913	954	1029	1066	1085	1129	1122	1111	1079	1034	1025	968	866	772
6/5/2010	700	656	627	614	615	622	671	722	796	846	890	928	947	964	964	1009	1011	1003	972	940	922	892	805	732
6/6/2010	676	647	616	608	605	606	622	668	692	720	729	748	752	750	774	801	818	826	813	833	792	749	655	578
6/7/2010	525	502	489	504	549	617	670	709	744	779	806	840	857	879	902	898	907	908	898	883	862	815	694	617
6/8/2010	569	545	527	535	574	634	687	697	739	771	802	825	851	870	895	879	898	898	883	874	859	845	746	658
6/9/2010	611	583	570	576	621	695	741	774	803	826	848	866	886	906	932	952	981	1006	982	952	929	884	764	668
6/10/2010	595	558	543	541	580	647	691	744	796	835	890	925	975	1001	1028	1066	1084	1085	1072	1022	1015	953	833	730
6/11/2010	658	614	594	592	632	707	746	797	862	920	1008	1065	1077	1083	1064	1044	1051	1043	1003	968	961	908	815	726
6/12/2010	697	624	606	595	610	627	661	730	791	855	908	950	1010	1055	1082	1154	1145	1140	1101	1039	979	919	826	742
6/13/2010	668	619	594	584	552	553	600	681	751	828	898	937	975	1024	1060	1097	1116	1115	1098	1066	1020	922	799	711
6/14/2010	642	612	594	600	635	707	762	820	890	965	1033	1094	1148	1177	1198	1207	1225	1234	1193	1127	1058	972	842	753
6/15/2010	677	637	615	617	652	718	775	791	862	888	950	1018	1073	1139	1179	1206	1228	1175	1094	1009	958	885	776	699
6/16/2010	652	612	590	589	644	709	759	806	863	915	959	995	1042	1068	1086	1109	1119	1121	1087	1032	1002	936	807	704
6/17/2010	629	587	559	562	605	665	729	772	822	874	934	977	1025	1058	1086	1122	1131	1125	1100	1059	1043	979	848	742
6/18/2010	694	613	596	583	614	671	730	794	851	933	991	1057	1115	1172	1253	1260	1230	1244	1211	1154	1136	1057	940	834
6/19/2010	748	691	655	621	603	615	636	684	748	835	909	972	1028	1052	1083	1103	1118	1108	1074	1016	971	904	825	721
6/20/2010	652	599	581	535	534	526	568	678	781	860	935	995	1046	1081	1129	1164	1192	1189	1136	1127	1110	1043	923	814
6/21/2010	737	692	664	664	693	740	800	870	928	990	1031	1057	1088	1126	1160	1185	1205	1223	1176	1137	1106	994	795	
6/22/2010	733	690	671	649	678	731	771	778	796	827	930	1015	1109	1132	1137	1149	1181	1190	1163	1134	1099	1042	912	803
6/23/2010	741	694	661	667	717	779	844	904	982	1062	1136	1210	1247	1270	1306	1317	1328	1324	1289	1248	1205	1139	999	886
6/24/2010	803	745	717	706	745	801	858	883	913	959	1006	1024	1066	1099	1131	1135	1154	1146	1110	1064	1025	973	845	732
6/25/2010	848	766	736	736	765	828	894	931	965	991	1021	1032	1065	1098	1130	1154	1171	1165	1121	1069	1020	971	857	744
6/26/2010	864	829	792	783	803	867	943	97																

Hourly System Demands

	HE1	HE2	HE3	HE4	HE5	HE6	HE7	HE8	HE9	HE10	HE11	HE12	HE13	HE14	HE15	HE16	HE17	HE18	HE19	HE20	HE21	HE22	HE23	HE24
7/1/2010	567	537	526	535	570	623	667	697	729	765	790	811	831	849	872	895	921	936	924	895	858	826	714	612
7/2/2010	569	526	517	512	548	599	643	682	711	746	768	797	819	854	873	905	952	936	909	863	824	783	687	604
7/3/2010	539	502	480	471	476	478	511	573	642	690	743	804	868	905	969	1017	1047	1049	1011	966	916	864	800	706
7/4/2010	627	583	550	546	531	525	570	677	781	869	958	1038	1093	1107	1148	1148	1161	1143	1100	1047	987	933	872	801
7/5/2010	704	648	612	593	582	590	613	701	805	937	1020	1064	1106	1117	1146	1171	1185	1181	1152	1108	1067	987	902	737
7/6/2010	675	631	622	598	626	683	729	787	888	952	1035	1122	1207	1262	1279	1306	1321	1304	1269	1225	1210	1122	976	870
7/7/2010	733	686	651	640	671	719	764	833	903	1007	1075	1162	1221	1227	1214	1156	1106	1117	1077	1049	1027	975	855	759
7/8/2010	773	724	686	674	706	753	796	850	924	1008	1105	1171	1221	1227	1214	1156	1106	1117	1077	1049	1027	975	855	759
7/9/2010	713	675	658	662	650	763	796	809	857	870	819	951	975	1008	1039	1055	1064	1065	1028	980	968	919	826	724
7/10/2010	643	614	583	569	564	563	600	687	778	856	930	982	1023	1042	1070	1064	1100	1081	1020	978	934	885	797	691
7/11/2010	622	574	552	525	521	520	551	641	720	788	875	948	991	1025	1059	1077	1068	1040	1027	1002	980	938	821	740
7/12/2010	678	647	624	625	654	717	764	793	842	905	959	1018	1074	1125	1154	1166	1187	1188	1156	1096	1082	1020	893	784
7/13/2010	714	668	640	663	683	732	790	804	850	840	856	905	947	964	989	1014	1060	1088	1072	1027	1008	942	820	708
7/14/2010	652	617	585	588	624	660	734	785	867	943	1030	1097	1137	1186	1226	1269	1285	1276	1240	1184	1187	1092	943	850
7/15/2010	743	692	675	658	693	752	798	858	937	1034	1113	1207	1259	1259	1311	1315	1290	1259	1233	1150	1123	1046	919	823
7/16/2010	763	712	676	670	703	742	784	850	898	986	1065	1126	1182	1219	1243	1267	1274	1268	1227	1181	1128	1070	949	848
7/17/2010	768	715	667	651	651	654	689	780	870	963	1027	1095	1155	1176	1185	1207	1202	1160	1095	1048	984	929	834	740
7/18/2010	678	614	600	586	579	579	616	708	795	872	937	1000	1038	1045	1026	1028	1018	991	963	935	926	875	788	692
7/19/2010	638	604	577	564	640	717	767	821	866	940	1022	1106	1154	1202	1236	1230	1184	1124	1073	1035	990	922	811	725
7/20/2010	661	633	631	633	675	735	744	768	789	840	920	992	1038	1053	1075	1098	1124	1131	1105	1069	1053	1005	883	790
7/21/2010	733	685	662	673	707	771	822	837	885	963	1033	1085	1136	1164	1190	1192	1271	1264	1177	1123	1091	1006	907	811
7/22/2010	744	684	671	658	708	774	811	871	934	1012	1082	1157	1205	1234	1258	1251	1311	1315	1290	1259	1233	1150	1123	1046
7/23/2010	810	767	735	744	778	842	889	970	1023	1125	1196	1239	1291	1341	1356	1383	1347	1351	1307	1269	1217	1147	1040	944
7/24/2010	853	799	783	795	728	732	769	868	953	1050	1131	1187	1232	1267	1288	1315	1314	1304	1260	1219	1184	1128	1011	903
7/25/2010	808	763	729	709	691	693	711	782	885	944	996	1055	1107	1125	1165	1190	1198	1195	1150	1107	1079	1007	876	778
7/26/2010	702	659	639	637	674	742	767	837	878	957	1027	1072	1114	1138	1143	1186	1210	1214	1175	1129	1100	1012	874	786
7/27/2010	708	666	635	635	677	732	768	815	863	959	1001	1089	1157	1168	1219	1224	1243	1234	1207	1165	1152	1050	933	833
7/28/2010	788	709	689	690	729	780	845	902	965	1058	1124	1181	1231	1241	1258	1225	1296	1196	1160	1122	1089	1017	886	800
7/29/2010	750	697	672	676	725	788	838	901	963	1043	1078	1067	1115	1140	1165	1178	1153	1163	1138	1078	1048	961	874	726
7/30/2010	655	618	589	587	618	678	703	741	792	840	895	940	993	1017	1035	1050	1088	1022	976	942	857	808	785	705
7/31/2010	639	604	580	579	591	599	614	667	731	805	851	887	912	945	970	989	1007	1011	972	943	837	881	781	698
8/1/2010	632	600	599	548	538	509	559	636	704	774	850	907	961	981	1022	1061	1088	1085	1070	1019	999	925	804	698
8/2/2010	644	602	580	584	627	693	781	850	944	1037	1111	1166	1201	1209	1230	1237	1280	1290	1232	1190	1169	1076	938	834
8/3/2010	738	719	695	698	760	796	837	890	954	1000	1063	1146	1205	1267	1310	1341	1332	1329	1300	1293	1190	1066	1009	959
8/4/2010	899	858	820	813	839	895	923	981	1057	1165	1224	1314	1363	1385	1395	1419	1423	1431	1402	1334	1320	1203	1069	959
8/5/2010	876	813	786	764	783	832	852	879	900	955	1000	1035	1094	1107	1165	1208	1220	1222	1182	1125	1110	1019	891	794
8/6/2010	724	656	631	628	659	718	734	778	842	895	952	1007	1038	1082	1092	1109	1115	1098	1035	984	942	872	799	675
8/7/2010	608	578	536	503	527	548	562	640	708	765	802	864	933	972	1014	1062	1073	1061	1020	952	927	855	750	658
8/8/2010	593	567	522	505	503	501	537	611	702	772	861	925	982	1032	1091	1122	1149	1145	1109	1057	1037	941	818	709
8/9/2010	655	615	595	593	634	706	741	774	843	933	1035	1124	1209	1265	1284	1309	1348	1350	1314	1280	1256	1151	1028	911
8/10/2010	650	708	750	733	772	840	865	903	971	1074	1147	1224	1299	1331	1368	1367	1389	1382	1365	1332	1308	1194	1065	965
8/11/2010	860	839	799	792	803	851	948	1015	1107	1142	1192	1260	1275	1285	1290	1329	1297	1272	1225	1198	1101	970	876	776
8/12/2010	808	756	732	721	765	840	882	902	972	1074	1158	1238	1284	1311	1340	1333	1371	1360	1272	1226	1223	1112	990	886
8/13/2010	801	747	706	698	733	814	840	880	948	1031	1119	1202	1247	1260	1313	1327	1348	1321	1298	1235	1199	1123	1012	906
8/14/2010	821	762	722	698	792	874	940	805	881	958	1026	1096	1140	1175	1194	1190	1173	1161	1125	1075	1067	985	897	808
8/15/2010	741	695	666	638	635	641	662	752	825	900	990	1076	1145	1185	1206	1236	1246	1245	1217	1179	1145	1033	938	788
8/16/2010	722	675	638	642	666	754	761	794	841	892	934	987	1028	1061	1100	1125	1153	1154	1127	1073	1037	906	788	685
8/17/2010	625	590	563	571	619	714	735	751	784	827	871	931	986	1030	1061	1092	1122	1103	1063	1044	1013	902	790	704
8/18/2010	832	615	598	608	661	751	781	771	801	850	907	967	1022	1063	1112	1157	1171	1173	1152	1098	1078	980	833	737
8/19/2010	662	616	601	613	649	752	716	776	814	860	903	923	981	1021	1061	1101	1161	1196	1220	1227	1209	1165	1129	1002
8/20/2010	708	664	635	636	675	769	794	806	867	929	1003	1072	1120	1169	1213	1239	1241	1256	1155	1112	1063	1004	903	801
8/21/2010	725	690	649	643	641	654	691	737	786	825	858	882	922	972	1025	1059	1073	1052	1029	986	978	895	807	723
8/22/2010	661	620	587	567	564	568	565	578	760	831	885	959	1001	1040	1079	1128	1145	1148	1114	1077	1030	909	785	689
8/23/2010	635	597	571	572	621	734	752	763	795	841	893	950	997	1033	1056	1089	1105	1114	1082	1049	1020	896	782	689
8/24/2010	640	586	571	570	621	731	747	755	784	834	881	918	945	962	974	961	1006	991						

Hourly System Demands

	HE1	HE2	HE3	HE4	HE5	HE6	HE7	HE8	HE9	HE10	HE11	HE12	HE13	HE14	HE15	HE16	HE17	HE18	HE19	HE20	HE21	HE22	HE23	HE24	
8/1/2010	685	649	617	619	672	767	799	794	846	908	975	1032	1091	1115	1147	1188	1186	1186	1150	1101	1052	945	824	731	
8/2/2010	671	629	607	608	654	756	783	796	843	904	972	1027	1055	1065	1086	1090	1109	1099	1088	1072	1045	923	810	725	
8/3/2010	678	647	620	632	677	777	815	799	809	823	843	866	860	901	915	903	899	857	811	769	775	718	641	575	
8/4/2010	531	502	486	479	489	498	478	560	505	534	631	642	637	654	663	686	684	676	662	656	661	606	548	491	
8/5/2010	465	439	438	427	436	453	472	526	564	574	582	610	610	627	648	670	703	711	687	686	680	625	558	504	
8/6/2010	454	447	436	436	433	448	465	519	579	644	671	704	730	767	808	864	905	911	910	910	869	770	663	591	
8/7/2010	553	531	514	524	576	596	733	728	767	821	892	962	1027	1064	1067	1098	1101	1090	1055	1050	990	877	751	676	
8/8/2010	606	570	551	554	598	662	719	709	721	751	771	801	834	864	865	905	934	946	913	912	867	768	653	588	
8/9/2010	546	526	507	520	569	671	696	676	687	704	727	732	757	774	796	817	827	824	808	845	815	742	649	589	
8/10/2010	544	523	516	519	565	671	708	684	697	700	707	707	714	716	703	721	730	725	715	747	739	696	639	586	
8/11/2010	543	519	506	506	512	530	574	620	664	681	695	697	688	686	686	722	747	779	772	765	773	753	696	623	570
8/12/2010	519	486	474	473	465	489	514	561	616	647	683	710	731	752	760	813	838	843	826	838	792	699	611	542	
8/13/2010	510	493	487	492	533	561	707	690	715	734	776	808	861	897	933	974	1001	1013	983	989	932	827	715	650	
8/14/2010	588	566	542	557	596	704	738	712	737	757	797	839	865	865	892	917	932	944	930	955	903	800	691	616	
8/15/2010	574	550	529	538	583	693	726	705	712	745	790	839	865	940	987	1018	1037	1024	1005	1028	976	874	769	704	
8/16/2010	669	629	597	615	653	771	814	784	790	813	846	880	921	930	947	980	961	941	909	931	863	767	669	612	
8/17/2010	565	543	522	534	584	684	722	701	718	724	739	753	782	803	822	851	883	851	812	816	784	725	637	572	
8/18/2010	536	510	490	485	497	524	558	569	538	657	684	715	748	795	827	870	883	880	845	826	786	714	638	573	
8/19/2010	524	495	482	475	478	488	525	574	620	651	689	731	753	779	800	834	860	860	875	867	880	821	735	642	584
8/20/2010	528	518	511	518	577	694	737	716	751	790	843	906	955	1004	1050	1078	1109	1108	1083	1088	1009	901	783	711	
8/21/2010	648	626	589	594	643	741	777	783	786	847	918	993	1052	1108	1151	1177	1197	1182	1147	1146	1065	932	817	731	
8/22/2010	678	649	624	622	670	783	800	773	810	866	930	974	1013	1013	1013	1022	1040	1028	1006	1024	965	855	748	671	
8/23/2010	618	590	571	577	609	733	774	757	793	851	924	997	1077	1076	1153	1164	1171	1152	1144	1074	964	869	782		
8/24/2010	721	676	657	647	705	804	838	830	890	914	969	999	993	1002	1020	1018	994	927	921	923	996	716	636		
8/25/2010	568	537	513	506	512	538	568	604	640	655	672	698	700	712	739	751	755	721	703	722	688	636	572	523	
8/26/2010	490	469	458	453	456	473	507	557	591	595	615	635	607	611	608	627	643	648	678	724	676	604	536	498	
8/27/2010	474	460	461	477	534	646	696	671	671	676	680	680	694	684	690	690	708	719	764	781	737	652	563	543	
8/28/2010	513	495	491	497	550	658	698	677	663	668	669	671	685	688	699	698	699	709	726	750	764	707	672	586	540
8/29/2010	515	490	496	508	587	659	713	675	680	677	682	688	691	695	695	709	726	735	750	764	707	643	586	530	
8/30/2010	505	483	486	500	555	667	702	676	674	676	682	689	711	728	720	727	725	729	753	750	715	653	601	545	
8/31/2010	517	501	480	500	545	654	688	688	687	699	670	688	676	679	675	680	688	676	683	690	674	624	574	534	
9/1/2010	527	472	468	467	486	520	568	609	632	641	638	629	623	620	622	617	616	614	642	666	642	606	553	504	
9/2/2010	480	471	461	458	467	497	538	595	617	619	606	606	599	578	582	597	618	631	686	716	677	616	560	529	
9/3/2010	519	521	522	522	611	733	775	792	731	718	710	698	695	690	675	673	694	718	758	790	756	697	626	597	
9/4/2010	575	563	566	591	652	784	821	783	758	735	699	697	685	674	667	661	671	682	738	785	748	677	615	571	
9/5/2010	554	554	555	580	648	772	811	773	736	708	699	673	664	670	658	666	675	692	724	705	729	660	581	540	
9/6/2010	510	498	487	508	562	684	727	681	693	676	685	685	686	701	705	709	717	725	751	797	740	668	598	545	
9/7/2010	501	484	487	503	556	680	730	706	690	682	685	676	690	690	686	687	709	703	708	718	686	643	586	530	
9/8/2010	499	480	461	472	490	532	577	617	643	646	646	653	656	669	685	710	716	699	697	707	667	618	561	500	
9/9/2010	474	457	447	444	454	474	512	562	595	608	623	646	672	704	728	751	780	783	802	815	766	659	581	518	
9/10/2010	463	475	467	474	532	644	697	678	676	700	716	733	775	786	800	808	897	821	851	854	781	704	614	561	
9/11/2010	522	500	488	524	548	668	707	681	662	661	669	706	714	716	721	717	740	740	789	799	756	678	604	548	
9/12/2010	510	483	492	494	554	654	694	690	678	660	665	668	708	706	691	688	702	725	754	781	717	646	587	536	
9/13/2010	507	492	488	505	562	678	725	696	689	696	670	668	696	664	652	653	680	666	751	761	719	655	593	565	
9/14/2010	520	503	511	525	581	695	740	712	706	694	686	667	667	650	647	650	648	643	686	698	672	639	583	547	
9/15/2010	513	506	499	510	533	633	669	680	667	633	605	591	579	571	582	584	580	618	623	603	572	522	484		
9/16/2010	461	441	449	444	466	482	533	579	597	595	578	579	574	566	584	604	600	634	696	702	650	581	529	480	
9/17/2010	458	448	455	477	536	657	713	690	687	681	683	684	683	679	683	678	701	711	775	778	727	653	586	533	
9/18/2010	511	500	494	515	570	692	736	705	689	679	665	653	647	648	640	634	631	675	743	767	727	659	600	564	
9/19/2010	548	532	531	563	624	744	792	761	752	699	695	650	656	651	646	634	654	664	732	740	708	643	580	536	
9/20/2010	514	498	499	517	573	684	725	699	696	681	670	65													

Hourly System Demands

	HE1	HE2	HE3	HE4	HE5	HE6	HE7	HE8	HE9	HE10	HE11	HE12	HE13	HE14	HE15	HE16	HE17	HE18	HE19	HE20	HE21	HE22	HE23	HE24	
11/1/2010	572	574	565	604	687	815	867	831	805	780	759	738	712	692	675	675	595	744	821	830	780	737	878	647	
11/2/2010	823	618	820	651	719	823	874	748	819	795	762	739	720	702	689	686	724	786	847	845	806	739	680	643	
11/3/2010	528	620	622	654	718	854	863	847	826	794	769	745	711	686	670	674	700	737	803	806	769	711	657	626	
11/4/2010	803	601	601	633	697	825	875	827	803	649	744	724	706	693	683	707	723	778	847	843	816	755	695	665	
11/5/2010	637	631	626	646	716	824	872	842	853	799	771	767	744	745	758	776	799	828	866	859	846	807	762	731	
11/6/2010	711	707	710	732	756	813	867	888	930	850	818	789	745	716	697	682	703	729	803	816	814	793	750	726	
11/7/2010	708	698	703	713	721	749	788	844	895	821	758	718	692	660	630	627	645	680	773	776	771	783	677	640	
11/8/2010	565	603	606	614	655	732	858	870	823	729	744	719	687	675	661	654	655	697	772	785	765	721	672	621	
11/9/2010	593	581	590	592	633	708	828	842	794	746	715	689	670	667	652	649	652	688	770	781	764	715	662	605	
11/10/2010	584	567	564	578	612	682	811	834	781	746	717	687	667	664	658	644	652	691	766	770	753	718	660	613	
11/11/2010	574	560	560	565	604	676	796	804	791	748	720	701	678	679	667	659	656	687	757	764	748	710	656	598	
11/12/2010	571	553	548	554	588	656	783	811	781	743	711	690	671	658	654	641	637	667	719	716	701	688	642	597	
11/13/2010	569	546	540	536	548	585	621	662	620	595	568	560	539	529	512	527	539	577	639	682	669	639	607	563	
11/14/2010	536	514	510	512	526	563	597	651	704	714	690	669	660	632	619	610	629	686	786	807	810	769	724	674	
11/15/2010	658	651	659	671	718	789	922	948	911	881	847	819	786	771	760	759	783	835	903	913	899	868	815	765	
11/16/2010	726	713	700	702	724	787	890	919	867	862	835	820	815	823	813	821	801	890	913	902	881	845	770	720	
11/17/2010	686	668	655	673	699	765	878	900	856	825	804	774	738	732	704	699	710	787	882	876	874	857	804	753	
11/18/2010	715	701	683	676	704	768	876	901	862	851	835	825	812	801	788	800	829	870	920	924	917	865	809	772	
11/19/2010	736	726	716	724	753	826	935	970	913	875	869	862	842	817	780	768	769	823	896	859	861	829	795	750	
11/20/2010	709	689	671	683	696	733	775	824	854	849	831	800	767	734	707	695	703	751	796	752	780	767	725	694	
11/21/2010	650	623	604	597	622	620	639	680	722	715	691	678	666	654	643	646	556	709	754	749	736	684	622	359	
11/22/2010	523	497	492	487	503	570	690	731	703	702	693	658	687	653	666	673	721	785	873	866	850	813	667	599	
11/23/2010	564	515	491	496	519	586	712	775	759	763	756	743	727	717	708	691	706	785	869	860	860	840	842	788	
11/24/2010	758	737	737	745	760	840	932	980	983	974	979	981	987	994	982	969	975	1008	1005	975	954	906	853	760	
11/25/2010	693	650	609	578	563	561	584	628	695	778	834	819	736	668	627	622	616	651	670	693	703	714	705	682	
11/26/2010	668	658	669	688	717	750	795	834	807	837	828	812	787	766	743	734	753	834	899	897	884	854	812	762	
11/27/2010	727	695	683	682	692	709	738	771	815	842	852	834	806	775	741	735	736	803	880	870	867	858	838	809	
11/28/2010	784	764	766	786	776	800	829	874	903	873	827	778	750	711	694	668	690	774	865	890	883	856	794	754	
11/29/2010	714	704	705	713	747	815	940	966	915	888	837	783	766	746	726	727	757	833	878	876	868	816	747	672	
11/30/2010	621	593	577	567	578	643	753	795	786	757	766	774	787	797	815	837	875	956	1011	1018	1022	984	910	856	
12/1/2010	822	797	789	784	822	883	982	1035	998	989	984	981	977	992	996	1076	1108	1101	1060	1051	991	912			
12/2/2010	877	857	849	845	878	946	1069	1079	1042	1039	981	962	927	934	919	931	950	1010	1063	1062	1055	1014	952	874	
12/3/2010	840	814	811	813	841	917	1033	1061	1008	969	936	887	858	845	826	829	850	918	989	961	951	999	891	843	
12/4/2010	824	770	759	754	776	807	845	882	930	967	961	959	941	930	926	937	945	1004	1021	999	998	963	927	874	
12/5/2010	837	832	790	779	792	823	833	860	940	958	950	955	948	950	946	960	1000	1070	1119	1121	1124	1073	1009	953	
12/6/2010	927	913	912	935	968	1051	1178	1224	1187	1182	1154	1119	1089	1071	1053	1058	1095	1195	1259	1263	1248	1221	1146	1071	
12/7/2010	1033	1020	1013	1015	1044	1115	1234	1282	1196	1155	1098	1059	1024	997	981	991	1024	1144	1200	1217	1229	1209	1154	1099	
12/8/2010	1063	1058	1054	1069	1111	1188	1298	1315	1248	1179	1113	1061	1021	990	963	949	977	1086	1168	1188	1199	1191	1124	1069	
12/9/2010	1049	1041	1048	1052	1091	1184	1295	1295	1236	1169	1080	1033	1000	997	990	993	1014	1090	1132	1132	1128	1067	1020	940	
12/10/2010	869	855	840	833	850	915	1020	1053	1009	968	928	880	854	827	806	802	813	896	958	959	958	944	907	850	
12/11/2010	817	792	774	775	796	811	833	884	917	931	920	904	895	889	823	860	896	929	931	907	892	870	834	783	
12/12/2010	745	730	741	751	781	816	853	919	979	1014	1031	1032	1037	1035	1026	1035	1051	1135	1191	1191	1182	1138	1091	1027	
12/13/2010	997	985	995	1012	1063	1111	1199	1244	1257	1241	1217	1197	1177	1149	1130	1132	1157	1264	1327	1336	1326	1290	1232	1177	
12/14/2010	1146	1138	1137	1151	1182	1253	1334	1381	1360	1293	1214	1144	1080	1046	1014	1012	1045	1164	1259	1284	1295	1283	1231	1178	
12/15/2010	1153	1140	1153	1159	1198	1277	1365	1412	1351	1284	1211	1133	1059	1072	1056	1065	1091	1166	1208	1223	1208	1170	1108	1042	
12/16/2010	1003	975	956	952	980	1014	1086	1095	1105	1129	1141	1145	1128	1097	1080	1072	1093	1149	1165	1147	1163	1118	1054	990	
12/17/2010	950	919	910	912	940	994	1076	1118	1122	1099	1092	1075	1056	1049	1038	1036	1050	1118	1143	1134	1127	1107	1068	1017	
12/18/2010	985	952	940	940	954	979	1012	1069	1112	1112	1112	1070	1015	975	951	939	949	971	1036	1081	1091	1080	1077	1050	1000
12/19/2010	954	920	910	907	924	961	1000	1073	1112	1093	1040	993	963	942	930	934	957	1026	1086	998	976	1024	972	906	
12/20/2010	898	842	837	836	876	937	1043	1079	1066	1054	1007	982	946	955	946	949	971	1062	1100	1110	1120	1075	1018	942	
12/21/2010	892	870	848	846	873	920	1011	1044	1054	1032	1013	1009	990	986	969	989	978	1036	1085	1077	1061	1026	966	905	
12/22/2010	845	819	801	798	820	882	977	1050	1037	1044	1050	1051	1062	1053	1051	1046	1059	1119	1145	1141	1119	1096	1053	973	
12/23/2010	932	917	905	917	936	962	1047	1087	1100	1078	1039	978	943	925	905	903	914	992	1050	1062	1037	1018	979	905	
12/24/2010	848	815	789	787	811	848	882	831	976	979	961	932	913	906	896	907	934	944	931	935	932	910	872		
12/25/2010	852	797	772	778	777	802	832	893	844	958	977	966	919	887	866	862	900	966	965	962	966	960	934	892	
12/26/2010	847	840	831	836	848	869	907	952	990	1012	1007	994	962	957											

# Appendix C

## Hourly System Lambda

## **Appendix C: Hourly System Lambda**

Hourly System Lambda - LMP

	HE 1	HE 2	HE 3	HE 4	HE 5	HE 6	HE 7	HE 8	HE 9	HE 10	HE 11	HE 12	HE 13	HE 14	HE 15	HE 16	HE 17	HE 18	HE 19	HE 20	HE 21	HE 22	HE 23	HE 24		
1-Jan-10	\$ 25.97	\$ 24.60	\$ 23.89	\$ 23.05	\$ 22.40	\$ 22.44	\$ 22.12	\$ 23.12	\$ 24.16	\$ 26.45	\$ 26.64	\$ 25.13	\$ 28.46	\$ 27.02	\$ 25.65	\$ 25.57	\$ 26.67	\$ 47.48	\$ 57.50	\$ 53.68	\$ 49.40	\$ 39.84	\$ 29.98	\$ 26.98	\$ 25.98	
2-Jan-10	\$ 28.63	\$ 26.75	\$ 27.94	\$ 26.31	\$ 25.77	\$ 26.08	\$ 27.92	\$ 31.00	\$ 33.64	\$ 42.07	\$ 53.09	\$ 52.27	\$ 43.54	\$ 38.79	\$ 33.01	\$ 31.83	\$ 34.20	\$ 61.88	\$ 76.98	\$ 81.84	\$ 57.72	\$ 44.40	\$ 47.35	\$ 45.08	\$ 45.08	\$ 45.08
3-Jan-10	\$ 37.82	\$ 35.47	\$ 33.33	\$ 31.52	\$ 30.30	\$ 29.76	\$ 31.90	\$ 32.25	\$ 36.98	\$ 41.76	\$ 48.27	\$ 45.97	\$ 40.62	\$ 34.78	\$ 30.93	\$ 30.75	\$ 33.31	\$ 57.45	\$ 64.30	\$ 57.08	\$ 47.62	\$ 45.05	\$ 40.57	\$ 40.57	\$ 40.57	\$ 40.57
4-Jan-10	\$ 39.75	\$ 36.61	\$ 34.26	\$ 33.76	\$ 34.44	\$ 40.30	\$ 47.39	\$ 49.05	\$ 67.29	\$ 69.82	\$ 66.45	\$ 64.59	\$ 54.12	\$ 49.58	\$ 45.03	\$ 42.84	\$ 44.49	\$ 71.09	\$ 93.47	\$ 78.52	\$ 69.40	\$ 66.61	\$ 51.40	\$ 48.43	\$ 48.43	\$ 48.43
5-Jan-10	\$ 32.23	\$ 31.06	\$ 28.80	\$ 28.53	\$ 29.60	\$ 34.39	\$ 33.22	\$ 43.41	\$ 61.67	\$ 58.69	\$ 58.94	\$ 57.74	\$ 50.70	\$ 43.84	\$ 39.59	\$ 35.81	\$ 36.58	\$ 69.64	\$ 78.85	\$ 89.00	\$ 64.25	\$ 57.08	\$ 42.80	\$ 34.65	\$ 34.65	\$ 34.65
6-Jan-10	\$ 36.20	\$ 33.86	\$ 31.40	\$ 31.39	\$ 34.62	\$ 40.60	\$ 39.40	\$ 56.45	\$ 76.45	\$ 88.34	\$ 84.59	\$ 87.39	\$ 64.57	\$ 60.84	\$ 51.74	\$ 49.78	\$ 40.11	\$ 41.14	\$ 65.48	\$ 113.57	\$ 67.27	\$ 58.66	\$ 53.56	\$ 43.60	\$ 36.14	\$ 36.14
7-Jan-10	\$ 29.98	\$ 29.37	\$ 26.45	\$ 27.61	\$ 28.11	\$ 34.21	\$ 31.36	\$ 63.46	\$ 59.22	\$ 56.01	\$ 61.10	\$ 59.90	\$ 66.73	\$ 51.88	\$ 44.73	\$ 39.75	\$ 41.27	\$ 65.01	\$ 81.40	\$ 66.82	\$ 60.43	\$ 54.17	\$ 43.95	\$ 30.59	\$ 30.59	\$ 30.59
8-Jan-10	\$ 27.58	\$ 27.42	\$ 26.88	\$ 26.43	\$ 26.40	\$ 27.94	\$ 40.73	\$ 57.68	\$ 55.09	\$ 55.46	\$ 59.94	\$ 59.51	\$ 57.94	\$ 56.08	\$ 45.38	\$ 39.04	\$ 39.85	\$ 64.53	\$ 72.85	\$ 53.53	\$ 49.94	\$ 48.84	\$ 46.41	\$ 37.78	\$ 37.78	\$ 37.78
9-Jan-10	\$ 41.42	\$ 39.82	\$ 35.98	\$ 34.40	\$ 34.00	\$ 36.71	\$ 44.08	\$ 53.64	\$ 57.16	\$ 60.41	\$ 62.36	\$ 57.34	\$ 50.57	\$ 44.77	\$ 37.77	\$ 33.91	\$ 35.62	\$ 61.45	\$ 77.49	\$ 67.00	\$ 60.67	\$ 52.70	\$ 48.40	\$ 41.49	\$ 41.49	\$ 41.49
10-Jan-10	\$ 39.20	\$ 38.21	\$ 35.74	\$ 34.37	\$ 32.91	\$ 32.28	\$ 32.87	\$ 33.70	\$ 38.15	\$ 45.73	\$ 47.48	\$ 45.94	\$ 40.57	\$ 35.26	\$ 30.52	\$ 29.42	\$ 29.76	\$ 55.59	\$ 77.09	\$ 64.30	\$ 59.24	\$ 50.15	\$ 46.15	\$ 38.90	\$ 38.90	\$ 38.90
11-Jan-10	\$ 32.87	\$ 30.97	\$ 30.52	\$ 29.49	\$ 30.21	\$ 34.19	\$ 47.09	\$ 65.53	\$ 66.74	\$ 63.58	\$ 66.81	\$ 63.82	\$ 61.17	\$ 52.55	\$ 43.42	\$ 39.12	\$ 40.20	\$ 65.68	\$ 86.21	\$ 69.83	\$ 66.98	\$ 57.88	\$ 45.54	\$ 39.89	\$ 39.89	\$ 39.89
12-Jan-10	\$ 26.65	\$ 27.63	\$ 26.91	\$ 26.71	\$ 27.77	\$ 29.99	\$ 42.16	\$ 66.40	\$ 56.41	\$ 52.60	\$ 54.77	\$ 52.38	\$ 48.00	\$ 43.03	\$ 35.95	\$ 32.09	\$ 31.03	\$ 51.97	\$ 70.88	\$ 68.47	\$ 52.02	\$ 44.57	\$ 34.21	\$ 31.97	\$ 31.97	\$ 31.97
13-Jan-10	\$ 27.24	\$ 26.23	\$ 26.26	\$ 26.27	\$ 26.62	\$ 28.12	\$ 42.47	\$ 52.30	\$ 51.37	\$ 49.64	\$ 50.17	\$ 47.76	\$ 43.76	\$ 38.24	\$ 30.74	\$ 28.57	\$ 28.21	\$ 47.90	\$ 63.66	\$ 52.62	\$ 48.73	\$ 40.76	\$ 30.00	\$ 28.97	\$ 28.97	\$ 28.97
14-Jan-10	\$ 28.75	\$ 27.60	\$ 26.57	\$ 26.29	\$ 27.10	\$ 30.58	\$ 48.40	\$ 55.89	\$ 49.89	\$ 49.59	\$ 49.29	\$ 47.34	\$ 38.82	\$ 34.62	\$ 29.91	\$ 28.73	\$ 28.88	\$ 47.96	\$ 64.54	\$ 49.45	\$ 45.20	\$ 39.45	\$ 29.28	\$ 28.35	\$ 28.35	\$ 28.35
15-Jan-10	\$ 26.83	\$ 25.20	\$ 25.39	\$ 24.64	\$ 25.44	\$ 27.70	\$ 39.51	\$ 52.84	\$ 48.91	\$ 50.08	\$ 48.48	\$ 45.64	\$ 40.81	\$ 34.74	\$ 30.52	\$ 28.41	\$ 27.97	\$ 42.79	\$ 49.93	\$ 47.61	\$ 40.81	\$ 32.95	\$ 28.02	\$ 28.06	\$ 28.06	\$ 28.06
16-Jan-10	\$ 25.97	\$ 25.03	\$ 24.21	\$ 23.69	\$ 23.65	\$ 24.74	\$ 27.84	\$ 30.36	\$ 32.73	\$ 39.41	\$ 40.97	\$ 38.59	\$ 31.15	\$ 28.41	\$ 26.62	\$ 26.53	\$ 27.00	\$ 37.80	\$ 46.78	\$ 42.12	\$ 36.86	\$ 32.37	\$ 27.99	\$ 26.03	\$ 26.03	\$ 26.03
17-Jan-10	\$ 25.09	\$ 24.08	\$ 23.96	\$ 23.43	\$ 23.80	\$ 22.09	\$ 20.40	\$ 25.43	\$ 25.43	\$ 26.84	\$ 23.17	\$ 20.86	\$ 17.92	\$ 14.28	\$ 12.29	\$ 12.09	\$ 12.05	\$ 18.26	\$ 27.09	\$ 28.05	\$ 25.47	\$ 20.47	\$ 16.33	\$ 15.27	\$ 15.27	\$ 15.27
18-Jan-10	\$ 23.86	\$ 23.46	\$ 22.93	\$ 22.80	\$ 23.25	\$ 24.83	\$ 29.33	\$ 44.84	\$ 45.21	\$ 48.85	\$ 50.76	\$ 48.29	\$ 44.88	\$ 40.41	\$ 33.66	\$ 30.74	\$ 30.37	\$ 46.27	\$ 52.41	\$ 49.56	\$ 45.94	\$ 40.97	\$ 29.30	\$ 25.37	\$ 25.37	\$ 25.37
19-Jan-10	\$ 25.80	\$ 24.44	\$ 23.78	\$ 23.72	\$ 24.25	\$ 26.53	\$ 40.11	\$ 53.00	\$ 49.26	\$ 50.28	\$ 49.46	\$ 44.61	\$ 42.23	\$ 39.80	\$ 31.84	\$ 29.28	\$ 29.20	\$ 44.64	\$ 51.78	\$ 46.86	\$ 45.42	\$ 42.21	\$ 35.81	\$ 28.97	\$ 28.97	\$ 28.97
20-Jan-10	\$ 24.71	\$ 23.86	\$ 23.05	\$ 22.84	\$ 23.30	\$ 24.86	\$ 32.93	\$ 47.11	\$ 43.62	\$ 43.86	\$ 43.61	\$ 42.25	\$ 37.42	\$ 34.97	\$ 31.01	\$ 30.06	\$ 31.24	\$ 39.83	\$ 50.10	\$ 48.23	\$ 43.61	\$ 35.47	\$ 27.01	\$ 24.85	\$ 24.85	\$ 24.85
21-Jan-10	\$ 23.06	\$ 21.46	\$ 21.38	\$ 21.24	\$ 21.77	\$ 23.02	\$ 28.30	\$ 36.25	\$ 34.61	\$ 36.49	\$ 36.25	\$ 36.25	\$ 34.17	\$ 32.10	\$ 26.58	\$ 27.55	\$ 27.96	\$ 37.03	\$ 45.39	\$ 37.95	\$ 34.74	\$ 30.34	\$ 26.70	\$ 24.15	\$ 24.15	\$ 24.15
22-Jan-10	\$ 23.48	\$ 22.07	\$ 22.08	\$ 22.00	\$ 22.63	\$ 24.86	\$ 31.45	\$ 45.11	\$ 41.13	\$ 40.45	\$ 41.16	\$ 38.38	\$ 33.71	\$ 31.86	\$ 28.39	\$ 26.96	\$ 26.92	\$ 33.59	\$ 41.07	\$ 35.80	\$ 31.15	\$ 27.66	\$ 24.86	\$ 23.28	\$ 23.28	\$ 23.28
23-Jan-10	\$ 23.32	\$ 21.57	\$ 20.87	\$ 19.95	\$ 20.69	\$ 20.32	\$ 22.39	\$ 24.99	\$ 28.17	\$ 32.94	\$ 28.89	\$ 27.86	\$ 26.05	\$ 24.56	\$ 22.33	\$ 22.14	\$ 22.70	\$ 28.69	\$ 41.05	\$ 30.48	\$ 29.02	\$ 25.45	\$ 23.09	\$ 20.78	\$ 20.78	\$ 20.78
24-Jan-10	\$ 19.64	\$ 18.18	\$ 18.06	\$ 17.30	\$ 17.34	\$ 17.08	\$ 17.55	\$ 17.55	\$ 19.71	\$ 20.41	\$ 22.20	\$ 23.30	\$ 23.19	\$ 23.95	\$ 22.57	\$ 20.51	\$ 21.59	\$ 28.65	\$ 37.35	\$ 31.70	\$ 28.98	\$ 26.00	\$ 23.58	\$ 21.00	\$ 21.00	\$ 21.00
25-Jan-10	\$ 18.89	\$ 17.77	\$ 18.37	\$ 17.94	\$ 19.19	\$ 22.28	\$ 27.82	\$ 36.22	\$ 33.22	\$ 37.13	\$ 37.44	\$ 36.77	\$ 33.69	\$ 30.69	\$ 26.83	\$ 26.94	\$ 28.65	\$ 37.35	\$ 51.70	\$ 46.86	\$ 45.42	\$ 42.21	\$ 35.81	\$ 28.97	\$ 28.97	\$ 28.97
26-Jan-10	\$ 23.30	\$ 22.35	\$ 22.29	\$ 22.04	\$ 22.52	\$ 26.38	\$ 38.82	\$ 49.82	\$ 46.49	\$ 46.78	\$ 47.50	\$ 41.52	\$ 44.04	\$ 43.96	\$ 38.52	\$ 33.89	\$ 37.71	\$ 49.87	\$ 63.58	\$ 52.62	\$ 48.73	\$ 40.76	\$ 30.00	\$ 28.97	\$ 28.97	\$ 28.97
27-Jan-10	\$ 27.82	\$ 26.99	\$ 26.02	\$ 25.73	\$ 26.32	\$ 28.44	\$ 44.72	\$ 62.80	\$ 56.82	\$ 56.19	\$ 51.36	\$ 48.00	\$ 46.62	\$ 41.07	\$ 34.59	\$ 31.01	\$ 31.74	\$ 48.21	\$ 66.82	\$ 56.88	\$ 50.97	\$ 42.94	\$ 33.94	\$ 27.03	\$ 27.03	\$ 27.03
28-Jan-10	\$ 23.72	\$ 23.17	\$ 22.64	\$ 22.35	\$ 23.31	\$ 25.64	\$ 30.86	\$ 41.58	\$ 42.88	\$ 43.27	\$ 43.82	\$ 43.46	\$ 42.34	\$ 38.44	\$ 33.59	\$ 30.83	\$ 31.29	\$ 43.26	\$ 53.33	\$ 49.02	\$ 46.26	\$ 42.92	\$ 35.81	\$ 33.75	\$ 33.75	\$ 33.75
29-Jan-10	\$ 32.03	\$ 30.21	\$ 29.68	\$ 29.42	\$ 30.61	\$ 35.45	\$ 48.26	\$ 69.27	\$ 57.97	\$ 57.31	\$ 55.27	\$ 50.58	\$ 48.41	\$ 47.84	\$ 40.36	\$ 34.58	\$ 35.01	\$ 47.72	\$ 64.50	\$ 56.03	\$ 51.06	\$ 45.36	\$ 38.78	\$ 33.90	\$ 33.90	\$ 33.90
30-Jan-10	\$ 30.86	\$ 30.64	\$ 29.66	\$ 29.18	\$ 27.54	\$ 27.13	\$ 30.55	\$ 34.90	\$ 36.78	\$ 44.36	\$ 45.76	\$ 39.65	\$ 36.13	\$ 33.62	\$ 30.84	\$ 29.94	\$ 29.23	\$ 30.48	\$ 58.40	\$ 47.86	\$ 44.44	\$ 40.51	\$ 31.84	\$ 21.09	\$ 21.09	\$ 21.09
31-Jan-10	\$ 29.56	\$ 27.75	\$ 26.70	\$ 25.85	\$ 25.11	\$ 24.71	\$ 25.43	\$ 28.70	\$ 29.66	\$ 35.57	\$ 34.97	\$ 33.16	\$ 30.19	\$ 29.73	\$ 26.89	\$ 26.19	\$ 26.42	\$ 36.18	\$ 53.26	\$ 43.58	\$ 40.77	\$ 33.57	\$ 30.88	\$ 26.56	\$ 26.56	\$ 26.56
1-Feb-10	\$ 25.16	\$ 24.46	\$ 24.17	\$ 24.24	\$ 24.54	\$ 25.61	\$ 30.84	\$ 41.20	\$ 54.02	\$ 49.66	\$ 45.06	\$ 43.86	\$ 40.18	\$ 36.98	\$ 32.60	\$ 30.05	\$ 30.93	\$ 37.42	\$ 58.47	\$ 53.58	\$ 43.98	\$ 41.44	\$ 30.94	\$ 26.67	\$ 26.67	\$ 26.67
2-Feb-10	\$ 25.92	\$ 25.73	\$ 25.91	\$ 25.92	\$ 26.44	\$ 27.56	\$ 31.46	\$ 52.70	\$ 48.01	\$ 45.52	\$ 44.87	\$ 43.07	\$ 41.91	\$ 36.57	\$ 30.76	\$ 30.57	\$ 31.48	\$ 38.07	\$ 53.61	\$ 47.27	\$ 42.44	\$ 39.03	\$ 31.35	\$ 28.92	\$ 28.92	\$ 28.92
3-Feb-10	\$ 25.14	\$ 24.39	\$ 23.58	\$ 23.63	\$ 23.67	\$ 25.82	\$ 33.77	\$ 45.22	\$ 42.77	\$ 40.48	\$ 40.17	\$ 37.95	\$ 35.21	\$ 32.91	\$ 30.06	\$ 28.23	\$ 29.05	\$ 34.04	\$ 47.78	\$ 46.64	\$ 42.18	\$ 36.62	\$ 29.11	\$ 26.67	\$ 26.67	\$ 26.67
4-Feb-10	\$ 24.52	\$ 24.41	\$ 24.46	\$ 24.53	\$ 24.47	\$ 27.77	\$ 40.28	\$ 49.04	\$ 46.65	\$ 46.01	\$ 43.07	\$ 42.53	\$ 39.58	\$ 35.09	\$ 33.04	\$ 31.51	\$ 31.38	\$ 36.08	\$ 47.31	\$ 45.99	\$ 40.99	\$ 36.80	\$ 28.59	\$ 26.87	\$ 26.87	\$ 26.87
5-Feb-10	\$ 24.98	\$ 24.00	\$ 23.74	\$ 23.60	\$ 23.64	\$ 24.57	\$ 28.92	\$ 44.94	\$ 39.37	\$ 42.67	\$ 40.18	\$ 39.94	\$ 39.08	\$ 36.38	\$ 32.63	\$ 29.72	\$ 29.23	\$ 32.28	\$ 42.94	\$ 40.09	\$ 39.56	\$ 31.88	\$ 27.27	\$ 25.56	\$ 25.56	\$ 25.56
6-Feb-10	\$ 27.82	\$ 27.56	\$ 26.35	\$ 26.48	\$ 26.97	\$ 26.96	\$ 28.17	\$ 32.42	\$ 35.69	\$ 42.29	\$ 46.14	\$ 42.16														

Hourly System Lambda - LMP

	HE 1	HE 2	HE 3	HE 4	HE 5	HE 6	HE 7	HE 8	HE 9	HE 10	HE 11	HE 12	HE 13	HE 14	HE 15	HE 16	HE 17	HE 18	HE 19	HE 20	HE 21	HE 22	HE 23	HE 24		
1-Mar-10	\$ 29.77	\$ 26.97	\$ 26.65	\$ 26.80	\$ 27.67	\$ 32.06	\$ 40.96	\$ 44.00	\$ 48.32	\$ 51.27	\$ 46.70	\$ 47.29	\$ 44.13	\$ 42.18	\$ 38.00	\$ 35.99	\$ 36.24	\$ 37.75	\$ 51.70	\$ 59.56	\$ 50.16	\$ 42.01	\$ 33.79	\$ 33.38	\$ 33.38	
2-Mar-10	\$ 30.32	\$ 28.39	\$ 28.80	\$ 26.50	\$ 29.33	\$ 33.67	\$ 44.25	\$ 47.45	\$ 45.09	\$ 46.80	\$ 46.11	\$ 46.16	\$ 42.33	\$ 40.33	\$ 36.93	\$ 35.89	\$ 34.19	\$ 37.68	\$ 49.75	\$ 60.86	\$ 46.33	\$ 42.21	\$ 34.84	\$ 33.70	\$ 33.70	
3-Mar-10	\$ 29.69	\$ 27.94	\$ 27.87	\$ 27.79	\$ 29.16	\$ 32.66	\$ 43.70	\$ 45.37	\$ 45.04	\$ 45.78	\$ 44.74	\$ 43.79	\$ 39.89	\$ 37.36	\$ 35.82	\$ 32.99	\$ 31.81	\$ 34.23	\$ 43.80	\$ 47.98	\$ 43.79	\$ 40.76	\$ 33.95	\$ 31.33	\$ 31.33	
4-Mar-10	\$ 30.30	\$ 29.08	\$ 29.67	\$ 29.59	\$ 30.90	\$ 36.18	\$ 49.88	\$ 52.09	\$ 51.06	\$ 50.40	\$ 51.25	\$ 47.91	\$ 43.60	\$ 41.97	\$ 37.87	\$ 31.85	\$ 31.02	\$ 32.59	\$ 43.56	\$ 52.02	\$ 47.62	\$ 42.34	\$ 34.29	\$ 31.24	\$ 31.24	
5-Mar-10	\$ 30.11	\$ 27.92	\$ 27.88	\$ 27.87	\$ 28.67	\$ 33.97	\$ 39.41	\$ 43.63	\$ 44.25	\$ 43.66	\$ 42.11	\$ 40.38	\$ 35.30	\$ 31.02	\$ 28.65	\$ 26.73	\$ 26.14	\$ 27.07	\$ 33.32	\$ 41.25	\$ 36.94	\$ 31.90	\$ 25.27	\$ 25.37	\$ 25.37	
6-Mar-10	\$ 29.59	\$ 27.13	\$ 27.07	\$ 26.67	\$ 26.75	\$ 26.44	\$ 26.15	\$ 26.17	\$ 22.60	\$ 34.75	\$ 32.86	\$ 28.95	\$ 26.53	\$ 24.64	\$ 24.01	\$ 23.56	\$ 23.42	\$ 24.19	\$ 27.67	\$ 32.90	\$ 29.24	\$ 26.10	\$ 25.27	\$ 25.37	\$ 25.37	
7-Mar-10	\$ 25.51	\$ 25.12	\$ 25.03	\$ 24.15	\$ 24.15	\$ 24.55	\$ 25.70	\$ 24.52	\$ 24.83	\$ 25.66	\$ 25.33	\$ 24.56	\$ 24.24	\$ 23.78	\$ 22.95	\$ 22.92	\$ 22.71	\$ 24.07	\$ 30.69	\$ 38.43	\$ 32.71	\$ 28.61	\$ 23.96	\$ 22.52	\$ 22.52	
8-Mar-10	\$ 21.68	\$ 21.09	\$ 21.04	\$ 21.61	\$ 22.42	\$ 25.30	\$ 38.92	\$ 34.99	\$ 38.23	\$ 26.45	\$ 35.48	\$ 35.48	\$ 33.88	\$ 33.72	\$ 27.42	\$ 25.26	\$ 25.46	\$ 26.34	\$ 31.87	\$ 41.08	\$ 35.08	\$ 28.13	\$ 23.95	\$ 23.17	\$ 23.17	
9-Mar-10	\$ 21.95	\$ 21.42	\$ 21.42	\$ 21.72	\$ 22.78	\$ 27.70	\$ 38.12	\$ 34.94	\$ 35.93	\$ 35.07	\$ 35.00	\$ 34.04	\$ 32.24	\$ 29.91	\$ 27.22	\$ 26.97	\$ 26.72	\$ 27.05	\$ 33.33	\$ 39.80	\$ 33.92	\$ 28.02	\$ 24.44	\$ 22.40	\$ 22.40	
10-Mar-10	\$ 21.63	\$ 20.85	\$ 20.90	\$ 20.84	\$ 21.87	\$ 25.66	\$ 37.65	\$ 35.42	\$ 36.52	\$ 35.67	\$ 35.69	\$ 37.49	\$ 36.25	\$ 35.32	\$ 32.02	\$ 29.60	\$ 28.47	\$ 30.76	\$ 41.20	\$ 47.42	\$ 40.53	\$ 34.01	\$ 26.90	\$ 22.76	\$ 22.76	
11-Mar-10	\$ 19.92	\$ 19.23	\$ 18.84	\$ 18.89	\$ 19.74	\$ 23.45	\$ 33.10	\$ 33.40	\$ 30.31	\$ 29.73	\$ 31.49	\$ 30.81	\$ 30.29	\$ 28.58	\$ 26.71	\$ 26.36	\$ 26.85	\$ 28.71	\$ 27.83	\$ 28.11	\$ 35.96	\$ 36.34	\$ 34.58	\$ 27.71	\$ 20.69	\$ 20.69
12-Mar-10	\$ 18.47	\$ 18.33	\$ 18.34	\$ 18.24	\$ 20.24	\$ 23.96	\$ 31.52	\$ 35.96	\$ 38.92	\$ 38.81	\$ 39.57	\$ 37.76	\$ 39.53	\$ 35.97	\$ 33.43	\$ 28.71	\$ 27.83	\$ 28.11	\$ 35.96	\$ 36.34	\$ 34.58	\$ 27.71	\$ 20.69	\$ 20.69	\$ 20.69	
13-Mar-10	\$ 21.40	\$ 21.27	\$ 21.06	\$ 20.58	\$ 20.44	\$ 21.04	\$ 23.72	\$ 24.83	\$ 28.55	\$ 29.27	\$ 29.38	\$ 28.66	\$ 28.12	\$ 27.45	\$ 26.45	\$ 25.52	\$ 25.47	\$ 26.91	\$ 30.69	\$ 38.85	\$ 29.21	\$ 27.25	\$ 25.23	\$ 22.22	\$ 22.22	
14-Mar-10	\$ 21.26	\$ 20.65	\$ 20.92	\$ 20.90	\$ 20.97	\$ 22.26	\$ 25.10	\$ 24.30	\$ 25.07	\$ 26.57	\$ 27.09	\$ 26.95	\$ 26.57	\$ 26.54	\$ 25.96	\$ 25.24	\$ 26.25	\$ 28.24	\$ 33.84	\$ 47.05	\$ 34.73	\$ 26.39	\$ 24.47	\$ 22.06	\$ 22.06	
15-Mar-10	\$ 21.44	\$ 21.02	\$ 21.04	\$ 21.31	\$ 22.71	\$ 39.98	\$ 47.84	\$ 39.19	\$ 39.61	\$ 39.93	\$ 38.34	\$ 37.88	\$ 37.66	\$ 35.64	\$ 32.43	\$ 29.43	\$ 29.94	\$ 30.14	\$ 38.55	\$ 49.07	\$ 37.04	\$ 26.88	\$ 26.19	\$ 23.20	\$ 23.20	
16-Mar-10	\$ 21.11	\$ 21.56	\$ 21.77	\$ 21.67	\$ 23.63	\$ 30.78	\$ 39.31	\$ 40.69	\$ 35.21	\$ 39.21	\$ 39.10	\$ 38.27	\$ 38.66	\$ 32.63	\$ 29.54	\$ 27.84	\$ 27.59	\$ 27.68	\$ 34.65	\$ 41.54	\$ 36.47	\$ 27.25	\$ 23.50	\$ 22.07	\$ 22.07	
17-Mar-10	\$ 22.50	\$ 21.94	\$ 22.18	\$ 22.23	\$ 24.94	\$ 35.59	\$ 44.11	\$ 36.68	\$ 39.14	\$ 38.46	\$ 39.44	\$ 39.49	\$ 36.64	\$ 33.42	\$ 31.35	\$ 28.59	\$ 27.82	\$ 27.77	\$ 32.81	\$ 39.53	\$ 33.42	\$ 27.20	\$ 24.39	\$ 22.22	\$ 22.22	
18-Mar-10	\$ 20.45	\$ 19.92	\$ 20.00	\$ 20.73	\$ 22.30	\$ 31.34	\$ 36.70	\$ 34.51	\$ 34.12	\$ 33.59	\$ 31.73	\$ 30.50	\$ 30.61	\$ 28.78	\$ 27.72	\$ 25.89	\$ 24.88	\$ 24.36	\$ 27.31	\$ 35.70	\$ 30.20	\$ 25.66	\$ 22.30	\$ 20.93	\$ 20.93	
19-Mar-10	\$ 21.27	\$ 20.84	\$ 20.78	\$ 20.45	\$ 20.86	\$ 23.33	\$ 27.70	\$ 29.41	\$ 32.77	\$ 36.16	\$ 37.50	\$ 33.98	\$ 29.95	\$ 27.50	\$ 26.97	\$ 27.20	\$ 26.45	\$ 32.11	\$ 39.30	\$ 36.43	\$ 29.85	\$ 23.95	\$ 23.95	\$ 23.95	\$ 23.95	
20-Mar-10	\$ 23.03	\$ 22.04	\$ 22.77	\$ 22.12	\$ 22.11	\$ 24.33	\$ 25.93	\$ 25.71	\$ 27.64	\$ 27.98	\$ 28.15	\$ 27.56	\$ 27.43	\$ 25.57	\$ 24.56	\$ 24.84	\$ 25.69	\$ 27.09	\$ 31.56	\$ 41.85	\$ 35.45	\$ 28.63	\$ 24.00	\$ 22.44	\$ 22.44	
21-Mar-10	\$ 22.84	\$ 22.60	\$ 22.90	\$ 22.29	\$ 25.85	\$ 34.71	\$ 44.11	\$ 42.36	\$ 41.83	\$ 41.05	\$ 40.26	\$ 37.84	\$ 35.39	\$ 32.17	\$ 31.64	\$ 29.14	\$ 28.34	\$ 28.51	\$ 33.91	\$ 44.86	\$ 35.95	\$ 27.80	\$ 24.95	\$ 23.15	\$ 23.15	
22-Mar-10	\$ 23.98	\$ 23.12	\$ 23.19	\$ 23.60	\$ 26.66	\$ 35.46	\$ 46.96	\$ 38.42	\$ 37.54	\$ 37.42	\$ 37.00	\$ 36.43	\$ 33.94	\$ 31.97	\$ 29.17	\$ 26.31	\$ 25.98	\$ 25.99	\$ 27.77	\$ 38.44	\$ 31.60	\$ 27.14	\$ 24.50	\$ 23.15	\$ 23.15	
23-Mar-10	\$ 23.21	\$ 22.81	\$ 22.89	\$ 23.09	\$ 23.58	\$ 34.50	\$ 45.74	\$ 38.74	\$ 36.90	\$ 37.55	\$ 38.76	\$ 35.94	\$ 34.53	\$ 33.08	\$ 29.17	\$ 27.81	\$ 26.75	\$ 28.40	\$ 28.98	\$ 36.42	\$ 33.86	\$ 27.78	\$ 23.15	\$ 23.15	\$ 23.15	
24-Mar-10	\$ 22.66	\$ 21.76	\$ 21.91	\$ 22.22	\$ 25.13	\$ 36.04	\$ 41.86	\$ 35.88	\$ 36.00	\$ 34.93	\$ 35.81	\$ 33.64	\$ 32.46	\$ 30.84	\$ 28.12	\$ 27.89	\$ 27.85	\$ 28.86	\$ 33.17	\$ 45.75	\$ 38.35	\$ 28.99	\$ 25.95	\$ 24.77	\$ 24.77	
25-Mar-10	\$ 24.34	\$ 22.90	\$ 23.01	\$ 23.12	\$ 26.21	\$ 36.39	\$ 48.64	\$ 41.27	\$ 41.06	\$ 40.69	\$ 38.37	\$ 33.58	\$ 32.97	\$ 30.89	\$ 27.45	\$ 25.25	\$ 27.40	\$ 26.88	\$ 30.73	\$ 44.96	\$ 35.08	\$ 28.15	\$ 26.16	\$ 25.31	\$ 25.31	
26-Mar-10	\$ 25.63	\$ 24.67	\$ 24.33	\$ 24.02	\$ 24.42	\$ 30.03	\$ 29.05	\$ 33.98	\$ 34.90	\$ 33.17	\$ 28.89	\$ 26.75	\$ 24.75	\$ 23.81	\$ 23.08	\$ 22.97	\$ 23.77	\$ 25.54	\$ 34.75	\$ 29.67	\$ 27.51	\$ 23.54	\$ 21.99	\$ 21.99	\$ 21.99	
27-Mar-10	\$ 20.67	\$ 20.68	\$ 20.67	\$ 20.46	\$ 20.64	\$ 21.68	\$ 24.05	\$ 24.03	\$ 24.90	\$ 23.47	\$ 25.86	\$ 25.14	\$ 25.10	\$ 24.10	\$ 23.37	\$ 24.82	\$ 24.85	\$ 25.41	\$ 28.76	\$ 35.42	\$ 31.42	\$ 26.84	\$ 24.45	\$ 22.67	\$ 22.67	
28-Mar-10	\$ 21.57	\$ 21.63	\$ 21.54	\$ 21.40	\$ 24.06	\$ 34.66	\$ 45.82	\$ 44.75	\$ 40.96	\$ 39.81	\$ 40.56	\$ 37.98	\$ 32.86	\$ 31.35	\$ 30.13	\$ 28.07	\$ 29.69	\$ 32.89	\$ 42.87	\$ 37.20	\$ 27.46	\$ 26.41	\$ 25.91	\$ 24.81	\$ 24.81	
29-Mar-10	\$ 22.17	\$ 22.00	\$ 21.71	\$ 22.55	\$ 24.76	\$ 36.39	\$ 47.83	\$ 38.17	\$ 35.99	\$ 36.31	\$ 36.30	\$ 32.12	\$ 31.02	\$ 29.04	\$ 27.37	\$ 26.72	\$ 26.13	\$ 25.75	\$ 27.93	\$ 37.69	\$ 31.13	\$ 25.70	\$ 23.75	\$ 22.75	\$ 22.75	
30-Mar-10	\$ 20.55	\$ 19.19	\$ 19.38	\$ 19.64	\$ 21.06	\$ 33.52	\$ 36.88	\$ 30.21	\$ 31.96	\$ 30.62	\$ 33.57	\$ 31.45	\$ 31.63	\$ 28.77	\$ 26.80	\$ 27.76	\$ 26.56	\$ 27.47	\$ 27.36	\$ 35.90	\$ 29.34	\$ 24.16	\$ 20.77	\$ 20.57	\$ 20.57	
1-Apr-10	\$ 17.37	\$ 15.99	\$ 15.62	\$ 16.10	\$ 18.33	\$ 31.39	\$ 30.62	\$ 30.40	\$ 30.95	\$ 31.54	\$ 31.21	\$ 31.20	\$ 30.90	\$ 30.62	\$ 29.83	\$ 28.58	\$ 28.01	\$ 25.23	\$ 26.23	\$ 26.79	\$ 26.30	\$ 23.61	\$ 19.67	\$ 19.69	\$ 19.69	
2-Apr-10	\$ 15.40	\$ 12.54	\$ 12.00	\$ 12.83	\$ 14.40	\$ 25.73	\$ 24.06	\$ 25.35	\$ 26.23	\$ 27.19	\$ 27.44	\$ 28.97	\$ 27.36	\$ 27.45	\$ 27.74	\$ 26.80	\$ 26.17	\$ 25.96	\$ 25.20	\$ 26.90	\$ 25.96	\$ 22.73	\$ 19.55	\$ 18.03	\$ 18.03	
3-Apr-10	\$ 17.96	\$ 16.64	\$ 15.47	\$ 13.69	\$ 14.96	\$ 16.21	\$ 21.22	\$ 23.20	\$ 26.10	\$ 28.36	\$ 28.41	\$ 25.42	\$ 25.15	\$ 24.73	\$ 23.67	\$ 24.09	\$ 24.00	\$ 23.53	\$ 23.73	\$ 26.07	\$ 25.29	\$ 22.75	\$ 18.86	\$ 16.19	\$ 16.19	
4-Apr-10	\$ 18.32	\$ 17.45	\$ 14.06	\$ 13.77	\$ 14.74	\$ 17.52	\$ 20.91	\$ 22.01	\$ 22.23	\$ 22.38	\$ 22.90	\$ 22.59	\$ 22.08	\$ 21.73	\$ 21.22	\$ 21.21	\$ 21.56	\$ 21.76	\$ 22.83	\$ 31.48	\$ 25.59	\$ 22.72	\$ 19.84	\$ 19.37	\$ 19.37	
5-Apr-10	\$ 19.38	\$ 18.92	\$ 18.09	\$ 18.03	\$ 19.75	\$ 34.77	\$ 32.43	\$ 34.63	\$ 32.50	\$ 38.00	\$ 34.91	\$ 35.46	\$ 35.85	\$ 36.38	\$ 33.31	\$ 31.77	\$ 32.07	\$ 26.95	\$ 27.46	\$ 33.78	\$ 29.06	\$ 24.28	\$ 22.27	\$ 20.21	\$ 20.21	
6-Apr-10	\$ 17.82	\$ 16.70	\$ 16.49	\$ 16.75	\$ 19.58	\$ 30.75	\$ 31.79	\$ 31.04	\$ 31.96	\$ 35.84	\$ 36.61	\$ 33.91	\$ 31.27	\$ 31.53	\$ 29.87	\$ 28.67	\$ 28.10	\$ 26.64	\$ 30.78	\$ 37.69	\$ 32.34	\$ 26.50	\$ 23.61	\$ 19.67	\$ 19.69	
7-Apr-10	\$ 18.62	\$ 16.45	\$ 15.52	\$ 16.57	\$ 19.19	\$ 25.10	\$ 27.57	\$ 31.02	\$ 33.27	\$ 33.07	\$ 36.31	\$ 35.72	\$ 30.67	\$ 40.88	\$ 36.87	\$ 41.88	\$ 35.92	\$ 33.96	\$ 32.07	\$ 29.40	\$ 31.49	\$ 41.82	\$ 30.59	\$ 27.62	\$ 20.80	
8-Apr-10	\$ 19.47	\$ 16.71	\$ 16.47	\$ 16.56	\$ 20.18	\$ 29.63	\$ 36.38	\$ 40.81	\$ 40.71	\$ 41.45	\$ 40.65	\$ 41.28	\$ 41.71	\$ 41.18	\$ 41.18	\$ 35.92	\$ 33.96	\$ 32.07	\$ 29.40	\$ 31.49						

Hourly System Lambda - LMP

	HE 1	HE 2	HE 3	HE 4	HE 5	HE 6	HE 7	HE 8	HE 9	HE 10	HE 11	HE 12	HE 13	HE 14	HE 15	HE 16	HE 17	HE 18	HE 19	HE 20	HE 21	HE 22	HE 23	HE 24	
1-May-10	\$ 20.13	\$ 18.65	\$ 18.56	\$ 18.50	\$ 18.54	\$ 19.45	\$ 22.72	\$ 25.91	\$ 29.50	\$ 31.11	\$ 33.61	\$ 35.03	\$ 35.63	\$ 31.15	\$ 30.66	\$ 30.63	\$ 31.34	\$ 30.07	\$ 28.00	\$ 37.72	\$ 38.62	\$ 28.38	\$ 21.58	\$ 20.85	\$ 20.85
2-May-10	\$ 20.83	\$ 16.72	\$ 18.97	\$ 18.97	\$ 19.13	\$ 19.56	\$ 22.20	\$ 23.42	\$ 25.84	\$ 27.57	\$ 28.47	\$ 28.74	\$ 29.01	\$ 28.54	\$ 28.38	\$ 28.18	\$ 28.69	\$ 28.36	\$ 28.29	\$ 38.95	\$ 39.26	\$ 29.22	\$ 22.83	\$ 21.14	\$ 21.14
3-May-10	\$ 18.91	\$ 18.69	\$ 17.92	\$ 18.14	\$ 18.72	\$ 24.15	\$ 26.30	\$ 31.10	\$ 33.92	\$ 38.83	\$ 39.92	\$ 41.01	\$ 41.09	\$ 40.82	\$ 40.55	\$ 40.24	\$ 38.99	\$ 31.99	\$ 29.27	\$ 35.91	\$ 39.94	\$ 26.46	\$ 23.19	\$ 21.33	\$ 21.33
4-May-10	\$ 20.71	\$ 19.86	\$ 19.24	\$ 19.52	\$ 20.54	\$ 23.88	\$ 28.12	\$ 33.43	\$ 36.71	\$ 43.18	\$ 46.76	\$ 50.70	\$ 48.32	\$ 50.76	\$ 49.56	\$ 46.07	\$ 45.88	\$ 40.07	\$ 33.57	\$ 44.52	\$ 45.20	\$ 31.69	\$ 22.87	\$ 21.76	\$ 21.76
5-May-10	\$ 19.88	\$ 19.14	\$ 19.60	\$ 18.65	\$ 19.82	\$ 24.25	\$ 28.68	\$ 32.75	\$ 34.99	\$ 40.60	\$ 41.80	\$ 46.79	\$ 47.57	\$ 48.10	\$ 49.52	\$ 51.53	\$ 49.05	\$ 42.95	\$ 33.63	\$ 43.21	\$ 46.40	\$ 29.53	\$ 23.22	\$ 21.03	\$ 21.03
6-May-10	\$ 21.18	\$ 20.51	\$ 20.10	\$ 20.40	\$ 21.55	\$ 25.99	\$ 29.61	\$ 34.61	\$ 39.55	\$ 40.56	\$ 42.04	\$ 42.21	\$ 42.23	\$ 42.44	\$ 42.30	\$ 42.29	\$ 40.18	\$ 36.48	\$ 31.54	\$ 41.62	\$ 43.88	\$ 27.90	\$ 24.20	\$ 21.70	\$ 21.70
7-May-10	\$ 20.76	\$ 20.25	\$ 19.83	\$ 20.20	\$ 20.70	\$ 24.32	\$ 28.18	\$ 33.20	\$ 34.00	\$ 36.23	\$ 35.66	\$ 38.68	\$ 37.50	\$ 40.18	\$ 39.51	\$ 38.44	\$ 31.65	\$ 28.84	\$ 27.66	\$ 30.85	\$ 35.82	\$ 26.06	\$ 21.06	\$ 20.19	\$ 20.19
8-May-10	\$ 20.35	\$ 19.93	\$ 19.19	\$ 18.99	\$ 19.29	\$ 21.32	\$ 23.69	\$ 29.11	\$ 29.70	\$ 31.25	\$ 32.55	\$ 33.37	\$ 30.15	\$ 29.14	\$ 28.21	\$ 27.40	\$ 27.89	\$ 27.63	\$ 26.24	\$ 33.19	\$ 37.31	\$ 28.37	\$ 25.13	\$ 21.31	\$ 21.31
9-May-10	\$ 20.36	\$ 20.02	\$ 19.44	\$ 19.24	\$ 19.82	\$ 20.00	\$ 21.03	\$ 20.07	\$ 24.48	\$ 24.76	\$ 24.69	\$ 24.22	\$ 24.16	\$ 23.65	\$ 23.31	\$ 23.06	\$ 23.29	\$ 23.45	\$ 23.68	\$ 26.66	\$ 34.77	\$ 24.57	\$ 20.29	\$ 19.00	\$ 19.00
10-May-10	\$ 18.39	\$ 17.93	\$ 17.89	\$ 18.24	\$ 20.37	\$ 23.23	\$ 28.30	\$ 30.56	\$ 32.00	\$ 34.58	\$ 33.99	\$ 33.46	\$ 32.62	\$ 31.90	\$ 29.80	\$ 26.84	\$ 26.42	\$ 25.71	\$ 24.95	\$ 27.47	\$ 33.21	\$ 23.77	\$ 20.26	\$ 18.60	\$ 18.60
11-May-10	\$ 17.87	\$ 17.25	\$ 17.00	\$ 17.46	\$ 19.50	\$ 22.70	\$ 25.79	\$ 29.69	\$ 31.65	\$ 33.75	\$ 33.89	\$ 33.68	\$ 33.91	\$ 34.37	\$ 34.86	\$ 31.34	\$ 29.74	\$ 29.13	\$ 27.54	\$ 29.89	\$ 36.36	\$ 26.19	\$ 22.08	\$ 20.44	\$ 20.44
12-May-10	\$ 20.57	\$ 19.78	\$ 19.40	\$ 19.56	\$ 20.82	\$ 22.93	\$ 29.53	\$ 31.21	\$ 35.81	\$ 38.83	\$ 39.65	\$ 37.45	\$ 35.42	\$ 35.38	\$ 36.56	\$ 32.52	\$ 30.84	\$ 25.36	\$ 20.97	\$ 27.64	\$ 35.33	\$ 20.72	\$ 20.62	\$ 20.44	\$ 20.44
13-May-10	\$ 20.98	\$ 20.47	\$ 20.05	\$ 20.32	\$ 21.82	\$ 25.90	\$ 33.32	\$ 39.05	\$ 42.07	\$ 43.00	\$ 44.16	\$ 44.18	\$ 45.71	\$ 45.65	\$ 46.55	\$ 48.58	\$ 46.29	\$ 42.80	\$ 35.68	\$ 41.18	\$ 45.81	\$ 33.56	\$ 24.17	\$ 21.09	\$ 21.09
14-May-10	\$ 21.59	\$ 20.47	\$ 20.28	\$ 20.41	\$ 21.31	\$ 24.82	\$ 29.76	\$ 35.03	\$ 39.26	\$ 40.88	\$ 42.75	\$ 42.89	\$ 41.29	\$ 40.23	\$ 38.59	\$ 37.40	\$ 35.33	\$ 31.45	\$ 28.57	\$ 31.81	\$ 36.16	\$ 29.23	\$ 23.87	\$ 22.06	\$ 22.06
15-May-10	\$ 22.68	\$ 21.48	\$ 20.34	\$ 20.24	\$ 20.47	\$ 21.30	\$ 22.59	\$ 27.47	\$ 29.85	\$ 31.74	\$ 33.18	\$ 31.45	\$ 30.71	\$ 28.97	\$ 27.98	\$ 26.87	\$ 26.57	\$ 27.98	\$ 27.06	\$ 28.87	\$ 34.80	\$ 27.19	\$ 23.16	\$ 21.19	\$ 21.19
16-May-10	\$ 20.18	\$ 19.40	\$ 18.87	\$ 18.78	\$ 19.22	\$ 19.43	\$ 20.93	\$ 23.04	\$ 24.36	\$ 24.53	\$ 25.40	\$ 25.92	\$ 25.82	\$ 25.57	\$ 25.30	\$ 25.26	\$ 26.57	\$ 26.86	\$ 27.94	\$ 29.06	\$ 36.88	\$ 26.67	\$ 21.98	\$ 20.43	\$ 20.43
17-May-10	\$ 20.02	\$ 19.22	\$ 19.00	\$ 19.66	\$ 20.71	\$ 24.85	\$ 29.71	\$ 34.97	\$ 38.43	\$ 41.46	\$ 41.37	\$ 42.12	\$ 40.37	\$ 40.10	\$ 37.85	\$ 38.11	\$ 33.87	\$ 32.30	\$ 33.47	\$ 41.06	\$ 31.32	\$ 23.69	\$ 21.82	\$ 21.82	\$ 21.82
18-May-10	\$ 21.96	\$ 21.00	\$ 20.97	\$ 21.45	\$ 22.34	\$ 26.07	\$ 30.31	\$ 35.36	\$ 39.96	\$ 40.93	\$ 41.54	\$ 41.24	\$ 41.40	\$ 39.53	\$ 38.02	\$ 36.61	\$ 36.84	\$ 32.49	\$ 30.31	\$ 31.74	\$ 38.46	\$ 29.25	\$ 24.05	\$ 21.30	\$ 21.30
19-May-10	\$ 20.37	\$ 19.24	\$ 19.14	\$ 19.50	\$ 20.88	\$ 23.94	\$ 28.27	\$ 32.24	\$ 36.37	\$ 37.75	\$ 34.20	\$ 31.01	\$ 30.34	\$ 29.97	\$ 33.80	\$ 32.38	\$ 31.61	\$ 29.23	\$ 27.26	\$ 28.22	\$ 32.18	\$ 26.60	\$ 23.48	\$ 21.85	\$ 21.85
20-May-10	\$ 21.22	\$ 19.86	\$ 19.57	\$ 19.86	\$ 21.23	\$ 25.07	\$ 28.56	\$ 30.67	\$ 35.57	\$ 38.75	\$ 37.87	\$ 40.10	\$ 40.90	\$ 40.43	\$ 40.06	\$ 41.22	\$ 38.35	\$ 34.32	\$ 30.16	\$ 30.21	\$ 36.43	\$ 29.60	\$ 24.77	\$ 22.32	\$ 22.32
21-May-10	\$ 21.31	\$ 20.17	\$ 19.76	\$ 20.04	\$ 21.09	\$ 24.22	\$ 28.55	\$ 33.30	\$ 38.21	\$ 41.01	\$ 43.88	\$ 42.35	\$ 43.51	\$ 42.31	\$ 41.05	\$ 40.37	\$ 39.91	\$ 35.20	\$ 31.79	\$ 32.21	\$ 35.93	\$ 30.45	\$ 25.14	\$ 22.87	\$ 22.87
22-May-10	\$ 22.82	\$ 21.48	\$ 20.54	\$ 20.11	\$ 20.26	\$ 20.58	\$ 22.11	\$ 24.10	\$ 27.34	\$ 29.86	\$ 30.72	\$ 31.40	\$ 32.73	\$ 34.01	\$ 35.27	\$ 37.10	\$ 36.39	\$ 31.86	\$ 31.12	\$ 38.09	\$ 27.70	\$ 24.18	\$ 22.11	\$ 22.11	\$ 22.11
23-May-10	\$ 20.59	\$ 19.50	\$ 18.34	\$ 17.73	\$ 18.06	\$ 18.07	\$ 20.64	\$ 22.52	\$ 25.25	\$ 28.02	\$ 31.62	\$ 33.81	\$ 36.75	\$ 42.53	\$ 46.14	\$ 47.87	\$ 49.22	\$ 51.37	\$ 47.55	\$ 45.47	\$ 50.89	\$ 41.97	\$ 27.55	\$ 24.54	\$ 24.54
24-May-10	\$ 20.97	\$ 19.55	\$ 18.60	\$ 18.60	\$ 19.81	\$ 22.36	\$ 26.30	\$ 28.42	\$ 33.52	\$ 38.67	\$ 43.93	\$ 48.89	\$ 53.53	\$ 60.18	\$ 63.67	\$ 66.03	\$ 62.18	\$ 57.90	\$ 51.81	\$ 48.56	\$ 52.31	\$ 40.34	\$ 27.64	\$ 24.52	\$ 24.52
25-May-10	\$ 23.13	\$ 20.84	\$ 19.76	\$ 19.84	\$ 20.68	\$ 23.05	\$ 30.10	\$ 31.82	\$ 35.73	\$ 40.36	\$ 44.77	\$ 50.39	\$ 56.68	\$ 65.04	\$ 66.45	\$ 69.10	\$ 63.65	\$ 59.11	\$ 50.27	\$ 47.28	\$ 49.29	\$ 38.65	\$ 30.26	\$ 27.00	\$ 27.00
26-May-10	\$ 23.59	\$ 21.29	\$ 20.18	\$ 20.00	\$ 20.82	\$ 23.56	\$ 28.85	\$ 31.56	\$ 34.55	\$ 40.98	\$ 45.41	\$ 50.29	\$ 55.19	\$ 61.95	\$ 63.17	\$ 66.28	\$ 63.00	\$ 57.29	\$ 47.75	\$ 48.40	\$ 38.19	\$ 27.60	\$ 24.67	\$ 24.67	\$ 24.67
27-May-10	\$ 20.96	\$ 19.67	\$ 19.04	\$ 19.00	\$ 19.43	\$ 21.19	\$ 23.66	\$ 27.14	\$ 32.60	\$ 36.46	\$ 40.87	\$ 47.14	\$ 51.66	\$ 56.14	\$ 57.54	\$ 63.08	\$ 68.65	\$ 73.83	\$ 43.27	\$ 38.46	\$ 40.56	\$ 29.01	\$ 23.51	\$ 20.47	\$ 20.47
28-May-10	\$ 22.52	\$ 19.99	\$ 19.12	\$ 19.29	\$ 20.71	\$ 22.18	\$ 23.59	\$ 25.57	\$ 27.69	\$ 31.71	\$ 35.63	\$ 34.46	\$ 40.05	\$ 43.32	\$ 43.76	\$ 45.28	\$ 42.26	\$ 37.81	\$ 31.24	\$ 28.09	\$ 33.20	\$ 27.42	\$ 22.75	\$ 22.35	\$ 22.35
29-May-10	\$ 22.46	\$ 21.75	\$ 20.37	\$ 20.06	\$ 20.06	\$ 18.70	\$ 21.89	\$ 23.62	\$ 25.11	\$ 26.31	\$ 32.94	\$ 38.07	\$ 40.04	\$ 44.73	\$ 47.06	\$ 49.92	\$ 52.04	\$ 47.65	\$ 42.40	\$ 37.51	\$ 42.31	\$ 31.06	\$ 24.50	\$ 23.15	\$ 23.15
30-May-10	\$ 20.10	\$ 19.11	\$ 17.98	\$ 18.21	\$ 18.97	\$ 18.41	\$ 19.89	\$ 22.28	\$ 23.55	\$ 27.35	\$ 32.96	\$ 37.91	\$ 41.12	\$ 45.36	\$ 49.34	\$ 53.18	\$ 56.89	\$ 61.20	\$ 64.10	\$ 39.14	\$ 42.84	\$ 32.42	\$ 25.32	\$ 23.23	\$ 23.23
31-May-10	\$ 22.28	\$ 19.65	\$ 17.99	\$ 18.34	\$ 18.69	\$ 14.21	\$ 17.76	\$ 23.43	\$ 24.16	\$ 27.65	\$ 33.94	\$ 41.57	\$ 42.38	\$ 43.69	\$ 45.47	\$ 47.34	\$ 47.84	\$ 44.15	\$ 36.10	\$ 33.47	\$ 44.60	\$ 29.31	\$ 23.43	\$ 21.86	\$ 21.86
1-Jun-10	\$ 22.27	\$ 20.14	\$ 19.49	\$ 19.68	\$ 20.48	\$ 23.94	\$ 31.51	\$ 33.67	\$ 38.99	\$ 48.10	\$ 56.47	\$ 61.79	\$ 65.09	\$ 67.58	\$ 68.00	\$ 72.00	\$ 68.19	\$ 61.09	\$ 57.51	\$ 53.40	\$ 56.82	\$ 37.89	\$ 28.36	\$ 23.89	\$ 23.89
2-Jun-10	\$ 23.42	\$ 22.66	\$ 21.79	\$ 21.84	\$ 22.48	\$ 23.34	\$ 26.08	\$ 30.53	\$ 36.63	\$ 44.39	\$ 54.35	\$ 60.41	\$ 61.12	\$ 69.64	\$ 69.94	\$ 72.48	\$ 71.71	\$ 58.60	\$ 48.09	\$ 42.21	\$ 51.64	\$ 36.39	\$ 28.60	\$ 25.17	\$ 25.17
3-Jun-10	\$ 24.30	\$ 23.02	\$ 22.28	\$ 22.87	\$ 23.35	\$ 24.27	\$ 29.07	\$ 31.32	\$ 34.28	\$ 40.86	\$ 46.96	\$ 49.04	\$ 48.87	\$ 52.21	\$ 51.34	\$ 53.48	\$ 50.47	\$ 46.08	\$ 41.25	\$ 36.82	\$ 43.76	\$ 31.41	\$ 25.70	\$ 23.07	\$ 23.07
4-Jun-10	\$ 25.28	\$ 22.32	\$ 21.62	\$ 21.40	\$ 22.07	\$ 22.50	\$ 25.15	\$ 27.35	\$ 32.93	\$ 39.69	\$ 45.52	\$ 47.08	\$ 51.35	\$ 54.71	\$ 54.64	\$ 54.18	\$ 54.79	\$ 46.23	\$ 42.16	\$ 37.77	\$ 42.09	\$ 32.00	\$ 27.25	\$ 24.91	\$ 24.91
5-Jun-10	\$ 24.75	\$ 22.78	\$ 22.08	\$ 21.53	\$ 22.09	\$ 21.86	\$ 23.05	\$ 25.52	\$ 27.12	\$ 34.63	\$ 37.96	\$ 40.16	\$ 40.34	\$ 42.31	\$ 44.83	\$ 42.71	\$ 43.60	\$ 40.08	\$ 40.23	\$ 34.87	\$ 38.92	\$ 30.05	\$ 26.59	\$ 23.99	\$ 23.99
6-Jun-10	\$ 23.53	\$ 22.76	\$ 22.30	\$ 22.11	\$ 23.95	\$ 20.69	\$ 20.17	\$ 22.62	\$ 23.29	\$ 24.70	\$ 25.82	\$ 26.74	\$ 29.53	\$ 30.75	\$ 32.41	\$ 32.81	\$ 32.76	\$ 30.22	\$ 29.04	\$ 27.60	\$ 32.61	\$ 25.26	\$ 23.02	\$ 21.62	\$ 21.62
7-Jun-10	\$ 20.94	\$ 17.99	\$ 17.72	\$ 19.70	\$ 21.84	\$ 23.18	\$ 26.39	\$ 30.82	\$ 34.84	\$ 42.55	\$ 45.42	\$ 45.10	\$ 47.36	\$ 46.85	\$ 46.60	\$ 47.30	\$ 45.22	\$ 43.26	\$ 39.35	\$ 36.12	\$ 43.1				

Hourly System Lambda - LMF

	HE 1	HE 2	HE 3	HE 4	HE 5	HE 6	HE 7	HE 8	HE 9	HE 10	HE 11	HE 12	HE 13	HE 14	HE 15	HE 16	HE 17	HE 18	HE 19	HE 20	HE 21	HE 22	HE 23	HE 24	
1-Jul-10	17.05	15.35	14.48	14.63	16.18	18.85	21.75	24.23	26.14	30.09	32.24	33.86	39.12	45.12	46.89	46.89	45.13	43.25	41.80	36.33	31.96	31.22	27.31	22.34	20.41
2-Jul-10	19.68	18.87	17.84	17.64	18.74	20.01	22.27	24.50	26.02	30.48	33.69	35.35	42.44	47.10	46.74	47.28	47.32	44.60	37.78	31.55	31.50	29.13	25.26	23.26	23.26
3-Jul-10	22.07	19.88	19.23	20.02	19.72	18.34	21.66	24.04	26.47	29.14	32.98	37.00	42.97	46.86	45.00	46.10	46.02	46.09	47.78	41.80	42.76	37.45	32.11	25.80	23.26
4-Jul-10	23.11	18.68	14.85	15.83	14.73	8.41	18.40	21.14	23.04	26.30	29.16	37.79	44.68	47.67	55.83	56.30	58.02	58.02	58.02	52.09	42.83	36.45	40.28	30.68	26.15
5-Jul-10	23.61	20.48	18.56	17.78	17.82	18.20	21.15	23.89	25.36	30.74	40.39	47.30	46.48	52.37	59.64	62.51	64.71	59.75	53.21	43.67	45.71	35.96	26.62	24.32	23.26
6-Jul-10	27.57	26.05	24.39	23.78	23.94	24.91	25.70	27.12	42.85	53.80	62.70	65.01	70.77	78.14	80.42	87.78	85.81	79.18	73.60	64.79	63.78	50.67	36.56	35.51	23.26
7-Jul-10	28.29	25.85	23.41	22.80	23.60	25.87	28.70	39.50	47.68	57.39	60.85	67.85	74.00	84.83	87.56	96.05	91.20	82.25	73.63	60.18	60.52	53.79	38.07	35.62	23.26
8-Jul-10	27.78	24.31	23.59	23.60	23.41	24.40	27.07	35.44	44.92	54.71	59.22	61.18	67.18	72.99	74.18	78.09	72.10	67.28	63.98	56.92	57.10	41.00	31.80	28.18	23.26
9-Jul-10	26.83	23.70	23.01	22.49	23.39	24.43	26.15	32.30	37.60	43.88	45.23	48.67	54.17	57.32	59.96	62.56	56.48	51.35	44.56	37.53	39.90	32.81	27.71	25.69	23.26
10-Jul-10	24.12	21.17	19.99	17.75	18.72	18.44	19.90	24.02	26.34	31.97	37.21	42.30	46.24	49.91	52.64	57.68	55.63	51.46	46.02	38.09	40.81	35.18	28.91	26.20	23.26
11-Jul-10	22.54	19.43	15.57	14.06	14.74	10.36	12.72	22.11	24.09	27.03	31.08	34.55	39.59	41.87	48.63	48.04	52.13	48.05	44.27	38.28	43.71	36.91	28.41	25.09	23.26
12-Jul-10	24.39	23.47	22.55	22.81	23.18	24.43	26.79	34.85	38.97	45.31	50.00	55.67	65.74	70.15	71.70	71.37	63.37	58.74	49.77	44.20	46.02	36.43	28.20	25.43	23.26
13-Jul-10	24.32	21.99	20.23	20.06	22.01	23.73	25.08	27.40	30.86	38.36	43.19	47.05	54.89	59.96	60.87	63.18	59.28	52.64	44.08	40.36	43.85	35.87	28.33	25.52	23.26
14-Jul-10	23.04	19.49	18.47	19.03	20.54	23.38	25.32	27.32	30.63	42.03	48.82	57.99	63.33	74.14	75.30	82.60	77.46	66.99	62.68	56.76	60.64	44.51	31.59	27.89	23.26
15-Jul-10	26.01	23.72	22.82	22.43	23.50	25.41	26.36	33.48	43.44	53.84	57.51	62.35	71.31	80.10	83.56	87.76	83.13	75.96	65.83	60.78	64.81	52.25	41.37	35.61	23.26
16-Jul-10	25.70	23.30	21.86	20.95	22.35	24.44	26.69	32.71	40.15	51.43	55.88	60.72	68.05	81.85	82.08	82.41	78.37	68.12	58.28	53.82	54.91	40.04	29.70	27.32	23.26
17-Jul-10	22.88	19.25	18.63	15.48	15.97	11.94	18.85	24.34	29.74	39.25	45.99	40.38	56.07	63.52	67.83	72.01	69.48	63.04	55.50	48.83	51.11	39.81	29.32	26.41	23.26
18-Jul-10	24.19	22.61	19.65	19.24	18.57	17.48	20.88	23.78	28.71	37.35	44.77	50.30	56.26	63.02	70.98	75.49	81.73	88.10	94.27	98.46	98.46	84.29	68.69	54.75	23.26
19-Jul-10	24.27	22.85	20.70	20.76	21.95	23.06	25.43	27.67	33.97	41.27	46.17	53.04	59.44	64.70	66.43	74.28	80.83	88.10	94.10	98.46	98.46	84.29	68.69	54.75	23.26
20-Jul-10	24.01	22.81	21.68	21.24	22.61	24.04	26.98	35.35	40.62	50.18	52.50	58.00	65.34	72.05	75.31	81.03	87.17	94.10	98.46	98.46	84.29	68.69	54.75	23.26	23.26
21-Jul-10	26.00	23.59	22.60	22.54	23.52	26.03	28.74	35.43	39.04	49.09	53.36	59.87	66.35	73.28	76.54	81.10	83.09	87.38	90.81	94.16	98.29	82.05	61.31	51.28	23.26
22-Jul-10	23.91	22.35	20.89	20.47	21.64	23.71	27.14	31.60	38.78	45.56	54.15	59.38	64.93	69.97	73.03	80.37	84.82	87.21	94.40	98.46	98.46	84.29	68.69	54.75	23.26
23-Jul-10	26.20	24.18	23.62	23.59	23.95	26.68	34.37	41.33	48.50	60.10	68.86	72.24	77.29	82.16	89.67	95.78	100.00	104.30	108.60	112.90	117.20	121.50	125.80	130.10	134.40
24-Jul-10	23.88	20.00	23.88	22.84	22.45	22.92	24.94	31.69	43.75	55.16	59.85	63.11	70.80	73.98	80.11	81.89	82.18	71.88	64.40	56.27	56.33	45.74	35.74	30.14	23.26
25-Jul-10	25.18	23.66	21.19	20.72	19.88	18.76	19.34	23.48	25.86	31.85	36.41	42.06	44.58	49.86	54.54	56.45	55.33	51.29	46.10	41.67	46.12	36.50	25.29	23.16	23.26
26-Jul-10	22.15	20.66	19.12	19.26	21.59	23.26	25.05	29.07	34.17	37.71	45.50	51.67	62.81	68.06	70.02	77.73	81.49	81.49	81.49	81.49	81.49	81.49	81.49	81.49	81.49
27-Jul-10	24.07	21.97	20.89	20.68	22.33	24.61	25.56	29.42	35.62	40.07	49.05	55.43	63.88	70.58	77.80	84.29	88.29	94.09	97.45	103.09	105.36	110.07	114.56	118.11	121.11
28-Jul-10	28.59	24.68	23.73	23.63	24.14	28.23	32.56	38.30	44.40	53.33	63.09	70.34	74.02	77.11	85.81	94.04	101.85	108.65	115.50	122.35	129.20	136.05	142.90	149.75	156.60
29-Jul-10	25.95	24.25	23.30	23.12	23.54	26.77	28.68	33.55	37.55	45.50	54.15	59.38	64.93	69.97	73.03	80.37	84.82	87.21	94.40	98.46	98.46	84.29	68.69	54.75	23.26
30-Jul-10	23.58	24.01	23.02	22.84	23.24	25.36	27.71	33.59	37.30	43.89	51.38	57.59	63.73	67.23	72.83	75.80	78.06	80.82	83.27	85.37	88.83	91.96	94.16	96.41	98.61
31-Jul-10	24.03	23.03	22.50	21.98	20.27	18.95	23.05	24.71	29.12	36.20	41.75	47.10	49.81	55.81	61.19	63.65	65.02	68.13	70.76	72.66	74.83	77.28	79.93	82.78	85.81
1-Aug-10	26.71	24.55	23.18	22.40	20.84	19.44	20.94	23.32	25.32	29.41	34.95	38.02	47.05	50.95	52.88	60.53	62.13	65.06	66.83	71.49	74.44	76.94	79.43	81.93	84.43
2-Aug-10	24.08	21.67	20.77	20.83	22.80	24.25	24.79	30.94	35.52	42.76	51.67	56.58	64.92	69.71	70.16	89.86	97.88	103.79	108.03	111.81	115.14	118.03	120.47	122.46	124.01
3-Aug-10	25.94	24.21	23.64	23.50	23.99	26.26	30.05	36.89	42.74	54.68	63.30	68.33	75.54	79.53	80.24	97.63	104.43	108.85	112.56	115.56	118.81	122.30	125.94	129.73	133.56
4-Aug-10	33.21	27.58	26.20	26.10	27.21	30.59	33.85	40.69	44.50	56.32	65.89	74.13	77.57	82.06	85.20	95.18	101.85	106.54	110.24	113.00	115.81	118.67	121.58	124.54	127.54
5-Aug-10	31.14	29.27	27.36	26.12	27.00	31.56	33.87	38.28	47.27	57.50	66.32	71.12	77.12	80.56	90.17	93.89	93.84	70.28	67.77	62.91	63.13	56.44	49.13	43.03	36.61
6-Aug-10	24.32	22.28	20.84	20.70	22.67	25.98	28.03	32.43	35.13	38.93	43.75	50.18	59.95	66.40	66.72	87.93	91.46	92.64	94.96	97.43	100.05	102.81	105.71	108.74	111.89
7-Aug-10	31.79	19.52	18.06	17.48	17.50	17.74	19.51	23.10	23.96	28.50	33.77	37.70	44.58	47.83	52.89	59.59	67.88	71.27	71.14	72.00	72.00	72.00	72.00	72.00	72.00
8-Aug-10	21.38	19.74	16.70	16.01	16.13	15.56	16.37	22.10	24.09	27.58	33.52	37.91	45.40	51.01	52.69	60.29	67.88	71.27	71.14	72.00	72.00	72.00	72.00	72.00	72.00
9-Aug-10	24.46	22.40	21.11	21.12	22.08	24.93	26.38	31.64	36.74	47.26	55.36	59.22	67.80	74.60	80.27	88.88	95.25	101.43	107.06	112.24	117.00	121.44	125.56	129.34	132.82
10-Aug-10	26.53	24.79	23.71	23.67	24.05	26.91	28.12	33.62	40.26	52.69	61.65	67.00	73.78	78.85	85.82	91.83	98.02	103.46	108.15	112.09	115.2				

Hourly System Lambda - LMP

	HE 1	HE 2	HE 3	HE 4	HE 5	HE 6	HE 7	HE 8	HE 9	HE 10	HE 11	HE 12	HE 13	HE 14	HE 15	HE 16	HE 17	HE 18	HE 19	HE 20	HE 21	HE 22	HE 23	HE 24		
1-Sep-10	\$ 22.89	\$ 22.38	\$ 21.17	\$ 21.04	\$ 22.06	\$ 27.04	\$ 26.59	\$ 26.40	\$ 26.59	\$ 31.97	\$ 34.85	\$ 45.03	\$ 54.06	\$ 62.27	\$ 72.53	\$ 82.27	\$ 93.14	\$ 104.61	\$ 115.57	\$ 127.42	\$ 139.82	\$ 152.42	\$ 165.82	\$ 179.97	\$ 194.97	
2-Sep-10	\$ 24.11	\$ 22.98	\$ 21.85	\$ 21.01	\$ 22.95	\$ 28.60	\$ 26.95	\$ 27.43	\$ 28.99	\$ 31.02	\$ 35.72	\$ 37.57	\$ 42.05	\$ 46.80	\$ 52.80	\$ 54.23	\$ 47.05	\$ 39.54	\$ 36.47	\$ 40.37	\$ 34.67	\$ 28.08	\$ 26.26	\$ 26.79	\$ 26.79	
3-Sep-10	\$ 22.62	\$ 20.03	\$ 19.59	\$ 20.01	\$ 22.91	\$ 27.71	\$ 26.93	\$ 27.71	\$ 33.05	\$ 37.35	\$ 39.03	\$ 39.75	\$ 37.74	\$ 38.67	\$ 39.22	\$ 37.57	\$ 37.53	\$ 30.35	\$ 29.81	\$ 35.06	\$ 27.81	\$ 24.62	\$ 20.92	\$ 19.78	\$ 19.78	
4-Sep-10	\$ 18.77	\$ 15.07	\$ 12.47	\$ 13.19	\$ 15.15	\$ 17.81	\$ 21.07	\$ 24.40	\$ 25.60	\$ 27.60	\$ 29.90	\$ 28.78	\$ 28.36	\$ 26.19	\$ 26.29	\$ 28.02	\$ 29.27	\$ 26.32	\$ 27.30	\$ 31.40	\$ 31.40	\$ 25.00	\$ 20.46	\$ 18.46	\$ 18.46	\$ 18.46
5-Sep-10	\$ 8.25	\$ 8.95	\$ 4.42	\$ 4.16	\$ 6.07	\$ 8.53	\$ 10.49	\$ 19.06	\$ 22.88	\$ 24.17	\$ 24.74	\$ 25.72	\$ 26.13	\$ 27.76	\$ 28.69	\$ 29.00	\$ 31.29	\$ 30.17	\$ 31.14	\$ 31.64	\$ 30.40	\$ 25.60	\$ 20.92	\$ 19.26	\$ 19.26	\$ 19.26
6-Sep-10	\$ 7.77	\$ 3.77	\$ 0.36	\$ 0.86	\$ 0.87	\$ 2.13	\$ 7.84	\$ 19.04	\$ 23.40	\$ 24.60	\$ 27.09	\$ 31.22	\$ 34.64	\$ 39.94	\$ 40.12	\$ 41.54	\$ 41.46	\$ 36.00	\$ 38.50	\$ 40.29	\$ 38.03	\$ 28.22	\$ 20.97	\$ 19.26	\$ 19.26	\$ 19.26
7-Sep-10	\$ 12.00	\$ 12.89	\$ 11.43	\$ 12.20	\$ 15.53	\$ 26.61	\$ 25.52	\$ 24.97	\$ 27.08	\$ 30.33	\$ 33.85	\$ 36.27	\$ 41.77	\$ 47.06	\$ 50.46	\$ 66.80	\$ 60.83	\$ 49.30	\$ 42.62	\$ 47.16	\$ 37.32	\$ 27.28	\$ 23.95	\$ 20.71	\$ 20.71	\$ 20.71
8-Sep-10	\$ 14.48	\$ 12.07	\$ 9.98	\$ 11.27	\$ 17.00	\$ 26.15	\$ 24.84	\$ 24.49	\$ 25.15	\$ 26.69	\$ 30.27	\$ 36.52	\$ 30.19	\$ 30.23	\$ 33.00	\$ 32.05	\$ 31.07	\$ 28.81	\$ 26.81	\$ 31.69	\$ 26.52	\$ 24.36	\$ 20.24	\$ 16.02	\$ 16.02	\$ 16.02
9-Sep-10	\$ 4.49	\$ 1.91	\$ 0.94	\$ 2.47	\$ 15.55	\$ 25.97	\$ 25.40	\$ 26.41	\$ 27.51	\$ 29.02	\$ 30.27	\$ 31.33	\$ 34.64	\$ 34.51	\$ 38.78	\$ 38.65	\$ 36.02	\$ 30.89	\$ 29.07	\$ 36.81	\$ 30.57	\$ 25.45	\$ 18.29	\$ 17.44	\$ 17.44	\$ 17.44
10-Sep-10	\$ 16.83	\$ 14.24	\$ 11.97	\$ 14.04	\$ 19.70	\$ 26.57	\$ 26.32	\$ 26.32	\$ 27.67	\$ 30.20	\$ 31.07	\$ 34.87	\$ 36.47	\$ 36.45	\$ 37.86	\$ 37.12	\$ 33.15	\$ 29.17	\$ 27.40	\$ 32.40	\$ 27.00	\$ 23.81	\$ 20.35	\$ 19.24	\$ 19.24	\$ 19.24
11-Sep-10	\$ 14.38	\$ 10.80	\$ 8.57	\$ 11.75	\$ 13.87	\$ 18.96	\$ 18.36	\$ 18.36	\$ 22.92	\$ 26.01	\$ 27.67	\$ 29.02	\$ 28.10	\$ 27.29	\$ 28.04	\$ 28.17	\$ 27.97	\$ 26.94	\$ 26.18	\$ 34.41	\$ 26.66	\$ 23.75	\$ 23.29	\$ 17.71	\$ 15.88	\$ 15.88
12-Sep-10	\$ 13.96	\$ 11.56	\$ 8.21	\$ 7.52	\$ 7.43	\$ 8.80	\$ 10.57	\$ 19.51	\$ 22.63	\$ 22.99	\$ 24.15	\$ 24.38	\$ 24.67	\$ 24.94	\$ 25.13	\$ 26.78	\$ 26.77	\$ 26.27	\$ 26.66	\$ 39.96	\$ 27.75	\$ 23.29	\$ 21.97	\$ 19.65	\$ 19.65	\$ 19.65
13-Sep-10	\$ 16.02	\$ 13.97	\$ 11.20	\$ 13.62	\$ 19.91	\$ 27.84	\$ 24.56	\$ 27.18	\$ 29.89	\$ 31.13	\$ 35.45	\$ 37.53	\$ 40.71	\$ 41.21	\$ 45.49	\$ 43.52	\$ 41.60	\$ 34.85	\$ 34.55	\$ 43.59	\$ 32.20	\$ 26.80	\$ 21.97	\$ 19.65	\$ 19.65	\$ 19.65
14-Sep-10	\$ 18.35	\$ 16.33	\$ 14.88	\$ 16.40	\$ 19.83	\$ 30.53	\$ 28.27	\$ 26.68	\$ 30.04	\$ 31.52	\$ 34.50	\$ 37.68	\$ 38.81	\$ 39.75	\$ 43.05	\$ 43.78	\$ 38.81	\$ 31.93	\$ 32.20	\$ 40.55	\$ 31.45	\$ 25.44	\$ 22.06	\$ 20.11	\$ 20.11	\$ 20.11
15-Sep-10	\$ 18.34	\$ 16.87	\$ 14.26	\$ 16.21	\$ 19.73	\$ 30.29	\$ 24.85	\$ 24.55	\$ 26.10	\$ 29.05	\$ 30.67	\$ 31.50	\$ 36.17	\$ 37.71	\$ 41.11	\$ 41.80	\$ 37.29	\$ 34.94	\$ 34.27	\$ 40.69	\$ 30.13	\$ 24.62	\$ 20.68	\$ 19.33	\$ 19.33	\$ 19.33
16-Sep-10	\$ 17.90	\$ 15.51	\$ 14.09	\$ 15.65	\$ 19.49	\$ 32.25	\$ 27.84	\$ 27.18	\$ 30.85	\$ 33.94	\$ 36.47	\$ 38.32	\$ 37.84	\$ 37.90	\$ 38.13	\$ 37.65	\$ 32.43	\$ 29.48	\$ 31.98	\$ 38.92	\$ 30.34	\$ 24.75	\$ 19.56	\$ 18.39	\$ 18.39	\$ 18.39
17-Sep-10	\$ 18.64	\$ 17.93	\$ 15.84	\$ 17.99	\$ 20.99	\$ 33.48	\$ 29.96	\$ 26.87	\$ 29.89	\$ 32.51	\$ 35.10	\$ 39.35	\$ 40.48	\$ 41.38	\$ 43.43	\$ 41.55	\$ 37.22	\$ 31.92	\$ 35.53	\$ 41.28	\$ 31.49	\$ 25.50	\$ 23.04	\$ 19.74	\$ 19.74	\$ 19.74
18-Sep-10	\$ 18.79	\$ 16.25	\$ 14.44	\$ 14.83	\$ 16.69	\$ 19.78	\$ 21.15	\$ 23.25	\$ 26.44	\$ 29.98	\$ 31.27	\$ 33.94	\$ 32.85	\$ 32.85	\$ 32.91	\$ 34.58	\$ 38.04	\$ 40.03	\$ 41.38	\$ 38.84	\$ 41.07	\$ 59.22	\$ 81.11	\$ 99.02	\$ 122.48	\$ 150.34
19-Sep-10	\$ 18.40	\$ 15.81	\$ 13.62	\$ 14.05	\$ 14.34	\$ 15.93	\$ 19.95	\$ 20.82	\$ 23.56	\$ 24.44	\$ 26.37	\$ 29.27	\$ 31.52	\$ 34.58	\$ 38.62	\$ 40.52	\$ 43.12	\$ 45.49	\$ 43.12	\$ 38.94	\$ 41.10	\$ 42.88	\$ 29.76	\$ 20.70	\$ 20.70	\$ 20.70
20-Sep-10	\$ 19.63	\$ 19.46	\$ 17.04	\$ 19.44	\$ 21.91	\$ 34.62	\$ 32.78	\$ 27.64	\$ 30.04	\$ 34.45	\$ 39.26	\$ 41.59	\$ 43.13	\$ 42.92	\$ 45.98	\$ 45.52	\$ 43.12	\$ 38.94	\$ 41.10	\$ 42.88	\$ 29.76	\$ 20.70	\$ 20.70	\$ 20.70	\$ 20.70	\$ 20.70
21-Sep-10	\$ 19.99	\$ 19.66	\$ 16.58	\$ 19.43	\$ 20.83	\$ 35.13	\$ 31.48	\$ 28.73	\$ 30.31	\$ 36.29	\$ 40.61	\$ 45.82	\$ 52.67	\$ 57.58	\$ 66.61	\$ 71.56	\$ 84.83	\$ 84.57	\$ 59.99	\$ 62.27	\$ 45.67	\$ 33.92	\$ 25.83	\$ 20.88	\$ 20.88	\$ 20.88
22-Sep-10	\$ 21.13	\$ 20.31	\$ 19.83	\$ 20.25	\$ 21.54	\$ 35.08	\$ 30.74	\$ 29.18	\$ 31.89	\$ 37.12	\$ 38.83	\$ 46.02	\$ 50.32	\$ 54.31	\$ 64.24	\$ 69.96	\$ 80.81	\$ 83.00	\$ 43.50	\$ 46.59	\$ 35.11	\$ 29.89	\$ 25.86	\$ 23.21	\$ 23.21	\$ 23.21
23-Sep-10	\$ 22.08	\$ 21.12	\$ 20.38	\$ 20.55	\$ 21.98	\$ 33.83	\$ 30.01	\$ 28.91	\$ 32.56	\$ 36.16	\$ 41.49	\$ 46.63	\$ 56.47	\$ 63.10	\$ 70.27	\$ 78.68	\$ 93.23	\$ 97.67	\$ 58.14	\$ 58.81	\$ 41.78	\$ 32.54	\$ 28.00	\$ 24.15	\$ 24.15	\$ 24.15
24-Sep-10	\$ 23.01	\$ 20.72	\$ 19.88	\$ 20.33	\$ 22.67	\$ 33.72	\$ 30.80	\$ 29.44	\$ 32.02	\$ 36.63	\$ 41.96	\$ 44.67	\$ 50.09	\$ 52.85	\$ 60.92	\$ 69.27	\$ 83.03	\$ 89.87	\$ 61.51	\$ 61.84	\$ 42.68	\$ 32.68	\$ 29.17	\$ 25.04	\$ 23.42	\$ 23.42
25-Sep-10	\$ 20.53	\$ 20.23	\$ 19.19	\$ 19.76	\$ 19.80	\$ 20.88	\$ 21.87	\$ 23.68	\$ 25.06	\$ 27.75	\$ 29.19	\$ 29.23	\$ 27.84	\$ 28.03	\$ 27.78	\$ 28.40	\$ 27.84	\$ 27.57	\$ 33.91	\$ 35.28	\$ 36.57	\$ 24.50	\$ 20.70	\$ 18.20	\$ 18.20	\$ 18.20
26-Sep-10	\$ 15.67	\$ 14.58	\$ 12.15	\$ 13.14	\$ 14.12	\$ 16.68	\$ 17.45	\$ 20.81	\$ 23.92	\$ 24.82	\$ 24.47	\$ 24.37	\$ 24.14	\$ 24.24	\$ 24.26	\$ 24.20	\$ 24.26	\$ 24.20	\$ 24.86	\$ 24.86	\$ 24.86	\$ 24.86	\$ 24.86	\$ 24.86	\$ 24.86	\$ 24.86
27-Sep-10	\$ 18.88	\$ 18.70	\$ 18.10	\$ 19.14	\$ 21.97	\$ 33.22	\$ 39.56	\$ 33.97	\$ 29.20	\$ 34.40	\$ 37.51	\$ 32.05	\$ 32.47	\$ 32.24	\$ 32.69	\$ 32.16	\$ 30.81	\$ 29.28	\$ 30.84	\$ 36.75	\$ 27.67	\$ 24.50	\$ 21.50	\$ 21.07	\$ 21.07	\$ 21.07
28-Sep-10	\$ 19.35	\$ 18.94	\$ 17.65	\$ 19.49	\$ 21.42	\$ 33.42	\$ 36.78	\$ 28.27	\$ 27.42	\$ 29.90	\$ 33.21	\$ 38.19	\$ 35.99	\$ 35.29	\$ 33.29	\$ 32.18	\$ 29.83	\$ 28.70	\$ 38.64	\$ 35.45	\$ 29.19	\$ 25.08	\$ 21.54	\$ 20.68	\$ 20.68	\$ 20.68
29-Sep-10	\$ 19.09	\$ 18.88	\$ 18.15	\$ 19.34	\$ 21.44	\$ 31.33	\$ 32.08	\$ 27.47	\$ 28.72	\$ 32.59	\$ 33.99	\$ 34.01	\$ 34.36	\$ 34.90	\$ 35.95	\$ 36.15	\$ 32.65	\$ 29.61	\$ 36.64	\$ 37.33	\$ 29.81	\$ 24.68	\$ 23.22	\$ 21.48	\$ 21.48	\$ 21.48
30-Sep-10	\$ 18.10	\$ 17.35	\$ 15.37	\$ 15.96	\$ 20.49	\$ 29.59	\$ 33.56	\$ 25.37	\$ 27.75	\$ 31.30	\$ 35.09	\$ 35.41	\$ 36.13	\$ 36.86	\$ 34.78	\$ 33.43	\$ 30.56	\$ 29.42	\$ 28.60	\$ 38.97	\$ 30.92	\$ 25.42	\$ 21.32	\$ 20.35	\$ 20.35	\$ 20.35
1-Oct-10	\$ 16.42	\$ 14.21	\$ 14.24	\$ 16.89	\$ 20.89	\$ 28.99	\$ 38.84	\$ 32.80	\$ 34.51	\$ 34.46	\$ 34.78	\$ 35.79	\$ 34.08	\$ 33.73	\$ 33.84	\$ 31.37	\$ 28.99	\$ 28.08	\$ 35.29	\$ 35.29	\$ 35.29	\$ 35.29	\$ 35.29	\$ 35.29	\$ 35.29	\$ 35.29
2-Oct-10	\$ 20.17	\$ 19.73	\$ 18.32	\$ 19.71	\$ 20.91	\$ 22.04	\$ 22.54	\$ 25.44	\$ 27.35	\$ 28.22	\$ 24.07	\$ 22.15	\$ 20.82	\$ 20.54	\$ 20.01	\$ 19.00	\$ 18.00	\$ 18.00	\$ 18.00	\$ 18.00	\$ 18.00	\$ 18.00	\$ 18.00	\$ 18.00	\$ 18.00	\$ 18.00
3-Oct-10	\$ 19.73	\$ 18.81	\$ 18.08	\$ 17.87	\$ 18.53	\$ 20.62	\$ 22.44	\$ 22.56	\$ 24.91	\$ 25.17	\$ 25.26	\$ 24.14	\$ 23.90	\$ 23.84	\$ 23.73	\$ 24.01	\$ 24.36	\$ 25.05	\$ 25.05	\$ 25.05	\$ 25.05	\$ 25.05	\$ 25.05	\$ 25.05	\$ 25.05	\$ 25.05
4-Oct-10	\$ 19.55	\$ 16.85	\$ 16.73	\$ 14.29	\$ 20.07	\$ 28.68	\$ 42.18	\$ 37.36	\$ 33.42	\$ 36.07	\$ 36.36	\$ 32.55	\$ 31.96	\$ 31.14	\$ 29.73	\$ 29.05	\$ 28.27	\$ 27.35	\$ 27.50	\$ 41.74	\$ 36.15	\$ 28.12	\$ 25.88	\$ 21.86	\$ 21.08	\$ 21.08
5-Oct-10	\$ 20.10	\$ 20.41	\$ 20.51	\$ 20.48	\$ 24.36	\$ 33.20	\$ 40.61	\$ 36.01	\$ 36.64	\$ 39.77	\$ 38.01	\$ 36.63	\$ 36.94	\$ 37.18	\$ 34.73	\$ 33.70	\$ 30.68	\$ 31.50	\$ 41.66	\$ 37.33	\$ 33.05	\$ 27.40	\$ 25.10	\$ 22.29	\$ 22.29	\$ 22.29
6-Oct-10	\$ 15.38	\$ 16.68	\$ 19.15	\$ 19.73	\$ 22.29	\$ 30.67	\$ 33.56	\$ 28.69	\$ 29.16	\$ 31.83	\$ 33.61	\$ 30.67	\$ 33.81	\$ 33.91	\$ 30.67	\$ 27.76	\$ 27.80	\$ 28.27	\$ 28.10	\$ 38.42	\$ 34.12	\$ 27.60	\$ 24.75	\$ 22.56	\$ 21.47	\$ 21.47
7-Oct-10	\$ 18.61	\$ 19.18	\$ 18.81	\$ 18.23	\$ 23.01	\$ 30.84	\$ 33.69	\$ 29.75	\$ 30.14	\$ 32.45	\$ 34.31	\$ 33.93	\$ 33.86	\$ 34.84	\$ 33.40	\$										

Hourly System Lambda - LMP

	HE 1	HE 2	HE 3	HE 4	HE 5	HE 6	HE 7	HE 8	HE 9	HE 10	HE 11	HE 12	HE 13	HE 14	HE 15	HE 16	HE 17	HE 18	HE 19	HE 20	HE 21	HE 22	HE 23	HE 24		
1-Nov-10	\$ 21.82	\$ 21.74	\$ 21.59	\$ 22.26	\$ 23.38	\$ 34.94	\$ 49.04	\$ 41.58	\$ 35.51	\$ 35.96	\$ 34.72	\$ 33.56	\$ 31.45	\$ 30.30	\$ 28.07	\$ 26.40	\$ 25.07	\$ 24.00	\$ 23.17	\$ 22.45	\$ 21.84	\$ 21.35	\$ 20.95	\$ 20.63	\$ 20.38	
2-Nov-10	\$ 21.45	\$ 21.76	\$ 21.47	\$ 21.49	\$ 22.85	\$ 32.86	\$ 46.40	\$ 36.07	\$ 35.35	\$ 37.37	\$ 36.11	\$ 34.82	\$ 34.45	\$ 32.82	\$ 29.40	\$ 28.00	\$ 26.30	\$ 25.49	\$ 24.46	\$ 23.50	\$ 22.71	\$ 22.07	\$ 21.56	\$ 21.20	\$ 20.97	
3-Nov-10	\$ 24.43	\$ 24.87	\$ 24.34	\$ 24.34	\$ 25.96	\$ 37.45	\$ 45.75	\$ 35.25	\$ 36.08	\$ 36.15	\$ 35.98	\$ 34.84	\$ 33.26	\$ 30.73	\$ 28.42	\$ 27.74	\$ 27.58	\$ 26.64	\$ 25.99	\$ 24.72	\$ 23.19	\$ 22.07	\$ 21.53	\$ 21.24	\$ 21.00	
4-Nov-10	\$ 23.40	\$ 23.37	\$ 23.20	\$ 23.52	\$ 23.60	\$ 35.46	\$ 49.86	\$ 38.01	\$ 37.99	\$ 42.18	\$ 40.73	\$ 37.02	\$ 35.89	\$ 34.94	\$ 30.72	\$ 29.33	\$ 28.02	\$ 26.97	\$ 25.28	\$ 23.85	\$ 22.31	\$ 21.56	\$ 21.03	\$ 20.74	\$ 20.50	
5-Nov-10	\$ 24.00	\$ 24.38	\$ 24.21	\$ 24.72	\$ 25.56	\$ 36.38	\$ 50.08	\$ 41.28	\$ 41.00	\$ 41.88	\$ 41.30	\$ 38.16	\$ 38.19	\$ 37.04	\$ 33.80	\$ 32.54	\$ 31.28	\$ 29.37	\$ 28.11	\$ 26.39	\$ 24.83	\$ 23.33	\$ 22.85	\$ 22.56	\$ 22.32	
6-Nov-10	\$ 28.81	\$ 28.33	\$ 28.88	\$ 28.46	\$ 29.39	\$ 31.73	\$ 35.44	\$ 38.92	\$ 39.06	\$ 40.53	\$ 39.51	\$ 38.35	\$ 36.81	\$ 35.98	\$ 31.75	\$ 30.53	\$ 29.25	\$ 27.51	\$ 26.11	\$ 24.37	\$ 22.86	\$ 21.43	\$ 20.99	\$ 20.70	\$ 20.46	
7-Nov-10	\$ 31.24	\$ 31.07	\$ 32.20	\$ 25.71	\$ 24.56	\$ 26.18	\$ 28.60	\$ 27.84	\$ 28.16	\$ 28.87	\$ 28.84	\$ 27.89	\$ 26.85	\$ 26.14	\$ 25.53	\$ 25.50	\$ 25.60	\$ 25.02	\$ 24.02	\$ 23.07	\$ 22.10	\$ 21.21	\$ 20.38	\$ 19.61	\$ 18.94	
8-Nov-10	\$ 22.19	\$ 22.16	\$ 22.07	\$ 21.29	\$ 22.07	\$ 30.41	\$ 40.38	\$ 27.84	\$ 37.66	\$ 37.20	\$ 36.44	\$ 35.10	\$ 33.06	\$ 32.05	\$ 28.42	\$ 28.06	\$ 29.74	\$ 28.83	\$ 28.89	\$ 28.99	\$ 28.99	\$ 28.99	\$ 28.99	\$ 28.99	\$ 28.99	\$ 28.99
9-Nov-10	\$ 21.19	\$ 21.42	\$ 21.14	\$ 20.79	\$ 21.38	\$ 26.16	\$ 36.95	\$ 37.62	\$ 36.17	\$ 36.21	\$ 35.43	\$ 33.37	\$ 32.60	\$ 30.76	\$ 29.59	\$ 28.68	\$ 28.57	\$ 27.72	\$ 26.72	\$ 25.67	\$ 24.57	\$ 23.43	\$ 22.26	\$ 21.05	\$ 19.81	
10-Nov-10	\$ 20.87	\$ 20.33	\$ 20.27	\$ 20.26	\$ 21.60	\$ 27.25	\$ 46.75	\$ 35.66	\$ 36.08	\$ 37.29	\$ 36.87	\$ 37.18	\$ 35.27	\$ 33.86	\$ 30.40	\$ 28.09	\$ 27.88	\$ 26.67	\$ 25.11	\$ 23.78	\$ 22.45	\$ 21.10	\$ 19.74	\$ 18.38	\$ 17.02	
11-Nov-10	\$ 21.63	\$ 21.26	\$ 20.42	\$ 20.54	\$ 22.47	\$ 25.15	\$ 45.24	\$ 41.55	\$ 34.95	\$ 33.38	\$ 35.71	\$ 33.19	\$ 32.88	\$ 31.80	\$ 29.58	\$ 28.31	\$ 28.21	\$ 27.80	\$ 26.52	\$ 24.91	\$ 23.38	\$ 21.84	\$ 20.30	\$ 18.76	\$ 17.22	
12-Nov-10	\$ 18.94	\$ 17.90	\$ 17.05	\$ 17.69	\$ 18.71	\$ 20.97	\$ 42.83	\$ 38.88	\$ 28.38	\$ 26.51	\$ 26.89	\$ 26.34	\$ 27.10	\$ 26.91	\$ 24.19	\$ 22.80	\$ 22.60	\$ 22.45	\$ 22.15	\$ 21.80	\$ 21.45	\$ 21.10	\$ 20.75	\$ 20.40	\$ 20.05	
13-Nov-10	\$ 24.15	\$ 24.07	\$ 21.87	\$ 20.60	\$ 20.80	\$ 24.70	\$ 27.32	\$ 28.40	\$ 26.98	\$ 28.27	\$ 26.84	\$ 25.57	\$ 24.12	\$ 23.08	\$ 22.53	\$ 22.54	\$ 23.40	\$ 23.19	\$ 22.77	\$ 22.35	\$ 21.93	\$ 21.51	\$ 21.09	\$ 20.67	\$ 20.25	
14-Nov-10	\$ 20.60	\$ 19.50	\$ 18.57	\$ 18.70	\$ 18.72	\$ 18.77	\$ 22.24	\$ 25.00	\$ 24.75	\$ 25.49	\$ 25.99	\$ 25.33	\$ 25.21	\$ 24.97	\$ 24.19	\$ 24.37	\$ 24.07	\$ 23.67	\$ 23.04	\$ 22.41	\$ 21.78	\$ 21.15	\$ 20.52	\$ 19.89	\$ 19.26	
15-Nov-10	\$ 23.22	\$ 22.31	\$ 22.08	\$ 22.04	\$ 22.64	\$ 25.73	\$ 45.39	\$ 41.34	\$ 26.33	\$ 27.00	\$ 27.76	\$ 27.85	\$ 28.13	\$ 24.78	\$ 23.82	\$ 23.71	\$ 23.15	\$ 22.15	\$ 21.17	\$ 20.17	\$ 19.17	\$ 18.17	\$ 17.17	\$ 16.17	\$ 15.17	
16-Nov-10	\$ 20.86	\$ 20.44	\$ 20.31	\$ 20.21	\$ 20.28	\$ 22.13	\$ 42.84	\$ 37.45	\$ 29.86	\$ 28.66	\$ 30.43	\$ 29.04	\$ 27.43	\$ 26.69	\$ 25.61	\$ 24.65	\$ 23.86	\$ 23.16	\$ 22.54	\$ 21.91	\$ 21.28	\$ 20.65	\$ 20.02	\$ 19.39	\$ 18.76	
17-Nov-10	\$ 20.87	\$ 20.86	\$ 20.81	\$ 20.98	\$ 20.94	\$ 22.54	\$ 37.06	\$ 30.08	\$ 23.47	\$ 25.30	\$ 25.29	\$ 26.41	\$ 26.62	\$ 24.20	\$ 23.35	\$ 22.93	\$ 22.92	\$ 22.92	\$ 22.92	\$ 22.92	\$ 22.92	\$ 22.92	\$ 22.92	\$ 22.92	\$ 22.92	
18-Nov-10	\$ 21.63	\$ 21.49	\$ 21.35	\$ 20.97	\$ 20.98	\$ 22.03	\$ 36.35	\$ 34.00	\$ 33.33	\$ 33.47	\$ 33.74	\$ 33.79	\$ 32.11	\$ 28.50	\$ 26.24	\$ 24.73	\$ 24.04	\$ 23.55	\$ 23.00	\$ 22.46	\$ 21.92	\$ 21.38	\$ 20.84	\$ 20.30	\$ 19.76	
19-Nov-10	\$ 22.14	\$ 21.83	\$ 21.40	\$ 21.16	\$ 21.31	\$ 24.01	\$ 37.33	\$ 33.47	\$ 29.22	\$ 28.03	\$ 27.25	\$ 26.87	\$ 26.46	\$ 24.84	\$ 23.69	\$ 22.70	\$ 22.75	\$ 22.75	\$ 22.75	\$ 22.75	\$ 22.75	\$ 22.75	\$ 22.75	\$ 22.75	\$ 22.75	
20-Nov-10	\$ 20.69	\$ 20.92	\$ 20.58	\$ 20.19	\$ 19.83	\$ 21.01	\$ 23.94	\$ 23.97	\$ 25.77	\$ 26.12	\$ 26.76	\$ 25.88	\$ 22.69	\$ 22.50	\$ 21.91	\$ 21.27	\$ 21.51	\$ 20.46	\$ 19.40	\$ 18.34	\$ 17.28	\$ 16.22	\$ 15.16	\$ 14.10	\$ 13.04	
21-Nov-10	\$ 19.81	\$ 19.22	\$ 18.98	\$ 18.20	\$ 18.57	\$ 20.01	\$ 21.50	\$ 23.05	\$ 25.05	\$ 25.95	\$ 25.66	\$ 25.37	\$ 25.11	\$ 23.88	\$ 22.85	\$ 22.85	\$ 23.83	\$ 23.83	\$ 23.83	\$ 23.83	\$ 23.83	\$ 23.83	\$ 23.83	\$ 23.83	\$ 23.83	
22-Nov-10	\$ 19.65	\$ 19.64	\$ 19.39	\$ 19.33	\$ 19.60	\$ 22.99	\$ 37.31	\$ 35.34	\$ 31.97	\$ 32.89	\$ 33.75	\$ 34.70	\$ 35.00	\$ 32.53	\$ 29.86	\$ 26.61	\$ 24.44	\$ 22.22	\$ 20.00	\$ 17.78	\$ 15.56	\$ 13.34	\$ 11.12	\$ 8.90	\$ 6.68	
23-Nov-10	\$ 20.37	\$ 20.15	\$ 19.95	\$ 19.98	\$ 20.01	\$ 21.34	\$ 33.39	\$ 28.35	\$ 32.77	\$ 35.82	\$ 36.47	\$ 36.92	\$ 32.37	\$ 30.57	\$ 28.48	\$ 26.44	\$ 24.40	\$ 22.36	\$ 20.32	\$ 18.28	\$ 16.24	\$ 14.20	\$ 12.16	\$ 10.12	\$ 8.08	
24-Nov-10	\$ 23.59	\$ 23.58	\$ 23.40	\$ 22.71	\$ 22.68	\$ 26.19	\$ 40.44	\$ 39.53	\$ 39.43	\$ 34.29	\$ 33.21	\$ 32.37	\$ 32.20	\$ 30.06	\$ 27.84	\$ 25.60	\$ 23.36	\$ 21.12	\$ 18.88	\$ 16.64	\$ 14.40	\$ 12.16	\$ 9.92	\$ 7.68	\$ 5.44	
25-Nov-10	\$ 22.47	\$ 21.88	\$ 21.82	\$ 21.89	\$ 21.28	\$ 21.59	\$ 21.82	\$ 23.91	\$ 26.32	\$ 29.06	\$ 30.16	\$ 30.08	\$ 25.86	\$ 24.22	\$ 22.53	\$ 20.97	\$ 19.41	\$ 17.85	\$ 16.29	\$ 14.73	\$ 13.17	\$ 11.61	\$ 10.05	\$ 8.49	\$ 6.93	
26-Nov-10	\$ 21.11	\$ 20.73	\$ 20.72	\$ 20.90	\$ 21.01	\$ 21.64	\$ 24.58	\$ 31.69	\$ 29.81	\$ 32.03	\$ 33.22	\$ 33.42	\$ 30.42	\$ 28.40	\$ 26.37	\$ 24.35	\$ 22.32	\$ 20.29	\$ 18.26	\$ 16.23	\$ 14.20	\$ 12.17	\$ 10.14	\$ 8.11	\$ 6.08	
27-Nov-10	\$ 22.65	\$ 22.14	\$ 21.85	\$ 21.61	\$ 21.74	\$ 22.11	\$ 24.48	\$ 26.01	\$ 29.12	\$ 31.00	\$ 32.06	\$ 32.62	\$ 26.71	\$ 24.80	\$ 22.87	\$ 20.94	\$ 19.01	\$ 17.08	\$ 15.15	\$ 13.22	\$ 11.29	\$ 9.36	\$ 7.43	\$ 5.50	\$ 3.57	
28-Nov-10	\$ 23.52	\$ 22.97	\$ 22.97	\$ 22.26	\$ 21.91	\$ 21.81	\$ 22.60	\$ 24.76	\$ 25.99	\$ 26.04	\$ 26.92	\$ 26.42	\$ 24.32	\$ 23.83	\$ 23.01	\$ 22.92	\$ 22.79	\$ 22.79	\$ 22.79	\$ 22.79	\$ 22.79	\$ 22.79	\$ 22.79	\$ 22.79	\$ 22.79	
29-Nov-10	\$ 22.77	\$ 23.04	\$ 22.47	\$ 22.26	\$ 22.39	\$ 23.42	\$ 33.27	\$ 42.98	\$ 37.93	\$ 35.34	\$ 36.03	\$ 35.57	\$ 30.06	\$ 28.48	\$ 27.01	\$ 25.57	\$ 24.10	\$ 22.63	\$ 21.16	\$ 19.69	\$ 18.22	\$ 16.75	\$ 15.28	\$ 13.81	\$ 12.34	
30-Nov-10	\$ 20.81	\$ 20.53	\$ 20.03	\$ 20.01	\$ 19.91	\$ 21.06	\$ 29.83	\$ 34.33	\$ 29.21	\$ 30.56	\$ 29.54	\$ 30.37	\$ 29.49	\$ 29.36	\$ 28.82	\$ 28.21	\$ 27.55	\$ 26.84	\$ 26.13	\$ 25.42	\$ 24.71	\$ 24.00	\$ 23.29	\$ 22.58	\$ 21.87	
1-Dec-10	\$ 21.92	\$ 22.01	\$ 21.88	\$ 21.89	\$ 21.66	\$ 24.57	\$ 34.99	\$ 41.81	\$ 36.71	\$ 36.94	\$ 37.92	\$ 38.77	\$ 32.08	\$ 31.44	\$ 29.80	\$ 28.09	\$ 26.47	\$ 24.85	\$ 23.23	\$ 21.61	\$ 20.00	\$ 18.38	\$ 16.76	\$ 15.14	\$ 13.52	
2-Dec-10	\$ 26.88	\$ 25.87	\$ 25.46	\$ 25.46	\$ 25.15	\$ 27.00	\$ 38.05	\$ 42.03	\$ 36.44	\$ 38.20	\$ 38.98	\$ 38.06	\$ 34.34	\$ 33.42	\$ 29.83	\$ 28.69	\$ 27.57	\$ 26.45	\$ 25.33	\$ 24.21	\$ 23.09	\$ 21.97	\$ 20.85	\$ 19.73	\$ 18.61	
3-Dec-10	\$ 22.98	\$ 22.05	\$ 21.50	\$ 21.67	\$ 22.60	\$ 24.62	\$ 40.36	\$ 46.13	\$ 43.04	\$ 41.63	\$ 43.69	\$ 39.68	\$ 33.46	\$ 33.24	\$ 28.74	\$ 27.95	\$ 27.05	\$ 26.15	\$ 25.25	\$ 24.35	\$ 23.45	\$ 22.55	\$ 21.65	\$ 20.75	\$ 19.85	
4-Dec-10	\$ 28.48	\$ 26.96	\$ 26.84	\$ 26.54	\$ 25.07	\$ 25.70	\$ 27.70	\$ 32.28	\$ 36.64	\$ 45.26	\$ 40.30	\$ 31.65	\$ 29.51	\$ 28.15	\$ 26.06	\$ 24.07	\$ 22.08	\$ 20.09	\$ 18.10	\$ 16.11	\$ 14.12	\$ 12.13	\$ 10.14	\$ 8.15	\$ 6.16	
5-Dec-10	\$ 26.52	\$ 26.10	\$ 25.49	\$ 24.31	\$ 23.19	\$ 22.99	\$ 23.84	\$ 26.09	\$ 27.04	\$ 28.90	\$ 28.48	\$ 28.51	\$ 28.02	\$ 27.61	\$ 27.06	\$ 26.66	\$ 26.26	\$ 25.86	\$ 25.46	\$ 25.06	\$ 24.66	\$ 24.26	\$ 23.86	\$ 23.46	\$ 23.06	
6-Dec-10	\$ 26.65	\$ 26.55	\$ 26.55	\$ 26.49	\$ 26.66	\$ 27.66	\$ 41.73	\$ 50.85	\$ 48.77	\$ 45.13	\$ 47.40	\$ 45.64	\$ 43.80	\$ 42.29	\$ 38.48	\$ 35.15	\$ 32.28	\$ 29.41	\$ 26.54	\$ 23.67	\$ 20.80	\$ 17.93	\$ 15.06	\$ 12.19	\$ 9.32	
7-Dec-10	\$ 30.90	\$ 28.73	\$ 27.97	\$ 27.58	\$ 27.54	\$ 31.14	\$ 51.90	\$ 51.72	\$ 46.29	\$ 46.49	\$ 46.21	\$ 42.03	\$ 40.23	\$ 37.89	\$ 34.46	\$ 31.30	\$ 28.38	\$ 25.46	\$ 22.54	\$ 19.62	\$ 16.70	\$ 13.78	\$ 10.86	\$ 7.94	\$ 5.02	
8-Dec-10	\$ 29.49	\$ 28.40	\$ 27.76	\$ 27.59	\$ 27.06	\$ 30.37	\$ 48.69	\$ 62.88	\$ 50.47	\$ 52.22	\$ 58.19	\$ 50.96	\$ 45.50	\$ 45.20	\$ 39.27	\$ 36.60	\$ 33.72	\$ 30.84	\$ 27.96	\$ 25.08	\$ 22.20	\$				

Hourly System Lambda - Energy Only																										
	HE 1	HE 2	HE 3	HE 4	HE 5	HE 6	HE 7	HE 8	HE 9	HE 10	HE 11	HE 12	HE 13	HE 14	HE 15	HE 16	HE 17	HE 18	HE 19	HE 20	HE 21	HE 22	HE 23	HE 24		
1-Jan-10	\$ 26.62	\$ 25.01	\$ 23.42	\$ 22.96	\$ 22.02	\$ 21.94	\$ 23.98	\$ 24.83	\$ 26.30	\$ 29.21	\$ 31.97	\$ 32.31	\$ 30.66	\$ 28.06	\$ 26.99	\$ 26.99	\$ 27.83	\$ 47.72	\$ 63.45	\$ 58.03	\$ 56.47	\$ 45.66	\$ 39.93	\$ 31.57		
2-Jan-10	\$ 26.14	\$ 27.96	\$ 27.11	\$ 25.52	\$ 24.99	\$ 25.18	\$ 27.58	\$ 30.87	\$ 33.69	\$ 42.44	\$ 55.05	\$ 53.36	\$ 44.31	\$ 36.39	\$ 35.58	\$ 31.77	\$ 34.20	\$ 62.82	\$ 80.84	\$ 65.16	\$ 60.07	\$ 51.00	\$ 47.73	\$ 44.99		
3-Jan-10	\$ 36.69	\$ 34.05	\$ 32.22	\$ 30.55	\$ 28.62	\$ 29.04	\$ 31.61	\$ 37.69	\$ 37.01	\$ 45.03	\$ 48.80	\$ 46.82	\$ 40.96	\$ 38.81	\$ 30.84	\$ 30.67	\$ 33.28	\$ 56.32	\$ 80.79	\$ 65.44	\$ 58.52	\$ 48.94	\$ 45.36	\$ 39.62		
4-Jan-10	\$ 38.85	\$ 35.78	\$ 32.32	\$ 31.13	\$ 29.36	\$ 28.94	\$ 37.63	\$ 49.18	\$ 49.74	\$ 67.24	\$ 68.33	\$ 64.79	\$ 54.53	\$ 48.94	\$ 46.29	\$ 43.18	\$ 44.88	\$ 71.87	\$ 93.71	\$ 78.31	\$ 71.23	\$ 66.29	\$ 56.72	\$ 45.51		
5-Jan-10	\$ 33.89	\$ 31.60	\$ 28.79	\$ 29.13	\$ 28.63	\$ 34.91	\$ 51.57	\$ 64.52	\$ 64.24	\$ 61.78	\$ 61.26	\$ 59.48	\$ 52.48	\$ 45.43	\$ 37.60	\$ 37.06	\$ 37.06	\$ 64.80	\$ 82.51	\$ 72.15	\$ 66.18	\$ 58.72	\$ 43.49	\$ 35.13		
6-Jan-10	\$ 35.83	\$ 33.23	\$ 30.48	\$ 30.94	\$ 33.65	\$ 49.33	\$ 56.65	\$ 71.02	\$ 72.52	\$ 69.23	\$ 70.49	\$ 66.33	\$ 59.84	\$ 50.88	\$ 44.63	\$ 41.02	\$ 40.99	\$ 66.12	\$ 87.56	\$ 75.80	\$ 69.30	\$ 60.63	\$ 43.40	\$ 34.36		
7-Jan-10	\$ 28.37	\$ 28.71	\$ 25.56	\$ 25.07	\$ 26.48	\$ 46.28	\$ 51.98	\$ 46.28	\$ 38.20	\$ 62.12	\$ 60.49	\$ 57.01	\$ 51.23	\$ 44.59	\$ 39.61	\$ 39.67	\$ 39.67	\$ 65.36	\$ 85.21	\$ 72.98	\$ 64.84	\$ 57.93	\$ 44.29	\$ 31.94		
8-Jan-10	\$ 26.98	\$ 25.82	\$ 24.87	\$ 24.49	\$ 24.66	\$ 26.06	\$ 40.15	\$ 49.57	\$ 62.55	\$ 62.04	\$ 65.41	\$ 64.04	\$ 59.45	\$ 57.49	\$ 46.60	\$ 40.10	\$ 40.95	\$ 66.20	\$ 84.52	\$ 66.73	\$ 61.82	\$ 59.56	\$ 50.71	\$ 38.42		
9-Jan-10	\$ 41.25	\$ 39.45	\$ 35.20	\$ 34.22	\$ 33.87	\$ 35.54	\$ 43.78	\$ 54.34	\$ 58.43	\$ 64.66	\$ 66.96	\$ 62.04	\$ 56.73	\$ 46.40	\$ 39.00	\$ 31.06	\$ 29.98	\$ 50.35	\$ 66.83	\$ 61.44	\$ 56.99	\$ 65.30	\$ 54.93	\$ 48.49	\$ 38.65	
10-Jan-10	\$ 36.35	\$ 34.13	\$ 31.53	\$ 30.56	\$ 29.44	\$ 28.77	\$ 29.76	\$ 33.12	\$ 38.50	\$ 46.77	\$ 48.77	\$ 47.17	\$ 41.90	\$ 38.03	\$ 31.06	\$ 26.98	\$ 26.98	\$ 50.35	\$ 66.83	\$ 61.44	\$ 56.99	\$ 65.30	\$ 54.93	\$ 48.49	\$ 38.65	
11-Jan-10	\$ 29.58	\$ 26.96	\$ 26.90	\$ 26.51	\$ 27.22	\$ 30.10	\$ 42.24	\$ 61.27	\$ 64.71	\$ 62.01	\$ 64.81	\$ 62.34	\$ 60.07	\$ 51.63	\$ 43.13	\$ 39.24	\$ 38.93	\$ 58.93	\$ 65.08	\$ 67.46	\$ 69.85	\$ 68.69	\$ 58.11	\$ 44.59	\$ 39.11	
12-Jan-10	\$ 28.16	\$ 26.99	\$ 25.90	\$ 25.46	\$ 26.18	\$ 27.74	\$ 39.72	\$ 58.45	\$ 57.15	\$ 53.31	\$ 58.57	\$ 53.21	\$ 49.38	\$ 43.13	\$ 35.38	\$ 31.57	\$ 30.33	\$ 51.96	\$ 71.80	\$ 59.38	\$ 52.86	\$ 45.50	\$ 31.83	\$ 28.82		
13-Jan-10	\$ 25.10	\$ 24.21	\$ 23.08	\$ 24.11	\$ 24.45	\$ 25.88	\$ 38.78	\$ 51.40	\$ 52.17	\$ 50.39	\$ 50.82	\$ 48.36	\$ 44.20	\$ 36.80	\$ 31.21	\$ 28.95	\$ 28.98	\$ 48.75	\$ 64.58	\$ 53.32	\$ 50.41	\$ 41.31	\$ 29.85	\$ 28.28		
14-Jan-10	\$ 26.08	\$ 24.91	\$ 23.24	\$ 23.35	\$ 23.70	\$ 26.90	\$ 40.63	\$ 52.55	\$ 49.17	\$ 48.89	\$ 48.79	\$ 46.83	\$ 39.45	\$ 34.96	\$ 30.64	\$ 29.20	\$ 29.09	\$ 46.93	\$ 55.62	\$ 50.48	\$ 46.52	\$ 39.72	\$ 29.85	\$ 27.57		
15-Jan-10	\$ 23.55	\$ 23.99	\$ 23.53	\$ 23.20	\$ 23.74	\$ 25.54	\$ 38.81	\$ 51.79	\$ 53.33	\$ 50.58	\$ 50.49	\$ 46.45	\$ 42.03	\$ 35.86	\$ 31.06	\$ 26.98	\$ 26.98	\$ 50.35	\$ 66.83	\$ 61.44	\$ 56.99	\$ 65.30	\$ 54.93	\$ 48.49	\$ 38.65	
16-Jan-10	\$ 24.84	\$ 23.87	\$ 22.82	\$ 22.46	\$ 22.43	\$ 25.97	\$ 39.22	\$ 52.68	\$ 50.39	\$ 49.86	\$ 48.77	\$ 46.45	\$ 42.03	\$ 35.86	\$ 31.06	\$ 26.98	\$ 26.98	\$ 50.35	\$ 66.83	\$ 61.44	\$ 56.99	\$ 65.30	\$ 54.93	\$ 48.49	\$ 38.65	
17-Jan-10	\$ 24.26	\$ 23.08	\$ 22.76	\$ 22.36	\$ 21.92	\$ 21.51	\$ 23.23	\$ 25.72	\$ 26.85	\$ 24.22	\$ 30.03	\$ 31.16	\$ 29.40	\$ 28.42	\$ 27.34	\$ 26.09	\$ 26.09	\$ 45.61	\$ 53.96	\$ 47.52	\$ 43.23	\$ 37.59	\$ 29.31	\$ 26.26		
18-Jan-10	\$ 23.72	\$ 23.24	\$ 22.49	\$ 22.43	\$ 22.76	\$ 24.29	\$ 29.22	\$ 44.44	\$ 48.03	\$ 50.90	\$ 53.39	\$ 49.41	\$ 45.53	\$ 40.30	\$ 33.82	\$ 30.71	\$ 30.32	\$ 47.55	\$ 57.42	\$ 52.47	\$ 47.90	\$ 41.54	\$ 28.25	\$ 25.34		
19-Jan-10	\$ 24.90	\$ 23.69	\$ 22.86	\$ 22.81	\$ 23.18	\$ 25.13	\$ 38.06	\$ 53.07	\$ 52.75	\$ 52.83	\$ 52.86	\$ 47.47	\$ 45.14	\$ 41.67	\$ 33.66	\$ 30.62	\$ 30.77	\$ 47.26	\$ 57.29	\$ 52.40	\$ 48.99	\$ 44.23	\$ 29.44	\$ 26.52		
20-Jan-10	\$ 21.80	\$ 22.73	\$ 21.90	\$ 21.64	\$ 21.86	\$ 23.28	\$ 31.15	\$ 47.19	\$ 46.97	\$ 46.37	\$ 45.93	\$ 43.99	\$ 38.20	\$ 36.08	\$ 31.12	\$ 30.12	\$ 31.30	\$ 40.32	\$ 63.74	\$ 49.56	\$ 44.83	\$ 35.90	\$ 26.76	\$ 24.47		
21-Jan-10	\$ 22.35	\$ 20.89	\$ 20.82	\$ 20.48	\$ 20.81	\$ 22.08	\$ 27.40	\$ 38.57	\$ 34.76	\$ 35.57	\$ 36.43	\$ 36.83	\$ 34.52	\$ 32.23	\$ 28.69	\$ 27.68	\$ 28.03	\$ 37.19	\$ 51.36	\$ 44.56	\$ 39.09	\$ 31.54	\$ 26.20	\$ 23.64		
22-Jan-10	\$ 22.55	\$ 21.12	\$ 20.77	\$ 20.71	\$ 21.21	\$ 23.43	\$ 30.00	\$ 45.06	\$ 41.17	\$ 40.50	\$ 41.29	\$ 38.47	\$ 30.78	\$ 21.61	\$ 18.52	\$ 17.10	\$ 17.01	\$ 33.86	\$ 41.36	\$ 35.82	\$ 31.06	\$ 27.68	\$ 24.28	\$ 22.42		
23-Jan-10	\$ 21.48	\$ 20.67	\$ 19.72	\$ 19.12	\$ 19.20	\$ 19.93	\$ 21.50	\$ 24.40	\$ 26.70	\$ 32.88	\$ 30.37	\$ 28.39	\$ 26.69	\$ 25.37	\$ 24.06	\$ 22.68	\$ 23.46	\$ 29.49	\$ 43.43	\$ 32.33	\$ 30.00	\$ 26.28	\$ 23.03	\$ 20.70		
24-Jan-10	\$ 19.81	\$ 18.00	\$ 17.50	\$ 16.92	\$ 16.97	\$ 16.84	\$ 17.87	\$ 19.94	\$ 21.96	\$ 23.00	\$ 24.15	\$ 24.01	\$ 24.01	\$ 23.24	\$ 21.02	\$ 22.00	\$ 22.00	\$ 38.95	\$ 39.12	\$ 35.33	\$ 33.15	\$ 27.57	\$ 22.83	\$ 19.90		
25-Jan-10	\$ 18.12	\$ 16.03	\$ 17.03	\$ 16.79	\$ 17.71	\$ 20.21	\$ 28.21	\$ 35.94	\$ 34.35	\$ 38.08	\$ 38.09	\$ 38.10	\$ 34.34	\$ 31.32	\$ 28.03	\$ 27.60	\$ 29.17	\$ 38.24	\$ 53.48	\$ 48.14	\$ 40.76	\$ 35.29	\$ 26.73	\$ 23.21		
26-Jan-10	\$ 22.82	\$ 21.05	\$ 21.27	\$ 21.21	\$ 21.73	\$ 24.86	\$ 35.26	\$ 50.72	\$ 47.97	\$ 46.52	\$ 49.24	\$ 40.26	\$ 46.57	\$ 44.93	\$ 40.43	\$ 40.43	\$ 40.43	\$ 46.93	\$ 51.60	\$ 45.82	\$ 41.57	\$ 36.56	\$ 30.62	\$ 26.78		
27-Jan-10	\$ 27.26	\$ 25.80	\$ 24.20	\$ 24.58	\$ 24.97	\$ 26.87	\$ 42.79	\$ 64.08	\$ 58.97	\$ 48.07	\$ 53.42	\$ 50.10	\$ 48.90	\$ 42.75	\$ 36.17	\$ 32.21	\$ 29.89	\$ 41.11	\$ 69.46	\$ 59.15	\$ 52.98	\$ 43.73	\$ 35.38	\$ 27.91		
28-Jan-10	\$ 26.95	\$ 25.01	\$ 23.94	\$ 23.64	\$ 24.70	\$ 27.37	\$ 39.81	\$ 51.85	\$ 50.81	\$ 50.98	\$ 50.77	\$ 49.30	\$ 47.71	\$ 43.47	\$ 38.15	\$ 34.54	\$ 35.59	\$ 48.91	\$ 63.54	\$ 58.82	\$ 54.14	\$ 43.20	\$ 41.85	\$ 38.99		
29-Jan-10	\$ 32.08	\$ 30.19	\$ 29.13	\$ 28.74	\$ 29.82	\$ 34.19	\$ 48.67	\$ 68.31	\$ 58.10	\$ 58.69	\$ 56.82	\$ 51.73	\$ 49.16	\$ 48.47	\$ 41.11	\$ 35.52	\$ 35.86	\$ 48.18	\$ 65.71	\$ 57.89	\$ 51.87	\$ 48.81	\$ 38.60	\$ 34.06		
30-Jan-10	\$ 33.50	\$ 33.07	\$ 31.81	\$ 29.77	\$ 29.48	\$ 29.19	\$ 33.96	\$ 39.86	\$ 42.78	\$ 51.77	\$ 53.62	\$ 47.28	\$ 41.80	\$ 38.04	\$ 33.03	\$ 30.52	\$ 30.45	\$ 42.26	\$ 63.62	\$ 54.89	\$ 49.51	\$ 40.85	\$ 35.70	\$ 34.36		
31-Jan-10	\$ 32.50	\$ 31.55	\$ 29.97	\$ 29.81	\$ 29.24	\$ 27.63	\$ 29.90	\$ 32.82	\$ 35.11	\$ 42.87	\$ 42.00	\$ 38.22	\$ 35.50	\$ 32.42	\$ 29.68	\$ 28.67	\$ 28.83	\$ 40.46	\$ 59.92	\$ 51.31	\$ 47.35	\$ 41.43	\$ 36.09	\$ 30.83		
1-Feb-10	\$ 26.70	\$ 26.39	\$ 25.94	\$ 25.90	\$ 26.46	\$ 27.86	\$ 46.46	\$ 66.10	\$ 57.49	\$ 54.67	\$ 49.85	\$ 47.58	\$ 43.67	\$ 40.43	\$ 35.47	\$ 32.19	\$ 33.32	\$ 41.42	\$ 64.76	\$ 58.44	\$ 48.66	\$ 45.85	\$ 33.44	\$ 29.32		
2-Feb-10	\$ 26.92	\$ 25.75	\$ 23.05	\$ 25.25	\$ 25.67	\$ 28.68	\$ 42.82	\$ 55.34	\$ 52.72	\$ 50.01	\$ 48.14	\$ 46.87	\$ 42.94	\$ 39.51	\$ 34.59	\$ 31.28	\$ 32.22	\$ 39.19	\$ 57.08	\$ 50.26	\$ 47.48	\$ 44.51	\$ 34.57	\$ 29.50		
3-Feb-10	\$ 26.28	\$ 25.45	\$ 24.31	\$ 24.04	\$ 24.54	\$ 26.40	\$ 38.71	\$ 53.07	\$ 51.85	\$ 48.28	\$ 47.32	\$ 44.17	\$ 39.68	\$ 36.82	\$ 33.28	\$ 30.53	\$ 31.38	\$ 37.56	\$ 55.56	\$ 51.71	\$ 48.82	\$ 41.73	\$ 31.62	\$ 28.24		
4-Feb-10	\$ 26.55	\$ 24.93	\$ 24.68	\$ 24.53	\$ 24.80	\$ 27.72	\$ 41.88	\$ 53.60	\$ 51.43	\$ 50.02	\$ 48.50	\$ 47.14	\$ 42.07	\$ 38.94	\$ 34.01	\$ 32.48	\$ 32.44	\$ 40.93	\$ 54.04	\$ 47.19	\$ 41.17	\$ 41.26	\$ 36.01	\$ 27.80		
5-Feb-10	\$ 25.02	\$ 24.22	\$ 23.72	\$ 23.54	\$ 23.61	\$ 24.38	\$ 30.86	\$ 47.47	\$ 44.55	\$ 46.08	\$ 44.00	\$ 42.54	\$ 42.00	\$ 39.42	\$ 34.13	\$ 30.87	\$ 30.41	\$ 37.96	\$ 45.79	\$ 43.02	\$ 42.14	\$ 35.18	\$ 27.61	\$ 26.81		
6-Feb-10	\$ 27.42	\$ 26.82	\$ 25.70	\$ 25.07	\$ 25.03	\$ 26.78	\$ 27.97	\$ 33.95	\$ 37.85	\$ 45.47	\$ 50.01	\$ 46.97	\$ 42.30	\$ 34.88	\$ 31.03	\$ 30.87	\$ 31.43	\$ 40.96	\$ 57.24	\$ 55.24	\$ 54.48	\$ 47.40	\$ 38.38	\$ 33.44		
7-Feb-10	\$ 33.91	\$ 31.82	\$ 29.94	\$ 28.76	\$ 28.52	\$ 27.64	\$ 30.04	\$ 34.25	\$ 35.36	\$ 30.04	\$ 30.28	\$ 38.13	\$ 36.35	\$ 34.05	\$ 31.23	\$ 30.13	\$ 31.60	\$ 40.33	\$ 60.54	\$ 52.53	\$ 49.32	\$ 45.11	\$ 37.65	\$ 31.94		
8-Feb-10	\$ 27.35	\$ 27.40	\$ 27.72	\$ 26.73	\$ 26.98	\$ 29.47	\$ 45.16	\$ 69.05	\$ 59.12	\$ 52.97	\$ 52.86	\$ 51.00	\$ 47.07													

Hourly System Lambda - Energy Only

	HE 1	HE 2	HE 3	HE 4	HE 5	HE 6	HE 7	HE 8	HE 9	HE 10	HE 11	HE 12	HE 13	HE 14	HE 15	HE 16	HE 17	HE 18	HE 19	HE 20	HE 21	HE 22	HE 23	HE 24		
1-Mar-10	\$ 28.48	\$ 27.60	\$ 27.13	\$ 27.01	\$ 27.41	\$ 32.76	\$ 49.64	\$ 42.08	\$ 49.64	\$ 51.31	\$ 54.80	\$ 50.50	\$ 50.71	\$ 48.47	\$ 44.44	\$ 41.05	\$ 37.70	\$ 36.78	\$ 39.36	\$ 53.99	\$ 61.57	\$ 52.39	\$ 44.12	\$ 36.11	\$ 34.30	
2-Mar-10	\$ 30.40	\$ 28.81	\$ 28.03	\$ 27.73	\$ 28.51	\$ 34.03	\$ 44.56	\$ 49.56	\$ 50.97	\$ 51.15	\$ 51.71	\$ 49.20	\$ 44.80	\$ 42.67	\$ 41.17	\$ 37.90	\$ 34.87	\$ 38.18	\$ 49.57	\$ 61.84	\$ 48.49	\$ 44.70	\$ 36.69	\$ 24.22	\$ 24.22	
3-Mar-10	\$ 29.49	\$ 27.99	\$ 27.54	\$ 27.10	\$ 28.44	\$ 33.15	\$ 43.59	\$ 46.41	\$ 45.93	\$ 46.43	\$ 45.36	\$ 44.38	\$ 40.99	\$ 37.83	\$ 36.30	\$ 32.99	\$ 32.24	\$ 34.71	\$ 44.46	\$ 48.69	\$ 44.39	\$ 41.53	\$ 32.80	\$ 31.56	\$ 31.56	
4-Mar-10	\$ 30.10	\$ 29.10	\$ 28.62	\$ 28.22	\$ 29.24	\$ 34.46	\$ 47.23	\$ 52.70	\$ 51.57	\$ 51.02	\$ 45.36	\$ 46.47	\$ 44.11	\$ 42.49	\$ 38.36	\$ 32.14	\$ 31.33	\$ 32.76	\$ 43.62	\$ 53.61	\$ 48.34	\$ 42.83	\$ 33.56	\$ 29.13	\$ 29.13	
5-Mar-10	\$ 29.18	\$ 28.29	\$ 28.09	\$ 28.09	\$ 28.99	\$ 37.85	\$ 44.18	\$ 44.82	\$ 44.23	\$ 42.69	\$ 41.14	\$ 35.72	\$ 32.30	\$ 30.08	\$ 26.88	\$ 24.20	\$ 23.51	\$ 25.31	\$ 33.83	\$ 41.98	\$ 37.44	\$ 32.09	\$ 26.54	\$ 25.98	\$ 25.98	
6-Mar-10	\$ 25.35	\$ 25.97	\$ 24.85	\$ 23.70	\$ 23.46	\$ 23.84	\$ 25.46	\$ 27.26	\$ 31.75	\$ 33.97	\$ 34.11	\$ 30.72	\$ 27.36	\$ 24.89	\$ 23.96	\$ 23.30	\$ 23.41	\$ 23.93	\$ 35.99	\$ 30.82	\$ 28.11	\$ 25.49	\$ 23.08	\$ 23.08	\$ 23.08	
7-Mar-10	\$ 23.50	\$ 23.36	\$ 23.02	\$ 22.68	\$ 22.28	\$ 22.67	\$ 23.64	\$ 23.92	\$ 25.11	\$ 26.09	\$ 25.78	\$ 25.35	\$ 24.51	\$ 24.01	\$ 23.21	\$ 22.56	\$ 23.09	\$ 24.74	\$ 31.17	\$ 40.03	\$ 33.21	\$ 29.04	\$ 23.91	\$ 23.91	\$ 23.91	
8-Mar-10	\$ 21.21	\$ 20.55	\$ 20.51	\$ 21.14	\$ 22.07	\$ 24.33	\$ 35.64	\$ 35.53	\$ 38.82	\$ 40.10	\$ 37.08	\$ 36.03	\$ 34.18	\$ 31.19	\$ 27.21	\$ 26.24	\$ 26.93	\$ 26.74	\$ 32.41	\$ 41.80	\$ 35.62	\$ 28.61	\$ 23.52	\$ 22.68	\$ 22.68	
9-Mar-10	\$ 21.42	\$ 20.56	\$ 20.49	\$ 20.67	\$ 21.79	\$ 24.87	\$ 34.13	\$ 34.83	\$ 38.20	\$ 35.43	\$ 35.19	\$ 33.99	\$ 32.54	\$ 29.05	\$ 26.10	\$ 26.74	\$ 26.49	\$ 27.55	\$ 33.39	\$ 39.84	\$ 34.12	\$ 28.22	\$ 23.42	\$ 22.06	\$ 22.06	
10-Mar-10	\$ 21.25	\$ 20.40	\$ 20.38	\$ 20.33	\$ 21.32	\$ 24.11	\$ 33.89	\$ 35.74	\$ 38.92	\$ 40.06	\$ 38.60	\$ 37.65	\$ 36.60	\$ 33.66	\$ 30.37	\$ 28.31	\$ 28.77	\$ 29.31	\$ 31.15	\$ 38.77	\$ 31.46	\$ 26.72	\$ 22.42	\$ 22.42	\$ 22.42	
11-Mar-10	\$ 20.29	\$ 19.10	\$ 18.94	\$ 18.97	\$ 19.92	\$ 22.64	\$ 30.42	\$ 33.18	\$ 32.87	\$ 30.69	\$ 29.71	\$ 27.55	\$ 26.95	\$ 23.33	\$ 20.62	\$ 20.31	\$ 20.62	\$ 22.66	\$ 28.69	\$ 33.72	\$ 27.53	\$ 23.14	\$ 19.94	\$ 19.94	\$ 19.94	
12-Mar-10	\$ 18.01	\$ 17.64	\$ 17.91	\$ 17.81	\$ 18.48	\$ 21.59	\$ 30.83	\$ 30.20	\$ 30.17	\$ 30.83	\$ 38.11	\$ 39.86	\$ 38.30	\$ 33.72	\$ 28.97	\$ 26.16	\$ 26.97	\$ 28.97	\$ 36.27	\$ 39.68	\$ 24.80	\$ 22.36	\$ 19.74	\$ 19.74	\$ 19.74	
13-Mar-10	\$ 20.87	\$ 20.05	\$ 20.12	\$ 19.54	\$ 19.23	\$ 19.66	\$ 22.45	\$ 24.56	\$ 27.29	\$ 29.69	\$ 30.05	\$ 29.29	\$ 28.48	\$ 27.80	\$ 26.80	\$ 25.92	\$ 25.83	\$ 27.90	\$ 30.50	\$ 39.35	\$ 29.59	\$ 27.61	\$ 24.84	\$ 21.87	\$ 21.87	
14-Mar-10	\$ 21.06	\$ 20.74	\$ 20.60	\$ 20.36	\$ 20.25	\$ 21.07	\$ 23.59	\$ 24.09	\$ 25.52	\$ 26.87	\$ 27.40	\$ 27.27	\$ 26.87	\$ 26.85	\$ 26.85	\$ 25.54	\$ 26.58	\$ 26.63	\$ 28.63	\$ 34.26	\$ 47.62	\$ 35.14	\$ 28.71	\$ 24.05	\$ 21.70	
15-Mar-10	\$ 20.81	\$ 20.37	\$ 20.20	\$ 20.32	\$ 21.40	\$ 22.45	\$ 25.21	\$ 26.94	\$ 28.16	\$ 29.43	\$ 29.74	\$ 29.83	\$ 29.68	\$ 29.43	\$ 29.96	\$ 29.85	\$ 28.28	\$ 28.88	\$ 30.14	\$ 36.63	\$ 49.17	\$ 37.82	\$ 28.80	\$ 25.38	\$ 22.24	
16-Mar-10	\$ 20.07	\$ 20.34	\$ 20.34	\$ 20.45	\$ 22.10	\$ 22.99	\$ 27.74	\$ 30.79	\$ 30.29	\$ 30.28	\$ 30.15	\$ 29.27	\$ 28.92	\$ 28.84	\$ 29.62	\$ 27.94	\$ 27.66	\$ 27.74	\$ 34.73	\$ 41.65	\$ 36.55	\$ 27.29	\$ 22.63	\$ 21.25	\$ 21.25	
17-Mar-10	\$ 21.72	\$ 21.04	\$ 21.02	\$ 21.50	\$ 22.84	\$ 23.35	\$ 23.73	\$ 23.71	\$ 23.63	\$ 23.69	\$ 23.60	\$ 23.60	\$ 23.63	\$ 23.48	\$ 23.40	\$ 23.62	\$ 22.68	\$ 22.68	\$ 27.68	\$ 32.67	\$ 39.69	\$ 33.38	\$ 26.62	\$ 23.53	\$ 21.14	
18-Mar-10	\$ 20.21	\$ 19.29	\$ 19.54	\$ 19.71	\$ 20.91	\$ 20.34	\$ 21.02	\$ 21.84	\$ 21.90	\$ 21.82	\$ 21.72	\$ 21.65	\$ 21.62	\$ 21.62	\$ 21.62	\$ 20.60	\$ 20.60	\$ 20.60	\$ 24.86	\$ 30.41	\$ 31.70	\$ 26.50	\$ 22.97	\$ 20.77	\$ 20.77	
19-Mar-10	\$ 19.60	\$ 19.04	\$ 18.98	\$ 19.33	\$ 20.74	\$ 27.57	\$ 36.91	\$ 34.55	\$ 34.17	\$ 33.74	\$ 31.78	\$ 30.40	\$ 30.60	\$ 28.72	\$ 27.47	\$ 25.52	\$ 24.85	\$ 24.36	\$ 27.38	\$ 35.72	\$ 30.29	\$ 25.53	\$ 22.14	\$ 20.91	\$ 20.91	
20-Mar-10	\$ 20.66	\$ 20.20	\$ 20.06	\$ 19.76	\$ 20.10	\$ 22.30	\$ 26.16	\$ 27.68	\$ 27.45	\$ 26.21	\$ 25.90	\$ 25.65	\$ 25.62	\$ 25.60	\$ 25.62	\$ 25.60	\$ 25.60	\$ 25.60	\$ 26.38	\$ 30.73	\$ 38.83	\$ 35.11	\$ 23.10	\$ 23.10	\$ 23.10	
21-Mar-10	\$ 21.50	\$ 20.88	\$ 21.24	\$ 20.68	\$ 20.91	\$ 22.99	\$ 25.47	\$ 25.36	\$ 25.33	\$ 25.33	\$ 25.33	\$ 25.33	\$ 25.33	\$ 25.33	\$ 25.33	\$ 25.33	\$ 25.33	\$ 25.33	\$ 26.29	\$ 31.22	\$ 41.39	\$ 35.09	\$ 28.30	\$ 23.01	\$ 23.01	
22-Mar-10	\$ 21.74	\$ 21.37	\$ 21.43	\$ 21.74	\$ 23.78	\$ 31.99	\$ 42.75	\$ 42.99	\$ 41.46	\$ 40.71	\$ 39.94	\$ 37.53	\$ 35.07	\$ 31.84	\$ 31.27	\$ 28.83	\$ 26.68	\$ 26.68	\$ 30.56	\$ 44.45	\$ 36.63	\$ 27.52	\$ 23.63	\$ 21.97	\$ 21.97	
23-Mar-10	\$ 21.71	\$ 21.08	\$ 21.09	\$ 21.49	\$ 23.64	\$ 31.21	\$ 42.14	\$ 43.11	\$ 41.51	\$ 40.71	\$ 39.94	\$ 37.53	\$ 35.07	\$ 31.84	\$ 31.27	\$ 28.83	\$ 26.68	\$ 26.68	\$ 30.56	\$ 44.45	\$ 36.63	\$ 27.52	\$ 23.63	\$ 21.97	\$ 21.97	
24-Mar-10	\$ 21.10	\$ 20.66	\$ 20.60	\$ 20.87	\$ 22.82	\$ 30.09	\$ 44.68	\$ 44.68	\$ 43.92	\$ 43.92	\$ 43.92	\$ 43.92	\$ 43.92	\$ 43.92	\$ 43.92	\$ 43.92	\$ 43.92	\$ 43.92	\$ 43.92	\$ 43.92	\$ 43.92	\$ 43.92	\$ 43.92	\$ 43.92	\$ 43.92	\$ 43.92
25-Mar-10	\$ 19.48	\$ 18.77	\$ 18.76	\$ 18.61	\$ 20.51	\$ 28.04	\$ 37.44	\$ 35.37	\$ 35.99	\$ 34.94	\$ 35.48	\$ 34.26	\$ 33.45	\$ 31.70	\$ 30.23	\$ 27.75	\$ 27.30	\$ 27.30	\$ 27.30	\$ 27.30	\$ 27.30	\$ 27.30	\$ 27.30	\$ 27.30	\$ 27.30	\$ 27.30
26-Mar-10	\$ 21.14	\$ 20.13	\$ 20.50	\$ 21.08	\$ 23.06	\$ 30.79	\$ 42.62	\$ 40.44	\$ 39.55	\$ 38.71	\$ 36.39	\$ 32.89	\$ 31.90	\$ 30.07	\$ 28.75	\$ 24.83	\$ 24.34	\$ 24.13	\$ 26.60	\$ 36.72	\$ 29.80	\$ 24.89	\$ 22.08	\$ 21.22	\$ 21.22	
27-Mar-10	\$ 21.87	\$ 21.11	\$ 20.80	\$ 20.77	\$ 21.07	\$ 23.44	\$ 27.13	\$ 28.20	\$ 31.79	\$ 33.67	\$ 32.66	\$ 30.22	\$ 27.28	\$ 25.58	\$ 24.57	\$ 24.01	\$ 23.83	\$ 24.09	\$ 26.99	\$ 33.67	\$ 28.75	\$ 25.34	\$ 20.99	\$ 19.62	\$ 19.62	
28-Mar-10	\$ 19.25	\$ 19.01	\$ 18.93	\$ 18.66	\$ 18.75	\$ 19.22	\$ 21.87	\$ 22.27	\$ 22.42	\$ 24.30	\$ 24.90	\$ 24.56	\$ 24.71	\$ 23.64	\$ 22.72	\$ 22.84	\$ 23.42	\$ 23.81	\$ 27.47	\$ 35.72	\$ 32.00	\$ 26.65	\$ 22.49	\$ 20.87	\$ 20.87	
29-Mar-10	\$ 19.93	\$ 19.64	\$ 19.80	\$ 19.66	\$ 21.62	\$ 29.17	\$ 45.28	\$ 44.85	\$ 42.87	\$ 40.10	\$ 40.84	\$ 37.75	\$ 33.24	\$ 33.30	\$ 30.43	\$ 29.38	\$ 28.01	\$ 28.21	\$ 31.31	\$ 41.30	\$ 35.60	\$ 27.83	\$ 23.85	\$ 22.19	\$ 22.19	
30-Mar-10	\$ 20.52	\$ 19.67	\$ 19.42	\$ 19.91	\$ 21.52	\$ 29.81	\$ 39.22	\$ 36.00	\$ 35.33	\$ 35.87	\$ 35.82	\$ 31.87	\$ 30.31	\$ 28.52	\$ 26.67	\$ 25.75	\$ 25.05	\$ 24.82	\$ 29.50	\$ 34.81	\$ 29.54	\$ 24.90	\$ 21.70	\$ 20.47	\$ 20.47	
31-Mar-10	\$ 19.86	\$ 18.80	\$ 18.91	\$ 18.13	\$ 17.95	\$ 17.93	\$ 19.88	\$ 27.93	\$ 31.30	\$ 32.98	\$ 31.93	\$ 33.13	\$ 33.44	\$ 31.42	\$ 28.18	\$ 26.83	\$ 25.69	\$ 25.94	\$ 28.87	\$ 34.71	\$ 29.01	\$ 24.26	\$ 20.09	\$ 18.51	\$ 18.51	
1-Apr-10	\$ 16.21	\$ 15.18	\$ 14.61	\$ 15.00	\$ 17.74	\$ 28.21	\$ 39.81	\$ 30.10	\$ 30.60	\$ 31.17	\$ 32.42	\$ 31.14	\$ 30.76	\$ 30.51	\$ 29.76	\$ 28.20	\$ 27.15	\$ 24.94	\$ 24.98	\$ 27.25	\$ 28.26	\$ 22.83	\$ 17.57	\$ 16.14	\$ 16.14	
2-Apr-10	\$ 13.48	\$ 11.21	\$ 10.63	\$ 11.29	\$ 12.84	\$ 22.92	\$ 33.34	\$ 24.60	\$ 26.14	\$ 27.00	\$ 27.40	\$ 26.95	\$ 27.37	\$ 27.18	\$ 27.18	\$ 26.40	\$ 25.49	\$ 24.72	\$ 24.44	\$ 26.49	\$ 25.52	\$ 21.80	\$ 18.41	\$ 17.03	\$ 17.03	
3-Apr-10	\$ 10.93	\$ 9.39	\$ 9.96	\$ 9.98	\$ 9.16	\$ 11.78	\$ 17.92	\$ 20.93	\$ 23.54	\$ 24.20	\$ 24.46	\$ 24.41	\$ 23.93	\$ 23.42	\$ 23.14	\$ 23.14	\$ 22.42	\$ 21.43	\$ 21.07	\$ 23.28	\$ 26.80	\$ 24.76	\$ 22.57	\$ 14.96	\$ 13.01	
4-Apr-10	\$ 12.71	\$ 11.45	\$ 9.26	\$ 9.01	\$ 10.40	\$ 13.67	\$ 17.40	\$ 23.08	\$ 21.11	\$ 21.45	\$ 22.16	\$ 21.98	\$ 21.51	\$ 21.10	\$ 20.61	\$ 20.58	\$ 21.11	\$ 21.38	\$ 22.44	\$ 26.93	\$ 25.34	\$ 23.06	\$ 18.75	\$ 16.64	\$ 16.64	
5-Apr-10	\$ 16.53	\$ 16.20	\$ 16.00	\$ 16.33	\$ 17.35	\$ 28.22	\$ 30.04	\$ 33.80	\$ 30.74	\$ 30.75	\$ 30.67	\$ 40.25	\$ 40.74	\$ 41.40	\$ 41.60	\$ 37.65	\$ 35.55	\$ 33.94	\$ 28.55	\$ 28.81	\$ 35.51	\$ 30.93	\$ 25.11	\$ 21.28	\$ 19.36	
6-Apr-10	\$ 16.34	\$ 15.11	\$ 14.56	\$ 14.76	\$ 17.08	\$ 28.22	\$ 28.24	\$ 30.73	\$ 32.00	\$ 35.40	\$ 36.84	\$ 38.07	\$ 39.85	\$ 39.64	\$ 38.28	\$ 36.15	\$ 35.33	\$ 28.66	\$ 24.81	\$ 30.63	\$ 24.56	\$ 18.86	\$ 17.24	\$ 17.24	\$ 17.24	
7-Apr-10	\$ 16.70	\$ 15.18	\$ 14.33	\$ 14.83	\$ 18.54	\$ 21.91	\$ 26.95	\$ 31.28	\$ 30.40	\$ 35.00	\$ 35.88	\$ 36.13	\$ 36.52	\$ 36.91	\$ 35.30	\$ 35.12	\$ 33.39	\$ 28.80	\$ 29.20							

Hourly System Lambda - Energy Only

	HE 1	HE 2	HE 3	HE 4	HE 5	HE 6	HE 7	HE 8	HE 9	HE 10	HE 11	HE 12	HE 13	HE 14	HE 15	HE 16	HE 17	HE 18	HE 19	HE 20	HE 21	HE 22	HE 23	HE 24	
1-May-10	\$ 20.59	\$ 20.34	\$ 21.93	\$ 21.74	\$ 21.83	\$ 22.66	\$ 22.66	\$ 22.66	\$ 20.55	\$ 32.52	\$ 34.79	\$ 34.77	\$ 32.64	\$ 31.32	\$ 30.47	\$ 30.57	\$ 31.26	\$ 30.43	\$ 29.20	\$ 30.34	\$ 37.79	\$ 29.86	\$ 22.50	\$ 21.57	\$ 21.57
2-May-10	\$ 20.69	\$ 19.44	\$ 26.07	\$ 21.87	\$ 22.61	\$ 20.44	\$ 22.98	\$ 23.07	\$ 26.25	\$ 28.84	\$ 29.42	\$ 29.72	\$ 30.16	\$ 29.44	\$ 29.03	\$ 28.36	\$ 28.67	\$ 28.98	\$ 29.25	\$ 35.76	\$ 38.58	\$ 31.05	\$ 28.76	\$ 28.61	\$ 28.61
3-May-10	\$ 21.00	\$ 21.88	\$ 20.45	\$ 20.37	\$ 20.28	\$ 25.01	\$ 29.16	\$ 32.88	\$ 34.58	\$ 39.64	\$ 40.82	\$ 41.27	\$ 41.15	\$ 40.52	\$ 39.58	\$ 38.92	\$ 36.74	\$ 33.61	\$ 31.17	\$ 36.36	\$ 40.41	\$ 28.35	\$ 23.83	\$ 23.34	\$ 23.34
4-May-10	\$ 23.46	\$ 21.58	\$ 20.52	\$ 21.78	\$ 22.18	\$ 28.04	\$ 31.73	\$ 34.18	\$ 36.47	\$ 42.04	\$ 45.30	\$ 46.07	\$ 47.25	\$ 49.98	\$ 48.47	\$ 45.55	\$ 44.59	\$ 38.50	\$ 32.08	\$ 42.80	\$ 44.53	\$ 31.53	\$ 22.97	\$ 23.19	\$ 23.19
5-May-10	\$ 22.16	\$ 21.12	\$ 20.30	\$ 20.87	\$ 22.02	\$ 27.16	\$ 31.53	\$ 33.72	\$ 35.21	\$ 40.27	\$ 40.89	\$ 43.04	\$ 45.43	\$ 45.94	\$ 45.70	\$ 47.80	\$ 48.66	\$ 39.42	\$ 33.25	\$ 41.78	\$ 45.54	\$ 30.28	\$ 28.60	\$ 20.60	\$ 20.60
6-May-10	\$ 22.34	\$ 21.86	\$ 20.66	\$ 21.50	\$ 22.04	\$ 27.30	\$ 31.41	\$ 35.91	\$ 38.14	\$ 40.55	\$ 42.17	\$ 42.41	\$ 42.26	\$ 42.47	\$ 41.87	\$ 41.16	\$ 38.04	\$ 36.30	\$ 32.17	\$ 39.60	\$ 42.00	\$ 28.93	\$ 28.13	\$ 21.96	\$ 21.96
7-May-10	\$ 20.69	\$ 20.93	\$ 20.43	\$ 20.81	\$ 20.76	\$ 25.46	\$ 29.04	\$ 32.59	\$ 33.50	\$ 38.77	\$ 36.51	\$ 36.34	\$ 36.92	\$ 38.02	\$ 37.14	\$ 33.30	\$ 30.10	\$ 26.73	\$ 26.70	\$ 29.53	\$ 33.75	\$ 25.40	\$ 21.81	\$ 20.47	\$ 20.47
8-May-10	\$ 20.24	\$ 19.71	\$ 20.16	\$ 20.71	\$ 21.23	\$ 22.51	\$ 23.40	\$ 28.71	\$ 30.90	\$ 33.15	\$ 34.22	\$ 34.72	\$ 32.37	\$ 30.08	\$ 29.48	\$ 28.47	\$ 28.98	\$ 29.40	\$ 27.62	\$ 34.71	\$ 37.86	\$ 29.51	\$ 23.81	\$ 21.80	\$ 21.80
9-May-10	\$ 21.22	\$ 21.70	\$ 20.92	\$ 20.79	\$ 20.40	\$ 20.56	\$ 22.17	\$ 26.04	\$ 25.98	\$ 27.10	\$ 26.97	\$ 25.66	\$ 25.22	\$ 24.59	\$ 24.33	\$ 24.15	\$ 24.56	\$ 24.91	\$ 25.46	\$ 29.23	\$ 36.43	\$ 26.58	\$ 24.88	\$ 22.94	\$ 22.94
10-May-10	\$ 21.43	\$ 20.85	\$ 20.83	\$ 20.15	\$ 21.51	\$ 23.43	\$ 31.36	\$ 32.71	\$ 34.46	\$ 38.53	\$ 37.18	\$ 35.76	\$ 34.46	\$ 34.13	\$ 32.42	\$ 29.74	\$ 29.63	\$ 28.86	\$ 27.80	\$ 29.43	\$ 35.00	\$ 26.27	\$ 24.07	\$ 22.52	\$ 22.52
11-May-10	\$ 19.97	\$ 18.82	\$ 18.65	\$ 19.11	\$ 19.87	\$ 24.76	\$ 27.95	\$ 31.03	\$ 33.12	\$ 35.32	\$ 34.73	\$ 34.85	\$ 34.97	\$ 35.17	\$ 35.06	\$ 32.03	\$ 30.55	\$ 30.07	\$ 28.77	\$ 31.01	\$ 36.72	\$ 27.24	\$ 22.35	\$ 20.60	\$ 20.60
12-May-10	\$ 23.37	\$ 22.89	\$ 22.42	\$ 22.79	\$ 25.13	\$ 26.10	\$ 31.12	\$ 32.70	\$ 37.79	\$ 38.53	\$ 38.37	\$ 39.10	\$ 37.14	\$ 36.82	\$ 37.55	\$ 35.10	\$ 33.95	\$ 31.63	\$ 30.26	\$ 33.62	\$ 38.09	\$ 30.19	\$ 25.41	\$ 23.27	\$ 23.27
13-May-10	\$ 23.77	\$ 22.98	\$ 22.36	\$ 22.69	\$ 23.51	\$ 26.58	\$ 35.72	\$ 38.85	\$ 43.07	\$ 43.70	\$ 44.76	\$ 44.38	\$ 44.84	\$ 44.88	\$ 45.15	\$ 45.24	\$ 44.12	\$ 41.44	\$ 36.36	\$ 40.72	\$ 44.58	\$ 33.43	\$ 25.39	\$ 24.07	\$ 24.07
14-May-10	\$ 23.58	\$ 21.36	\$ 20.74	\$ 20.45	\$ 21.67	\$ 27.33	\$ 32.06	\$ 37.18	\$ 40.55	\$ 41.81	\$ 42.57	\$ 42.74	\$ 41.90	\$ 40.44	\$ 39.01	\$ 37.10	\$ 36.90	\$ 32.93	\$ 31.13	\$ 33.53	\$ 36.98	\$ 27.33	\$ 24.39	\$ 24.10	\$ 24.10
15-May-10	\$ 24.42	\$ 24.27	\$ 20.97	\$ 20.97	\$ 20.66	\$ 21.42	\$ 22.88	\$ 27.40	\$ 30.54	\$ 32.49	\$ 33.47	\$ 32.44	\$ 31.63	\$ 29.00	\$ 28.63	\$ 27.68	\$ 28.17	\$ 27.99	\$ 26.81	\$ 28.86	\$ 34.89	\$ 30.12	\$ 23.18	\$ 22.35	\$ 22.35
16-May-10	\$ 20.41	\$ 19.44	\$ 18.90	\$ 18.98	\$ 19.19	\$ 19.55	\$ 21.03	\$ 22.74	\$ 24.12	\$ 24.43	\$ 25.27	\$ 25.67	\$ 25.56	\$ 25.43	\$ 25.20	\$ 25.13	\$ 26.11	\$ 26.24	\$ 26.54	\$ 28.88	\$ 36.74	\$ 26.36	\$ 21.91	\$ 19.94	\$ 19.94
17-May-10	\$ 20.09	\$ 19.43	\$ 19.19	\$ 19.59	\$ 20.85	\$ 21.84	\$ 23.84	\$ 24.72	\$ 24.15	\$ 24.80	\$ 25.67	\$ 25.92	\$ 25.82	\$ 25.43	\$ 25.20	\$ 25.13	\$ 26.11	\$ 26.24	\$ 26.54	\$ 28.88	\$ 36.74	\$ 26.36	\$ 21.91	\$ 19.94	\$ 19.94
18-May-10	\$ 22.85	\$ 21.77	\$ 21.51	\$ 21.79	\$ 22.79	\$ 27.20	\$ 31.83	\$ 37.82	\$ 40.19	\$ 42.33	\$ 43.07	\$ 43.50	\$ 43.26	\$ 43.01	\$ 41.69	\$ 39.48	\$ 37.83	\$ 34.08	\$ 31.43	\$ 33.52	\$ 39.28	\$ 29.52	\$ 26.70	\$ 23.36	\$ 23.36
19-May-10	\$ 21.21	\$ 19.88	\$ 19.85	\$ 19.50	\$ 20.48	\$ 25.23	\$ 28.65	\$ 31.81	\$ 34.59	\$ 36.90	\$ 38.23	\$ 38.29	\$ 36.90	\$ 35.16	\$ 35.08	\$ 34.82	\$ 33.78	\$ 30.70	\$ 28.32	\$ 29.75	\$ 34.37	\$ 28.06	\$ 24.37	\$ 21.54	\$ 21.54
20-May-10	\$ 23.27	\$ 21.49	\$ 21.11	\$ 21.05	\$ 24.02	\$ 26.97	\$ 29.38	\$ 32.48	\$ 34.59	\$ 37.36	\$ 38.36	\$ 40.00	\$ 40.49	\$ 40.90	\$ 39.88	\$ 39.64	\$ 37.07	\$ 35.18	\$ 31.80	\$ 32.17	\$ 36.41	\$ 30.47	\$ 25.37	\$ 23.44	\$ 23.44
21-May-10	\$ 21.60	\$ 20.47	\$ 19.99	\$ 20.22	\$ 21.21	\$ 24.17	\$ 26.02	\$ 33.95	\$ 38.49	\$ 40.96	\$ 43.22	\$ 43.85	\$ 42.90	\$ 41.76	\$ 40.85	\$ 40.32	\$ 39.63	\$ 34.73	\$ 31.34	\$ 31.80	\$ 35.45	\$ 30.25	\$ 25.57	\$ 22.84	\$ 22.84
22-May-10	\$ 23.30	\$ 22.81	\$ 21.83	\$ 21.43	\$ 21.65	\$ 21.93	\$ 25.36	\$ 28.55	\$ 32.70	\$ 35.09	\$ 31.02	\$ 31.67	\$ 32.03	\$ 32.41	\$ 32.96	\$ 34.16	\$ 36.01	\$ 35.34	\$ 31.22	\$ 30.64	\$ 37.01	\$ 29.69	\$ 24.24	\$ 21.65	\$ 21.65
23-May-10	\$ 19.85	\$ 19.64	\$ 18.19	\$ 17.34	\$ 18.07	\$ 17.47	\$ 20.74	\$ 23.17	\$ 26.30	\$ 28.14	\$ 29.37	\$ 32.92	\$ 36.36	\$ 41.56	\$ 45.88	\$ 47.17	\$ 48.85	\$ 51.20	\$ 49.25	\$ 45.68	\$ 50.45	\$ 43.25	\$ 27.48	\$ 24.78	\$ 24.78
24-May-10	\$ 22.37	\$ 20.84	\$ 19.85	\$ 19.86	\$ 21.29	\$ 23.68	\$ 28.40	\$ 31.87	\$ 35.43	\$ 40.08	\$ 44.71	\$ 47.75	\$ 54.27	\$ 60.88	\$ 62.71	\$ 64.76	\$ 60.83	\$ 57.10	\$ 60.91	\$ 48.60	\$ 61.39	\$ 41.88	\$ 30.19	\$ 27.34	\$ 27.34
25-May-10	\$ 26.20	\$ 23.38	\$ 21.56	\$ 21.46	\$ 23.79	\$ 27.83	\$ 33.55	\$ 39.39	\$ 41.21	\$ 48.29	\$ 52.07	\$ 56.58	\$ 62.14	\$ 68.80	\$ 71.17	\$ 72.83	\$ 69.25	\$ 65.12	\$ 59.26	\$ 56.03	\$ 56.17	\$ 45.28	\$ 30.44	\$ 26.62	\$ 26.62
26-May-10	\$ 26.17	\$ 23.00	\$ 21.92	\$ 21.95	\$ 23.70	\$ 27.49	\$ 32.06	\$ 36.70	\$ 38.95	\$ 43.39	\$ 49.13	\$ 53.83	\$ 59.26	\$ 63.91	\$ 66.04	\$ 69.56	\$ 66.43	\$ 62.02	\$ 56.77	\$ 52.16	\$ 54.37	\$ 40.93	\$ 31.27	\$ 27.49	\$ 27.49
27-May-10	\$ 24.27	\$ 22.15	\$ 20.74	\$ 20.67	\$ 23.15	\$ 25.36	\$ 27.90	\$ 30.68	\$ 34.64	\$ 40.36	\$ 43.93	\$ 48.54	\$ 54.68	\$ 59.79	\$ 59.96	\$ 58.38	\$ 55.17	\$ 50.41	\$ 43.32	\$ 39.28	\$ 39.02	\$ 31.54	\$ 25.28	\$ 22.87	\$ 22.87
28-May-10	\$ 24.12	\$ 21.83	\$ 20.73	\$ 20.46	\$ 22.16	\$ 24.26	\$ 25.74	\$ 27.22	\$ 29.55	\$ 33.50	\$ 37.87	\$ 42.87	\$ 48.63	\$ 54.23	\$ 59.96	\$ 64.78	\$ 67.44	\$ 64.66	\$ 59.43	\$ 55.79	\$ 59.67	\$ 31.08	\$ 23.71	\$ 21.77	\$ 21.77
29-May-10	\$ 20.51	\$ 20.58	\$ 19.23	\$ 18.33	\$ 18.50	\$ 17.70	\$ 21.61	\$ 23.18	\$ 24.15	\$ 27.98	\$ 32.30	\$ 33.22	\$ 35.70	\$ 38.66	\$ 41.30	\$ 44.75	\$ 47.44	\$ 44.66	\$ 39.43	\$ 35.79	\$ 39.67	\$ 28.68	\$ 23.80	\$ 21.29	\$ 21.29
30-May-10	\$ 18.86	\$ 17.06	\$ 15.73	\$ 15.33	\$ 14.82	\$ 11.63	\$ 16.08	\$ 20.32	\$ 22.09	\$ 25.20	\$ 27.32	\$ 30.33	\$ 33.33	\$ 36.31	\$ 40.08	\$ 41.12	\$ 45.09	\$ 48.80	\$ 46.60	\$ 41.16	\$ 37.80	\$ 40.97	\$ 33.28	\$ 25.32	\$ 24.72
31-May-10	\$ 23.84	\$ 21.55	\$ 19.60	\$ 19.15	\$ 18.69	\$ 15.37	\$ 18.02	\$ 23.48	\$ 23.06	\$ 27.29	\$ 34.96	\$ 37.16	\$ 38.95	\$ 39.25	\$ 40.25	\$ 41.23	\$ 43.88	\$ 41.10	\$ 36.44	\$ 33.51	\$ 41.23	\$ 28.77	\$ 23.32	\$ 22.45	\$ 22.45
1-Jun-10	\$ 21.34	\$ 19.32	\$ 18.62	\$ 18.65	\$ 18.43	\$ 23.55	\$ 32.27	\$ 33.64	\$ 35.40	\$ 44.05	\$ 51.15	\$ 55.54	\$ 59.47	\$ 62.47	\$ 62.15	\$ 64.83	\$ 61.87	\$ 55.25	\$ 50.85	\$ 47.10	\$ 48.96	\$ 35.17	\$ 24.80	\$ 22.43	\$ 22.43
2-Jun-10	\$ 22.88	\$ 21.33	\$ 20.53	\$ 20.31	\$ 21.11	\$ 23.31	\$ 26.27	\$ 30.28	\$ 35.28	\$ 43.30	\$ 48.75	\$ 52.38	\$ 55.17	\$ 57.79	\$ 61.65	\$ 63.43	\$ 61.66	\$ 53.48	\$ 50.51	\$ 40.19	\$ 47.95	\$ 35.38	\$ 27.66	\$ 24.03	\$ 24.03
3-Jun-10	\$ 22.87	\$ 21.54	\$ 20.92	\$ 20.84	\$ 22.08	\$ 24.17	\$ 30.23	\$ 31.18	\$ 33.57	\$ 39.26	\$ 44.02	\$ 46.63	\$ 47.23	\$ 51.11	\$ 53.37	\$ 53.96	\$ 49.58	\$ 45.57	\$ 41.06	\$ 37.49	\$ 41.02	\$ 32.73	\$ 28.10	\$ 23.47	\$ 23.47
4-Jun-10	\$ 21.10	\$ 19.88	\$ 19.23	\$ 18.99	\$ 19.85	\$ 20.51	\$ 24.02	\$ 26.97	\$ 31.26	\$ 37.18	\$ 42.22	\$ 45.88	\$ 48.61	\$ 51.98	\$ 52.52	\$ 54.02	\$ 46.27	\$ 41.97	\$ 37.51	\$ 41.07	\$ 32.62	\$ 26.88	\$ 23.56	\$ 23.56	
5-Jun-10	\$ 22.78	\$ 20.99	\$ 20.33	\$ 19.73	\$ 19.84	\$ 20.27	\$ 21.97	\$ 24.47	\$ 26.97	\$ 34.66	\$ 38.26	\$ 41.07	\$ 41.36	\$ 43.60	\$ 45.63	\$ 46.21	\$ 45.36	\$ 40.89	\$ 38.43	\$ 35.16	\$ 38.37	\$ 30.01	\$ 24.61	\$ 22.03	\$ 22.03
6-Jun-10	\$ 21.09	\$ 20.22	\$ 19.59	\$ 19.30	\$ 18.47	\$ 17.78	\$ 18.23	\$ 21.23	\$ 21.69	\$ 25.03	\$ 28.23	\$ 26.10	\$ 26.89	\$ 28.16	\$ 29.24	\$ 29.79	\$ 29.81	\$ 28.80	\$ 27.42	\$ 26.46	\$ 30.55	\$ 25.24	\$ 22.20	\$ 20.50	\$ 20.50
7-Jun-10	\$ 18.92	\$ 16.66	\$ 16.16	\$ 17.33	\$ 19.25	\$ 21.05	\$ 25.56	\$ 28.45	\$ 33.91	\$ 41.64	\$ 44.74	\$ 45.30	\$ 46.52	\$ 48.36	\$ 46.57	\$ 47.70	\$ 46.78	\$ 43.85	\$ 39.66	\$ 35.26	\$ 41.12	\$ 30.8			

Hourly System Lambda - Energy Only

	HE 1	HE 2	HE 3	HE 4	HE 5	HE 6	HE 7	HE 8	HE 9	HE 10	HE 11	HE 12	HE 13	HE 14	HE 15	HE 16	HE 17	HE 18	HE 19	HE 20	HE 21	HE 22	HE 23	HE 24	
1-Jul-10	\$ 16.66	\$ 16.50	\$ 14.49	\$ 14.31	\$ 16.65	\$ 20.02	\$ 23.16	\$ 26.47	\$ 20.77	\$ 31.68	\$ 35.42	\$ 35.72	\$ 38.19	\$ 42.20	\$ 42.78	\$ 43.47	\$ 42.14	\$ 42.53	\$ 36.06	\$ 31.31	\$ 33.47	\$ 29.95	\$ 25.61	\$ 20.47	\$ 22.03
2-Jul-10	\$ 19.14	\$ 17.96	\$ 16.77	\$ 16.55	\$ 19.07	\$ 20.39	\$ 23.99	\$ 26.68	\$ 27.08	\$ 30.28	\$ 33.26	\$ 35.43	\$ 40.57	\$ 46.11	\$ 46.91	\$ 47.08	\$ 46.90	\$ 49.85	\$ 36.34	\$ 30.98	\$ 31.93	\$ 29.25	\$ 25.07	\$ 22.04	\$ 22.03
3-Jul-10	\$ 18.71	\$ 16.42	\$ 14.49	\$ 14.19	\$ 14.20	\$ 15.22	\$ 17.07	\$ 21.10	\$ 24.46	\$ 27.28	\$ 27.28	\$ 34.39	\$ 36.77	\$ 47.88	\$ 50.73	\$ 56.70	\$ 58.71	\$ 54.08	\$ 46.06	\$ 39.80	\$ 40.06	\$ 36.47	\$ 27.04	\$ 22.93	\$ 22.93
4-Jul-10	\$ 19.70	\$ 16.71	\$ 13.99	\$ 11.97	\$ 12.47	\$ 6.60	\$ 15.04	\$ 19.78	\$ 21.71	\$ 24.64	\$ 27.24	\$ 34.31	\$ 40.22	\$ 44.13	\$ 50.43	\$ 63.75	\$ 58.17	\$ 56.36	\$ 51.97	\$ 42.04	\$ 43.09	\$ 37.23	\$ 26.56	\$ 23.42	\$ 23.42
5-Jul-10	\$ 21.41	\$ 18.71	\$ 17.29	\$ 16.52	\$ 16.62	\$ 16.23	\$ 18.90	\$ 22.29	\$ 24.62	\$ 29.86	\$ 37.66	\$ 43.48	\$ 46.76	\$ 48.23	\$ 53.95	\$ 57.47	\$ 59.63	\$ 56.87	\$ 49.37	\$ 42.15	\$ 43.07	\$ 35.81	\$ 25.54	\$ 22.92	\$ 22.92
6-Jul-10	\$ 27.79	\$ 24.40	\$ 21.73	\$ 21.29	\$ 21.63	\$ 24.09	\$ 27.59	\$ 34.52	\$ 39.44	\$ 47.33	\$ 55.37	\$ 59.69	\$ 64.95	\$ 72.70	\$ 74.81	\$ 82.90	\$ 81.60	\$ 74.25	\$ 64.10	\$ 56.87	\$ 54.76	\$ 47.42	\$ 33.43	\$ 28.52	\$ 28.52
7-Jul-10	\$ 25.48	\$ 23.63	\$ 21.62	\$ 21.22	\$ 21.74	\$ 23.66	\$ 27.22	\$ 36.99	\$ 42.72	\$ 50.72	\$ 56.69	\$ 63.96	\$ 70.13	\$ 80.64	\$ 84.99	\$ 89.22	\$ 86.61	\$ 77.18	\$ 68.01	\$ 58.09	\$ 54.51	\$ 48.32	\$ 34.78	\$ 30.53	\$ 30.53
8-Jul-10	\$ 25.58	\$ 22.66	\$ 21.87	\$ 21.43	\$ 21.70	\$ 22.70	\$ 26.38	\$ 34.54	\$ 41.47	\$ 49.13	\$ 54.45	\$ 57.19	\$ 63.05	\$ 69.60	\$ 74.84	\$ 79.31	\$ 76.31	\$ 70.99	\$ 62.28	\$ 53.03	\$ 50.94	\$ 50.90	\$ 39.35	\$ 30.22	\$ 26.63
9-Jul-10	\$ 24.01	\$ 21.99	\$ 20.60	\$ 20.02	\$ 21.06	\$ 21.99	\$ 24.49	\$ 30.78	\$ 36.34	\$ 42.79	\$ 44.61	\$ 48.45	\$ 53.10	\$ 56.05	\$ 58.64	\$ 61.34	\$ 58.71	\$ 52.30	\$ 44.07	\$ 36.16	\$ 39.93	\$ 34.56	\$ 26.71	\$ 23.71	\$ 23.71
10-Jul-10	\$ 21.80	\$ 19.20	\$ 16.87	\$ 15.62	\$ 16.44	\$ 16.18	\$ 18.20	\$ 23.10	\$ 26.91	\$ 31.65	\$ 35.58	\$ 41.57	\$ 46.92	\$ 48.91	\$ 52.48	\$ 54.09	\$ 56.93	\$ 58.81	\$ 55.20	\$ 47.09	\$ 49.50	\$ 40.81	\$ 32.52	\$ 27.97	\$ 23.30
11-Jul-10	\$ 20.26	\$ 17.70	\$ 13.93	\$ 12.87	\$ 13.02	\$ 9.99	\$ 15.22	\$ 21.28	\$ 25.48	\$ 28.60	\$ 31.24	\$ 36.56	\$ 40.64	\$ 45.36	\$ 48.14	\$ 48.78	\$ 52.53	\$ 54.81	\$ 45.20	\$ 38.56	\$ 42.95	\$ 36.42	\$ 27.11	\$ 23.71	\$ 23.71
12-Jul-10	\$ 22.23	\$ 21.14	\$ 20.16	\$ 20.09	\$ 20.60	\$ 22.02	\$ 25.47	\$ 34.04	\$ 36.82	\$ 42.89	\$ 48.14	\$ 53.63	\$ 61.82	\$ 69.24	\$ 69.01	\$ 69.11	\$ 63.41	\$ 58.93	\$ 49.13	\$ 43.42	\$ 45.70	\$ 37.23	\$ 27.63	\$ 24.48	\$ 24.48
13-Jul-10	\$ 22.17	\$ 20.33	\$ 18.83	\$ 18.02	\$ 20.03	\$ 21.66	\$ 23.78	\$ 27.37	\$ 31.10	\$ 37.75	\$ 42.08	\$ 46.86	\$ 52.76	\$ 58.69	\$ 58.69	\$ 62.18	\$ 58.70	\$ 53.08	\$ 44.56	\$ 40.49	\$ 43.42	\$ 36.10	\$ 29.06	\$ 24.88	\$ 24.88
14-Jul-10	\$ 20.56	\$ 17.55	\$ 16.01	\$ 17.08	\$ 18.26	\$ 20.29	\$ 24.42	\$ 27.00	\$ 31.08	\$ 36.60	\$ 47.50	\$ 56.67	\$ 59.92	\$ 69.64	\$ 71.91	\$ 76.25	\$ 76.56	\$ 69.25	\$ 59.68	\$ 55.23	\$ 57.52	\$ 43.40	\$ 31.00	\$ 27.40	\$ 27.40
15-Jul-10	\$ 24.85	\$ 22.24	\$ 21.18	\$ 20.69	\$ 21.42	\$ 23.00	\$ 25.66	\$ 34.44	\$ 41.91	\$ 50.34	\$ 58.11	\$ 62.33	\$ 71.05	\$ 80.27	\$ 84.06	\$ 89.00	\$ 84.18	\$ 77.04	\$ 66.81	\$ 60.43	\$ 60.04	\$ 50.78	\$ 37.10	\$ 31.00	\$ 31.00
16-Jul-10	\$ 23.28	\$ 21.35	\$ 19.67	\$ 18.92	\$ 20.07	\$ 21.88	\$ 24.83	\$ 31.83	\$ 36.11	\$ 48.15	\$ 54.30	\$ 60.15	\$ 64.90	\$ 72.77	\$ 79.64	\$ 81.54	\$ 78.96	\$ 68.96	\$ 59.56	\$ 53.20	\$ 53.73	\$ 40.53	\$ 29.48	\$ 26.90	\$ 26.90
17-Jul-10	\$ 20.77	\$ 17.93	\$ 15.68	\$ 14.81	\$ 15.20	\$ 12.79	\$ 18.88	\$ 25.89	\$ 29.24	\$ 39.65	\$ 44.83	\$ 48.20	\$ 53.32	\$ 61.60	\$ 64.98	\$ 70.51	\$ 69.66	\$ 62.44	\$ 55.03	\$ 45.66	\$ 46.70	\$ 39.68	\$ 27.42	\$ 23.70	\$ 23.70
18-Jul-10	\$ 21.05	\$ 20.26	\$ 17.94	\$ 17.18	\$ 16.95	\$ 15.48	\$ 19.12	\$ 22.40	\$ 26.80	\$ 35.89	\$ 41.34	\$ 45.92	\$ 51.41	\$ 57.02	\$ 60.60	\$ 64.38	\$ 67.39	\$ 64.28	\$ 57.39	\$ 47.47	\$ 51.92	\$ 43.04	\$ 29.68	\$ 23.77	\$ 23.77
19-Jul-10	\$ 21.98	\$ 20.35	\$ 18.68	\$ 18.63	\$ 19.65	\$ 21.40	\$ 24.91	\$ 28.04	\$ 34.25	\$ 40.37	\$ 45.21	\$ 51.23	\$ 57.43	\$ 63.88	\$ 63.22	\$ 71.78	\$ 68.32	\$ 59.30	\$ 53.86	\$ 48.05	\$ 46.45	\$ 38.52	\$ 27.53	\$ 23.74	\$ 23.74
20-Jul-10	\$ 21.95	\$ 20.32	\$ 19.24	\$ 18.64	\$ 20.18	\$ 21.76	\$ 26.82	\$ 33.84	\$ 36.50	\$ 45.34	\$ 48.43	\$ 54.27	\$ 60.10	\$ 66.87	\$ 70.11	\$ 76.18	\$ 74.71	\$ 65.30	\$ 57.60	\$ 51.42	\$ 54.61	\$ 43.09	\$ 32.54	\$ 26.14	\$ 26.14
21-Jul-10	\$ 23.78	\$ 21.42	\$ 20.58	\$ 19.97	\$ 21.12	\$ 23.38	\$ 26.59	\$ 34.95	\$ 38.76	\$ 46.95	\$ 52.09	\$ 57.00	\$ 62.97	\$ 69.74	\$ 75.29	\$ 78.83	\$ 81.49	\$ 86.09	\$ 69.84	\$ 52.32	\$ 54.85	\$ 42.90	\$ 31.40	\$ 27.81	\$ 27.81
22-Jul-10	\$ 22.81	\$ 21.07	\$ 19.47	\$ 19.20	\$ 19.90	\$ 21.72	\$ 26.07	\$ 30.72	\$ 36.80	\$ 43.78	\$ 51.71	\$ 56.00	\$ 61.64	\$ 64.68	\$ 72.41	\$ 80.10	\$ 72.84	\$ 64.87	\$ 60.56	\$ 54.15	\$ 57.58	\$ 46.16	\$ 31.92	\$ 27.25	\$ 27.25
23-Jul-10	\$ 25.01	\$ 22.70	\$ 21.96	\$ 21.62	\$ 22.07	\$ 24.36	\$ 30.97	\$ 37.81	\$ 45.66	\$ 58.16	\$ 64.25	\$ 68.78	\$ 76.37	\$ 82.04	\$ 91.15	\$ 96.16	\$ 87.61	\$ 78.81	\$ 71.57	\$ 63.66	\$ 66.06	\$ 53.93	\$ 36.28	\$ 31.48	\$ 31.48
24-Jul-10	\$ 28.00	\$ 24.78	\$ 22.98	\$ 21.90	\$ 21.32	\$ 21.44	\$ 23.05	\$ 28.26	\$ 33.60	\$ 40.07	\$ 46.42	\$ 56.75	\$ 65.09	\$ 68.54	\$ 73.92	\$ 85.84	\$ 76.50	\$ 67.90	\$ 52.58	\$ 42.98	\$ 44.06	\$ 36.28	\$ 25.55	\$ 23.01	\$ 23.01
25-Jul-10	\$ 24.40	\$ 22.98	\$ 20.67	\$ 19.95	\$ 18.92	\$ 17.98	\$ 18.35	\$ 22.35	\$ 24.61	\$ 27.85	\$ 30.07	\$ 39.84	\$ 41.89	\$ 46.10	\$ 49.84	\$ 50.98	\$ 51.42	\$ 48.26	\$ 47.40	\$ 39.00	\$ 44.06	\$ 36.28	\$ 25.55	\$ 23.01	\$ 23.01
26-Jul-10	\$ 21.29	\$ 19.56	\$ 18.06	\$ 18.12	\$ 20.01	\$ 21.58	\$ 23.99	\$ 28.05	\$ 34.10	\$ 37.52	\$ 45.23	\$ 51.06	\$ 58.83	\$ 62.30	\$ 70.72	\$ 79.17	\$ 73.89	\$ 62.70	\$ 54.62	\$ 48.20	\$ 48.43	\$ 37.36	\$ 27.56	\$ 23.70	\$ 23.70
27-Jul-10	\$ 22.53	\$ 20.38	\$ 19.04	\$ 18.99	\$ 20.44	\$ 22.85	\$ 24.80	\$ 29.08	\$ 35.85	\$ 40.24	\$ 48.24	\$ 54.04	\$ 62.27	\$ 69.16	\$ 76.30	\$ 88.35	\$ 77.24	\$ 68.96	\$ 62.59	\$ 54.22	\$ 57.30	\$ 44.49	\$ 30.43	\$ 27.60	\$ 27.60
28-Jul-10	\$ 27.47	\$ 23.76	\$ 22.67	\$ 22.71	\$ 23.11	\$ 26.84	\$ 30.59	\$ 38.32	\$ 42.99	\$ 51.87	\$ 59.82	\$ 67.25	\$ 73.35	\$ 77.86	\$ 86.17	\$ 94.30	\$ 85.38	\$ 75.94	\$ 66.64	\$ 69.65	\$ 62.52	\$ 50.92	\$ 36.50	\$ 30.67	\$ 30.67
29-Jul-10	\$ 24.94	\$ 23.41	\$ 22.35	\$ 21.99	\$ 22.66	\$ 25.27	\$ 27.53	\$ 33.43	\$ 37.44	\$ 44.10	\$ 53.72	\$ 57.53	\$ 63.40	\$ 67.41	\$ 73.08	\$ 79.06	\$ 71.36	\$ 63.89	\$ 56.84	\$ 49.10	\$ 46.51	\$ 37.98	\$ 29.21	\$ 25.94	\$ 25.94
30-Jul-10	\$ 23.49	\$ 21.87	\$ 20.11	\$ 19.94	\$ 20.72	\$ 23.69	\$ 25.99	\$ 31.82	\$ 36.38	\$ 41.83	\$ 48.14	\$ 52.30	\$ 58.84	\$ 62.15	\$ 67.65	\$ 70.80	\$ 65.82	\$ 59.79	\$ 52.77	\$ 46.21	\$ 45.99	\$ 40.45	\$ 29.25	\$ 24.38	\$ 24.38
31-Jul-10	\$ 22.79	\$ 21.54	\$ 20.91	\$ 19.92	\$ 19.48	\$ 18.44	\$ 22.41	\$ 24.84	\$ 29.50	\$ 35.96	\$ 40.88	\$ 45.62	\$ 47.74	\$ 53.86	\$ 56.17	\$ 65.93	\$ 62.06	\$ 55.03	\$ 48.10	\$ 43.02	\$ 46.63	\$ 37.12	\$ 27.77	\$ 24.02	\$ 24.02
1-Aug-10	\$ 23.96	\$ 22.09	\$ 20.57	\$ 19.78	\$ 18.92	\$ 17.28	\$ 19.65	\$ 22.70	\$ 25.29	\$ 29.91	\$ 35.11	\$ 38.10	\$ 45.50	\$ 49.35	\$ 51.06	\$ 59.10	\$ 61.02	\$ 55.24	\$ 48.06	\$ 42.41	\$ 45.12	\$ 36.78	\$ 28.14	\$ 24.60	\$ 24.60
2-Aug-10	\$ 22.80	\$ 20.20	\$ 19.26	\$ 19.24	\$ 20.76	\$ 22.69	\$ 25.10	\$ 30.14	\$ 36.49	\$ 43.58	\$ 52.10	\$ 56.51	\$ 63.83	\$ 69.17	\$ 74.57	\$ 87.44	\$ 79.06	\$ 70.84	\$ 62.90	\$ 59.29	\$ 62.47	\$ 47.68	\$ 33.53	\$ 28.44	\$ 28.44
3-Aug-10	\$ 24.87	\$ 22.97	\$ 22.36	\$ 22.11	\$ 22.49	\$ 24.64	\$ 29.90	\$ 36.66	\$ 42.83	\$ 51.36	\$ 59.73	\$ 67.34	\$ 74.59	\$ 79.54	\$ 90.58	\$ 97.82	\$ 91.06	\$ 82.88	\$ 72.46	\$ 65.85	\$ 66.01	\$ 53.18	\$ 36.77	\$ 31.76	\$ 31.76
4-Aug-10	\$ 26.49	\$ 25.61	\$ 24.33	\$ 23.90	\$ 24.93	\$ 27.74	\$ 33.09	\$ 39.85	\$ 45.49	\$ 56.30	\$ 63.93	\$ 70.91	\$ 77.04	\$ 82.00	\$ 95.09	\$ 99.31	\$ 87.13	\$ 77.12	\$ 70.87	\$ 65.24	\$ 67.53	\$ 51.07	\$ 40.15	\$ 36.70	\$ 36.70
5-Aug-10	\$ 30.35	\$ 26.40	\$ 24.81	\$ 24.02	\$ 24.70	\$ 28.24	\$ 31.22	\$ 37.60	\$ 45.10	\$ 54.97	\$ 62.40	\$ 67.24	\$ 74.07	\$ 77.13	\$ 87.38	\$ 88.18	\$ 81.07	\$ 72.13	\$ 64.92	\$ 59.33	\$ 60.47	\$ 45.76	\$ 35.20	\$ 28.89	\$ 28.89
6-Aug-10	\$ 23.38	\$ 21.59	\$ 20.30	\$ 20.17	\$ 21.35	\$ 23.44	\$ 26.46	\$ 32.08	\$ 35.08	\$ 38.38	\$ 46.49	\$ 49.58	\$ 56.61	\$ 61.93	\$ 63.39	\$ 64.64	\$ 53.23	\$ 49.96	\$ 49.87	\$ 39.61	\$ 39.14	\$ 33.04	\$ 27.76	\$ 23.80	\$ 23.80
7-Aug-10	\$ 21.51	\$ 19.50	\$ 18.01	\$ 17.28	\$ 17.26	\$ 17.23	\$ 19.26	\$ 22.11	\$ 24.77	\$ 27.55	\$ 30.94	\$ 33.91	\$ 35.98	\$ 40.41	\$ 44.16	\$ 49.13	\$ 48.55	\$ 46.00	\$ 39.59	\$ 35.70	\$ 34.48</				



Hourly System Lambda - Energy Only

	HE 1	HE 2	HE 3	HE 4	HE 5	HE 6	HE 7	HE 8	HE 9	HE 10	HE 11	HE 12	HE 13	HE 14	HE 15	HE 16	HE 17	HE 18	HE 19	HE 20	HE 21	HE 22	HE 23	HE 24	
1-Nov-10	\$ 19.08	\$ 19.94	\$ 20.19	\$ 20.54	\$ 22.13	\$ 22.99	\$ 43.01	\$ 40.41	\$ 38.38	\$ 38.69	\$ 38.39	\$ 36.96	\$ 33.76	\$ 31.97	\$ 30.91	\$ 29.51	\$ 29.84	\$ 35.14	\$ 43.47	\$ 43.01	\$ 36.60	\$ 29.99	\$ 26.36	\$ 22.73	\$ 20.17
2-Nov-10	\$ 21.07	\$ 20.29	\$ 19.68	\$ 19.81	\$ 21.50	\$ 20.84	\$ 44.54	\$ 37.66	\$ 38.86	\$ 39.17	\$ 37.81	\$ 36.96	\$ 35.70	\$ 33.81	\$ 32.57	\$ 29.81	\$ 28.81	\$ 35.71	\$ 43.47	\$ 37.01	\$ 32.89	\$ 26.83	\$ 22.50	\$ 20.17	\$ 19.11
3-Nov-10	\$ 19.31	\$ 19.16	\$ 18.92	\$ 19.19	\$ 20.54	\$ 20.23	\$ 41.49	\$ 35.59	\$ 35.51	\$ 35.88	\$ 35.77	\$ 33.48	\$ 32.20	\$ 30.32	\$ 27.74	\$ 26.80	\$ 26.27	\$ 30.21	\$ 37.19	\$ 34.29	\$ 29.87	\$ 25.22	\$ 22.50	\$ 20.17	\$ 19.11
4-Nov-10	\$ 17.98	\$ 17.72	\$ 17.47	\$ 17.78	\$ 18.40	\$ 19.32	\$ 39.78	\$ 37.14	\$ 37.44	\$ 40.20	\$ 38.74	\$ 36.00	\$ 34.15	\$ 33.01	\$ 29.47	\$ 28.08	\$ 28.42	\$ 37.72	\$ 46.60	\$ 38.46	\$ 33.35	\$ 27.69	\$ 24.76	\$ 22.42	\$ 21.45
5-Nov-10	\$ 21.52	\$ 21.25	\$ 21.52	\$ 22.09	\$ 23.01	\$ 22.18	\$ 40.20	\$ 44.86	\$ 49.58	\$ 43.94	\$ 42.21	\$ 39.50	\$ 39.00	\$ 37.73	\$ 34.14	\$ 32.75	\$ 33.07	\$ 45.08	\$ 51.62	\$ 46.82	\$ 37.51	\$ 31.96	\$ 27.85	\$ 24.45	\$ 24.45
6-Nov-10	\$ 24.42	\$ 24.16	\$ 24.38	\$ 23.65	\$ 23.94	\$ 26.09	\$ 31.04	\$ 34.74	\$ 36.35	\$ 38.65	\$ 37.90	\$ 33.98	\$ 28.31	\$ 26.05	\$ 26.19	\$ 25.88	\$ 38.23	\$ 37.99	\$ 44.83	\$ 31.28	\$ 26.95	\$ 24.77	\$ 24.21	\$ 24.21	\$ 24.21
7-Nov-10	\$ 24.04	\$ 24.06	\$ 22.40	\$ 20.40	\$ 20.71	\$ 21.77	\$ 25.24	\$ 25.54	\$ 26.29	\$ 27.16	\$ 26.07	\$ 26.51	\$ 25.69	\$ 24.98	\$ 24.08	\$ 24.28	\$ 24.18	\$ 37.25	\$ 44.06	\$ 38.09	\$ 32.02	\$ 25.82	\$ 23.21	\$ 21.46	\$ 21.46
8-Nov-10	\$ 18.37	\$ 18.77	\$ 18.54	\$ 18.02	\$ 18.91	\$ 25.64	\$ 35.78	\$ 35.36	\$ 36.28	\$ 36.55	\$ 36.09	\$ 35.26	\$ 32.95	\$ 31.51	\$ 28.87	\$ 27.54	\$ 29.10	\$ 37.98	\$ 40.85	\$ 35.00	\$ 31.92	\$ 26.66	\$ 22.73	\$ 20.14	\$ 20.14
9-Nov-10	\$ 17.26	\$ 17.30	\$ 16.81	\$ 16.67	\$ 17.15	\$ 22.39	\$ 32.97	\$ 36.63	\$ 35.37	\$ 35.90	\$ 34.76	\$ 32.41	\$ 31.13	\$ 29.22	\$ 28.05	\$ 27.53	\$ 27.44	\$ 38.37	\$ 41.02	\$ 36.94	\$ 32.44	\$ 26.64	\$ 20.81	\$ 17.16	\$ 17.16
10-Nov-10	\$ 15.44	\$ 14.38	\$ 14.31	\$ 14.26	\$ 14.53	\$ 19.18	\$ 32.96	\$ 37.24	\$ 34.59	\$ 34.42	\$ 34.30	\$ 34.02	\$ 32.24	\$ 30.74	\$ 28.23	\$ 26.15	\$ 26.00	\$ 36.54	\$ 41.43	\$ 36.90	\$ 29.72	\$ 25.37	\$ 21.55	\$ 17.15	\$ 17.15
11-Nov-10	\$ 16.02	\$ 15.38	\$ 15.16	\$ 15.17	\$ 15.73	\$ 20.24	\$ 30.13	\$ 36.82	\$ 34.07	\$ 33.98	\$ 36.35	\$ 33.81	\$ 32.60	\$ 32.08	\$ 29.30	\$ 27.25	\$ 27.25	\$ 40.62	\$ 50.12	\$ 39.59	\$ 33.43	\$ 29.59	\$ 23.74	\$ 20.78	\$ 20.78
12-Nov-10	\$ 18.10	\$ 17.19	\$ 16.98	\$ 16.18	\$ 16.28	\$ 19.12	\$ 34.06	\$ 35.21	\$ 33.70	\$ 34.74	\$ 35.94	\$ 34.84	\$ 35.39	\$ 34.54	\$ 32.23	\$ 28.47	\$ 27.56	\$ 39.41	\$ 42.68	\$ 34.78	\$ 30.70	\$ 25.33	\$ 22.69	\$ 20.11	\$ 20.11
13-Nov-10	\$ 16.75	\$ 16.62	\$ 15.12	\$ 14.32	\$ 14.44	\$ 16.22	\$ 21.67	\$ 23.74	\$ 25.25	\$ 27.08	\$ 27.70	\$ 27.00	\$ 25.11	\$ 23.96	\$ 23.14	\$ 23.03	\$ 23.78	\$ 37.02	\$ 35.47	\$ 30.58	\$ 27.20	\$ 23.67	\$ 20.65	\$ 18.53	\$ 18.53
14-Nov-10	\$ 17.32	\$ 16.91	\$ 16.47	\$ 14.37	\$ 15.51	\$ 16.48	\$ 20.24	\$ 21.83	\$ 23.45	\$ 24.61	\$ 25.21	\$ 24.73	\$ 24.42	\$ 24.16	\$ 23.45	\$ 23.62	\$ 25.26	\$ 39.50	\$ 41.13	\$ 39.62	\$ 33.05	\$ 27.27	\$ 23.93	\$ 22.15	\$ 22.15
15-Nov-10	\$ 20.42	\$ 19.68	\$ 19.54	\$ 19.56	\$ 19.56	\$ 22.79	\$ 37.45	\$ 37.27	\$ 35.29	\$ 37.37	\$ 37.89	\$ 37.32	\$ 36.65	\$ 34.91	\$ 32.87	\$ 27.27	\$ 27.56	\$ 43.85	\$ 42.67	\$ 37.57	\$ 36.10	\$ 31.63	\$ 27.14	\$ 22.61	\$ 22.61
16-Nov-10	\$ 20.45	\$ 19.87	\$ 19.81	\$ 19.42	\$ 19.36	\$ 20.69	\$ 37.05	\$ 36.43	\$ 35.63	\$ 36.58	\$ 37.84	\$ 36.68	\$ 33.03	\$ 32.17	\$ 30.72	\$ 29.32	\$ 29.12	\$ 43.56	\$ 40.54	\$ 37.34	\$ 35.13	\$ 31.51	\$ 26.39	\$ 22.97	\$ 22.97
17-Nov-10	\$ 20.88	\$ 20.70	\$ 20.20	\$ 20.03	\$ 19.96	\$ 20.95	\$ 32.51	\$ 35.44	\$ 32.99	\$ 33.80	\$ 33.82	\$ 32.22	\$ 32.32	\$ 29.69	\$ 28.74	\$ 27.60	\$ 28.13	\$ 41.20	\$ 40.80	\$ 37.63	\$ 33.54	\$ 30.94	\$ 24.86	\$ 22.05	\$ 22.05
18-Nov-10	\$ 23.10	\$ 22.14	\$ 22.02	\$ 21.64	\$ 21.73	\$ 22.14	\$ 36.73	\$ 40.37	\$ 39.28	\$ 38.69	\$ 39.67	\$ 38.01	\$ 31.77	\$ 29.86	\$ 28.81	\$ 28.01	\$ 28.01	\$ 42.05	\$ 39.42	\$ 33.78	\$ 30.29	\$ 24.91	\$ 22.99	\$ 22.99	\$ 22.99
19-Nov-10	\$ 20.24	\$ 18.58	\$ 17.51	\$ 17.36	\$ 17.64	\$ 21.55	\$ 35.29	\$ 36.25	\$ 35.48	\$ 34.41	\$ 33.94	\$ 32.91	\$ 31.67	\$ 29.67	\$ 27.96	\$ 27.32	\$ 27.32	\$ 42.71	\$ 43.58	\$ 36.62	\$ 30.97	\$ 27.90	\$ 23.85	\$ 22.07	\$ 22.07
20-Nov-10	\$ 20.77	\$ 20.22	\$ 19.91	\$ 19.36	\$ 19.46	\$ 19.79	\$ 23.16	\$ 25.29	\$ 27.44	\$ 30.30	\$ 30.99	\$ 29.08	\$ 25.43	\$ 24.83	\$ 23.34	\$ 22.70	\$ 23.76	\$ 38.94	\$ 36.97	\$ 32.10	\$ 28.84	\$ 25.40	\$ 21.86	\$ 22.16	\$ 22.16
21-Nov-10	\$ 21.41	\$ 20.68	\$ 19.80	\$ 19.81	\$ 19.54	\$ 19.10	\$ 19.95	\$ 20.93	\$ 22.08	\$ 23.80	\$ 23.93	\$ 23.08	\$ 22.28	\$ 22.32	\$ 22.27	\$ 24.01	\$ 42.90	\$ 41.17	\$ 36.11	\$ 32.58	\$ 25.68	\$ 22.10	\$ 20.88	\$ 20.88	\$ 20.88
22-Nov-10	\$ 20.43	\$ 20.03	\$ 19.90	\$ 19.78	\$ 19.90	\$ 21.23	\$ 31.46	\$ 35.51	\$ 33.55	\$ 35.51	\$ 37.81	\$ 37.81	\$ 36.99	\$ 34.68	\$ 32.55	\$ 30.12	\$ 31.03	\$ 45.57	\$ 56.88	\$ 47.22	\$ 36.37	\$ 31.54	\$ 25.07	\$ 24.05	\$ 24.05
23-Nov-10	\$ 20.41	\$ 19.74	\$ 19.46	\$ 19.38	\$ 19.58	\$ 20.75	\$ 29.66	\$ 36.25	\$ 34.16	\$ 36.50	\$ 37.19	\$ 37.26	\$ 34.27	\$ 32.30	\$ 30.48	\$ 28.53	\$ 28.23	\$ 40.54	\$ 47.86	\$ 42.69	\$ 35.96	\$ 31.84	\$ 27.70	\$ 25.83	\$ 25.83
24-Nov-10	\$ 22.49	\$ 20.74	\$ 20.04	\$ 19.58	\$ 19.38	\$ 22.19	\$ 31.28	\$ 33.79	\$ 34.54	\$ 33.00	\$ 32.10	\$ 31.57	\$ 31.01	\$ 29.75	\$ 28.91	\$ 27.31	\$ 27.31	\$ 43.01	\$ 42.05	\$ 39.42	\$ 33.78	\$ 30.29	\$ 24.91	\$ 22.99	\$ 22.99
25-Nov-10	\$ 19.48	\$ 18.28	\$ 17.53	\$ 17.27	\$ 17.01	\$ 17.86	\$ 20.00	\$ 22.18	\$ 24.58	\$ 26.42	\$ 27.16	\$ 26.72	\$ 23.81	\$ 22.12	\$ 21.47	\$ 20.84	\$ 21.13	\$ 24.73	\$ 24.82	\$ 24.57	\$ 24.08	\$ 22.83	\$ 21.13	\$ 19.99	\$ 19.99
26-Nov-10	\$ 17.66	\$ 15.52	\$ 14.92	\$ 14.92	\$ 14.92	\$ 18.21	\$ 22.28	\$ 25.60	\$ 25.54	\$ 27.32	\$ 27.17	\$ 26.88	\$ 25.82	\$ 25.14	\$ 24.57	\$ 24.60	\$ 37.10	\$ 44.39	\$ 43.98	\$ 38.04	\$ 36.50	\$ 32.16	\$ 26.82	\$ 22.94	\$ 22.94
27-Nov-10	\$ 21.18	\$ 20.63	\$ 20.30	\$ 20.19	\$ 20.53	\$ 21.19	\$ 23.90	\$ 26.49	\$ 28.28	\$ 30.40	\$ 30.98	\$ 29.96	\$ 27.15	\$ 25.10	\$ 24.40	\$ 24.25	\$ 24.99	\$ 43.06	\$ 36.54	\$ 35.19	\$ 31.98	\$ 27.29	\$ 23.86	\$ 21.83	\$ 21.83
28-Nov-10	\$ 19.60	\$ 18.83	\$ 18.81	\$ 18.95	\$ 18.86	\$ 18.57	\$ 18.41	\$ 20.78	\$ 22.29	\$ 22.95	\$ 22.93	\$ 22.03	\$ 21.43	\$ 20.75	\$ 20.63	\$ 22.18	\$ 43.96	\$ 36.05	\$ 33.09	\$ 30.45	\$ 27.92	\$ 24.60	\$ 22.52	\$ 20.80	\$ 20.80
29-Nov-10	\$ 16.34	\$ 15.80	\$ 15.14	\$ 14.90	\$ 15.43	\$ 17.64	\$ 27.64	\$ 36.78	\$ 34.82	\$ 34.82	\$ 36.53	\$ 33.50	\$ 30.05	\$ 28.07	\$ 27.68	\$ 27.30	\$ 27.84	\$ 46.84	\$ 43.98	\$ 36.36	\$ 35.30	\$ 28.36	\$ 24.84	\$ 21.32	\$ 21.32
30-Nov-10	\$ 15.44	\$ 14.10	\$ 13.58	\$ 13.90	\$ 12.95	\$ 15.23	\$ 25.22	\$ 31.21	\$ 27.88	\$ 28.20	\$ 28.03	\$ 27.22	\$ 26.93	\$ 26.43	\$ 25.84	\$ 26.87	\$ 40.99	\$ 42.84	\$ 38.16	\$ 33.42	\$ 28.36	\$ 25.33	\$ 21.70	\$ 21.70	\$ 21.70
1-Dec-10	\$ 19.82	\$ 19.55	\$ 19.06	\$ 18.90	\$ 19.01	\$ 21.82	\$ 31.26	\$ 37.68	\$ 35.90	\$ 35.59	\$ 36.61	\$ 34.60	\$ 31.10	\$ 30.20	\$ 29.04	\$ 28.32	\$ 31.56	\$ 51.84	\$ 48.57	\$ 44.11	\$ 40.88	\$ 35.02	\$ 27.88	\$ 24.25	\$ 24.25
2-Dec-10	\$ 24.57	\$ 23.61	\$ 23.13	\$ 22.89	\$ 23.04	\$ 24.45	\$ 37.70	\$ 47.50	\$ 45.88	\$ 42.26	\$ 42.45	\$ 40.86	\$ 35.81	\$ 34.04	\$ 30.81	\$ 29.42	\$ 30.85	\$ 55.56	\$ 51.45	\$ 45.45	\$ 42.43	\$ 41.16	\$ 29.88	\$ 24.27	\$ 24.27
3-Dec-10	\$ 25.82	\$ 24.81	\$ 24.17	\$ 23.64	\$ 23.63	\$ 24.62	\$ 39.40	\$ 48.60	\$ 46.09	\$ 43.35	\$ 43.27	\$ 40.57	\$ 33.98	\$ 32.06	\$ 28.26	\$ 27.12	\$ 29.02	\$ 50.40	\$ 48.39	\$ 43.62	\$ 40.73	\$ 36.55	\$ 29.68	\$ 25.30	\$ 25.30
4-Dec-10	\$ 25.30	\$ 24.08	\$ 23.38	\$ 22.47	\$ 22.11	\$ 22.63	\$ 34.78	\$ 38.26	\$ 38.48	\$ 35.22	\$ 37.46	\$ 34.47	\$ 29.66	\$ 26.20	\$ 25.61	\$ 29.51	\$ 29.30	\$ 48.21	\$ 48.07	\$ 44.11	\$ 41.62	\$ 36.26	\$ 30.65	\$ 27.51	\$ 27.51
5-Dec-10	\$ 24.17	\$ 23.81	\$ 23.00	\$ 22.26	\$ 21.77	\$ 21.40	\$ 22.51	\$ 24.23	\$ 25.53	\$ 27.42	\$ 27.60	\$ 27.75	\$ 26.90	\$ 26.46	\$ 25.38	\$ 25.77	\$ 27.59	\$ 50.88	\$ 48.89	\$ 44.92	\$ 43.07	\$ 39.54	\$ 32.14	\$ 29.58	\$ 29.58
6-Dec-10	\$ 24.34	\$ 24.21	\$ 23.64	\$ 23.45	\$ 23.61	\$ 24.84	\$ 36.68	\$ 47.24	\$ 46.55	\$ 43.76	\$ 45.71	\$ 43.41	\$ 40.20	\$ 37.85	\$ 36.96	\$ 36.20	\$ 33.75	\$ 60.96	\$ 55.95	\$ 54.39	\$ 50.23	\$ 44.67	\$ 32.38	\$ 30.45	\$ 30.45
7-Dec-10	\$ 27.21	\$ 26.38	\$ 26.40	\$ 26.20	\$ 24.96	\$ 27.45	\$ 43.47	\$ 48.23	\$ 47.30	\$ 46.94	\$ 46.82	\$ 42.38	\$ 39.59	\$ 36.93	\$ 33.76	\$ 30.91	\$ 34.58	\$ 62.92	\$ 54.11	\$ 48.94	\$ 46.70	\$ 45.31	\$ 36.72	\$ 32.83	\$ 32.83
8-Dec-10	\$ 26.82	\$ 25.69	\$ 24.84	\$ 24.76	\$ 24.83	\$ 26.84	\$ 41.27	\$ 44.48	\$ 43.56	\$ 44.18	\$ 43.62	\$ 40.03	\$ 34.53	\$ 32.89	\$ 29.30	\$ 28.01	\$ 30.93	\$ 62.98	\$ 52.54	\$ 45.73	\$ 43.60				

## **Appendix D**

### **Historical/Forecast Annual Values Summary Base Case**

**Appendix D: Historical/Forecast Annual Values Summary  
Base Case**

**APPENDIX D**

**HEREC "BASE" CASE SCENARIO TABLES  
HISTORICAL/FORECAST ANNUAL SUMMARY**



1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 34 YEARS)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

MENU

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

Aggregated Member System Data  
NUMBER OF CONSUMERS

Aggregated Member System Data  
SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

	YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL	1999	242,823	11,747	129	1,225	255,924	3,301,206	679,879	954,026	113,744	5,048,855
ACTUAL	2000	248,463	12,109	139	1,363	262,074	3,408,837	742,554	1,177,210	116,332	5,444,933
ACTUAL	2001	253,162	12,265	155	1,444	267,026	3,522,968	729,098	1,261,060	113,891	5,627,017
ACTUAL	2002	257,347	12,533	163	1,501	271,544	3,772,856	750,481	1,372,372	117,598	6,013,307
ACTUAL	2003	261,300	12,711	176	1,654	275,841	3,744,229	760,700	1,406,637	112,443	6,024,008
ACTUAL	2004	265,436	12,930	173	1,793	280,332	3,816,332	797,926	1,498,284	112,624	6,225,166
ACTUAL	2005	269,261	13,031	173	1,934	284,399	4,087,081	833,664	1,583,193	44,652	6,548,580
ACTUAL	2006	272,892	13,211	177	2,070	288,350	3,997,738	859,810	1,632,862	37,999	6,528,409
ACTUAL	2007	275,983	13,481	199	2,186	291,849	4,235,636	896,961	1,706,767	41,253	6,880,617
ACTUAL	2008	277,143	13,424	208	2,202	292,977	4,225,769	896,208	1,712,574	38,855	6,873,406
ACTUAL	2009	277,179	13,547	200	2,204	293,130	4,049,085	862,271	1,638,530	36,404	6,586,290
FRCST	2010	278,058	13,684	204	2,222	294,168	4,098,974	879,903	1,747,689	40,028	6,766,594
FRCST	2011	279,471	13,817	202	2,222	295,712	4,149,224	890,741	1,728,364	40,028	6,808,357
FRCST	2012	281,258	13,950	201	2,222	297,631	4,196,139	901,640	1,822,016	40,028	6,959,823
FRCST	2013	283,905	14,083	202	2,222	299,812	4,238,845	912,597	1,947,217	40,028	7,138,687
FRCST	2014	285,534	14,216	202	2,222	302,174	4,283,594	923,618	2,043,312	40,028	7,290,552
FRCST	2015	287,915	14,349	202	2,222	304,688	4,332,678	934,706	2,174,080	40,028	7,481,492
FRCST	2016	290,544	14,538	202	2,222	307,506	4,387,570	950,411	2,251,632	40,028	7,629,641
FRCST	2017	293,251	14,727	201	2,222	310,401	4,444,976	966,183	2,270,024	40,028	7,721,211
FRCST	2018	296,054	14,916	201	2,222	313,393	4,503,537	982,019	2,278,123	40,028	7,803,707
FRCST	2019	298,916	15,105	201	2,222	316,444	4,563,172	997,922	2,284,521	40,028	7,885,643
FRCST	2020	301,845	15,294	200	2,222	319,561	4,623,491	1,013,898	2,290,962	40,028	7,968,379
FRCST	2021	305,026	15,548	199	2,222	322,995	4,686,270	1,033,417	2,277,950	40,028	8,037,665
FRCST	2022	308,274	15,802	199	2,222	326,497	4,750,347	1,052,975	2,277,950	40,028	8,121,300
FRCST	2023	311,588	16,056	199	2,222	330,065	4,815,756	1,072,583	2,277,950	40,028	8,206,317
FRCST	2024	314,977	16,310	199	2,222	333,708	4,882,627	1,092,238	2,277,950	40,028	8,292,843
FRCST	2025	318,468	16,564	199	2,222	337,453	4,951,409	1,111,936	2,277,950	40,028	8,381,323
FRCST	2026	322,163	16,885	199	2,222	341,469	5,029,187	1,136,563	2,277,950	40,028	8,483,728
FRCST	2027	325,914	17,206	199	2,222	345,541	5,110,464	1,161,244	2,277,950	40,028	8,589,686
FRCST	2028	329,731	17,527	199	2,222	349,679	5,194,544	1,185,989	2,277,950	40,028	8,698,511
FRCST	2029	333,607	17,848	199	2,222	353,876	5,280,984	1,210,790	2,277,950	40,028	8,809,752
FRCST	2030	337,521	18,169	199	2,222	358,111	5,369,120	1,235,656	2,277,950	40,028	8,922,754

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

AGGREGATED NUMBER OF CONSUMERS

AGGREGATED SYSTEM ENERGY SALES

TIME PERIOD	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT.CHG.)	OTHER (ACT.CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
1999 -2004	1.80%	1.94%	44	568	1.84%	2.94%	3.25%	9.45%	-0.20%	4.28%
2004 -2009	0.87%	0.94%	27	411	0.90%	1.19%	1.56%	1.81%	-20.22%	1.13%
2010 -2015	0.70%	0.95%	-2	0	0.71%	1.12%	1.22%	4.46%	0.00%	2.03%
2015 -2020	0.95%	1.28%	-2	0	0.96%	1.31%	1.64%	1.05%	0.00%	1.27%
2020 -2025	1.08%	1.61%	-1	0	1.10%	1.38%	1.86%	-0.11%	0.00%	1.02%
2025 -2030	1.17%	1.87%	0	0	1.20%	1.63%	2.13%	0.00%	0.00%	1.26%
1999 -2009	1.33%	1.44%	71	979	1.37%	2.06%	2.41%	5.56%	-10.77%	2.69%
2010 -2030	0.97%	1.43%	-5	0	0.99%	1.36%	1.71%	1.33%	0.00%	1.39%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

YEAR	AGGREGATED TOTAL MEMBER ENERGY PURCHASED (MWH)	TOTAL ENERGY GENERATED for H.E. MEMBERS (MWH)	HE SYSTEM AVERAGE MONTHLY LOSS FACTORS due to MEMBER SYSTEM LOAD (excludes pass-throughs)		H.E. AVERAGE WHOLESALE POWER COSTS (MILLS/MWH)	AGGREGATED MEMBER SYSTEM DEMANDS (WITHOUT LOSSES, 30 MINUTE DEMAND)			
			FOR ENERGY	FOR DEMAND		NONCOINCIDENT (MW)		COINCIDENT (MW) (EST. BEFORE 1984)	
						WINTER	SUMMER	WINTER	SUMMER
ACTUAL 1999	5,320,840	5,535,309	3.97%	4.54%	*****	1,117	1,223	1,037	1,155
ACTUAL 2000	5,758,399	6,009,930	4.31%	4.52%	*****	1,173	1,187	1,110	1,117
ACTUAL 2001	5,864,890	6,118,847	4.27%	4.53%	*****	1,285	1,274	1,178	1,187
ACTUAL 2002	6,314,792	6,600,361	4.45%	4.78%	*****	1,211	1,346	1,151	1,229
ACTUAL 2003	6,320,460	6,593,113	4.26%	4.26%	*****	1,354	1,313	1,265	1,229
ACTUAL 2004	6,549,574	6,831,431	4.25%	4.81%	*****	1,381	1,321	1,268	1,255
ACTUAL 2005	6,850,535	7,115,713	3.83%	4.22%	*****	1,429	1,472	1,335	1,393
ACTUAL 2006	6,802,245	7,091,068	4.19%	4.47%	*****	1,414	1,502	1,336	1,393
ACTUAL 2007	7,215,322	7,533,291	4.33%	4.84%	*****	1,533	1,558	1,421	1,403
ACTUAL 2008	7,193,537	7,471,337	3.80%	5.10%	*****	1,575	1,442	1,440	1,289
ACTUAL 2009	6,898,809	7,174,754	3.93%	4.86%	*****	1,674	1,453	1,519	1,307
FRCST 2010	7,085,562	7,392,428	4.25%	4.73%	68.830	1,528	1,468	1,407	1,352
FRCST 2011	7,129,789	7,427,217	4.10%	4.80%	70.910	1,538	1,479	1,416	1,362
FRCST 2012	7,287,700	7,591,811	4.10%	4.80%	75.360	1,569	1,523	1,443	1,391
FRCST 2013	7,474,993	7,787,042	4.10%	4.80%	79.430	1,601	1,549	1,474	1,427
FRCST 2014	7,633,923	7,952,697	4.10%	4.80%	82.230	1,651	1,583	1,495	1,444
FRCST 2015	7,834,143	8,161,407	4.10%	4.80%	83.810	1,690	1,611	1,532	1,486
FRCST 2016	7,989,290	8,323,145	4.10%	4.80%	85.486	1,730	1,628	1,553	1,500
FRCST 2017	8,085,302	8,423,220	4.10%	4.80%	87.196	1,751	1,649	1,572	1,520
FRCST 2018	8,171,754	8,513,326	4.10%	4.80%	88.940	1,769	1,668	1,590	1,537
FRCST 2019	8,257,819	8,602,819	4.10%	4.80%	90.719	1,788	1,686	1,607	1,554
FRCST 2020	8,344,326	8,693,189	4.10%	4.80%	92.533	1,807	1,704	1,624	1,571
FRCST 2021	8,417,178	8,769,156	4.10%	4.80%	94.384	1,822	1,721	1,639	1,588
FRCST 2022	8,504,937	8,860,668	4.10%	4.80%	96.271	1,841	1,740	1,657	1,605
FRCST 2023	8,594,141	8,953,686	4.10%	4.80%	98.197	1,861	1,759	1,675	1,623
FRCST 2024	8,684,929	9,048,356	4.10%	4.80%	100.161	1,881	1,779	1,693	1,641
FRCST 2025	8,777,776	9,145,173	4.10%	4.80%	102.164	1,901	1,799	1,712	1,660
FRCST 2026	8,885,271	9,257,263	4.10%	4.80%	102.164	1,925	1,823	1,735	1,682
FRCST 2027	8,996,487	9,373,235	4.10%	4.80%	102.164	1,949	1,846	1,757	1,704
FRCST 2028	9,110,713	9,492,345	4.10%	4.80%	102.164	1,974	1,871	1,780	1,727
FRCST 2029	9,227,476	9,614,100	4.10%	4.80%	102.164	2,000	1,896	1,804	1,750
FRCST 2030	9,346,080	9,737,775	4.10%	4.80%	102.164	2,026	1,921	1,828	1,774

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	AGGREGATED H.E. ENERGY TOTAL ENERGY GENERATED PURCHASED FOR MEMBERS (% CHG.)	H.E. ENERGY GENERATED FOR MEMBERS (% CHG.)	AVG. MONTHLY LOSS FACTORS due to MEMBERS		H.E. AVERAGE WHOLESALE POWER COSTS (% CHG.)	AGGREGATED MEMBER PEAK SEASONAL DEMANDS (WITHOUT LOSSES, 30 MINUTE DEMAND)			
			ENERGY (AVERAGE)	DEMAND (AVERAGE)		Non-Coincident (% Chg)		Coincident (% Chg)	
						WINTER	SUMMER	WINTER	SUMMER
1999 -2004	4.24%	4.30%	4.25%	4.57%	*****	4.34%	1.55%	4.09%	1.68%
2004 -2009	1.04%	0.99%	4.06%	4.71%	*****	3.92%	1.92%	3.68%	0.81%
2010 -2015	2.03%	2.00%	4.13%	4.79%	4.02%	2.03%	1.87%	1.72%	1.91%
2015 -2020	1.27%	1.27%	4.10%	4.80%	2.00%	1.34%	1.14%	1.18%	1.13%
2020 -2025	1.02%	1.02%	4.10%	4.80%	2.00%	1.02%	1.08%	1.06%	1.10%
2025 -2030	1.26%	1.26%	4.10%	4.80%	0.00%	1.28%	1.33%	1.32%	1.34%
1999 -2009	2.63%	2.63%	4.14%	4.63%	*****	4.13%	1.74%	3.88%	1.25%
2010 -2030	1.39%	1.39%	4.11%	4.79%	1.99%	1.42%	1.35%	1.32%	1.37%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

HOOSIER ENERGY SYSTEM PEAK SEASONAL COINCIDENT DEMAND (MW)					H.E. ANNUAL LOAD FACTOR	HOOSIER ENERGY SYSTEM PEAK SEASONAL NON-COINCIDENT DEMAND (MW)				H.E. ANNUAL LOAD FACTOR
(All values are estimated 60 minute values)					Due To	(All values are estimated 60 minute values)				Due To
YEAR	(WITHOUT LOSSES)		(WITH LOSSES)		COINCIDENT PEAK	(WITHOUT LOSSES)		(WITH LOSSES)		NON-COIN. PEAK
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999	1,024	1,142	1,071	1,196	52.9%	1,103	1,209	1,154	1,266	49.9%
ACTUAL 2000	1,086	1,099	1,136	1,150	59.5%	1,149	1,167	1,202	1,221	56.0%
ACTUAL 2001	1,159	1,174	1,213	1,228	56.9%	1,271	1,259	1,329	1,317	52.5%
ACTUAL 2002	1,105	1,218	1,159	1,278	59.0%	1,161	1,334	1,217	1,399	53.9%
ACTUAL 2003	1,244	1,214	1,298	1,267	58.0%	1,332	1,298	1,390	1,354	54.2%
ACTUAL 2004	1,252	1,235	1,314	1,296	59.2%	1,364	1,300	1,432	1,364	54.3%
ACTUAL 2005	1,301	1,378	1,357	1,438	56.5%	1,393	1,456	1,453	1,519	53.5%
ACTUAL 2006	1,304	1,374	1,364	1,437	56.3%	1,380	1,481	1,443	1,548	52.3%
ACTUAL 2007	1,387	1,400	1,456	1,470	58.5%	1,496	1,555	1,571	1,632	52.7%
ACTUAL 2008	1,424	1,269	1,499	1,336	56.7%	1,558	1,420	1,640	1,494	51.9%
ACTUAL 2009	1,519	1,304	1,595	1,370	51.4%	1,674	1,450	1,758	1,522	46.6%
FRCST 2010	1,391	1,342	1,458	1,408	57.9%	1,511	1,458	1,584	1,529	53.3%
FRCST 2011	1,400	1,353	1,469	1,420	57.7%	1,520	1,469	1,595	1,541	53.2%
FRCST 2012	1,427	1,381	1,497	1,449	57.7%	1,551	1,512	1,628	1,587	53.1%
FRCST 2013	1,457	1,417	1,529	1,487	58.2%	1,582	1,538	1,660	1,614	53.5%
FRCST 2014	1,478	1,434	1,551	1,505	58.5%	1,632	1,572	1,713	1,649	53.0%
FRCST 2015	1,514	1,475	1,589	1,549	58.6%	1,671	1,600	1,753	1,679	53.1%
FRCST 2016	1,535	1,490	1,611	1,564	58.8%	1,710	1,617	1,795	1,696	52.8%
FRCST 2017	1,554	1,510	1,631	1,584	58.9%	1,730	1,638	1,816	1,719	52.9%
FRCST 2018	1,571	1,527	1,649	1,602	58.9%	1,749	1,656	1,836	1,738	52.9%
FRCST 2019	1,588	1,543	1,667	1,620	58.9%	1,768	1,674	1,855	1,757	52.9%
FRCST 2020	1,605	1,560	1,685	1,638	58.7%	1,786	1,693	1,875	1,776	52.8%
FRCST 2021	1,620	1,577	1,701	1,655	58.9%	1,801	1,710	1,890	1,794	53.0%
FRCST 2022	1,638	1,594	1,719	1,673	58.8%	1,820	1,728	1,910	1,814	53.0%
FRCST 2023	1,656	1,612	1,738	1,692	58.8%	1,839	1,747	1,930	1,834	53.0%
FRCST 2024	1,674	1,630	1,757	1,711	58.6%	1,859	1,767	1,951	1,854	52.8%
FRCST 2025	1,692	1,648	1,776	1,730	58.8%	1,879	1,786	1,972	1,875	52.9%
FRCST 2026	1,715	1,670	1,800	1,753	58.7%	1,902	1,810	1,997	1,900	52.9%
FRCST 2027	1,737	1,692	1,823	1,776	58.7%	1,927	1,834	2,022	1,924	52.9%
FRCST 2028	1,760	1,715	1,847	1,800	58.5%	1,951	1,858	2,048	1,950	52.8%
FRCST 2029	1,783	1,738	1,872	1,824	58.6%	1,977	1,883	2,075	1,976	52.9%
FRCST 2030	1,807	1,762	1,897	1,849	58.6%	2,003	1,908	2,102	2,002	52.9%

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	HOOSIER ENERGY COINCIDENT PEAK DEMAND (60 MINUTE VALUE, ALL VALUES EST.)				H.E. ANNUAL COINCIDENT LOAD FACTOR (AVERAGE)	HOOSIER ENERGY NON-COINCIDENT PEAK DEMAND (60 MINUTE VALUE, ALL VALUES EST.)				H.E. ANNUAL NON-COIN. LOAD FACTOR (AVERAGE)
	Without Losses (% Chg)		With Losses (% Chg)			Without Losses (% Chg)		With Losses (% Chg)		
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	4.10%	1.57%	4.16%	1.62%	57.57%	4.34%	1.45%	4.40%	1.50%	53.48%
2004 -2009	3.94%	1.10%	3.96%	1.12%	56.43%	4.18%	2.21%	4.20%	2.22%	51.87%
2010 -2015	1.72%	1.91%	1.73%	1.92%	58.10%	2.03%	1.87%	2.05%	1.89%	53.20%
2015 -2020	1.18%	1.13%	1.18%	1.13%	58.83%	1.34%	1.14%	1.34%	1.14%	52.93%
2020 -2025	1.06%	1.10%	1.06%	1.10%	58.78%	1.02%	1.08%	1.02%	1.08%	52.90%
2025 -2030	1.32%	1.34%	1.32%	1.34%	58.65%	1.28%	1.33%	1.28%	1.33%	52.89%
1999 -2009	4.02%	1.33%	4.06%	1.37%	56.80%	4.26%	1.83%	4.30%	1.86%	52.52%
2010 -2030	1.32%	1.37%	1.32%	1.37%	58.57%	1.42%	1.35%	1.42%	1.36%	52.98%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** BASE SCENARIO RESULTS *****						***** BASE SCENARIO RESULTS *****					
YEAR	**** EXTREME TEMPERATURE CONDITIONS **** HOOSIER ENERGY SYSTEM PEAK SEASONAL COINCIDENT DEMAND (MW): 60 MINUTE VALUE (WITHOUT LOSSES)				H.E. ANNUAL LOAD FACTOR Due to EXTREME COINCIDENT PEAK	**** EXTREME TEMPERATURE CONDITIONS **** HOOSIER ENERGY SYSTEM PEAK SEASONAL NON-COINCIDENT DEMAND (MW): 60 MINUTE VALUE (WITHOUT LOSSES)				H.E. ANNUAL LOAD FACTOR Due To EXTREME NON- COIN. PEAK	
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER		
ACTUAL 1999	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2000	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2001	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2002	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2003	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2004	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2005	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2006	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2007	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2008	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
FRCST 2010	1,529	1,468	1,604	1,540	52.6%	1,660	1,594	1,740	1,671	48.5%	
FRCST 2011	1,539	1,480	1,615	1,553	52.5%	1,670	1,605	1,752	1,684	48.4%	
FRCST 2012	1,567	1,509	1,645	1,584	52.5%	1,703	1,651	1,787	1,733	48.4%	
FRCST 2013	1,599	1,548	1,679	1,624	53.0%	1,736	1,679	1,822	1,762	48.8%	
FRCST 2014	1,621	1,564	1,702	1,642	53.4%	1,787	1,713	1,875	1,798	48.4%	
FRCST 2015	1,659	1,608	1,742	1,688	53.5%	1,828	1,742	1,918	1,828	48.6%	
FRCST 2016	1,679	1,621	1,763	1,701	53.8%	1,866	1,758	1,959	1,844	48.4%	
FRCST 2017	1,701	1,642	1,785	1,724	53.9%	1,889	1,781	1,982	1,869	48.5%	
FRCST 2018	1,719	1,661	1,804	1,743	53.9%	1,909	1,801	2,004	1,890	48.5%	
FRCST 2019	1,738	1,679	1,824	1,763	53.8%	1,929	1,821	2,025	1,911	48.5%	
FRCST 2020	1,756	1,698	1,844	1,782	53.7%	1,950	1,840	2,046	1,931	48.4%	
FRCST 2021	1,773	1,716	1,861	1,801	53.8%	1,966	1,859	2,063	1,951	48.5%	
FRCST 2022	1,792	1,734	1,881	1,820	53.8%	1,986	1,879	2,085	1,972	48.5%	
FRCST 2023	1,811	1,753	1,901	1,840	53.8%	2,008	1,900	2,107	1,994	48.5%	
FRCST 2024	1,831	1,773	1,922	1,861	53.6%	2,029	1,920	2,130	2,015	48.4%	
FRCST 2025	1,851	1,793	1,943	1,882	53.7%	2,051	1,942	2,153	2,038	48.5%	
FRCST 2026	1,876	1,817	1,969	1,907	53.7%	2,076	1,968	2,179	2,065	48.5%	
FRCST 2027	1,900	1,841	1,994	1,932	53.6%	2,103	1,993	2,207	2,092	48.5%	
FRCST 2028	1,925	1,865	2,021	1,958	53.5%	2,130	2,020	2,236	2,120	48.3%	
FRCST 2029	1,951	1,890	2,048	1,984	53.6%	2,158	2,047	2,265	2,148	48.5%	
FRCST 2030	1,977	1,916	2,075	2,011	53.6%	2,186	2,074	2,294	2,177	48.5%	

***** BASE SCENARIO RESULTS *****						***** BASE SCENARIO RESULTS *****					
TIME PERIOD	**** EXTREME TEMPERATURE CONDITIONS **** HOOSIER ENERGY COINCIDENT PEAK (60 MIN.)				EXTREME COIN. H.E. ANNUAL LOAD FACTOR (AVERAGE)	**** EXTREME TEMPERATURE CONDITIONS **** HOOSIER ENERGY NON-COINCIDENT PEAK (60 MIN.)				EXT. NON-COIN H.E. ANNUAL LOAD FACTOR (AVERAGE)	
	Without Losses (% Chg)		With Losses (% Chg)			Without Losses (% Chg)		With Losses (% Chg)			
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER		
1999 -2004	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2004 -2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2010 -2015	1.65%	1.83%	1.67%	1.85%	52.91%	1.95%	1.80%	1.96%	1.81%	48.50%	
2015 -2020	1.14%	1.09%	1.14%	1.09%	53.75%	1.30%	1.10%	1.30%	1.10%	48.47%	
2020 -2025	1.06%	1.10%	1.06%	1.10%	53.72%	1.02%	1.08%	1.02%	1.08%	48.46%	
2025 -2030	1.32%	1.34%	1.32%	1.34%	53.62%	1.28%	1.32%	1.28%	1.33%	48.45%	
1999 -2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2010 -2030	1.29%	1.34%	1.30%	1.34%	53.48%	1.39%	1.33%	1.39%	1.33%	48.47%	

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\* Adjusted for IN #72, IN #16, IN#92, and IL#002 \*\*\*\*  
Aggregated Member System Data  
NUMBER OF CONSUMERS

YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	209,962	9,568	112	887	220,529
ACTUAL 2000	215,011	9,890	120	1,018	226,039
ACTUAL 2001	219,228	10,003	132	1,093	230,456
ACTUAL 2002	223,044	10,265	139	1,144	234,592
ACTUAL 2003	226,749	10,462	151	1,293	238,655
ACTUAL 2004	230,760	10,690	151	1,429	243,030
ACTUAL 2005	257,250	11,810	185	1,573	270,798
ACTUAL 2006	260,854	11,986	189	1,707	274,716
ACTUAL 2007	263,908	12,246	181	1,821	278,166
ACTUAL 2008	265,071	12,166	200	1,833	279,270
ACTUAL 2009	265,137	12,281	192	1,836	279,446
FRCST 2010	266,015	12,414	196	1,854	280,479
FRCST 2011	279,471	13,817	202	2,222	295,712
FRCST 2012	281,258	13,950	201	2,222	297,631
FRCST 2013	283,305	14,083	202	2,222	299,812
FRCST 2014	285,534	14,216	202	2,222	302,174
FRCST 2015	287,915	14,349	202	2,222	304,688
FRCST 2016	290,544	14,538	202	2,222	307,506
FRCST 2017	293,251	14,727	201	2,222	310,401
FRCST 2018	296,054	14,916	201	2,222	313,393
FRCST 2019	298,916	15,105	201	2,222	316,444
FRCST 2020	301,845	15,294	200	2,222	319,561
FRCST 2021	305,026	15,548	199	2,222	322,995
FRCST 2022	308,274	15,802	199	2,222	326,497
FRCST 2023	311,588	16,056	199	2,222	330,065
FRCST 2024	314,977	16,310	199	2,222	333,708
FRCST 2025	318,468	16,564	199	2,222	337,453
FRCST 2026	322,163	16,885	199	2,222	341,469
FRCST 2027	325,914	17,206	199	2,222	345,541
FRCST 2028	329,731	17,527	199	2,222	349,679
FRCST 2029	333,607	17,848	199	2,222	353,876
FRCST 2030	337,521	18,169	199	2,222	358,111

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\* Adjusted for IN #72, IN #16, IN#92, and IL#002 \*\*\*\*  
Aggregated Member System Data  
SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	2,864,229	599,227	862,060	29,908	4,355,424
ACTUAL 2000	2,948,957	658,492	1,088,160	30,617	4,724,226
ACTUAL 2001	3,052,360	639,446	1,164,603	31,271	4,887,680
ACTUAL 2002	3,261,617	663,738	1,272,906	32,441	5,230,702
ACTUAL 2003	3,243,405	673,235	1,316,094	32,150	5,264,884
ACTUAL 2004	3,305,807	706,497	1,403,535	33,098	5,448,937
ACTUAL 2005	3,749,514	774,714	1,484,489	33,634	6,042,351
ACTUAL 2006	3,856,899	824,354	1,545,582	32,678	6,259,513
ACTUAL 2007	4,088,777	855,093	1,620,151	34,240	6,598,261
ACTUAL 2008	4,080,904	856,375	1,630,203	33,209	6,600,691
ACTUAL 2009	3,904,139	818,798	1,564,440	31,738	6,319,115
FRCST 2010	3,950,498	836,310	1,680,134	33,075	6,500,017
FRCST 2011	4,149,224	890,741	1,728,364	40,028	6,808,357
FRCST 2012	4,196,139	901,640	1,822,016	40,028	6,959,823
FRCST 2013	4,238,845	912,597	1,947,217	40,028	7,138,687
FRCST 2014	4,283,594	923,618	2,043,312	40,028	7,290,552
FRCST 2015	4,332,678	934,706	2,174,080	40,028	7,481,492
FRCST 2016	4,387,570	950,411	2,251,632	40,028	7,629,641
FRCST 2017	4,444,976	966,183	2,270,024	40,028	7,721,211
FRCST 2018	4,503,537	982,019	2,278,123	40,028	7,803,707
FRCST 2019	4,563,172	997,922	2,284,521	40,028	7,885,643
FRCST 2020	4,623,491	1,013,898	2,290,962	40,028	7,968,379
FRCST 2021	4,686,270	1,033,417	2,277,950	40,028	8,037,665
FRCST 2022	4,750,347	1,052,975	2,277,950	40,028	8,121,300
FRCST 2023	4,815,756	1,072,583	2,277,950	40,028	8,206,317
FRCST 2024	4,882,627	1,092,238	2,277,950	40,028	8,292,843
FRCST 2025	4,951,409	1,111,936	2,277,950	40,028	8,381,323
FRCST 2026	5,029,187	1,136,563	2,277,950	40,028	8,483,728
FRCST 2027	5,110,464	1,161,244	2,277,950	40,028	8,589,686
FRCST 2028	5,194,544	1,185,989	2,277,950	40,028	8,698,511
FRCST 2029	5,280,984	1,210,790	2,277,950	40,028	8,809,752
FRCST 2030	5,369,120	1,235,656	2,277,950	40,028	8,922,754

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

Adjusted for Systems -- AGGREGATED NUMBER OF CONSUMERS

TIME PERIOD	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT.CHG.)	OTHER (ACT.CHG.)	TOTAL (% CHG.)
1999 -2004	1.91%	2.24%	39	542	1.96%
2004 -2009	2.82%	2.81%	41	407	2.83%
2010 -2015	1.59%	2.94%	6	368	1.67%
2015 -2020	0.95%	1.28%	-2	0	0.96%
2020 -2025	1.08%	1.61%	-1	0	1.10%
2025 -2030	1.17%	1.87%	0	0	1.20%
1999 -2009	2.36%	2.53%	80	949	2.40%
2010 -2030	1.20%	1.92%	3	368	1.23%

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

Adjusted for Systems -- AGGREGATED ENERGY SALES

TIME PERIOD	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
1999 -2004	2.91%	3.35%	10.24%	2.05%	4.58%
2004 -2009	3.38%	2.99%	2.19%	-0.84%	3.01%
2010 -2015	1.86%	2.25%	5.29%	3.89%	2.85%
2015 -2020	1.31%	1.64%	1.05%	0.00%	1.27%
2020 -2025	1.38%	1.86%	-0.11%	0.00%	1.02%
2025 -2030	1.63%	2.13%	0.00%	0.00%	1.26%
1999 -2009	3.15%	3.17%	6.14%	0.60%	3.79%
2010 -2030	1.55%	1.97%	1.53%	0.96%	1.60%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN #72, IN # 16, IN#92, and IL#002									
YEAR	AGGREGATED TOTAL MEMBER ENERGY PURCHASED (MWH)	ENERGY GENERATED FOR MEMBERS (MWH)	AGGREGATED MEMBER 30 MIN. COINCIDENT PEAK W/O LOSSES (MW)		HE COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984) (WITHOUT LOSSES)		HE COINCIDENT 60 MINUTE DEMAND (MW) (WITH LOSSES)		ANNUAL LOAD FACTOR
			WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999	4,592,866	4,777,226	900	1,004	888	993	929	1,039	52.5%
ACTUAL 2000	4,998,042	5,215,344	958	969	937	953	980	997	59.6%
ACTUAL 2001	5,106,079	5,326,182	1,023	1,032	1,006	1,020	1,052	1,067	57.0%
ACTUAL 2002	5,499,105	5,746,666	1,012	1,077	972	1,066	1,019	1,118	58.7%
ACTUAL 2003	5,527,292	5,764,676	1,102	1,072	1,084	1,059	1,130	1,105	58.2%
ACTUAL 2004	5,736,200	5,981,961	1,103	1,095	1,089	1,077	1,143	1,130	59.6%
ACTUAL 2005	6,332,029	6,576,556	1,172	1,333	1,142	1,319	1,191	1,376	54.6%
ACTUAL 2006	6,525,204	6,801,916	1,295	1,337	1,264	1,318	1,322	1,379	56.3%
ACTUAL 2007	6,924,233	7,229,037	1,384	1,341	1,351	1,338	1,418	1,405	58.2%
ACTUAL 2008	6,912,387	7,179,069	1,395	1,245	1,380	1,226	1,453	1,290	56.2%
ACTUAL 2009	6,617,661	6,882,100	1,472	1,247	1,472	1,243	1,546	1,306	50.8%
FRCST 2010	6,804,955	7,099,365	1,360	1,297	1,344	1,288	1,410	1,351	57.5%
FRCST 2011	7,129,789	7,427,217	1,416	1,362	1,400	1,353	1,469	1,420	57.7%
FRCST 2012	7,287,700	7,591,811	1,443	1,391	1,427	1,381	1,497	1,449	57.7%
FRCST 2013	7,474,993	7,787,042	1,474	1,427	1,457	1,417	1,529	1,487	58.2%
FRCST 2014	7,633,923	7,952,697	1,495	1,444	1,478	1,434	1,551	1,505	58.5%
FRCST 2015	7,834,143	8,161,407	1,532	1,486	1,514	1,475	1,589	1,549	58.8%
FRCST 2016	7,989,290	8,323,145	1,553	1,500	1,535	1,490	1,611	1,564	58.8%
FRCST 2017	8,085,302	8,423,220	1,572	1,520	1,554	1,510	1,631	1,584	58.9%
FRCST 2018	8,171,754	8,513,326	1,590	1,537	1,571	1,527	1,649	1,602	58.9%
FRCST 2019	8,257,619	8,602,819	1,607	1,554	1,588	1,543	1,667	1,620	58.9%
FRCST 2020	8,344,326	8,693,189	1,624	1,571	1,605	1,560	1,685	1,638	58.7%
FRCST 2021	8,417,178	8,769,156	1,639	1,588	1,620	1,577	1,701	1,655	58.9%
FRCST 2022	8,504,937	8,860,668	1,657	1,605	1,638	1,594	1,719	1,673	58.9%
FRCST 2023	8,594,141	8,953,686	1,675	1,623	1,656	1,612	1,738	1,692	58.8%
FRCST 2024	8,684,929	9,048,356	1,693	1,641	1,674	1,630	1,757	1,711	58.6%
FRCST 2025	8,777,776	9,145,173	1,712	1,660	1,692	1,648	1,776	1,730	58.8%
FRCST 2026	8,885,271	9,257,263	1,735	1,682	1,715	1,670	1,800	1,753	58.7%
FRCST 2027	8,996,487	9,373,235	1,757	1,704	1,737	1,692	1,823	1,776	58.7%
FRCST 2028	9,110,713	9,492,345	1,780	1,727	1,760	1,715	1,847	1,800	58.5%
FRCST 2029	9,227,476	9,614,100	1,804	1,750	1,783	1,738	1,872	1,824	58.6%
FRCST 2030	9,346,060	9,737,775	1,828	1,774	1,807	1,762	1,897	1,849	58.6%

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	Adjusted for Systems ENERGY PURCHASED (% CHG.)		Adjusted for Systems ENERGY AGGREGATED 30 MIN. COIN. PEAK W/O LOSSES (% CHG)		Adjusted for Systems -- HE COIN. 60 MINUTE DEMAND Without Losses (% Chg)		Adjusted for Systems -- HE COIN. 60 MINUTE DEMAND With Losses (% Chg)		ADJUSTED ANNUAL LOAD FACTOR (AVERAGE)
			WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	4.55%	4.60%	4.15%	1.76%	4.17%	1.65%	4.23%	1.70%	57.58%
2004 -2009	2.90%	2.84%	5.94%	2.62%	6.21%	2.91%	6.23%	2.93%	55.96%
2010 -2015	2.86%	2.83%	2.41%	2.76%	2.41%	2.76%	2.43%	2.77%	58.04%
2015 -2020	1.27%	1.27%	1.18%	1.13%	1.18%	1.13%	1.18%	1.13%	58.83%
2020 -2025	1.02%	1.02%	1.06%	1.10%	1.06%	1.10%	1.06%	1.10%	58.78%
2025 -2030	1.26%	1.26%	1.32%	1.34%	1.32%	1.34%	1.32%	1.34%	58.65%
1999 -2009	3.72%	3.72%	5.05%	2.19%	5.19%	2.28%	5.22%	2.31%	56.51%
2010 -2030	1.60%	1.59%	1.49%	1.58%	1.49%	1.58%	1.50%	1.58%	58.55%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN #72, IN #16, IN#92, and IL#002

EXTREME COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984)

YEAR	(WITHOUT LOSSES)		(WITH LOSSES)		EXTREME ANNUAL LOAD FACTOR
	WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999	*****	*****	*****	*****	*****
ACTUAL 2000	*****	*****	*****	*****	*****
ACTUAL 2001	*****	*****	*****	*****	*****
ACTUAL 2002	*****	*****	*****	*****	*****
ACTUAL 2003	*****	*****	*****	*****	*****
ACTUAL 2004	*****	*****	*****	*****	*****
ACTUAL 2005	*****	*****	*****	*****	*****
ACTUAL 2006	*****	*****	*****	*****	*****
ACTUAL 2007	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****
FRCST 2010	1,478	1,408	1,550	1,477	52.3%
FRCST 2011	1,539	1,480	1,615	1,553	52.5%
FRCST 2012	1,567	1,509	1,645	1,584	52.5%
FRCST 2013	1,599	1,548	1,679	1,624	53.0%
FRCST 2014	1,621	1,564	1,702	1,642	53.4%
FRCST 2015	1,659	1,608	1,742	1,688	53.5%
FRCST 2016	1,679	1,621	1,763	1,701	53.8%
FRCST 2017	1,701	1,642	1,785	1,724	53.9%
FRCST 2018	1,719	1,661	1,804	1,743	53.9%
FRCST 2019	1,738	1,679	1,824	1,763	53.8%
FRCST 2020	1,756	1,698	1,844	1,782	53.7%
FRCST 2021	1,773	1,716	1,861	1,801	53.8%
FRCST 2022	1,792	1,734	1,881	1,820	53.8%
FRCST 2023	1,811	1,753	1,901	1,840	53.8%
FRCST 2024	1,831	1,773	1,922	1,861	53.6%
FRCST 2025	1,851	1,793	1,943	1,882	53.7%
FRCST 2026	1,876	1,817	1,969	1,907	53.7%
FRCST 2027	1,900	1,841	1,994	1,932	53.6%
FRCST 2028	1,925	1,865	2,021	1,958	53.5%
FRCST 2029	1,951	1,890	2,048	1,984	53.6%
FRCST 2030	1,977	1,916	2,075	2,011	53.6%

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

Adjusted for Systems HE EXT. COIN. 60 MINUTE DEMAND

Without Losses (% Chg) With Losses (% Chg)

ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)

TIME PERIOD	WINTER	SUMMER	WINTER	SUMMER	ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)
1999 -2004	*****	*****	*****	*****	*****
2004 -2009	*****	*****	*****	*****	*****
2010 -2015	2.35%	2.69%	2.36%	2.71%	52.86%
2015 -2020	1.14%	1.09%	1.14%	1.09%	53.75%
2020 -2025	1.06%	1.10%	1.06%	1.10%	53.72%
2025 -2030	1.32%	1.34%	1.32%	1.34%	53.62%
1999 -2009	*****	*****	*****	*****	*****
2010 -2030	1.47%	1.55%	1.47%	1.56%	53.47%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

Values Adjusted for IN#72,IN#16,IN#92,IL#002 and Special Industrial Loads  
Aggregated Member System Data  
NUMBER OF CONSUMERS

Values Adjusted for IN#72,IN#16,IN#92,IL#002 and Special Industrial Loads  
Aggregated Member System Data  
SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	209,962	9,568	112	887	220,529	2,864,229	599,227	726,658	29,908	4,220,022
ACTUAL 2000	215,011	9,890	119	1,018	226,038	2,948,957	658,492	917,277	30,617	4,553,343
ACTUAL 2001	219,228	10,003	131	1,093	230,455	3,052,380	639,446	990,705	31,271	4,713,782
ACTUAL 2002	223,044	10,265	138	1,144	234,591	3,261,617	663,738	1,086,676	32,441	5,044,472
ACTUAL 2003	226,749	10,462	150	1,293	238,654	3,243,405	673,235	1,127,531	32,150	5,076,321
ACTUAL 2004	230,760	10,690	150	1,429	243,029	3,305,807	706,497	1,205,248	33,098	5,250,650
ACTUAL 2005	257,250	11,810	164	1,573	270,797	3,749,514	774,714	1,291,857	33,634	5,849,719
ACTUAL 2006	260,854	11,986	168	1,707	274,715	3,856,899	824,354	1,350,149	32,678	6,064,080
ACTUAL 2007	263,908	12,246	190	1,821	278,165	4,088,777	855,093	1,435,203	34,240	6,413,313
ACTUAL 2008	265,071	12,166	199	1,833	279,269	4,080,904	856,375	1,461,568	33,209	6,432,056
ACTUAL 2009	265,137	12,281	191	1,836	279,445	3,904,139	818,798	1,407,974	31,738	6,182,649
FRCST 2010	266,015	12,414	195	1,854	280,478	3,950,498	836,310	1,507,744	33,075	6,327,627
FRCST 2011	279,471	13,817	201	2,222	295,711	4,149,224	890,741	1,554,914	40,028	6,634,907
FRCST 2012	281,258	13,950	200	2,222	297,630	4,196,139	901,640	1,646,951	40,028	6,784,758
FRCST 2013	283,305	14,083	201	2,222	299,811	4,238,845	912,597	1,770,523	40,028	6,961,993
FRCST 2014	285,534	14,216	201	2,222	302,173	4,283,594	923,618	1,864,972	40,028	7,112,212
FRCST 2015	287,915	14,349	201	2,222	304,687	4,332,678	934,706	1,984,080	40,028	7,301,492
FRCST 2016	290,544	14,538	201	2,222	307,505	4,387,570	950,411	2,070,843	40,028	7,448,652
FRCST 2017	293,251	14,727	200	2,222	310,400	4,444,976	966,183	2,088,040	40,028	7,539,227
FRCST 2018	296,054	14,916	200	2,222	313,392	4,503,537	982,019	2,095,139	40,028	7,620,723
FRCST 2019	298,916	15,105	200	2,222	316,443	4,563,172	997,922	2,100,532	40,028	7,701,654
FRCST 2020	301,845	15,294	199	2,222	319,580	4,623,491	1,013,898	2,105,962	40,028	7,783,379
FRCST 2021	305,026	15,548	198	2,222	322,994	4,686,270	1,033,417	2,092,950	40,028	7,852,665
FRCST 2022	308,274	15,802	198	2,222	326,496	4,750,347	1,052,975	2,092,950	40,028	7,936,300
FRCST 2023	311,588	16,056	198	2,222	330,064	4,815,756	1,072,593	2,092,950	40,028	8,021,317
FRCST 2024	314,977	16,310	198	2,222	333,707	4,882,627	1,092,238	2,092,950	40,028	8,107,843
FRCST 2025	318,468	16,564	198	2,222	337,452	4,951,409	1,111,936	2,092,950	40,028	8,196,323
FRCST 2026	322,163	16,885	198	2,222	341,468	5,029,187	1,136,563	2,092,950	40,028	8,298,728
FRCST 2027	325,914	17,206	198	2,222	345,540	5,110,464	1,161,244	2,092,950	40,028	8,404,686
FRCST 2028	329,731	17,527	198	2,222	349,678	5,194,544	1,185,989	2,092,950	40,028	8,513,511
FRCST 2029	333,607	17,848	198	2,222	353,875	5,280,984	1,210,790	2,092,950	40,028	8,624,752
FRCST 2030	337,521	18,169	198	2,222	358,110	5,369,120	1,235,656	2,092,950	40,028	8,737,754

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	Adjusted for Systems & Ind. -- AGGREGATED NUMBER OF CONSUMERS					Adjusted for Systems & Ind. -- AGGREGATED ENERGY SALES				
	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT.CHG.)	OTHER (ACT.CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
1999 -2004	1.91%	2.24%	38	542	1.96%	2.91%	3.35%	10.65%	2.05%	4.47%
2004 -2009	2.82%	2.81%	41	407	2.83%	3.38%	2.99%	3.16%	-0.84%	3.25%
2010 -2015	1.59%	2.94%	6	368	1.67%	1.86%	2.25%	5.75%	3.89%	2.90%
2015 -2020	0.95%	1.28%	-2	0	0.96%	1.31%	1.64%	1.10%	0.00%	1.29%
2020 -2025	1.08%	1.61%	-1	0	1.10%	1.38%	1.86%	-0.12%	0.00%	1.04%
2025 -2030	1.17%	1.87%	0	0	1.20%	1.63%	2.13%	0.00%	0.00%	1.29%
1999 -2009	2.36%	2.53%	79	949	2.40%	3.15%	3.17%	6.84%	0.60%	3.86%
2010 -2030	1.20%	1.92%	3	368	1.23%	1.55%	1.97%	1.65%	0.96%	1.63%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN#72,IN#16,IN#92,IL#002 and Special Industrial Loads

YEAR	AGGREGATED TOTAL MEMBER ENERGY PURCHASED (MWH)	ENERGY GENERATED FOR MEMBERS (MWH)	H.E. 30 MINUTE COINCIDENT DEMAND (MW) (WITHOUT LOSSES)		H.E. COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984) (WITHOUT LOSSES)		H.E. COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984) (WITH LOSSES)		ANNUAL LOAD FACTOR
			WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
			ACTUAL 1999	4,457,464	4,641,824	884	984	874	
ACTUAL 2000	4,827,158	5,044,460	934	927	915	912	952	972	59.1%
ACTUAL 2001	4,932,180	5,152,284	987	1,004	976	992	1,022	1,045	56.3%
ACTUAL 2002	5,312,874	5,560,435	968	1,040	929	1,030	965	1,091	58.2%
ACTUAL 2003	5,338,729	5,576,113	1,079	1,040	1,061	1,027	1,106	1,079	57.6%
ACTUAL 2004	5,537,913	5,783,674	1,066	1,055	1,052	1,037	1,106	1,093	59.5%
ACTUAL 2005	6,139,397	6,383,924	1,138	1,305	1,109	1,291	1,150	1,355	53.8%
ACTUAL 2006	6,329,771	6,606,483	1,260	1,322	1,229	1,303	1,283	1,366	55.2%
ACTUAL 2007	6,739,285	7,044,089	1,354	1,337	1,321	1,334	1,387	1,397	57.6%
ACTUAL 2008	6,743,752	7,010,434	1,394	1,235	1,379	1,215	1,442	1,327	55.3%
ACTUAL 2009	6,461,195	6,725,634	1,465	1,232	1,465	1,229	1,525	1,292	50.3%
FRCST 2010	6,632,565	6,926,975	1,334	1,272	1,319	1,263	1,384	1,326	57.1%
FRCST 2011	6,956,339	7,253,767	1,390	1,337	1,374	1,328	1,443	1,395	57.4%
FRCST 2012	7,112,635	7,416,746	1,417	1,365	1,401	1,356	1,471	1,424	57.4%
FRCST 2013	7,298,298	7,610,347	1,447	1,401	1,430	1,392	1,503	1,462	57.8%
FRCST 2014	7,455,583	7,774,357	1,469	1,418	1,452	1,408	1,525	1,479	58.2%
FRCST 2015	7,654,143	7,981,407	1,505	1,460	1,488	1,449	1,562	1,522	58.3%
FRCST 2016	7,808,301	8,142,156	1,526	1,474	1,508	1,464	1,584	1,538	58.5%
FRCST 2017	7,903,319	8,241,236	1,546	1,494	1,527	1,483	1,604	1,558	58.6%
FRCST 2018	7,988,771	8,330,342	1,563	1,511	1,544	1,500	1,622	1,576	58.6%
FRCST 2019	8,073,630	8,418,830	1,580	1,527	1,561	1,517	1,640	1,593	58.6%
FRCST 2020	8,159,326	8,508,189	1,597	1,544	1,578	1,534	1,658	1,611	58.4%
FRCST 2021	8,232,178	8,584,156	1,612	1,561	1,593	1,550	1,673	1,628	58.6%
FRCST 2022	8,319,937	8,675,668	1,630	1,578	1,611	1,567	1,692	1,646	58.5%
FRCST 2023	8,409,141	8,768,686	1,648	1,596	1,628	1,585	1,710	1,665	58.5%
FRCST 2024	8,499,929	8,863,356	1,666	1,614	1,646	1,603	1,729	1,684	58.3%
FRCST 2025	8,592,776	8,960,173	1,685	1,633	1,665	1,621	1,749	1,703	58.5%
FRCST 2026	8,700,271	9,072,263	1,707	1,655	1,687	1,644	1,772	1,726	58.4%
FRCST 2027	8,811,487	9,188,235	1,730	1,677	1,710	1,666	1,796	1,749	58.4%
FRCST 2028	8,925,713	9,307,345	1,753	1,700	1,733	1,688	1,820	1,773	58.2%
FRCST 2029	9,042,476	9,429,100	1,777	1,723	1,756	1,711	1,844	1,798	58.4%
FRCST 2030	9,161,080	9,552,775	1,801	1,747	1,780	1,735	1,869	1,822	58.3%

96.3%

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	Adjusted for Systems & Ind ENERGY PURCHASED (% CHG.)	ENERGY GENERATED (% CHG.)	Adj. Sys. & Ind. - H.E. 30 MINUTE COINCIDENT DEMAND (MW) (WITHOUT LOSSES)		Adjusted for Sys. & Ind. - HE COIN. 60 MINUTE DEMAND Without Losses (% Chg)		HE COIN. 60 MINUTE DEMAND With Losses (% Chg)		ADJUSTED ANNUAL LOAD FACTOR (AVERAGE)
			WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	4.44%	4.50%	3.80%	1.40%	3.78%	1.26%	3.91%	1.33%	57.07%
2004 -2009	3.13%	3.06%	6.58%	3.15%	6.85%	3.46%	6.64%	3.40%	55.30%
2010 -2015	2.91%	2.87%	2.44%	2.79%	2.44%	2.79%	2.45%	2.81%	57.70%
2015 -2020	1.29%	1.29%	1.19%	1.14%	1.19%	1.14%	1.19%	1.14%	58.52%
2020 -2025	1.04%	1.04%	1.08%	1.12%	1.08%	1.12%	1.08%	1.12%	58.48%
2025 -2030	1.29%	1.29%	1.34%	1.36%	1.34%	1.36%	1.34%	1.36%	58.37%
1999 -2009	3.78%	3.78%	5.18%	2.27%	5.30%	2.35%	5.26%	2.36%	55.88%
2010 -2030	1.63%	1.62%	1.51%	1.60%	1.51%	1.60%	1.51%	1.60%	58.25%

1971 : BEGINNING HISTORICAL DATA YEAR ?  
2009 : FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 : NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN#72,IN#16,IN#92,IL#002 and Special Industrial Loads

EXTREME COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984)

YEAR	(WITHOUT LOSSES)		(WITH LOSSES)		EXTREME ANNUAL LOAD FACTOR
	WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999	*****	*****	*****	*****	*****
ACTUAL 2000	*****	*****	*****	*****	*****
ACTUAL 2001	*****	*****	*****	*****	*****
ACTUAL 2002	*****	*****	*****	*****	*****
ACTUAL 2003	*****	*****	*****	*****	*****
ACTUAL 2004	*****	*****	*****	*****	*****
ACTUAL 2005	*****	*****	*****	*****	*****
ACTUAL 2006	*****	*****	*****	*****	*****
ACTUAL 2007	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****
FRCST 2010	1,452	1,383	1,524	1,452	51.9%
FRCST 2011	1,513	1,455	1,590	1,528	52.1%
FRCST 2012	1,541	1,484	1,619	1,559	52.2%
FRCST 2013	1,573	1,522	1,653	1,599	52.6%
FRCST 2014	1,595	1,538	1,675	1,616	53.0%
FRCST 2015	1,633	1,582	1,715	1,662	53.1%
FRCST 2016	1,653	1,595	1,736	1,675	53.4%
FRCST 2017	1,674	1,616	1,758	1,698	53.5%
FRCST 2018	1,692	1,634	1,777	1,717	53.5%
FRCST 2019	1,711	1,653	1,797	1,736	53.5%
FRCST 2020	1,729	1,671	1,816	1,755	53.3%
FRCST 2021	1,745	1,689	1,833	1,774	53.5%
FRCST 2022	1,764	1,708	1,853	1,794	53.4%
FRCST 2023	1,784	1,727	1,874	1,814	53.4%
FRCST 2024	1,804	1,746	1,895	1,834	53.3%
FRCST 2025	1,824	1,766	1,916	1,855	53.4%
FRCST 2026	1,848	1,790	1,941	1,880	53.3%
FRCST 2027	1,873	1,814	1,967	1,905	53.3%
FRCST 2028	1,898	1,838	1,993	1,931	53.2%
FRCST 2029	1,923	1,864	2,020	1,958	53.3%
FRCST 2030	1,949	1,889	2,048	1,984	53.3%

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

Adjusted for Sys. & Ind. HE EXT. COIN. 60 MINUTE DEMAND

TIME PERIOD	<u>Without Losses (% Chg)</u>		<u>With Losses (% Chg)</u>		ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)
	WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	*****	*****	*****	*****	*****
2004 -2009	*****	*****	*****	*****	*****
2010 -2015	2.37%	2.72%	2.39%	2.74%	52.47%
2015 -2020	1.15%	1.10%	1.15%	1.10%	53.39%
2020 -2025	1.07%	1.11%	1.07%	1.11%	53.38%
2025 -2030	1.34%	1.36%	1.34%	1.36%	53.29%
1999 -2009	*****	*****	*****	*****	*****
2010 -2030	1.48%	1.57%	1.49%	1.57%	53.11%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

YEAR	H.E. Time Factor Ratio from 30 to 60 Minute excludes pass-throughs (Est before 1984)		PERCENTAGE of IN #72 Served by H.E.	IN #72 served by H.E. ( Yes=0 , No= 1 )		PERCENTAGE of IN #16 Served by H.E.	IN #16 served by H.E. ( Yes=0 , No= 1 )	
	WINTER	SUMMER		WINTER	SUMMER		WINTER	SUMMER
ACTUAL 1999	98.85%	98.99%	100.0%	0	0	100.0%	0	0
ACTUAL 2000	97.92%	98.42%	100.0%	0	0	100.0%	0	0
ACTUAL 2001	98.92%	98.85%	100.0%	0	0	100.0%	0	0
ACTUAL 2002	96.00%	99.02%	100.0%	0	0	100.0%	0	0
ACTUAL 2003	98.31%	98.80%	100.0%	0	0	100.0%	0	0
ACTUAL 2004	98.73%	98.31%	100.0%	0	0	100.0%	0	0
ACTUAL 2005	97.45%	98.93%	100.0%	0	0	100.0%	0	0
ACTUAL 2006	97.54%	98.57%	100.0%	0	0	100.0%	0	0
ACTUAL 2007	97.56%	99.78%	100.0%	0	0	100.0%	0	0
ACTUAL 2008	98.92%	98.38%	100.0%	0	0	100.0%	0	0
ACTUAL 2009	100.00%	99.76%	100.0%	0	0	100.0%	0	0
FRCST 2010	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2011	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2012	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2013	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2014	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2015	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2016	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2017	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2018	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2019	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2020	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2021	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2022	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2023	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2024	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2025	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2026	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2027	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2028	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2029	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2030	98.83%	99.30%	100.0%	0	0	100.0%	0	0

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	HE TIME FACTOR RATIO (30 to 60 MINUTE)	
	WINTER (AVERAGE)	SUMMER (AVERAGE)
1999 -2004	98.12%	98.73%
2004 -2009	98.37%	98.95%
2010 -2015	98.83%	99.30%
2015 -2020	98.83%	99.30%
2020 -2025	98.83%	99.30%
2025 -2030	98.83%	99.30%
1999 -2009	98.20%	98.89%
2010 -2030	98.83%	99.30%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

YEAR	PERCENTAGE of IN #92 Served by H.E.	IN #92 served by H.E. ( Yes=0 , No= 1 )		PERCENTAGE of IL #2 Served by H.E.	IL #2 served by H.E. ( Yes=0 , No= 1 )	
		WINTER	SUMMER		WINTER	SUMMER
		ACTUAL 1999	0.0%		1	1
ACTUAL 2000	0.0%	1	1	0.0%	1	1
ACTUAL 2001	0.0%	1	1	0.0%	1	1
ACTUAL 2002	0.0%	1	1	0.0%	1	1
ACTUAL 2003	0.0%	1	1	0.0%	1	1
ACTUAL 2004	0.0%	1	1	0.0%	1	1
ACTUAL 2005	51.0%	1	0	0.0%	1	1
ACTUAL 2006	100.0%	0	0	0.0%	1	1
ACTUAL 2007	100.0%	0	0	0.0%	1	1
ACTUAL 2008	100.0%	0	0	0.0%	1	1
ACTUAL 2009	100.0%	0	0	0.0%	1	1
FRCST 2010	100.0%	0	0	0.0%	1	1
FRCST 2011	100.0%	0	0	100.0%	0	0
FRCST 2012	100.0%	0	0	100.0%	0	0
FRCST 2013	100.0%	0	0	100.0%	0	0
FRCST 2014	100.0%	0	0	100.0%	0	0
FRCST 2015	100.0%	0	0	100.0%	0	0
FRCST 2016	100.0%	0	0	100.0%	0	0
FRCST 2017	100.0%	0	0	100.0%	0	0
FRCST 2018	100.0%	0	0	100.0%	0	0
FRCST 2019	100.0%	0	0	100.0%	0	0
FRCST 2020	100.0%	0	0	100.0%	0	0
FRCST 2021	100.0%	0	0	100.0%	0	0
FRCST 2022	100.0%	0	0	100.0%	0	0
FRCST 2023	100.0%	0	0	100.0%	0	0
FRCST 2024	100.0%	0	0	100.0%	0	0
FRCST 2025	100.0%	0	0	100.0%	0	0
FRCST 2026	100.0%	0	0	100.0%	0	0
FRCST 2027	100.0%	0	0	100.0%	0	0
FRCST 2028	100.0%	0	0	100.0%	0	0
FRCST 2029	100.0%	0	0	100.0%	0	0
FRCST 2030	100.0%	0	0	100.0%	0	0

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD

1999 -2004  
2004 -2009

2010 -2015  
2015 -2020  
2020 -2025  
2025 -2030

1999 -2009  
2010 -2030

**APPENDIX D**

**HEREC "BASE" DSM CASE SCENARIO TABLES  
HISTORICAL/FORECAST ANNUAL SUMMARY**

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 34 YEARS)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

Aggregated Member System Data  
NUMBER OF CONSUMERS

Aggregated Member System Data  
SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	242,823	11,747	129	1,225	255,924	3,301,206	679,879	954,026	113,744	5,048,855
ACTUAL 2000	248,463	12,109	139	1,363	262,074	3,408,837	742,554	1,177,210	116,332	5,444,933
ACTUAL 2001	253,162	12,265	155	1,444	267,026	3,522,968	729,098	1,261,060	113,891	5,627,017
ACTUAL 2002	257,347	12,533	163	1,501	271,544	3,772,856	750,481	1,372,372	117,598	6,013,307
ACTUAL 2003	261,300	12,711	176	1,654	275,841	3,744,229	760,700	1,406,637	112,443	6,024,009
ACTUAL 2004	265,436	12,930	173	1,793	280,332	3,816,332	797,926	1,498,294	112,624	6,225,166
ACTUAL 2005	269,261	13,031	173	1,934	284,399	4,087,081	833,664	1,583,193	44,652	6,548,590
ACTUAL 2006	272,892	13,211	177	2,070	288,350	3,997,738	859,810	1,632,862	37,999	6,528,409
ACTUAL 2007	275,983	13,481	199	2,188	291,849	4,235,636	896,961	1,706,767	41,253	6,880,617
ACTUAL 2008	277,143	13,424	208	2,202	292,977	4,225,769	896,208	1,712,574	38,855	6,873,406
ACTUAL 2009	277,179	13,547	200	2,204	293,130	4,049,085	862,271	1,638,530	36,404	6,586,290
FRCST 2010	278,058	13,684	204	2,222	294,168	4,058,271	875,889	1,747,689	40,028	6,721,677
FRCST 2011	279,471	13,817	202	2,222	295,712	4,085,155	876,942	1,728,364	40,028	6,730,489
FRCST 2012	281,258	13,950	201	2,222	297,631	4,114,279	876,919	1,822,016	40,028	6,853,241
FRCST 2013	283,305	14,083	202	2,222	299,812	4,149,087	873,736	1,947,217	40,028	7,010,088
FRCST 2014	285,534	14,216	202	2,222	302,174	4,177,180	869,406	2,043,312	40,028	7,129,905
FRCST 2015	287,915	14,349	202	2,222	304,688	4,210,296	866,521	2,174,080	40,028	7,290,924
FRCST 2016	290,544	14,538	202	2,222	307,506	4,262,931	869,701	2,251,632	40,028	7,424,292
FRCST 2017	293,251	14,727	201	2,222	310,401	4,311,277	874,029	2,270,024	40,028	7,495,358
FRCST 2018	296,054	14,916	201	2,222	313,393	4,361,103	880,017	2,278,123	40,028	7,559,272
FRCST 2019	298,916	15,105	201	2,222	316,444	4,413,829	886,229	2,284,521	40,028	7,624,607
FRCST 2020	301,845	15,294	200	2,222	319,561	4,462,947	893,425	2,290,962	40,028	7,687,362
FRCST 2021	305,026	15,548	199	2,222	322,995	4,514,220	904,834	2,277,950	40,028	7,737,032
FRCST 2022	308,274	15,802	199	2,222	326,497	4,566,836	917,035	2,277,950	40,028	7,801,850
FRCST 2023	311,588	16,056	199	2,222	330,065	4,621,237	929,722	2,277,950	40,028	7,868,937
FRCST 2024	314,977	16,310	199	2,222	333,708	4,678,152	944,143	2,277,950	40,028	7,940,273
FRCST 2025	318,468	16,564	199	2,222	337,453	4,738,597	960,507	2,277,950	40,028	8,017,082
FRCST 2026	322,163	16,885	199	2,222	341,469	4,810,812	988,782	2,277,950	40,028	8,117,572
FRCST 2027	325,914	17,206	199	2,222	345,541	4,891,325	1,018,713	2,277,950	40,028	8,228,015
FRCST 2028	329,731	17,527	199	2,222	349,679	4,977,045	1,052,172	2,277,950	40,028	8,347,195
FRCST 2029	333,607	17,848	199	2,222	353,876	5,066,261	1,087,062	2,277,950	40,028	8,471,301
FRCST 2030	337,521	18,169	199	2,222	358,111	5,157,223	1,120,796	2,277,950	40,028	8,595,997

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

AGGREGATED NUMBER OF CONSUMERS

AGGREGATED SYSTEM ENERGY SALES

TIME PERIOD	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT.CHG.)	OTHER (ACT.CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
1999 -2004	1.80%	1.94%	44	568	1.84%	2.94%	3.25%	9.45%	-0.20%	4.28%
2004 -2009	0.87%	0.94%	27	411	0.90%	1.19%	1.56%	1.81%	-20.22%	1.13%
2010 -2015	0.70%	0.95%	-2	0	0.71%	0.74%	-0.21%	4.46%	0.00%	1.64%
2015 -2020	0.95%	1.28%	-2	0	0.96%	1.17%	0.61%	1.05%	0.00%	1.06%
2020 -2025	1.08%	1.61%	-1	0	1.10%	1.21%	1.46%	-0.11%	0.00%	0.84%
2025 -2030	1.17%	1.87%	0	0	1.20%	1.71%	3.13%	0.00%	0.00%	1.40%
1999 -2009	1.33%	1.44%	71	979	1.37%	2.06%	2.41%	5.56%	-10.77%	2.69%
2010 -2030	0.97%	1.43%	-5	0	0.99%	1.21%	1.24%	1.33%	0.00%	1.24%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	AGGREGATED TOTAL MEMBER ENERGY PURCHASED (MWH)	TOTAL ENERGY GENERATED for H.E. MEMBERS (MWH)	HE SYSTEM AVERAGE MONTHLY LOSS FACTORS due to MEMBER SYSTEM LOAD (excludes pass-throughs)		H.E. AVERAGE WHOLESALE POWER COSTS (MILLS/MWH)	AGGREGATED MEMBER SYSTEM DEMANDS (WITHOUT LOSSES, 30 MINUTE DEMAND)			
			FOR ENERGY	FOR DEMAND		NONCOINCIDENT (MW)		COINCIDENT (MW) (EST. BEFORE 1984)	
						WINTER	SUMMER	WINTER	SUMMER
ACTUAL 1999	5,320,840	5,535,309	3.97%	4.54%	*****	1,117	1,223	1,037	1,155
ACTUAL 2000	5,758,399	6,009,930	4.31%	4.52%	*****	1,173	1,187	1,110	1,117
ACTUAL 2001	5,864,880	6,118,847	4.27%	4.53%	*****	1,285	1,274	1,178	1,187
ACTUAL 2002	6,314,792	6,600,361	4.45%	4.78%	*****	1,211	1,346	1,151	1,229
ACTUAL 2003	6,320,460	6,593,113	4.28%	4.26%	*****	1,354	1,313	1,265	1,229
ACTUAL 2004	6,549,574	6,831,431	4.25%	4.81%	*****	1,381	1,321	1,268	1,255
ACTUAL 2005	6,850,535	7,115,713	3.83%	4.22%	*****	1,429	1,472	1,335	1,393
ACTUAL 2006	6,802,245	7,091,068	4.19%	4.47%	*****	1,414	1,502	1,336	1,393
ACTUAL 2007	7,215,322	7,533,291	4.33%	4.84%	*****	1,533	1,558	1,421	1,403
ACTUAL 2008	7,193,537	7,471,337	3.80%	5.10%	*****	1,575	1,442	1,440	1,289
ACTUAL 2009	6,898,809	7,174,754	3.93%	4.86%	*****	1,674	1,453	1,519	1,307
FRCST 2010	7,038,407	7,343,179	4.25%	4.73%	68.830	1,506	1,456	1,384	1,339
FRCST 2011	7,048,039	7,341,972	4.10%	4.80%	70.910	1,500	1,455	1,378	1,338
FRCST 2012	7,175,828	7,475,155	4.10%	4.80%	75.360	1,516	1,483	1,390	1,351
FRCST 2013	7,340,042	7,646,321	4.10%	4.80%	79.430	1,531	1,491	1,404	1,369
FRCST 2014	7,465,409	7,776,979	4.10%	4.80%	82.230	1,563	1,507	1,408	1,368
FRCST 2015	7,634,274	7,952,992	4.10%	4.80%	83.810	1,585	1,518	1,426	1,393
FRCST 2016	7,773,943	8,098,591	4.10%	4.80%	85.486	1,613	1,523	1,436	1,395
FRCST 2017	7,848,476	8,176,268	4.10%	4.80%	87.196	1,621	1,530	1,443	1,401
FRCST 2018	7,915,447	8,246,060	4.10%	4.80%	88.940	1,628	1,536	1,448	1,406
FRCST 2019	7,983,924	8,317,421	4.10%	4.80%	90.719	1,635	1,543	1,454	1,411
FRCST 2020	8,049,681	8,385,947	4.10%	4.80%	92.533	1,647	1,554	1,464	1,421
FRCST 2021	8,101,959	8,440,460	4.10%	4.80%	94.384	1,652	1,563	1,470	1,429
FRCST 2022	8,169,980	8,511,389	4.10%	4.80%	96.271	1,664	1,575	1,479	1,440
FRCST 2023	8,240,379	8,584,798	4.10%	4.80%	98.197	1,675	1,588	1,490	1,452
FRCST 2024	8,315,221	8,662,840	4.10%	4.80%	100.161	1,688	1,603	1,501	1,466
FRCST 2025	8,395,826	8,746,892	4.10%	4.80%	102.164	1,703	1,620	1,514	1,481
FRCST 2026	8,501,305	8,856,881	4.10%	4.80%	102.164	1,722	1,644	1,532	1,503
FRCST 2027	8,617,208	8,977,740	4.10%	4.80%	102.164	1,746	1,668	1,555	1,526
FRCST 2028	8,742,266	9,108,144	4.10%	4.80%	102.164	1,774	1,696	1,580	1,552
FRCST 2029	8,872,483	9,243,929	4.10%	4.80%	102.164	1,803	1,724	1,607	1,578
FRCST 2030	9,003,318	9,380,358	4.10%	4.80%	102.164	1,833	1,753	1,635	1,606

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	AGGREGATED H.E. ENERGY TOTAL ENERGY GENERATED PURCHASED FOR MEMBERS (% CHG.)	H.E. ENERGY GENERATED FOR MEMBERS (% CHG.)	AVG. MONTHLY LOSS FACTORS due to MEMBERS		H.E. AVERAGE WHOLESALE POWER COSTS (% CHG.)	AGGREGATED MEMBER PEAK SEASONAL DEMANDS (WITHOUT LOSSES, 30 MINUTE DEMAND)			
			ENERGY (AVERAGE)	DEMAND (AVERAGE)		Non-Coincident (% Chg)		Coincident (% Chg)	
						WINTER	SUMMER	WINTER	SUMMER
1999 -2004	4.24%	4.30%	4.25%	4.57%	*****	4.34%	1.55%	4.09%	1.68%
2004 -2009	1.04%	0.99%	4.06%	4.71%	*****	3.92%	1.92%	3.68%	0.81%
2010 -2015	1.64%	1.61%	4.13%	4.79%	4.02%	1.02%	0.84%	0.60%	0.79%
2015 -2020	1.07%	1.07%	4.10%	4.80%	2.00%	0.77%	0.47%	0.53%	0.39%
2020 -2025	0.85%	0.85%	4.10%	4.80%	2.00%	0.67%	0.84%	0.67%	0.84%
2025 -2030	1.41%	1.41%	4.10%	4.80%	0.00%	1.48%	1.59%	1.55%	1.63%
1999 -2009	2.63%	2.63%	4.14%	4.63%	*****	4.13%	1.74%	3.88%	1.25%
2010 -2030	1.24%	1.23%	4.11%	4.79%	1.99%	0.90%	0.93%	0.84%	0.91%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

HOOSIER ENERGY SYSTEM PEAK SEASONAL COINCIDENT DEMAND (MW) (All values are estimated 60 minute values)					H.E. ANNUAL LOAD FACTOR Due To COINCIDENT PEAK	HOOSIER ENERGY SYSTEM PEAK SEASONAL NON-COINCIDENT DEMAND (MW) (All values are estimated 60 minute values)					H.E. ANNUAL LOAD FACTOR Due To NON-COIN. PEAK
YEAR	WITHOUT LOSSES)		WITH LOSSES)		COINCIDENT PEAK	WITHOUT LOSSES)		WITH LOSSES)		NON-COIN. PEAK	
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER		
ACTUAL 1999	1,024	1,142	1,071	1,196	52.9%	1,103	1,209	1,154	1,266	49.9%	
ACTUAL 2000	1,086	1,099	1,136	1,150	59.5%	1,149	1,167	1,202	1,221	56.0%	
ACTUAL 2001	1,159	1,174	1,213	1,228	56.9%	1,271	1,259	1,329	1,317	52.5%	
ACTUAL 2002	1,105	1,218	1,159	1,278	59.0%	1,161	1,334	1,217	1,399	53.9%	
ACTUAL 2003	1,244	1,214	1,298	1,267	58.0%	1,332	1,298	1,390	1,354	54.2%	
ACTUAL 2004	1,252	1,235	1,314	1,296	59.2%	1,364	1,300	1,432	1,364	54.3%	
ACTUAL 2005	1,301	1,378	1,357	1,438	56.5%	1,393	1,456	1,453	1,519	53.5%	
ACTUAL 2006	1,304	1,374	1,364	1,437	56.3%	1,380	1,481	1,443	1,548	52.3%	
ACTUAL 2007	1,387	1,400	1,458	1,470	58.5%	1,496	1,555	1,571	1,632	52.7%	
ACTUAL 2008	1,424	1,269	1,499	1,336	56.7%	1,558	1,420	1,640	1,494	51.9%	
ACTUAL 2009	1,519	1,304	1,595	1,370	51.4%	1,674	1,450	1,758	1,522	46.6%	
FRCST 2010	1,368	1,330	1,435	1,395	58.4%	1,489	1,446	1,561	1,516	53.7%	
FRCST 2011	1,362	1,329	1,430	1,395	58.6%	1,483	1,445	1,556	1,516	53.9%	
FRCST 2012	1,374	1,342	1,442	1,408	59.0%	1,499	1,473	1,573	1,545	54.1%	
FRCST 2013	1,388	1,359	1,457	1,427	59.8%	1,514	1,480	1,589	1,553	54.9%	
FRCST 2014	1,391	1,359	1,460	1,426	60.8%	1,545	1,497	1,622	1,571	54.7%	
FRCST 2015	1,410	1,383	1,479	1,452	61.4%	1,566	1,508	1,644	1,582	55.2%	
FRCST 2016	1,420	1,386	1,490	1,454	61.9%	1,595	1,512	1,674	1,587	55.1%	
FRCST 2017	1,426	1,392	1,497	1,460	62.4%	1,602	1,520	1,681	1,595	55.5%	
FRCST 2018	1,432	1,396	1,502	1,465	62.7%	1,609	1,526	1,689	1,601	55.7%	
FRCST 2019	1,437	1,401	1,508	1,471	62.9%	1,617	1,532	1,696	1,608	56.0%	
FRCST 2020	1,447	1,411	1,519	1,481	62.9%	1,628	1,543	1,708	1,619	55.9%	
FRCST 2021	1,453	1,419	1,525	1,489	63.2%	1,633	1,552	1,714	1,629	56.2%	
FRCST 2022	1,462	1,430	1,535	1,501	63.3%	1,644	1,564	1,726	1,641	56.3%	
FRCST 2023	1,473	1,442	1,545	1,513	63.4%	1,656	1,577	1,738	1,655	56.4%	
FRCST 2024	1,484	1,456	1,557	1,528	63.3%	1,669	1,592	1,751	1,671	56.3%	
FRCST 2025	1,497	1,471	1,571	1,544	63.6%	1,683	1,609	1,766	1,689	56.5%	
FRCST 2026	1,515	1,493	1,590	1,567	63.6%	1,703	1,632	1,787	1,713	56.6%	
FRCST 2027	1,537	1,516	1,613	1,591	63.5%	1,726	1,657	1,812	1,739	56.6%	
FRCST 2028	1,562	1,541	1,639	1,617	63.3%	1,753	1,684	1,840	1,767	56.4%	
FRCST 2029	1,589	1,567	1,667	1,645	63.3%	1,782	1,712	1,870	1,797	56.4%	
FRCST 2030	1,616	1,595	1,696	1,674	63.1%	1,812	1,741	1,901	1,827	56.3%	

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	HOOSIER ENERGY COINCIDENT PEAK DEMAND (60 MINUTE VALUE, ALL VALUES EST.)				H.E. ANNUAL COINCIDENT LOAD FACTOR (AVERAGE)	HOOSIER ENERGY NON-COINCIDENT PEAK DEMAND (60 MINUTE VALUE, ALL VALUES EST.)				H.E. ANNUAL NON-COIN. LOAD FACTOR (AVERAGE)
	Without Losses (% Chg)		With Losses (% Chg)			Without Losses (% Chg)		With Losses (% Chg)		
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	4.10%	1.57%	4.16%	1.62%	57.57%	4.34%	1.45%	4.40%	1.50%	53.48%
2004 -2009	3.94%	1.10%	3.96%	1.12%	56.43%	4.18%	2.21%	4.20%	2.22%	51.87%
2010 -2015	0.60%	0.79%	0.61%	0.80%	59.69%	1.02%	0.84%	1.04%	0.86%	54.43%
2015 -2020	0.53%	0.39%	0.53%	0.39%	62.34%	0.77%	0.47%	0.78%	0.47%	55.57%
2020 -2025	0.67%	0.84%	0.67%	0.84%	63.28%	0.67%	0.84%	0.67%	0.84%	56.27%
2025 -2030	1.55%	1.62%	1.55%	1.63%	63.40%	1.48%	1.59%	1.48%	1.59%	56.46%
1999 -2009	4.02%	1.33%	4.06%	1.37%	56.80%	4.26%	1.83%	4.30%	1.86%	52.52%
2010 -2030	0.84%	0.91%	0.84%	0.91%	62.12%	0.99%	0.93%	0.99%	0.94%	55.66%

1971 : BEGINNING HISTORICAL DATA YEAR ?  
2009 : FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 : NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** BASE SCENARIO WITH DSM IMPACTS *****					***** BASE SCENARIO WITH DSM IMPACTS *****						
**** EXTREME TEMPERATURE CONDITIONS ****					H.E. ANNUAL	**** EXTREME TEMPERATURE CONDITIONS ****					H.E. ANNUAL
HOOSIER ENERGY SYSTEM PEAK SEASONAL					LOAD FACTOR	HOOSIER ENERGY SYSTEM PEAK SEASONAL					LOAD FACTOR
COINCIDENT DEMAND (MW); 60 MINUTE VALUE					Due to EXTREME	NON-COINCIDENT DEMAND (MW); 60 MINUTE VALUE					Due To
(WITHOUT LOSSES)					COINCIDENT	(WITHOUT LOSSES)					EXTREME NON-
(WITH LOSSES)					PEAK	(WITH LOSSES)					COIN. PEAK
YEAR	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER		
ACTUAL 1999	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2000	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2001	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2002	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2003	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2004	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2005	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2006	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2007	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2008	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
FRCST 2010	1,507	1,456	1,580	1,527	53.0%	1,637	1,582	1,717	1,658	48.8%	
FRCST 2011	1,501	1,456	1,576	1,528	53.2%	1,632	1,581	1,713	1,660	48.9%	
FRCST 2012	1,515	1,470	1,590	1,542	53.5%	1,650	1,612	1,732	1,691	49.1%	
FRCST 2013	1,531	1,490	1,607	1,564	54.3%	1,668	1,621	1,750	1,701	49.9%	
FRCST 2014	1,535	1,489	1,611	1,563	55.1%	1,700	1,638	1,784	1,719	49.8%	
FRCST 2015	1,555	1,516	1,632	1,591	55.6%	1,723	1,650	1,808	1,732	50.2%	
FRCST 2016	1,564	1,517	1,642	1,592	56.2%	1,751	1,653	1,837	1,735	50.2%	
FRCST 2017	1,573	1,525	1,650	1,600	56.6%	1,761	1,663	1,848	1,745	50.5%	
FRCST 2018	1,580	1,531	1,658	1,607	56.8%	1,770	1,671	1,857	1,753	50.7%	
FRCST 2019	1,587	1,537	1,665	1,613	57.0%	1,778	1,679	1,866	1,761	50.9%	
FRCST 2020	1,598	1,548	1,677	1,625	56.9%	1,792	1,691	1,880	1,774	50.8%	
FRCST 2021	1,605	1,558	1,685	1,635	57.2%	1,798	1,701	1,887	1,785	51.1%	
FRCST 2022	1,616	1,570	1,696	1,648	57.3%	1,811	1,715	1,901	1,799	51.1%	
FRCST 2023	1,628	1,584	1,709	1,662	57.3%	1,824	1,730	1,915	1,815	51.2%	
FRCST 2024	1,641	1,599	1,722	1,678	57.3%	1,839	1,746	1,930	1,833	51.1%	
FRCST 2025	1,656	1,616	1,738	1,696	57.5%	1,855	1,765	1,947	1,852	51.3%	
FRCST 2026	1,676	1,639	1,759	1,720	57.5%	1,877	1,790	1,970	1,878	51.3%	
FRCST 2027	1,700	1,664	1,784	1,747	57.4%	1,903	1,817	1,997	1,906	51.3%	
FRCST 2028	1,727	1,691	1,813	1,775	57.2%	1,932	1,846	2,028	1,937	51.1%	
FRCST 2029	1,756	1,720	1,843	1,805	57.2%	1,963	1,876	2,060	1,969	51.2%	
FRCST 2030	1,786	1,749	1,874	1,836	57.1%	1,995	1,907	2,094	2,001	51.1%	

***** BASE SCENARIO WITH DSM IMPACTS *****					***** BASE SCENARIO WITH DSM IMPACTS *****						
**** EXTREME TEMPERATURE CONDITIONS ****					EXTREME COIN.	**** EXTREME TEMPERATURE CONDITIONS ****					EXT. NON-COIN
HOOSIER ENERGY COINCIDENT PEAK (60 MIN.)					H.E. ANNUAL	HOOSIER ENERGY NON-COINCIDENT PEAK (60 MIN.)					H.E. ANNUAL
Without Losses (% Chg)					LOAD FACTOR	Without Losses (% Chg)					LOAD FACTOR
With Losses (% Chg)					(AVERAGE)	With Losses (% Chg)					(AVERAGE)
TIME PERIOD	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER		
1999 -2004	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2004 -2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2010 -2015	0.63%	0.81%	0.65%	0.82%	54.14%	1.03%	0.85%	1.04%	0.87%	49.46%	
2015 -2020	0.55%	0.42%	0.55%	0.42%	56.51%	0.78%	0.49%	0.78%	0.49%	50.54%	
2020 -2025	0.71%	0.86%	0.71%	0.86%	57.24%	0.70%	0.86%	0.70%	0.86%	51.09%	
2025 -2030	1.53%	1.60%	1.53%	1.60%	57.33%	1.46%	1.56%	1.46%	1.56%	51.24%	
1999 -2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2010 -2030	0.85%	0.92%	0.86%	0.92%	56.25%	0.99%	0.94%	1.00%	0.94%	50.55%	

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\* Adjusted for IN #72, IN #16, IN#92, and IL#002 \*\*\*\*

\*\*\*\* Adjusted for IN #72, IN #16, IN#92, and IL#002 \*\*\*\*

Aggregated Member System Data  
NUMBER OF CONSUMERS

Aggregated Member System Data  
SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

	YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL	1999	209,962	9,568	112	887	220,529	2,864,229	599,227	862,060	29,908	4,355,424
ACTUAL	2000	215,011	9,890	120	1,018	226,039	2,948,957	656,492	1,088,160	30,617	4,724,226
ACTUAL	2001	219,228	10,003	132	1,093	230,456	3,052,360	639,446	1,164,603	31,271	4,887,680
ACTUAL	2002	223,044	10,265	139	1,144	234,592	3,261,617	663,738	1,272,906	32,441	5,230,702
ACTUAL	2003	226,749	10,462	151	1,293	238,655	3,243,405	673,235	1,316,094	32,150	5,264,884
ACTUAL	2004	230,760	10,690	151	1,429	243,030	3,305,807	706,497	1,403,535	33,098	5,448,937
ACTUAL	2005	257,250	11,810	165	1,573	270,798	3,749,514	774,714	1,484,489	33,634	6,042,351
ACTUAL	2006	260,854	11,986	169	1,707	274,716	3,856,899	824,354	1,545,582	32,678	6,259,513
ACTUAL	2007	263,908	12,246	191	1,821	278,166	4,088,777	855,093	1,620,151	34,240	6,598,261
ACTUAL	2008	265,071	12,166	200	1,833	279,270	4,080,904	856,375	1,630,203	33,209	6,600,691
ACTUAL	2009	265,137	12,281	192	1,836	279,446	3,904,139	818,798	1,564,440	31,738	6,319,115
FRCST	2010	266,015	12,414	196	1,854	280,479	3,909,795	832,096	1,680,134	33,075	6,455,100
FRCST	2011	279,471	13,817	202	2,222	295,712	4,085,155	876,942	1,728,364	40,028	6,730,489
FRCST	2012	281,258	13,950	201	2,222	297,631	4,114,279	876,919	1,822,016	40,028	6,853,241
FRCST	2013	283,305	14,083	202	2,222	299,812	4,149,087	873,736	1,947,217	40,028	7,010,068
FRCST	2014	285,534	14,216	202	2,222	302,174	4,177,160	869,406	2,043,312	40,028	7,129,905
FRCST	2015	287,915	14,349	202	2,222	304,688	4,210,296	866,521	2,174,080	40,028	7,290,924
FRCST	2016	290,544	14,538	202	2,222	307,506	4,262,931	869,701	2,251,632	40,028	7,424,292
FRCST	2017	293,251	14,727	201	2,222	310,401	4,311,277	874,029	2,270,024	40,028	7,495,358
FRCST	2018	296,054	14,916	201	2,222	313,393	4,361,103	880,017	2,278,123	40,028	7,559,272
FRCST	2019	298,916	15,105	201	2,222	316,444	4,413,829	886,229	2,284,521	40,028	7,624,607
FRCST	2020	301,845	15,294	200	2,222	319,561	4,462,947	893,425	2,290,962	40,028	7,687,362
FRCST	2021	305,026	15,548	199	2,222	322,995	4,514,220	904,834	2,277,950	40,028	7,737,032
FRCST	2022	308,274	15,802	199	2,222	326,497	4,566,836	917,035	2,277,950	40,028	7,801,850
FRCST	2023	311,588	16,056	199	2,222	330,065	4,621,237	929,722	2,277,950	40,028	7,868,937
FRCST	2024	314,977	16,310	199	2,222	333,708	4,678,152	944,143	2,277,950	40,028	7,940,273
FRCST	2025	318,468	16,564	199	2,222	337,453	4,738,597	960,507	2,277,950	40,028	8,017,082
FRCST	2026	322,163	16,885	199	2,222	341,469	4,810,812	988,782	2,277,950	40,028	8,117,572
FRCST	2027	325,914	17,206	199	2,222	345,541	4,891,325	1,018,713	2,277,950	40,028	8,228,015
FRCST	2028	329,731	17,527	199	2,222	349,679	4,977,045	1,052,172	2,277,950	40,028	8,347,195
FRCST	2029	333,607	17,848	199	2,222	353,876	5,066,261	1,087,062	2,277,950	40,028	8,471,301
FRCST	2030	337,521	18,169	199	2,222	358,111	5,157,223	1,120,796	2,277,950	40,028	8,595,997

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

Adjusted for Systems -- AGGREGATED NUMBER OF CONSUMERS

Adjusted for Systems -- AGGREGATED ENERGY SALES

TIME PERIOD	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT.CHG.)	OTHER (ACT.CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
1999 -2004	1.91%	2.24%	39	542	1.96%	2.91%	3.35%	10.24%	2.05%	4.58%
2004 -2009	2.82%	2.81%	41	407	2.83%	3.38%	2.99%	2.19%	-0.84%	3.01%
2010 -2015	1.59%	2.94%	6	368	1.67%	1.49%	0.81%	5.29%	3.89%	2.47%
2015 -2020	0.95%	1.28%	-2	0	0.96%	1.17%	0.61%	1.05%	0.00%	1.06%
2020 -2025	1.08%	1.61%	-1	0	1.10%	1.21%	1.46%	-0.11%	0.00%	0.84%
2025 -2030	1.17%	1.87%	0	0	1.20%	1.71%	3.13%	0.00%	0.00%	1.40%
1999 -2009	2.36%	2.53%	80	949	2.40%	3.15%	3.17%	6.14%	0.60%	3.79%
2010 -2030	1.20%	1.92%	3	368	1.23%	1.39%	1.50%	1.53%	0.96%	1.44%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN #72, IN # 16, IN#92, and IL#002

YEAR	AGGREGATED TOTAL MEMBER ENERGY PURCHASED (MWH)	ENERGY GENERATED FOR MEMBERS (MWH)	AGGREGATED MEMBER 30 MIN. COINCIDENT PEAK W/O LOSSES (MW)		HE COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984) (WITHOUT LOSSES)		HE COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984) (WITH LOSSES)		ANNUAL LOAD FACTOR
			WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999	4,592,866	4,777,226	900	1,004	888	993	929	1,039	52.5%
ACTUAL 2000	4,998,042	5,215,344	958	969	937	953	980	997	59.6%
ACTUAL 2001	5,106,079	5,326,162	1,023	1,032	1,006	1,020	1,052	1,067	57.0%
ACTUAL 2002	5,499,105	5,746,666	1,012	1,077	972	1,066	1,019	1,118	58.7%
ACTUAL 2003	5,527,292	5,764,676	1,102	1,072	1,084	1,059	1,130	1,105	58.2%
ACTUAL 2004	5,736,200	5,981,961	1,103	1,095	1,089	1,077	1,143	1,130	59.6%
ACTUAL 2005	6,332,029	6,576,556	1,172	1,333	1,142	1,319	1,191	1,376	54.6%
ACTUAL 2006	6,525,204	6,801,916	1,295	1,337	1,264	1,318	1,322	1,379	56.3%
ACTUAL 2007	6,924,233	7,229,037	1,384	1,341	1,351	1,338	1,418	1,405	58.2%
ACTUAL 2008	6,912,387	7,179,069	1,395	1,245	1,380	1,226	1,453	1,280	56.2%
ACTUAL 2009	6,617,661	6,882,100	1,472	1,247	1,472	1,243	1,546	1,306	50.8%
FRCST 2010	6,757,799	7,050,116	1,337	1,285	1,322	1,276	1,386	1,338	58.1%
FRCST 2011	7,048,039	7,341,972	1,378	1,338	1,362	1,329	1,430	1,395	58.6%
FRCST 2012	7,175,828	7,475,155	1,390	1,351	1,374	1,342	1,442	1,408	59.0%
FRCST 2013	7,340,042	7,646,321	1,404	1,369	1,388	1,359	1,457	1,427	59.9%
FRCST 2014	7,465,409	7,776,979	1,408	1,368	1,391	1,359	1,460	1,426	60.8%
FRCST 2015	7,634,274	7,952,992	1,426	1,393	1,410	1,383	1,479	1,452	61.4%
FRCST 2016	7,773,943	8,098,591	1,436	1,395	1,420	1,386	1,490	1,454	61.9%
FRCST 2017	7,848,476	8,176,268	1,443	1,401	1,426	1,392	1,497	1,460	62.4%
FRCST 2018	7,915,447	8,246,060	1,448	1,406	1,432	1,396	1,502	1,465	62.7%
FRCST 2019	7,983,924	8,317,421	1,454	1,411	1,437	1,401	1,508	1,471	62.9%
FRCST 2020	8,049,681	8,385,947	1,464	1,421	1,447	1,411	1,519	1,481	62.9%
FRCST 2021	8,101,959	8,440,460	1,470	1,429	1,453	1,419	1,525	1,489	63.2%
FRCST 2022	8,169,980	8,511,389	1,479	1,440	1,462	1,430	1,535	1,501	63.3%
FRCST 2023	8,240,379	8,584,798	1,490	1,452	1,473	1,442	1,545	1,513	63.4%
FRCST 2024	8,315,221	8,662,840	1,501	1,466	1,484	1,456	1,557	1,528	63.3%
FRCST 2025	8,395,826	8,746,892	1,514	1,481	1,497	1,471	1,571	1,544	63.6%
FRCST 2026	8,501,305	8,856,881	1,532	1,503	1,515	1,493	1,590	1,567	63.6%
FRCST 2027	8,617,208	8,977,740	1,555	1,526	1,537	1,516	1,613	1,591	63.5%
FRCST 2028	8,742,266	9,108,144	1,580	1,552	1,562	1,541	1,639	1,617	63.3%
FRCST 2029	8,872,483	9,243,929	1,607	1,578	1,589	1,567	1,667	1,645	63.3%
FRCST 2030	9,003,318	9,380,358	1,635	1,606	1,616	1,595	1,696	1,674	63.1%

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	Adjusted for ENERGY PURCHASED (% CHG.)	Systems ENERGY GENERATED (% CHG.)	Adjusted for Systems AGGREGATED 30 MIN. COIN. PEAK W/O LOSSES (% CHG)		Adjusted for Systems - HE COIN. 60 MINUTE DEMAND Without Losses (% Chg)		Adjusted for Systems - HE COIN. 60 MINUTE DEMAND With Losses (% Chg)		ADJUSTED ANNUAL LOAD FACTOR (AVERAGE)
			WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	4.55%	4.60%	4.15%	1.76%	4.17%	1.65%	4.23%	1.70%	57.58%
2004 -2009	2.90%	2.84%	5.94%	2.62%	6.21%	2.91%	6.23%	2.93%	55.96%
2010 -2015	2.47%	2.44%	1.29%	1.63%	1.29%	1.63%	1.31%	1.65%	59.63%
2015 -2020	1.07%	1.07%	0.53%	0.39%	0.53%	0.39%	0.53%	0.39%	62.34%
2020 -2025	0.85%	0.85%	0.67%	0.84%	0.67%	0.84%	0.67%	0.84%	63.28%
2025 -2030	1.41%	1.41%	1.55%	1.63%	1.55%	1.62%	1.55%	1.63%	63.40%
1999 -2009	3.72%	3.72%	5.05%	2.19%	5.19%	2.28%	5.22%	2.31%	56.51%
2010 -2030	1.44%	1.44%	1.01%	1.12%	1.01%	1.12%	1.01%	1.13%	62.10%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN #72, IN #16, IN#92, and IL#002

EXTREME COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984)

YEAR	(WITHOUT LOSSES)		(WITH LOSSES)		EXTREME ANNUAL LOAD FACTOR
	WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999	*****	*****	*****	*****	*****
ACTUAL 2000	*****	*****	*****	*****	*****
ACTUAL 2001	*****	*****	*****	*****	*****
ACTUAL 2002	*****	*****	*****	*****	*****
ACTUAL 2003	*****	*****	*****	*****	*****
ACTUAL 2004	*****	*****	*****	*****	*****
ACTUAL 2005	*****	*****	*****	*****	*****
ACTUAL 2006	*****	*****	*****	*****	*****
ACTUAL 2007	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****
FRCST 2010	1,456	1,396	1,527	1,464	52.7%
FRCST 2011	1,501	1,456	1,576	1,528	53.2%
FRCST 2012	1,515	1,470	1,590	1,542	53.5%
FRCST 2013	1,531	1,490	1,607	1,564	54.3%
FRCST 2014	1,535	1,489	1,611	1,563	55.1%
FRCST 2015	1,555	1,516	1,632	1,591	55.6%
FRCST 2016	1,564	1,517	1,642	1,592	56.2%
FRCST 2017	1,573	1,525	1,650	1,600	56.6%
FRCST 2018	1,580	1,531	1,658	1,607	56.8%
FRCST 2019	1,587	1,537	1,665	1,613	57.0%
FRCST 2020	1,598	1,548	1,677	1,625	56.9%
FRCST 2021	1,605	1,558	1,685	1,635	57.2%
FRCST 2022	1,616	1,570	1,696	1,648	57.3%
FRCST 2023	1,628	1,584	1,709	1,662	57.3%
FRCST 2024	1,641	1,599	1,722	1,678	57.3%
FRCST 2025	1,656	1,616	1,738	1,696	57.5%
FRCST 2026	1,676	1,639	1,759	1,720	57.5%
FRCST 2027	1,700	1,664	1,784	1,747	57.4%
FRCST 2028	1,727	1,691	1,813	1,775	57.2%
FRCST 2029	1,756	1,720	1,843	1,805	57.2%
FRCST 2030	1,786	1,749	1,874	1,836	57.1%

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

Adjusted for Systems HE EXT. COIN. 60 MINUTE DEMAND

Without Losses (% Chg)

With Losses (% Chg)

ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)

TIME PERIOD	WINTER	SUMMER	WINTER	SUMMER	ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)
1999 -2004	*****	*****	*****	*****	*****
2004 -2009	*****	*****	*****	*****	*****
2010 -2015	1.33%	1.66%	1.34%	1.68%	54.09%
2015 -2020	0.55%	0.42%	0.55%	0.42%	56.51%
2020 -2025	0.71%	0.86%	0.71%	0.86%	57.24%
2025 -2030	1.53%	1.60%	1.53%	1.60%	57.33%
1999 -2009	*****	*****	*****	*****	*****
2010 -2030	1.03%	1.13%	1.03%	1.14%	56.24%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

Values Adjusted for IN#72,IN#16,IN#92,IL#002 and Special Industrial Loads  
Aggregated Member System Data  
NUMBER OF CONSUMERS

Values Adjusted for IN#72,IN#16,IN#92,IL#002 and Special Industrial Loads  
Aggregated Member System Data  
SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	209,962	9,568	112	887	220,529	2,864,229	599,227	726,658	29,908	4,220,022
ACTUAL 2000	215,011	9,890	119	1,018	226,038	2,948,957	656,492	917,277	30,617	4,553,343
ACTUAL 2001	219,228	10,003	131	1,093	230,455	3,052,360	639,446	990,705	31,271	4,713,782
ACTUAL 2002	223,044	10,265	138	1,144	234,591	3,261,617	663,738	1,086,676	32,441	5,044,472
ACTUAL 2003	226,749	10,462	150	1,293	238,654	3,243,405	673,235	1,127,531	32,150	5,076,321
ACTUAL 2004	230,760	10,690	150	1,429	243,029	3,305,807	706,497	1,205,248	33,098	5,250,650
ACTUAL 2005	257,250	11,810	164	1,573	270,797	3,749,514	774,714	1,291,857	33,634	5,849,719
ACTUAL 2006	260,854	11,986	168	1,707	274,715	3,856,899	824,354	1,350,149	32,678	6,064,080
ACTUAL 2007	263,908	12,246	190	1,821	278,165	4,088,777	855,093	1,435,203	34,240	6,413,313
ACTUAL 2008	265,071	12,166	199	1,833	279,269	4,080,904	856,375	1,461,568	33,209	6,432,056
ACTUAL 2009	265,137	12,281	191	1,836	279,445	3,904,139	818,798	1,407,974	31,738	6,162,649
FRCST 2010	266,015	12,414	195	1,854	280,478	3,909,795	832,096	1,507,744	33,075	6,282,710
FRCST 2011	279,471	13,817	201	2,222	295,711	4,085,155	876,942	1,554,914	40,028	6,557,040
FRCST 2012	281,258	13,950	200	2,222	297,630	4,114,279	876,919	1,646,951	40,028	6,678,177
FRCST 2013	283,305	14,083	201	2,222	299,811	4,149,087	873,736	1,770,523	40,028	6,833,374
FRCST 2014	285,534	14,216	201	2,222	302,173	4,177,160	869,406	1,864,972	40,028	6,951,566
FRCST 2015	287,915	14,349	201	2,222	304,887	4,210,296	866,521	1,994,080	40,028	7,110,924
FRCST 2016	290,544	14,538	201	2,222	307,505	4,262,931	869,701	2,070,643	40,028	7,243,303
FRCST 2017	293,251	14,727	200	2,222	310,400	4,311,277	874,029	2,088,040	40,028	7,313,375
FRCST 2018	296,054	14,916	200	2,222	313,392	4,361,103	880,017	2,095,139	40,028	7,376,288
FRCST 2019	298,916	15,105	200	2,222	316,443	4,413,829	886,229	2,100,532	40,028	7,440,618
FRCST 2020	301,845	15,294	199	2,222	319,560	4,462,947	893,425	2,105,962	40,028	7,502,362
FRCST 2021	305,026	15,548	198	2,222	322,994	4,514,220	904,834	2,092,950	40,028	7,552,032
FRCST 2022	308,274	15,802	198	2,222	326,496	4,566,836	917,035	2,092,950	40,028	7,616,850
FRCST 2023	311,588	16,056	198	2,222	330,064	4,621,237	929,722	2,092,950	40,028	7,683,937
FRCST 2024	314,977	16,310	198	2,222	333,707	4,678,152	944,143	2,092,950	40,028	7,755,273
FRCST 2025	318,468	16,564	198	2,222	337,452	4,738,597	960,507	2,092,950	40,028	7,832,082
FRCST 2026	322,163	16,885	198	2,222	341,468	4,810,812	988,782	2,092,950	40,028	7,932,572
FRCST 2027	325,914	17,206	198	2,222	345,540	4,891,325	1,018,713	2,092,950	40,028	8,043,015
FRCST 2028	329,731	17,527	198	2,222	349,678	4,977,045	1,052,172	2,092,950	40,028	8,162,195
FRCST 2029	333,607	17,848	198	2,222	353,875	5,066,261	1,087,062	2,092,950	40,028	8,286,301
FRCST 2030	337,521	18,169	198	2,222	358,110	5,157,223	1,120,796	2,092,950	40,028	8,410,997

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

Adjusted for Systems & Ind. -- AGGREGATED NUMBER OF CONSUMERS

Adjusted for Systems & Ind. -- AGGREGATED ENERGY SALES

TIME PERIOD	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT.CHG.)	OTHER (ACT.CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
1999 -2004	1.91%	2.24%	38	542	1.96%	2.91%	3.35%	10.65%	2.05%	4.47%
2004 -2009	2.82%	2.81%	41	407	2.83%	3.38%	2.99%	3.16%	-0.84%	3.25%
2010 -2015	1.59%	2.94%	6	368	1.67%	1.49%	0.81%	5.75%	3.89%	2.51%
2015 -2020	0.95%	1.28%	-2	0	0.96%	1.17%	0.61%	1.10%	0.00%	1.08%
2020 -2025	1.08%	1.61%	-1	0	1.10%	1.21%	1.46%	-0.12%	0.00%	0.86%
2025 -2030	1.17%	1.87%	0	0	1.20%	1.71%	3.13%	0.00%	0.00%	1.44%
1999 -2009	2.36%	2.53%	79	949	2.40%	3.15%	3.17%	6.84%	0.60%	3.86%
2010 -2030	1.20%	1.92%	3	368	1.23%	1.39%	1.50%	1.65%	0.96%	1.47%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN#72,IN#16,IN#92,IL#002 and Special Industrial Loads

YEAR	AGGREGATED TOTAL MEMBER ENERGY PURCHASED (MWH)	ENERGY GENERATED FOR MEMBERS (MWH)	H.E. 30 MINUTE COINCIDENT DEMAND (MW) (WITHOUT LOSSES)		H.E. COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984)				ANNUAL LOAD FACTOR
			WINTER	SUMMER	(WITHOUT LOSSES)		(WITH LOSSES)		
					WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999	4,457,464	4,641,824	884	984	874	974	913	1,023	51.8%
ACTUAL 2000	4,827,158	5,044,460	934	927	915	912	952	972	59.1%
ACTUAL 2001	4,932,180	5,152,284	987	1,004	976	992	1,022	1,045	56.3%
ACTUAL 2002	5,312,874	5,560,435	968	1,040	929	1,030	965	1,091	58.2%
ACTUAL 2003	5,338,729	5,576,113	1,079	1,040	1,061	1,027	1,106	1,079	57.6%
ACTUAL 2004	5,537,913	5,783,674	1,066	1,055	1,052	1,037	1,106	1,093	59.5%
ACTUAL 2005	6,139,397	6,383,924	1,138	1,305	1,109	1,291	1,150	1,355	53.8%
ACTUAL 2006	6,329,771	6,606,483	1,260	1,322	1,229	1,303	1,283	1,366	55.2%
ACTUAL 2007	6,739,285	7,044,089	1,354	1,337	1,321	1,334	1,387	1,397	57.6%
ACTUAL 2008	6,743,752	7,010,434	1,394	1,235	1,379	1,215	1,442	1,327	55.3%
ACTUAL 2009	6,461,195	6,725,634	1,465	1,232	1,465	1,229	1,525	1,292	50.3%
FRCST 2010	6,585,409	6,877,726	1,312	1,260	1,296	1,251	1,361	1,313	57.7%
FRCST 2011	6,874,590	7,168,523	1,352	1,313	1,337	1,304	1,404	1,370	58.3%
FRCST 2012	7,000,763	7,300,091	1,364	1,325	1,348	1,316	1,416	1,383	58.7%
FRCST 2013	7,163,347	7,469,626	1,378	1,343	1,362	1,334	1,431	1,401	59.6%
FRCST 2014	7,287,070	7,598,639	1,381	1,342	1,365	1,333	1,434	1,400	60.5%
FRCST 2015	7,454,274	7,772,992	1,399	1,367	1,383	1,357	1,453	1,426	61.1%
FRCST 2016	7,592,954	7,917,602	1,410	1,369	1,393	1,360	1,463	1,428	61.6%
FRCST 2017	7,666,493	7,994,285	1,416	1,375	1,399	1,365	1,470	1,434	62.1%
FRCST 2018	7,732,464	8,063,076	1,421	1,379	1,405	1,370	1,475	1,439	62.4%
FRCST 2019	7,799,935	8,133,432	1,427	1,384	1,410	1,375	1,481	1,444	62.7%
FRCST 2020	7,864,681	8,200,947	1,437	1,394	1,420	1,384	1,491	1,454	62.6%
FRCST 2021	7,916,959	8,255,460	1,443	1,402	1,426	1,392	1,498	1,463	62.9%
FRCST 2022	7,984,980	8,326,389	1,452	1,413	1,435	1,403	1,507	1,474	63.1%
FRCST 2023	8,055,379	8,399,798	1,462	1,425	1,445	1,415	1,518	1,487	63.2%
FRCST 2024	8,130,221	8,477,840	1,474	1,439	1,457	1,429	1,530	1,501	63.1%
FRCST 2025	8,210,826	8,561,892	1,487	1,455	1,469	1,444	1,543	1,517	63.3%
FRCST 2026	8,316,305	8,671,881	1,505	1,476	1,487	1,466	1,562	1,540	63.4%
FRCST 2027	8,432,208	8,792,740	1,527	1,499	1,509	1,489	1,585	1,564	63.3%
FRCST 2028	8,557,266	8,923,144	1,553	1,525	1,535	1,514	1,612	1,590	63.0%
FRCST 2029	8,687,483	9,058,929	1,580	1,551	1,561	1,541	1,640	1,618	63.1%
FRCST 2030	8,818,318	9,195,358	1,608	1,579	1,589	1,568	1,669	1,647	62.9%

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	Adjusted for ENERGY PURCHASED (% CHG.)	Systems & Ind ENERGY GENERATED (% CHG.)	Adj. Sys. & Ind. - H.E. 30 MINUTE COINCIDENT DEMAND (MW) (WITHOUT LOSSES)		Adjusted for Sys. & Ind. - HE COIN. 60 MINUTE DEMAND Without Losses (% Chg)		HE COIN. 60 MINUTE DEMAND With Losses (% Chg)		ADJUSTED ANNUAL LOAD FACTOR (AVERAGE)
			WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	4.44%	4.50%	3.80%	1.40%	3.78%	1.26%	3.91%	1.33%	57.07%
2004 -2009	3.13%	3.06%	5.58%	3.15%	6.85%	3.46%	6.54%	3.40%	55.30%
2010 -2015	2.51%	2.48%	1.30%	1.65%	1.30%	1.65%	1.32%	1.66%	59.31%
2015 -2020	1.08%	1.08%	0.53%	0.39%	0.53%	0.39%	0.53%	0.39%	62.07%
2020 -2025	0.87%	0.87%	0.69%	0.86%	0.69%	0.86%	0.69%	0.86%	63.03%
2025 -2030	1.44%	1.44%	1.58%	1.65%	1.58%	1.65%	1.58%	1.65%	63.16%
1999 -2009	3.78%	3.78%	5.18%	2.27%	5.30%	2.35%	5.26%	2.36%	55.88%
2010 -2030	1.47%	1.46%	1.02%	1.14%	1.02%	1.14%	1.03%	1.14%	61.83%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN#72,IN#16,IN#92,IL#002 and Special Industrial Loads

EXTREME COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984)

YEAR	(WITHOUT LOSSES)		(WITH LOSSES)		EXTREME ANNUAL LOAD FACTOR
	WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999	*****	*****	*****	*****	*****
ACTUAL 2000	*****	*****	*****	*****	*****
ACTUAL 2001	*****	*****	*****	*****	*****
ACTUAL 2002	*****	*****	*****	*****	*****
ACTUAL 2003	*****	*****	*****	*****	*****
ACTUAL 2004	*****	*****	*****	*****	*****
ACTUAL 2005	*****	*****	*****	*****	*****
ACTUAL 2006	*****	*****	*****	*****	*****
ACTUAL 2007	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****
FRCST 2010	1,430	1,371	1,501	1,439	52.3%
FRCST 2011	1,476	1,431	1,550	1,503	52.8%
FRCST 2012	1,489	1,444	1,564	1,517	53.1%
FRCST 2013	1,505	1,464	1,581	1,538	53.9%
FRCST 2014	1,508	1,463	1,584	1,537	54.8%
FRCST 2015	1,528	1,490	1,605	1,565	55.3%
FRCST 2016	1,537	1,490	1,615	1,566	55.8%
FRCST 2017	1,546	1,498	1,624	1,574	56.2%
FRCST 2018	1,553	1,504	1,631	1,580	56.4%
FRCST 2019	1,560	1,511	1,638	1,587	56.7%
FRCST 2020	1,571	1,521	1,650	1,598	56.6%
FRCST 2021	1,578	1,531	1,658	1,606	56.9%
FRCST 2022	1,589	1,543	1,669	1,621	56.9%
FRCST 2023	1,601	1,557	1,682	1,635	57.0%
FRCST 2024	1,614	1,572	1,695	1,651	56.9%
FRCST 2025	1,628	1,589	1,710	1,669	57.1%
FRCST 2026	1,648	1,612	1,732	1,694	57.2%
FRCST 2027	1,672	1,637	1,757	1,720	57.1%
FRCST 2028	1,700	1,664	1,785	1,748	56.9%
FRCST 2029	1,729	1,693	1,816	1,778	56.9%
FRCST 2030	1,758	1,722	1,847	1,809	56.8%

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

Adjusted for Sys. & Ind. HE EXT. COIN. 60 MINUTE DEMAND

ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)

TIME PERIOD	Without Losses (% Chg)		With Losses (% Chg)		ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)
	WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	*****	*****	*****	*****	*****
2004 -2009	*****	*****	*****	*****	*****
2010 -2015	1.34%	1.67%	1.35%	1.69%	53.70%
2015 -2020	0.55%	0.42%	0.55%	0.42%	56.17%
2020 -2025	0.72%	0.87%	0.72%	0.87%	56.92%
2025 -2030	1.55%	1.62%	1.55%	1.62%	57.02%
1999 -2009	*****	*****	*****	*****	*****
2010 -2030	1.04%	1.15%	1.04%	1.15%	55.90%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	H.E. Time Factor Ratio from 30 to 60 Minute excludes pass-throughs (Est. before 1984)		PERCENTAGE of IN #72 Served by H.E.	IN #72 served by H.E. (Yes=0, No=1)		PERCENTAGE of IN #16 Served by H.E.	IN #16 served by H.E. (Yes=0, No=1)	
	WINTER	SUMMER		WINTER	SUMMER		WINTER	SUMMER
ACTUAL 1999	98.85%	98.99%	100.0%	0	0	100.0%	0	0
ACTUAL 2000	97.92%	98.42%	100.0%	0	0	100.0%	0	0
ACTUAL 2001	98.92%	98.85%	100.0%	0	0	100.0%	0	0
ACTUAL 2002	96.00%	99.02%	100.0%	0	0	100.0%	0	0
ACTUAL 2003	98.31%	98.80%	100.0%	0	0	100.0%	0	0
ACTUAL 2004	98.73%	98.31%	100.0%	0	0	100.0%	0	0
ACTUAL 2005	97.45%	98.93%	100.0%	0	0	100.0%	0	0
ACTUAL 2006	97.54%	98.57%	100.0%	0	0	100.0%	0	0
ACTUAL 2007	97.56%	99.78%	100.0%	0	0	100.0%	0	0
ACTUAL 2008	98.92%	98.38%	100.0%	0	0	100.0%	0	0
ACTUAL 2009	100.00%	99.76%	100.0%	0	0	100.0%	0	0
FRCST 2010	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2011	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2012	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2013	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2014	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2015	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2016	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2017	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2018	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2019	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2020	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2021	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2022	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2023	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2024	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2025	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2026	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2027	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2028	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2029	98.83%	99.30%	100.0%	0	0	100.0%	0	0
FRCST 2030	98.83%	99.30%	100.0%	0	0	100.0%	0	0

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	HE TIME FACTOR RATIO (30 to 60 MINUTE)	
	WINTER (AVERAGE)	SUMMER (AVERAGE)
1999 -2004	98.12%	98.73%
2004 -2009	98.37%	98.95%
2010 -2015	98.83%	99.30%
2015 -2020	98.83%	99.30%
2020 -2025	98.83%	99.30%
2025 -2030	98.83%	99.30%
1999 -2009	98.20%	98.89%
2010 -2030	98.83%	99.30%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	PERCENTAGE of IN #92 Served by H.E.	IN #92 served by H.E. ( Yes=0 , No= 1 )		PERCENTAGE of IL #2 Served by H.E.	IL #2 served by H.E. ( Yes=0 , No= 1 )	
		WINTER	SUMMER		WINTER	SUMMER
ACTUAL 1999	0.0%	1	1	0.0%	1	1
ACTUAL 2000	0.0%	1	1	0.0%	1	1
ACTUAL 2001	0.0%	1	1	0.0%	1	1
ACTUAL 2002	0.0%	1	1	0.0%	1	1
ACTUAL 2003	0.0%	1	1	0.0%	1	1
ACTUAL 2004	0.0%	1	1	0.0%	1	1
ACTUAL 2005	51.0%	1	0	0.0%	1	1
ACTUAL 2006	100.0%	0	0	0.0%	1	1
ACTUAL 2007	100.0%	0	0	0.0%	1	1
ACTUAL 2008	100.0%	0	0	0.0%	1	1
ACTUAL 2009	100.0%	0	0	0.0%	1	1
FRCST 2010	100.0%	0	0	0.0%	1	1
FRCST 2011	100.0%	0	0	100.0%	0	0
FRCST 2012	100.0%	0	0	100.0%	0	0
FRCST 2013	100.0%	0	0	100.0%	0	0
FRCST 2014	100.0%	0	0	100.0%	0	0
FRCST 2015	100.0%	0	0	100.0%	0	0
FRCST 2016	100.0%	0	0	100.0%	0	0
FRCST 2017	100.0%	0	0	100.0%	0	0
FRCST 2018	100.0%	0	0	100.0%	0	0
FRCST 2019	100.0%	0	0	100.0%	0	0
FRCST 2020	100.0%	0	0	100.0%	0	0
FRCST 2021	100.0%	0	0	100.0%	0	0
FRCST 2022	100.0%	0	0	100.0%	0	0
FRCST 2023	100.0%	0	0	100.0%	0	0
FRCST 2024	100.0%	0	0	100.0%	0	0
FRCST 2025	100.0%	0	0	100.0%	0	0
FRCST 2026	100.0%	0	0	100.0%	0	0
FRCST 2027	100.0%	0	0	100.0%	0	0
FRCST 2028	100.0%	0	0	100.0%	0	0
FRCST 2029	100.0%	0	0	100.0%	0	0
FRCST 2030	100.0%	0	0	100.0%	0	0

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD

1999 -2004  
2004 -2009

2010 -2015  
2015 -2020  
2020 -2025  
2025 -2030

1999 -2009  
2010 -2030

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	DSM EE Program Energy Impact				DSM Demand Impacts-- Both EE & DR Programs) Coincident 60 Minute Demand MW				
	Aggregated Total Member Energy Purchased	Percent of Total Purchases w/o DSM	Total Member Energy Generated	Percent of Total Generated	Savings w/o Losses		Savings with Losses		
	Savings MWH		Savings MWH	w/o DSM	Winter	Summer	Winter	Summer	
ACTUAL	1999								
ACTUAL	2000								
ACTUAL	2001								
ACTUAL	2002								
ACTUAL	2003								
ACTUAL	2004								
ACTUAL	2005								
ACTUAL	2006								
ACTUAL	2007								
ACTUAL	2008								
ACTUAL	2009								
FRCST	2010	47,155	0.7%	49,248	0.7%	22.515	12.187	23.631	12.792
FRCST	2011	81,750	1.2%	85,245	1.2%	37.975	23.890	39.889	25.093
FRCST	2012	111,872	1.6%	116,655	1.6%	53.016	39.908	55.688	41.919
FRCST	2013	134,951	1.8%	140,721	1.8%	69.186	58.148	72.672	61.079
FRCST	2014	168,513	2.3%	175,718	2.3%	87.761	75.440	92.184	79.242
FRCST	2015	199,869	2.6%	208,415	2.6%	105.721	92.709	111.049	97.381
FRCST	2016	215,347	2.8%	224,554	2.8%	116.598	104.956	122.474	110.246
FRCST	2017	236,826	3.0%	246,952	3.0%	129.595	118.699	136.126	124.681
FRCST	2018	256,307	3.2%	267,266	3.2%	141.288	131.145	148.408	137.754
FRCST	2019	273,695	3.4%	285,397	3.4%	152.765	143.050	160.464	150.259
FRCST	2020	294,644	3.6%	307,242	3.6%	160.071	150.607	168.138	158.197
FRCST	2021	315,219	3.8%	328,696	3.8%	169.286	158.804	177.817	166.807
FRCST	2022	334,957	4.0%	349,278	4.0%	177.509	165.505	186.455	173.846
FRCST	2023	353,763	4.2%	368,888	4.2%	185.273	171.092	194.610	179.714
FRCST	2024	369,708	4.3%	385,516	4.3%	192.204	175.352	201.890	184.189
FRCST	2025	381,950	4.4%	398,281	4.4%	198.084	178.333	208.067	187.320
FRCST	2026	383,966	4.4%	400,383	4.4%	202.224	178.852	212.415	187.865
FRCST	2027	379,279	4.3%	395,498	4.3%	202.695	177.884	212.909	186.848
FRCST	2028	368,448	4.1%	384,201	4.1%	200.366	175.228	210.463	184.059
FRCST	2029	354,993	3.9%	370,172	3.9%	196.817	171.870	206.735	180.531
FRCST	2030	342,761	3.7%	357,417	3.7%	193.128	168.144	202.861	176.617

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD

1999 -2004  
2004 -2009

2010 -2015  
2015 -2020  
2020 -2025  
2025 -2030

1999 -2009  
2010 -2030

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

DSM -- EE Program Demand Impacts  
Coincident 60 Minute Demand MW

DSM -- DR Program Demand Impacts  
Coincident 60 Minute Demand MW

YEAR	Savings w/o Losses		Savings with Losses		Savings w/o Losses		Savings with Losses	
	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer
ACTUAL 1999								
ACTUAL 2000								
ACTUAL 2001								
ACTUAL 2002								
ACTUAL 2003								
ACTUAL 2004								
ACTUAL 2005								
ACTUAL 2006								
ACTUAL 2007								
ACTUAL 2008								
ACTUAL 2009								
FRCST 2010	20.094	8.866	21.091	9.305	2.421	3.322	2.541	3.487
FRCST 2011	31.653	15.483	33.249	16.263	6.322	8.407	6.641	8.830
FRCST 2012	42.118	21.830	44.241	22.930	10.898	18.078	11.447	18.989
FRCST 2013	49.965	27.978	52.483	29.388	19.221	30.170	20.189	31.691
FRCST 2014	61.008	35.447	64.082	37.233	26.754	39.994	28.102	42.009
FRCST 2015	71.421	42.520	75.021	44.662	34.300	50.190	36.028	52.719
FRCST 2016	77.833	47.586	81.756	49.984	38.765	57.370	40.718	60.262
FRCST 2017	85.273	53.026	89.570	55.698	44.322	65.673	46.555	68.982
FRCST 2018	92.375	58.073	97.030	60.999	48.912	73.072	51.377	76.754
FRCST 2019	99.170	62.454	104.168	65.601	53.595	80.596	56.296	84.658
FRCST 2020	103.760	65.080	108.989	68.359	56.311	85.527	59.148	89.837
FRCST 2021	110.785	69.340	116.368	72.835	58.501	89.464	61.449	93.973
FRCST 2022	117.571	73.147	123.496	76.833	59.938	92.358	62.958	97.012
FRCST 2023	124.496	76.815	130.770	80.686	60.777	94.277	63.840	99.028
FRCST 2024	131.019	79.987	137.622	84.017	61.185	95.365	64.268	100.171
FRCST 2025	136.611	82.358	143.496	86.508	61.473	95.975	64.571	100.812
FRCST 2026	140.546	82.416	147.629	86.569	61.678	96.436	64.786	101.295
FRCST 2027	140.853	81.059	147.952	85.144	61.841	96.825	64.958	101.704
FRCST 2028	138.460	78.187	145.438	82.127	61.905	97.041	65.025	101.932
FRCST 2029	134.939	74.738	141.739	78.504	61.878	97.132	64.996	102.027
FRCST 2030	131.732	71.649	138.371	75.260	61.396	96.494	64.490	101.357

TIME PERIOD

1999 -2004  
2004 -2009

2010 -2015  
2015 -2020  
2020 -2025  
2025 -2030

1999 -2009  
2010 -2030

**APPENDIX D**

**HEREC "BASE" CASE SCENARIO TABLES  
MEMBER SYSTEM FORECAST DETAILS  
(ALPHABETICAL)**

MENU

1971 : BEGINNING HISTORICAL DATA YEAR ?  
2009 : FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 34 YEARS)  
20 : NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	9,324	559	17	52	9,952	129,943	24,874	120,688	832	276,317
ACTUAL 2000	9,503	528	15	51	10,097	131,599	25,096	129,507	868	287,070
ACTUAL 2001	9,577	572	15	53	10,217	134,752	25,932	126,585	981	288,260
ACTUAL 2002	9,653	573	15	55	10,296	142,339	28,242	133,087	1,056	304,724
ACTUAL 2003	9,768	577	16	55	10,416	141,885	29,091	139,295	879	311,150
ACTUAL 2004	9,852	580	17	54	10,503	140,623	30,897	159,488	864	331,872
ACTUAL 2005	9,970	582	17	52	10,621	150,167	32,128	180,771	876	363,942
ACTUAL 2006	10,060	560	17	54	10,691	148,179	33,143	187,422	853	369,597
ACTUAL 2007	10,147	583	17	57	10,804	157,663	35,281	193,497	907	387,348
ACTUAL 2008	10,213	588	16	58	10,875	157,954	32,572	179,653	921	371,100
ACTUAL 2009	10,238	581	16	56	10,891	153,594	28,496	143,346	827	326,263
FRCST 2010	10,272	583	16	55	10,926	155,658	28,664	184,012	873	369,207
FRCST 2011	10,320	585	16	55	10,976	157,436	28,831	198,849	873	385,989
FRCST 2012	10,383	587	16	55	11,041	158,990	29,000	215,618	873	404,481
FRCST 2013	10,460	589	16	55	11,120	160,220	29,188	216,554	873	406,815
FRCST 2014	10,552	591	16	55	11,214	161,585	29,337	217,495	873	409,290
FRCST 2015	10,644	593	16	55	11,308	163,084	29,508	218,441	873	411,904
FRCST 2016	10,755	598	16	55	11,424	165,052	29,870	219,352	873	415,147
FRCST 2017	10,866	603	16	55	11,540	167,142	30,236	220,268	873	418,519
FRCST 2018	10,979	608	16	55	11,658	169,309	30,603	221,188	873	421,973
FRCST 2019	11,092	613	16	55	11,776	171,529	30,970	222,113	873	425,485
FRCST 2020	11,206	618	15	55	11,894	173,790	31,339	223,042	873	429,044
FRCST 2021	11,332	626	15	55	12,028	176,233	31,844	223,042	873	431,992
FRCST 2022	11,459	634	15	55	12,163	178,707	32,349	223,042	873	434,971
FRCST 2023	11,587	642	15	55	12,299	181,213	32,855	223,042	873	437,983
FRCST 2024	11,716	650	15	55	12,436	183,750	33,362	223,042	873	441,027
FRCST 2025	11,847	658	15	55	12,575	186,319	33,871	223,042	873	444,105
FRCST 2026	11,976	670	15	55	12,716	189,100	34,567	223,042	873	447,582
FRCST 2027	12,107	682	15	55	12,859	192,030	35,264	223,042	873	451,209
FRCST 2028	12,239	694	15	55	13,003	195,059	35,962	223,042	873	454,936
FRCST 2029	12,372	706	15	55	13,148	198,163	36,660	223,042	873	458,738
FRCST 2030	12,506	718	15	55	13,294	201,327	37,359	223,042	873	462,601

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	1.11%	0.74%	0	2	1.08%	1.59%	4.43%	5.74%	0.76%	3.73%
2004 -2009	0.77%	0.03%	-1	2	0.73%	1.78%	-1.60%	-2.11%	-0.87%	-0.34%
2010 -2015	0.71%	0.34%	0	0	0.69%	0.94%	0.58%	3.49%	0.00%	2.21%
2015 -2020	1.03%	0.83%	-1	0	1.02%	1.28%	1.21%	0.42%	0.00%	0.82%
2020 -2025	1.12%	1.26%	0	0	1.12%	1.40%	1.57%	0.00%	0.00%	0.69%
2025 -2030	1.09%	1.76%	0	0	1.12%	1.56%	1.98%	0.00%	0.00%	0.82%
1999 -2009	0.94%	0.39%	-1	4	0.91%	1.69%	1.37%	1.74%	-0.06%	1.68%
2010 -2030	0.99%	1.05%	-1	0	0.98%	1.29%	1.33%	0.97%	0.00%	1.13%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
 2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 34)  
 20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** BASE SCENARIO RESULTS *****					***** BASE SCENARIO RESULTS *****					
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)
ACTUAL 1999	2.83%	8,048	284,365	47.6%	55,018	68,142	86.2%	91.0%	47,427	62,026
ACTUAL 2000	4.22%	12,648	299,718	53.8%	57,917	63,846	91.4%	92.4%	52,945	58,998
ACTUAL 2001	2.88%	8,548	296,808	50.3%	62,051	67,428	86.9%	92.3%	53,893	62,216
ACTUAL 2002	3.33%	10,497	315,221	51.5%	57,240	69,844	90.6%	87.7%	51,885	61,282
ACTUAL 2003	2.74%	8,786	319,916	51.7%	64,245	70,699	92.4%	87.0%	59,385	61,481
ACTUAL 2004	3.61%	12,429	344,301	55.4%	65,871	70,931	83.9%	91.3%	55,286	64,748
ACTUAL 2005	3.05%	11,449	375,391	53.0%	69,508	80,930	90.1%	91.4%	62,652	73,969
ACTUAL 2006	2.26%	8,546	378,143	52.4%	71,183	82,346	94.1%	90.7%	66,966	74,689
ACTUAL 2007	3.06%	12,227	399,575	53.2%	77,045	85,743	90.9%	86.8%	70,001	74,410
ACTUAL 2008	3.01%	11,517	382,617	54.0%	77,281	80,848	90.3%	86.0%	69,788	69,531
ACTUAL 2009	2.52%	8,434	334,697	48.5%	78,740	75,849	80.7%	87.3%	63,565	66,180
FRCST 2010	3.00%	11,419	380,626	54.0%	73,149	80,464	89.0%	89.0%	65,102	71,613
FRCST 2011	3.00%	11,938	397,927	54.0%	76,474	84,121	89.0%	89.0%	68,062	74,868
FRCST 2012	3.00%	12,510	416,991	54.0%	80,137	88,151	89.0%	89.0%	71,322	78,455
FRCST 2013	3.00%	12,582	419,397	54.0%	80,600	88,660	89.0%	89.0%	71,734	78,907
FRCST 2014	3.00%	12,659	421,948	54.0%	81,090	89,199	89.0%	89.0%	72,170	79,387
FRCST 2015	3.00%	12,739	424,643	54.0%	81,608	89,769	89.0%	89.0%	72,631	79,894
FRCST 2016	3.00%	12,840	427,987	54.0%	80,782	90,476	89.0%	89.0%	71,896	80,523
FRCST 2017	3.00%	12,944	431,463	54.0%	81,438	91,211	89.0%	89.0%	72,480	81,177
FRCST 2018	3.00%	13,051	435,024	54.0%	82,110	91,963	89.0%	89.0%	73,078	81,847
FRCST 2019	3.00%	13,159	438,644	54.0%	82,794	92,729	89.0%	89.0%	73,686	82,529
FRCST 2020	3.00%	13,269	442,313	54.0%	83,486	93,504	89.0%	89.0%	74,303	83,219
FRCST 2021	3.00%	13,361	445,353	54.0%	82,585	94,147	89.0%	89.0%	73,501	83,791
FRCST 2022	3.00%	13,453	448,424	54.0%	83,155	94,796	89.0%	89.0%	74,008	84,369
FRCST 2023	3.00%	13,546	451,529	54.0%	83,730	95,453	89.0%	89.0%	74,520	84,953
FRCST 2024	3.00%	13,640	454,667	54.0%	84,312	96,118	89.0%	89.0%	75,038	85,543
FRCST 2025	3.00%	13,735	457,840	54.0%	84,901	96,787	89.0%	89.0%	75,562	86,140
FRCST 2026	3.00%	13,843	461,425	54.0%	85,565	97,545	89.0%	89.0%	76,153	86,815
FRCST 2027	3.00%	13,955	465,164	54.0%	86,259	98,335	89.0%	89.0%	76,770	87,518
FRCST 2028	3.00%	14,070	469,006	54.0%	86,971	99,147	89.0%	89.0%	77,404	88,241
FRCST 2029	3.00%	14,188	472,926	54.0%	87,698	99,976	89.0%	89.0%	78,051	88,978
FRCST 2030	3.00%	14,307	476,908	54.0%	88,437	100,818	89.0%	89.0%	78,709	89,728

***** BASE SCENARIO RESULTS *****					***** BASE SCENARIO RESULTS *****					
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHANGE)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999 -2004	3.27%	9.08%	3.90%	51.7%	3.67%	0.61%	88.6%	90.3%	3.11%	0.86%
2004 -2009	2.92%	-7.46%	-0.56%	52.8%	3.63%	1.35%	88.3%	88.9%	2.83%	0.44%
2010 -2015	3.00%	2.21%	2.21%	54.0%	2.21%	2.21%	89.0%	89.0%	2.21%	2.21%
2015 -2020	3.00%	0.82%	0.82%	54.0%	0.46%	0.82%	89.0%	89.0%	0.46%	0.82%
2020 -2025	3.00%	0.69%	0.69%	54.0%	0.34%	0.69%	89.0%	89.0%	0.34%	0.69%
2025 -2030	3.00%	0.82%	0.82%	54.0%	0.82%	0.82%	89.0%	89.0%	0.82%	0.82%
1999 -2009	3.05%	0.47%	1.64%	51.9%	3.65%	1.08%	88.9%	89.4%	2.97%	0.65%
2010 -2030	3.00%	1.13%	1.13%	54.0%	0.95%	1.13%	89.0%	89.0%	0.95%	1.13%

1971 : BEGINNING HISTORICAL DATA YEAR ?  
 2009 : FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 34)  
 20 : NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** BASE SCENARIO RESULTS *****							***** BASE SCENARIO RESULTS *****	
PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES							H.E.	
YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)		ITERATION ACT. AVG WPC (MILLS/KWH)		
		WINTER	SUMMER	WINTER	SUMMER			
ACTUAL	1999							
ACTUAL	2000							
ACTUAL	2001							
ACTUAL	2002							
ACTUAL	2003							
ACTUAL	2004							
ACTUAL	2005							
ACTUAL	2006							
ACTUAL	2007							
ACTUAL	2008							
ACTUAL	2009							
FRCST	2010	50.0%	79.001	86.901	70.311	77.342	68.830	
FRCST	2011	50.0%	82.592	90.851	73.507	80.857	70.910	
FRCST	2012	50.0%	86.548	95.203	77.028	84.731	75.360	
FRCST	2013	50.0%	87.048	95.752	77.472	85.220	79.430	
FRCST	2014	50.0%	87.577	96.335	77.944	85.738	82.230	
FRCST	2015	50.0%	88.137	96.950	78.442	86.286	83.810	
FRCST	2016	50.0%	87.244	97.714	77.648	86.965	85.486	
FRCST	2017	50.0%	87.953	98.507	78.278	87.672	87.196	
FRCST	2018	50.0%	88.679	99.320	78.924	88.395	88.940	
FRCST	2019	50.0%	89.417	100.147	79.581	89.131	90.719	
FRCST	2020	50.0%	90.165	100.985	80.247	89.876	92.533	
FRCST	2021	50.0%	89.192	101.679	79.381	90.494	94.384	
FRCST	2022	50.0%	89.807	102.380	79.928	91.118	96.271	
FRCST	2023	50.0%	90.429	103.089	80.482	91.749	98.197	
FRCST	2024	50.0%	91.057	103.805	81.041	92.387	100.161	
FRCST	2025	50.0%	91.693	104.530	81.607	93.031	102.164	
FRCST	2026	50.0%	92.411	105.348	82.245	93.760	102.164	
FRCST	2027	50.0%	93.159	106.202	82.912	94.520	102.164	
FRCST	2028	50.0%	93.929	107.079	83.597	95.300	102.164	
FRCST	2029	50.0%	94.714	107.974	84.295	96.097	102.164	
FRCST	2030	50.0%	95.511	108.883	85.005	96.906	102.164	

***** BASE SCENARIO RESULTS *****							***** BASE SCENARIO RESULTS *****	
TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)				
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)			
1999 -2004	47.6%	65.871	70.931	59.385	64.748			
2004 -2009	48.5%	78.740	85.743	70.001	74.689			
2010 -2015	50.0%	88.137	96.950	78.442	86.286			
2015 -2020	50.0%	90.165	100.985	80.247	89.876			
2020 -2025	50.0%	91.693	104.530	81.607	93.031			
2025 -2030	50.0%	95.511	108.883	85.005	96.906			
1999 -2009	47.6%	78.740	85.743	70.001	74.689			
2010 -2030	50.0%	95.511	108.883	85.005	96.906			

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\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	15,132	841	0	4	15,977	220,079	67,891	0	80	288,050
ACTUAL 2000	15,782	903	0	3	16,688	231,878	78,985	0	55	308,918
ACTUAL 2001	16,386	930	0	2	17,318	250,776	79,072	0	55	329,903
ACTUAL 2002	17,025	969	0	2	17,996	265,204	80,603	0	55	345,862
ACTUAL 2003	17,635	979	0	2	18,616	269,896	81,875	0	55	351,826
ACTUAL 2004	18,422	1,018	0	2	19,442	287,500	89,677	0	21	377,198
ACTUAL 2005	19,069	1,026	0	2	20,097	318,665	96,683	0	11	415,359
ACTUAL 2006	19,714	1,057	0	2	20,773	311,497	106,173	0	11	417,681
ACTUAL 2007	20,257	1,094	0	2	21,353	336,990	113,600	0	11	450,601
ACTUAL 2008	20,564	1,115	0	2	21,881	334,771	116,997	0	11	451,779
ACTUAL 2009	20,755	1,119	0	2	21,876	329,485	106,668	0	11	436,164
FRCST 2010	20,928	1,143	0	1	22,072	337,289	114,824	0	11	452,124
FRCST 2011	21,112	1,163	0	1	22,276	341,093	117,122	0	11	458,226
FRCST 2012	21,308	1,183	0	1	22,492	344,342	119,461	0	11	463,814
FRCST 2013	21,515	1,203	0	1	22,719	347,578	121,842	0	11	469,431
FRCST 2014	21,734	1,223	0	1	22,958	350,974	124,266	0	11	475,251
FRCST 2015	21,964	1,243	0	1	23,208	354,010	126,737	0	11	480,758
FRCST 2016	22,221	1,266	0	1	23,488	358,187	129,216	0	11	487,414
FRCST 2017	22,505	1,289	0	1	23,795	363,201	131,721	0	11	494,933
FRCST 2018	22,818	1,312	0	1	24,131	368,895	134,254	0	11	503,160
FRCST 2019	23,161	1,335	0	1	24,497	375,198	136,816	0	11	512,025
FRCST 2020	23,536	1,358	0	1	24,895	382,089	139,407	0	11	521,507
FRCST 2021	23,951	1,383	0	1	25,335	389,729	141,246	0	11	530,986
FRCST 2022	24,399	1,408	0	1	25,808	397,993	143,088	0	11	541,092
FRCST 2023	24,882	1,433	0	1	26,316	406,895	144,935	0	11	551,841
FRCST 2024	25,403	1,458	0	1	26,862	416,460	146,784	0	11	563,255
FRCST 2025	25,963	1,483	0	1	27,447	426,720	148,638	0	11	575,369
FRCST 2026	26,554	1,508	0	1	28,063	437,883	150,495	0	11	588,389
FRCST 2027	27,188	1,533	0	1	28,702	449,682	152,356	0	11	602,049
FRCST 2028	27,806	1,558	0	1	29,365	462,064	154,221	0	11	616,296
FRCST 2029	28,470	1,583	0	1	30,054	475,011	156,089	0	11	631,111
FRCST 2030	29,161	1,608	0	1	30,770	488,528	157,962	0	11	646,501

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	4.01%	3.89%	0	-2	4.00%	5.49%	5.72%	NA	-23.47%	5.54%
2004 -2009	2.41%	1.91%	0	0	2.39%	2.76%	3.53%	NA	-12.13%	2.95%
2010 -2015	0.97%	1.69%	0	0	1.01%	0.97%	1.99%	NA	0.00%	1.24%
2015 -2020	1.39%	1.79%	0	0	1.41%	1.54%	1.92%	NA	0.00%	1.64%
2020 -2025	1.98%	1.78%	0	0	1.97%	2.23%	1.29%	NA	0.00%	1.99%
2025 -2030	2.35%	1.63%	0	0	2.31%	2.74%	1.22%	NA	0.00%	2.36%
1999 -2009	3.21%	2.90%	0	-2	3.19%	4.12%	4.62%	NA	-18.00%	4.24%
2010 -2030	1.67%	1.72%	0	0	1.68%	1.87%	1.61%	NA	0.00%	1.80%

1971 BEGINNING HISTORICAL DATA YEAR ?  
2009 FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 34)  
20 NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** BASE SCENARIO RESULTS *****											
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK		
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)	
ACTUAL	1999	8.06%	25,252	313,302	46.5%	68,288	78,967	96.3%	97.4%	65,785	74,865
ACTUAL	2000	7.79%	26,098	335,016	48.8%	70,036	78,319	97.4%	96.4%	68,206	75,460
ACTUAL	2001	5.07%	17,619	347,522	46.9%	76,260	84,590	95.5%	92.5%	72,853	78,239
ACTUAL	2002	6.35%	23,451	369,313	48.6%	74,604	86,719	97.3%	93.4%	72,555	80,958
ACTUAL	2003	6.31%	23,695	375,521	49.0%	84,779	87,564	97.0%	94.1%	82,208	82,410
ACTUAL	2004	5.76%	23,055	400,253	50.6%	87,393	90,350	97.3%	96.9%	85,067	87,569
ACTUAL	2005	3.86%	16,677	432,036	47.8%	91,840	103,212	95.4%	95.0%	87,654	98,024
ACTUAL	2006	4.36%	19,041	436,722	46.0%	92,893	108,317	97.8%	94.4%	90,892	102,216
ACTUAL	2007	6.00%	28,762	479,363	48.8%	101,841	112,035	93.9%	92.8%	95,590	103,961
ACTUAL	2008	6.26%	30,170	481,949	50.5%	109,029	103,834	95.0%	94.0%	103,597	97,616
ACTUAL	2009	4.42%	20,170	456,334	45.8%	113,833	103,066	96.1%	94.8%	109,400	97,711
FRCST	2010	5.00%	23,796	475,920	49.0%	108,701	110,675	96.0%	97.0%	104,353	107,549
FRCST	2011	5.00%	24,117	482,343	49.0%	110,168	112,372	96.0%	97.0%	105,762	109,001
FRCST	2012	5.00%	24,411	488,225	49.0%	111,512	113,742	96.0%	97.0%	107,051	110,330
FRCST	2013	5.00%	24,707	494,138	49.0%	112,862	115,119	96.0%	97.0%	108,347	111,666
FRCST	2014	5.00%	25,013	500,264	49.0%	114,261	116,547	96.0%	97.0%	109,691	113,050
FRCST	2015	5.00%	25,303	506,061	49.0%	115,585	117,897	96.0%	97.0%	110,962	114,360
FRCST	2016	5.00%	25,653	513,067	49.0%	116,048	119,529	97.0%	95.0%	112,566	113,553
FRCST	2017	5.00%	26,048	520,982	49.0%	117,838	121,373	97.0%	95.0%	114,303	115,305
FRCST	2018	5.00%	26,482	529,642	49.0%	119,797	123,391	97.0%	95.0%	116,203	117,221
FRCST	2019	5.00%	26,949	538,974	49.0%	121,908	125,565	97.0%	95.0%	118,250	119,287
FRCST	2020	5.00%	27,446	548,955	49.0%	124,165	127,890	97.0%	95.0%	120,440	121,495
FRCST	2021	5.00%	27,947	558,933	49.0%	126,422	130,214	97.0%	95.0%	122,629	123,704
FRCST	2022	5.00%	28,479	569,571	49.0%	128,828	132,693	97.0%	95.0%	124,963	126,058
FRCST	2023	5.00%	29,044	580,885	49.0%	131,387	135,329	97.0%	95.0%	127,445	128,562
FRCST	2024	5.00%	29,645	592,900	49.0%	134,105	138,128	97.0%	95.0%	130,082	131,222
FRCST	2025	5.00%	30,283	605,652	49.0%	136,989	141,099	97.0%	95.0%	132,879	134,044
FRCST	2026	5.00%	30,968	619,357	49.0%	140,089	144,292	97.0%	95.0%	135,886	137,077
FRCST	2027	5.00%	31,687	633,736	49.0%	143,341	147,642	97.0%	95.0%	139,041	140,260
FRCST	2028	5.00%	32,437	648,733	49.0%	146,733	151,135	97.0%	95.0%	142,331	143,578
FRCST	2029	5.00%	33,216	664,327	49.0%	150,261	154,768	97.0%	95.0%	145,753	147,030
FRCST	2030	5.00%	34,026	680,527	49.0%	153,925	158,542	97.0%	95.0%	149,307	150,615

***** BASE SCENARIO RESULTS *****											
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHANGE)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK		
					WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)	
1999 -2004	6.56%	-1.80%	5.02%	48.4%	5.06%	3.29%	96.8%	95.1%	5.28%	3.18%	
2004 -2009	5.11%	-2.64%	2.66%	48.3%	5.43%	2.67%	95.9%	94.7%	5.16%	2.22%	
2010 -2015	5.00%	1.24%	1.24%	49.0%	1.24%	1.24%	96.0%	97.0%	1.24%	1.24%	
2015 -2020	5.00%	1.64%	1.64%	49.0%	1.44%	1.64%	96.8%	95.3%	1.65%	1.22%	
2020 -2025	5.00%	1.99%	1.99%	49.0%	1.99%	1.99%	97.0%	95.0%	1.99%	1.99%	
2025 -2030	5.00%	2.36%	2.36%	49.0%	2.36%	2.36%	97.0%	95.0%	2.36%	2.36%	
1999 -2009	5.84%	-2.22%	3.83%	48.1%	5.24%	2.98%	96.3%	94.7%	5.22%	2.70%	
2010 -2030	5.00%	1.80%	1.80%	49.0%	1.75%	1.80%	96.7%	95.6%	1.81%	1.70%	

1971 : BEGINNING HISTORICAL DATA YEAR ?  
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\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES							H.E. ITERATION ACT. AVG. WPC (MILLS/KWH)
YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)			
		WINTER	SUMMER	WINTER	SUMMER		
ACTUAL	1999						
ACTUAL	2000						
ACTUAL	2001						
ACTUAL	2002						
ACTUAL	2003						
ACTUAL	2004						
ACTUAL	2005						
ACTUAL	2006						
ACTUAL	2007						
ACTUAL	2008						
ACTUAL	2009						
FRCST	2010	47.0%	113.327	115.593	108.794	112.125	68.830
FRCST	2011	47.0%	114.856	117.153	110.262	113.639	70.910
FRCST	2012	47.0%	116.257	118.562	111.606	115.024	75.360
FRCST	2013	47.0%	117.685	120.018	112.958	116.417	79.430
FRCST	2014	47.0%	119.124	121.506	114.359	117.861	82.230
FRCST	2015	47.0%	120.504	122.914	115.684	119.227	83.810
FRCST	2016	48.0%	118.465	122.019	114.911	115.918	85.486
FRCST	2017	48.0%	120.293	123.902	116.684	117.707	87.196
FRCST	2018	48.0%	122.293	125.961	118.624	119.663	88.940
FRCST	2019	48.0%	124.447	128.181	120.714	121.772	90.719
FRCST	2020	48.0%	126.752	130.554	122.949	124.027	92.533
FRCST	2021	48.0%	129.056	132.927	125.184	126.281	94.384
FRCST	2022	48.0%	131.512	135.457	127.567	128.684	96.271
FRCST	2023	48.0%	134.124	138.148	130.101	131.241	98.197
FRCST	2024	48.0%	136.899	141.006	132.792	133.955	100.161
FRCST	2025	48.0%	139.843	144.038	135.648	136.836	102.164
FRCST	2026	48.0%	143.007	147.298	138.717	139.933	102.164
FRCST	2027	48.0%	146.328	150.717	141.938	143.182	102.164
FRCST	2028	48.0%	149.790	154.284	145.296	146.570	102.164
FRCST	2029	48.0%	153.391	157.993	148.789	150.093	102.164
FRCST	2030	48.0%	157.131	161.845	152.417	153.753	102.164

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)	
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)
1999 -2004	46.5%	87.393	90.350	85.067	87.569
2004 -2009	45.8%	113.833	112.035	109.400	103.961
2010 -2015	47.0%	120.504	122.914	115.684	119.227
2015 -2020	47.0%	126.752	130.554	122.949	124.027
2020 -2025	48.0%	139.843	144.038	135.648	136.836
2025 -2030	48.0%	157.131	161.845	152.417	153.753
1999 -2009	45.8%	113.833	112.035	109.400	103.961
2010 -2030	47.0%	157.131	161.845	152.417	153.753

MENU

1971 : BEGINNING HISTORICAL DATA YEAR ?  
 2009 : FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 34 YEARS)  
 20 : NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS				TOTAL	SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER		RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	7,285	516	1	3	7,805	93,771	34,152	24,246	50	152,219
ACTUAL 2000	7,394	538	2	3	7,937	97,436	35,936	146,633	50	280,055
ACTUAL 2001	7,371	554	2	3	7,930	98,459	36,324	173,371	50	308,204
ACTUAL 2002	7,235	542	2	3	7,782	106,894	39,523	182,594	50	329,061
ACTUAL 2003	7,208	542	2	3	7,755	104,179	38,389	179,259	50	321,877
ACTUAL 2004	7,229	553	2	3	7,787	105,479	40,108	192,410	50	338,047
ACTUAL 2005	7,265	575	2	3	7,845	111,418	39,904	199,368	50	350,740
ACTUAL 2006	7,297	588	2	3	7,890	109,388	41,314	202,516	50	353,268
ACTUAL 2007	7,337	603	2	3	7,945	116,423	42,964	222,748	50	382,185
ACTUAL 2008	7,344	596	2	3	7,945	114,624	42,929	236,266	50	393,869
ACTUAL 2009	7,343	589	2	3	7,937	111,254	40,955	231,537	50	383,796
FRCST 2010	7,354	591	2	3	7,950	112,612	41,092	239,265	50	392,019
FRCST 2011	7,376	593	2	3	7,974	114,127	41,229	238,265	50	393,671
FRCST 2012	7,399	595	2	3	7,999	115,400	41,367	238,265	50	395,082
FRCST 2013	7,421	597	2	3	8,023	116,467	41,504	238,265	50	396,286
FRCST 2014	7,444	599	2	3	8,048	117,499	41,642	238,265	50	397,456
FRCST 2015	7,467	601	2	3	8,073	118,587	41,779	238,265	50	398,681
FRCST 2016	7,506	605	2	3	8,116	120,916	42,138	238,265	50	401,369
FRCST 2017	7,545	609	2	3	8,159	122,734	42,499	238,265	50	403,548
FRCST 2018	7,585	613	2	3	8,203	124,273	42,861	238,265	50	405,449
FRCST 2019	7,625	617	2	3	8,247	125,662	43,224	238,265	50	407,201
FRCST 2020	7,664	621	2	3	8,290	126,974	43,589	238,265	50	408,878
FRCST 2021	7,721	629	2	3	8,355	128,498	44,235	238,265	50	411,048
FRCST 2022	7,778	637	2	3	8,420	129,996	44,884	238,265	50	413,195
FRCST 2023	7,836	645	2	3	8,486	131,487	45,537	238,265	50	415,339
FRCST 2024	7,894	653	2	3	8,552	132,983	46,195	238,265	50	417,493
FRCST 2025	7,952	661	2	3	8,618	134,487	46,856	238,265	50	419,658
FRCST 2026	8,011	674	2	3	8,690	136,105	47,808	238,265	50	422,228
FRCST 2027	8,071	687	2	3	8,763	137,790	48,766	238,265	50	424,871
FRCST 2028	8,131	700	2	3	8,836	139,522	49,732	238,265	50	427,569
FRCST 2029	8,192	713	2	3	8,910	141,291	50,704	238,265	50	430,310
FRCST 2030	8,253	726	2	3	8,984	143,091	51,683	238,265	50	433,089

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS				TOTAL	SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)		RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	-0.15%	1.39%	1	0	-0.05%	2.38%	3.27%	51.33%	0.00%	17.30%
2004 -2009	0.31%	1.27%	0	0	0.38%	1.07%	0.42%	3.77%	0.00%	2.57%
2010 -2015	0.31%	0.34%	0	0	0.31%	1.04%	0.33%	0.00%	0.00%	0.34%
2015 -2020	0.52%	0.66%	0	0	0.53%	1.38%	0.85%	0.00%	0.00%	0.51%
2020 -2025	0.74%	1.26%	0	0	0.78%	1.16%	1.46%	0.00%	0.00%	0.52%
2025 -2030	0.75%	1.89%	0	0	0.84%	1.25%	1.98%	0.00%	0.00%	0.63%
1999 -2009	0.08%	1.33%	1	0	0.17%	1.72%	1.83%	25.31%	0.00%	9.69%
2010 -2030	0.58%	1.03%	0	0	0.61%	1.20%	1.15%	0.00%	0.00%	0.50%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
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***** BASE SCENARIO RESULTS *****					***** BASE SCENARIO RESULTS *****						
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK		
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)	
ACTUAL	1999	7.21%	11,828	164,047	44.8%	29,287	41,826	92.0%	87.2%	26,956	36,459
ACTUAL	2000	3.95%	11,517	291,572	64.5%	47,198	51,636	93.8%	92.7%	44,167	47,864
ACTUAL	2001	3.68%	11,775	319,979	62.5%	52,055	58,451	89.2%	90.9%	46,432	53,146
ACTUAL	2002	3.00%	10,177	339,238	65.1%	53,214	59,491	93.4%	92.9%	49,725	55,242
ACTUAL	2003	3.35%	11,157	333,034	67.9%	64,778	56,007	89.9%	96.5%	49,228	54,032
ACTUAL	2004	3.41%	11,934	349,981	68.4%	58,730	58,411	85.9%	95.3%	48,727	55,654
ACTUAL	2005	3.45%	12,533	363,273	67.5%	57,395	61,411	94.0%	95.9%	53,958	58,921
ACTUAL	2006	3.38%	12,358	365,626	66.2%	57,857	63,067	90.8%	97.0%	52,514	61,167
ACTUAL	2007	3.27%	12,920	395,105	65.4%	60,830	68,991	88.3%	88.0%	53,720	60,729
ACTUAL	2008	2.96%	12,014	405,883	71.5%	64,828	64,822	83.6%	93.9%	54,221	60,841
ACTUAL	2009	3.09%	12,237	396,033	67.8%	66,662	65,167	90.4%	94.5%	60,267	61,584
FRCST	2010	3.20%	12,959	404,978	68.0%	66,006	67,986	91.0%	94.0%	60,085	63,907
FRCST	2011	3.20%	13,014	406,685	68.0%	66,284	68,273	91.0%	94.0%	60,318	64,176
FRCST	2012	3.20%	13,061	408,143	68.0%	66,522	68,517	91.0%	94.0%	60,535	64,408
FRCST	2013	3.20%	13,100	409,386	68.0%	66,724	68,726	91.0%	94.0%	60,719	64,602
FRCST	2014	3.20%	13,139	410,595	68.0%	66,921	68,929	91.0%	94.0%	60,898	64,793
FRCST	2015	3.20%	13,180	411,861	68.0%	67,127	69,141	91.0%	94.0%	61,086	64,993
FRCST	2016	3.20%	13,268	414,637	68.0%	67,580	69,607	91.0%	94.0%	61,498	65,431
FRCST	2017	3.20%	13,340	416,888	68.0%	67,947	69,985	91.0%	94.0%	61,832	65,786
FRCST	2018	3.20%	13,403	418,852	68.0%	68,267	70,315	91.0%	94.0%	62,123	66,096
FRCST	2019	3.20%	13,461	420,662	68.0%	68,562	70,619	91.0%	94.0%	62,392	66,382
FRCST	2020	3.20%	13,517	422,395	68.0%	68,844	70,910	91.0%	94.0%	62,648	66,655
FRCST	2021	3.20%	13,588	424,636	68.0%	69,210	71,288	91.0%	94.0%	62,981	67,009
FRCST	2022	3.20%	13,659	426,854	68.0%	69,571	71,658	91.0%	94.0%	63,310	67,359
FRCST	2023	3.20%	13,730	429,089	68.0%	69,932	72,030	91.0%	94.0%	63,638	67,709
FRCST	2024	3.20%	13,801	431,294	68.0%	70,295	72,404	91.0%	94.0%	63,968	68,059
FRCST	2025	3.20%	13,873	433,531	68.0%	70,660	72,779	91.0%	94.0%	64,300	68,413
FRCST	2026	3.20%	13,958	436,186	68.0%	71,092	73,225	91.0%	94.0%	64,694	68,831
FRCST	2027	3.20%	14,045	438,916	68.0%	71,537	73,683	91.0%	94.0%	65,099	69,262
FRCST	2028	3.20%	14,135	441,704	68.0%	71,992	74,151	91.0%	94.0%	65,512	69,702
FRCST	2029	3.20%	14,225	444,535	68.0%	72,453	74,627	91.0%	94.0%	65,932	70,149
FRCST	2030	3.20%	14,317	447,406	68.0%	72,921	75,108	91.0%	94.0%	66,358	70,602

***** BASE SCENARIO RESULTS *****					***** BASE SCENARIO RESULTS *****					
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHANGE)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999 -2004	4.10%	0.18%	16.36%	62.2%	14.14%	6.91%	90.7%	92.6%	12.57%	8.83%
2004 -2009	3.26%	0.50%	2.50%	67.8%	3.28%	2.21%	88.8%	94.1%	4.34%	2.05%
2010 -2015	3.20%	0.34%	0.34%	68.0%	0.34%	0.34%	91.0%	94.0%	0.34%	0.34%
2015 -2020	3.20%	0.51%	0.51%	68.0%	0.51%	0.51%	91.0%	94.0%	0.51%	0.51%
2020 -2025	3.20%	0.52%	0.52%	68.0%	0.52%	0.52%	91.0%	94.0%	0.52%	0.52%
2025 -2030	3.20%	0.63%	0.63%	68.0%	0.63%	0.63%	91.0%	94.0%	0.63%	0.63%
1999 -2009	3.70%	0.34%	9.21%	64.7%	8.57%	4.53%	90.1%	93.2%	8.38%	5.38%
2010 -2030	3.20%	0.50%	0.50%	68.0%	0.50%	0.50%	91.0%	94.0%	0.50%	0.50%

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***** BASE SCENARIO RESULTS *****							***** BASE SCENARIO RESULTS *****	
PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES								
YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)			H.E. ITERATION ACT. AVG. WPC (MILLS/KWH)	
		WINTER	SUMMER	WINTER	SUMMER			
ACTUAL	1999							
ACTUAL	2000							
ACTUAL	2001							
ACTUAL	2002							
ACTUAL	2003							
ACTUAL	2004							
ACTUAL	2005							
ACTUAL	2006							
ACTUAL	2007							
ACTUAL	2008							
ACTUAL	2009							
FRCST	2010	66.0%	68.006	70.046	61.885	65.843	68.630	
FRCST	2011	66.0%	68.293	70.341	62.146	66.121	70.910	
FRCST	2012	66.0%	68.537	70.593	62.369	66.358	75.360	
FRCST	2013	66.0%	68.746	70.809	62.559	66.560	79.430	
FRCST	2014	66.0%	68.949	71.018	62.744	66.757	82.230	
FRCST	2015	66.0%	69.162	71.237	62.937	66.962	83.810	
FRCST	2016	66.0%	69.628	71.717	63.361	67.414	85.486	
FRCST	2017	66.0%	70.006	72.106	63.705	67.780	87.196	
FRCST	2018	66.0%	70.336	72.446	64.005	68.099	88.940	
FRCST	2019	66.0%	70.640	72.759	64.282	68.393	90.719	
FRCST	2020	66.0%	70.931	73.059	64.547	68.675	92.533	
FRCST	2021	66.0%	71.307	73.446	64.889	69.039	94.384	
FRCST	2022	66.0%	71.679	73.830	65.228	69.400	96.271	
FRCST	2023	66.0%	72.052	74.213	65.567	69.760	98.197	
FRCST	2024	66.0%	72.425	74.598	65.907	70.122	100.161	
FRCST	2025	66.0%	72.801	74.985	66.249	70.486	102.164	
FRCST	2026	66.0%	73.246	75.444	66.654	70.917	102.164	
FRCST	2027	66.0%	73.705	75.916	67.072	71.361	102.164	
FRCST	2028	66.0%	74.173	76.398	67.498	71.814	102.164	
FRCST	2029	66.0%	74.649	76.888	67.930	72.275	102.164	
FRCST	2030	66.0%	75.131	77.384	68.369	72.741	102.164	

***** BASE SCENARIO RESULTS *****							***** BASE SCENARIO RESULTS *****	
TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)				
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)			
1999 -2004	44.8%	56.730	59.491	49.725	55.654			
2004 -2009	65.4%	66.662	68.991	60.267	61.584			
2010 -2015	66.0%	69.162	71.237	62.937	66.962			
2015 -2020	66.0%	70.931	73.059	64.547	68.675			
2020 -2025	66.0%	72.801	74.985	66.249	70.486			
2025 -2030	66.0%	75.131	77.384	68.369	72.741			
1999 -2009	44.8%	66.662	68.991	60.267	61.584			
2010 -2030	66.0%	75.131	77.384	68.369	72.741			

MENU

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\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	6,317	410	8	19	6,754	84,874	20,225	139,883	151	245,133
ACTUAL 2000	6,417	412	8	21	6,858	89,832	22,774	148,899	169	261,674
ACTUAL 2001	6,525	409	8	21	6,963	91,613	23,671	142,357	163	257,804
ACTUAL 2002	6,635	408	8	21	7,072	98,916	21,970	143,963	170	265,019
ACTUAL 2003	6,794	409	8	24	7,235	97,834	22,159	133,554	176	253,723
ACTUAL 2004	6,942	420	8	27	7,397	99,527	24,300	134,166	189	258,182
ACTUAL 2005	7,024	416	8	27	7,475	106,793	25,848	137,449	222	270,312
ACTUAL 2006	7,173	410	8	26	7,617	103,399	26,586	141,240	161	271,386
ACTUAL 2007	7,300	409	8	28	7,745	111,760	29,833	140,344	163	282,100
ACTUAL 2008	7,348	408	9	25	7,790	112,750	38,961	169,655	123	321,489
ACTUAL 2009	7,370	406	9	24	7,809	106,303	31,130	160,105	103	297,641
FRCST 2010	7,401	408	9	16	7,834	107,946	31,274	171,477	89	310,786
FRCST 2011	7,452	410	9	16	7,887	109,614	31,418	155,579	89	296,700
FRCST 2012	7,524	412	9	16	7,960	111,158	31,562	196,173	89	338,982
FRCST 2013	7,618	414	8	16	8,056	112,791	31,706	197,181	89	341,767
FRCST 2014	7,713	416	8	16	8,153	114,462	31,850	198,244	89	344,645
FRCST 2015	7,809	418	8	16	8,251	116,289	31,994	199,359	89	347,731
FRCST 2016	7,918	421	8	16	8,363	118,345	32,242	200,940	89	351,616
FRCST 2017	8,028	424	8	16	8,476	120,448	32,490	202,538	89	355,565
FRCST 2018	8,151	427	8	16	8,602	122,761	32,739	204,153	89	359,742
FRCST 2019	8,276	430	8	16	8,730	125,122	32,987	205,785	89	363,983
FRCST 2020	8,403	433	8	16	8,860	127,529	33,236	207,435	89	368,289
FRCST 2021	8,521	440	8	16	8,985	129,792	33,807	207,435	89	371,123
FRCST 2022	8,640	447	8	16	9,111	132,084	34,378	207,435	89	373,986
FRCST 2023	8,761	454	8	16	9,239	134,410	34,951	207,435	89	376,885
FRCST 2024	8,884	461	8	16	9,369	136,773	35,525	207,435	89	379,822
FRCST 2025	9,008	468	8	16	9,500	139,175	36,100	207,435	89	382,799
FRCST 2026	9,138	479	8	16	9,641	141,865	36,964	207,435	89	386,353
FRCST 2027	9,271	490	8	16	9,785	144,697	37,830	207,435	89	390,051
FRCST 2028	9,405	501	8	16	9,930	147,631	38,698	207,435	89	393,853
FRCST 2029	9,541	512	8	16	10,077	150,647	39,567	207,435	89	397,738
FRCST 2030	9,679	523	8	16	10,226	153,736	40,438	207,435	89	401,698

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	1.90%	0.48%	0	8	1.84%	3.24%	3.74%	-0.83%	4.59%	1.04%
2004 -2009	1.20%	-0.68%	1	-3	1.09%	1.33%	5.08%	3.60%	-11.43%	2.89%
2010 -2015	1.08%	0.49%	-1	0	1.04%	1.50%	0.46%	3.06%	0.00%	2.27%
2015 -2020	1.48%	0.71%	0	0	1.43%	1.88%	0.76%	0.80%	0.00%	1.16%
2020 -2025	1.40%	1.57%	0	0	1.40%	1.76%	1.67%	0.00%	0.00%	0.78%
2025 -2030	1.45%	2.25%	0	0	1.48%	2.01%	2.30%	0.00%	0.00%	0.97%
1999 -2009	1.55%	-0.10%	1	5	1.46%	2.28%	4.41%	1.36%	-3.75%	1.96%
2010 -2030	1.35%	1.25%	-1	0	1.34%	1.78%	1.29%	0.96%	0.00%	1.29%

1971 : BEGINNING HISTORICAL DATA YEAR ?  
2009 : FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 34)  
20 : NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** BASE SCENARIO RESULTS *****					***** BASE SCENARIO RESULTS *****					
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)
ACTUAL 1999	4.05%	10,347	255,480	62.3%	44,980	46,809	92.8%	92.0%	41,736	43,061
ACTUAL 2000	2.90%	7,815	269,489	64.7%	47,524	47,155	96.9%	90.0%	46,060	42,452
ACTUAL 2001	3.00%	7,973	285,777	60.1%	50,458	48,387	88.2%	92.0%	44,507	44,530
ACTUAL 2002	2.87%	7,831	272,850	63.4%	47,466	49,147	94.6%	87.9%	44,925	43,209
ACTUAL 2003	3.63%	9,557	263,280	59.8%	50,249	46,601	94.7%	88.7%	47,592	41,348
ACTUAL 2004	3.64%	9,753	267,935	62.4%	49,013	46,413	90.9%	91.5%	44,563	42,486
ACTUAL 2005	2.99%	8,331	278,643	62.6%	50,777	50,779	95.5%	93.6%	48,501	47,535
ACTUAL 2006	3.03%	8,480	279,866	62.4%	50,003	51,239	97.3%	90.7%	48,667	48,472
ACTUAL 2007	2.37%	6,848	288,948	60.8%	54,248	53,031	91.9%	90.5%	49,832	47,992
ACTUAL 2008	2.14%	7,030	328,519	60.1%	55,732	62,372	94.0%	89.8%	52,394	56,037
ACTUAL 2009	3.11%	9,554	307,195	51.5%	68,068	63,266	91.9%	74.1%	62,583	46,902
FRCST 2010	2.90%	9,282	320,068	60.0%	60,898	59,069	93.0%	87.0%	56,633	51,390
FRCST 2011	2.90%	8,861	305,561	60.0%	58,136	56,392	93.0%	87.0%	54,066	49,061
FRCST 2012	2.90%	10,124	349,106	60.0%	66,420	64,428	93.0%	87.0%	61,771	56,052
FRCST 2013	2.90%	10,207	351,974	60.0%	66,966	64,957	93.0%	87.0%	62,276	56,513
FRCST 2014	2.90%	10,293	354,938	60.0%	67,530	65,504	93.0%	87.0%	62,803	56,989
FRCST 2015	2.90%	10,385	358,116	60.0%	68,135	66,091	93.0%	87.0%	63,365	57,499
FRCST 2016	2.90%	10,501	362,117	60.0%	68,896	66,829	93.0%	87.0%	64,073	58,141
FRCST 2017	2.90%	10,619	366,184	60.0%	69,670	67,580	93.0%	87.0%	64,793	58,794
FRCST 2018	2.90%	10,744	370,486	60.0%	70,488	68,374	93.0%	87.0%	65,554	59,465
FRCST 2019	2.90%	10,871	374,854	60.0%	71,319	69,180	93.0%	87.0%	66,327	60,166
FRCST 2020	2.90%	10,999	379,288	60.0%	72,163	69,998	93.0%	87.0%	67,112	60,898
FRCST 2021	2.90%	11,084	382,207	60.0%	72,718	70,537	93.0%	87.0%	67,628	61,367
FRCST 2022	2.90%	11,170	385,156	60.0%	73,279	71,081	93.0%	87.0%	68,150	61,840
FRCST 2023	2.90%	11,256	388,141	60.0%	73,847	71,632	93.0%	87.0%	68,678	62,320
FRCST 2024	2.90%	11,344	391,166	60.0%	74,423	72,190	93.0%	87.0%	69,213	62,805
FRCST 2025	2.90%	11,433	394,232	60.0%	75,006	72,756	93.0%	87.0%	69,756	63,298
FRCST 2026	2.90%	11,539	397,892	60.0%	75,703	73,431	93.0%	87.0%	70,403	63,885
FRCST 2027	2.90%	11,649	401,700	60.0%	76,427	74,134	93.0%	87.0%	71,077	64,497
FRCST 2028	2.90%	11,763	405,616	60.0%	77,172	74,857	93.0%	87.0%	71,770	65,125
FRCST 2029	2.90%	11,879	409,617	60.0%	77,933	75,595	93.0%	87.0%	72,478	65,768
FRCST 2030	2.90%	11,997	413,695	60.0%	78,709	76,348	93.0%	87.0%	73,200	66,423

***** BASE SCENARIO RESULTS *****					***** BASE SCENARIO RESULTS *****					
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHANGE)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999 -2004	3.35%	-1.18%	0.96%	62.1%	1.73%	-0.17%	93.0%	90.4%	1.32%	-0.27%
2004 -2009	2.88%	-0.41%	2.77%	60.0%	6.79%	6.40%	93.6%	88.4%	7.03%	2.00%
2010 -2015	2.90%	2.27%	2.27%	60.0%	2.27%	2.27%	93.0%	87.0%	2.27%	2.27%
2015 -2020	2.90%	1.16%	1.16%	60.0%	1.16%	1.16%	93.0%	87.0%	1.16%	1.16%
2020 -2025	2.90%	0.78%	0.78%	60.0%	0.78%	0.78%	93.0%	87.0%	0.78%	0.78%
2025 -2030	2.90%	0.97%	0.97%	60.0%	0.97%	0.97%	93.0%	87.0%	0.97%	0.97%
1999 -2009	3.07%	-0.79%	1.86%	60.9%	4.23%	3.06%	93.5%	89.2%	4.13%	0.86%
2010 -2030	2.90%	1.29%	1.29%	60.0%	1.29%	1.29%	93.0%	87.0%	1.29%	1.29%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
 2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 34)  
 20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** BASE SCENARIO RESULTS *****							***** BASE SCENARIO RESULTS *****	
PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES								
YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)			H.E. ITERATION ACT. AVG. WPC (MILLS/KWH)	
		WINTER	SUMMER	WINTER	SUMMER			
ACTUAL	1999							
ACTUAL	2000							
ACTUAL	2001							
ACTUAL	2002							
ACTUAL	2003							
ACTUAL	2004							
ACTUAL	2005							
ACTUAL	2006							
ACTUAL	2007							
ACTUAL	2008							
ACTUAL	2009							
FRCST	2010	53.0%	68.939	66.870	64.113	58.177	68.830	
FRCST	2011	53.0%	65.814	63.839	61.207	55.540	70.910	
FRCST	2012	53.0%	75.193	72.937	69.929	63.455	75.360	
FRCST	2013	53.0%	75.811	73.536	70.504	63.977	79.430	
FRCST	2014	53.0%	76.449	74.156	71.098	64.515	82.230	
FRCST	2015	53.0%	77.134	74.820	71.734	65.093	83.810	
FRCST	2016	53.0%	77.995	75.655	72.536	65.820	85.486	
FRCST	2017	53.0%	78.871	76.505	73.350	66.560	87.196	
FRCST	2018	53.0%	79.798	77.404	74.212	67.341	88.940	
FRCST	2019	53.0%	80.739	78.317	75.087	68.135	90.719	
FRCST	2020	53.0%	81.694	79.243	75.975	68.941	92.533	
FRCST	2021	53.0%	82.322	79.853	76.560	69.472	94.384	
FRCST	2022	53.0%	82.958	80.469	77.151	70.008	96.271	
FRCST	2023	53.0%	83.601	81.093	77.749	70.551	98.197	
FRCST	2024	53.0%	84.252	81.725	78.354	71.100	100.161	
FRCST	2025	53.0%	84.913	82.365	78.969	71.658	102.164	
FRCST	2026	53.0%	85.701	83.130	79.702	72.323	102.164	
FRCST	2027	53.0%	86.521	83.926	80.465	73.015	102.164	
FRCST	2028	53.0%	87.364	84.743	81.249	73.727	102.164	
FRCST	2029	53.0%	88.226	85.580	82.051	74.454	102.164	
FRCST	2030	53.0%	89.105	86.432	82.867	75.196	102.164	

***** BASE SCENARIO RESULTS *****							***** BASE SCENARIO RESULTS *****	
TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)				
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)			
1999 -2004	59.8%	50.458	49.147	47.592	44.530			
2004 -2009	51.5%	68.068	63.286	62.583	56.037			
2010 -2015	53.0%	77.134	74.820	71.734	65.093			
2015 -2020	53.0%	81.694	79.243	75.975	68.941			
2020 -2025	53.0%	84.913	82.365	78.969	71.658			
2025 -2030	53.0%	89.105	86.432	82.867	75.196			
1999 -2009	51.5%	68.068	63.286	62.583	56.037			
2010 -2030	53.0%	89.105	86.432	82.867	75.196			

MENU

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\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	10,725	722	0	73	11,520	135,637	74,338	0	1,297	211,272
ACTUAL 2000	10,897	778	0	101	11,776	138,878	78,279	0	1,958	215,115
ACTUAL 2001	11,076	779	2	103	11,960	140,239	68,804	6,962	1,970	217,975
ACTUAL 2002	11,276	782	3	103	12,164	149,368	66,473	11,577	2,193	229,609
ACTUAL 2003	11,497	797	3	108	12,405	144,621	69,529	11,435	2,146	227,731
ACTUAL 2004	11,684	818	5	109	12,616	147,067	70,969	15,273	2,306	235,615
ACTUAL 2005	11,843	840	5	110	12,798	157,589	76,070	22,698	2,379	258,736
ACTUAL 2006	12,013	842	6	112	12,973	156,377	72,345	26,252	2,221	257,195
ACTUAL 2007	12,108	851	10	110	13,079	165,679	63,505	40,736	2,224	272,144
ACTUAL 2008	12,126	847	10	110	13,093	161,653	62,231	48,059	2,178	272,121
ACTUAL 2009	12,120	839	10	110	13,079	156,684	62,609	47,011	2,114	268,418
FRCST 2010	12,175	844	10	112	13,141	158,017	63,068	45,317	2,492	268,894
FRCST 2011	12,255	849	10	112	13,228	162,852	63,527	45,431	2,492	274,302
FRCST 2012	12,336	854	10	112	13,312	166,420	63,987	45,552	2,492	278,451
FRCST 2013	12,442	859	10	112	13,423	169,453	64,447	45,682	2,492	282,074
FRCST 2014	12,550	864	10	112	13,536	172,019	64,907	45,819	2,492	285,237
FRCST 2015	12,658	869	10	112	13,649	174,391	65,368	45,965	2,492	288,216
FRCST 2016	12,794	879	10	112	13,795	176,975	66,225	45,965	2,492	291,657
FRCST 2017	12,930	889	10	112	13,941	179,470	67,084	45,965	2,492	295,011
FRCST 2018	13,068	899	10	112	14,089	181,910	67,943	45,965	2,492	298,310
FRCST 2019	13,207	909	10	112	14,238	184,320	68,803	45,965	2,492	301,590
FRCST 2020	13,347	919	10	112	14,388	186,717	69,663	45,965	2,492	304,837
FRCST 2021	13,497	934	10	112	14,553	189,216	70,921	45,965	2,492	308,594
FRCST 2022	13,649	949	10	112	14,720	191,709	72,180	45,965	2,492	312,346
FRCST 2023	13,802	964	10	112	14,888	194,204	73,440	45,965	2,492	316,101
FRCST 2024	13,956	979	10	112	15,057	196,711	74,702	45,965	2,492	319,870
FRCST 2025	14,112	994	10	112	15,228	199,232	75,964	45,965	2,492	323,653
FRCST 2026	14,270	1,014	10	112	15,406	201,962	77,624	45,965	2,492	328,043
FRCST 2027	14,429	1,034	10	112	15,585	204,842	79,286	45,965	2,492	332,585
FRCST 2028	14,589	1,054	10	112	15,765	207,839	80,949	45,965	2,492	337,245
FRCST 2029	14,751	1,074	10	112	15,947	210,932	82,614	45,965	2,492	342,003
FRCST 2030	14,914	1,094	10	112	16,130	214,105	84,281	45,965	2,492	346,843

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	1.73%	2.53%	5	36	1.83%	1.63%	-0.92%	NA	12.20%	2.21%
2004 -2009	0.74%	0.51%	5	1	0.72%	1.27%	-2.48%	25.21%	-1.72%	2.64%
2010 -2015	0.78%	0.59%	0	0	0.76%	1.99%	0.72%	0.28%	0.00%	1.40%
2015 -2020	1.07%	1.13%	0	0	1.06%	1.38%	1.28%	0.00%	0.00%	1.13%
2020 -2025	1.12%	1.58%	0	0	1.14%	1.31%	1.75%	0.00%	0.00%	1.21%
2025 -2030	1.11%	1.94%	0	0	1.16%	1.45%	2.10%	0.00%	0.00%	1.39%
1999 -2009	1.23%	1.51%	10	37	1.28%	1.45%	-1.70%	NA	5.01%	2.42%
2010 -2030	1.02%	1.31%	0	0	1.03%	1.53%	1.46%	0.07%	0.00%	1.28%

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***** BASE SCENARIO RESULTS *****										
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)
ACTUAL 1999	6.25%	14,085	225,357	44.8%	40,874	57,464	91.2%	94.6%	37,265	54,355
ACTUAL 2000	6.71%	15,472	230,587	48.9%	42,058	53,774	98.1%	92.0%	41,258	49,458
ACTUAL 2001	5.10%	11,714	229,689	47.6%	44,362	55,029	94.4%	88.4%	41,857	48,661
ACTUAL 2002	5.98%	14,604	244,213	46.7%	41,129	59,745	99.6%	86.2%	40,967	51,513
ACTUAL 2003	6.23%	15,130	242,861	48.1%	46,821	57,609	97.5%	90.7%	45,641	52,224
ACTUAL 2004	6.93%	17,544	253,159	49.3%	45,805	58,582	91.5%	93.0%	41,898	54,478
ACTUAL 2005	5.85%	16,077	274,813	48.7%	49,624	64,444	97.5%	93.7%	48,390	60,374
ACTUAL 2006	5.38%	14,624	271,819	47.7%	52,282	65,109	93.9%	92.5%	49,082	60,206
ACTUAL 2007	6.61%	19,262	291,408	49.6%	53,365	67,046	96.0%	90.6%	51,232	60,772
ACTUAL 2008	5.92%	17,123	289,244	54.3%	55,275	60,840	96.3%	93.4%	53,252	56,817
ACTUAL 2009	5.20%	14,723	283,141	51.0%	56,859	63,345	96.4%	92.0%	54,835	58,292
FRCST 2010	5.80%	16,556	285,450	50.0%	54,309	65,171	96.0%	94.0%	52,137	61,261
FRCST 2011	5.80%	16,889	291,191	50.0%	55,402	66,482	96.0%	94.0%	53,186	62,493
FRCST 2012	5.80%	17,145	295,596	50.0%	56,240	67,488	96.0%	94.0%	53,990	63,438
FRCST 2013	5.80%	17,388	299,442	50.0%	56,971	68,366	96.0%	94.0%	54,693	64,264
FRCST 2014	5.80%	17,562	302,799	50.0%	57,610	69,132	96.0%	94.0%	55,306	64,985
FRCST 2015	5.80%	17,746	305,962	50.0%	58,212	69,854	96.0%	94.0%	55,884	65,663
FRCST 2016	5.80%	17,958	309,615	50.0%	58,907	70,689	96.0%	94.0%	56,551	66,447
FRCST 2017	5.80%	18,164	313,175	50.0%	59,584	71,501	96.0%	94.0%	57,201	67,211
FRCST 2018	5.80%	18,367	316,677	50.0%	60,251	72,301	96.0%	94.0%	57,841	67,963
FRCST 2019	5.80%	18,569	320,149	50.0%	60,911	73,093	96.0%	94.0%	58,475	68,708
FRCST 2020	5.80%	18,769	323,606	50.0%	61,569	73,883	96.0%	94.0%	59,106	69,450
FRCST 2021	5.80%	19,000	327,594	50.0%	62,328	74,793	96.0%	94.0%	59,835	70,306
FRCST 2022	5.80%	19,231	331,577	50.0%	63,086	75,703	96.0%	94.0%	60,562	71,160
FRCST 2023	5.80%	19,463	335,564	50.0%	63,844	76,613	96.0%	94.0%	61,290	72,016
FRCST 2024	5.80%	19,695	339,565	50.0%	64,605	77,526	96.0%	94.0%	62,021	72,875
FRCST 2025	5.80%	19,928	343,581	50.0%	65,369	78,443	96.0%	94.0%	62,755	73,737
FRCST 2026	5.80%	20,198	348,241	50.0%	66,256	79,507	96.0%	94.0%	63,606	74,737
FRCST 2027	5.80%	20,478	353,063	50.0%	67,173	80,608	96.0%	94.0%	64,486	75,772
FRCST 2028	5.80%	20,765	358,010	50.0%	68,115	81,738	96.0%	94.0%	65,390	76,833
FRCST 2029	5.80%	21,058	363,061	50.0%	69,076	82,891	96.0%	94.0%	66,313	77,917
FRCST 2030	5.80%	21,356	368,199	50.0%	70,053	84,064	96.0%	94.0%	67,251	79,020

***** BASE SCENARIO RESULTS *****										
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHANGE)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999 -2004	6.20%	4.49%	2.35%	47.8%	2.30%	0.39%	95.4%	90.8%	2.37%	0.05%
2004 -2009	5.98%	-3.44%	2.26%	50.1%	4.42%	1.58%	95.3%	92.5%	5.53%	1.36%
2010 -2015	5.80%	1.40%	1.40%	50.0%	1.40%	1.40%	96.0%	94.0%	1.40%	1.40%
2015 -2020	5.80%	1.13%	1.13%	50.0%	1.13%	1.13%	96.0%	94.0%	1.13%	1.13%
2020 -2025	5.80%	1.21%	1.21%	50.0%	1.20%	1.20%	96.0%	94.0%	1.21%	1.21%
2025 -2030	5.80%	1.39%	1.39%	50.0%	1.39%	1.39%	96.0%	94.0%	1.39%	1.39%

1999 -2009	6.01%	0.44%	2.31%	48.8%	3.36%	0.98%	95.7%	91.8%	3.94%	0.70%
2010 -2030	5.80%	1.28%	1.28%	50.0%	1.28%	1.28%	96.0%	94.0%	1.28%	1.28%

1971 : BEGINNING HISTORICAL DATA YEAR ?  
 2009 : FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 34)  
 20 : NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES						H.E.	
						ITERATION	
						ACT. AVG.	
						WPC	
						(MILLS/KWH)	
YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW) WINTER	NON-COINCIDENT PEAK (MW) SUMMER	COINCIDENT PEAK (MW) WINTER	COINCIDENT PEAK (MW) SUMMER		
ACTUAL	1999						
ACTUAL	2000						
ACTUAL	2001						
ACTUAL	2002						
ACTUAL	2003						
ACTUAL	2004						
ACTUAL	2005						
ACTUAL	2006						
ACTUAL	2007						
ACTUAL	2008						
ACTUAL	2009						
FRCST	2010	47.0%	57.776	69.331	55.465	65.171	68.830
FRCST	2011	47.0%	58.938	70.726	56.581	66.482	70.910
FRCST	2012	47.0%	59.830	71.795	57.436	67.488	75.360
FRCST	2013	47.0%	60.608	72.729	58.184	68.366	79.430
FRCST	2014	47.0%	61.288	73.545	58.836	69.132	82.230
FRCST	2015	47.0%	61.928	74.313	59.451	69.854	83.810
FRCST	2016	47.0%	62.667	75.201	60.160	70.689	85.486
FRCST	2017	47.0%	63.388	76.065	60.852	71.501	87.196
FRCST	2018	47.0%	64.097	76.916	61.533	72.301	88.940
FRCST	2019	47.0%	64.799	77.759	62.207	73.093	90.719
FRCST	2020	47.0%	65.499	78.599	62.879	73.883	92.533
FRCST	2021	47.0%	66.306	79.568	63.654	74.793	94.364
FRCST	2022	47.0%	67.112	80.535	64.428	75.703	96.271
FRCST	2023	47.0%	67.919	81.503	65.203	76.613	98.197
FRCST	2024	47.0%	68.729	82.475	65.980	77.526	100.161
FRCST	2025	47.0%	69.542	83.450	66.760	78.443	102.164
FRCST	2026	47.0%	70.485	84.582	67.666	79.507	102.164
FRCST	2027	47.0%	71.461	85.753	68.603	80.608	102.164
FRCST	2028	47.0%	72.462	86.955	69.564	81.738	102.164
FRCST	2029	47.0%	73.485	88.182	70.545	82.891	102.164
FRCST	2030	47.0%	74.524	89.429	71.543	84.064	102.164

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)	
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)
1999 -2004	44.8%	46.821	59.745	45.641	54.478
2004 -2009	47.7%	56.859	87.046	54.835	60.772
2010 -2015	47.0%	61.928	74.313	59.451	69.854
2015 -2020	47.0%	65.499	78.599	62.879	73.883
2020 -2025	47.0%	69.542	83.450	66.760	78.443
2025 -2030	47.0%	74.524	89.429	71.543	84.064
1999 -2009	44.8%	56.859	87.046	54.835	60.772
2010 -2030	47.0%	74.524	89.429	71.543	84.064

MENU

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20 : NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	17,493	843	9	139	18,484	270,990	61,217	78,508	1,930	412,645
ACTUAL 2000	17,962	890	9	138	18,999	280,971	66,416	95,952	1,904	445,243
ACTUAL 2001	18,454	933	9	146	19,542	304,084	68,315	105,076	2,211	479,686
ACTUAL 2002	18,863	981	9	133	19,986	313,920	66,544	117,106	1,992	499,562
ACTUAL 2003	19,238	1,011	12	130	20,391	315,971	67,433	128,480	3,028	514,912
ACTUAL 2004	19,644	1,094	12	152	20,902	322,537	69,363	130,933	3,111	525,944
ACTUAL 2005	19,998	1,140	12	150	21,300	344,001	70,582	110,558	3,123	528,262
ACTUAL 2006	20,285	1,139	12	148	21,584	341,563	70,617	96,344	2,841	511,365
ACTUAL 2007	20,530	1,183	12	160	21,885	352,775	79,861	109,300	3,358	545,294
ACTUAL 2008	20,673	1,222	14	148	22,057	359,747	76,338	97,472	3,225	536,782
ACTUAL 2009	20,682	1,234	15	149	22,080	337,770	76,763	87,664	2,957	505,154
FRCST 2010	20,790	1,246	13	152	22,201	337,001	77,565	88,483	3,113	506,162
FRCST 2011	20,972	1,258	13	152	22,395	340,460	78,367	88,669	3,113	510,609
FRCST 2012	21,205	1,270	13	152	22,640	345,363	79,169	88,855	3,113	516,500
FRCST 2013	21,440	1,282	13	152	22,887	350,336	79,972	89,041	3,113	522,462
FRCST 2014	21,678	1,294	13	152	23,137	355,704	80,775	89,228	3,113	528,820
FRCST 2015	21,918	1,306	13	152	23,389	361,607	81,579	89,416	3,113	535,715
FRCST 2016	22,178	1,328	13	152	23,671	367,761	83,141	89,789	3,113	543,804
FRCST 2017	22,440	1,350	13	152	23,955	373,949	84,707	90,165	3,113	551,934
FRCST 2018	22,706	1,372	13	152	24,243	380,203	86,275	90,542	3,113	560,133
FRCST 2019	22,974	1,394	13	152	24,533	386,539	87,847	90,920	3,113	568,419
FRCST 2020	23,246	1,416	13	152	24,827	392,966	89,422	91,300	3,113	576,801
FRCST 2021	23,549	1,446	13	152	25,160	399,879	91,509	91,300	3,113	585,801
FRCST 2022	23,855	1,476	13	152	25,496	406,847	93,600	91,300	3,113	594,860
FRCST 2023	24,164	1,506	13	152	25,835	413,896	95,695	91,300	3,113	604,004
FRCST 2024	24,476	1,536	13	152	26,177	421,039	97,794	91,300	3,113	613,246
FRCST 2025	24,792	1,566	13	152	26,523	428,284	99,898	91,300	3,113	622,595
FRCST 2026	25,145	1,606	13	152	26,916	436,640	102,642	91,300	3,113	633,695
FRCST 2027	25,501	1,646	13	152	27,312	445,345	105,391	91,300	3,113	645,149
FRCST 2028	25,861	1,686	13	152	27,712	454,307	108,146	91,300	3,113	656,866
FRCST 2029	26,223	1,726	13	152	28,114	463,478	110,906	91,300	3,113	668,797
FRCST 2030	26,590	1,766	13	152	28,521	472,836	113,672	91,300	3,113	680,921

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	2.35%	5.35%	3	13	2.49%	3.54%	2.53%	10.77%	10.02%	4.97%
2004 -2009	1.04%	2.44%	3	-3	1.10%	0.93%	2.05%	-7.71%	-1.01%	-0.80%
2010 -2015	1.06%	0.95%	0	0	1.05%	1.42%	1.01%	0.21%	0.00%	1.14%
2015 -2020	1.18%	1.63%	0	0	1.20%	1.68%	1.85%	0.42%	0.00%	1.49%
2020 -2025	1.30%	2.03%	0	0	1.33%	1.74%	2.24%	0.00%	0.00%	1.54%
2025 -2030	1.41%	2.43%	0	0	1.46%	2.00%	2.62%	0.00%	0.00%	1.81%
1999 -2009	1.69%	3.88%	6	10	1.79%	2.23%	2.29%	1.11%	4.36%	2.04%
2010 -2030	1.24%	1.76%	0	0	1.26%	1.71%	1.93%	0.16%	0.00%	1.49%

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***** BASE SCENARIO RESULTS *****					***** BASE SCENARIO RESULTS *****					
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)
ACTUAL 1999	5.40%	23,555	436,200	50.9%	97,761	97,839	94.3%	96.6%	92,228	94,560
ACTUAL 2000	6.90%	32,999	478,242	53.1%	102,839	99,859	97.9%	95.4%	100,690	95,305
ACTUAL 2001	2.08%	10,189	489,875	49.1%	113,880	103,533	93.3%	91.9%	106,268	95,168
ACTUAL 2002	5.03%	26,459	526,021	54.1%	106,626	110,985	95.6%	91.7%	103,885	101,793
ACTUAL 2003	4.05%	21,734	536,646	49.0%	124,954	108,509	95.9%	93.6%	119,854	101,516
ACTUAL 2004	4.38%	24,092	550,036	49.7%	126,392	107,755	94.7%	94.2%	119,634	101,463
ACTUAL 2005	3.94%	21,667	549,929	50.1%	125,242	114,225	97.8%	95.7%	122,520	109,358
ACTUAL 2006	2.74%	14,406	525,771	51.4%	116,756	113,156	98.2%	97.2%	114,671	110,001
ACTUAL 2007	3.12%	17,561	562,855	48.6%	132,214	118,857	94.3%	92.8%	124,623	110,285
ACTUAL 2008	3.63%	20,219	557,001	46.2%	137,492	109,850	96.1%	94.5%	132,192	103,781
ACTUAL 2009	4.46%	23,582	528,736	42.1%	143,425	107,713	95.7%	92.9%	137,284	100,063
FRCST 2010	3.80%	19,994	526,156	48.0%	125,192	106,362	96.0%	95.0%	120,127	101,044
FRCST 2011	3.80%	20,170	530,779	48.0%	126,231	107,297	96.0%	95.0%	121,182	101,932
FRCST 2012	3.80%	20,402	536,902	48.0%	127,688	108,535	96.0%	95.0%	122,580	103,108
FRCST 2013	3.80%	20,638	543,100	48.0%	129,162	109,788	96.0%	95.0%	123,995	104,298
FRCST 2014	3.80%	20,889	549,709	48.0%	130,734	111,124	96.0%	95.0%	125,504	105,588
FRCST 2015	3.80%	21,161	556,876	48.0%	132,438	112,572	96.0%	95.0%	127,141	106,944
FRCST 2016	3.80%	21,481	565,285	48.0%	134,438	114,272	96.0%	95.0%	129,061	108,559
FRCST 2017	3.80%	21,802	573,736	48.0%	136,448	115,981	96.0%	95.0%	130,990	110,182
FRCST 2018	3.80%	22,126	582,259	48.0%	138,475	117,704	96.0%	95.0%	132,936	111,818
FRCST 2019	3.80%	22,453	590,872	48.0%	140,523	119,445	96.0%	95.0%	134,902	113,472
FRCST 2020	3.80%	22,784	599,585	48.0%	142,595	121,206	96.0%	95.0%	136,892	115,146
FRCST 2021	3.80%	23,140	608,941	48.0%	144,820	123,097	96.0%	95.0%	139,028	116,942
FRCST 2022	3.80%	23,498	618,358	48.0%	147,060	125,001	96.0%	95.0%	141,178	118,751
FRCST 2023	3.80%	23,859	627,863	48.0%	149,320	126,922	96.0%	95.0%	143,348	120,576
FRCST 2024	3.80%	24,224	637,470	48.0%	151,605	128,864	96.0%	95.0%	145,541	122,421
FRCST 2025	3.80%	24,593	647,188	48.0%	153,917	130,829	96.0%	95.0%	147,760	124,288
FRCST 2026	3.80%	25,032	658,727	48.0%	156,661	133,161	96.0%	95.0%	150,394	126,503
FRCST 2027	3.80%	25,484	670,633	48.0%	159,492	135,568	96.0%	95.0%	153,113	128,790
FRCST 2028	3.80%	25,947	682,813	48.0%	162,389	138,030	96.0%	95.0%	155,893	131,129
FRCST 2029	3.80%	26,418	695,215	48.0%	165,338	140,538	96.0%	95.0%	158,725	133,511
FRCST 2030	3.80%	26,897	707,818	48.0%	168,336	143,085	96.0%	95.0%	161,602	135,931

***** BASE SCENARIO RESULTS *****					***** BASE SCENARIO RESULTS *****					
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHANGE)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999 -2004	4.64%	0.45%	4.75%	51.0%	5.27%	1.95%	95.3%	93.9%	5.34%	1.42%
2004 -2009	3.71%	-0.43%	-0.79%	48.0%	2.56%	-0.01%	96.1%	94.6%	2.79%	-0.28%
2010 -2015	3.80%	1.14%	1.14%	48.0%	1.14%	1.14%	96.0%	95.0%	1.14%	1.14%
2015 -2020	3.80%	1.49%	1.49%	48.0%	1.49%	1.49%	96.0%	95.0%	1.49%	1.49%
2020 -2025	3.80%	1.54%	1.54%	48.0%	1.54%	1.54%	96.0%	95.0%	1.54%	1.54%
2025 -2030	3.80%	1.81%	1.81%	48.0%	1.81%	1.81%	96.0%	95.0%	1.81%	1.81%
1999 -2009	4.16%	0.01%	1.94%	49.5%	3.91%	0.97%	95.8%	94.2%	4.06%	0.57%
2010 -2030	3.80%	1.49%	1.49%	48.0%	1.49%	1.49%	96.0%	95.0%	1.49%	1.49%

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***** BASE SCENARIO RESULTS *****						***** BASE SCENARIO RESULTS *****	
PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES							H.E. ITERATION ACT. AVG. WPC (MILLS/KWH)
YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)			
		WINTER	SUMMER	WINTER	SUMMER		
ACTUAL	1999						
ACTUAL	2000						
ACTUAL	2001						
ACTUAL	2002						
ACTUAL	2003						
ACTUAL	2004						
ACTUAL	2005						
ACTUAL	2006						
ACTUAL	2007						
ACTUAL	2008						
ACTUAL	2009						
FRCST	2010	42.0%	143.008	121.557	137.288	115.479	68.830
FRCST	2011	42.0%	144.264	122.625	138.494	116.494	70.910
FRCST	2012	42.0%	145.929	124.040	140.092	117.838	75.360
FRCST	2013	42.0%	147.614	125.472	141.709	119.198	79.430
FRCST	2014	42.0%	149.410	126.999	143.434	120.649	82.230
FRCST	2015	42.0%	151.358	128.654	145.303	122.221	83.810
FRCST	2016	42.0%	153.644	130.597	147.498	124.067	85.486
FRCST	2017	42.0%	155.940	132.549	149.703	125.922	87.196
FRCST	2018	42.0%	158.257	134.518	151.927	127.792	88.940
FRCST	2019	42.0%	160.598	136.508	154.174	129.683	90.719
FRCST	2020	42.0%	162.966	138.521	156.448	131.595	92.533
FRCST	2021	42.0%	165.509	140.683	158.889	133.649	94.384
FRCST	2022	42.0%	168.068	142.858	161.346	135.715	96.271
FRCST	2023	42.0%	170.652	145.054	163.826	137.801	98.197
FRCST	2024	42.0%	173.263	147.274	166.333	139.910	100.161
FRCST	2025	42.0%	175.905	149.519	168.868	142.043	102.164
FRCST	2026	42.0%	179.041	152.185	171.879	144.575	102.164
FRCST	2027	42.0%	182.277	154.935	174.986	147.189	102.164
FRCST	2028	42.0%	185.587	157.749	178.164	149.862	102.164
FRCST	2029	42.0%	188.958	160.615	181.400	152.584	102.164
FRCST	2030	42.0%	192.384	163.526	184.688	155.350	102.164

***** BASE SCENARIO RESULTS *****						***** BASE SCENARIO RESULTS *****	
TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)			
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)		
1999 -2004	49.0%	126.392	110.995	119.854	101.793		
2004 -2009	42.1%	143.425	118.857	137.284	110.285		
2010 -2015	42.0%	151.358	128.654	145.303	122.221		
2015 -2020	42.0%	162.966	138.521	156.448	131.595		
2020 -2025	42.0%	175.905	149.519	168.888	142.043		
2025 -2030	42.0%	192.384	163.526	184.688	155.350		
1999 -2009	42.1%	143.425	118.857	137.284	110.285		
2010 -2030	42.0%	192.384	163.526	184.688	155.350		

MENU

1971 : BEGINNING HISTORICAL DATA YEAR ?  
 2009 : FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 34 YEARS)  
 20 : NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	8,588	511	3	0	9,102	121,275	22,825	3,916	2,757	150,573
ACTUAL 2000	8,736	528	3	0	9,267	122,674	24,181	4,072	2,779	153,706
ACTUAL 2001	8,777	543	3	0	9,323	127,404	25,144	4,171	2,814	159,533
ACTUAL 2002	8,946	558	4	0	9,508	133,570	24,962	4,200	2,907	165,639
ACTUAL 2003	9,069	568	4	0	9,641	134,756	24,637	9,234	2,747	171,374
ACTUAL 2004	9,284	479	5	0	9,768	136,784	24,005	11,568	2,916	175,273
ACTUAL 2005	9,852	172	5	0	9,829	151,349	19,078	12,731	2,897	186,055
ACTUAL 2006	9,700	172	5	0	9,877	147,283	20,476	11,664	2,915	182,338
ACTUAL 2007	9,736	171	6	0	9,913	151,995	23,060	11,254	2,925	189,234
ACTUAL 2008	9,695	170	6	0	9,871	150,948	22,387	12,405	2,948	188,689
ACTUAL 2009	9,847	185	6	0	9,818	145,110	19,127	11,996	2,903	179,136
FRCST 2010	9,636	165	6	0	9,807	144,646	19,127	13,195	2,856	179,626
FRCST 2011	9,671	165	6	0	9,842	145,216	19,127	13,187	2,858	180,388
FRCST 2012	9,722	165	6	0	9,893	146,010	19,127	13,180	2,858	181,175
FRCST 2013	9,773	165	6	0	9,944	146,780	19,127	13,173	2,858	181,938
FRCST 2014	9,840	165	6	0	10,011	147,846	19,127	13,166	2,858	182,997
FRCST 2015	9,908	165	6	0	10,079	149,014	19,127	16,867	2,858	187,866
FRCST 2016	10,000	167	6	0	10,173	150,502	19,393	16,877	2,858	189,630
FRCST 2017	10,093	169	6	0	10,268	151,978	19,660	16,888	2,858	191,384
FRCST 2018	10,186	171	6	0	10,363	153,455	19,927	16,899	2,858	193,139
FRCST 2019	10,281	173	6	0	10,460	154,940	20,195	16,910	2,858	194,903
FRCST 2020	10,376	175	6	0	10,557	156,435	20,464	16,921	2,858	196,678
FRCST 2021	10,497	178	6	0	10,681	158,302	20,847	16,921	2,858	198,928
FRCST 2022	10,619	181	6	0	10,806	160,182	21,230	16,921	2,858	201,191
FRCST 2023	10,742	184	6	0	10,932	162,080	21,615	16,921	2,858	203,474
FRCST 2024	10,867	187	6	0	11,060	163,998	22,000	16,921	2,858	205,777
FRCST 2025	10,993	190	6	0	11,189	165,936	22,386	16,921	2,858	208,101
FRCST 2026	11,139	195	6	0	11,340	168,254	23,001	16,921	2,858	211,034
FRCST 2027	11,286	200	6	0	11,492	170,649	23,617	16,921	2,858	214,045
FRCST 2028	11,435	205	6	0	11,646	173,100	24,234	16,921	2,858	217,113
FRCST 2029	11,586	210	6	0	11,802	175,597	24,852	16,921	2,858	220,228
FRCST 2030	11,739	215	6	0	11,960	178,134	25,472	16,921	2,858	223,385

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	1.57%	-1.29%	2	0	1.42%	2.44%	1.19%	24.19%	1.13%	3.08%
2004 -2009	0.77%	-19.20%	1	0	0.10%	1.19%	-4.44%	0.73%	-0.09%	0.44%
2010 -2015	0.56%	0.00%	0	0	0.55%	0.80%	0.00%	5.03%	0.00%	0.88%
2015 -2020	0.93%	1.18%	0	0	0.93%	0.98%	1.36%	0.06%	0.00%	0.92%
2020 -2025	1.16%	1.66%	0	0	1.17%	1.19%	1.81%	0.00%	0.00%	1.14%
2025 -2030	1.32%	2.50%	0	0	1.34%	1.43%	2.62%	0.00%	0.00%	1.43%
1999 -2009	1.17%	-10.89%	3	0	0.76%	1.81%	-1.67%	11.85%	0.52%	1.75%
2010 -2030	0.99%	1.33%	0	0	1.00%	1.05%	1.44%	1.25%	0.00%	1.09%

1971 : BEGINNING HISTORICAL DATA YEAR ?  
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20 : NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** BASE SCENARIO RESULTS *****										
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)
ACTUAL 1999	5.63%	8,983	159,556	47.6%	38,273	33,570	97.5%	98.2%	37,305	32,973
ACTUAL 2000	7.02%	11,605	165,311	49.6%	38,047	30,272	98.3%	95.5%	37,412	28,903
ACTUAL 2001	3.72%	6,164	165,697	45.3%	41,727	33,372	94.4%	97.6%	39,371	32,587
ACTUAL 2002	6.17%	10,892	178,531	52.9%	38,098	37,574	98.8%	90.7%	37,638	34,096
ACTUAL 2003	5.43%	9,840	181,214	49.0%	42,224	34,074	95.5%	95.7%	40,331	32,801
ACTUAL 2004	5.87%	10,930	186,203	49.2%	43,218	34,478	96.8%	98.1%	41,837	33,818
ACTUAL 2005	4.81%	9,401	195,456	50.2%	44,429	39,529	98.4%	99.6%	43,738	39,376
ACTUAL 2006	3.81%	7,222	189,560	49.2%	43,957	39,712	99.2%	99.4%	43,613	39,469
ACTUAL 2007	5.45%	10,908	200,142	45.8%	49,893	39,157	94.1%	80.8%	46,958	31,655
ACTUAL 2008	5.96%	11,959	200,648	49.5%	46,274	36,628	97.0%	92.3%	44,895	33,807
ACTUAL 2009	4.92%	9,270	188,406	42.1%	51,082	35,729	96.9%	96.3%	49,520	34,398
FRCST 2010	5.10%	9,664	188,490	48.0%	45,065	36,052	98.0%	95.0%	44,164	34,250
FRCST 2011	5.10%	9,694	190,082	48.0%	45,206	36,165	98.0%	95.0%	44,302	34,357
FRCST 2012	5.10%	9,736	190,911	48.0%	45,403	36,323	98.0%	95.0%	44,495	34,507
FRCST 2013	5.10%	9,777	191,715	48.0%	45,595	36,476	98.0%	95.0%	44,683	34,652
FRCST 2014	5.10%	9,834	192,831	48.0%	45,860	36,688	98.0%	95.0%	44,943	34,854
FRCST 2015	5.10%	10,096	197,962	48.0%	47,080	37,864	98.0%	95.0%	46,139	35,781
FRCST 2016	5.10%	10,191	199,821	48.0%	47,522	38,018	98.0%	95.0%	46,572	36,117
FRCST 2017	5.10%	10,285	201,669	48.0%	47,962	38,369	98.0%	95.0%	47,003	36,451
FRCST 2018	5.10%	10,379	203,518	48.0%	48,402	38,721	98.0%	95.0%	47,434	36,785
FRCST 2019	5.10%	10,474	205,377	48.0%	48,844	39,075	98.0%	95.0%	47,867	37,121
FRCST 2020	5.10%	10,570	207,248	48.0%	49,288	39,431	98.0%	95.0%	48,303	37,459
FRCST 2021	5.10%	10,661	209,619	48.0%	49,852	39,882	98.0%	95.0%	48,855	37,888
FRCST 2022	5.10%	10,812	212,003	48.0%	50,419	40,336	98.0%	95.0%	49,411	38,319
FRCST 2023	5.10%	10,935	214,409	48.0%	50,991	40,793	98.0%	95.0%	49,972	38,753
FRCST 2024	5.10%	11,059	216,836	48.0%	51,569	41,255	98.0%	95.0%	50,537	39,192
FRCST 2025	5.10%	11,184	219,285	48.0%	52,151	41,721	98.0%	95.0%	51,108	39,635
FRCST 2026	5.10%	11,341	222,375	48.0%	52,886	42,309	98.0%	95.0%	51,828	40,193
FRCST 2027	5.10%	11,503	225,548	48.0%	53,641	42,912	98.0%	95.0%	52,568	40,767
FRCST 2028	5.10%	11,668	228,781	48.0%	54,409	43,528	98.0%	95.0%	53,321	41,351
FRCST 2029	5.10%	11,835	232,063	48.0%	55,190	44,152	98.0%	95.0%	54,086	41,944
FRCST 2030	5.10%	12,005	235,390	48.0%	55,981	44,785	98.0%	95.0%	54,862	42,546

***** BASE SCENARIO RESULTS *****										
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHANGE)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999 -2004	5.64%	4.00%	3.14%	48.9%	2.46%	0.54%	96.9%	96.0%	2.32%	0.51%
2004 -2009	5.14%	-3.24%	0.24%	47.7%	3.40%	0.72%	97.1%	94.4%	3.43%	0.34%
2010 -2015	5.10%	0.88%	0.88%	48.0%	0.88%	0.88%	98.0%	95.0%	0.88%	0.88%
2015 -2020	5.10%	0.92%	0.92%	48.0%	0.92%	0.92%	98.0%	95.0%	0.92%	0.92%
2020 -2025	5.10%	1.14%	1.14%	48.0%	1.14%	1.14%	98.0%	95.0%	1.14%	1.14%
2025 -2030	5.10%	1.43%	1.43%	48.0%	1.43%	1.43%	98.0%	95.0%	1.43%	1.43%
1999 -2009	5.34%	0.31%	1.68%	48.2%	2.93%	0.63%	97.0%	94.9%	2.87%	0.42%
2010 -2030	5.10%	1.09%	1.09%	48.0%	1.09%	1.09%	98.0%	95.0%	1.09%	1.09%

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\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES							H.E.
EXTREME ANNUAL LOAD FACTOR							ITERATION
YEAR	LOAD FACTOR	WINTER	SUMMER	WINTER	SUMMER		ACT. AVG. WPC (MILLS/KWH)
ACTUAL	1999						
ACTUAL	2000						
ACTUAL	2001						
ACTUAL	2002						
ACTUAL	2003						
ACTUAL	2004						
ACTUAL	2005						
ACTUAL	2006						
ACTUAL	2007						
ACTUAL	2008						
ACTUAL	2009						
FRCST	2010	42.0%	51.503	41.203	50.473	39.142	68.830
FRCST	2011	42.0%	51.664	41.331	50.631	39.285	70.910
FRCST	2012	42.0%	51.890	41.512	50.852	39.436	75.360
FRCST	2013	42.0%	52.108	41.688	51.066	39.602	79.430
FRCST	2014	42.0%	52.411	41.929	51.363	39.833	82.230
FRCST	2015	42.0%	53.806	43.045	52.730	40.892	83.810
FRCST	2016	42.0%	54.311	43.449	53.225	41.277	85.486
FRCST	2017	42.0%	54.813	43.851	53.717	41.658	87.198
FRCST	2018	42.0%	55.316	44.253	54.210	42.040	88.940
FRCST	2019	42.0%	55.821	44.657	54.705	42.424	90.719
FRCST	2020	42.0%	56.330	45.064	55.203	42.810	92.533
FRCST	2021	42.0%	56.974	45.579	55.834	43.300	94.384
FRCST	2022	42.0%	57.622	46.098	56.470	43.793	96.271
FRCST	2023	42.0%	58.276	46.621	57.110	44.290	98.197
FRCST	2024	42.0%	58.935	47.148	57.757	44.791	100.161
FRCST	2025	42.0%	59.601	47.681	58.409	45.297	102.164
FRCST	2026	42.0%	60.441	48.353	59.232	45.935	102.164
FRCST	2027	42.0%	61.304	49.043	60.077	46.591	102.164
FRCST	2028	42.0%	62.182	49.746	60.939	47.259	102.164
FRCST	2029	42.0%	63.074	50.460	61.813	47.937	102.164
FRCST	2030	42.0%	63.979	51.183	62.699	48.624	102.164

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW) WIN (MAX)	EXTREME SINGLE TEMP. COINCIDENT PEAK (MW) SUM (MAX)	EXTREME SINGLE TEMP. COINCIDENT PEAK (MW) WIN (MAX)	EXTREME SINGLE TEMP. COINCIDENT PEAK (MW) SUM (MAX)	
1999 -2004	45.3%	43.218	37.574	41.837	34.096	
2004 -2009	42.1%	51.082	39.712	49.520	39.469	
2010 -2015	42.0%	53.806	43.045	52.730	40.892	
2015 -2020	42.0%	56.330	45.064	55.203	42.810	
2020 -2025	42.0%	59.601	47.681	58.409	45.297	
2025 -2030	42.0%	63.979	51.183	62.699	48.624	
1999 -2009	42.1%	51.082	39.712	49.520	39.469	
2010 -2030	42.0%	63.979	51.183	62.699	48.624	

MENU

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\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	20,931	927	10	13	21,881	314,257	43,359	25,634	56	383,306
ACTUAL 2000	21,430	955	12	12	22,409	335,737	45,117	26,172	54	407,080
ACTUAL 2001	21,852	992	15	13	22,872	340,780	46,240	27,122	55	414,197
ACTUAL 2002	22,165	1,005	16	16	23,202	374,868	43,045	29,438	76	447,427
ACTUAL 2003	22,457	1,012	17	16	23,502	368,719	45,487	28,455	74	442,735
ACTUAL 2004	22,655	1,025	14	15	23,709	377,963	47,278	27,198	74	452,513
ACTUAL 2005	22,862	1,038	14	13	23,927	400,163	48,716	33,055	72	482,006
ACTUAL 2006	23,044	1,020	15	13	24,092	384,953	46,916	36,845	72	468,786
ACTUAL 2007	23,188	1,005	16	15	24,224	410,226	47,308	37,853	74	495,461
ACTUAL 2008	23,235	1,006	16	15	24,272	411,303	45,884	34,941	79	492,207
ACTUAL 2009	23,152	1,001	16	15	24,184	387,018	42,848	34,461	85	464,412
FRCST 2010	23,144	1,003	17	18	24,182	387,024	42,939	36,814	85	466,862
FRCST 2011	23,196	1,005	17	18	24,236	389,449	43,030	37,080	85	469,844
FRCST 2012	23,301	1,007	17	18	24,343	392,792	43,121	37,215	85	473,213
FRCST 2013	23,435	1,009	17	18	24,479	396,263	43,212	37,352	85	476,912
FRCST 2014	23,596	1,011	17	18	24,642	400,405	43,304	37,493	85	481,297
FRCST 2015	23,769	1,013	17	18	24,817	405,191	43,395	37,636	85	486,307
FRCST 2016	23,946	1,019	17	18	25,000	409,981	43,690	37,932	85	491,688
FRCST 2017	24,125	1,025	17	18	25,185	414,768	43,986	38,232	85	497,071
FRCST 2018	24,305	1,031	17	18	25,371	419,578	44,281	38,534	85	502,478
FRCST 2019	24,486	1,037	17	18	25,558	424,427	44,577	38,840	85	507,929
FRCST 2020	24,669	1,043	17	18	25,747	429,321	44,873	39,149	85	513,428
FRCST 2021	24,881	1,053	17	18	25,969	434,664	45,374	39,149	85	519,272
FRCST 2022	25,094	1,063	17	18	26,192	440,016	45,875	39,149	85	525,125
FRCST 2023	25,309	1,073	17	18	26,417	445,400	46,377	39,149	85	531,011
FRCST 2024	25,525	1,083	17	18	26,643	450,829	46,879	39,149	85	536,942
FRCST 2025	25,743	1,093	17	18	26,871	456,310	47,382	39,149	85	542,926
FRCST 2026	25,972	1,113	17	18	27,120	462,485	48,342	39,149	85	550,081
FRCST 2027	26,203	1,133	17	18	27,371	468,970	49,302	39,149	85	557,506
FRCST 2028	26,436	1,153	17	18	27,624	475,659	50,263	39,149	85	565,156
FRCST 2029	26,670	1,173	17	18	27,878	482,498	51,225	39,149	85	572,957
FRCST 2030	26,906	1,193	17	18	28,134	489,460	52,189	39,149	85	580,883

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	1.60%	2.03%	4	2	1.62%	3.76%	1.75%	1.19%	5.73%	3.38%
2004 -2009	0.43%	-0.47%	2	0	0.40%	0.47%	-1.95%	4.85%	2.81%	0.52%
2010 -2015	0.53%	0.20%	0	0	0.52%	0.92%	0.21%	0.44%	0.00%	0.82%
2015 -2020	0.75%	0.59%	0	0	0.74%	1.16%	0.67%	0.79%	0.00%	1.09%
2020 -2025	0.86%	0.94%	0	0	0.86%	1.23%	1.09%	0.00%	0.00%	1.12%
2025 -2030	0.89%	1.77%	0	0	0.92%	1.41%	1.95%	0.00%	0.00%	1.36%
1999 -2009	1.01%	0.77%	6	2	1.01%	2.10%	-0.12%	3.00%	4.26%	1.94%
2010 -2030	0.76%	0.87%	0	0	0.76%	1.18%	0.98%	0.31%	0.00%	1.10%

1971 BEGINNING HISTORICAL DATA YEAR ?  
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20 NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** BASE SCENARIO RESULTS *****										
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)
ACTUAL 1999	6.98%	28,762	412,088	52.0%	90,447	90,216	99.4%	98.1%	89,940	88,538
ACTUAL 2000	6.24%	27,092	434,172	48.1%	103,080	83,856	100.0%	100.0%	103,080	83,856
ACTUAL 2001	4.12%	17,798	431,995	45.0%	109,694	89,148	96.6%	99.1%	105,942	88,346
ACTUAL 2002	4.09%	19,080	466,507	55.1%	96,655	88,611	100.0%	99.6%	96,655	88,239
ACTUAL 2003	5.64%	25,463	469,198	44.6%	120,195	88,249	100.0%	99.8%	120,195	88,069
ACTUAL 2004	5.35%	25,578	478,091	44.4%	122,916	90,106	100.0%	99.7%	122,916	89,877
ACTUAL 2005	4.51%	22,785	504,771	47.4%	121,879	104,268	100.0%	99.4%	121,879	103,896
ACTUAL 2006	4.50%	22,089	490,875	46.4%	120,890	105,165	99.2%	99.2%	119,971	104,314
ACTUAL 2007	4.88%	25,419	520,880	44.2%	134,682	108,585	98.1%	95.8%	132,062	104,001
ACTUAL 2008	4.88%	25,252	517,459	41.5%	142,368	96,122	93.3%	95.7%	132,873	92,030
ACTUAL 2009	5.12%	25,061	489,473	38.5%	145,110	94,919	98.5%	96.7%	142,890	91,744
FRCST 2010	4.80%	23,539	490,401	44.0%	127,231	95,424	98.0%	98.0%	124,687	93,616
FRCST 2011	4.80%	23,680	493,324	44.0%	127,990	95,992	98.0%	98.0%	125,430	94,073
FRCST 2012	4.80%	23,859	497,072	44.0%	128,962	96,722	98.0%	98.0%	126,383	94,787
FRCST 2013	4.80%	24,046	500,958	44.0%	129,970	97,478	98.0%	98.0%	127,371	95,528
FRCST 2014	4.80%	24,267	505,554	44.0%	131,163	98,372	98.0%	98.0%	128,539	96,404
FRCST 2015	4.80%	24,520	510,827	44.0%	132,531	99,398	98.0%	98.0%	129,880	97,410
FRCST 2016	4.80%	24,791	516,479	44.0%	133,997	100,498	98.0%	98.0%	131,317	98,468
FRCST 2017	4.80%	25,082	522,133	44.0%	135,464	101,598	98.0%	98.0%	132,755	99,566
FRCST 2018	4.80%	25,335	527,813	44.0%	136,938	102,703	98.0%	98.0%	134,199	100,649
FRCST 2019	4.80%	25,610	533,539	44.0%	138,423	103,817	98.0%	98.0%	135,655	101,741
FRCST 2020	4.80%	25,897	539,315	44.0%	139,922	104,941	98.0%	98.0%	137,123	102,842
FRCST 2021	4.80%	26,182	545,454	44.0%	141,515	106,136	98.0%	98.0%	138,684	104,013
FRCST 2022	4.80%	26,477	551,802	44.0%	143,110	107,332	98.0%	98.0%	140,247	105,186
FRCST 2023	4.80%	26,774	557,785	44.0%	144,714	108,535	98.0%	98.0%	141,819	106,385
FRCST 2024	4.80%	27,073	564,015	44.0%	146,330	109,748	98.0%	98.0%	143,404	107,553
FRCST 2025	4.80%	27,374	570,300	44.0%	147,961	110,971	98.0%	98.0%	145,002	108,751
FRCST 2026	4.80%	27,734	577,795	44.0%	149,605	112,429	98.0%	98.0%	146,607	110,180
FRCST 2027	4.80%	28,110	585,816	44.0%	151,264	113,951	98.0%	98.0%	148,296	111,672
FRCST 2028	4.80%	28,495	593,651	44.0%	154,019	115,514	98.0%	98.0%	150,939	113,204
FRCST 2029	4.80%	28,889	601,846	44.0%	156,145	117,109	98.0%	98.0%	153,022	114,767
FRCST 2030	4.80%	29,288	610,171	44.0%	158,305	118,729	98.0%	98.0%	155,139	116,354

***** BASE SCENARIO RESULTS *****										
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHANGE)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999 -2004	5.40%	-2.32%	3.02%	48.2%	6.33%	-0.02%	99.3%	99.4%	6.45%	0.30%
2004 -2009	4.87%	-0.41%	0.47%	43.7%	3.38%	1.05%	98.2%	97.8%	3.06%	0.41%
2010 -2015	4.80%	0.82%	0.82%	44.0%	0.82%	0.82%	98.0%	98.0%	0.82%	0.82%
2015 -2020	4.80%	1.09%	1.09%	44.0%	1.09%	1.09%	98.0%	98.0%	1.09%	1.09%
2020 -2025	4.80%	1.12%	1.12%	44.0%	1.12%	1.12%	98.0%	98.0%	1.12%	1.12%
2025 -2030	4.80%	1.36%	1.36%	44.0%	1.36%	1.36%	98.0%	98.0%	1.36%	1.36%
1999 -2009	5.12%	-1.37%	1.74%	46.1%	4.84%	0.51%	98.6%	98.5%	4.74%	0.36%
2010 -2030	4.80%	1.10%	1.10%	44.0%	1.10%	1.10%	98.0%	98.0%	1.10%	1.10%

1971 : BEGINNING HISTORICAL DATA YEAR ?  
 2009 : FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 34)  
 20 : NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR. ?)

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES							H.E. ITERATION ACT. AVG. WPC (MILLS/KWH)
YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)			
		WINTER	SUMMER	WINTER	SUMMER		
ACTUAL	1999						
ACTUAL	2000						
ACTUAL	2001						
ACTUAL	2002						
ACTUAL	2003						
ACTUAL	2004						
ACTUAL	2005						
ACTUAL	2006						
ACTUAL	2007						
ACTUAL	2008						
ACTUAL	2009						
FRCST	2010	38.5%	145.407	109.056	142.499	106.674	88.830
FRCST	2011	38.5%	146.274	109.708	143.349	107.512	70.910
FRCST	2012	38.5%	147.386	110.539	144.438	108.328	75.360
FRCST	2013	38.5%	148.538	111.403	145.567	109.175	79.430
FRCST	2014	38.5%	149.900	112.425	146.902	110.177	82.230
FRCST	2015	38.5%	151.464	113.598	148.434	111.326	83.810
FRCST	2016	38.5%	153.140	114.855	150.077	112.558	85.486
FRCST	2017	38.5%	154.816	116.112	151.720	113.790	87.196
FRCST	2018	38.5%	156.501	117.375	153.370	115.028	88.940
FRCST	2019	38.5%	158.198	118.648	155.034	116.275	90.719
FRCST	2020	38.5%	159.911	119.933	156.712	117.534	92.533
FRCST	2021	38.5%	161.731	121.298	158.496	118.872	94.384
FRCST	2022	38.5%	163.554	122.665	160.283	120.212	96.271
FRCST	2023	38.5%	165.387	124.040	162.079	121.559	98.197
FRCST	2024	38.5%	167.234	125.426	163.890	122.917	100.161
FRCST	2025	38.5%	169.098	126.824	165.716	124.287	102.164
FRCST	2026	38.5%	171.320	128.490	167.894	125.920	102.164
FRCST	2027	38.5%	173.639	130.229	170.166	127.625	102.164
FRCST	2028	38.5%	176.022	132.016	172.501	129.376	102.164
FRCST	2029	38.5%	178.452	133.839	174.883	131.162	102.164
FRCST	2030	38.5%	180.920	135.690	177.302	132.976	102.164

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)	
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)
1999 -2004	44.4%	122.916	90.216	122.916	89.877
2004 -2009	38.5%	145.110	108.585	142.890	104.314
2010 -2015	38.5%	151.464	113.598	148.434	111.326
2015 -2020	38.5%	159.911	119.933	156.712	117.534
2020 -2025	38.5%	169.098	126.824	165.716	124.287
2025 -2030	38.5%	180.920	135.690	177.302	132.976
1999 -2009	38.5%	145.110	108.585	142.890	104.314
2010 -2030	38.5%	180.920	135.690	177.302	132.976

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\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS				TOTAL	SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER		RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	13,955	563	2	433	14,953	187,896	60,312	10,145	439	258,792
ACTUAL 2000	14,823	581	7	551	15,962	199,246	53,788	21,587	588	275,189
ACTUAL 2001	15,459	606	6	619	16,690	208,736	63,094	17,789	598	290,217
ACTUAL 2002	16,027	662	4	676	17,369	231,830	65,964	17,951	713	316,458
ACTUAL 2003	16,554	689	9	799	18,051	229,600	60,155	26,024	771	316,550
ACTUAL 2004	17,284	707	10	904	18,905	244,678	59,839	28,825	881	334,223
ACTUAL 2005	18,119	744	7	1,039	19,909	270,213	77,827	16,110	952	367,102
ACTUAL 2006	19,143	775	7	1,172	21,097	271,662	84,355	18,907	1,019	375,943
ACTUAL 2007	20,017	795	15	1,268	22,095	300,946	81,075	33,144	1,085	416,250
ACTUAL 2008	20,399	819	15	1,295	22,528	302,238	76,084	41,278	1,101	420,701
ACTUAL 2009	20,649	833	15	1,303	22,800	289,007	78,015	34,871	1,111	403,004
FRCST 2010	21,154	843	17	1,324	23,338	300,692	79,023	37,804	1,127	418,646
FRCST 2011	21,671	853	17	1,324	23,865	310,960	80,031	43,651	1,127	435,769
FRCST 2012	22,201	863	17	1,324	24,405	320,358	81,039	48,227	1,127	450,751
FRCST 2013	22,743	873	17	1,324	24,957	328,950	82,047	52,808	1,127	464,932
FRCST 2014	23,299	883	17	1,324	25,523	337,629	83,055	56,378	1,127	478,189
FRCST 2015	23,868	893	17	1,324	26,102	346,841	84,063	60,216	1,127	492,247
FRCST 2016	24,432	910	17	1,324	26,683	356,514	85,945	61,864	1,127	505,450
FRCST 2017	25,009	927	17	1,324	27,277	366,702	87,831	64,192	1,127	519,852
FRCST 2018	25,599	944	17	1,324	27,884	377,308	89,720	66,523	1,127	534,678
FRCST 2019	26,203	961	17	1,324	28,505	388,282	91,613	67,114	1,127	548,138
FRCST 2020	26,820	978	17	1,324	29,139	399,029	93,510	67,710	1,127	561,376
FRCST 2021	27,456	1,005	17	1,324	29,802	408,131	96,418	67,710	1,127	573,386
FRCST 2022	28,105	1,032	17	1,324	30,478	418,175	99,333	67,710	1,127	586,345
FRCST 2023	28,768	1,059	17	1,324	31,168	428,838	102,253	67,710	1,127	599,928
FRCST 2024	29,445	1,086	17	1,324	31,872	439,957	105,179	67,710	1,127	613,973
FRCST 2025	30,136	1,113	17	1,324	32,590	451,450	108,111	67,710	1,127	628,398
FRCST 2026	30,852	1,145	17	1,324	33,338	464,006	111,553	67,710	1,127	644,396
FRCST 2027	31,582	1,177	17	1,324	34,100	477,203	115,002	67,710	1,127	661,042
FRCST 2028	32,327	1,209	17	1,324	34,877	490,911	118,457	67,710	1,127	678,205
FRCST 2029	33,086	1,241	17	1,324	35,668	505,063	121,920	67,710	1,127	695,820
FRCST 2030	33,861	1,273	17	1,324	36,475	519,631	125,389	67,710	1,127	713,857

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS				TOTAL	SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)		RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	4.37%	4.66%	8	471	4.80%	5.42%	-0.16%	23.23%	14.95%	5.25%
2004 -2009	3.62%	3.33%	5	399	3.82%	3.39%	5.45%	3.88%	4.75%	3.81%
2010 -2015	2.44%	1.16%	0	0	2.26%	2.90%	1.24%	9.76%	0.00%	3.29%
2015 -2020	2.36%	1.84%	0	0	2.23%	2.84%	2.15%	2.37%	0.00%	2.66%
2020 -2025	2.36%	2.62%	0	0	2.26%	2.50%	2.94%	0.00%	0.00%	2.28%
2025 -2030	2.36%	2.72%	0	0	2.28%	2.85%	3.01%	0.00%	0.00%	2.58%
1999 -2009	4.00%	4.00%	13	870	4.31%	4.40%	2.61%	13.14%	9.73%	4.53%
2010 -2030	2.38%	2.08%	0	0	2.26%	2.77%	2.34%	2.96%	0.00%	2.70%

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***** BASE SCENARIO RESULTS *****					***** BASE SCENARIO RESULTS *****						
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK		
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)	
ACTUAL	1999	4.63%	12,564	271,356	39.5%	48,973	78,345	93.1%	95.2%	45,584	74,573
ACTUAL	2000	4.77%	13,784	288,973	45.5%	48,827	72,439	89.7%	94.1%	43,822	68,164
ACTUAL	2001	4.71%	14,345	304,562	43.4%	80,090	80,016	91.9%	95.3%	55,215	76,287
ACTUAL	2002	4.72%	15,677	332,135	44.6%	55,208	85,023	90.4%	95.0%	49,888	80,787
ACTUAL	2003	4.83%	16,065	332,615	45.4%	57,631	83,676	92.2%	95.2%	53,122	79,670
ACTUAL	2004	4.79%	16,815	351,038	47.4%	63,562	84,504	89.4%	95.4%	56,795	80,655
ACTUAL	2005	4.96%	19,159	386,261	42.5%	68,119	103,654	93.1%	91.9%	63,452	95,220
ACTUAL	2006	4.90%	19,370	395,313	41.6%	73,384	108,488	91.1%	94.5%	66,877	102,518
ACTUAL	2007	4.82%	21,079	437,329	42.9%	78,366	116,323	91.5%	92.3%	71,682	107,365
ACTUAL	2008	4.81%	21,258	441,959	45.6%	86,956	110,536	85.1%	87.6%	74,016	96,636
ACTUAL	2009	4.77%	20,186	423,190	46.7%	93,294	103,477	87.7%	96.8%	81,810	100,204
FRCST	2010	4.80%	21,108	439,754	44.0%	83,278	114,091	92.0%	93.0%	76,616	106,105
FRCST	2011	4.80%	21,972	457,741	44.0%	86,685	118,758	92.0%	93.0%	79,750	110,445
FRCST	2012	4.80%	22,727	473,478	44.0%	89,665	122,841	92.0%	93.0%	82,492	114,242
FRCST	2013	4.80%	23,442	488,374	44.0%	92,486	126,706	92.0%	93.0%	85,087	117,836
FRCST	2014	4.80%	24,110	502,299	44.0%	95,123	130,318	92.0%	93.0%	87,513	121,196
FRCST	2015	4.80%	24,819	517,066	44.0%	97,919	134,150	92.0%	93.0%	90,086	124,759
FRCST	2016	4.80%	25,485	530,935	44.0%	100,546	137,748	92.0%	93.0%	92,502	128,105
FRCST	2017	4.80%	26,211	546,063	44.0%	103,411	141,673	92.0%	93.0%	95,138	131,756
FRCST	2018	4.80%	26,959	561,637	44.0%	106,360	145,713	92.0%	93.0%	97,851	135,513
FRCST	2019	4.80%	27,637	575,773	44.0%	109,037	149,381	92.0%	93.0%	100,314	138,924
FRCST	2020	4.80%	28,305	589,681	44.0%	111,671	152,989	92.0%	93.0%	102,737	142,280
FRCST	2021	4.80%	28,910	602,296	44.0%	114,060	156,262	92.0%	93.0%	104,935	145,324
FRCST	2022	4.80%	29,564	615,909	44.0%	116,638	159,794	92.0%	93.0%	107,307	148,608
FRCST	2023	4.80%	30,248	630,176	44.0%	119,340	163,495	92.0%	93.0%	109,793	152,051
FRCST	2024	4.80%	30,957	644,930	44.0%	122,134	167,323	92.0%	93.0%	112,363	155,611
FRCST	2025	4.80%	31,684	660,082	44.0%	125,003	171,254	92.0%	93.0%	115,003	159,267
FRCST	2026	4.80%	32,491	676,887	44.0%	128,185	175,614	92.0%	93.0%	117,931	163,321
FRCST	2027	4.80%	33,330	694,372	44.0%	131,497	180,151	92.0%	93.0%	120,977	167,540
FRCST	2028	4.80%	34,195	712,400	44.0%	134,911	184,828	92.0%	93.0%	124,118	171,890
FRCST	2029	4.80%	35,083	730,903	44.0%	138,415	189,628	92.0%	93.0%	127,342	176,354
FRCST	2030	4.80%	35,993	749,850	44.0%	142,003	194,544	92.0%	93.0%	130,643	180,926

***** BASE SCENARIO RESULTS *****					***** BASE SCENARIO RESULTS *****					
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHANGE)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999 -2004	4.74%	6.00%	5.28%	44.3%	5.35%	1.53%	91.1%	95.0%	4.50%	1.58%
2004 -2009	4.84%	3.72%	3.81%	44.5%	7.98%	4.13%	89.7%	93.1%	7.57%	4.44%
2010 -2015	4.80%	3.29%	3.29%	44.0%	3.29%	3.29%	92.0%	93.0%	3.29%	3.29%
2015 -2020	4.80%	2.66%	2.66%	44.0%	2.66%	2.66%	92.0%	93.0%	2.66%	2.66%
2020 -2025	4.80%	2.28%	2.28%	44.0%	2.28%	2.28%	92.0%	93.0%	2.28%	2.28%
2025 -2030	4.80%	2.58%	2.58%	44.0%	2.58%	2.58%	92.0%	93.0%	2.58%	2.58%
1999 -2009	4.79%	4.88%	4.54%	44.1%	6.66%	2.82%	90.5%	93.9%	6.02%	3.00%
2010 -2030	4.80%	2.70%	2.70%	44.0%	2.70%	2.70%	92.0%	93.0%	2.70%	2.70%

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***** BASE SCENARIO RESULTS *****						***** BASE SCENARIO RESULTS *****	
PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES							H.E. ITERATION ACT. AVG. WPC (MILLS/KWH)
YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)			
		WINTER	SUMMER	WINTER	SUMMER		
ACTUAL	1999						
ACTUAL	2000						
ACTUAL	2001						
ACTUAL	2002						
ACTUAL	2003						
ACTUAL	2004						
ACTUAL	2005						
ACTUAL	2006						
ACTUAL	2007						
ACTUAL	2008						
ACTUAL	2009						
FRCST	2010	42.0%	87.244	119.524	80.265	111.158	68.830
FRCST	2011	42.0%	90.813	124.413	83.548	115.704	70.910
FRCST	2012	42.0%	93.935	128.690	86.420	119.682	75.360
FRCST	2013	42.0%	96.890	132.739	89.139	123.447	79.430
FRCST	2014	42.0%	99.653	136.524	91.680	126.967	82.230
FRCST	2015	42.0%	102.582	140.538	94.376	130.700	83.810
FRCST	2016	42.0%	105.334	144.307	96.907	134.205	85.486
FRCST	2017	42.0%	108.335	148.419	99.668	138.030	87.196
FRCST	2018	42.0%	111.425	152.652	102.511	141.966	88.940
FRCST	2019	42.0%	114.229	156.494	105.091	145.539	90.719
FRCST	2020	42.0%	116.989	160.274	107.629	149.055	92.533
FRCST	2021	42.0%	119.491	163.703	109.932	152.244	94.384
FRCST	2022	42.0%	122.192	167.403	112.416	155.685	96.271
FRCST	2023	42.0%	125.023	171.281	115.021	159.291	98.197
FRCST	2024	42.0%	127.950	175.291	117.714	163.021	100.161
FRCST	2025	42.0%	130.956	179.409	120.479	166.851	102.164
FRCST	2026	42.0%	134.289	183.977	123.546	171.098	102.164
FRCST	2027	42.0%	137.758	188.729	126.738	175.518	102.164
FRCST	2028	42.0%	141.335	193.629	130.028	180.075	102.164
FRCST	2029	42.0%	145.006	198.658	133.406	184.752	102.164
FRCST	2030	42.0%	148.765	203.808	136.864	189.541	102.164

***** BASE SCENARIO RESULTS *****						***** BASE SCENARIO RESULTS *****	
TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)			
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)		
1999 -2004	39.5%	63.562	85.023	56.795	80.787		
2004 -2009	41.6%	93.294	116.323	81.810	107.365		
2010 -2015	42.0%	102.582	140.538	94.376	130.700		
2015 -2020	42.0%	116.989	160.274	107.629	149.055		
2020 -2025	42.0%	130.956	179.409	120.479	166.851		
2025 -2030	42.0%	148.765	203.808	136.864	189.541		
1999 -2009	39.5%	93.294	116.323	81.810	107.365		
2010 -2030	42.0%	148.765	203.808	136.864	189.541		

MENU

1971 : BEGINNING HISTORICAL DATA YEAR ?  
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20 : NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	6,756	328	2	3	7,089	84,970	8,776	1,391	52	95,189
ACTUAL 2000	6,899	333	3	3	7,238	86,279	9,476	1,379	52	97,186
ACTUAL 2001	7,085	332	5	3	7,425	89,029	9,127	1,515	52	99,723
ACTUAL 2002	7,237	330	4	3	7,574	95,656	9,185	2,605	52	107,498
ACTUAL 2003	7,298	333	5	3	7,639	92,982	9,135	2,450	54	104,621
ACTUAL 2004	7,402	339	4	3	7,748	96,814	9,213	2,614	55	108,696
ACTUAL 2005	7,503	330	3	3	7,839	101,827	9,177	2,738	55	113,795
ACTUAL 2006	7,549	338	3	3	7,893	98,283	10,254	2,514	55	111,106
ACTUAL 2007	7,619	339	3	3	7,964	104,813	11,215	2,523	56	118,607
ACTUAL 2008	7,839	57	4	3	7,903	108,221	7,999	2,674	56	118,950
ACTUAL 2009	7,773	54	3	3	7,833	101,190	8,133	2,661	54	112,038
FRCST 2010	7,763	54	3	3	7,823	104,498	8,133	2,857	54	115,542
FRCST 2011	7,817	54	3	3	7,877	106,426	8,133	2,857	54	117,470
FRCST 2012	7,872	54	3	3	7,932	107,911	8,133	2,857	54	118,955
FRCST 2013	7,927	54	3	3	7,987	109,102	8,133	2,857	54	120,146
FRCST 2014	7,982	54	3	3	8,042	110,182	8,133	2,857	54	121,226
FRCST 2015	8,038	54	3	3	8,098	111,272	8,133	2,857	54	122,316
FRCST 2016	8,099	55	3	3	8,160	112,440	8,286	2,857	54	123,637
FRCST 2017	8,161	56	3	3	8,223	113,612	8,439	2,857	54	124,962
FRCST 2018	8,223	57	3	3	8,286	114,790	8,592	2,857	54	126,293
FRCST 2019	8,286	58	3	3	8,350	115,976	8,745	2,857	54	127,632
FRCST 2020	8,349	59	3	3	8,414	117,171	8,898	2,857	54	128,980
FRCST 2021	8,417	60	3	3	8,483	118,413	9,051	2,857	54	130,375
FRCST 2022	8,484	61	3	3	8,551	119,657	9,205	2,857	54	131,773
FRCST 2023	8,552	62	3	3	8,620	120,905	9,358	2,857	54	133,174
FRCST 2024	8,621	63	3	3	8,690	122,160	9,512	2,857	54	134,583
FRCST 2025	8,690	64	3	3	8,760	123,423	9,665	2,857	54	135,999
FRCST 2026	8,764	66	3	3	8,836	124,873	9,972	2,857	54	137,756
FRCST 2027	8,838	68	3	3	8,912	126,413	10,280	2,857	54	139,604
FRCST 2028	8,913	70	3	3	8,989	128,022	10,588	2,857	54	141,521
FRCST 2029	8,989	72	3	3	9,067	129,685	10,896	2,857	54	143,492
FRCST 2030	9,065	74	3	3	9,145	131,393	11,204	2,857	54	145,508

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	1.84%	0.66%	2	0	1.79%	2.64%	0.98%	13.45%	1.13%	2.69%
2004 -2009	0.98%	-30.75%	-1	0	0.22%	0.89%	-2.46%	0.36%	-0.37%	0.61%
2010 -2015	0.70%	0.00%	0	0	0.69%	1.26%	0.00%	0.00%	0.00%	1.15%
2015 -2020	0.76%	1.79%	0	0	0.77%	1.04%	1.81%	0.00%	0.00%	1.07%
2020 -2025	0.80%	1.64%	0	0	0.81%	1.05%	1.67%	0.00%	0.00%	1.07%
2025 -2030	0.85%	2.95%	0	0	0.86%	1.26%	3.00%	0.00%	0.00%	1.36%

1999 -2009	1.41%	-16.51%	1	0	1.00%	1.76%	-0.76%	6.70%	0.38%	1.64%
2010 -2030	0.78%	1.59%	0	0	0.78%	1.15%	1.61%	0.00%	0.00%	1.16%

1971 : BEGINNING HISTORICAL DATA YEAR ?  
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20 : NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR. ?)

***** BASE SCENARIO RESULTS *****											
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK		
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)	
ACTUAL	1999	5.90%	5,968	101,157	43.6%	26,465	24,818	88.3%	99.2%	23,376	24,617
ACTUAL	2000	8.75%	9,331	106,517	48.3%	25,154	23,046	90.3%	100.0%	22,713	23,046
ACTUAL	2001	7.57%	8,167	107,890	41.9%	29,416	24,263	86.6%	96.3%	25,473	23,373
ACTUAL	2002	7.58%	8,817	116,315	49.9%	25,855	26,599	92.2%	94.9%	23,845	25,253
ACTUAL	2003	8.25%	9,407	114,028	41.8%	31,139	24,714	84.2%	93.9%	26,232	23,198
ACTUAL	2004	6.49%	7,544	116,240	41.6%	31,882	24,641	82.9%	98.4%	26,435	24,256
ACTUAL	2005	7.10%	8,697	122,492	42.3%	33,071	27,738	87.9%	97.3%	29,079	26,992
ACTUAL	2006	6.98%	8,337	119,443	45.4%	30,064	28,222	93.7%	96.9%	28,162	27,336
ACTUAL	2007	6.87%	8,749	127,356	44.3%	32,818	28,606	86.2%	95.1%	28,281	27,191
ACTUAL	2008	6.51%	8,283	127,233	41.3%	35,170	25,884	85.7%	93.5%	30,132	24,214
ACTUAL	2009	7.04%	8,485	120,523	36.6%	37,603	25,741	85.9%	95.9%	32,305	24,694
FRCST	2010	6.80%	8,430	123,972	42.0%	33,695	26,282	86.0%	96.0%	28,978	25,231
FRCST	2011	6.80%	8,571	126,041	42.0%	34,258	26,721	86.0%	96.0%	29,461	25,652
FRCST	2012	6.80%	8,679	127,634	42.0%	34,691	27,059	86.0%	96.0%	29,834	25,976
FRCST	2013	6.80%	8,766	128,912	42.0%	35,038	27,329	86.0%	96.0%	30,133	26,236
FRCST	2014	6.80%	8,845	130,071	42.0%	35,353	27,575	86.0%	96.0%	30,404	26,472
FRCST	2015	6.80%	8,924	131,240	42.0%	35,671	27,823	86.0%	96.0%	30,677	26,710
FRCST	2016	6.80%	9,021	132,658	42.0%	36,056	28,124	86.0%	96.0%	31,008	26,999
FRCST	2017	6.80%	9,117	134,079	42.0%	36,442	28,425	86.0%	96.0%	31,340	27,288
FRCST	2018	6.80%	9,215	135,508	42.0%	36,830	28,728	86.0%	96.0%	31,674	27,579
FRCST	2019	6.80%	9,312	136,944	42.0%	37,221	29,032	86.0%	96.0%	32,010	27,871
FRCST	2020	6.80%	9,411	138,391	42.0%	37,614	29,339	86.0%	96.0%	32,348	28,166
FRCST	2021	6.80%	9,512	139,887	42.0%	38,021	29,656	86.0%	96.0%	32,698	28,470
FRCST	2022	6.80%	9,614	141,387	42.0%	38,428	29,974	86.0%	96.0%	33,048	28,775
FRCST	2023	6.80%	9,717	142,891	42.0%	38,837	30,293	86.0%	96.0%	33,400	29,081
FRCST	2024	6.80%	9,819	144,402	42.0%	39,248	30,613	86.0%	96.0%	33,753	29,389
FRCST	2025	6.80%	9,923	145,922	42.0%	39,661	30,936	86.0%	96.0%	34,109	29,698
FRCST	2026	6.80%	10,051	147,807	42.0%	40,174	31,335	86.0%	96.0%	34,549	30,082
FRCST	2027	6.80%	10,186	149,790	42.0%	40,712	31,756	86.0%	96.0%	35,013	30,485
FRCST	2028	6.80%	10,326	151,847	42.0%	41,271	32,192	86.0%	96.0%	35,493	30,904
FRCST	2029	6.80%	10,469	153,961	42.0%	41,846	32,640	86.0%	96.0%	35,988	31,334
FRCST	2030	6.80%	10,616	156,124	42.0%	42,434	33,099	86.0%	96.0%	36,493	31,775

***** BASE SCENARIO RESULTS *****										
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHANGE)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999 -2004	7.43%	4.80%	2.82%	44.5%	3.79%	-0.14%	87.4%	97.1%	2.49%	-0.30%
2004 -2009	6.83%	2.38%	0.73%	41.9%	3.36%	0.86%	87.1%	96.2%	4.09%	0.36%
2010 -2015	6.80%	1.15%	1.15%	42.0%	1.15%	1.15%	86.0%	96.0%	1.15%	1.15%
2015 -2020	6.80%	1.07%	1.07%	42.0%	1.07%	1.07%	86.0%	96.0%	1.07%	1.07%
2020 -2025	6.80%	1.07%	1.07%	42.0%	1.07%	1.07%	86.0%	96.0%	1.07%	1.06%
2025 -2030	6.80%	1.36%	1.36%	42.0%	1.36%	1.36%	86.0%	96.0%	1.36%	1.35%
1999 -2009	7.19%	3.58%	1.77%	43.4%	3.58%	0.37%	87.6%	96.5%	3.29%	0.03%
2010 -2030	6.80%	1.16%	1.16%	42.0%	1.16%	1.16%	86.0%	96.0%	1.16%	1.16%

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\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES							H.E.
YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)		ACT. AVG. WPC (MILLS/KWH)	
		WINTER	SUMMER	WINTER	SUMMER		
ACTUAL	1999						
ACTUAL	2000						
ACTUAL	2001						
ACTUAL	2002						
ACTUAL	2003						
ACTUAL	2004						
ACTUAL	2005						
ACTUAL	2006						
ACTUAL	2007						
ACTUAL	2008						
ACTUAL	2009						
FRCST	2010	37.0%	38.249	29.834	32.894	28.641	68.830
FRCST	2011	37.0%	38.887	30.332	33.443	29.119	70.910
FRCST	2012	37.0%	39.379	30.715	33.866	29.487	75.360
FRCST	2013	37.0%	39.773	31.023	34.204	29.782	79.430
FRCST	2014	37.0%	40.130	31.302	34.512	30.050	82.230
FRCST	2015	37.0%	40.491	31.583	34.822	30.320	83.810
FRCST	2016	37.0%	40.928	31.924	35.198	30.647	85.486
FRCST	2017	37.0%	41.367	32.266	35.576	30.976	87.196
FRCST	2018	37.0%	41.808	32.610	35.954	31.305	88.940
FRCST	2019	37.0%	42.251	32.956	36.336	31.637	90.719
FRCST	2020	37.0%	42.697	33.304	36.720	31.972	92.533
FRCST	2021	37.0%	43.159	33.664	37.117	32.317	94.384
FRCST	2022	37.0%	43.621	34.025	37.514	32.664	96.271
FRCST	2023	37.0%	44.085	34.387	37.914	33.011	98.197
FRCST	2024	37.0%	44.552	34.750	38.315	33.360	100.161
FRCST	2025	37.0%	45.021	35.116	38.718	33.712	102.164
FRCST	2026	37.0%	45.603	35.570	39.218	34.147	102.164
FRCST	2027	37.0%	46.214	36.047	39.744	34.605	102.164
FRCST	2028	37.0%	46.849	36.542	40.290	35.080	102.164
FRCST	2029	37.0%	47.501	37.051	40.851	35.569	102.164
FRCST	2030	37.0%	48.169	37.572	41.425	36.069	102.164

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)	
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)
1999 -2004	41.6%	31.882	26.599	26.435	25.253
2004 -2009	36.6%	37.603	28.606	32.305	27.336
2010 -2015	37.0%	40.491	31.583	34.822	30.320
2015 -2020	37.0%	42.697	33.304	36.720	31.972
2020 -2025	37.0%	45.021	35.116	38.718	33.712
2025 -2030	37.0%	48.169	37.572	41.425	36.069
1999 -2009	36.6%	37.603	28.606	32.305	27.336
2010 -2030	37.0%	48.169	37.572	41.425	36.069

MENU

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\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	12,768	364	9	6	13,147	176,072	20,990	74,011	35	271,108
ACTUAL 2000	13,058	375	9	7	13,449	176,372	22,379	76,607	52	275,410
ACTUAL 2001	13,421	220	10	8	13,659	189,031	20,888	78,799	45	288,763
ACTUAL 2002	13,655	141	12	8	13,816	198,022	21,070	79,329	47	298,468
ACTUAL 2003	13,837	141	12	21	14,011	201,810	23,137	84,894	52	309,893
ACTUAL 2004	13,948	140	12	21	14,121	198,337	20,594	94,319	67	313,317
ACTUAL 2005	14,070	147	11	21	14,249	210,667	23,717	112,736	68	347,188
ACTUAL 2006	14,144	152	13	22	14,331	209,488	24,207	109,523	70	343,288
ACTUAL 2007	14,228	162	14	22	14,426	215,233	24,897	119,983	73	360,186
ACTUAL 2008	14,247	167	16	22	14,452	212,645	27,508	117,357	75	357,595
ACTUAL 2009	14,227	170	16	22	14,435	208,085	28,813	126,426	71	363,397
FRCST 2010	14,220	173	17	23	14,433	213,028	29,306	136,094	71	378,499
FRCST 2011	14,236	176	17	23	14,452	213,940	29,800	137,565	71	381,376
FRCST 2012	14,275	179	17	23	14,494	214,848	30,293	138,225	71	383,437
FRCST 2013	14,336	182	17	23	14,558	215,891	30,786	138,891	71	385,639
FRCST 2014	14,420	185	17	23	14,645	217,283	31,279	139,562	71	388,195
FRCST 2015	14,528	188	17	23	14,756	218,981	31,772	140,237	71	391,081
FRCST 2016	14,667	192	17	23	14,899	221,028	32,462	140,848	71	394,409
FRCST 2017	14,830	196	17	23	15,066	224,511	33,152	141,462	71	399,196
FRCST 2018	15,019	200	17	23	15,259	227,808	33,843	142,079	71	403,801
FRCST 2019	15,211	204	17	23	15,455	230,999	34,534	142,699	71	408,303
FRCST 2020	15,405	208	17	23	15,653	234,157	35,226	143,321	71	412,775
FRCST 2021	15,607	215	17	23	15,862	237,378	36,447	143,321	71	417,217
FRCST 2022	15,811	222	17	23	16,073	240,610	37,671	143,321	71	421,673
FRCST 2023	16,018	229	17	23	16,287	243,868	38,897	143,321	71	426,157
FRCST 2024	16,228	236	17	23	16,504	247,161	40,126	143,321	71	430,679
FRCST 2025	16,441	243	17	23	16,724	250,493	41,357	143,321	71	435,242
FRCST 2026	16,658	253	17	23	16,951	254,031	43,084	143,321	71	440,507
FRCST 2027	16,878	263	17	23	17,181	257,682	44,814	143,321	71	445,888
FRCST 2028	17,101	273	17	23	17,414	261,416	46,547	143,321	71	451,355
FRCST 2029	17,327	283	17	23	17,650	265,220	48,284	143,321	71	456,896
FRCST 2030	17,556	293	17	23	17,889	269,086	50,025	143,321	71	462,503

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	1.78%	-17.40%	3	15	1.44%	2.41%	-0.38%	4.97%	13.87%	2.94%
2004 -2009	0.40%	3.96%	4	1	0.44%	0.96%	6.95%	6.03%	1.17%	3.01%
2010 -2015	0.43%	1.68%	0	0	0.44%	0.55%	1.63%	0.60%	0.00%	0.66%
2015 -2020	1.18%	2.04%	0	0	1.19%	1.35%	2.09%	0.44%	0.00%	1.09%
2020 -2025	1.31%	3.16%	0	0	1.33%	1.36%	3.26%	0.00%	0.00%	1.07%
2025 -2030	1.32%	3.81%	0	0	1.36%	1.44%	3.88%	0.00%	0.00%	1.22%
1999 -2009	1.09%	-7.33%	7	16	0.94%	1.68%	3.22%	5.50%	7.33%	2.97%
2010 -2030	1.06%	2.67%	0	0	1.08%	1.17%	2.71%	0.26%	0.00%	1.01%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 34)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** BASE SCENARIO RESULTS *****										
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)
ACTUAL 1999	4.87%	13,879	284,987	53.2%	57,786	61,162	94.6%	96.4%	54,645	58,988
ACTUAL 2000	6.98%	20,666	296,076	59.0%	57,279	56,097	94.8%	94.5%	54,173	53,030
ACTUAL 2001	3.56%	10,859	299,422	53.9%	63,387	62,292	92.6%	95.1%	58,706	59,218
ACTUAL 2002	5.66%	17,907	316,375	55.5%	57,402	65,045	97.0%	92.2%	55,665	60,002
ACTUAL 2003	3.45%	11,073	320,966	56.9%	64,439	63,140	93.3%	93.8%	60,091	59,227
ACTUAL 2004	5.67%	18,833	332,150	58.3%	65,069	63,591	92.6%	93.9%	60,282	59,718
ACTUAL 2005	4.60%	16,741	363,929	55.6%	68,922	74,750	94.0%	96.5%	64,783	72,105
ACTUAL 2006	2.57%	9,055	352,343	52.3%	68,249	76,890	96.0%	95.8%	65,549	73,644
ACTUAL 2007	4.79%	18,121	378,307	54.5%	72,531	79,289	94.8%	91.1%	68,727	72,262
ACTUAL 2008	5.01%	18,860	376,445	58.0%	74,128	72,228	93.1%	88.3%	68,987	63,746
ACTUAL 2009	4.88%	18,644	382,041	52.8%	82,631	73,545	90.7%	85.6%	74,978	62,965
FRCST 2010	4.10%	16,182	394,681	57.0%	77,494	79,044	92.0%	92.0%	71,294	72,720
FRCST 2011	4.10%	16,305	397,681	57.0%	78,083	79,644	92.0%	92.0%	71,836	73,273
FRCST 2012	4.10%	16,393	399,830	57.0%	78,505	80,075	92.0%	92.0%	72,224	73,669
FRCST 2013	4.10%	16,487	402,126	57.0%	78,956	80,535	92.0%	92.0%	72,639	74,092
FRCST 2014	4.10%	16,596	404,791	57.0%	79,479	81,069	92.0%	92.0%	73,121	74,583
FRCST 2015	4.10%	16,719	407,780	57.0%	80,066	81,667	92.0%	92.0%	73,661	75,134
FRCST 2016	4.10%	16,862	411,271	57.0%	80,751	82,366	92.0%	92.0%	74,291	75,777
FRCST 2017	4.10%	17,067	416,263	57.0%	81,731	83,366	92.0%	92.0%	75,193	76,697
FRCST 2018	4.10%	17,264	421,065	57.0%	82,674	84,327	92.0%	92.0%	76,060	77,581
FRCST 2019	4.10%	17,458	425,759	57.0%	83,596	85,288	92.0%	92.0%	76,908	78,446
FRCST 2020	4.10%	17,647	430,422	57.0%	84,512	86,202	92.0%	92.0%	77,751	79,306
FRCST 2021	4.10%	17,837	435,054	57.0%	85,421	87,129	92.0%	92.0%	78,587	80,159
FRCST 2022	4.10%	18,028	439,701	57.0%	86,333	88,060	92.0%	92.0%	79,427	81,015
FRCST 2023	4.10%	18,219	444,376	57.0%	87,251	88,996	92.0%	92.0%	80,271	81,877
FRCST 2024	4.10%	18,413	449,092	57.0%	88,177	89,941	92.0%	92.0%	81,123	82,745
FRCST 2025	4.10%	18,608	453,850	57.0%	89,111	90,894	92.0%	92.0%	81,982	83,622
FRCST 2026	4.10%	18,833	459,340	57.0%	90,189	91,993	92.0%	92.0%	82,974	84,634
FRCST 2027	4.10%	19,063	464,951	57.0%	91,291	93,117	92.0%	92.0%	83,988	85,667
FRCST 2028	4.10%	19,297	470,652	57.0%	92,410	94,259	92.0%	92.0%	85,018	86,718
FRCST 2029	4.10%	19,534	476,430	57.0%	93,545	95,416	92.0%	92.0%	86,061	87,782
FRCST 2030	4.10%	19,773	482,276	57.0%	94,693	96,587	92.0%	92.0%	87,117	88,860

***** BASE SCENARIO RESULTS *****										
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHANGE)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999 -2004	5.03%	6.29%	3.11%	56.1%	2.40%	0.78%	94.1%	94.3%	1.98%	0.25%
2004 -2009	4.59%	-0.20%	2.84%	55.3%	4.89%	2.95%	93.5%	91.9%	4.46%	1.06%
2010 -2015	4.10%	0.66%	0.86%	57.0%	0.66%	0.66%	92.0%	92.0%	0.66%	0.66%
2015 -2020	4.10%	1.09%	1.09%	57.0%	1.09%	1.09%	92.0%	92.0%	1.09%	1.09%
2020 -2025	4.10%	1.07%	1.07%	57.0%	1.07%	1.07%	92.0%	92.0%	1.07%	1.07%
2025 -2030	4.10%	1.22%	1.22%	57.0%	1.22%	1.22%	92.0%	92.0%	1.22%	1.22%

1999 -2009	4.73%	3.00%	2.97%	55.5%	3.64%	1.86%	93.9%	93.0%	3.21%	0.65%
2010 -2030	4.10%	1.01%	1.01%	57.0%	1.01%	1.01%	92.0%	92.0%	1.01%	1.01%

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\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES							H.E.
EXTREME ANNUAL LOAD FACTOR							ITERATION
YEAR	LOAD FACTOR	WINTER	SUMMER	WINTER	SUMMER		ACT. AVG. WPC (MILLS/KWH)
ACTUAL	1999						
ACTUAL	2000						
ACTUAL	2001						
ACTUAL	2002						
ACTUAL	2003						
ACTUAL	2004						
ACTUAL	2005						
ACTUAL	2006						
ACTUAL	2007						
ACTUAL	2008						
ACTUAL	2009						
FRCST	2010	54.0%	81.799	83.435	75.255	78.760	69.830
FRCST	2011	54.0%	82.421	84.069	75.827	77.343	70.910
FRCST	2012	54.0%	82.866	84.524	76.237	77.762	75.360
FRCST	2013	54.0%	83.342	85.009	76.675	78.208	79.430
FRCST	2014	54.0%	83.895	85.572	77.183	78.727	82.230
FRCST	2015	54.0%	84.514	86.204	77.753	79.308	83.810
FRCST	2016	54.0%	85.238	86.942	78.419	79.987	85.486
FRCST	2017	54.0%	86.272	87.997	79.370	80.958	87.196
FRCST	2018	54.0%	87.267	89.012	80.286	81.891	88.940
FRCST	2019	54.0%	88.240	90.005	81.181	82.804	90.719
FRCST	2020	54.0%	89.207	90.991	82.070	83.712	92.533
FRCST	2021	54.0%	90.167	91.970	82.953	84.612	94.384
FRCST	2022	54.0%	91.130	92.952	83.839	85.516	96.271
FRCST	2023	54.0%	92.099	93.941	84.731	86.425	98.197
FRCST	2024	54.0%	93.076	94.937	85.630	87.342	100.161
FRCST	2025	54.0%	94.062	95.943	86.537	88.268	102.164
FRCST	2026	54.0%	95.200	97.104	87.584	89.335	102.164
FRCST	2027	54.0%	96.363	98.290	88.654	90.427	102.164
FRCST	2028	54.0%	97.544	99.495	89.741	91.536	102.164
FRCST	2029	54.0%	98.742	100.717	90.842	92.659	102.164
FRCST	2030	54.0%	99.953	101.952	91.957	93.796	102.164

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)	
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)
1999 -2004	53.2%	65.069	65.045	60.282	60.002
2004 -2009	52.3%	82.631	79.289	74.978	73.644
2010 -2015	54.0%	84.514	86.204	77.753	79.308
2015 -2020	54.0%	89.207	90.991	82.070	83.712
2020 -2025	54.0%	94.062	95.943	86.537	88.268
2025 -2030	54.0%	99.953	101.952	91.957	93.796
1999 -2009	52.3%	82.631	79.289	74.978	73.644
2010 -2030	54.0%	99.953	101.952	91.957	93.796

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\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	28,644	164	2	0	29,810	395,424	39,877	10,574	0	445,875
ACTUAL 2000	30,467	179	2	0	30,648	404,420	62,696	10,674	0	477,990
ACTUAL 2001	31,133	188	2	0	31,323	402,541	48,611	10,615	0	461,767
ACTUAL 2002	31,640	202	2	0	31,844	441,536	54,269	10,758	0	506,563
ACTUAL 2003	32,220	210	2	0	32,432	433,122	55,077	11,138	0	499,337
ACTUAL 2004	32,594	223	2	0	32,819	441,063	60,461	11,376	0	512,900
ACTUAL 2005	32,799	228	2	0	33,029	464,660	64,856	11,147	0	540,663
ACTUAL 2006	33,045	236	2	0	33,283	459,123	63,421	10,296	0	532,840
ACTUAL 2007	33,355	242	1	0	33,598	484,547	68,053	8,718	0	561,318
ACTUAL 2008	33,339	251	1	0	33,591	477,562	68,367	8,866	0	554,795
ACTUAL 2009	33,236	258	1	0	33,495	458,426	65,021	2,123	0	525,570
FRCST 2010	33,241	266	1	0	33,508	468,099	70,173	4,588	0	542,858
FRCST 2011	33,292	274	1	0	33,567	474,531	72,029	5,174	0	551,734
FRCST 2012	33,388	282	1	0	33,671	479,031	73,899	5,828	0	558,758
FRCST 2013	33,530	290	1	0	33,821	481,893	75,784	6,556	0	564,233
FRCST 2014	33,673	298	1	0	33,972	484,157	77,684	7,366	0	569,207
FRCST 2015	33,862	306	1	0	34,169	487,290	79,599	8,268	0	575,157
FRCST 2016	34,061	315	1	0	34,377	490,969	81,759	8,268	0	580,996
FRCST 2017	34,261	324	1	0	34,586	494,876	83,937	8,268	0	587,081
FRCST 2018	34,462	333	1	0	34,796	498,916	86,132	8,268	0	593,316
FRCST 2019	34,664	342	1	0	35,007	503,041	88,346	8,268	0	599,655
FRCST 2020	34,867	351	1	0	35,219	507,225	90,580	8,268	0	606,073
FRCST 2021	35,082	362	1	0	35,445	511,544	92,671	8,268	0	612,483
FRCST 2022	35,298	373	1	0	35,672	515,868	94,768	8,268	0	618,904
FRCST 2023	35,515	384	1	0	35,900	520,208	96,872	8,268	0	625,348
FRCST 2024	35,733	395	1	0	36,129	524,572	98,982	8,268	0	631,822
FRCST 2025	35,952	406	1	0	36,359	528,964	101,098	8,268	0	638,330
FRCST 2026	36,173	420	1	0	36,594	533,980	103,725	8,268	0	645,973
FRCST 2027	36,394	434	1	0	36,829	539,333	106,359	8,268	0	653,960
FRCST 2028	36,617	448	1	0	37,066	544,886	109,002	8,268	0	662,156
FRCST 2029	36,841	462	1	0	37,304	550,568	111,652	8,268	0	670,488
FRCST 2030	37,065	476	1	0	37,542	556,343	114,310	8,268	0	678,921

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	1.92%	6.34%	0	0	1.94%	2.21%	8.68%	1.47%	NA	2.84%
2004 -2009	0.39%	2.96%	-1	0	0.41%	0.78%	1.46%	-28.52%	NA	0.49%
2010 -2015	0.37%	2.84%	0	0	0.39%	0.81%	2.55%	12.51%	NA	1.16%
2015 -2020	0.59%	2.78%	0	0	0.61%	0.81%	2.62%	0.00%	NA	1.05%
2020 -2025	0.61%	2.95%	0	0	0.64%	0.84%	2.22%	0.00%	NA	1.04%
2025 -2030	0.61%	3.23%	0	0	0.64%	1.01%	2.49%	0.00%	NA	1.24%
1999 -2009	1.15%	4.64%	-1	0	1.17%	1.49%	5.01%	-14.83%	NA	1.66%
2010 -2030	0.55%	2.95%	0	0	0.57%	0.87%	2.47%	2.99%	NA	1.12%

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\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)
ACTUAL 1999	2.83%	12,986	458,861	46.7%	108,291	112,105	97.4%	96.5%	105,483	108,183
ACTUAL 2000	1.26%	8,100	484,090	50.9%	108,654	101,736	96.0%	96.6%	104,260	98,229
ACTUAL 2001	5.56%	27,186	488,953	46.0%	121,370	115,121	90.3%	93.7%	109,610	107,920
ACTUAL 2002	4.55%	24,147	530,710	50.3%	110,472	120,355	98.2%	95.7%	108,523	115,185
ACTUAL 2003	5.62%	29,734	529,071	47.3%	127,659	116,421	97.0%	93.9%	123,797	109,300
ACTUAL 2004	5.40%	29,278	542,178	47.1%	131,507	114,385	97.6%	95.1%	128,304	108,729
ACTUAL 2005	6.34%	36,598	577,261	49.8%	131,518	132,310	95.8%	97.3%	126,055	128,794
ACTUAL 2006	4.78%	26,748	559,588	48.4%	129,269	131,982	98.8%	97.3%	127,662	128,447
ACTUAL 2007	5.49%	32,606	593,924	47.3%	143,243	136,976	98.4%	95.0%	140,930	130,189
ACTUAL 2008	5.17%	30,247	585,042	45.5%	146,727	124,336	96.7%	87.7%	141,881	109,037
ACTUAL 2009	4.68%	25,804	551,374	39.2%	160,569	121,705	95.9%	93.5%	153,913	113,778
FRCST 2010	5.30%	30,382	573,240	46.0%	142,257	120,910	96.0%	95.0%	136,567	114,873
FRCST 2011	5.30%	30,878	582,612	46.0%	144,583	122,896	96.0%	95.0%	138,800	116,751
FRCST 2012	5.30%	31,272	590,030	46.0%	146,424	124,460	96.0%	95.0%	140,567	118,237
FRCST 2013	5.30%	31,578	595,811	46.0%	147,859	125,680	96.0%	95.0%	141,944	119,396
FRCST 2014	5.30%	31,856	601,063	46.0%	149,162	126,788	96.0%	95.0%	143,196	120,448
FRCST 2015	5.30%	32,189	607,346	46.0%	150,721	128,113	96.0%	95.0%	144,693	121,708
FRCST 2016	5.30%	32,516	613,512	46.0%	152,251	129,414	96.0%	95.0%	146,161	122,943
FRCST 2017	5.30%	32,857	619,938	46.0%	153,846	130,769	96.0%	95.0%	147,692	124,231
FRCST 2018	5.30%	33,206	626,522	46.0%	155,480	132,158	96.0%	95.0%	149,261	125,550
FRCST 2019	5.30%	33,560	633,215	46.0%	157,141	133,570	96.0%	95.0%	150,855	126,891
FRCST 2020	5.30%	33,920	639,993	46.0%	158,823	134,999	96.0%	95.0%	152,470	128,249
FRCST 2021	5.30%	34,278	646,761	46.0%	160,503	136,427	96.0%	95.0%	154,083	129,606
FRCST 2022	5.30%	34,638	653,542	46.0%	162,185	137,857	96.0%	95.0%	155,698	130,965
FRCST 2023	5.30%	34,998	660,346	46.0%	163,874	139,293	96.0%	95.0%	157,319	132,328
FRCST 2024	5.30%	35,361	667,183	46.0%	165,570	140,735	96.0%	95.0%	158,948	133,698
FRCST 2025	5.30%	35,725	674,055	46.0%	167,276	142,185	96.0%	95.0%	160,585	135,075
FRCST 2026	5.30%	36,153	682,126	46.0%	169,279	143,887	96.0%	95.0%	162,507	136,692
FRCST 2027	5.30%	36,600	690,560	46.0%	171,372	145,666	96.0%	95.0%	164,517	138,383
FRCST 2028	5.30%	37,058	699,214	46.0%	173,519	147,491	96.0%	95.0%	166,579	140,117
FRCST 2029	5.30%	37,525	708,013	46.0%	175,703	149,347	96.0%	95.0%	168,675	141,880
FRCST 2030	5.30%	37,997	716,918	46.0%	177,913	151,226	96.0%	95.0%	170,796	143,665

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHANGE)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK (% CHANGE)	COINCIDENT FACTOR (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999 -2004	4.20%	17.66%	3.39%	48.1%	3.96%	0.40%	96.1%	95.3%	3.99%	0.10%
2004 -2009	5.31%	-2.49%	0.34%	46.2%	4.07%	1.25%	97.2%	94.3%	3.71%	0.91%
2010 -2015	5.30%	1.16%	1.16%	46.0%	1.18%	1.16%	96.0%	95.0%	1.16%	1.16%
2015 -2020	5.30%	1.05%	1.05%	46.0%	1.05%	1.05%	96.0%	95.0%	1.05%	1.05%
2020 -2025	5.30%	1.04%	1.04%	46.0%	1.04%	1.04%	96.0%	95.0%	1.04%	1.04%
2025 -2030	5.30%	1.24%	1.24%	46.0%	1.24%	1.24%	96.0%	95.0%	1.24%	1.24%

1999 -2009	4.70%	7.11%	1.85%	47.1%	4.02%	0.83%	96.6%	94.8%	3.85%	0.51%
2010 -2030	5.30%	1.12%	1.12%	46.0%	1.12%	1.12%	96.0%	95.0%	1.12%	1.12%

1971 : BEGINNING HISTORICAL DATA YEAR ?  
2009 : FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 34)  
20 : NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** BASE SCENARIO RESULTS *****						***** BASE SCENARIO RESULTS *****	
PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES							H.E. ITERATION ACT. AVG. WPC (MILLS/KWH)
YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW) WINTER	NON-COINCIDENT PEAK (MW) SUMMER	COINCIDENT PEAK (MW) WINTER	COINCIDENT PEAK (MW) SUMMER		
ACTUAL	1999						
ACTUAL	2000						
ACTUAL	2001						
ACTUAL	2002						
ACTUAL	2003						
ACTUAL	2004						
ACTUAL	2005						
ACTUAL	2006						
ACTUAL	2007						
ACTUAL	2008						
ACTUAL	2009						
FRCST	2010	41.0%	159.606	135.686	153.222	128.882	69.830
FRCST	2011	41.0%	162.215	137.883	155.727	130.989	70.910
FRCST	2012	41.0%	164.280	139.638	157.709	132.556	75.360
FRCST	2013	41.0%	165.890	141.007	159.254	133.956	79.430
FRCST	2014	41.0%	167.353	142.250	160.659	135.137	82.230
FRCST	2015	41.0%	169.102	143.737	162.338	136.550	83.810
FRCST	2016	41.0%	170.819	145.196	163.986	137.936	85.486
FRCST	2017	41.0%	172.608	146.717	165.703	139.381	87.198
FRCST	2018	41.0%	174.441	148.275	167.463	140.861	88.940
FRCST	2019	41.0%	176.305	149.859	169.252	142.366	90.719
FRCST	2020	41.0%	178.191	151.463	171.064	143.889	92.533
FRCST	2021	41.0%	180.076	153.065	172.873	145.411	94.384
FRCST	2022	41.0%	181.964	154.659	174.685	146.936	96.271
FRCST	2023	41.0%	183.858	156.280	176.504	148.466	98.197
FRCST	2024	41.0%	185.762	157.898	178.331	150.003	100.161
FRCST	2025	41.0%	187.675	159.524	180.168	151.548	102.164
FRCST	2026	41.0%	189.622	161.434	182.325	153.362	102.164
FRCST	2027	41.0%	192.271	163.430	184.580	155.259	102.164
FRCST	2028	41.0%	194.680	165.478	186.893	157.204	102.164
FRCST	2029	41.0%	197.130	167.561	189.245	159.183	102.164
FRCST	2030	41.0%	199.610	169.668	191.625	161.185	102.164

***** BASE SCENARIO RESULTS *****						***** BASE SCENARIO RESULTS *****	
TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW) WIN (MAX)	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW) SUM (MAX)	EXTREME SINGLE TEMP. COINCIDENT PEAK (MW) WIN (MAX)	EXTREME SINGLE TEMP. COINCIDENT PEAK (MW) SUM (MAX)		
1999 -2004	46.0%	131.507	120.355	128.304	115.185		
2004 -2009	39.2%	160.569	136.976	153.913	130.189		
2010 -2015	41.0%	169.102	143.737	162.338	136.550		
2015 -2020	41.0%	178.191	151.463	171.064	143.889		
2020 -2025	41.0%	187.675	159.524	180.168	151.548		
2025 -2030	41.0%	199.610	169.668	191.625	161.185		
1999 -2009	39.2%	160.569	136.976	153.913	130.189		
2010 -2030	41.0%	199.610	169.668	191.625	161.185		

MENU

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 20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	22,381	832	7	0	23,220	308,133	38,428	34,056	0	380,617
ACTUAL 2000	22,597	848	6	0	23,451	318,529	52,546	32,690	0	403,765
ACTUAL 2001	23,079	879	13	0	23,971	334,370	38,577	61,317	0	434,264
ACTUAL 2002	23,548	909	13	0	24,470	358,794	36,127	68,666	0	463,587
ACTUAL 2003	23,983	939	14	0	24,936	357,822	38,920	73,829	0	470,571
ACTUAL 2004	24,416	972	14	0	25,402	363,038	42,211	85,278	0	490,527
ACTUAL 2005	24,724	1,113	14	0	25,851	390,780	45,260	111,478	0	547,518
ACTUAL 2006	25,030	1,131	12	0	26,173	372,598	45,029	126,757	0	544,384
ACTUAL 2007	25,258	1,139	12	0	26,409	396,073	48,058	110,874	0	555,005
ACTUAL 2008	25,325	1,157	12	0	26,494	398,993	48,663	103,057	0	550,713
ACTUAL 2009	25,367	1,164	12	0	26,543	376,299	47,362	87,709	0	511,370
FRCST 2010	25,343	1,171	13	0	26,527	372,063	47,703	111,383	0	531,149
FRCST 2011	25,378	1,178	13	0	26,569	372,235	48,045	111,516	0	531,796
FRCST 2012	25,472	1,185	13	0	26,670	374,016	48,387	111,650	0	534,053
FRCST 2013	25,626	1,192	13	0	26,831	376,721	48,729	111,784	0	537,234
FRCST 2014	25,840	1,199	13	0	27,052	380,694	49,072	111,918	0	541,684
FRCST 2015	26,068	1,206	13	0	27,287	385,382	49,415	112,053	0	546,850
FRCST 2016	26,317	1,219	13	0	27,549	390,412	50,060	112,474	0	552,946
FRCST 2017	26,568	1,232	13	0	27,813	395,508	50,706	112,897	0	559,111
FRCST 2018	26,821	1,245	13	0	28,079	400,671	51,354	113,321	0	565,346
FRCST 2019	27,076	1,258	13	0	28,347	405,900	52,002	113,747	0	571,649
FRCST 2020	27,334	1,271	13	0	28,618	411,196	52,652	114,174	0	578,022
FRCST 2021	27,611	1,289	13	0	28,913	416,770	53,619	114,174	0	584,563
FRCST 2022	27,891	1,307	13	0	29,211	422,390	54,588	114,174	0	591,153
FRCST 2023	28,173	1,325	13	0	29,511	428,068	55,564	114,174	0	597,806
FRCST 2024	28,458	1,343	13	0	29,814	433,810	56,542	114,174	0	604,526
FRCST 2025	28,745	1,361	13	0	30,119	439,621	57,524	114,174	0	611,319
FRCST 2026	29,048	1,383	13	0	30,444	446,191	58,678	114,174	0	619,043
FRCST 2027	29,354	1,405	13	0	30,772	453,095	59,837	114,174	0	627,106
FRCST 2028	29,663	1,427	13	0	31,103	460,226	61,000	114,174	0	635,400
FRCST 2029	29,974	1,449	13	0	31,436	467,525	62,168	114,174	0	643,667
FRCST 2030	30,288	1,471	13	0	31,772	474,965	63,341	114,174	0	652,480

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	1.76%	3.16%	7	0	1.81%	3.33%	1.90%	20.15%	NA	5.20%
2004 -2009	0.77%	3.67%	-2	0	0.88%	0.72%	2.33%	0.56%	NA	0.84%
2010 -2015	0.57%	0.59%	0	0	0.57%	0.71%	0.71%	0.12%	NA	0.58%
2015 -2020	0.95%	1.06%	0	0	0.96%	1.31%	1.28%	0.38%	NA	1.11%
2020 -2025	1.01%	1.38%	0	0	1.03%	1.35%	1.79%	0.00%	NA	1.13%
2025 -2030	1.05%	1.57%	0	0	1.07%	1.56%	1.95%	0.00%	NA	1.31%
1999 -2009	1.26%	3.41%	5	0	1.35%	2.02%	2.11%	9.92%	NA	3.00%
2010 -2030	0.90%	1.15%	0	0	0.91%	1.23%	1.43%	0.12%	NA	1.03%

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20 : NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** BASE SCENARIO RESULTS *****					***** BASE SCENARIO RESULTS *****						
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK		
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)	
ACTUAL	1999	6.50%	26,460	407,077	45.4%	102,282	93,488	93.5%	91.0%	95,633	85,104
ACTUAL	2000	8.41%	37,075	440,840	47.2%	106,707	87,017	96.0%	96.2%	102,391	83,746
ACTUAL	2001	4.50%	20,463	454,727	44.7%	116,063	97,409	93.3%	96.3%	108,334	93,772
ACTUAL	2002	5.54%	27,189	490,776	53.1%	105,609	103,388	97.1%	92.5%	102,549	95,674
ACTUAL	2003	5.84%	29,186	499,757	46.0%	124,007	101,678	96.4%	95.7%	119,546	97,299
ACTUAL	2004	6.70%	35,225	525,752	48.4%	129,461	102,236	93.0%	96.4%	120,384	98,519
ACTUAL	2005	5.35%	30,948	578,466	47.7%	138,452	124,782	95.1%	95.0%	131,721	118,564
ACTUAL	2006	4.94%	28,290	572,674	47.5%	137,678	123,457	92.4%	96.5%	127,146	118,131
ACTUAL	2007	5.60%	32,924	587,929	44.5%	150,899	130,534	92.1%	91.3%	138,741	119,213
ACTUAL	2008	4.79%	27,706	578,419	43.8%	150,619	115,685	92.4%	91.7%	139,190	106,080
ACTUAL	2009	5.62%	30,450	541,820	39.0%	158,609	116,157	88.8%	89.2%	140,851	103,648
FRCST	2010	5.20%	29,135	560,284	46.5%	137,547	112,799	88.0%	91.0%	121,041	102,638
FRCST	2011	5.20%	29,170	560,966	46.5%	137,714	112,926	88.0%	91.0%	121,189	102,763
FRCST	2012	5.20%	29,294	563,347	46.5%	138,299	113,405	88.0%	91.0%	121,703	103,199
FRCST	2013	5.20%	29,469	566,703	46.5%	139,123	114,081	88.0%	91.0%	122,428	103,814
FRCST	2014	5.20%	29,713	571,397	46.5%	140,275	115,026	88.0%	91.0%	123,442	104,673
FRCST	2015	5.20%	29,996	576,846	46.5%	141,613	116,123	88.0%	91.0%	124,619	105,672
FRCST	2016	5.20%	30,330	583,276	46.5%	143,192	117,417	88.0%	91.0%	126,009	106,850
FRCST	2017	5.20%	30,669	589,780	46.5%	144,788	118,726	88.0%	91.0%	127,414	108,041
FRCST	2018	5.20%	31,011	596,357	46.5%	146,403	120,050	88.0%	91.0%	128,834	109,246
FRCST	2019	5.20%	31,356	603,005	46.5%	148,035	121,389	88.0%	91.0%	130,271	110,464
FRCST	2020	5.20%	31,706	609,728	46.5%	149,685	122,742	88.0%	91.0%	131,723	111,695
FRCST	2021	5.20%	32,065	616,628	46.5%	151,379	124,131	88.0%	91.0%	133,214	112,959
FRCST	2022	5.20%	32,426	623,579	46.5%	153,086	125,530	88.0%	91.0%	134,716	114,233
FRCST	2023	5.20%	32,791	630,597	46.5%	154,809	126,943	88.0%	91.0%	136,232	115,518
FRCST	2024	5.20%	33,160	637,686	46.5%	156,549	128,370	88.0%	91.0%	137,763	116,817
FRCST	2025	5.20%	33,532	644,851	46.5%	158,308	129,813	88.0%	91.0%	139,311	118,130
FRCST	2026	5.20%	33,956	652,999	46.5%	160,308	131,453	88.0%	91.0%	141,071	119,622
FRCST	2027	5.20%	34,398	661,504	46.5%	162,396	133,165	88.0%	91.0%	142,909	121,160
FRCST	2028	5.20%	34,853	670,253	46.5%	164,544	134,926	88.0%	91.0%	144,799	122,783
FRCST	2029	5.20%	35,318	679,185	46.5%	166,737	136,724	88.0%	91.0%	146,728	124,419
FRCST	2030	5.20%	35,790	688,270	46.5%	168,967	138,553	88.0%	91.0%	148,691	126,083

***** BASE SCENARIO RESULTS *****					***** BASE SCENARIO RESULTS *****					
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHANGE)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999 -2004	6.25%	5.89%	5.25%	47.1%	4.83%	1.81%	94.9%	94.7%	4.71%	2.97%
2004 -2009	5.50%	-2.87%	0.60%	44.8%	4.14%	2.59%	92.3%	93.4%	3.19%	1.02%
2010 -2015	5.20%	0.58%	0.58%	46.5%	0.58%	0.58%	88.0%	91.0%	0.58%	0.58%
2015 -2020	5.20%	1.11%	1.11%	46.5%	1.11%	1.11%	88.0%	91.0%	1.11%	1.11%
2020 -2025	5.20%	1.13%	1.13%	46.5%	1.13%	1.13%	88.0%	91.0%	1.13%	1.13%
2025 -2030	5.20%	1.31%	1.31%	46.5%	1.31%	1.31%	88.0%	91.0%	1.31%	1.31%
1999 -2009	5.80%	1.41%	2.90%	45.9%	4.48%	2.19%	93.6%	93.8%	3.95%	1.99%
2010 -2030	5.20%	1.03%	1.03%	46.5%	1.03%	1.03%	88.0%	91.0%	1.03%	1.03%

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***** BASE SCENARIO RESULTS *****						***** BASE SCENARIO RESULTS *****	
PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES							H.E. ITERATION ACT. AVG. WPC (MILLS/KWH)
YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)			
		WINTER	SUMMER	WINTER	SUMMER		
ACTUAL	1999						
ACTUAL	2000						
ACTUAL	2001						
ACTUAL	2002						
ACTUAL	2003						
ACTUAL	2004						
ACTUAL	2005						
ACTUAL	2006						
ACTUAL	2007						
ACTUAL	2008						
ACTUAL	2009						
FRCST	2010	40.0%	159.898	131.117	140.711	119.316	68.830
FRCST	2011	40.0%	160.093	131.276	140.882	119.461	70.910
FRCST	2012	40.0%	160.773	131.834	141.480	119.969	75.360
FRCST	2013	40.0%	161.730	132.619	142.323	120.683	79.430
FRCST	2014	40.0%	163.070	133.718	143.502	121.683	82.230
FRCST	2015	40.0%	164.625	134.993	144.870	122.843	83.810
FRCST	2016	40.0%	166.460	136.497	146.485	124.213	85.486
FRCST	2017	40.0%	168.316	138.019	148.118	125.598	87.196
FRCST	2018	40.0%	170.193	139.558	149.770	126.998	88.940
FRCST	2019	40.0%	172.091	141.114	151.440	128.414	90.719
FRCST	2020	40.0%	174.009	142.688	153.128	129.846	92.533
FRCST	2021	40.0%	175.978	144.302	154.861	131.315	94.384
FRCST	2022	40.0%	177.962	145.929	156.607	132.796	96.271
FRCST	2023	40.0%	179.965	147.571	158.369	134.290	98.197
FRCST	2024	40.0%	181.988	149.230	160.150	135.800	100.161
FRCST	2025	40.0%	184.033	150.907	161.949	137.326	102.164
FRCST	2026	40.0%	186.358	152.814	163.995	138.061	102.164
FRCST	2027	40.0%	188.786	154.804	166.131	140.872	102.164
FRCST	2028	40.0%	191.282	156.852	168.329	142.735	102.164
FRCST	2029	40.0%	193.831	158.942	170.572	144.637	102.164
FRCST	2030	40.0%	196.424	161.068	172.853	146.572	102.164

***** BASE SCENARIO RESULTS *****						***** BASE SCENARIO RESULTS *****	
TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)			
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)		
1999 -2004	44.7%	129.461	103.388	120.384	98.519		
2004 -2009	39.0%	158.609	130.534	140.851	119.213		
2010 -2015	40.0%	164.625	134.993	144.870	122.843		
2015 -2020	40.0%	174.009	142.688	153.128	129.846		
2020 -2025	40.0%	184.033	150.907	161.949	137.326		
2025 -2030	40.0%	196.424	161.068	172.853	146.572		
1999 -2009	39.0%	158.609	130.534	140.851	119.213		
2010 -2030	40.0%	196.424	161.068	172.853	146.572		

MENU

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\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	7,575	514	16	66	8,171	97,451	20,139	232,550	635	350,775
ACTUAL 2000	7,716	532	16	65	8,329	100,329	20,420	274,166	632	395,547
ACTUAL 2001	7,820	554	15	65	8,454	101,360	21,428	271,384	638	394,810
ACTUAL 2002	7,908	574	16	63	8,561	108,757	31,160	290,130	658	430,705
ACTUAL 2003	7,998	574	15	65	8,652	105,867	36,062	290,173	590	432,692
ACTUAL 2004	8,070	585	16	66	8,737	106,962	40,923	304,618	573	453,076
ACTUAL 2005	8,140	593	18	66	8,817	112,906	42,733	304,087	668	460,394
ACTUAL 2006	8,219	603	18	66	8,906	110,016	46,504	307,910	626	465,056
ACTUAL 2007	8,312	610	19	66	9,007	116,841	50,655	301,725	675	469,896
ACTUAL 2008	8,346	597	21	66	9,030	115,334	48,939	280,827	642	445,742
ACTUAL 2009	8,358	601	11	65	9,035	109,517	40,333	263,463	639	413,952
FRCST 2010	8,428	606	11	63	9,108	111,592	38,317	290,598	701	441,208
FRCST 2011	8,498	611	11	63	9,183	113,420	38,658	292,733	701	445,512
FRCST 2012	8,569	616	11	63	9,259	114,880	38,999	295,929	701	450,509
FRCST 2013	8,640	621	11	63	9,335	116,098	39,340	300,891	701	457,030
FRCST 2014	8,711	626	11	63	9,411	117,249	39,682	304,121	701	461,753
FRCST 2015	8,782	631	11	63	9,487	118,444	40,024	306,493	701	465,662
FRCST 2016	8,855	638	11	63	9,567	119,673	40,571	307,758	701	468,703
FRCST 2017	8,929	645	11	63	9,648	120,914	41,120	309,031	701	471,766
FRCST 2018	9,003	652	11	63	9,729	122,167	41,670	310,311	701	474,849
FRCST 2019	9,077	659	11	63	9,810	123,430	42,222	311,598	701	477,951
FRCST 2020	9,152	666	11	63	9,892	124,704	42,776	312,893	701	481,074
FRCST 2021	9,230	675	11	63	9,979	126,019	43,452	312,893	701	483,065
FRCST 2022	9,309	684	11	63	10,067	127,334	44,129	312,893	701	485,057
FRCST 2023	9,388	693	11	63	10,155	128,653	44,808	312,893	701	487,055
FRCST 2024	9,468	702	11	63	10,244	129,978	45,480	312,893	701	489,062
FRCST 2025	9,547	711	11	63	10,332	131,309	46,173	312,893	701	491,076
FRCST 2026	9,630	724	11	63	10,428	132,795	47,148	312,893	701	493,537
FRCST 2027	9,713	737	11	63	10,524	134,375	48,126	312,893	701	496,095
FRCST 2028	9,796	750	11	63	10,620	136,024	49,107	312,893	701	498,725
FRCST 2029	9,880	763	11	63	10,717	137,729	50,093	312,893	701	501,416
FRCST 2030	9,964	776	11	63	10,814	139,477	51,083	312,893	701	504,154

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	1.27%	2.62%	0	0	1.35%	1.88%	15.24%	5.55%	-2.03%	5.25%
2004 -2009	0.70%	0.54%	-5	-1	0.67%	0.47%	-0.29%	-2.86%	2.20%	-1.79%
2010 -2015	0.83%	0.81%	0	0	0.82%	1.20%	0.86%	1.07%	0.00%	1.08%
2015 -2020	0.83%	1.09%	0	0	0.84%	1.04%	1.34%	0.41%	0.00%	0.65%
2020 -2025	0.85%	1.32%	0	0	0.87%	1.04%	1.54%	0.00%	0.00%	0.41%
2025 -2030	0.86%	1.76%	0	0	0.92%	1.21%	2.04%	0.00%	0.00%	0.53%
1999 -2009	0.99%	1.58%	-5	-1	1.01%	1.17%	7.19%	1.26%	0.06%	1.67%
2010 -2030	0.84%	1.24%	0	0	0.86%	1.12%	1.45%	0.37%	0.00%	0.67%

1971 : BEGINNING HISTORICAL DATA YEAR ?  
 2009 : FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 34)  
 20 : NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** BASE SCENARIO RESULTS *****					***** BASE SCENARIO RESULTS *****						
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK		
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)	
ACTUAL	1999	4.00%	8,974	359,749	55.6%	63,815	73,901	76.2%	88.7%	48,604	65,538
ACTUAL	2000	4.22%	9,699	405,446	58.5%	71,461	79,175	87.4%	79.1%	62,473	62,588
ACTUAL	2001	4.14%	9,541	404,351	58.0%	78,008	79,540	88.8%	88.7%	69,261	70,558
ACTUAL	2002	3.96%	10,080	440,785	61.5%	76,771	81,863	93.1%	87.9%	71,479	71,976
ACTUAL	2003	4.18%	10,650	443,342	60.7%	78,409	83,357	86.0%	79.6%	67,395	66,321
ACTUAL	2004	3.79%	10,037	463,113	63.8%	79,100	82,646	88.6%	89.7%	70,057	74,339
ACTUAL	2005	3.88%	10,809	471,203	60.8%	83,122	88,484	83.8%	87.6%	69,657	77,476
ACTUAL	2006	3.97%	11,147	476,203	59.1%	85,634	92,027	81.9%	74.0%	70,106	68,138
ACTUAL	2007	4.63%	13,834	483,730	59.9%	88,002	92,223	88.4%	76.0%	77,775	70,073
ACTUAL	2008	3.78%	10,866	456,628	59.5%	86,295	87,578	77.7%	77.3%	67,081	67,692
ACTUAL	2009	3.99%	10,701	424,653	54.1%	84,099	89,604	68.5%	75.6%	57,596	67,770
FRCST	2010	4.00%	11,201	452,409	60.0%	81,209	86,075	81.0%	82.0%	65,774	70,581
FRCST	2011	4.00%	11,336	456,848	60.0%	82,000	86,919	81.0%	82.0%	66,420	71,274
FRCST	2012	4.00%	11,477	461,986	60.0%	82,921	87,897	81.0%	82.0%	67,186	72,075
FRCST	2013	4.00%	11,681	468,711	60.0%	84,129	89,176	81.0%	82.0%	68,144	73,125
FRCST	2014	4.00%	11,809	473,562	60.0%	84,999	90,099	81.0%	82.0%	68,849	73,881
FRCST	2015	4.00%	11,903	477,565	60.0%	85,718	90,861	81.0%	82.0%	69,431	74,506
FRCST	2016	4.00%	11,988	480,691	60.0%	86,279	91,456	81.0%	82.0%	69,886	74,994
FRCST	2017	4.00%	12,074	483,840	60.0%	86,844	92,055	81.0%	82.0%	70,344	75,485
FRCST	2018	4.00%	12,161	487,010	60.0%	87,413	92,658	81.0%	82.0%	70,805	75,980
FRCST	2019	4.00%	12,248	490,199	60.0%	87,986	93,265	81.0%	82.0%	71,268	76,477
FRCST	2020	4.00%	12,336	493,410	60.0%	88,562	93,876	81.0%	82.0%	71,735	76,976
FRCST	2021	4.00%	12,419	495,484	60.0%	88,934	94,270	81.0%	82.0%	72,037	77,302
FRCST	2022	4.00%	12,502	497,559	60.0%	89,307	94,665	81.0%	82.0%	72,338	77,625
FRCST	2023	4.00%	12,586	499,641	60.0%	89,680	95,061	81.0%	82.0%	72,641	77,950
FRCST	2024	4.00%	12,669	501,731	60.0%	90,055	95,459	81.0%	82.0%	72,945	78,276
FRCST	2025	4.00%	12,753	503,829	60.0%	90,432	95,858	81.0%	82.0%	73,250	78,604
FRCST	2026	4.00%	12,856	506,393	60.0%	90,892	96,346	81.0%	82.0%	73,623	79,003
FRCST	2027	4.00%	12,962	509,057	60.0%	91,370	96,853	81.0%	82.0%	74,010	79,419
FRCST	2028	4.00%	13,072	511,797	60.0%	91,862	97,374	81.0%	82.0%	74,408	79,847
FRCST	2029	4.00%	13,184	514,600	60.0%	92,365	97,907	81.0%	82.0%	74,816	80,284
FRCST	2030	4.00%	13,298	517,452	60.0%	92,877	98,450	81.0%	82.0%	75,231	80,729

***** BASE SCENARIO RESULTS *****					***** BASE SCENARIO RESULTS *****					
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHANGE)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999 -2004	4.05%	2.26%	5.18%	59.7%	4.39%	2.31%	85.7%	85.6%	7.59%	2.55%
2004 -2009	4.01%	1.29%	-1.72%	59.5%	1.23%	1.58%	81.5%	80.0%	-3.84%	-1.83%
2010 -2015	4.00%	1.22%	1.09%	60.0%	1.09%	1.09%	81.0%	82.0%	1.09%	1.09%
2015 -2020	4.00%	0.72%	0.65%	60.0%	0.65%	0.66%	81.0%	82.0%	0.66%	0.65%
2020 -2025	4.00%	0.67%	0.42%	60.0%	0.42%	0.42%	81.0%	82.0%	0.42%	0.42%
2025 -2030	4.00%	0.84%	0.54%	60.0%	0.53%	0.54%	81.0%	82.0%	0.54%	0.53%

1999 -2009	4.05%	1.78%	1.67%	59.2%	2.80%	1.95%	83.7%	82.2%	1.71%	0.34%
2010 -2030	4.00%	0.86%	0.67%	60.0%	0.67%	0.67%	81.0%	82.0%	0.67%	0.67%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 34)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES							H.E.
YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)		ITERATION ACT. AVG. WPC (MILLS/KWH)	
		WINTER	SUMMER	WINTER	SUMMER		
ACTUAL	1999						
ACTUAL	2000						
ACTUAL	2001						
ACTUAL	2002						
ACTUAL	2003						
ACTUAL	2004						
ACTUAL	2005						
ACTUAL	2006						
ACTUAL	2007						
ACTUAL	2008						
ACTUAL	2009						
FRCST	2010	58.0%	85.337	90.457	69.123	74.174	68.830
FRCST	2011	58.0%	86.169	91.339	69.797	74.698	70.910
FRCST	2012	58.0%	87.135	92.363	70.580	75.738	75.360
FRCST	2013	58.0%	88.397	93.700	71.601	76.834	79.430
FRCST	2014	58.0%	89.310	94.669	72.341	77.628	82.230
FRCST	2015	58.0%	90.066	95.470	72.954	78.286	83.810
FRCST	2016	58.0%	90.654	96.094	73.430	78.797	85.486
FRCST	2017	58.0%	91.247	96.722	73.910	79.312	87.196
FRCST	2018	58.0%	91.843	97.354	74.393	79.830	88.940
FRCST	2019	58.0%	92.443	97.990	74.879	80.352	90.719
FRCST	2020	58.0%	93.047	98.630	75.368	80.877	92.533
FRCST	2021	58.0%	93.432	99.038	75.680	81.211	94.384
FRCST	2022	58.0%	93.818	99.447	75.992	81.546	96.271
FRCST	2023	58.0%	94.204	99.856	76.305	81.882	98.197
FRCST	2024	58.0%	94.592	100.268	76.620	82.219	100.161
FRCST	2025	58.0%	94.982	100.681	76.935	82.558	102.164
FRCST	2026	58.0%	95.458	101.185	77.321	82.972	102.164
FRCST	2027	58.0%	95.952	101.709	77.721	83.402	102.164
FRCST	2028	58.0%	96.461	102.249	78.134	83.844	102.164
FRCST	2029	58.0%	96.982	102.800	78.555	84.296	102.164
FRCST	2030	58.0%	97.511	103.362	78.984	84.757	102.164

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)	
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)
1999 -2004	55.6%	79.100	83.357	71.479	74.339
2004 -2009	54.1%	88.002	92.223	77.775	77.476
2010 -2015	58.0%	90.066	95.470	72.954	78.286
2015 -2020	58.0%	93.047	98.630	75.368	80.877
2020 -2025	58.0%	94.982	100.681	76.935	82.558
2025 -2030	58.0%	97.511	103.362	78.984	84.757
1999 -2009	54.1%	88.002	92.223	77.775	77.476
2010 -2030	58.0%	97.511	103.362	78.984	84.757

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1971 BEGINNING HISTORICAL DATA YEAR ?  
2009 FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 34 YEARS)  
20 NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	16,585	821	20	0	17,426	209,679	29,671	34,454	0	273,804
ACTUAL 2000	16,960	861	20	0	17,841	217,543	30,071	35,332	0	282,946
ACTUAL 2001	17,264	863	20	1	18,148	221,712	29,505	32,788	3	284,008
ACTUAL 2002	17,496	944	20	1	18,461	239,785	30,881	30,665	6	301,337
ACTUAL 2003	17,633	939	20	1	18,593	237,058	30,797	31,042	11	298,908
ACTUAL 2004	17,825	934	18	1	18,778	241,323	30,497	30,062	11	301,893
ACTUAL 2005	17,987	950	20	1	18,958	256,363	33,082	30,958	11	320,414
ACTUAL 2006	18,119	982	18	1	19,120	245,481	34,113	33,250	11	312,855
ACTUAL 2007	18,183	995	18	1	19,197	261,956	36,420	29,929	11	328,316
ACTUAL 2008	18,161	1,004	19	1	19,185	258,863	35,637	31,681	12	326,193
ACTUAL 2009	18,104	1,020	20	1	19,145	245,078	35,746	33,704	14	314,542
FRCST 2010	18,171	1,026	19	1	19,217	247,210	35,991	36,463	14	319,678
FRCST 2011	18,238	1,032	19	1	19,290	249,856	36,236	36,533	14	322,639
FRCST 2012	18,305	1,038	19	1	19,363	252,284	36,481	36,604	14	325,363
FRCST 2013	18,373	1,044	19	1	19,437	254,431	36,726	36,674	14	327,845
FRCST 2014	18,441	1,050	19	1	19,511	256,601	36,971	36,745	14	330,331
FRCST 2015	18,509	1,056	19	1	19,585	258,943	37,217	36,816	14	332,990
FRCST 2016	18,581	1,066	19	1	19,667	261,183	37,640	36,887	14	335,724
FRCST 2017	18,654	1,076	19	1	19,750	263,341	38,063	36,958	14	338,376
FRCST 2018	18,727	1,086	19	1	19,833	265,462	38,487	37,030	14	340,993
FRCST 2019	18,800	1,096	19	1	19,916	267,569	38,912	37,101	14	343,596
FRCST 2020	18,874	1,106	19	1	20,000	269,676	39,338	37,173	14	346,201
FRCST 2021	18,953	1,120	19	1	20,093	271,815	39,904	37,173	14	348,906
FRCST 2022	19,033	1,134	19	1	20,187	273,934	40,471	37,173	14	351,592
FRCST 2023	19,112	1,148	19	1	20,280	276,051	41,039	37,173	14	354,277
FRCST 2024	19,192	1,162	19	1	20,374	278,173	41,608	37,173	14	356,966
FRCST 2025	19,303	1,176	19	1	20,499	280,751	42,178	37,173	14	360,116
FRCST 2026	19,448	1,194	19	1	20,662	284,017	42,889	37,173	14	364,093
FRCST 2027	19,593	1,212	19	1	20,825	287,423	43,601	37,173	14	368,211
FRCST 2028	19,739	1,230	19	1	20,989	290,926	44,315	37,173	14	372,428
FRCST 2029	19,886	1,248	19	1	21,154	294,501	45,030	37,173	14	376,718
FRCST 2030	20,003	1,266	19	1	21,289	297,663	45,747	37,173	14	380,597

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	1.45%	2.61%	-2	1	1.51%	2.85%	0.55%	-2.69%	NA	1.97%
2004 -2009	0.31%	1.78%	2	0	0.39%	0.31%	3.23%	2.31%	4.94%	0.82%
2010 -2015	0.37%	0.58%	0	0	0.38%	0.93%	0.67%	0.19%	0.00%	0.82%
2015 -2020	0.39%	0.93%	0	0	0.42%	0.82%	1.11%	0.19%	0.00%	0.78%
2020 -2025	0.45%	1.23%	0	0	0.49%	0.81%	1.40%	0.00%	0.00%	0.79%
2025 -2030	0.71%	1.49%	0	0	0.76%	1.18%	1.64%	0.00%	0.00%	1.11%
1999 -2009	0.88%	2.19%	0	1	0.95%	1.57%	1.88%	-0.22%	NA	1.40%
2010 -2030	0.48%	1.06%	0	0	0.51%	0.93%	1.21%	0.10%	0.00%	0.88%

1971 : BEGINNING HISTORICAL DATA YEAR ?  
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20 : NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** BASE SCENARIO RESULTS *****										
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)
ACTUAL 1999	6.62%	19,411	293,215	47.6%	63,913	70,374	103.9%	92.8%	66,408	65,283
ACTUAL 2000	6.76%	20,514	303,460	51.2%	62,750	67,638	101.1%	100.6%	63,469	68,064
ACTUAL 2001	6.37%	19,322	303,330	48.9%	70,874	69,893	101.8%	93.1%	72,161	65,092
ACTUAL 2002	6.33%	20,364	321,701	49.5%	64,228	74,133	116.7%	87.2%	74,938	64,652
ACTUAL 2003	6.60%	21,122	320,030	49.2%	74,216	69,222	98.5%	107.4%	73,087	74,336
ACTUAL 2004	6.75%	21,853	323,746	48.6%	75,985	67,807	97.4%	111.1%	74,002	75,351
ACTUAL 2005	6.52%	22,348	342,762	50.8%	76,262	77,005	104.3%	98.4%	79,575	75,773
ACTUAL 2006	7.10%	23,910	336,765	50.2%	75,839	76,531	108.3%	85.0%	82,155	65,026
ACTUAL 2007	6.64%	23,351	351,667	49.4%	81,308	79,149	104.5%	83.6%	84,992	66,180
ACTUAL 2008	6.29%	21,895	348,088	47.1%	84,404	68,898	97.3%	94.4%	82,155	65,026
ACTUAL 2009	6.90%	23,312	337,854	43.4%	88,855	70,056	96.1%	96.7%	85,403	67,718
FRCST 2010	6.60%	22,590	342,268	49.0%	79,738	71,764	96.0%	95.0%	76,548	68,176
FRCST 2011	6.60%	22,799	345,438	49.0%	80,477	72,429	96.0%	95.0%	77,258	68,808
FRCST 2012	6.60%	22,993	348,376	49.0%	81,161	73,045	96.0%	95.0%	77,914	69,393
FRCST 2013	6.60%	23,167	351,012	49.0%	81,775	73,598	96.0%	95.0%	78,504	69,918
FRCST 2014	6.60%	23,342	353,673	49.0%	82,396	74,156	96.0%	95.0%	79,100	70,448
FRCST 2015	6.60%	23,530	356,520	49.0%	83,059	74,753	96.0%	95.0%	79,736	71,015
FRCST 2016	6.60%	23,724	359,448	49.0%	83,740	75,366	96.0%	95.0%	80,391	71,598
FRCST 2017	6.60%	23,911	362,287	49.0%	84,402	75,962	96.0%	95.0%	81,026	72,164
FRCST 2018	6.60%	24,096	365,089	49.0%	85,055	76,549	96.0%	95.0%	81,652	72,722
FRCST 2019	6.60%	24,280	367,876	49.0%	85,704	77,134	96.0%	95.0%	82,276	73,277
FRCST 2020	6.60%	24,464	370,665	49.0%	86,354	77,718	96.0%	95.0%	82,900	73,833
FRCST 2021	6.60%	24,655	373,561	49.0%	87,028	78,325	96.0%	95.0%	83,547	74,409
FRCST 2022	6.60%	24,845	376,437	49.0%	87,698	78,929	96.0%	95.0%	84,191	74,982
FRCST 2023	6.60%	25,035	379,312	49.0%	88,368	79,531	96.0%	95.0%	84,833	75,555
FRCST 2024	6.60%	25,225	382,193	49.0%	89,039	80,135	96.0%	95.0%	85,478	76,129
FRCST 2025	6.60%	25,447	385,563	49.0%	89,825	80,842	96.0%	95.0%	86,232	76,800
FRCST 2026	6.60%	25,728	389,821	49.0%	90,817	81,735	96.0%	95.0%	87,184	77,648
FRCST 2027	6.60%	26,019	394,230	49.0%	91,844	82,659	96.0%	95.0%	88,170	78,526
FRCST 2028	6.60%	26,317	398,745	49.0%	92,896	83,606	96.0%	95.0%	89,180	79,428
FRCST 2029	6.60%	26,620	403,338	49.0%	93,966	84,569	96.0%	95.0%	90,207	80,341
FRCST 2030	6.60%	26,894	407,491	49.0%	94,933	85,440	96.0%	95.0%	91,136	81,168

***** BASE SCENARIO RESULTS *****										
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHANGE)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999 -2004	6.57%	2.40%	2.00%	49.2%	3.52%	-0.74%	103.2%	98.7%	2.19%	2.91%
2004 -2009	6.70%	1.30%	0.86%	48.3%	3.18%	0.65%	101.3%	94.9%	2.91%	-2.11%
2010 -2015	6.60%	0.82%	0.82%	49.0%	0.82%	0.82%	96.0%	95.0%	0.82%	0.82%
2015 -2020	6.60%	0.78%	0.78%	49.0%	0.78%	0.78%	96.0%	95.0%	0.78%	0.78%
2020 -2025	6.60%	0.79%	0.79%	49.0%	0.79%	0.79%	96.0%	95.0%	0.79%	0.79%
2025 -2030	6.60%	1.11%	1.11%	49.0%	1.11%	1.11%	96.0%	95.0%	1.11%	1.11%
1999 -2009	6.63%	1.85%	1.43%	48.7%	3.35%	-0.05%	102.7%	95.5%	2.55%	0.37%
2010 -2030	6.60%	0.88%	0.88%	49.0%	0.88%	0.88%	96.0%	95.0%	0.88%	0.88%

1971 : BEGINNING HISTORICAL DATA YEAR ?  
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20 : NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES

YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)		H.E. ITERATION ACT. AVG. WPC (MILLS/KWH)
		WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999						
ACTUAL 2000						
ACTUAL 2001						
ACTUAL 2002						
ACTUAL 2003						
ACTUAL 2004						
ACTUAL 2005						
ACTUAL 2006						
ACTUAL 2007						
ACTUAL 2008						
ACTUAL 2009						
FRCST 2010	44.0%	88.799	79.919	85.247	75.923	68.830
FRCST 2011	44.0%	89.622	80.660	86.037	76.627	70.910
FRCST 2012	44.0%	90.384	81.345	86.768	77.278	75.360
FRCST 2013	44.0%	91.068	81.961	87.425	77.863	79.430
FRCST 2014	44.0%	91.759	82.583	88.088	78.454	82.230
FRCST 2015	44.0%	92.497	83.248	88.797	79.085	83.810
FRCST 2016	44.0%	93.256	83.931	89.526	79.734	85.486
FRCST 2017	44.0%	93.993	84.594	90.233	80.364	87.198
FRCST 2018	44.0%	94.720	85.248	90.931	80.986	88.940
FRCST 2019	44.0%	95.443	85.899	91.625	81.604	90.719
FRCST 2020	44.0%	96.167	86.550	92.320	82.223	92.533
FRCST 2021	44.0%	96.918	87.226	93.041	82.865	94.384
FRCST 2022	44.0%	97.664	87.898	93.758	83.503	96.271
FRCST 2023	44.0%	98.410	88.569	94.474	84.141	98.197
FRCST 2024	44.0%	99.157	89.242	95.191	84.780	100.161
FRCST 2025	44.0%	100.032	90.029	96.031	85.527	102.164
FRCST 2026	44.0%	101.137	91.023	97.091	86.472	102.164
FRCST 2027	44.0%	102.291	92.053	98.189	87.450	102.164
FRCST 2028	44.0%	103.452	93.107	99.314	88.451	102.164
FRCST 2029	44.0%	104.644	94.179	100.458	89.470	102.164
FRCST 2030	44.0%	105.721	95.149	101.492	90.391	102.164

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)	
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)
1999 -2004	47.6%	75.985	74.133	74.938	75.351
2004 -2009	43.4%	88.855	79.149	85.403	75.773
2010 -2015	44.0%	92.497	83.248	88.797	79.085
2015 -2020	44.0%	96.167	86.550	92.320	82.223
2020 -2025	44.0%	100.032	90.029	96.031	85.527
2025 -2030	44.0%	105.721	95.149	101.492	90.391
1999 -2009	43.4%	88.855	79.149	85.403	75.773
2010 -2030	44.0%	105.721	95.149	101.492	90.391

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\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	14,450	1,303	13	1	15,767	202,146	63,051	87,944	16,940	370,081
ACTUAL 2000	14,527	1,326	17	1	15,871	208,395	64,722	101,193	17,208	391,518
ACTUAL 2001	14,466	1,362	19	2	15,849	206,160	68,058	123,170	17,238	414,626
ACTUAL 2002	14,453	1,407	23	2	15,885	216,774	73,958	170,521	17,832	479,085
ACTUAL 2003	14,528	1,451	25	2	16,006	215,978	74,697	183,596	16,559	490,830
ACTUAL 2004	14,639	1,496	22	7	16,164	214,142	81,318	190,858	16,936	503,254
ACTUAL 2005	14,674	1,551	22	7	16,254	227,489	79,672	199,532	17,035	523,728
ACTUAL 2006	14,745	1,591	26	6	16,368	222,482	85,555	219,097	16,474	543,608
ACTUAL 2007	14,771	1,629	32	6	16,438	235,819	84,406	241,196	16,646	578,067
ACTUAL 2008	14,725	1,692	32	6	16,455	233,759	86,378	248,638	16,125	584,900
ACTUAL 2009	14,678	1,755	32	6	16,471	224,428	88,279	274,410	15,189	602,286
FRCST 2010	14,628	1,795	34	6	16,463	226,672	90,431	264,745	15,413	597,261
FRCST 2011	14,628	1,835	31	6	16,500	229,440	92,585	233,398	15,413	570,836
FRCST 2012	14,654	1,875	31	6	16,566	232,018	94,742	230,678	15,413	572,851
FRCST 2013	14,680	1,915	32	6	16,633	234,123	96,901	275,624	15,413	622,061
FRCST 2014	14,705	1,955	32	6	16,698	236,131	99,061	317,050	15,413	667,655
FRCST 2015	14,757	1,995	32	6	16,790	238,648	101,225	352,562	15,413	707,848
FRCST 2016	14,812	2,033	32	6	16,883	241,156	103,388	382,648	15,413	742,606
FRCST 2017	14,888	2,071	31	6	16,976	243,639	105,555	382,109	15,413	746,716
FRCST 2018	14,924	2,109	31	6	17,070	246,119	107,727	382,109	15,413	751,368
FRCST 2019	14,979	2,147	31	6	17,163	248,609	109,904	382,109	15,413	756,035
FRCST 2020	15,036	2,185	31	6	17,258	251,116	112,084	382,109	15,413	760,722
FRCST 2021	15,101	2,221	30	6	17,358	253,703	114,278	369,097	15,413	752,491
FRCST 2022	15,167	2,257	30	6	17,460	256,264	116,478	369,097	15,413	757,252
FRCST 2023	15,233	2,293	30	6	17,562	258,822	118,685	369,097	15,413	762,017
FRCST 2024	15,299	2,329	30	6	17,664	261,389	120,899	369,097	15,413	766,798
FRCST 2025	15,365	2,365	30	6	17,766	263,973	123,119	369,097	15,413	771,602
FRCST 2026	15,433	2,399	30	6	17,868	266,747	125,243	369,097	15,413	776,500
FRCST 2027	15,501	2,433	30	6	17,970	269,628	127,373	369,097	15,413	781,511
FRCST 2028	15,570	2,467	30	6	18,073	272,584	129,510	369,097	15,413	786,604
FRCST 2029	15,639	2,501	30	6	18,176	275,596	131,653	369,097	15,413	791,759
FRCST 2030	15,708	2,535	30	6	18,279	278,654	133,802	369,097	15,413	796,966

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	0.26%	2.80%	9	6	0.50%	1.16%	5.22%	16.76%	0.00%	6.34%
2004 -2009	0.05%	3.25%	10	-1	0.38%	0.94%	1.66%	7.53%	-2.18%	3.66%
2010 -2015	0.18%	2.14%	-2	0	0.39%	1.04%	2.28%	5.90%	0.00%	3.46%
2015 -2020	0.38%	1.84%	-1	0	0.55%	1.02%	2.06%	1.62%	0.00%	1.45%
2020 -2025	0.43%	1.60%	-1	0	0.58%	1.00%	1.90%	-0.69%	0.00%	0.28%
2025 -2030	0.44%	1.40%	0	0	0.57%	1.09%	1.68%	0.00%	0.00%	0.65%
1999 -2009	0.16%	3.02%	19	5	0.44%	1.05%	3.42%	12.05%	-1.10%	4.99%
2010 -2030	0.36%	1.74%	-4	0	0.52%	1.04%	1.98%	1.68%	0.00%	1.45%

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20 : NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** BASE SCENARIO RESULTS *****					***** BASE SCENARIO RESULTS *****					
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)
ACTUAL 1999	5.33%	20,836	390,917	49.7%	79,062	89,671	90.4%	91.1%	71,463	81,914
ACTUAL 2000	4.83%	19,870	411,388	53.5%	78,767	87,819	94.1%	90.1%	74,137	79,144
ACTUAL 2001	5.03%	21,960	436,586	52.9%	87,725	94,174	86.9%	86.7%	76,265	81,622
ACTUAL 2002	4.70%	23,627	502,712	52.9%	98,068	108,427	85.3%	84.8%	83,688	91,920
ACTUAL 2003	4.01%	20,505	511,335	53.7%	104,875	108,680	87.2%	89.9%	91,482	97,671
ACTUAL 2004	4.45%	23,438	526,692	54.6%	108,218	110,060	80.1%	0.866	86,710	95,338
ACTUAL 2005	4.20%	22,961	546,689	54.5%	112,228	114,514	84.8%	0.880	95,201	100,724
ACTUAL 2006	3.05%	17,102	580,710	52.6%	107,718	121,741	87.9%	0.894	94,728	108,894
ACTUAL 2007	3.57%	21,401	599,468	52.5%	122,302	130,372	82.2%	0.835	100,566	108,889
ACTUAL 2008	3.68%	22,221	607,121	56.1%	123,429	122,369	82.3%	0.827	101,594	101,234
ACTUAL 2009	3.63%	22,887	624,973	52.0%	137,188	129,906	81.4%	0.822	111,655	106,138
FRCST 2010	3.70%	22,948	620,209	54.0%	131,111	128,489	83.0%	0.850	108,822	109,216
FRCST 2011	3.70%	21,932	592,768	54.0%	125,310	122,804	83.0%	0.850	104,008	104,384
FRCST 2012	3.70%	22,010	594,861	54.0%	125,753	123,238	83.0%	0.850	104,375	104,752
FRCST 2013	3.70%	23,901	645,962	58.0%	127,138	127,138	83.0%	0.855	105,524	108,703
FRCST 2014	3.70%	25,652	693,307	49.8%	158,925	128,729	87.9%	0.855	107,910	110,064
FRCST 2015	3.70%	27,197	735,045	52.2%	160,746	132,615	88.0%	0.855	109,307	113,386
FRCST 2016	3.70%	26,532	771,138	48.0%	183,395	133,878	60.7%	0.855	111,321	114,466
FRCST 2017	3.70%	28,590	775,406	48.0%	184,410	135,541	61.0%	85.5%	112,490	115,888
FRCST 2018	3.70%	28,869	780,237	48.0%	185,559	136,386	61.0%	85.5%	113,191	116,610
FRCST 2019	3.70%	29,048	785,083	48.0%	186,711	137,233	61.0%	85.5%	113,894	117,334
FRCST 2020	3.70%	29,228	789,950	48.0%	187,869	138,084	61.0%	85.5%	114,600	118,061
FRCST 2021	3.70%	28,912	781,403	47.9%	186,224	137,806	61.4%	85.5%	114,342	117,824
FRCST 2022	3.70%	29,095	786,347	47.9%	187,402	138,678	61.4%	85.5%	115,065	118,570
FRCST 2023	3.70%	29,278	791,295	47.9%	188,582	139,550	61.4%	85.5%	115,789	119,316
FRCST 2024	3.70%	29,462	796,260	47.9%	189,765	140,426	61.4%	85.5%	116,516	120,064
FRCST 2025	3.70%	29,646	801,248	47.9%	190,954	141,306	61.4%	85.5%	117,246	120,816
FRCST 2026	3.70%	29,834	806,334	47.9%	192,166	143,164	61.8%	85.5%	118,758	122,405
FRCST 2027	3.70%	30,027	811,538	47.9%	193,406	144,087	61.8%	85.5%	119,525	123,185
FRCST 2028	3.70%	30,223	816,827	47.9%	194,666	145,026	61.8%	85.5%	120,304	123,997
FRCST 2029	3.70%	30,421	822,180	47.9%	195,942	145,971	61.8%	85.5%	121,092	124,810
FRCST 2030	3.70%	30,621	827,587	47.9%	197,231	146,937	61.8%	85.5%	121,888	125,631

***** BASE SCENARIO RESULTS *****					***** BASE SCENARIO RESULTS *****					
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHANGE)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999 -2004	4.73%	2.38%	5.14%	52.9%	6.48%	4.14%	87.3%	88.2%	3.94%	3.08%
2004 -2009	3.76%	-0.65%	3.48%	53.7%	4.86%	3.37%	83.1%	85.4%	5.19%	2.17%
2010 -2015	3.70%	3.46%	3.46%	53.7%	4.16%	0.63%	78.0%	85.3%	0.09%	0.75%
2015 -2020	3.70%	1.45%	1.45%	48.7%	3.17%	0.81%	62.1%	85.5%	0.95%	0.81%
2020 -2025	3.70%	0.28%	0.28%	47.9%	0.33%	0.46%	61.3%	85.5%	0.46%	0.46%
2025 -2030	3.70%	0.65%	0.65%	47.9%	0.65%	0.78%	61.7%	85.5%	0.78%	0.78%
1999 -2009	4.22%	0.85%	4.80%	53.2%	5.67%	3.75%	85.7%	86.8%	4.56%	2.62%
2010 -2030	3.70%	1.45%	1.45%	49.6%	2.06%	0.67%	66.1%	85.4%	0.57%	0.70%

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***** BASE SCENARIO RESULTS *****						***** BASE SCENARIO RESULTS *****	
PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES							H.E. ITERATION ACT. AVG. WPC (MILLS/KWH)
YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)			
		WINTER	SUMMER	WINTER	SUMMER		
ACTUAL	1999						
ACTUAL	2000						
ACTUAL	2001						
ACTUAL	2002						
ACTUAL	2003						
ACTUAL	2004						
ACTUAL	2005						
ACTUAL	2006						
ACTUAL	2007						
ACTUAL	2008						
ACTUAL	2009						
FRCST	2010	52.0%	136.154	133.431	113.008	113.416	68.830
FRCST	2011	52.0%	130.130	127.527	108.008	108.398	70.910
FRCST	2012	52.0%	130.589	127.978	108.389	108.781	75.360
FRCST	2013	55.8%	132.150	132.150	109.685	112.989	79.430
FRCST	2014	48.0%	164.885	133.557	111.957	114.191	82.230
FRCST	2015	50.8%	165.176	136.270	112.319	116.511	83.810
FRCST	2016	48.7%	188.500	137.605	114.419	117.652	85.486
FRCST	2017	46.5%	190.359	139.914	116.119	119.626	87.196
FRCST	2018	46.5%	191.545	140.785	116.842	120.371	88.940
FRCST	2019	46.5%	192.734	141.660	117.568	121.119	90.719
FRCST	2020	46.5%	193.929	142.538	118.297	121.870	92.533
FRCST	2021	46.5%	191.831	141.955	117.784	121.371	94.384
FRCST	2022	46.5%	193.045	142.853	118.529	122.139	96.271
FRCST	2023	46.5%	194.259	143.752	119.275	122.908	98.197
FRCST	2024	46.5%	195.478	144.654	120.024	123.679	100.161
FRCST	2025	46.5%	196.703	145.560	120.776	124.454	102.164
FRCST	2026	46.5%	197.951	147.474	122.334	126.090	102.164
FRCST	2027	46.5%	199.229	148.426	123.124	126.904	102.164
FRCST	2028	46.5%	200.527	149.393	123.926	127.731	102.164
FRCST	2029	46.5%	201.841	150.372	124.738	128.568	102.164
FRCST	2030	46.5%	203.169	151.361	125.558	129.413	102.164

***** BASE SCENARIO RESULTS *****						***** BASE SCENARIO RESULTS *****	
TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)			
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)		
1999 -2004	49.7%	108.218	110.060	91.482	97.671		
2004 -2009	52.0%	137.186	130.372	111.655	108.894		
2010 -2015	48.0%	165.176	136.270	113.008	116.511		
2015 -2020	46.5%	193.929	142.538	118.297	121.870		
2020 -2025	46.5%	196.703	145.560	120.776	124.454		
2025 -2030	46.5%	203.169	151.361	125.558	129.413		
1999 -2009	49.7%	137.186	130.372	111.655	108.894		
2010 -2030	46.5%	203.169	151.361	125.558	129.413		

MENU

1971 : BEGINNING HISTORICAL DATA YEAR ?  
 2009 : FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 34 YEARS)  
 20 : NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	11,930	1,252	7	325	13,514	122,720	37,293	66,332	83,780	310,125
ACTUAL 2000	12,022	1,264	7	333	13,626	124,143	40,945	62,878	85,661	313,627
ACTUAL 2001	12,082	1,270	8	338	13,698	129,828	43,412	69,335	82,565	325,140
ACTUAL 2002	12,138	1,283	8	341	13,750	136,371	43,698	70,028	85,081	335,178
ACTUAL 2003	12,094	1,237	8	345	13,684	132,105	41,978	62,088	80,219	316,390
ACTUAL 2004	12,021	1,215	8	349	13,593	132,582	44,151	67,551	79,452	323,716
ACTUAL 2005	12,011	1,221	8	361	13,601	141,487	35,079	82,507	10,983	270,056
ACTUAL 2006	12,038	1,225	8	363	13,634	140,839	35,456	87,280	5,321	268,896
ACTUAL 2007	12,075	1,235	8	365	13,683	146,859	41,868	86,616	7,013	282,356
ACTUAL 2008	12,072	1,258	8	369	13,707	144,865	39,833	82,371	5,646	272,715
ACTUAL 2009	12,042	1,266	8	368	13,684	144,946	43,473	74,090	4,666	267,175
FRCST 2010	12,043	1,270	8	368	13,689	148,478	43,593	67,555	6,953	266,577
FRCST 2011	12,045	1,274	9	368	13,696	151,205	43,713	69,836	6,953	271,707
FRCST 2012	12,047	1,278	9	368	13,702	153,178	43,833	99,119	6,953	303,083
FRCST 2013	12,048	1,282	9	368	13,707	154,631	43,953	165,843	6,953	371,380
FRCST 2014	12,050	1,286	9	368	13,713	155,903	44,073	209,564	6,953	416,493
FRCST 2015	12,052	1,290	9	368	13,719	157,170	44,193	268,941	6,953	495,257
FRCST 2016	12,064	1,296	9	368	13,737	158,442	44,461	327,219	6,953	537,075
FRCST 2017	12,076	1,302	9	368	13,755	159,648	44,730	338,241	6,953	549,572
FRCST 2018	12,088	1,308	9	368	13,773	160,821	44,999	338,391	6,953	551,164
FRCST 2019	12,100	1,314	9	368	13,791	161,980	45,269	338,542	6,953	552,744
FRCST 2020	12,111	1,320	9	368	13,808	163,134	45,540	338,692	6,953	554,319
FRCST 2021	12,132	1,330	9	368	13,839	164,376	45,931	338,692	6,953	555,952
FRCST 2022	12,153	1,340	9	368	13,870	165,605	46,323	338,692	6,953	557,573
FRCST 2023	12,174	1,350	9	368	13,901	166,832	46,715	338,692	6,953	559,192
FRCST 2024	12,194	1,360	9	368	13,931	168,061	47,109	338,692	6,953	560,815
FRCST 2025	12,215	1,370	9	368	13,962	169,295	47,503	338,692	6,953	562,443
FRCST 2026	12,242	1,380	9	368	13,999	170,730	47,946	338,692	6,953	564,321
FRCST 2027	12,268	1,390	9	368	14,035	172,240	48,389	338,692	6,953	566,274
FRCST 2028	12,295	1,400	9	368	14,072	173,796	48,835	338,692	6,953	568,276
FRCST 2029	12,321	1,410	9	368	14,108	175,385	49,281	338,692	6,953	570,311
FRCST 2030	12,348	1,420	9	368	14,145	176,999	49,729	338,692	6,953	572,373

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	0.15%	-0.60%	1	24	0.12%	1.55%	3.43%	0.36%	-1.06%	0.86%
2004 -2009	0.03%	0.83%	0	19	0.13%	1.80%	-0.31%	1.87%	-43.28%	-3.77%
2010 -2015	0.01%	0.31%	1	0	0.04%	1.14%	0.27%	33.54%	0.00%	13.19%
2015 -2020	0.10%	0.46%	0	0	0.13%	0.75%	0.60%	3.37%	0.00%	2.28%
2020 -2025	0.17%	0.75%	0	0	0.22%	0.74%	0.85%	0.00%	0.00%	0.29%
2025 -2030	0.22%	0.72%	0	0	0.26%	0.89%	0.92%	0.00%	0.00%	0.35%
1999 -2009	0.09%	0.11%	1	43	0.13%	1.68%	1.55%	1.11%	-25.08%	-1.48%
2010 -2030	0.13%	0.56%	1	0	0.16%	0.88%	0.66%	8.39%	0.00%	3.89%

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***** BASE SCENARIO RESULTS *****					***** BASE SCENARIO RESULTS *****					
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)
ACTUAL 1999	1.83%	5,781	315,906	56.8%	60,834	63,533	78.1%	98.7%	47,506	62,682
ACTUAL 2000	3.85%	12,558	326,185	56.8%	62,810	85,596	78.1%	98.7%	49,049	64,718
ACTUAL 2001	0.51%	1,667	326,807	53.0%	62,930	70,337	78.1%	94.9%	49,143	66,759
ACTUAL 2002	4.01%	14,002	349,180	54.8%	60,369	72,731	69.5%	88.9%	41,968	64,677
ACTUAL 2003	2.34%	7,581	323,971	53.0%	57,452	69,841	75.0%	98.7%	43,075	68,906
ACTUAL 2004	3.45%	11,567	335,283	52.5%	53,239	72,920	78.1%	96.3%	41,575	70,230
ACTUAL 2005	0.41%	1,112	271,168	50.3%	60,029	61,562	69.2%	97.7%	41,529	60,144
ACTUAL 2006	2.94%	8,145	277,041	47.5%	52,197	66,559	78.7%	84.5%	41,081	56,215
ACTUAL 2007	3.00%	8,733	291,089	53.1%	49,019	62,542	75.4%	100.0%	36,940	62,542
ACTUAL 2008	3.00%	8,434	281,148	58.8%	48,671	54,607	91.3%	80.9%	44,442	44,179
ACTUAL 2009	4.97%	13,973	281,148	47.3%	50,875	67,904	91.3%	89.7%	46,454	60,886
FRCST 2010	5.00%	14,030	280,607	52.0%	52,205	61,601	90.0%	89.0%	46,984	54,825
FRCST 2011	5.00%	14,300	286,007	52.0%	53,209	62,767	90.0%	89.0%	47,888	55,860
FRCST 2012	5.00%	15,952	319,035	45.0%	59,509	80,932	87.0%	75.5%	51,773	61,104
FRCST 2013	5.00%	19,546	390,926	50.0%	75,638	89,252	90.0%	90.0%	68,074	80,327
FRCST 2014	5.00%	21,921	438,414	46.5%	80,320	107,628	93.0%	77.0%	74,697	82,874
FRCST 2015	5.00%	26,066	521,323	51.5%	101,366	115,557	93.0%	92.0%	94,270	108,312
FRCST 2016	5.00%	28,267	565,342	56.0%	104,767	115,244	95.0%	93.0%	99,529	107,177
FRCST 2017	5.00%	28,925	578,497	56.0%	107,205	117,926	95.0%	93.0%	101,845	109,671
FRCST 2018	5.00%	29,009	580,173	56.0%	107,516	118,267	95.0%	93.0%	102,140	109,989
FRCST 2019	5.00%	29,092	581,836	56.0%	107,824	118,606	95.0%	93.0%	102,433	110,304
FRCST 2020	5.00%	29,175	583,494	56.0%	108,131	118,944	95.0%	93.0%	102,725	110,618
FRCST 2021	5.00%	29,261	585,213	56.0%	108,450	119,295	95.0%	93.5%	103,027	111,541
FRCST 2022	5.00%	29,346	586,919	56.0%	108,766	119,643	95.0%	93.5%	103,328	111,866
FRCST 2023	5.00%	29,431	588,623	56.0%	109,082	119,990	95.0%	93.5%	103,628	112,181
FRCST 2024	5.00%	29,517	590,332	56.0%	109,398	120,338	95.0%	93.5%	103,929	112,516
FRCST 2025	5.00%	29,602	592,045	56.0%	109,716	120,688	95.0%	93.5%	104,230	112,843
FRCST 2026	5.00%	29,701	594,022	56.0%	110,082	121,091	95.0%	93.5%	104,578	113,220
FRCST 2027	5.00%	29,804	596,078	56.0%	110,463	121,510	95.0%	93.5%	104,940	113,612
FRCST 2028	5.00%	29,909	598,185	56.0%	110,854	121,939	95.0%	93.5%	105,311	114,013
FRCST 2029	5.00%	30,016	600,327	56.0%	111,251	122,376	95.0%	93.5%	105,688	114,422
FRCST 2030	5.00%	30,125	602,498	56.0%	111,653	122,818	95.0%	93.5%	106,071	114,835

***** BASE SCENARIO RESULTS *****					***** BASE SCENARIO RESULTS *****					
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHANGE)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999 -2004	2.67%	14.88%	1.20%	54.5%	-2.63%	2.79%	76.2%	96.0%	-2.63%	2.30%
2004 -2009	2.96%	3.85%	-3.46%	51.6%	-0.90%	-1.42%	80.7%	91.5%	2.24%	-2.82%
2010 -2015	5.00%	13.19%	13.19%	49.5%	14.19%	13.41%	90.5%	85.4%	14.94%	14.16%
2015 -2020	5.00%	2.28%	2.28%	55.3%	1.30%	0.58%	94.7%	92.8%	1.73%	0.80%
2020 -2025	5.00%	0.29%	0.29%	56.0%	0.29%	0.29%	95.0%	93.4%	0.29%	0.40%
2025 -2030	5.00%	0.35%	0.35%	56.0%	0.35%	0.35%	95.0%	93.5%	0.35%	0.35%
1999 -2009	2.76%	9.23%	-1.16%	53.1%	-1.77%	0.67%	78.4%	93.5%	-0.22%	-0.29%
2010 -2030	5.00%	3.89%	3.89%	54.1%	3.87%	3.51%	93.7%	91.1%	4.16%	3.77%

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***** BASE SCENARIO RESULTS *****						***** BASE SCENARIO RESULTS *****	
PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES							H.E. ITERATION ACT. AVG. WPC (MILLS/KWH)
YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)			
		WINTER	SUMMER	WINTER	SUMMER		
ACTUAL	1999						
ACTUAL	2000						
ACTUAL	2001						
ACTUAL	2002						
ACTUAL	2003						
ACTUAL	2004						
ACTUAL	2005						
ACTUAL	2006						
ACTUAL	2007						
ACTUAL	2008						
ACTUAL	2009						
FRCST	2010	47.0%	57.758	68.155	51.982	60.658	68.830
FRCST	2011	47.0%	58.870	69.466	52.983	61.825	70.910
FRCST	2012	41.0%	65.314	88.828	56.824	67.065	75.360
FRCST	2013	46.5%	81.331	95.970	73.198	86.373	78.430
FRCST	2014	44.0%	84.883	113.744	78.941	87.583	82.230
FRCST	2015	48.5%	107.636	122.705	100.101	112.888	83.810
FRCST	2016	53.0%	110.898	121.767	105.163	113.244	85.486
FRCST	2017	53.0%	113.273	124.601	107.610	115.879	87.196
FRCST	2018	53.0%	113.602	124.962	107.922	116.214	88.940
FRCST	2019	53.0%	113.927	125.320	108.231	116.547	90.719
FRCST	2020	53.0%	114.252	125.677	108.539	116.880	92.533
FRCST	2021	53.0%	114.588	126.047	108.859	117.214	94.384
FRCST	2022	53.0%	114.923	126.415	109.176	117.547	96.271
FRCST	2023	53.0%	115.256	126.782	109.494	117.880	98.197
FRCST	2024	53.0%	115.591	127.150	109.811	118.214	100.161
FRCST	2025	53.0%	115.926	127.519	110.130	118.547	102.164
FRCST	2026	53.0%	116.313	127.945	110.498	118.880	102.164
FRCST	2027	53.0%	116.716	128.388	110.880	120.042	102.164
FRCST	2028	53.0%	117.129	128.841	111.272	120.467	102.164
FRCST	2029	53.0%	117.548	129.303	111.671	120.898	102.164
FRCST	2030	53.0%	117.973	129.770	112.074	121.335	102.164

***** BASE SCENARIO RESULTS *****						***** BASE SCENARIO RESULTS *****	
TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)			
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)		
1999 -2004	52.5%	62.930	72.920	49.143	70.230		
2004 -2009	47.3%	60.029	72.920	46.454	70.230		
2010 -2015	41.0%	107.636	122.705	100.101	112.888		
2015 -2020	48.5%	114.252	125.677	108.539	116.880		
2020 -2025	53.0%	115.926	127.519	110.130	119.230		
2025 -2030	53.0%	117.973	129.770	112.074	121.335		
1999 -2009	47.3%	62.930	72.920	49.143	70.230		
2010 -2030	41.0%	117.973	129.770	112.074	121.335		

MENU

1971 : BEGINNING HISTORICAL DATA YEAR ?  
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\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS				TOTAL	SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER		RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	10,984	277	3	88	11,352	145,889	12,661	9,714	4,710	172,974
ACTUAL 2000	11,273	278	3	74	11,628	146,576	12,727	9,289	4,302	172,894
ACTUAL 2001	11,335	279	3	87	11,684	152,094	12,896	8,704	4,443	178,137
ACTUAL 2002	11,447	283	4	74	11,808	160,254	12,807	9,754	4,710	187,525
ACTUAL 2003	11,489	303	4	80	11,876	160,024	12,142	11,691	5,032	188,889
ACTUAL 2004	11,525	332	4	80	11,941	159,933	12,122	11,747	5,118	188,920
ACTUAL 2005	11,551	365	5	79	12,000	170,544	13,252	13,274	5,250	202,320
ACTUAL 2006	11,574	390	5	79	12,048	165,127	13,346	15,045	5,299	198,817
ACTUAL 2007	11,562	436	6	80	12,084	169,038	14,902	16,327	5,982	206,249
ACTUAL 2008	11,492	470	7	79	12,048	169,539	18,501	19,374	5,662	213,076
ACTUAL 2009	11,438	492	8	77	12,015	164,691	18,500	22,951	5,630	211,972
FRCST 2010	11,367	497	8	77	11,949	166,451	18,680	18,041	6,124	209,298
FRCST 2011	11,314	502	8	77	11,901	166,964	18,860	18,041	6,124	209,989
FRCST 2012	11,297	507	8	77	11,889	167,140	19,040	18,041	6,124	210,345
FRCST 2013	11,298	512	8	77	11,895	167,117	19,220	18,041	6,124	210,502
FRCST 2014	11,306	517	8	77	11,908	167,271	19,400	18,041	6,124	210,836
FRCST 2015	11,314	522	8	77	11,921	167,534	19,580	21,688	6,124	214,926
FRCST 2016	11,338	531	8	77	11,954	168,034	19,924	21,688	6,124	215,770
FRCST 2017	11,363	540	8	77	11,988	168,535	20,267	21,688	6,124	216,614
FRCST 2018	11,390	549	8	77	12,024	169,091	20,612	21,688	6,124	217,515
FRCST 2019	11,418	558	8	77	12,061	169,649	20,956	21,688	6,124	218,417
FRCST 2020	11,450	567	8	77	12,102	170,262	21,301	21,688	6,124	219,375
FRCST 2021	11,488	582	8	77	12,155	171,808	21,863	21,688	6,124	221,483
FRCST 2022	11,530	597	8	77	12,212	172,976	22,424	21,688	6,124	223,212
FRCST 2023	11,572	612	8	77	12,269	173,926	22,987	21,688	6,124	224,725
FRCST 2024	11,618	627	8	77	12,330	174,823	23,550	21,688	6,124	226,185
FRCST 2025	11,664	642	8	77	12,391	175,667	24,113	21,688	6,124	227,592
FRCST 2026	11,710	662	8	77	12,457	177,523	24,882	21,688	6,124	230,217
FRCST 2027	11,757	682	8	77	12,524	179,067	25,651	21,688	6,124	232,530
FRCST 2028	11,808	702	8	77	12,595	180,572	26,423	21,688	6,124	234,807
FRCST 2029	11,859	722	8	77	12,666	182,095	27,196	21,688	6,124	237,103
FRCST 2030	11,915	742	8	77	12,742	183,692	27,970	21,688	6,124	239,474

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS				TOTAL (% CHANGE)	SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)		RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	0.97%	3.69%	1	-8	1.02%	1.86%	-0.87%	3.87%	1.68%	1.78%
2004 -2009	-0.15%	8.18%	4	-3	0.12%	0.61%	8.82%	14.33%	1.93%	2.33%
2010 -2015	-0.09%	0.99%	0	0	-0.05%	0.13%	0.95%	3.75%	0.00%	0.53%
2015 -2020	0.24%	1.67%	0	0	0.30%	0.32%	1.70%	0.00%	0.00%	0.41%
2020 -2025	0.37%	2.52%	0	0	0.47%	0.63%	2.51%	0.00%	0.00%	0.74%
2025 -2030	0.43%	2.94%	0	0	0.56%	0.90%	3.01%	0.00%	0.00%	1.02%
1999 -2009	0.41%	5.91%	5	-11	0.57%	1.23%	3.87%	8.98%	1.80%	2.05%
2010 -2030	0.24%	2.02%	0	0	0.32%	0.49%	2.04%	0.92%	0.00%	0.68%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 34)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** BASE SCENARIO RESULTS *****					***** BASE SCENARIO RESULTS *****					
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)
ACTUAL 1999	7.62%	14,268	187,242	49.5%	40,742	43,152	98.1%	95.6%	39,980	41,271
ACTUAL 2000	9.63%	18,424	191,318	51.6%	42,298	37,439	94.8%	91.3%	40,110	34,190
ACTUAL 2001	6.69%	12,772	190,909	48.4%	45,024	41,434	94.3%	96.5%	42,469	39,970
ACTUAL 2002	8.17%	16,684	204,209	49.9%	40,343	46,693	98.5%	92.2%	39,734	43,029
ACTUAL 2003	7.26%	14,787	203,676	50.3%	46,184	43,189	92.3%	90.9%	42,616	39,255
ACTUAL 2004	7.13%	14,504	203,424	50.4%	46,073	41,454	93.4%	92.3%	43,039	38,254
ACTUAL 2005	6.33%	13,672	215,992	51.5%	46,667	47,925	95.6%	95.9%	44,598	45,971
ACTUAL 2006	7.00%	14,965	213,782	50.5%	48,186	48,291	95.9%	94.3%	46,191	45,517
ACTUAL 2007	8.84%	20,000	226,249	51.2%	50,488	48,678	94.9%	93.6%	47,889	45,732
ACTUAL 2008	6.60%	15,057	228,133	51.8%	50,282	44,921	93.9%	91.1%	47,230	40,939
ACTUAL 2009	6.71%	15,246	227,216	45.6%	56,872	46,118	93.6%	92.7%	53,259	42,774
FRCST 2010	7.00%	15,753	225,049	52.0%	49,405	45,452	95.0%	94.0%	46,935	42,725
FRCST 2011	7.00%	15,806	225,795	52.0%	49,569	45,603	95.0%	94.0%	47,090	42,867
FRCST 2012	7.00%	15,832	226,177	52.0%	49,653	45,680	95.0%	94.0%	47,170	42,940
FRCST 2013	7.00%	15,844	226,346	52.0%	49,690	45,714	95.0%	94.0%	47,205	42,972
FRCST 2014	7.00%	15,869	226,705	52.0%	49,769	45,787	95.0%	94.0%	47,280	43,040
FRCST 2015	7.00%	16,177	231,103	52.0%	50,734	46,675	95.0%	94.0%	48,197	43,675
FRCST 2016	7.00%	16,241	232,011	52.0%	50,933	46,858	95.0%	94.0%	48,386	44,047
FRCST 2017	7.00%	16,304	232,918	52.0%	51,132	47,042	95.0%	94.0%	48,576	44,219
FRCST 2018	7.00%	16,372	233,887	52.0%	51,345	47,237	95.0%	94.0%	48,778	44,403
FRCST 2019	7.00%	16,440	234,857	52.0%	51,558	47,433	95.0%	94.0%	48,980	44,587
FRCST 2020	7.00%	16,512	235,887	52.0%	51,784	47,641	95.0%	94.0%	49,195	44,783
FRCST 2021	7.00%	16,671	238,154	52.0%	52,282	48,099	95.0%	94.0%	49,667	45,213
FRCST 2022	7.00%	16,801	240,013	52.0%	52,690	48,475	95.0%	94.0%	50,055	45,566
FRCST 2023	7.00%	16,915	241,640	52.0%	53,047	48,803	95.0%	94.0%	50,394	45,875
FRCST 2024	7.00%	17,025	243,210	52.0%	53,391	49,120	95.0%	94.0%	50,722	46,173
FRCST 2025	7.00%	17,131	244,723	52.0%	53,724	49,426	95.0%	94.0%	51,037	46,460
FRCST 2026	7.00%	17,328	247,545	52.0%	54,343	49,996	95.0%	94.0%	51,626	46,956
FRCST 2027	7.00%	17,502	250,032	52.0%	54,889	50,498	95.0%	94.0%	52,145	47,468
FRCST 2028	7.00%	17,674	252,481	52.0%	55,427	50,993	95.0%	94.0%	52,655	47,933
FRCST 2029	7.00%	17,846	254,949	52.0%	55,969	51,491	95.0%	94.0%	53,170	48,402
FRCST 2030	7.00%	18,025	257,499	52.0%	56,528	52,006	95.0%	94.0%	53,702	48,886

***** BASE SCENARIO RESULTS *****					***** BASE SCENARIO RESULTS *****					
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHANGE)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999 -2004	7.75%	0.33%	1.67%	50.0%	2.49%	-0.80%	95.2%	93.1%	1.49%	-1.51%
2004 -2009	7.10%	1.00%	2.24%	50.2%	4.30%	2.16%	94.6%	93.3%	4.35%	2.26%
2010 -2015	7.00%	0.53%	0.53%	52.0%	0.53%	0.53%	95.0%	94.0%	0.53%	0.53%
2015 -2020	7.00%	0.41%	0.41%	52.0%	0.41%	0.41%	95.0%	94.0%	0.41%	0.41%
2020 -2025	7.00%	0.74%	0.74%	52.0%	0.74%	0.74%	95.0%	94.0%	0.74%	0.74%
2025 -2030	7.00%	1.02%	1.02%	52.0%	1.02%	1.02%	95.0%	94.0%	1.02%	1.02%
1999 -2009	7.45%	0.67%	1.95%	50.1%	3.39%	0.67%	95.0%	93.3%	2.91%	0.36%
2010 -2030	7.00%	0.68%	0.68%	52.0%	0.68%	0.68%	95.0%	94.0%	0.68%	0.68%

VER 2.0  
SUM

SYSTEM I.D. : WWV  
INDIANA # : IN 109  
REGION # : R4

2011 POWER REQUIREMENTS STUDY  
SUMMARY HISTORICAL AND FORECAST SHEET  
ORIG. DATE : 7/08/11 ITER. DATE : 9/08/11

DISKETTE : 2011 PRS SYSTEM FORECAST  
WWW - DISK 1 OF 1  
FILE NAME : WWV.XLS

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 34)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** BASE SCENARIO RESULTS *****							***** BASE SCENARIO RESULTS *****	
PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES								
YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)			H.E. ITERATION ACT. AVG. WPC (MILLS/KWH)	
		WINTER	SUMMER	WINTER	SUMMER			
ACTUAL 1999								
ACTUAL 2000								
ACTUAL 2001								
ACTUAL 2002								
ACTUAL 2003								
ACTUAL 2004								
ACTUAL 2005								
ACTUAL 2006								
ACTUAL 2007								
ACTUAL 2008								
ACTUAL 2009								
FRCST 2010	45.0%	57.090	52.523	54.236	49.371		68.830	
FRCST 2011	45.0%	57.279	52.697	54.415	49.535		70.910	
FRCST 2012	46.0%	56.129	51.639	53.323	48.540		75.360	
FRCST 2013	45.0%	57.419	52.826	54.548	49.656		79.430	
FRCST 2014	45.0%	57.510	52.909	54.635	49.735		82.230	
FRCST 2015	45.0%	58.626	53.936	55.694	50.699		83.810	
FRCST 2016	45.0%	58.856	54.147	55.913	50.898		85.486	
FRCST 2017	45.0%	59.086	54.359	56.132	51.098		87.196	
FRCST 2018	45.0%	59.332	54.585	56.365	51.310		88.940	
FRCST 2019	45.0%	59.578	54.812	56.599	51.523		90.719	
FRCST 2020	45.0%	59.839	55.052	56.847	51.749		92.533	
FRCST 2021	45.0%	60.414	55.581	57.393	52.246		94.384	
FRCST 2022	45.0%	60.886	56.015	57.842	52.654		96.271	
FRCST 2023	45.0%	61.299	56.395	58.234	53.011		98.197	
FRCST 2024	45.0%	61.697	56.761	58.612	53.355		100.161	
FRCST 2025	45.0%	62.081	57.114	58.977	53.687		102.164	
FRCST 2026	45.0%	62.797	57.773	59.657	54.307		102.164	
FRCST 2027	45.0%	63.428	58.353	60.256	54.852		102.164	
FRCST 2028	45.0%	64.049	58.925	60.846	55.389		102.164	
FRCST 2029	45.0%	64.675	59.501	61.441	55.931		102.164	
FRCST 2030	45.0%	65.322	60.096	62.056	56.490		102.164	

***** BASE SCENARIO RESULTS *****							***** BASE SCENARIO RESULTS *****	
TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)				
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)			
1999 -2004	48.4%	46.184	46.693	43.039	43.029			
2004 -2009	45.6%	56.872	48.878	53.259	45.971			
2010 -2015	45.0%	58.626	53.936	55.694	50.699			
2015 -2020	45.0%	59.839	55.052	56.847	51.749			
2020 -2025	45.0%	62.081	57.114	58.977	53.687			
2025 -2030	45.0%	65.322	60.096	62.056	56.490			
1999 -2009	45.6%	56.872	48.878	53.259	45.971			
2010 -2030	45.0%	65.322	60.096	62.056	56.490			

**APPENDIX D**

**HEREC "BASE" DSM CASE SCENARIO TABLES  
MEMBER SYSTEM FORECAST DETAILS  
(ALPHABETICAL)**

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	9,324	559	17	52	9,952	129,943	24,874	120,668	832	276,317
ACTUAL 2000	9,503	528	16	51	10,097	131,599	25,096	129,507	868	287,070
ACTUAL 2001	9,577	572	15	53	10,217	134,752	25,932	126,585	991	288,260
ACTUAL 2002	9,653	573	15	55	10,296	142,339	28,242	133,087	1,056	304,724
ACTUAL 2003	9,766	577	16	55	10,416	141,885	29,091	139,295	879	311,150
ACTUAL 2004	9,852	580	17	54	10,503	140,623	30,897	159,488	864	331,872
ACTUAL 2005	9,970	582	17	52	10,621	150,167	32,128	180,771	876	363,942
ACTUAL 2006	10,060	560	17	54	10,691	148,179	33,143	187,422	853	369,597
ACTUAL 2007	10,147	583	17	57	10,804	157,883	35,281	193,497	907	387,348
ACTUAL 2008	10,213	588	16	58	10,875	157,954	32,572	179,653	921	371,100
ACTUAL 2009	10,238	581	16	56	10,891	153,594	28,496	143,346	827	326,263
FRCST 2010	10,272	583	16	55	10,926	153,713	28,154	184,012	873	366,752
FRCST 2011	10,320	585	16	55	10,976	154,216	27,709	198,849	873	381,647
FRCST 2012	10,383	587	16	55	11,041	154,873	27,032	215,618	873	398,396
FRCST 2013	10,460	589	16	55	11,120	156,085	25,958	216,554	873	399,470
FRCST 2014	10,552	591	16	55	11,214	156,629	24,969	217,495	873	399,967
FRCST 2015	10,644	593	16	55	11,308	157,325	24,090	218,441	873	400,729
FRCST 2016	10,755	598	16	55	11,424	159,080	23,540	219,352	873	402,825
FRCST 2017	10,866	603	16	55	11,540	160,867	23,093	220,268	873	405,101
FRCST 2018	10,979	608	16	55	11,658	162,766	22,609	221,188	873	407,436
FRCST 2019	11,092	613	16	55	11,776	164,439	22,288	222,113	873	409,712
FRCST 2020	11,206	618	15	55	11,894	166,175	22,010	223,042	873	412,100
FRCST 2021	11,332	626	15	55	12,028	168,117	21,926	223,042	873	413,958
FRCST 2022	11,459	634	15	55	12,163	170,055	21,896	223,042	873	415,866
FRCST 2023	11,587	642	15	55	12,299	171,990	21,905	223,042	873	417,810
FRCST 2024	11,716	650	15	55	12,436	174,001	22,185	223,042	873	420,101
FRCST 2025	11,847	658	15	55	12,575	176,168	22,558	223,042	873	422,641
FRCST 2026	11,976	670	15	55	12,716	178,656	23,470	223,042	873	426,042
FRCST 2027	12,107	682	15	55	12,859	181,580	24,641	223,042	873	430,136
FRCST 2028	12,239	694	15	55	13,003	184,694	26,230	223,042	873	434,840
FRCST 2029	12,372	706	15	55	13,148	187,940	27,746	223,042	873	439,601
FRCST 2030	12,506	718	15	55	13,294	191,273	29,164	223,042	873	444,353

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	1.11%	0.74%	0	2	1.08%	1.59%	4.43%	5.74%	0.76%	3.73%
2004 -2009	0.77%	0.03%	-1	2	0.73%	1.78%	-1.60%	-2.11%	-0.87%	-0.34%
2010 -2015	0.71%	0.34%	0	0	0.69%	0.47%	-3.07%	3.49%	0.00%	1.75%
2015 -2020	1.03%	0.83%	-1	0	1.02%	1.10%	-1.79%	0.42%	0.00%	0.56%
2020 -2025	1.12%	1.26%	0	0	1.12%	1.17%	0.49%	0.00%	0.00%	0.51%
2025 -2030	1.09%	1.76%	0	0	1.12%	1.66%	5.27%	0.00%	0.00%	1.01%
1999 -2009	0.94%	0.39%	-1	4	0.91%	1.69%	1.37%	1.74%	-0.06%	1.68%
2010 -2030	0.99%	1.05%	-1	0	0.99%	1.10%	0.18%	0.97%	0.00%	0.96%

***** BASE SCENARIO WITH DSM IMPACTS *****					***** BASE SCENARIO WITH DSM IMPACTS *****					
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)
ACTUAL 1999	2.83%	8,048	284,365	47.6%	55.018	68.142	86.2%	91.0%	47.427	62.026
ACTUAL 2000	4.22%	12,648	299,718	53.6%	57.917	63.846	91.4%	92.4%	52.945	58.998
ACTUAL 2001	2.88%	8,548	296,808	50.3%	62.051	67.428	86.9%	92.3%	53.893	62.216
ACTUAL 2002	3.33%	10,497	315,221	51.5%	57.240	69.844	90.6%	87.7%	51.685	61.282
ACTUAL 2003	2.74%	8,766	319,916	51.7%	64.245	70.699	92.4%	87.0%	59.385	61.481
ACTUAL 2004	3.61%	12,429	344,301	55.4%	65.871	70.931	83.9%	91.3%	55.286	64.748
ACTUAL 2005	3.05%	11,449	375,391	53.0%	69.508	80.930	90.1%	91.4%	62.652	73.989
ACTUAL 2006	2.26%	8,546	378,143	52.4%	71.183	82.346	94.1%	90.7%	66.966	74.689
ACTUAL 2007	3.06%	12,227	399,575	53.2%	77.045	85.743	90.9%	86.6%	70.001	74.410
ACTUAL 2008	3.01%	11,517	382,617	54.0%	77.281	80.848	90.3%	86.0%	69.768	69.531
ACTUAL 2009	2.52%	6,434	334,697	48.5%	78.740	75.849	80.7%	87.3%	63.565	66.180
FRCST 2010	3.00%	11,343	378,095	53.9%	72.370	80.040	88.9%	88.9%	64.323	71.189
FRCST 2011	3.00%	11,804	393,450	54.0%	75.076	83.227	88.8%	88.9%	66.664	73.974
FRCST 2012	3.00%	12,322	410,718	54.5%	78.136	85.790	88.7%	88.7%	69.321	76.094
FRCST 2013	3.00%	12,355	411,825	56.1%	78.100	83.852	88.6%	88.4%	69.234	74.099
FRCST 2014	3.00%	12,370	412,337	56.3%	77.878	83.620	88.5%	88.3%	68.958	73.808
FRCST 2015	3.00%	12,394	413,122	56.5%	77.737	83.453	88.5%	88.2%	68.760	73.578
FRCST 2016	3.00%	12,458	415,283	56.6%	76.433	83.521	88.4%	88.1%	67.547	73.568
FRCST 2017	3.00%	12,529	417,630	57.0%	76.636	83.639	88.3%	88.0%	67.678	73.605
FRCST 2018	3.00%	12,601	420,037	57.2%	76.868	83.763	88.2%	87.9%	67.836	73.647
FRCST 2019	3.00%	12,672	422,384	57.5%	77.083	83.923	88.2%	87.8%	67.975	73.723
FRCST 2020	3.00%	12,745	424,845	57.5%	77.323	84.092	88.1%	87.8%	68.140	73.807
FRCST 2021	3.00%	12,803	426,761	57.8%	76.056	84.234	88.1%	87.7%	66.972	73.878
FRCST 2022	3.00%	12,862	428,728	58.0%	76.280	84.440	88.0%	87.7%	67.133	74.013
FRCST 2023	3.00%	12,922	430,732	58.1%	76.513	84.690	88.0%	87.6%	67.303	74.190
FRCST 2024	3.00%	12,993	433,094	57.9%	76.831	85.112	87.9%	87.6%	67.557	74.539
FRCST 2025	3.00%	13,071	435,713	58.1%	77.208	85.596	87.9%	87.6%	67.869	74.949
FRCST 2026	3.00%	13,177	439,216	58.1%	77.735	86.274	87.9%	87.6%	68.323	75.544
FRCST 2027	3.00%	13,303	443,439	58.1%	78.503	87.114	87.9%	87.6%	69.014	76.297
FRCST 2028	3.00%	13,449	448,288	57.9%	79.375	88.128	87.9%	87.6%	69.808	77.222
FRCST 2029	3.00%	13,596	453,197	58.0%	80.291	89.138	88.0%	87.7%	70.644	78.140
FRCST 2030	3.00%	13,743	458,096	58.0%	81.223	90.205	88.0%	87.7%	71.495	79.115

***** BASE SCENARIO WITH DSM IMPACTS *****					***** BASE SCENARIO WITH DSM IMPACTS *****					
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHG.)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999 -2004	3.27%	9.08%	-3.90%	51.7%	3.67%	0.81%	88.6%	90.3%	3.11%	0.86%
2004 -2009	2.92%	-7.46%	-0.56%	52.6%	3.63%	1.35%	88.3%	88.9%	2.83%	0.44%
2010 -2015	3.00%	1.75%	1.79%	55.2%	1.44%	0.84%	88.7%	88.6%	1.34%	0.66%
2015 -2020	3.00%	0.56%	0.56%	57.1%	-0.11%	0.15%	88.3%	88.0%	-0.18%	0.06%
2020 -2025	3.00%	0.51%	0.51%	57.9%	-0.03%	0.36%	88.0%	87.7%	-0.08%	0.31%
2025 -2030	3.00%	1.01%	1.01%	58.0%	1.02%	1.05%	87.9%	87.6%	1.05%	1.09%
1999 -2009	3.05%	0.47%	1.64%	51.9%	3.65%	1.08%	88.9%	89.4%	2.97%	0.65%
2010 -2030	3.00%	0.96%	0.96%	57.0%	0.58%	0.60%	88.2%	88.0%	0.53%	0.53%

***** BASE SCENARIO WITH DSM IMPACTS *****						***** BASE SCENARIO WITH DSM IMPACTS *****		
PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES						Percent Total E.E. Reductions		
YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)		Sales to End-Consumers %	Total Member Purchase %	
		WINTER	SUMMER	WINTER	SUMMER			
ACTUAL 1999	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2000	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2001	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2002	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2003	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2004	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2005	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2006	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2007	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2008	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2009	*****	*****	*****	*****	*****	*****	*****	
FRCST 2010	49.9%	78.222	86.477	69.532	76.918	0.7%	0.7%	
FRCST 2011	49.9%	81.194	89.957	72.109	79.963	1.1%	1.1%	
FRCST 2012	50.4%	84.547	92.842	75.027	82.370	1.5%	1.5%	
FRCST 2013	51.7%	84.548	90.944	74.972	80.412	1.8%	1.8%	
FRCST 2014	51.9%	84.365	90.756	74.732	80.159	2.3%	2.3%	
FRCST 2015	52.0%	84.266	90.634	74.571	79.970	2.7%	2.7%	
FRCST 2016	52.1%	82.895	90.759	73.299	80.010	3.0%	3.0%	
FRCST 2017	52.4%	83.151	90.935	73.476	80.100	3.2%	3.2%	
FRCST 2018	52.6%	83.437	91.120	73.682	80.195	3.4%	3.4%	
FRCST 2019	52.8%	83.706	91.341	73.870	80.325	3.7%	3.7%	
FRCST 2020	52.8%	84.002	91.573	74.084	80.464	3.9%	3.9%	
FRCST 2021	53.1%	82.663	91.766	72.852	80.581	4.2%	4.2%	
FRCST 2022	53.2%	82.932	92.024	73.053	80.762	4.4%	4.4%	
FRCST 2023	53.3%	83.212	92.326	73.265	80.986	4.6%	4.6%	
FRCST 2024	53.1%	83.576	92.801	73.560	81.383	4.7%	4.7%	
FRCST 2025	53.3%	84.000	93.339	73.914	81.840	4.8%	4.8%	
FRCST 2026	53.3%	84.581	94.077	74.415	82.489	4.8%	4.8%	
FRCST 2027	53.3%	85.403	94.981	75.156	83.299	4.7%	4.7%	
FRCST 2028	53.1%	86.333	96.060	76.001	84.281	4.4%	4.4%	
FRCST 2029	53.3%	87.307	97.136	76.888	85.259	4.2%	4.2%	
FRCST 2030	53.2%	88.297	98.270	77.791	86.293	3.9%	3.9%	

***** BASE SCENARIO WITH DSM IMPACTS *****						***** BASE SCENARIO WITH DSM IMPACTS *****		
TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)				
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)			
1999 -2004	47.6%	65.871	70.931	59.385	64.748			
2004 -2009	48.5%	78.740	85.743	70.001	74.689			
2010 -2015	49.9%	84.548	92.842	75.027	82.370			
2015 -2020	52.0%	84.266	91.573	74.571	80.464			
2020 -2025	52.8%	84.002	93.339	74.084	81.840			
2025 -2030	53.1%	88.297	98.270	77.791	86.293			
1999 -2009	47.6%	78.740	85.743	70.001	74.689			
2010 -2030	49.9%	88.297	98.270	77.791	86.293			

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	15,132	841	0	4	15,977	220,079	67,891	0	80	288,050
ACTUAL 2000	15,782	903	0	3	16,688	231,878	76,985	0	55	308,918
ACTUAL 2001	16,386	930	0	2	17,318	250,776	79,072	0	55	329,803
ACTUAL 2002	17,025	969	0	2	17,996	265,204	80,603	0	55	345,862
ACTUAL 2003	17,635	979	0	2	18,616	269,896	81,875	0	55	351,826
ACTUAL 2004	18,422	1,018	0	2	19,442	287,500	89,677	0	21	377,198
ACTUAL 2005	19,069	1,026	0	2	20,097	318,665	96,683	0	11	415,359
ACTUAL 2006	19,714	1,057	0	2	20,773	311,497	106,173	0	11	417,681
ACTUAL 2007	20,257	1,094	0	2	21,353	336,990	113,600	0	11	450,601
ACTUAL 2008	20,564	1,115	0	2	21,681	334,771	116,997	0	11	451,779
ACTUAL 2009	20,755	1,119	0	2	21,876	329,485	108,668	0	11	438,164
FRCST 2010	20,928	1,143	0	1	22,072	330,070	113,993	0	11	444,074
FRCST 2011	21,112	1,163	0	1	22,276	329,937	115,511	0	11	445,459
FRCST 2012	21,308	1,183	0	1	22,492	330,616	117,070	0	11	447,697
FRCST 2013	21,515	1,203	0	1	22,719	334,679	118,671	0	11	453,361
FRCST 2014	21,734	1,223	0	1	22,958	335,784	120,315	0	11	456,110
FRCST 2015	21,964	1,243	0	1	23,208	336,871	122,185	0	11	459,067
FRCST 2016	22,221	1,266	0	1	23,488	341,699	124,128	0	11	465,837
FRCST 2017	22,505	1,289	0	1	23,795	346,527	126,145	0	11	472,683
FRCST 2018	22,818	1,312	0	1	24,131	352,004	128,237	0	11	480,252
FRCST 2019	23,161	1,335	0	1	24,497	357,244	130,345	0	11	487,600
FRCST 2020	23,536	1,358	0	1	24,895	363,378	132,494	0	11	495,883
FRCST 2021	23,951	1,383	0	1	25,335	370,259	133,914	0	11	504,183
FRCST 2022	24,399	1,408	0	1	25,808	377,558	135,359	0	11	512,928
FRCST 2023	24,882	1,433	0	1	26,316	385,333	136,823	0	11	522,168
FRCST 2024	25,403	1,458	0	1	26,862	393,921	138,383	0	11	532,316
FRCST 2025	25,963	1,483	0	1	27,447	403,424	140,632	0	11	544,067
FRCST 2026	26,554	1,508	0	1	28,063	414,097	142,921	0	11	557,028
FRCST 2027	27,168	1,533	0	1	28,702	425,885	145,222	0	11	571,118
FRCST 2028	27,806	1,558	0	1	29,365	438,618	147,534	0	11	586,163
FRCST 2029	28,470	1,583	0	1	30,054	452,040	149,860	0	11	601,912
FRCST 2030	29,161	1,608	0	1	30,770	466,026	152,021	0	11	618,058

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	4.01%	3.89%	0	-2	4.00%	5.49%	5.72%	NA	-23.47%	5.54%
2004 -2009	2.41%	1.91%	0	0	2.39%	2.76%	3.53%	NA	-12.13%	2.95%
2010 -2015	0.97%	1.69%	0	0	1.01%	0.41%	1.40%	NA	0.00%	0.67%
2015 -2020	1.39%	1.79%	0	0	1.41%	1.53%	1.63%	NA	0.00%	1.55%
2020 -2025	1.98%	1.78%	0	0	1.97%	2.11%	1.20%	NA	0.00%	1.87%
2025 -2030	2.35%	1.63%	0	0	2.31%	2.93%	1.57%	NA	0.00%	2.58%
1999 -2009	3.21%	2.90%	0	-2	3.19%	4.12%	4.62%	NA	-18.00%	4.24%
2010 -2030	1.67%	1.72%	0	0	1.68%	1.74%	1.45%	NA	0.00%	1.67%

***** BASE SCENARIO WITH DSM IMPACTS *****					***** BASE SCENARIO WITH DSM IMPACTS *****					
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)
ACTUAL 1999	8.06%	25,252	313,302	46.5%	68,288	76,867	96.3%	97.4%	65,785	74,865
ACTUAL 2000	7.79%	26,098	335,016	48.8%	70,036	78,319	97.4%	96.4%	68,206	75,490
ACTUAL 2001	5.07%	17,619	347,522	46.9%	76,260	84,590	95.5%	92.5%	72,853	78,239
ACTUAL 2002	6.35%	23,451	369,313	48.6%	74,604	86,719	97.3%	93.4%	72,555	80,958
ACTUAL 2003	6.31%	23,695	375,521	49.0%	84,779	87,564	97.0%	94.1%	82,208	82,410
ACTUAL 2004	5.76%	23,055	400,253	50.6%	87,393	90,350	97.3%	96.9%	85,067	87,589
ACTUAL 2005	3.86%	16,677	432,038	47.8%	91,840	103,212	95.4%	95.0%	87,654	98,024
ACTUAL 2006	4.36%	19,041	436,722	48.0%	92,893	108,317	97.8%	94.4%	90,892	102,216
ACTUAL 2007	6.00%	28,762	479,363	48.8%	101,841	112,035	93.9%	92.8%	95,590	103,961
ACTUAL 2008	6.26%	30,170	481,949	50.5%	109,029	103,834	95.0%	94.0%	103,597	97,616
ACTUAL 2009	4.42%	20,170	456,334	45.8%	113,833	103,066	96.1%	94.8%	109,400	97,711
FRCST 2010	5.00%	23,372	467,446	49.4%	104,138	107,924	95.8%	96.9%	99,790	104,598
FRCST 2011	5.00%	23,445	468,904	49.3%	104,318	108,531	95.8%	96.9%	99,912	105,160
FRCST 2012	5.00%	23,563	471,260	49.1%	104,716	109,164	95.7%	96.9%	100,255	105,752
FRCST 2013	5.00%	23,861	477,222	49.4%	105,996	110,187	95.7%	96.9%	101,481	106,734
FRCST 2014	5.00%	24,006	480,116	49.4%	106,567	110,924	95.7%	96.8%	101,997	107,427
FRCST 2015	5.00%	24,161	483,228	49.4%	107,154	111,620	95.7%	96.8%	102,531	108,083
FRCST 2016	5.00%	24,518	490,355	49.5%	107,537	112,861	96.8%	94.7%	104,055	106,885
FRCST 2017	5.00%	24,878	497,561	49.7%	109,069	114,222	96.8%	94.7%	105,534	108,154
FRCST 2018	5.00%	25,276	505,529	49.9%	110,792	115,738	96.8%	94.7%	107,199	109,566
FRCST 2019	5.00%	25,683	513,263	49.9%	112,451	117,327	96.7%	94.6%	108,793	111,049
FRCST 2020	5.00%	26,099	521,982	49.1%	116,810	121,003	96.8%	94.7%	113,085	114,608
FRCST 2021	5.00%	26,536	530,719	49.3%	118,658	122,812	96.8%	94.7%	114,865	116,302
FRCST 2022	5.00%	26,996	539,924	49.3%	120,807	124,937	96.8%	94.7%	116,942	118,302
FRCST 2023	5.00%	27,483	549,650	49.3%	123,038	127,211	96.8%	94.7%	119,096	120,444
FRCST 2024	5.00%	28,017	560,332	49.2%	125,482	129,692	96.8%	94.7%	121,459	122,786
FRCST 2025	5.00%	28,635	572,702	49.3%	128,261	132,522	96.8%	94.7%	124,151	125,467
FRCST 2026	5.00%	29,317	586,345	49.3%	131,346	135,701	96.8%	94.7%	127,143	128,486
FRCST 2027	5.00%	30,059	601,177	49.3%	134,691	139,159	96.8%	94.7%	130,391	131,777
FRCST 2028	5.00%	30,851	617,014	49.2%	138,286	142,875	96.8%	94.7%	133,884	135,318
FRCST 2029	5.00%	31,680	633,591	49.3%	142,211	146,798	96.8%	94.7%	137,703	139,060
FRCST 2030	5.00%	32,529	650,588	49.2%	146,247	150,820	96.8%	94.7%	141,629	142,893

***** BASE SCENARIO WITH DSM IMPACTS *****					***** BASE SCENARIO WITH DSM IMPACTS *****					
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHG.)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999 -2004	6.56%	-1.80%	5.02%	48.4%	5.06%	3.29%	96.8%	95.1%	5.28%	3.18%
2004 -2009	5.11%	-2.64%	2.65%	48.3%	5.43%	2.67%	95.9%	94.7%	5.16%	2.22%
2010 -2015	5.00%	0.67%	0.67%	49.4%	0.57%	0.68%	95.7%	96.9%	0.54%	0.66%
2015 -2020	5.00%	1.55%	1.55%	49.6%	1.74%	1.63%	96.6%	95.0%	1.98%	1.18%
2020 -2025	5.00%	1.87%	1.87%	49.3%	1.89%	1.84%	96.8%	94.7%	1.88%	1.83%
2025 -2030	5.00%	2.58%	2.58%	49.3%	2.66%	2.62%	96.8%	94.7%	2.67%	2.64%
1999 -2009	5.84%	-2.22%	3.83%	48.1%	5.24%	2.98%	96.3%	94.7%	5.22%	2.70%
2010 -2030	5.00%	1.67%	1.67%	49.4%	1.71%	1.69%	96.5%	95.3%	1.77%	1.57%

***** BASE SCENARIO WITH DSM IMPACTS *****						***** BASE SCENARIO WITH DSM IMPACTS *****		
PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES						Percent Total E.E. Reductions		
YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)		Sales to End-Consumers %	Total Member Purchase %	
		WINTER	SUMMER	WINTER	SUMMER			
ACTUAL 1999	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2000	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2001	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2002	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2003	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2004	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2005	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2006	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2007	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2008	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2009	*****	*****	*****	*****	*****	*****	*****	
FRCST 2010	47.4%	108,764	112,642	104,231	108,174	1.8%	1.8%	
FRCST 2011	47.2%	109,006	113,312	104,412	109,798	2.8%	2.8%	
FRCST 2012	47.1%	109,481	114,004	104,810	110,446	3.5%	3.5%	
FRCST 2013	47.3%	110,799	115,086	106,092	111,485	3.4%	3.4%	
FRCST 2014	47.3%	111,430	115,883	106,665	112,238	4.0%	4.0%	
FRCST 2015	47.3%	112,073	116,837	107,253	112,950	4.5%	4.5%	
FRCST 2016	48.4%	109,954	115,351	106,400	109,250	4.4%	4.4%	
FRCST 2017	48.6%	111,524	116,751	107,915	110,556	4.5%	4.5%	
FRCST 2018	48.8%	113,288	118,306	109,619	112,008	4.6%	4.6%	
FRCST 2019	48.8%	114,990	119,943	111,257	113,534	4.8%	4.8%	
FRCST 2020	48.1%	119,397	123,667	115,594	117,140	4.9%	4.9%	
FRCST 2021	48.3%	121,292	125,525	117,420	118,879	5.0%	5.0%	
FRCST 2022	48.3%	123,491	127,701	119,546	120,928	5.2%	5.2%	
FRCST 2023	48.3%	125,775	130,030	121,752	123,123	5.4%	5.4%	
FRCST 2024	48.1%	128,276	132,570	124,169	125,519	5.5%	5.5%	
FRCST 2025	48.3%	131,115	135,461	126,920	128,259	5.4%	5.4%	
FRCST 2026	48.3%	134,264	138,707	129,974	131,342	5.3%	5.3%	
FRCST 2027	48.2%	137,678	142,234	133,288	134,699	5.1%	5.1%	
FRCST 2028	48.1%	141,343	146,024	136,849	138,310	4.9%	4.9%	
FRCST 2029	48.2%	145,341	150,023	140,739	142,123	4.6%	4.6%	
FRCST 2030	48.2%	149,453	154,123	144,739	146,031	4.4%	4.4%	

***** BASE SCENARIO WITH DSM IMPACTS *****						***** BASE SCENARIO WITH DSM IMPACTS *****		
TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)				
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)			
1999 -2004	46.5%	87,393	90,350	85,067	87,569			
2004 -2009	45.8%	113,833	112,035	109,400	103,961			
2010 -2015	47.1%	112,073	116,837	107,253	112,950			
2015 -2020	47.3%	119,397	123,667	115,594	117,140			
2020 -2025	48.1%	131,115	135,461	126,920	128,259			
2025 -2030	48.1%	149,453	154,123	144,739	146,031			
1999 -2009	45.8%	113,833	112,035	109,400	103,961			
2010 -2030	47.1%	149,453	154,123	144,739	146,031			

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	7,285	518	1	3	7,805	93,771	34,152	24,246	50	152,219
ACTUAL 2000	7,394	538	2	3	7,937	97,436	35,936	146,633	50	280,055
ACTUAL 2001	7,371	554	2	3	7,930	98,459	36,324	173,371	50	308,204
ACTUAL 2002	7,235	542	2	3	7,782	106,894	39,523	182,594	50	329,061
ACTUAL 2003	7,208	542	2	3	7,755	104,179	38,389	179,259	50	321,877
ACTUAL 2004	7,229	553	2	3	7,787	105,479	40,108	192,410	50	338,047
ACTUAL 2005	7,265	575	2	3	7,845	111,418	39,904	199,368	50	350,740
ACTUAL 2006	7,297	588	2	3	7,890	109,388	41,314	202,516	50	353,268
ACTUAL 2007	7,337	603	2	3	7,945	116,423	42,964	222,748	50	382,185
ACTUAL 2008	7,344	596	2	3	7,945	114,624	42,929	238,266	50	393,869
ACTUAL 2009	7,343	589	2	3	7,937	111,254	40,955	231,537	50	383,796
FRCST 2010	7,354	591	2	3	7,950	109,820	40,971	238,265	50	389,106
FRCST 2011	7,376	593	2	3	7,974	110,836	40,323	238,265	50	389,474
FRCST 2012	7,399	595	2	3	7,999	111,707	39,530	238,265	50	389,552
FRCST 2013	7,421	597	2	3	8,023	113,148	38,453	238,265	50	389,916
FRCST 2014	7,444	599	2	3	8,048	113,767	37,170	238,265	50	389,252
FRCST 2015	7,467	601	2	3	8,073	114,410	36,017	238,265	50	388,742
FRCST 2016	7,506	605	2	3	8,116	117,885	35,253	238,265	50	391,453
FRCST 2017	7,545	609	2	3	8,159	119,303	34,618	238,265	50	392,236
FRCST 2018	7,585	613	2	3	8,203	120,466	34,307	238,265	50	393,088
FRCST 2019	7,625	617	2	3	8,247	121,433	33,865	238,265	50	393,612
FRCST 2020	7,664	621	2	3	8,290	122,368	33,470	238,265	50	394,153
FRCST 2021	7,721	629	2	3	8,355	123,510	33,427	238,265	50	395,252
FRCST 2022	7,778	637	2	3	8,420	124,655	33,451	238,265	50	396,421
FRCST 2023	7,836	645	2	3	8,486	125,830	33,524	238,265	50	397,669
FRCST 2024	7,894	653	2	3	8,552	127,039	33,775	238,265	50	399,129
FRCST 2025	7,952	661	2	3	8,618	128,305	33,943	238,265	50	400,562
FRCST 2026	8,011	674	2	3	8,690	129,778	35,218	238,265	50	403,311
FRCST 2027	8,071	687	2	3	8,763	131,528	36,672	238,265	50	406,515
FRCST 2028	8,131	700	2	3	8,836	133,262	38,444	238,265	50	410,022
FRCST 2029	8,192	713	2	3	8,910	135,084	40,442	238,265	50	413,841
FRCST 2030	8,253	726	2	3	8,984	136,961	42,327	238,265	50	417,803

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	-0.15%	1.39%	1	0	-0.05%	2.38%	3.27%	51.33%	0.00%	17.30%
2004 -2009	0.31%	1.27%	0	0	0.38%	1.07%	0.42%	3.77%	0.00%	2.57%
2010 -2015	0.31%	0.34%	0	0	0.31%	0.82%	-2.54%	0.00%	0.00%	-0.02%
2015 -2020	0.52%	0.66%	0	0	0.53%	1.35%	-1.48%	0.00%	0.00%	0.28%
2020 -2025	0.74%	1.26%	0	0	0.78%	0.95%	0.28%	0.00%	0.00%	0.32%
2025 -2030	0.75%	1.89%	0	0	0.84%	1.31%	4.51%	0.00%	0.00%	0.84%
1999 -2009	0.08%	1.33%	1	0	0.17%	1.72%	1.83%	25.31%	0.00%	9.69%
2010 -2030	0.58%	1.03%	0	0	0.61%	1.11%	0.16%	0.00%	0.00%	0.35%

***** BASE SCENARIO WITH DSM IMPACTS *****					***** BASE SCENARIO WITH DSM IMPACTS *****						
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK		
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)	
ACTUAL	1999	7.21%	11,828	164,047	44.8%	29,287	41,826	92.0%	87.2%	26,956	36,459
ACTUAL	2000	3.95%	11,517	291,572	64.5%	47,196	51,636	93.6%	92.7%	44,167	47,664
ACTUAL	2001	3.68%	11,775	319,979	62.5%	52,055	58,451	89.2%	90.9%	46,432	53,146
ACTUAL	2002	3.00%	10,177	339,238	65.1%	53,214	59,491	93.4%	92.9%	49,725	55,242
ACTUAL	2003	3.35%	11,157	333,034	67.9%	54,778	56,007	89.9%	96.5%	49,228	54,032
ACTUAL	2004	3.41%	11,934	349,981	68.4%	56,730	58,411	85.9%	95.3%	48,727	55,654
ACTUAL	2005	3.45%	12,533	363,273	67.5%	57,395	61,411	94.0%	95.9%	53,958	58,921
ACTUAL	2006	3.38%	12,358	365,626	66.2%	57,857	63,067	90.8%	97.0%	52,514	61,167
ACTUAL	2007	3.27%	12,920	395,105	65.4%	60,830	68,991	88.3%	88.0%	53,720	60,729
ACTUAL	2008	2.96%	12,014	405,883	71.5%	64,828	64,828	83.6%	93.9%	54,221	60,841
ACTUAL	2009	3.09%	12,237	396,033	67.8%	66,662	65,167	90.4%	94.5%	60,267	61,584
FRCST	2010	3.20%	12,863	401,969	68.3%	64,851	67,184	90.8%	93.9%	58,910	63,105
FRCST	2011	3.20%	12,875	402,349	68.6%	64,529	66,995	90.8%	93.9%	58,563	62,898
FRCST	2012	3.20%	12,878	402,430	68.7%	64,150	66,725	90.7%	93.8%	58,163	62,614
FRCST	2013	3.20%	12,890	402,806	69.3%	63,836	66,388	90.6%	93.8%	57,831	62,282
FRCST	2014	3.20%	12,868	402,119	69.7%	63,272	65,902	90.5%	93.7%	57,249	61,766
FRCST	2015	3.20%	12,851	401,593	70.0%	62,752	65,463	90.4%	93.7%	56,711	61,315
FRCST	2016	3.20%	12,941	404,394	70.3%	62,908	65,496	90.3%	93.6%	56,826	61,320
FRCST	2017	3.20%	12,966	405,203	70.8%	62,648	65,318	90.2%	93.6%	56,533	61,119
FRCST	2018	3.20%	12,995	406,083	71.1%	62,433	65,187	90.2%	93.5%	56,289	60,968
FRCST	2019	3.20%	13,012	406,624	71.4%	62,151	64,992	90.1%	93.5%	55,981	60,755
FRCST	2020	3.20%	13,030	407,183	71.1%	62,033	65,219	90.0%	93.5%	55,837	60,964
FRCST	2021	3.20%	13,066	408,318	71.4%	61,946	65,285	89.9%	93.4%	55,717	61,008
FRCST	2022	3.20%	13,105	409,526	71.5%	61,872	65,370	89.9%	93.4%	55,611	61,071
FRCST	2023	3.20%	13,146	410,815	71.6%	61,826	65,496	89.8%	93.4%	55,532	61,175
FRCST	2024	3.20%	13,194	412,323	71.5%	61,798	65,643	89.8%	93.4%	55,471	61,298
FRCST	2025	3.20%	13,242	413,804	71.8%	61,783	65,806	89.7%	93.4%	55,423	61,440
FRCST	2026	3.20%	13,333	416,644	71.8%	62,024	66,267	89.7%	93.4%	55,626	61,873
FRCST	2027	3.20%	13,439	419,954	71.7%	62,482	66,841	89.7%	93.4%	56,044	62,420
FRCST	2028	3.20%	13,554	423,576	71.4%	63,016	67,508	89.7%	93.4%	56,536	63,059
FRCST	2029	3.20%	13,681	427,521	71.5%	63,729	68,246	89.8%	93.4%	57,208	63,768
FRCST	2030	3.20%	13,805	431,408	71.4%	64,493	69,004	89.8%	93.5%	57,930	64,498

***** BASE SCENARIO WITH DSM IMPACTS *****					***** BASE SCENARIO WITH DSM IMPACTS *****					
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHG.)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999 -2004	4.10%	0.18%	16.36%	62.2%	14.14%	6.91%	90.7%	92.6%	12.57%	8.83%
2004 -2009	3.26%	0.50%	2.50%	67.8%	3.28%	2.21%	88.8%	94.1%	4.34%	2.05%
2010 -2015	3.20%	-0.02%	-0.02%	69.1%	-0.66%	-0.52%	90.8%	93.8%	-0.76%	-0.57%
2015 -2020	3.20%	0.28%	0.28%	70.8%	-0.23%	-0.07%	90.2%	93.6%	-0.31%	-0.11%
2020 -2025	3.20%	0.32%	0.32%	71.5%	-0.08%	0.18%	89.9%	93.4%	-0.15%	0.16%
2025 -2030	3.20%	0.84%	0.84%	71.6%	0.86%	0.95%	89.7%	93.4%	0.89%	0.98%
1999 -2009	3.70%	0.34%	9.21%	64.7%	8.57%	4.53%	90.1%	93.2%	8.38%	5.38%
2010 -2030	3.20%	0.35%	0.35%	70.7%	-0.03%	0.13%	90.1%	93.6%	-0.08%	0.11%

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES

YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)		Percent Total E.E. Reductions	
		WINTER	SUMMER	WINTER	SUMMER	Sales to End-Consumers %	Total Member Purchase %
ACTUAL 1999	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2000	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2001	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2002	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2003	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2004	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2005	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2006	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2007	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****	*****	*****
FRCST 2010	66.3%	66.851	69.244	60.730	65.041	0.7%	0.7%
FRCST 2011	66.5%	66.538	69.063	60.391	64.843	1.1%	1.1%
FRCST 2012	66.6%	66.165	68.601	59.997	64.566	1.4%	1.4%
FRCST 2013	67.2%	65.858	68.469	59.671	64.220	1.6%	1.6%
FRCST 2014	67.5%	65.300	67.991	59.095	63.730	2.1%	2.1%
FRCST 2015	67.9%	64.787	67.559	58.562	63.284	2.5%	2.5%
FRCST 2016	68.1%	64.956	67.606	58.689	63.303	2.5%	2.5%
FRCST 2017	68.6%	64.707	67.439	58.406	63.113	2.8%	2.8%
FRCST 2018	68.9%	64.502	67.318	58.171	62.971	3.0%	3.0%
FRCST 2019	69.1%	64.229	67.132	57.871	62.766	3.3%	3.3%
FRCST 2020	68.8%	64.120	67.368	57.736	62.984	3.6%	3.6%
FRCST 2021	69.1%	64.043	67.445	57.625	63.038	3.8%	3.8%
FRCST 2022	69.2%	63.980	67.542	57.529	63.112	4.1%	4.1%
FRCST 2023	69.3%	63.946	67.679	57.461	63.226	4.3%	4.3%
FRCST 2024	69.2%	63.928	67.837	57.410	63.361	4.4%	4.4%
FRCST 2025	69.5%	63.924	68.012	57.372	63.513	4.6%	4.6%
FRCST 2026	69.4%	64.178	68.486	57.586	63.959	4.5%	4.5%
FRCST 2027	69.4%	64.650	69.074	58.017	64.519	4.3%	4.3%
FRCST 2028	69.1%	65.197	69.755	58.522	65.171	4.1%	4.1%
FRCST 2029	69.2%	65.925	70.507	59.206	65.894	3.8%	3.8%
FRCST 2030	69.1%	66.703	71.280	59.941	66.637	3.6%	3.6%

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)	
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)
1999 -2004	44.8%	56.730	59.491	49.725	55.654
2004 -2009	65.4%	66.662	68.991	60.267	61.584
2010 -2015	66.3%	66.851	69.244	60.730	65.041
2015 -2020	67.9%	64.956	67.606	58.689	63.303
2020 -2025	68.8%	64.120	68.012	57.736	63.513
2025 -2030	69.1%	66.703	71.280	59.941	66.637
1999 -2009	44.8%	66.662	68.991	60.267	61.584
2010 -2030	66.3%	66.851	71.280	60.730	66.637

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	6,317	410	8	19	6,754	84,874	20,225	139,883	151	245,133
ACTUAL 2000	6,417	412	8	21	6,858	89,832	22,774	148,899	169	261,674
ACTUAL 2001	6,525	409	8	21	6,963	91,813	23,671	142,357	163	257,804
ACTUAL 2002	6,635	408	8	21	7,072	98,916	21,970	143,963	170	265,019
ACTUAL 2003	6,794	409	8	24	7,235	97,834	22,159	133,554	176	253,723
ACTUAL 2004	6,942	420	8	27	7,397	99,527	24,300	134,166	189	258,182
ACTUAL 2005	7,024	416	8	27	7,475	106,793	25,848	137,449	222	270,312
ACTUAL 2006	7,173	410	8	26	7,617	103,399	26,586	141,240	161	271,386
ACTUAL 2007	7,300	409	8	28	7,745	111,760	29,833	140,344	163	282,100
ACTUAL 2008	7,348	408	9	25	7,790	112,750	38,961	169,655	123	321,489
ACTUAL 2009	7,370	406	9	24	7,809	108,303	31,130	160,105	103	297,641
FRCST 2010	7,401	408	9	18	7,834	106,899	30,348	171,477	89	308,813
FRCST 2011	7,452	410	9	16	7,887	107,894	29,932	155,579	89	293,494
FRCST 2012	7,524	412	8	16	7,960	108,917	29,383	196,173	89	334,562
FRCST 2013	7,618	414	8	16	8,056	110,405	28,557	197,181	89	336,232
FRCST 2014	7,713	416	8	16	8,153	111,625	27,669	198,244	89	337,627
FRCST 2015	7,809	418	8	16	8,251	113,025	26,878	199,359	89	339,351
FRCST 2016	7,918	421	8	16	8,363	115,138	26,313	200,940	89	342,480
FRCST 2017	8,028	424	8	16	8,476	117,082	25,842	202,538	89	345,550
FRCST 2018	8,151	427	8	16	8,602	119,318	25,391	204,153	89	348,951
FRCST 2019	8,276	430	8	16	8,730	121,488	24,952	205,785	89	352,294
FRCST 2020	8,403	433	8	16	8,860	123,674	24,555	207,435	89	355,753
FRCST 2021	8,521	440	8	16	8,985	125,732	24,540	207,435	89	357,796
FRCST 2022	8,640	447	8	16	9,111	127,788	24,582	207,435	89	359,894
FRCST 2023	8,761	454	8	16	9,239	129,852	24,664	207,435	89	362,041
FRCST 2024	8,884	461	8	16	9,369	131,961	25,304	207,435	89	364,790
FRCST 2025	9,008	468	8	16	9,500	134,110	25,853	207,435	89	367,487
FRCST 2026	9,138	479	8	16	9,641	136,574	26,874	207,435	89	370,973
FRCST 2027	9,271	490	8	16	9,785	139,347	28,054	207,435	89	374,925
FRCST 2028	9,405	501	8	16	9,930	142,259	29,536	207,435	89	379,319
FRCST 2029	9,541	512	8	16	10,077	145,289	31,091	207,435	89	383,903
FRCST 2030	9,679	523	8	16	10,226	148,393	32,561	207,435	89	388,477

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	1.90%	0.48%	0	8	1.84%	3.24%	3.74%	-0.83%	4.59%	1.04%
2004 -2009	1.20%	-0.88%	1	-3	1.09%	1.33%	5.08%	3.60%	-11.43%	2.89%
2010 -2015	1.08%	0.49%	-1	0	1.04%	1.12%	-2.40%	3.06%	0.00%	1.90%
2015 -2020	1.48%	0.71%	0	0	1.43%	1.82%	-1.79%	0.80%	0.00%	0.95%
2020 -2025	1.40%	1.57%	0	0	1.40%	1.63%	1.04%	0.00%	0.00%	0.65%
2025 -2030	1.45%	2.25%	0	0	1.48%	2.04%	4.72%	0.00%	0.00%	1.12%
1999 -2009	1.55%	-0.10%	1	5	1.46%	2.28%	4.41%	1.36%	-3.75%	1.96%
2010 -2030	1.35%	1.25%	-1	0	1.34%	1.65%	0.35%	0.96%	0.00%	1.15%

***** BASE SCENARIO WITH DSM IMPACTS *****					***** BASE SCENARIO WITH DSM IMPACTS *****					
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)
ACTUAL 1999	4.05%	10,347	255,480	62.3%	44,980	46,809	92.8%	92.0%	41,736	43,061
ACTUAL 2000	2.90%	7,815	269,489	64.7%	47,524	47,155	96.9%	90.0%	46,060	42,452
ACTUAL 2001	3.00%	7,973	265,777	60.1%	50,458	48,387	88.2%	92.0%	44,507	44,530
ACTUAL 2002	2.87%	7,831	272,850	63.4%	47,466	49,147	94.6%	87.9%	44,925	43,209
ACTUAL 2003	3.63%	9,557	263,280	59.8%	50,249	46,601	94.7%	88.7%	47,592	41,348
ACTUAL 2004	3.64%	9,753	267,935	62.4%	49,013	46,413	90.9%	91.5%	44,563	42,486
ACTUAL 2005	2.99%	8,331	278,643	62.6%	50,779	50,777	95.5%	93.6%	48,501	47,535
ACTUAL 2006	3.03%	8,480	279,866	62.4%	50,003	51,239	97.3%	90.7%	48,667	46,472
ACTUAL 2007	2.37%	6,848	288,948	60.8%	54,248	53,031	91.9%	90.5%	49,832	47,992
ACTUAL 2008	2.14%	7,030	328,519	60.1%	55,732	62,372	94.0%	89.8%	52,394	56,037
ACTUAL 2009	3.11%	9,554	307,195	51.5%	68,068	63,286	91.9%	74.1%	62,563	46,902
FRCST 2010	2.90%	9,223	318,036	60.5%	60,001	58,738	92.9%	86.9%	55,738	51,059
FRCST 2011	2.90%	8,766	302,260	60.8%	56,738	55,748	92.8%	86.8%	52,668	48,417
FRCST 2012	2.90%	9,992	344,554	60.8%	64,475	63,378	92.8%	86.8%	59,826	55,002
FRCST 2013	2.90%	10,042	346,274	61.3%	64,493	63,453	92.7%	86.7%	59,805	55,009
FRCST 2014	2.90%	10,084	347,710	61.6%	64,389	63,425	92.7%	86.6%	59,662	54,910
FRCST 2015	2.90%	10,135	349,486	62.0%	64,359	63,466	92.6%	86.5%	59,589	54,874
FRCST 2016	2.90%	10,229	352,709	62.1%	64,621	63,745	92.5%	86.4%	59,798	55,057
FRCST 2017	2.90%	10,320	355,870	62.7%	64,824	63,970	92.5%	86.3%	59,947	55,184
FRCST 2018	2.90%	10,422	359,372	63.3%	64,849	63,974	92.4%	86.1%	59,915	55,085
FRCST 2019	2.90%	10,522	362,816	63.6%	65,110	64,269	92.3%	86.0%	60,118	55,275
FRCST 2020	2.90%	10,625	366,378	63.6%	65,560	64,674	92.3%	85.9%	60,509	55,574
FRCST 2021	2.90%	10,688	368,482	64.1%	65,611	64,808	92.2%	85.9%	60,521	55,638
FRCST 2022	2.90%	10,749	370,643	64.4%	65,731	65,059	92.2%	85.8%	60,602	55,818
FRCST 2023	2.90%	10,813	372,853	64.6%	65,876	65,354	92.2%	85.8%	60,707	56,042
FRCST 2024	2.90%	10,895	375,684	64.6%	66,159	65,818	92.1%	85.7%	60,949	56,433
FRCST 2025	2.90%	10,975	378,462	65.0%	66,429	66,265	92.1%	85.7%	61,179	56,807
FRCST 2026	2.90%	11,080	382,052	65.2%	66,892	66,934	92.1%	85.7%	61,592	57,388
FRCST 2027	2.90%	11,198	386,123	65.0%	67,629	67,782	92.1%	85.8%	62,279	58,145
FRCST 2028	2.90%	11,329	390,648	64.7%	68,556	68,775	92.1%	85.8%	63,154	59,043
FRCST 2029	2.90%	11,466	395,369	64.7%	69,566	69,804	92.2%	85.9%	64,111	59,977
FRCST 2030	2.90%	11,602	400,080	64.5%	70,544	70,824	92.2%	86.0%	65,035	60,899

***** BASE SCENARIO WITH DSM IMPACTS *****					***** BASE SCENARIO WITH DSM IMPACTS *****					
TIME PERIOD	ENERGY LOSS FACTOR	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHG.)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
	(AVERAGE %)			(AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999 -2004	3.35%	-1.18%	0.96%	62.1%	1.73%	-0.17%	93.0%	90.4%	1.32%	-0.27%
2004 -2009	2.88%	-0.41%	2.77%	60.0%	6.79%	6.40%	93.6%	88.4%	7.03%	2.00%
2010 -2015	2.90%	1.90%	1.90%	61.2%	1.41%	1.56%	92.8%	86.7%	1.35%	1.45%
2015 -2020	2.90%	0.95%	0.95%	62.9%	0.37%	0.38%	92.4%	86.2%	0.31%	0.25%
2020 -2025	2.90%	0.65%	0.65%	64.4%	0.26%	0.49%	92.2%	85.8%	0.22%	0.44%
2025 -2030	2.90%	1.12%	1.12%	64.8%	1.21%	1.34%	92.1%	85.8%	1.23%	1.40%
1999 -2009	3.07%	-0.79%	1.86%	60.9%	4.23%	-3.06%	93.5%	89.2%	4.13%	0.86%
2010 -2030	2.90%	1.15%	1.15%	63.3%	0.81%	0.94%	92.4%	86.1%	0.77%	0.89%

***** BASE SCENARIO WITH DSM IMPACTS *****						***** BASE SCENARIO WITH DSM IMPACTS *****		
PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES						Percent Total E.E. Reductions		
YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)		Sales to End-Consumers %	Total Member Purchase %	
		WINTER	SUMMER	WINTER	SUMMER			
ACTUAL 1999	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2000	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2001	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2002	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2003	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2004	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2005	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2006	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2007	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2008	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2009	*****	*****	*****	*****	*****	*****	*****	
FRCST 2010	53.4%	68.044	66.539	63.218	57.846	0.6%	0.6%	
FRCST 2011	53.6%	84.416	63.195	59.809	54.896	1.1%	1.1%	
FRCST 2012	53.6%	73.248	71.887	67.984	62.405	1.3%	1.3%	
FRCST 2013	53.9%	73.338	72.032	68.031	62.473	1.6%	1.6%	
FRCST 2014	54.1%	73.308	72.077	67.957	62.436	2.0%	2.0%	
FRCST 2015	54.4%	73.358	72.195	67.958	62.468	2.4%	2.4%	
FRCST 2016	54.5%	73.720	72.571	68.261	62.736	2.6%	2.6%	
FRCST 2017	54.9%	74.025	72.895	68.504	62.950	2.8%	2.8%	
FRCST 2018	55.3%	74.159	73.004	68.573	62.941	3.0%	3.0%	
FRCST 2019	55.6%	74.530	73.406	68.878	63.224	3.2%	3.2%	
FRCST 2020	55.5%	75.091	73.919	69.372	63.617	3.4%	3.4%	
FRCST 2021	55.9%	75.215	74.124	69.453	63.743	3.8%	3.6%	
FRCST 2022	56.1%	75.410	74.447	69.603	63.986	3.8%	3.8%	
FRCST 2023	56.3%	75.630	74.815	69.778	64.273	3.9%	3.9%	
FRCST 2024	56.3%	75.988	75.353	70.090	64.728	4.0%	4.0%	
FRCST 2025	56.6%	76.336	75.874	70.392	65.167	4.0%	4.0%	
FRCST 2026	56.7%	76.890	76.633	70.891	65.826	4.0%	4.0%	
FRCST 2027	56.7%	77.723	77.574	71.667	66.663	3.9%	3.9%	
FRCST 2028	56.5%	78.748	78.661	72.633	67.645	3.7%	3.7%	
FRCST 2029	56.5%	79.859	79.789	73.684	68.663	3.5%	3.5%	
FRCST 2030	56.4%	80.940	80.908	74.702	69.672	3.3%	3.3%	

***** BASE SCENARIO WITH DSM IMPACTS *****						***** BASE SCENARIO WITH DSM IMPACTS *****		
TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)				
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)			
1999 -2004	59.8%	50.458	49.147	47.592	44.530			
2004 -2009	51.5%	68.068	63.286	62.583	56.037			
2010 -2015	53.4%	73.358	72.195	68.031	62.473			
2015 -2020	54.4%	75.091	73.919	69.372	63.617			
2020 -2025	55.5%	76.336	75.874	70.392	65.167			
2025 -2030	56.4%	80.940	80.908	74.702	69.672			
1999 -2009	51.5%	68.068	63.286	62.583	56.037			
2010 -2030	53.4%	80.940	80.908	74.702	69.672			

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	10,725	722	0	73	11,520	135,637	74,338	0	1,297	211,272
ACTUAL 2000	10,897	778	0	101	11,776	136,878	76,279	0	1,958	215,115
ACTUAL 2001	11,076	779	2	103	11,960	140,239	88,804	6,962	1,970	217,975
ACTUAL 2002	11,276	782	3	103	12,164	149,366	66,473	11,577	2,193	229,609
ACTUAL 2003	11,497	797	3	108	12,405	144,621	89,529	11,435	2,146	227,731
ACTUAL 2004	11,684	818	5	109	12,616	147,067	70,969	15,273	2,306	235,615
ACTUAL 2005	11,843	840	5	110	12,798	157,589	76,070	22,698	2,379	258,736
ACTUAL 2006	12,013	842	6	112	12,973	156,377	72,345	26,252	2,221	257,195
ACTUAL 2007	12,108	851	10	110	13,079	165,679	63,505	40,736	2,224	272,144
ACTUAL 2008	12,126	847	10	110	13,093	161,653	62,231	46,059	2,178	272,121
ACTUAL 2009	12,120	839	10	110	13,079	156,684	62,609	47,011	2,114	268,418
FRCST 2010	12,175	844	10	112	13,141	156,233	62,226	45,317	2,492	266,268
FRCST 2011	12,255	849	10	112	13,226	159,676	62,370	45,431	2,492	269,969
FRCST 2012	12,336	854	10	112	13,312	161,947	62,310	45,552	2,492	272,301
FRCST 2013	12,442	859	10	112	13,423	164,689	62,279	45,682	2,492	275,142
FRCST 2014	12,550	864	10	112	13,536	166,400	62,157	45,819	2,492	276,868
FRCST 2015	12,658	869	10	112	13,649	167,847	62,083	45,965	2,492	278,387
FRCST 2016	12,794	879	10	112	13,795	170,076	62,468	45,965	2,492	281,001
FRCST 2017	12,930	889	10	112	13,941	171,636	62,902	45,965	2,492	282,995
FRCST 2018	13,068	899	10	112	14,089	173,342	63,464	45,965	2,492	285,263
FRCST 2019	13,207	909	10	112	14,238	175,050	63,959	45,965	2,492	287,466
FRCST 2020	13,347	919	10	112	14,388	176,575	64,468	45,965	2,492	289,500
FRCST 2021	13,497	934	10	112	14,553	178,050	65,399	45,965	2,492	291,907
FRCST 2022	13,649	949	10	112	14,720	179,602	66,355	45,965	2,492	294,415
FRCST 2023	13,802	964	10	112	14,888	181,317	67,328	45,965	2,492	297,102
FRCST 2024	13,956	979	10	112	15,057	183,116	68,392	45,965	2,492	299,965
FRCST 2025	14,112	994	10	112	15,228	185,037	70,137	45,965	2,492	303,631
FRCST 2026	14,270	1,014	10	112	15,406	187,363	71,850	45,965	2,492	307,669
FRCST 2027	14,429	1,034	10	112	15,585	190,171	73,778	45,965	2,492	312,406
FRCST 2028	14,589	1,054	10	112	15,765	193,279	75,687	45,965	2,492	317,422
FRCST 2029	14,751	1,074	10	112	15,947	196,608	77,696	45,965	2,492	322,761
FRCST 2030	14,914	1,094	10	112	16,130	199,973	79,687	45,965	2,492	328,097

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	1.73%	2.53%	5	36	1.83%	1.63%	-0.92%	NA	12.20%	2.21%
2004 -2009	0.74%	0.51%	5	1	0.72%	1.27%	-2.48%	25.21%	-1.72%	2.64%
2010 -2015	0.78%	0.59%	0	0	0.76%	1.44%	-0.05%	0.28%	0.00%	0.89%
2015 -2020	1.07%	1.13%	0	0	1.06%	1.02%	0.76%	0.00%	0.00%	0.79%
2020 -2025	1.12%	1.58%	0	0	1.14%	0.94%	1.70%	0.00%	0.00%	0.96%
2025 -2030	1.11%	1.94%	0	0	1.16%	1.56%	2.58%	0.00%	0.00%	1.56%
1999 -2009	1.23%	1.51%	10	37	1.28%	1.45%	-1.70%	NA	5.01%	2.42%
2010 -2030	1.02%	1.31%	0	0	1.03%	1.24%	1.24%	0.07%	0.00%	1.05%

***** BASE SCENARIO WITH DSM IMPACTS *****				***** BASE SCENARIO WITH DSM IMPACTS *****							
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK		
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)	
ACTUAL	1999	6.25%	14,085	225,357	44.8%	40,874	57,464	91.2%	94.6%	37,265	54,355
ACTUAL	2000	6.71%	15,472	230,587	48.9%	42,058	53,774	98.1%	92.0%	41,258	49,458
ACTUAL	2001	5.10%	11,714	229,689	47.6%	44,362	55,029	94.4%	88.4%	41,857	48,661
ACTUAL	2002	5.98%	14,604	244,213	46.7%	41,129	59,745	99.6%	86.2%	40,967	51,513
ACTUAL	2003	6.23%	15,130	242,861	48.1%	46,821	57,609	97.5%	90.7%	45,641	52,224
ACTUAL	2004	6.93%	17,544	253,159	49.3%	45,805	58,582	91.5%	93.0%	41,898	54,478
ACTUAL	2005	5.85%	16,077	274,813	48.7%	49,624	84,444	97.5%	93.7%	48,390	60,374
ACTUAL	2006	5.38%	14,624	271,819	47.7%	52,282	65,109	93.9%	92.5%	49,082	60,206
ACTUAL	2007	6.61%	19,262	291,406	49.6%	53,365	67,046	96.0%	90.6%	51,232	60,772
ACTUAL	2008	5.92%	17,123	289,244	54.3%	55,275	60,840	96.3%	93.4%	53,252	56,817
ACTUAL	2009	5.20%	14,723	283,141	51.0%	56,959	63,345	96.4%	92.0%	54,835	58,292
FRCST	2010	5.80%	16,394	282,662	49.9%	52,946	64,720	95.9%	94.0%	50,774	60,810
FRCST	2011	5.80%	16,622	286,591	49.8%	53,172	65,697	95.8%	93.9%	50,956	61,708
FRCST	2012	5.80%	16,766	289,067	49.8%	52,893	66,073	95.7%	93.9%	50,643	62,023
FRCST	2013	5.80%	16,941	292,082	50.4%	52,609	66,216	95.7%	93.8%	50,331	62,114
FRCST	2014	5.80%	17,047	293,915	50.7%	52,071	66,156	95.6%	93.7%	49,767	62,009
FRCST	2015	5.80%	17,141	295,528	51.0%	51,586	66,095	95.5%	93.7%	49,258	61,904
FRCST	2016	5.80%	17,302	298,303	51.3%	51,350	66,199	95.4%	93.6%	49,004	61,957
FRCST	2017	5.80%	17,424	300,419	51.8%	51,009	66,237	95.3%	93.5%	48,626	61,947
FRCST	2018	5.80%	17,564	302,827	52.1%	50,751	66,338	95.3%	93.5%	48,341	62,000
FRCST	2019	5.80%	17,700	305,166	52.4%	50,582	66,473	95.2%	93.4%	48,146	62,088
FRCST	2020	5.80%	17,825	307,325	52.5%	50,362	66,594	95.1%	93.3%	47,899	62,161
FRCST	2021	5.80%	17,973	309,880	52.9%	50,255	66,854	95.0%	93.3%	47,762	62,367
FRCST	2022	5.80%	18,127	312,542	52.9%	50,545	67,468	95.0%	93.3%	48,021	62,925
FRCST	2023	5.80%	18,293	315,395	52.7%	51,018	68,328	95.0%	93.3%	48,464	63,731
FRCST	2024	5.80%	18,469	318,435	52.4%	51,523	69,210	95.0%	93.3%	48,939	64,559
FRCST	2025	5.80%	18,695	322,326	52.4%	52,131	70,206	95.0%	93.3%	49,517	65,500
FRCST	2026	5.80%	18,944	326,613	52.3%	52,756	71,342	95.0%	93.3%	50,106	66,572
FRCST	2027	5.80%	19,235	331,642	52.1%	53,813	72,635	95.0%	93.3%	51,126	67,799
FRCST	2028	5.80%	19,544	336,967	51.8%	55,060	73,993	95.1%	93.4%	52,335	69,088
FRCST	2029	5.80%	19,873	342,634	51.9%	56,302	75,373	95.1%	93.4%	53,539	70,399
FRCST	2030	5.80%	20,201	348,299	51.6%	57,547	76,749	95.1%	93.4%	54,745	71,705

***** BASE SCENARIO WITH DSM IMPACTS *****				***** BASE SCENARIO WITH DSM IMPACTS *****							
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHG.)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK		
					WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)	
1999 -2004	6.20%	4.49%	2.35%	47.6%	2.30%	0.39%	95.4%	90.8%	2.37%	0.05%	
2004 -2009	5.98%	-3.44%	2.26%	50.1%	4.42%	1.58%	95.3%	92.5%	5.53%	1.36%	
2010 -2015	5.80%	0.89%	0.89%	50.3%	-0.52%	0.42%	95.7%	93.8%	-0.60%	0.36%	
2015 -2020	5.80%	0.79%	0.79%	51.9%	-0.48%	0.15%	95.3%	93.5%	-0.56%	0.08%	
2020 -2025	5.80%	0.96%	0.96%	52.6%	0.69%	1.06%	95.0%	93.3%	0.67%	1.05%	
2025 -2030	5.80%	1.56%	1.56%	52.1%	2.00%	1.80%	95.1%	93.4%	2.03%	1.83%	
1999 -2009	6.01%	0.44%	2.31%	48.8%	3.36%	0.98%	95.7%	91.6%	3.94%	0.70%	
2010 -2030	5.80%	1.05%	1.05%	51.7%	0.42%	0.86%	95.3%	93.5%	0.38%	0.83%	

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES

YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)		Percent Total E.E. Reductions	
		WINTER	SUMMER	WINTER	SUMMER	Sales to End-Consumers %	Total Member Purchase %
ACTUAL 1999	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2000	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2001	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2002	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2003	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2004	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2005	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2006	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2007	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****	*****	*****
FRCST 2010	46.8%	56.413	68.880	54.102	64.720	1.0%	1.0%
FRCST 2011	46.8%	56.708	69.941	54.351	65.697	1.6%	1.6%
FRCST 2012	46.8%	56.463	70.380	54.089	66.073	2.2%	2.2%
FRCST 2013	47.2%	56.246	70.579	53.822	66.216	2.5%	2.5%
FRCST 2014	47.5%	55.749	70.569	53.297	66.156	2.9%	2.9%
FRCST 2015	47.8%	55.302	70.554	52.825	66.095	3.4%	3.4%
FRCST 2016	48.0%	55.120	70.711	52.613	66.199	3.7%	3.7%
FRCST 2017	48.4%	54.813	70.801	52.277	66.237	4.1%	4.1%
FRCST 2018	48.7%	54.597	70.953	52.033	66.338	4.4%	4.4%
FRCST 2019	49.0%	54.470	71.139	51.878	66.473	4.7%	4.7%
FRCST 2020	49.1%	54.292	71.310	51.672	66.594	5.0%	5.0%
FRCST 2021	49.4%	54.233	71.629	51.581	66.854	5.4%	5.4%
FRCST 2022	49.3%	54.571	72.300	51.887	67.468	5.7%	5.7%
FRCST 2023	49.2%	55.093	73.218	52.377	68.328	6.0%	6.0%
FRCST 2024	48.9%	55.647	74.159	52.898	69.210	6.2%	6.2%
FRCST 2025	48.9%	56.304	75.213	53.522	70.206	6.2%	6.2%
FRCST 2026	48.8%	56.985	76.417	54.166	71.342	6.2%	6.2%
FRCST 2027	48.7%	58.101	77.780	55.243	72.635	6.1%	6.1%
FRCST 2028	48.4%	59.407	79.210	56.509	73.993	5.9%	5.9%
FRCST 2029	48.5%	60.711	80.664	57.771	75.373	5.6%	5.6%
FRCST 2030	48.4%	62.018	82.114	59.037	76.749	5.4%	5.4%

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)	
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)
1999 -2004	44.8%	46.821	59.745	45.641	54.478
2004 -2009	47.7%	56.859	67.046	54.835	60.772
2010 -2015	46.8%	56.708	70.579	54.351	66.216
2015 -2020	47.8%	55.302	71.310	52.825	66.594
2020 -2025	48.9%	56.304	75.213	53.522	70.206
2025 -2030	48.4%	62.018	82.114	59.037	76.749
1999 -2009	44.8%	56.859	67.046	54.835	60.772
2010 -2030	46.8%	62.018	82.114	59.037	76.749

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	17,493	843	9	139	18,484	270,990	61,217	78,508	1,930	412,645
ACTUAL 2000	17,962	890	9	138	18,999	280,971	66,416	95,952	1,904	445,243
ACTUAL 2001	18,454	933	9	146	19,542	304,084	68,315	105,076	2,211	479,686
ACTUAL 2002	18,863	981	9	133	19,986	313,920	66,544	117,106	1,992	499,562
ACTUAL 2003	19,238	1,011	12	130	20,391	315,971	67,433	128,480	3,028	514,912
ACTUAL 2004	19,844	1,094	12	152	20,902	322,537	69,363	130,933	3,111	525,944
ACTUAL 2005	19,998	1,140	12	150	21,300	344,001	70,582	110,556	3,123	528,262
ACTUAL 2006	20,285	1,139	12	148	21,584	341,563	70,617	96,344	2,841	511,365
ACTUAL 2007	20,530	1,183	12	160	21,885	352,775	79,861	109,300	3,358	545,294
ACTUAL 2008	20,673	1,222	14	148	22,057	359,747	76,338	97,472	3,225	536,782
ACTUAL 2009	20,682	1,234	15	149	22,080	337,770	76,763	87,664	2,957	505,154
FRCST 2010	20,790	1,246	13	152	22,201	334,361	77,078	88,483	3,113	503,035
FRCST 2011	20,972	1,258	13	152	22,395	336,122	77,355	88,669	3,113	505,258
FRCST 2012	21,205	1,270	13	152	22,640	339,743	77,521	88,855	3,113	509,231
FRCST 2013	21,440	1,282	13	152	22,887	344,329	77,420	89,041	3,113	513,904
FRCST 2014	21,678	1,294	13	152	23,137	348,405	77,194	89,228	3,113	517,940
FRCST 2015	21,918	1,306	13	152	23,389	352,942	77,034	89,416	3,113	522,505
FRCST 2016	22,178	1,328	13	152	23,671	358,506	77,727	89,789	3,113	529,135
FRCST 2017	22,440	1,350	13	152	23,955	363,652	78,494	90,165	3,113	535,424
FRCST 2018	22,706	1,372	13	152	24,243	368,715	79,265	90,542	3,113	541,635
FRCST 2019	22,974	1,394	13	152	24,533	373,689	80,136	90,920	3,113	547,858
FRCST 2020	23,246	1,416	13	152	24,827	378,935	81,033	91,300	3,113	554,382
FRCST 2021	23,549	1,446	13	152	25,160	384,650	82,484	91,300	3,113	561,547
FRCST 2022	23,855	1,476	13	152	25,496	390,451	83,979	91,300	3,113	568,842
FRCST 2023	24,164	1,506	13	152	25,835	396,438	85,503	91,300	3,113	576,354
FRCST 2024	24,476	1,536	13	152	26,177	402,830	87,152	91,300	3,113	584,195
FRCST 2025	24,792	1,566	13	152	26,523	409,106	89,148	91,300	3,113	592,667
FRCST 2026	25,145	1,606	13	152	26,916	416,939	91,924	91,300	3,113	603,276
FRCST 2027	25,501	1,646	13	152	27,312	425,579	94,832	91,300	3,113	614,824
FRCST 2028	25,861	1,686	13	152	27,712	434,729	98,029	91,300	3,113	627,171
FRCST 2029	26,223	1,726	13	152	28,114	444,159	101,371	91,300	3,113	639,943
FRCST 2030	26,590	1,766	13	152	28,521	453,818	104,667	91,300	3,113	652,898

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	2.35%	5.35%	3	13	2.49%	3.54%	2.53%	10.77%	10.02%	4.97%
2004 -2009	1.04%	2.44%	3	-3	1.10%	0.93%	2.05%	-7.71%	-1.01%	-0.60%
2010 -2015	1.06%	0.95%	0	0	1.05%	1.09%	-0.01%	0.21%	0.00%	0.76%
2015 -2020	1.18%	1.63%	0	0	1.20%	1.43%	1.02%	0.42%	0.00%	1.19%
2020 -2025	1.30%	2.03%	0	0	1.33%	1.54%	1.93%	0.00%	0.00%	1.34%
2025 -2030	1.41%	2.43%	0	0	1.46%	2.10%	3.26%	0.00%	0.00%	1.95%
1999 -2009	1.69%	3.88%	6	10	1.79%	2.23%	2.29%	1.11%	4.36%	2.04%
2010 -2030	1.24%	1.76%	0	0	1.26%	1.54%	1.54%	0.16%	0.00%	1.31%

***** BASE SCENARIO WITH DSM IMPACTS *****					***** BASE SCENARIO WITH DSM IMPACTS *****					
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)
ACTUAL 1999	5.40%	23,555	436,200	50.9%	97.761	97.839	94.3%	96.6%	92.228	94.560
ACTUAL 2000	6.90%	32,999	478,242	53.1%	102.839	99.859	97.9%	95.4%	100.690	95.305
ACTUAL 2001	2.08%	10,189	489,875	49.1%	113.880	103.533	93.3%	91.9%	106.268	95.168
ACTUAL 2002	5.03%	26,459	526,021	54.1%	108.626	110.995	95.6%	91.7%	103.885	101.793
ACTUAL 2003	4.05%	21,734	536,646	49.0%	124.964	108.509	95.9%	93.6%	119.854	101.516
ACTUAL 2004	4.38%	24,092	550,036	49.7%	126.392	107.755	94.7%	94.2%	119.634	101.463
ACTUAL 2005	3.94%	21,667	549,929	50.1%	125.242	114.225	97.8%	95.7%	122.520	109.358
ACTUAL 2006	2.74%	14,406	525,771	51.4%	116.756	113.156	98.2%	97.2%	114.671	110.001
ACTUAL 2007	3.12%	17,561	562,855	48.6%	132.214	118.857	94.3%	92.8%	124.623	110.285
ACTUAL 2008	3.63%	20,219	557,001	46.2%	137.492	109.850	96.1%	94.5%	132.192	103.781
ACTUAL 2009	4.46%	23,582	528,736	42.1%	143.425	107.713	95.7%	92.9%	137.284	100.063
FRCST 2010	3.80%	19,870	522,905	48.1%	124.071	105.350	96.0%	95.0%	119.066	100.032
FRCST 2011	3.80%	19,958	525,216	48.3%	124.237	105.267	95.9%	94.9%	119.188	99.902
FRCST 2012	3.80%	20,115	529,347	48.3%	124.766	105.442	95.9%	94.9%	119.658	100.015
FRCST 2013	3.80%	20,300	534,203	48.6%	125.432	105.579	95.9%	94.8%	120.265	100.089
FRCST 2014	3.80%	20,459	538,399	48.6%	125.948	105.668	95.8%	94.7%	120.718	100.112
FRCST 2015	3.80%	20,640	543,145	49.0%	126.626	105.877	95.8%	94.7%	121.329	100.249
FRCST 2016	3.80%	20,901	550,036	49.0%	127.834	106.452	95.8%	94.6%	122.457	100.739
FRCST 2017	3.80%	21,150	556,574	49.3%	128.999	107.011	95.8%	94.6%	123.541	101.212
FRCST 2018	3.80%	21,395	563,030	49.4%	130.184	107.576	95.7%	94.5%	124.645	101.690
FRCST 2019	3.80%	21,641	569,499	49.5%	131.376	108.171	95.7%	94.5%	125.755	102.198
FRCST 2020	3.80%	21,899	576,280	49.4%	132.755	109.109	95.7%	94.4%	127.052	103.049
FRCST 2021	3.80%	22,182	583,729	49.6%	134.456	110.361	95.7%	94.4%	128.664	104.206
FRCST 2022	3.80%	22,470	591,312	49.6%	136.173	111.645	95.7%	94.4%	130.291	105.395
FRCST 2023	3.80%	22,767	599,121	49.6%	137.959	113.039	95.7%	94.4%	131.987	106.693
FRCST 2024	3.80%	23,076	607,271	49.5%	139.803	114.574	95.7%	94.4%	133.739	108.131
FRCST 2025	3.80%	23,411	616,078	49.6%	141.836	116.152	95.7%	94.4%	135.679	109.611
FRCST 2026	3.80%	23,830	627,106	49.6%	144.342	118.173	95.7%	94.4%	138.075	111.515
FRCST 2027	3.80%	24,286	639,110	49.6%	147.021	120.385	95.7%	94.4%	140.642	113.607
FRCST 2028	3.80%	24,774	651,945	49.5%	149.949	122.784	95.7%	94.4%	143.453	115.883
FRCST 2029	3.80%	25,278	665,221	49.6%	153.021	125.279	95.7%	94.4%	146.408	118.252
FRCST 2030	3.80%	25,790	678,688	49.6%	156.231	127.960	95.7%	94.4%	149.497	120.806

***** BASE SCENARIO WITH DSM IMPACTS *****					***** BASE SCENARIO WITH DSM IMPACTS *****					
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHG.)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999 -2004	4.64%	0.45%	4.75%	51.0%	5.27%	1.95%	95.3%	93.9%	5.34%	1.42%
2004 -2009	3.71%	-0.43%	-0.79%	48.0%	2.56%	-0.01%	96.1%	94.6%	2.79%	-0.28%
2010 -2015	3.80%	0.76%	0.76%	48.5%	0.41%	0.10%	95.9%	94.8%	0.38%	0.04%
2015 -2020	3.80%	1.19%	1.19%	49.2%	0.95%	0.60%	95.8%	94.8%	0.93%	0.55%
2020 -2025	3.80%	1.34%	1.34%	49.5%	1.33%	1.26%	95.7%	94.4%	1.32%	1.24%
2025 -2030	3.80%	1.95%	1.95%	49.6%	1.95%	1.96%	95.7%	94.4%	1.96%	1.96%
1999 -2009	4.16%	0.01%	1.94%	49.5%	3.91%	0.97%	95.8%	94.2%	4.06%	0.57%
2010 -2030	3.80%	1.31%	1.31%	49.2%	1.16%	0.98%	95.8%	94.6%	1.14%	0.95%

***** BASE SCENARIO WITH DSM IMPACTS *****						***** BASE SCENARIO WITH DSM IMPACTS *****			
PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES						Percent Total E.E. Reductions			
YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)		Sales to End-Consumers %	Total Member Purchase %		
		WINTER	SUMMER	WINTER	SUMMER				
ACTUAL	1999	*****	*****	*****	*****	*****	*****		
ACTUAL	2000	*****	*****	*****	*****	*****	*****		
ACTUAL	2001	*****	*****	*****	*****	*****	*****		
ACTUAL	2002	*****	*****	*****	*****	*****	*****		
ACTUAL	2003	*****	*****	*****	*****	*****	*****		
ACTUAL	2004	*****	*****	*****	*****	*****	*****		
ACTUAL	2005	*****	*****	*****	*****	*****	*****		
ACTUAL	2006	*****	*****	*****	*****	*****	*****		
ACTUAL	2007	*****	*****	*****	*****	*****	*****		
ACTUAL	2008	*****	*****	*****	*****	*****	*****		
ACTUAL	2009	*****	*****	*****	*****	*****	*****		
FRCST	2010	42.1%	141.947	120.545	136.227	114.467	0.6%	0.6%	
FRCST	2011	42.1%	142.270	120.595	136.500	114.464	1.0%	1.0%	
FRCST	2012	42.1%	143.007	120.947	137.170	114.745	1.4%	1.4%	
FRCST	2013	42.4%	143.884	121.263	137.979	114.989	1.6%	1.6%	
FRCST	2014	42.5%	144.624	121.543	138.648	115.193	2.1%	2.1%	
FRCST	2015	42.6%	145.546	121.959	139.491	115.526	2.5%	2.5%	
FRCST	2016	42.6%	147.040	122.777	140.894	116.247	2.7%	2.7%	
FRCST	2017	42.8%	148.491	123.579	142.254	116.952	3.0%	3.0%	
FRCST	2018	42.9%	149.966	124.390	143.636	117.664	3.3%	3.3%	
FRCST	2019	42.9%	151.451	125.234	145.027	118.409	3.6%	3.6%	
FRCST	2020	42.8%	153.126	126.424	146.608	119.498	3.9%	3.9%	
FRCST	2021	43.0%	155.145	127.947	148.525	120.913	4.1%	4.1%	
FRCST	2022	42.9%	157.181	129.502	150.459	122.359	4.4%	4.4%	
FRCST	2023	42.9%	159.291	131.171	152.465	123.918	4.6%	4.6%	
FRCST	2024	42.8%	161.461	132.984	154.531	125.620	4.7%	4.7%	
FRCST	2025	42.9%	163.824	134.842	156.787	127.366	4.8%	4.8%	
FRCST	2026	42.9%	166.722	137.197	159.560	129.587	4.8%	4.8%	
FRCST	2027	43.0%	169.806	139.752	162.515	132.006	4.7%	4.7%	
FRCST	2028	42.9%	173.147	142.503	165.724	134.616	4.5%	4.5%	
FRCST	2029	43.0%	176.641	145.356	169.083	137.325	4.3%	4.3%	
FRCST	2030	43.0%	180.279	148.401	172.583	140.225	4.1%	4.1%	

***** BASE SCENARIO WITH DSM IMPACTS *****						***** BASE SCENARIO WITH DSM IMPACTS *****			
TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)					
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)				
1999 -2004	49.0%	126.392	110.895	119.854	101.793				
2004 -2009	42.1%	143.425	118.857	137.284	110.285				
2010 -2015	42.1%	145.546	121.959	139.491	115.526				
2015 -2020	42.6%	153.126	126.424	146.608	119.498				
2020 -2025	42.8%	163.824	134.842	156.787	127.366				
2025 -2030	42.9%	180.279	148.401	172.583	140.225				
1999 -2009	42.1%	143.425	118.857	137.284	110.285				
2010 -2030	42.1%	180.279	148.401	172.583	140.225				

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	8,588	511	3	0	9,102	121,275	22,825	3,916	2,757	150,573
ACTUAL 2000	8,736	528	3	0	9,267	122,674	24,181	4,072	2,779	153,706
ACTUAL 2001	8,777	543	3	0	9,323	127,404	25,144	4,171	2,814	159,533
ACTUAL 2002	8,946	558	4	0	9,508	133,570	24,962	4,200	2,907	165,639
ACTUAL 2003	9,069	568	4	0	9,641	134,756	24,637	9,234	2,747	171,374
ACTUAL 2004	9,284	479	5	0	9,768	136,784	24,005	11,568	2,916	175,273
ACTUAL 2005	9,652	172	5	0	9,829	151,349	19,078	12,731	2,897	186,055
ACTUAL 2006	9,700	172	5	0	9,877	147,283	20,476	11,664	2,915	182,338
ACTUAL 2007	9,736	171	6	0	9,913	151,995	23,060	11,254	2,925	189,234
ACTUAL 2008	9,695	170	6	0	9,871	150,948	22,387	12,405	2,949	188,689
ACTUAL 2009	9,647	165	6	0	9,818	145,110	19,127	11,996	2,903	179,136
FRCST 2010	9,636	165	6	0	9,807	143,174	19,086	13,195	2,858	176,313
FRCST 2011	9,671	165	6	0	9,842	142,985	18,046	13,187	2,858	177,076
FRCST 2012	9,722	165	6	0	9,893	143,222	17,396	13,180	2,858	176,656
FRCST 2013	9,773	165	6	0	9,944	143,986	16,746	13,173	2,858	176,763
FRCST 2014	9,840	165	6	0	10,011	144,526	16,096	13,166	2,858	176,646
FRCST 2015	9,908	165	6	0	10,079	145,171	15,576	16,867	2,858	180,472
FRCST 2016	10,000	167	6	0	10,173	146,783	15,322	16,877	2,858	181,840
FRCST 2017	10,093	169	6	0	10,268	148,014	15,069	16,888	2,858	182,829
FRCST 2018	10,186	171	6	0	10,363	149,304	14,946	16,899	2,858	184,007
FRCST 2019	10,281	173	6	0	10,460	150,456	14,824	16,910	2,858	185,048
FRCST 2020	10,376	175	6	0	10,557	151,657	14,833	16,921	2,858	186,269
FRCST 2021	10,497	178	6	0	10,681	153,235	14,956	16,921	2,858	187,970
FRCST 2022	10,619	181	6	0	10,806	154,804	15,208	16,921	2,858	189,791
FRCST 2023	10,742	184	6	0	10,932	156,393	15,470	16,921	2,858	191,642
FRCST 2024	10,867	187	6	0	11,060	158,020	15,780	16,921	2,858	193,558
FRCST 2025	10,993	190	6	0	11,189	159,691	16,039	16,921	2,858	195,509
FRCST 2026	11,139	195	6	0	11,340	161,774	17,579	16,921	2,858	199,132
FRCST 2027	11,286	200	6	0	11,492	164,070	18,735	16,921	2,858	202,584
FRCST 2028	11,435	205	6	0	11,646	166,511	19,895	16,921	2,858	206,186
FRCST 2029	11,586	210	6	0	11,802	169,026	21,060	16,921	2,858	209,865
FRCST 2030	11,739	215	6	0	11,960	171,592	22,100	16,921	2,858	213,471

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	1.57%	-1.29%	2	0	1.42%	2.44%	1.19%	24.19%	1.13%	3.08%
2004 -2009	0.77%	-19.20%	1	0	0.10%	1.19%	-4.44%	0.73%	-0.09%	0.44%
2010 -2015	0.56%	0.00%	0	0	0.55%	0.28%	-3.98%	5.03%	0.00%	0.24%
2015 -2020	0.93%	1.18%	0	0	0.93%	0.88%	-0.97%	0.06%	0.00%	0.63%
2020 -2025	1.16%	1.66%	0	0	1.17%	1.04%	1.58%	0.00%	0.00%	0.97%
2025 -2030	1.32%	2.50%	0	0	1.34%	1.45%	6.62%	0.00%	0.00%	1.77%

1999 -2009	1.17%	-10.69%	3	0	0.76%	1.81%	-1.67%	11.65%	0.52%	1.75%
2010 -2030	0.99%	1.33%	0	0	1.00%	0.91%	0.74%	1.25%	0.00%	0.90%

***** BASE SCENARIO WITH DSM IMPACTS *****				***** BASE SCENARIO WITH DSM IMPACTS *****							
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK		
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)	
ACTUAL	1999	5.63%	8,983	159,556	47.6%	38,273	33,570	97.5%	98.2%	37,305	32,873
ACTUAL	2000	7.02%	11,605	165,311	49.6%	38,047	30,272	98.3%	95.5%	37,412	28,903
ACTUAL	2001	3.72%	6,164	165,697	45.3%	41,727	33,372	94.4%	97.6%	39,371	32,587
ACTUAL	2002	6.17%	10,892	176,531	52.9%	38,098	37,574	98.8%	90.7%	37,638	34,096
ACTUAL	2003	5.43%	9,840	181,214	49.0%	42,224	34,074	95.5%	95.7%	40,331	32,601
ACTUAL	2004	5.87%	10,930	186,203	49.2%	43,218	34,478	96.8%	98.1%	41,837	33,818
ACTUAL	2005	4.81%	9,401	195,456	50.2%	44,429	39,529	98.4%	99.6%	43,738	39,376
ACTUAL	2006	3.81%	7,222	189,560	49.2%	43,957	39,712	99.2%	99.4%	43,613	39,469
ACTUAL	2007	5.45%	10,908	200,142	45.8%	49,893	39,157	94.1%	80.8%	46,958	31,655
ACTUAL	2008	5.96%	11,959	200,648	49.5%	46,274	36,628	97.0%	92.3%	44,895	33,807
ACTUAL	2009	4.92%	9,270	188,406	42.1%	51,082	35,729	96.9%	96.3%	49,520	34,398
FRCST	2010	5.10%	9,583	187,896	48.5%	44,269	35,504	98.0%	94.9%	43,368	33,702
FRCST	2011	5.10%	9,516	186,593	48.7%	43,717	34,947	97.9%	94.8%	42,813	33,139
FRCST	2012	5.10%	9,494	186,150	48.9%	43,298	34,517	97.9%	94.7%	42,390	32,701
FRCST	2013	5.10%	9,499	186,263	49.4%	43,003	34,111	97.8%	94.7%	42,091	32,287
FRCST	2014	5.10%	9,493	186,139	49.8%	42,658	33,707	97.8%	94.6%	41,741	31,873
FRCST	2015	5.10%	9,699	190,171	50.1%	43,365	34,154	97.8%	94.5%	42,424	32,271
FRCST	2016	5.10%	9,772	191,613	50.2%	43,449	34,047	97.8%	94.4%	42,499	32,146
FRCST	2017	5.10%	9,825	192,654	50.6%	43,444	33,897	97.8%	94.3%	42,485	31,979
FRCST	2018	5.10%	9,889	193,896	50.9%	43,480	33,798	97.8%	94.3%	42,512	31,862
FRCST	2019	5.10%	9,945	194,993	51.2%	43,484	33,683	97.8%	94.2%	42,507	31,729
FRCST	2020	5.10%	10,010	196,279	51.2%	43,667	33,898	97.7%	94.2%	42,682	31,926
FRCST	2021	5.10%	10,102	198,072	51.5%	43,942	34,126	97.7%	94.2%	42,945	32,132
FRCST	2022	5.10%	10,200	199,991	51.6%	44,242	34,393	97.7%	94.1%	43,234	32,378
FRCST	2023	5.10%	10,299	201,941	51.7%	44,561	34,700	97.7%	94.1%	43,542	32,660
FRCST	2024	5.10%	10,402	203,960	51.7%	44,894	35,018	97.7%	94.1%	43,862	32,955
FRCST	2025	5.10%	10,507	206,015	52.0%	45,230	35,351	97.7%	94.1%	44,187	33,255
FRCST	2026	5.10%	10,702	209,834	52.1%	45,958	36,092	97.7%	94.1%	44,900	33,976
FRCST	2027	5.10%	10,887	213,471	52.1%	46,730	36,767	97.7%	94.2%	45,657	34,622
FRCST	2028	5.10%	11,081	217,266	52.0%	47,588	37,473	97.7%	94.2%	46,500	35,296
FRCST	2029	5.10%	11,278	221,143	52.1%	48,455	38,193	97.7%	94.2%	47,351	35,985
FRCST	2030	5.10%	11,472	224,943	52.0%	49,369	38,954	97.7%	94.3%	48,250	36,715

***** BASE SCENARIO WITH DSM IMPACTS *****				***** BASE SCENARIO WITH DSM IMPACTS *****						
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHG.)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999 -2004	5.64%	4.00%	3.14%	48.9%	2.46%	0.54%	96.9%	96.0%	2.32%	0.51%
2004 -2009	5.14%	-3.24%	0.24%	47.7%	3.40%	0.72%	97.1%	94.4%	3.43%	0.34%
2010 -2015	5.10%	0.24%	0.24%	49.2%	-0.41%	-0.77%	97.9%	94.7%	-0.44%	-0.86%
2015 -2020	5.10%	0.63%	0.63%	50.7%	0.14%	-0.15%	97.8%	94.3%	0.12%	-0.22%
2020 -2025	5.10%	0.97%	0.97%	51.6%	0.71%	0.84%	97.7%	94.1%	0.70%	0.83%
2025 -2030	5.10%	1.77%	1.77%	52.1%	1.77%	1.96%	97.7%	94.2%	1.77%	1.99%
1999 -2009	5.34%	0.31%	1.68%	48.2%	2.93%	0.63%	97.0%	94.9%	2.87%	0.42%
2010 -2030	5.10%	0.90%	0.90%	50.9%	0.55%	0.46%	97.8%	94.3%	0.53%	0.43%

***** BASE SCENARIO WITH DSM IMPACTS *****						***** BASE SCENARIO WITH DSM IMPACTS *****			
PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES									
YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)		Percent Total E.E. Reductions			
		WINTER	SUMMER	WINTER	SUMMER	Sales to End-Consumers %	Total Member Purchase %		
ACTUAL	1999	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL	2000	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL	2001	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL	2002	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL	2003	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL	2004	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL	2005	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL	2006	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL	2007	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL	2008	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL	2009	*****	*****	*****	*****	*****	*****	*****	*****
FRCST	2010	42.3%	50.707	40.655	49.677	38.594	0.8%	0.8%	
FRCST	2011	42.5%	50.175	40.113	49.142	38.047	1.8%	1.8%	
FRCST	2012	42.6%	49.785	39.706	48.747	37.630	2.5%	2.5%	
FRCST	2013	42.9%	49.518	39.321	48.474	37.237	2.8%	2.8%	
FRCST	2014	43.2%	49.209	38.948	48.161	36.852	3.5%	3.5%	
FRCST	2015	43.3%	50.091	39.535	49.015	37.382	3.9%	3.9%	
FRCST	2016	43.4%	50.238	39.478	49.152	37.306	4.1%	4.1%	
FRCST	2017	43.7%	50.295	39.379	49.199	37.186	4.5%	4.5%	
FRCST	2018	43.9%	50.394	39.330	49.288	37.117	4.7%	4.7%	
FRCST	2019	44.1%	50.461	39.265	49.345	37.032	5.1%	5.1%	
FRCST	2020	44.1%	50.709	39.531	49.582	37.277	5.3%	5.3%	
FRCST	2021	44.3%	51.064	39.823	49.924	37.544	5.5%	5.5%	
FRCST	2022	44.4%	51.445	40.155	50.293	37.850	5.7%	5.7%	
FRCST	2023	44.5%	51.846	40.528	50.680	38.197	5.8%	5.8%	
FRCST	2024	44.4%	52.260	40.911	51.082	38.554	5.9%	5.9%	
FRCST	2025	44.6%	52.680	41.311	51.488	38.927	6.1%	6.1%	
FRCST	2026	44.8%	53.513	42.136	52.304	39.718	5.6%	5.6%	
FRCST	2027	44.8%	54.393	42.898	53.166	40.446	5.4%	5.4%	
FRCST	2028	44.7%	55.361	43.691	54.118	41.204	5.0%	5.0%	
FRCST	2029	44.8%	56.339	44.501	55.078	41.978	4.7%	4.7%	
FRCST	2030	44.8%	57.367	45.352	56.087	42.793	4.4%	4.4%	

***** BASE SCENARIO WITH DSM IMPACTS *****						***** BASE SCENARIO WITH DSM IMPACTS *****			
TIME PERIOD	SINGLE TEMP EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)					
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)				
1999 -2004	45.3%	43.218	37.574	41.837	34.096				
2004 -2009	42.1%	51.082	39.712	49.520	39.469				
2010 -2015	42.3%	50.707	40.655	49.677	38.594				
2015 -2020	43.3%	50.709	39.535	49.582	37.382				
2020 -2025	44.1%	52.680	41.311	51.488	38.927				
2025 -2030	44.6%	57.367	45.352	56.087	42.793				
1999 -2009	42.1%	51.082	39.712	49.520	39.469				
2010 -2030	42.3%	57.367	45.352	56.087	42.793				

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	20,931	927	10	13	21,881	314,257	43,359	25,634	56	383,306
ACTUAL 2000	21,430	955	12	12	22,409	335,737	45,117	26,172	54	407,080
ACTUAL 2001	21,852	992	15	13	22,872	340,780	46,240	27,122	55	414,197
ACTUAL 2002	22,165	1,005	16	16	23,202	374,868	43,045	29,438	76	447,427
ACTUAL 2003	22,457	1,012	17	18	23,502	368,719	45,487	28,455	74	442,735
ACTUAL 2004	22,655	1,025	14	15	23,709	377,963	47,278	27,198	74	452,513
ACTUAL 2005	22,862	1,038	14	13	23,927	400,163	48,716	33,055	72	482,006
ACTUAL 2006	23,044	1,020	15	13	24,092	384,953	46,918	36,845	72	468,786
ACTUAL 2007	23,188	1,005	16	15	24,224	410,226	47,308	37,853	74	495,461
ACTUAL 2008	23,235	1,006	16	15	24,272	411,303	45,884	34,941	79	492,207
ACTUAL 2009	23,152	1,001	16	15	24,184	387,018	42,848	34,461	85	464,412
FRCST 2010	23,144	1,003	17	18	24,182	384,161	42,746	36,814	85	463,806
FRCST 2011	23,196	1,005	17	18	24,236	384,838	41,927	37,080	85	463,930
FRCST 2012	23,301	1,007	17	18	24,343	386,684	41,368	37,215	85	465,352
FRCST 2013	23,435	1,009	17	18	24,479	384,549	40,809	37,352	85	462,795
FRCST 2014	23,596	1,011	17	18	24,642	387,377	40,251	37,493	85	465,206
FRCST 2015	23,769	1,013	17	18	24,817	390,951	39,692	37,636	85	468,364
FRCST 2016	23,946	1,019	17	18	25,000	395,530	39,337	37,932	85	472,884
FRCST 2017	24,125	1,025	17	18	25,185	399,921	38,983	38,232	85	477,221
FRCST 2018	24,305	1,031	17	18	25,371	404,408	38,628	38,534	85	481,655
FRCST 2019	24,486	1,037	17	18	25,558	413,926	38,663	38,840	85	491,513
FRCST 2020	24,669	1,043	17	18	25,747	418,367	38,708	39,149	85	496,310
FRCST 2021	24,881	1,053	17	18	25,969	423,272	38,978	39,149	85	501,485
FRCST 2022	25,094	1,063	17	18	26,192	428,152	39,266	39,149	85	506,652
FRCST 2023	25,309	1,073	17	18	26,417	432,964	39,566	39,149	85	511,764
FRCST 2024	25,525	1,083	17	18	26,643	437,842	39,891	39,149	85	516,967
FRCST 2025	25,743	1,093	17	18	26,871	442,815	40,381	39,149	85	522,430
FRCST 2026	25,972	1,113	17	18	27,120	448,618	42,071	39,149	85	529,924
FRCST 2027	26,203	1,133	17	18	27,371	454,922	43,509	39,149	85	537,664
FRCST 2028	26,436	1,153	17	18	27,624	461,490	44,954	39,149	85	545,676
FRCST 2029	26,670	1,173	17	18	27,878	468,277	46,405	39,149	85	553,916
FRCST 2030	26,906	1,193	17	18	28,134	475,080	47,863	39,149	85	562,177

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	1.80%	2.03%	4	2	1.62%	3.76%	1.75%	1.19%	5.73%	3.38%
2004 -2009	0.43%	-0.47%	2	0	0.40%	0.47%	-1.95%	4.85%	2.81%	0.52%
2010 -2015	0.53%	0.20%	0	0	0.52%	0.35%	-1.47%	0.44%	0.00%	0.20%
2015 -2020	0.75%	0.59%	0	0	0.74%	1.36%	-0.50%	0.79%	0.00%	1.17%
2020 -2025	0.86%	0.94%	0	0	0.86%	1.14%	0.85%	0.00%	0.00%	1.03%
2025 -2030	0.89%	1.77%	0	0	0.92%	1.42%	3.46%	0.00%	0.00%	1.48%
1999 -2009	1.01%	0.77%	6	2	1.01%	2.10%	-0.12%	3.00%	4.26%	1.94%
2010 -2030	0.76%	0.87%	0	0	0.76%	1.07%	0.57%	0.31%	0.00%	0.97%

***** BASE SCENARIO WITH DSM IMPACTS *****					***** BASE SCENARIO WITH DSM IMPACTS *****					
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)
ACTUAL 1999	6.98%	28,762	412,068	52.0%	90.447	90.216	99.4%	98.1%	89.940	88.538
ACTUAL 2000	6.24%	27,092	434,172	48.1%	103.080	83.856	100.0%	100.0%	103.080	83.856
ACTUAL 2001	4.12%	17,798	431,995	45.0%	109.694	89.148	96.6%	99.1%	105.942	86.346
ACTUAL 2002	4.09%	19,080	466,507	55.1%	96.655	88.611	100.0%	99.6%	96.655	88.239
ACTUAL 2003	5.64%	26,463	469,198	44.6%	120.195	88.249	100.0%	99.8%	120.195	88.069
ACTUAL 2004	5.35%	25,578	478,091	44.4%	122.916	90.106	100.0%	99.7%	122.916	89.877
ACTUAL 2005	4.51%	22,765	504,771	47.4%	121.679	104.268	100.0%	99.4%	121.679	103.686
ACTUAL 2006	4.50%	22,089	490,875	46.4%	120.890	105.165	99.2%	99.2%	119.971	104.314
ACTUAL 2007	4.88%	25,419	520,880	44.2%	134.682	108.585	98.1%	95.8%	132.062	104.001
ACTUAL 2008	4.68%	25,252	517,459	41.5%	142.366	96.122	93.3%	95.7%	132.873	92.030
ACTUAL 2009	5.12%	25,061	489,473	38.5%	145.110	94.919	98.5%	96.7%	142.890	91.744
FRCST 2010	4.80%	23,385	487,191	44.1%	126.202	94.991	98.0%	98.0%	123.658	93.082
FRCST 2011	4.80%	23,391	487,321	44.1%	126.196	95.045	98.0%	98.0%	123.636	93.126
FRCST 2012	4.80%	23,463	488,815	44.0%	126.518	95.367	98.0%	98.0%	123.939	93.432
FRCST 2013	4.80%	23,334	486,129	43.9%	126.531	95.162	97.9%	98.0%	123.932	93.212
FRCST 2014	4.80%	23,456	488,662	43.9%	126.964	95.371	97.9%	97.9%	124.340	93.403
FRCST 2015	4.80%	23,615	491,979	44.0%	127.512	95.589	97.9%	97.9%	124.861	93.581
FRCST 2016	4.80%	23,843	496,727	44.1%	128.299	95.797	97.9%	97.9%	125.619	93.787
FRCST 2017	4.80%	24,062	501,282	44.3%	129.045	95.857	97.9%	97.9%	126.336	93.825
FRCST 2018	4.80%	24,285	505,940	44.5%	129.715	95.797	97.9%	97.9%	126.976	93.743
FRCST 2019	4.80%	24,782	516,295	45.1%	130.770	96.179	97.9%	97.8%	128.002	94.103
FRCST 2020	4.80%	25,024	521,334	45.2%	131.317	96.059	97.9%	97.8%	128.518	93.960
FRCST 2021	4.80%	25,285	526,770	45.6%	131.965	96.022	97.9%	97.8%	129.134	93.899
FRCST 2022	4.80%	25,545	532,198	45.8%	132.606	95.994	97.8%	97.8%	129.743	93.848
FRCST 2023	4.80%	25,803	537,567	46.0%	133.314	96.117	97.8%	97.7%	130.419	93.947
FRCST 2024	4.80%	26,066	543,032	46.1%	134.128	96.410	97.8%	97.7%	131.202	94.215
FRCST 2025	4.80%	26,341	548,771	46.4%	135.076	96.896	97.8%	97.7%	132.117	94.676
FRCST 2026	4.80%	26,719	556,642	46.5%	136.620	98.033	97.8%	97.7%	133.622	95.784
FRCST 2027	4.80%	27,109	564,774	46.6%	138.464	99.361	97.8%	97.7%	135.426	97.082
FRCST 2028	4.80%	27,513	573,191	46.5%	140.443	100.899	97.8%	97.7%	137.363	98.589
FRCST 2029	4.80%	27,929	581,845	46.5%	142.829	102.681	97.8%	97.7%	139.706	100.339
FRCST 2030	4.80%	28,345	590,522	46.4%	145.292	104.476	97.8%	97.7%	142.126	102.101

***** BASE SCENARIO WITH DSM IMPACTS *****					***** BASE SCENARIO WITH DSM IMPACTS *****					
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHG.)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999-2004	5.40%	-2.32%	3.02%	48.2%	6.33%	-0.02%	99.3%	99.4%	6.45%	0.30%
2004-2009	4.87%	-0.41%	0.47%	43.7%	3.38%	1.05%	98.2%	97.8%	3.06%	0.41%
2010-2015	4.80%	0.20%	0.20%	44.0%	0.21%	0.12%	98.0%	98.0%	0.19%	0.11%
2015-2020	4.80%	1.17%	1.17%	44.5%	0.59%	0.10%	97.9%	97.9%	0.58%	0.08%
2020-2025	4.80%	1.03%	1.03%	45.8%	0.57%	0.17%	97.8%	97.8%	0.55%	0.15%
2025-2030	4.80%	1.48%	1.48%	46.5%	1.47%	1.52%	97.8%	97.7%	1.47%	1.52%

1999-2009	5.12%	-1.37%	1.74%	46.1%	4.84%	0.51%	98.6%	98.5%	4.74%	0.36%
2010-2030	4.80%	0.97%	0.97%	45.2%	0.71%	0.48%	97.9%	97.8%	0.70%	0.46%

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES

YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)		Percent Total Sales to End-Consumers %	E.E. Reductions Total Member Purchase %
		WINTER	SUMMER	WINTER	SUMMER		
ACTUAL 1999	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2000	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2001	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2002	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2003	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2004	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2005	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2006	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2007	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****	*****	*****
FRCST 2010	38.5%	144,378	108,623	141,470	106,441	0.7%	0.7%
FRCST 2011	38.5%	144,480	108,759	141,555	106,585	1.2%	1.2%
FRCST 2012	38.4%	144,942	109,184	141,994	106,973	1.7%	1.7%
FRCST 2013	38.2%	145,089	109,087	142,128	106,859	3.0%	3.0%
FRCST 2014	38.3%	145,701	109,424	142,703	107,176	3.3%	3.3%
FRCST 2015	38.4%	146,445	109,769	143,415	107,497	3.7%	3.7%
FRCST 2016	38.4%	147,442	110,154	144,379	107,857	3.8%	3.8%
FRCST 2017	38.6%	148,397	110,371	145,301	108,049	4.0%	4.0%
FRCST 2018	38.7%	149,278	110,469	146,147	108,122	4.1%	4.1%
FRCST 2019	39.1%	150,545	111,010	147,381	108,637	3.2%	3.2%
FRCST 2020	39.2%	151,306	111,051	148,107	108,652	3.3%	3.3%
FRCST 2021	39.5%	152,181	111,184	148,946	108,758	3.4%	3.4%
FRCST 2022	39.7%	153,050	111,327	149,779	108,874	3.5%	3.5%
FRCST 2023	39.9%	153,987	111,622	150,679	109,141	3.6%	3.6%
FRCST 2024	39.9%	155,032	112,088	151,688	109,579	3.7%	3.7%
FRCST 2025	40.1%	156,213	112,749	152,831	110,212	3.8%	3.8%
FRCST 2026	40.2%	158,035	114,094	154,609	111,524	3.7%	3.7%
FRCST 2027	40.3%	160,169	115,639	156,696	113,035	3.6%	3.6%
FRCST 2028	40.2%	162,446	117,401	158,925	114,761	3.4%	3.4%
FRCST 2029	40.2%	165,136	119,411	161,567	116,734	3.3%	3.3%
FRCST 2030	40.1%	167,907	121,437	164,289	118,723	3.2%	3.2%

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)	
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)
1999 -2004	44.4%	122,916	90,216	122,916	89,877
2004 -2009	38.5%	145,110	108,585	142,890	104,314
2010 -2015	38.2%	146,445	109,769	143,415	107,497
2015 -2020	38.4%	151,306	111,051	148,107	108,652
2020 -2025	39.2%	156,213	112,749	152,831	110,212
2025 -2030	40.1%	167,907	121,437	164,289	118,723
1999 -2009	38.5%	145,110	108,585	142,890	104,314
2010 -2030	38.2%	167,907	121,437	164,289	118,723

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	13,955	563	2	433	14,953	187,896	60,312	10,145	439	258,792
ACTUAL 2000	14,823	581	7	551	15,962	199,246	53,788	21,587	588	275,189
ACTUAL 2001	15,459	606	6	619	16,690	208,736	63,094	17,789	598	290,217
ACTUAL 2002	16,027	662	4	676	17,369	231,830	65,964	17,951	713	316,458
ACTUAL 2003	16,554	689	9	799	18,051	229,600	60,155	26,024	771	316,550
ACTUAL 2004	17,284	707	10	904	18,905	244,678	59,839	28,825	881	334,223
ACTUAL 2005	18,119	744	7	1,039	19,909	270,213	77,827	18,110	952	367,102
ACTUAL 2006	19,143	775	7	1,172	21,097	271,662	84,355	18,907	1,019	375,943
ACTUAL 2007	20,017	795	15	1,268	22,095	300,946	81,075	33,144	1,085	416,250
ACTUAL 2008	20,399	819	15	1,295	22,528	302,238	76,084	41,278	1,101	420,701
ACTUAL 2009	20,649	833	15	1,303	22,800	289,007	78,015	34,871	1,111	403,004
FRCST 2010	21,154	843	17	1,324	23,338	298,877	78,991	37,804	1,127	416,799
FRCST 2011	21,671	853	17	1,324	23,865	307,960	79,552	43,651	1,127	432,289
FRCST 2012	22,201	863	17	1,324	24,405	316,537	80,090	48,227	1,127	445,982
FRCST 2013	22,743	873	17	1,324	24,957	325,149	80,481	52,808	1,127	459,565
FRCST 2014	23,299	883	17	1,324	25,523	333,118	80,693	56,378	1,127	471,317
FRCST 2015	23,868	893	17	1,324	26,102	341,687	80,998	60,216	1,127	484,027
FRCST 2016	24,432	910	17	1,324	26,683	351,336	82,249	61,864	1,127	496,576
FRCST 2017	25,009	927	17	1,324	27,277	361,311	83,560	64,192	1,127	510,190
FRCST 2018	25,599	944	17	1,324	27,884	371,799	85,036	66,523	1,127	524,485
FRCST 2019	26,203	961	17	1,324	28,505	382,410	86,412	67,114	1,127	537,064
FRCST 2020	26,820	978	17	1,324	29,139	392,789	87,806	67,710	1,127	549,432
FRCST 2021	27,456	1,005	17	1,324	29,802	401,491	90,238	67,710	1,127	560,566
FRCST 2022	28,105	1,032	17	1,324	30,478	411,071	92,704	67,710	1,127	572,611
FRCST 2023	28,768	1,059	17	1,324	31,168	421,223	95,191	67,710	1,127	585,251
FRCST 2024	29,445	1,086	17	1,324	31,872	431,866	97,709	67,710	1,127	598,412
FRCST 2025	30,136	1,113	17	1,324	32,590	442,930	100,212	67,710	1,127	611,979
FRCST 2026	30,852	1,145	17	1,324	33,338	455,140	103,683	67,710	1,127	627,659
FRCST 2027	31,582	1,177	17	1,324	34,100	468,228	107,191	67,710	1,127	644,256
FRCST 2028	32,327	1,209	17	1,324	34,877	481,950	110,862	67,710	1,127	661,649
FRCST 2029	33,086	1,241	17	1,324	35,668	496,127	114,732	67,710	1,127	679,696
FRCST 2030	33,861	1,273	17	1,324	36,475	510,740	118,527	67,710	1,127	698,103

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	4.37%	4.66%	8	471	4.80%	5.42%	-0.16%	23.23%	14.95%	5.25%
2004 -2009	3.62%	3.33%	5	399	3.82%	3.39%	5.45%	3.88%	4.75%	3.81%
2010 -2015	2.44%	1.16%	0	0	2.26%	2.71%	0.50%	9.76%	0.00%	3.04%
2015 -2020	2.38%	1.84%	0	0	2.23%	2.83%	1.63%	2.37%	0.00%	2.57%
2020 -2025	2.36%	2.62%	0	0	2.26%	2.43%	2.68%	0.00%	0.00%	2.18%
2025 -2030	2.36%	2.72%	0	0	2.28%	2.89%	3.41%	0.00%	0.00%	2.67%
1999 -2009	4.00%	4.00%	13	870	4.31%	4.40%	2.61%	13.14%	9.73%	4.53%
2010 -2030	2.38%	2.08%	0	0	2.26%	2.72%	2.05%	2.96%	0.00%	2.61%

***** BASE SCENARIO WITH DSM IMPACTS *****					***** BASE SCENARIO WITH DSM IMPACTS *****					
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)
ACTUAL 1999	4.63%	12,564	271,356	39.5%	48,973	78,345	93.1%	95.2%	45,584	74,573
ACTUAL 2000	4.77%	13,784	288,973	45.5%	48,827	72,439	89.7%	94.1%	43,822	68,164
ACTUAL 2001	4.71%	14,345	304,562	43.4%	60,090	80,016	91.9%	95.3%	55,215	76,287
ACTUAL 2002	4.72%	15,677	332,135	44.6%	55,208	85,023	90.4%	95.0%	49,888	80,787
ACTUAL 2003	4.83%	16,065	332,615	45.4%	57,631	83,676	92.2%	95.2%	53,122	79,670
ACTUAL 2004	4.79%	16,815	351,038	47.4%	63,562	84,504	89.4%	95.4%	56,795	80,655
ACTUAL 2005	4.96%	19,159	386,261	42.5%	66,119	103,654	93.1%	91.9%	63,452	95,220
ACTUAL 2006	4.90%	19,370	395,313	41.6%	73,384	108,488	91.1%	94.5%	66,877	102,518
ACTUAL 2007	4.82%	21,079	437,329	42.9%	78,366	116,323	91.5%	92.3%	71,682	107,365
ACTUAL 2008	4.81%	21,258	441,959	45.6%	86,956	110,536	85.1%	87.6%	74,016	96,838
ACTUAL 2009	4.77%	20,186	423,190	46.7%	93,294	103,477	87.7%	96.8%	81,810	100,204
FRCST 2010	4.80%	21,015	437,814	43.9%	82,536	113,843	91.9%	93.0%	75,874	105,857
FRCST 2011	4.80%	21,796	454,085	44.2%	84,374	117,147	91.8%	92.9%	77,439	108,834
FRCST 2012	4.80%	22,486	468,468	44.5%	85,855	119,888	91.6%	92.8%	78,682	111,289
FRCST 2013	4.80%	23,171	482,737	45.0%	87,316	122,354	91.5%	92.8%	79,917	113,484
FRCST 2014	4.80%	23,764	495,080	45.1%	89,335	125,228	91.5%	92.7%	81,725	116,106
FRCST 2015	4.80%	24,405	509,432	45.4%	91,436	127,977	91.4%	92.7%	83,603	118,586
FRCST 2016	4.80%	25,037	521,614	45.5%	93,547	130,579	91.4%	92.6%	85,503	120,936
FRCST 2017	4.80%	25,724	535,914	46.2%	94,818	132,454	91.3%	92.5%	86,545	122,537
FRCST 2018	4.80%	26,445	550,930	46.4%	97,290	135,563	91.3%	92.5%	88,771	125,363
FRCST 2019	4.80%	27,079	564,142	46.6%	99,388	138,245	91.2%	92.4%	90,685	127,788
FRCST 2020	4.80%	27,702	577,135	46.6%	101,454	140,875	91.2%	92.4%	92,520	130,166
FRCST 2021	4.80%	28,264	588,830	46.9%	103,274	143,180	91.2%	92.4%	94,149	132,242
FRCST 2022	4.80%	28,871	601,483	47.1%	105,275	145,760	91.1%	92.3%	95,944	134,574
FRCST 2023	4.80%	29,508	614,759	47.2%	107,418	148,611	91.1%	92.3%	97,871	137,167
FRCST 2024	4.80%	30,172	628,584	47.1%	109,741	151,855	91.1%	92.3%	99,970	140,143
FRCST 2025	4.80%	30,856	642,836	47.2%	112,267	155,588	91.1%	92.3%	102,267	143,601
FRCST 2026	4.80%	31,647	659,308	47.1%	115,216	159,885	91.1%	92.3%	104,962	147,592
FRCST 2027	4.80%	32,484	676,740	47.0%	118,456	164,429	91.1%	92.3%	107,936	151,818
FRCST 2028	4.80%	33,360	695,009	46.8%	121,954	169,191	91.1%	92.4%	111,161	156,253
FRCST 2029	4.80%	34,270	713,966	46.8%	125,570	174,131	91.2%	92.4%	114,497	160,857
FRCST 2030	4.80%	35,198	733,302	46.7%	129,252	179,167	91.2%	92.4%	117,892	165,549

***** BASE SCENARIO WITH DSM IMPACTS *****					***** BASE SCENARIO WITH DSM IMPACTS *****					
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHG.)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999 -2004	4.74%	6.00%	5.28%	44.3%	5.35%	1.53%	91.1%	95.0%	4.50%	1.58%
2004 -2009	4.84%	3.72%	3.81%	44.5%	7.98%	4.13%	89.7%	93.1%	7.57%	4.44%
2010 -2015	4.80%	3.04%	3.04%	44.7%	2.07%	2.37%	91.6%	92.8%	1.96%	2.30%
2015 -2020	4.80%	2.57%	2.57%	46.1%	2.10%	1.94%	91.3%	92.5%	2.05%	1.88%
2020 -2025	4.80%	2.18%	2.18%	47.0%	2.05%	2.01%	91.1%	92.3%	2.02%	1.98%
2025 -2030	4.80%	2.67%	2.67%	46.9%	2.86%	2.86%	91.1%	92.4%	2.88%	2.89%
1999 -2009	4.79%	4.86%	4.54%	44.1%	6.66%	2.82%	90.5%	93.9%	6.02%	3.00%
2010 -2030	4.80%	2.61%	2.61%	46.2%	2.27%	2.29%	91.3%	92.5%	2.23%	2.26%

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES

YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)		Percent Total E.E. Reductions	
		WINTER	SUMMER	WINTER	SUMMER	Sales to End-Consumers %	Total Member Purchase %
ACTUAL 1999	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2000	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2001	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2002	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2003	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2004	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2005	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2006	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2007	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****	*****	*****
FRCST 2010	41.9%	86.502	119.276	79.523	110.910	0.4%	0.4%
FRCST 2011	42.2%	88.502	122.802	81.237	114.093	0.8%	0.8%
FRCST 2012	42.4%	90.125	125.737	82.610	116.729	1.1%	1.1%
FRCST 2013	42.9%	91.720	128.387	83.969	119.095	1.2%	1.2%
FRCST 2014	43.0%	93.865	131.434	85.892	121.877	1.4%	1.4%
FRCST 2015	43.2%	96.099	134.365	87.893	124.527	1.7%	1.7%
FRCST 2016	43.3%	98.335	137.138	89.908	127.036	1.8%	1.8%
FRCST 2017	43.9%	99.742	139.200	91.075	128.811	1.9%	1.9%
FRCST 2018	44.1%	102.345	142.502	93.431	131.816	1.9%	1.9%
FRCST 2019	44.3%	104.580	145.358	95.442	134.403	2.0%	2.0%
FRCST 2020	44.3%	106.772	148.160	97.412	136.941	2.1%	2.1%
FRCST 2021	44.6%	108.705	150.621	99.146	139.162	2.2%	2.2%
FRCST 2022	44.8%	110.829	153.369	101.053	141.651	2.3%	2.3%
FRCST 2023	44.9%	113.101	156.397	103.099	144.407	2.4%	2.4%
FRCST 2024	44.8%	115.557	159.823	105.321	147.553	2.5%	2.5%
FRCST 2025	44.8%	118.220	163.743	107.743	151.185	2.6%	2.6%
FRCST 2026	44.7%	121.320	168.248	110.577	155.369	2.6%	2.6%
FRCST 2027	44.7%	124.717	173.007	113.697	159.796	2.5%	2.5%
FRCST 2028	44.5%	128.378	177.992	117.071	164.438	2.4%	2.4%
FRCST 2029	44.5%	132.161	183.161	120.561	169.255	2.3%	2.3%
FRCST 2030	44.4%	136.014	188.431	124.113	174.164	2.2%	2.2%

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)	
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)
1999 -2004	39.5%	63.562	85.023	56.795	80.787
2004 -2009	41.6%	93.294	116.323	81.810	107.365
2010 -2015	41.9%	96.099	134.365	87.893	124.527
2015 -2020	43.2%	106.772	148.160	97.412	136.941
2020 -2025	44.3%	118.220	163.743	107.743	151.185
2025 -2030	44.4%	136.014	188.431	124.113	174.164
1999 -2009	39.5%	93.294	116.323	81.810	107.365
2010 -2030	41.9%	136.014	188.431	124.113	174.164

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	6,756	328	2	3	7,089	84,970	8,776	1,391	52	95,189
ACTUAL 2000	6,899	333	3	3	7,238	86,279	9,476	1,379	52	97,186
ACTUAL 2001	7,085	332	5	3	7,425	89,029	9,127	1,515	52	99,723
ACTUAL 2002	7,237	330	4	3	7,574	95,656	9,185	2,605	52	107,498
ACTUAL 2003	7,298	333	5	3	7,639	92,982	9,135	2,450	54	104,621
ACTUAL 2004	7,402	339	4	3	7,748	96,814	9,213	2,614	55	108,696
ACTUAL 2005	7,503	330	3	3	7,839	101,827	9,177	2,736	55	113,795
ACTUAL 2006	7,549	338	3	3	7,893	98,283	10,254	2,514	55	111,106
ACTUAL 2007	7,619	339	3	3	7,964	104,813	11,215	2,523	56	118,607
ACTUAL 2008	7,839	57	4	3	7,903	108,221	7,999	2,674	56	118,950
ACTUAL 2009	7,773	54	3	3	7,833	101,190	8,133	2,661	54	112,038
FRCST 2010	7,763	54	3	3	7,823	103,255	8,133	2,857	54	114,289
FRCST 2011	7,817	54	3	3	7,877	104,647	8,099	2,857	54	115,657
FRCST 2012	7,872	54	3	3	7,932	105,677	8,058	2,857	54	116,647
FRCST 2013	7,927	54	3	3	7,987	106,812	8,005	2,857	54	117,728
FRCST 2014	7,982	54	3	3	8,042	107,381	7,938	2,857	54	118,230
FRCST 2015	8,038	54	3	3	8,098	107,885	7,874	2,857	54	118,670
FRCST 2016	8,099	55	3	3	8,160	108,788	7,969	2,857	54	119,668
FRCST 2017	8,161	56	3	3	8,223	109,562	8,068	2,857	54	120,540
FRCST 2018	8,223	57	3	3	8,286	110,115	8,180	2,857	54	121,206
FRCST 2019	8,286	58	3	3	8,350	110,685	8,285	2,857	54	121,881
FRCST 2020	8,349	59	3	3	8,414	111,281	8,391	2,857	54	122,583
FRCST 2021	8,417	60	3	3	8,483	111,886	8,499	2,857	54	123,295
FRCST 2022	8,484	61	3	3	8,551	112,524	8,610	2,857	54	124,045
FRCST 2023	8,552	62	3	3	8,620	113,269	8,721	2,857	54	124,901
FRCST 2024	8,621	63	3	3	8,690	114,098	8,829	2,857	54	125,838
FRCST 2025	8,690	64	3	3	8,760	115,064	8,936	2,857	54	126,911
FRCST 2026	8,764	66	3	3	8,836	116,371	9,232	2,857	54	128,514
FRCST 2027	8,838	68	3	3	8,912	117,983	9,536	2,857	54	130,430
FRCST 2028	8,913	70	3	3	8,989	119,796	9,854	2,857	54	132,561
FRCST 2029	8,989	72	3	3	9,067	121,880	10,186	2,857	54	134,778
FRCST 2030	9,065	74	3	3	9,145	123,635	10,516	2,857	54	137,063

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	1.84%	0.66%	2	0	1.79%	2.64%	0.98%	13.45%	1.13%	2.69%
2004 -2009	0.98%	-30.75%	-1	0	0.22%	0.89%	-2.46%	0.36%	-0.37%	0.61%
2010 -2015	0.70%	0.00%	0	0	0.69%	0.88%	-0.64%	0.00%	0.00%	0.75%
2015 -2020	0.76%	1.79%	0	0	0.77%	0.62%	1.28%	0.00%	0.00%	0.65%
2020 -2025	0.80%	1.64%	0	0	0.81%	0.67%	1.27%	0.00%	0.00%	0.70%
2025 -2030	0.85%	2.95%	0	0	0.86%	1.45%	3.31%	0.00%	0.00%	1.55%

1999 -2009	1.41%	-16.51%	1	0	1.00%	1.76%	-0.76%	6.70%	0.38%	1.64%
2010 -2030	0.78%	1.59%	0	0	0.78%	0.90%	1.29%	0.00%	0.00%	0.91%

***** BASE SCENARIO WITH DSM IMPACTS *****											
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK		
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)	
ACTUAL	1999	5.90%	5,968	101,157	43.6%	26,465	24,818	88.3%	99.2%	23,376	24,617
ACTUAL	2000	8.76%	9,331	106,517	48.3%	25,154	23,046	90.3%	100.0%	22,713	23,046
ACTUAL	2001	7.57%	8,167	107,890	41.9%	29,416	24,263	86.6%	96.3%	25,473	23,373
ACTUAL	2002	7.58%	8,817	116,315	49.9%	25,855	26,599	92.2%	94.9%	23,845	25,253
ACTUAL	2003	8.25%	9,407	114,028	41.8%	31,139	24,714	84.2%	93.9%	26,232	23,198
ACTUAL	2004	6.49%	7,544	116,240	41.6%	31,882	24,641	82.9%	98.4%	26,435	24,256
ACTUAL	2005	7.10%	8,697	122,492	42.3%	33,071	27,738	87.9%	97.3%	29,079	26,992
ACTUAL	2006	6.98%	8,337	119,443	45.4%	30,054	28,222	93.7%	96.9%	28,162	27,336
ACTUAL	2007	6.87%	8,749	127,356	44.3%	32,818	28,606	86.2%	95.1%	28,281	27,191
ACTUAL	2008	6.51%	6,283	127,233	41.3%	35,170	25,884	85.7%	93.5%	30,132	24,214
ACTUAL	2009	7.04%	8,485	120,523	36.6%	37,603	25,741	85.9%	95.9%	32,305	24,694
FRCST	2010	6.80%	8,339	122,639	42.6%	32,902	25,697	85.7%	95.9%	28,185	24,846
FRCST	2011	6.80%	8,439	124,096	42.7%	33,171	25,819	85.5%	95.9%	28,374	24,750
FRCST	2012	6.80%	8,511	125,158	42.8%	33,325	25,849	85.4%	95.8%	28,468	24,766
FRCST	2013	6.80%	8,590	126,318	43.0%	33,499	25,834	85.4%	95.8%	28,594	24,741
FRCST	2014	6.80%	8,626	126,856	43.2%	33,530	25,743	85.2%	95.7%	28,581	24,640
FRCST	2015	6.80%	8,658	127,328	43.3%	33,564	25,652	85.1%	95.7%	28,570	24,539
FRCST	2016	6.80%	8,731	128,399	43.3%	33,770	25,659	85.1%	95.6%	28,722	24,534
FRCST	2017	6.80%	8,795	129,335	43.5%	33,961	25,660	85.0%	95.6%	28,859	24,523
FRCST	2018	6.80%	8,843	130,049	43.5%	34,123	25,660	84.9%	95.5%	28,967	24,511
FRCST	2019	6.80%	8,893	130,774	43.5%	34,285	25,658	84.8%	95.5%	29,074	24,497
FRCST	2020	6.80%	8,944	131,527	43.1%	34,771	26,037	84.9%	95.5%	29,505	24,864
FRCST	2021	6.80%	8,996	132,291	43.1%	35,047	26,214	84.8%	95.5%	29,724	25,028
FRCST	2022	6.80%	9,051	133,096	43.0%	35,324	26,396	84.8%	95.5%	29,944	25,197
FRCST	2023	6.80%	9,113	134,014	43.0%	35,613	26,610	84.7%	95.4%	30,176	25,398
FRCST	2024	6.80%	9,181	135,019	42.8%	35,908	26,827	84.7%	95.4%	30,413	25,603
FRCST	2025	6.80%	9,260	136,171	42.9%	36,212	27,056	84.7%	95.4%	30,660	25,818
FRCST	2026	6.80%	9,377	137,891	43.0%	36,634	27,382	84.6%	95.4%	31,009	26,129
FRCST	2027	6.80%	9,516	139,946	43.0%	37,128	27,753	84.7%	95.4%	31,429	26,482
FRCST	2028	6.80%	9,672	142,233	43.0%	37,698	28,152	84.7%	95.4%	31,920	26,864
FRCST	2029	6.80%	9,834	144,611	43.1%	38,291	28,571	84.7%	95.4%	32,433	27,265
FRCST	2030	6.80%	10,000	147,063	43.1%	38,935	29,062	84.7%	95.4%	32,994	27,736

***** BASE SCENARIO WITH DSM IMPACTS *****											
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHG.)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK			COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER (% CHANGE)	SUMMER (% CHANGE)	(% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999 -2004	7.43%	4.80%	2.82%	44.5%	3.79%	-0.14%		87.4%	97.1%	2.49%	-0.30%
2004 -2009	6.83%	2.36%	0.73%	41.9%	3.36%	0.88%		87.1%	96.2%	4.09%	0.36%
2010 -2015	6.80%	0.75%	0.75%	42.9%	0.40%	-0.04%		85.4%	95.8%	0.27%	-0.09%
2015 -2020	6.80%	0.65%	0.65%	43.4%	0.71%	0.30%		85.0%	95.6%	0.65%	0.26%
2020 -2025	6.80%	0.70%	0.70%	43.0%	0.82%	0.77%		84.8%	95.5%	0.77%	0.76%
2025 -2030	6.80%	1.55%	1.55%	43.0%	1.46%	1.44%		84.7%	95.4%	1.48%	1.44%
1999 -2009	7.19%	3.58%	1.77%	43.4%	3.58%	0.37%		87.6%	96.5%	3.29%	0.03%
2010 -2030	6.80%	0.91%	0.91%	43.1%	0.85%	0.62%		85.0%	95.6%	0.79%	0.59%

***** BASE SCENARIO WITH DSM IMPACTS *****						***** BASE SCENARIO WITH DSM IMPACTS *****		
PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES								
YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)		Percent Total Sales to Consumers %	E.E. Reductions Total Member Purchase %	
		WINTER	SUMMER	WINTER	SUMMER			
ACTUAL	1999	*****	*****	*****	*****	*****	*****	
ACTUAL	2000	*****	*****	*****	*****	*****	*****	
ACTUAL	2001	*****	*****	*****	*****	*****	*****	
ACTUAL	2002	*****	*****	*****	*****	*****	*****	
ACTUAL	2003	*****	*****	*****	*****	*****	*****	
ACTUAL	2004	*****	*****	*****	*****	*****	*****	
ACTUAL	2005	*****	*****	*****	*****	*****	*****	
ACTUAL	2006	*****	*****	*****	*****	*****	*****	
ACTUAL	2007	*****	*****	*****	*****	*****	*****	
ACTUAL	2008	*****	*****	*****	*****	*****	*****	
ACTUAL	2009	*****	*****	*****	*****	*****	*****	
FRCST	2010	37.4%	37.456	29.249	32.101	28.056	1.1%	1.1%
FRCST	2011	37.5%	37.800	29.430	32.356	28.217	1.5%	1.5%
FRCST	2012	37.5%	38.013	29.505	32.500	28.277	1.9%	1.9%
FRCST	2013	37.7%	38.234	29.528	32.665	28.287	2.0%	2.0%
FRCST	2014	37.8%	38.307	29.470	32.688	28.218	2.5%	2.5%
FRCST	2015	37.9%	38.384	29.412	32.715	28.149	3.0%	3.0%
FRCST	2016	37.8%	38.642	29.459	32.912	28.182	3.2%	3.2%
FRCST	2017	38.0%	38.886	29.501	33.095	28.211	3.5%	3.5%
FRCST	2018	38.0%	39.101	29.542	33.247	28.237	4.0%	4.0%
FRCST	2019	38.0%	39.315	29.582	33.400	28.263	4.5%	4.5%
FRCST	2020	37.6%	39.854	30.002	33.877	28.670	5.0%	5.0%
FRCST	2021	37.6%	40.185	30.222	34.143	28.875	5.4%	5.4%
FRCST	2022	37.5%	40.517	30.447	34.410	29.086	5.9%	5.9%
FRCST	2023	37.4%	40.861	30.704	34.690	29.328	6.2%	6.2%
FRCST	2024	37.3%	41.212	30.964	34.975	29.574	6.5%	6.5%
FRCST	2025	37.4%	41.572	31.236	35.269	29.832	6.7%	6.7%
FRCST	2026	37.4%	42.063	31.617	35.678	30.194	6.7%	6.7%
FRCST	2027	37.5%	42.630	32.044	36.160	30.602	6.8%	6.8%
FRCST	2028	37.4%	43.276	32.502	36.717	31.040	6.3%	6.3%
FRCST	2029	37.6%	43.946	32.982	37.296	31.500	6.1%	6.1%
FRCST	2030	37.6%	44.670	33.535	37.926	32.032	5.8%	5.8%

***** BASE SCENARIO WITH DSM IMPACTS *****						***** BASE SCENARIO WITH DSM IMPACTS *****		
TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)				
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)			
1999 -2004	41.6%	31.882	26.599	26.435	25.253			
2004 -2009	36.6%	37.603	28.606	32.305	27.336			
2010 -2015	37.4%	38.384	29.528	32.715	28.267			
2015 -2020	37.6%	39.854	30.002	33.877	28.670			
2020 -2025	37.3%	41.572	31.236	35.269	29.832			
2025 -2030	37.4%	44.670	33.535	37.926	32.032			
1999 -2009	36.6%	37.603	28.606	32.305	27.336			
2010 -2030	37.3%	44.670	33.535	37.926	32.032			

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	12,768	364	9	6	13,147	176,072	20,990	74,011	35	271,108
ACTUAL 2000	13,058	375	9	7	13,449	176,372	22,379	76,607	52	275,410
ACTUAL 2001	13,421	220	10	8	13,659	189,031	20,888	78,799	45	288,763
ACTUAL 2002	13,655	141	12	8	13,816	196,022	21,070	79,329	47	298,468
ACTUAL 2003	13,837	141	12	21	14,011	201,810	23,137	84,894	52	309,893
ACTUAL 2004	13,948	140	12	21	14,121	198,337	20,594	94,319	67	313,317
ACTUAL 2005	14,070	147	11	21	14,249	210,667	23,717	112,736	68	347,188
ACTUAL 2006	14,144	152	13	22	14,331	208,488	24,207	109,523	70	343,288
ACTUAL 2007	14,228	162	14	22	14,426	215,233	24,897	119,983	73	360,186
ACTUAL 2008	14,247	167	16	22	14,452	212,645	27,508	117,357	75	357,585
ACTUAL 2009	14,227	170	16	22	14,435	208,085	28,813	126,428	71	363,397
FRCST 2010	14,220	173	17	23	14,433	211,169	29,293	136,094	71	376,627
FRCST 2011	14,236	176	17	23	14,452	210,979	29,350	137,565	71	377,965
FRCST 2012	14,275	179	17	23	14,494	211,130	29,332	138,225	71	378,758
FRCST 2013	14,336	182	17	23	14,558	212,076	29,101	138,891	71	380,139
FRCST 2014	14,420	185	17	23	14,645	212,745	28,786	139,562	71	381,164
FRCST 2015	14,528	188	17	23	14,756	213,732	28,541	140,237	71	382,581
FRCST 2016	14,667	192	17	23	14,899	215,753	28,582	140,848	71	385,254
FRCST 2017	14,830	196	17	23	15,066	218,855	28,692	141,462	71	389,080
FRCST 2018	15,019	200	17	23	15,259	221,871	28,875	142,079	71	392,896
FRCST 2019	15,211	204	17	23	15,455	224,590	29,071	142,699	71	396,431
FRCST 2020	15,405	208	17	23	15,653	227,326	29,292	143,321	71	400,010
FRCST 2021	15,607	215	17	23	15,862	230,128	30,079	143,321	71	403,599
FRCST 2022	15,811	222	17	23	16,073	232,932	30,904	143,321	71	407,228
FRCST 2023	16,018	229	17	23	16,287	235,781	31,755	143,321	71	410,928
FRCST 2024	16,228	236	17	23	16,504	238,696	32,631	143,321	71	414,720
FRCST 2025	16,441	243	17	23	16,724	241,700	33,515	143,321	71	418,606
FRCST 2026	16,658	253	17	23	16,951	245,008	35,346	143,321	71	423,745
FRCST 2027	16,878	263	17	23	17,181	248,698	37,289	143,321	71	429,359
FRCST 2028	17,101	273	17	23	17,414	252,459	39,421	143,321	71	435,272
FRCST 2029	17,327	283	17	23	17,650	256,430	41,869	143,321	71	441,491
FRCST 2030	17,556	293	17	23	17,889	260,404	43,861	143,321	71	447,657

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	1.78%	-17.40%	3	15	1.44%	2.41%	-0.38%	4.97%	13.87%	2.94%
2004 -2009	0.40%	3.96%	4	1	0.44%	0.96%	6.95%	6.03%	1.17%	3.01%
2010 -2015	0.43%	1.68%	0	0	0.44%	0.24%	-0.52%	0.60%	0.00%	0.31%
2015 -2020	1.18%	2.04%	0	0	1.19%	1.24%	0.52%	0.44%	0.00%	0.89%
2020 -2025	1.31%	3.16%	0	0	1.33%	1.23%	2.73%	0.00%	0.00%	0.91%
2025 -2030	1.32%	3.81%	0	0	1.36%	1.50%	5.53%	0.00%	0.00%	1.35%
1999 -2009	1.09%	-7.33%	7	16	0.94%	1.68%	3.22%	5.50%	7.33%	2.97%
2010 -2030	1.06%	2.67%	0	0	1.08%	1.05%	2.04%	0.26%	0.00%	0.87%

***** BASE SCENARIO WITH DSM IMPACTS *****				***** BASE SCENARIO WITH DSM IMPACTS *****							
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK		
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)	
ACTUAL	1999	4.67%	13,879	284,987	53.2%	57,786	61,162	94.6%	96.4%	54,645	58,988
ACTUAL	2000	6.98%	20,666	296,075	59.0%	57,279	56,097	94.6%	94.5%	54,173	53,030
ACTUAL	2001	3.56%	10,659	299,422	53.9%	63,387	62,292	92.6%	95.1%	58,706	59,218
ACTUAL	2002	5.66%	17,907	316,375	55.5%	57,402	65,045	97.0%	92.2%	55,665	60,002
ACTUAL	2003	3.45%	11,073	320,966	56.9%	64,439	63,140	93.3%	93.8%	60,091	59,227
ACTUAL	2004	5.67%	18,833	332,150	58.3%	65,089	63,591	92.6%	93.9%	60,282	59,718
ACTUAL	2005	4.60%	16,741	363,929	55.6%	68,922	74,750	94.0%	96.5%	64,783	72,105
ACTUAL	2006	2.57%	9,055	352,343	52.3%	68,249	76,890	96.0%	95.8%	65,549	73,644
ACTUAL	2007	4.79%	18,121	378,307	54.5%	72,531	79,289	94.8%	91.1%	68,727	72,262
ACTUAL	2008	5.01%	18,860	376,445	58.0%	74,128	72,228	93.1%	88.3%	68,987	63,746
ACTUAL	2009	4.88%	18,644	382,041	52.8%	82,631	73,545	90.7%	85.6%	74,978	62,985
FRCST	2010	4.10%	16,102	392,729	57.1%	76,582	78,518	91.9%	91.9%	70,382	72,194
FRCST	2011	4.10%	16,159	394,124	57.3%	76,364	78,553	91.8%	91.9%	70,117	72,182
FRCST	2012	4.10%	16,193	394,951	57.3%	76,059	78,443	91.7%	91.8%	69,778	72,037
FRCST	2013	4.10%	16,252	396,391	57.7%	75,899	78,372	91.7%	91.8%	69,582	71,929
FRCST	2014	4.10%	16,296	397,460	58.0%	75,635	78,282	91.6%	91.7%	69,277	71,796
FRCST	2015	4.10%	16,356	398,937	58.2%	75,465	78,275	91.5%	91.7%	69,060	71,742
FRCST	2016	4.10%	16,471	401,725	58.3%	75,583	78,470	91.5%	91.6%	68,123	71,881
FRCST	2017	4.10%	16,634	405,714	58.7%	75,935	78,951	91.4%	91.6%	68,397	72,282
FRCST	2018	4.10%	16,797	409,694	58.9%	76,285	79,443	91.3%	91.5%	68,671	72,697
FRCST	2019	4.10%	16,949	413,380	59.1%	76,574	79,893	91.3%	91.5%	68,886	73,071
FRCST	2020	4.10%	17,102	417,111	58.9%	77,004	80,617	91.2%	91.4%	70,243	73,721
FRCST	2021	4.10%	17,255	420,854	59.0%	77,478	81,360	91.2%	91.4%	70,644	74,390
FRCST	2022	4.10%	17,410	424,638	59.0%	77,955	82,118	91.1%	91.4%	71,049	75,073
FRCST	2023	4.10%	17,568	428,496	59.0%	78,434	82,889	91.1%	91.4%	71,454	75,770
FRCST	2024	4.10%	17,730	432,450	58.8%	78,926	83,677	91.1%	91.4%	71,872	76,481
FRCST	2025	4.10%	17,897	436,503	59.0%	79,435	84,484	91.0%	91.4%	72,306	77,212
FRCST	2026	4.10%	18,116	441,861	58.9%	80,199	85,573	91.0%	91.4%	72,984	78,214
FRCST	2027	4.10%	18,356	447,715	58.9%	81,237	86,773	91.0%	91.4%	73,934	79,323
FRCST	2028	4.10%	18,609	453,881	58.7%	82,337	88,053	91.0%	91.4%	74,945	80,512
FRCST	2029	4.10%	18,875	460,366	58.8%	83,622	89,399	91.1%	91.5%	76,138	81,765
FRCST	2030	4.10%	19,139	466,796	58.7%	84,899	90,726	91.1%	91.5%	77,323	82,999

***** BASE SCENARIO WITH DSM IMPACTS *****				***** BASE SCENARIO WITH DSM IMPACTS *****							
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHG.)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK		
					WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)	
1999 -2004	5.03%	6.29%	3.11%	56.1%	2.40%	0.78%	94.1%	94.3%	1.98%	0.25%	
2004 -2009	4.58%	-0.20%	2.84%	55.3%	4.89%	2.95%	93.5%	91.9%	4.46%	1.06%	
2010 -2015	4.10%	0.31%	0.31%	57.6%	-0.29%	-0.06%	91.7%	91.8%	-0.38%	-0.13%	
2015 -2020	4.10%	0.89%	0.89%	58.7%	0.40%	0.59%	91.4%	91.5%	0.34%	0.55%	
2020 -2025	4.10%	0.91%	0.91%	59.0%	0.62%	0.94%	91.1%	91.4%	0.58%	0.93%	
2025 -2030	4.10%	1.35%	1.35%	58.8%	1.34%	1.44%	91.0%	91.4%	1.35%	1.46%	

1999 -2009	4.73%	3.00%	2.97%	55.5%	3.64%	1.86%	93.9%	93.0%	3.21%	0.65%
2010 -2030	4.10%	0.87%	0.87%	58.5%	0.52%	0.73%	91.3%	91.6%	0.47%	0.70%

***** BASE SCENARIO WITH DSM IMPACTS *****						***** BASE SCENARIO WITH DSM IMPACTS *****		
PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES								
YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)		Percent Sales to End-Consumers %	Total E.E. Reductions Total Member Purchase %	
		WINTER	SUMMER	WINTER	SUMMER			
ACTUAL 1999	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2000	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2001	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2002	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2003	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2004	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2005	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2006	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2007	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2008	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2009	*****	*****	*****	*****	*****	*****	*****	
FRCST 2010	54.1%	80.887	82.809	74.343	76.234	0.5%	0.5%	
FRCST 2011	54.2%	80.702	82.978	74.108	76.252	0.9%	0.9%	
FRCST 2012	54.2%	80.420	82.892	73.791	76.130	1.2%	1.2%	
FRCST 2013	54.6%	80.285	82.846	73.618	76.045	1.4%	1.4%	
FRCST 2014	54.8%	80.051	82.785	73.339	75.940	1.8%	1.8%	
FRCST 2015	55.0%	79.913	82.812	73.152	75.916	2.2%	2.2%	
FRCST 2016	55.1%	80.070	83.046	73.251	76.091	2.3%	2.3%	
FRCST 2017	55.4%	80.476	83.582	73.574	76.543	2.5%	2.5%	
FRCST 2018	55.6%	80.878	84.128	73.897	77.007	2.7%	2.7%	
FRCST 2019	55.8%	81.218	84.630	74.159	77.429	2.9%	2.9%	
FRCST 2020	55.6%	81.699	85.406	74.562	78.127	3.1%	3.1%	
FRCST 2021	55.7%	82.224	86.201	75.010	78.843	3.3%	3.3%	
FRCST 2022	55.7%	82.752	87.010	75.461	79.574	3.4%	3.4%	
FRCST 2023	55.7%	83.282	87.834	75.914	80.318	3.6%	3.6%	
FRCST 2024	55.5%	83.825	88.673	76.379	81.078	3.7%	3.7%	
FRCST 2025	55.7%	84.386	89.533	76.861	81.858	3.8%	3.8%	
FRCST 2026	55.6%	85.210	90.684	77.594	82.915	3.8%	3.8%	
FRCST 2027	55.6%	86.309	91.946	78.600	84.083	3.7%	3.7%	
FRCST 2028	55.4%	87.471	93.289	79.688	85.330	3.6%	3.6%	
FRCST 2029	55.5%	88.819	94.700	80.919	86.642	3.4%	3.4%	
FRCST 2030	55.5%	90.159	96.091	82.163	87.935	3.2%	3.2%	

***** BASE SCENARIO WITH DSM IMPACTS *****						***** BASE SCENARIO WITH DSM IMPACTS *****		
TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)				
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)			
1999 -2004	53.2%	65.069	65.045	60.282	60.002			
2004 -2009	52.3%	82.631	79.289	74.978	73.644			
2010 -2015	54.1%	80.887	82.978	74.343	76.252			
2015 -2020	55.0%	81.699	85.406	74.562	78.127			
2020 -2025	55.5%	84.386	89.533	76.861	81.858			
2025 -2030	55.4%	90.159	96.091	82.163	87.935			
1999 -2009	52.3%	82.631	79.289	74.978	73.644			
2010 -2030	54.1%	90.159	96.091	82.163	87.935			

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	28,644	164	2	0	29,810	395,424	39,877	10,574	0	445,875
ACTUAL 2000	30,467	179	2	0	30,648	404,420	62,696	10,874	0	477,990
ACTUAL 2001	31,133	188	2	0	31,323	402,541	48,611	10,615	0	461,767
ACTUAL 2002	31,840	202	2	0	31,844	441,536	54,269	10,758	0	506,563
ACTUAL 2003	32,220	210	2	0	32,432	433,122	55,077	11,138	0	499,337
ACTUAL 2004	32,594	223	2	0	32,819	441,063	60,461	11,376	0	512,900
ACTUAL 2005	32,799	228	2	0	33,029	464,660	64,856	11,147	0	540,663
ACTUAL 2006	33,045	236	2	0	33,283	459,123	63,421	10,296	0	532,840
ACTUAL 2007	33,355	242	1	0	33,598	484,547	68,053	8,718	0	561,318
ACTUAL 2008	33,339	251	1	0	33,591	477,562	68,367	8,866	0	554,795
ACTUAL 2009	33,236	258	1	0	33,495	458,426	65,021	2,123	0	525,570
FRCST 2010	33,241	266	1	0	33,508	465,122	70,168	4,586	0	539,876
FRCST 2011	33,292	274	1	0	33,567	470,152	71,789	5,174	0	547,115
FRCST 2012	33,388	282	1	0	33,671	473,459	73,376	5,828	0	552,663
FRCST 2013	33,530	290	1	0	33,821	475,298	74,877	6,556	0	556,731
FRCST 2014	33,673	298	1	0	33,972	476,109	76,287	7,366	0	559,762
FRCST 2015	33,862	306	1	0	34,169	477,574	77,718	8,268	0	563,560
FRCST 2016	34,061	315	1	0	34,377	479,901	79,413	8,268	0	567,582
FRCST 2017	34,261	324	1	0	34,586	481,816	81,133	8,268	0	571,217
FRCST 2018	34,462	333	1	0	34,796	483,623	82,711	8,268	0	574,602
FRCST 2019	34,664	342	1	0	35,007	485,564	84,534	8,268	0	578,366
FRCST 2020	34,867	351	1	0	35,219	487,632	86,383	8,268	0	582,284
FRCST 2021	35,082	362	1	0	35,445	489,747	88,108	8,268	0	586,123
FRCST 2022	35,298	373	1	0	35,672	492,092	89,856	8,268	0	590,216
FRCST 2023	35,515	384	1	0	35,900	494,809	91,622	8,268	0	594,698
FRCST 2024	35,733	395	1	0	36,129	497,754	93,386	8,268	0	599,407
FRCST 2025	35,952	406	1	0	36,359	501,058	95,157	8,268	0	604,483
FRCST 2026	36,173	420	1	0	36,594	505,793	97,680	8,268	0	611,741
FRCST 2027	36,394	434	1	0	36,829	511,122	100,265	8,268	0	619,654
FRCST 2028	36,617	448	1	0	37,066	517,220	102,964	8,268	0	628,452
FRCST 2029	36,841	462	1	0	37,304	523,518	105,786	8,268	0	637,572
FRCST 2030	37,065	476	1	0	37,542	529,877	108,620	8,268	0	646,764

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999-2004	1.92%	6.34%	0	0	1.94%	2.21%	8.68%	1.47%	NA	2.84%
2004-2009	0.39%	2.96%	-1	0	0.41%	0.78%	1.46%	-28.52%	NA	0.49%
2010-2015	0.37%	2.84%	0	0	0.39%	0.53%	2.06%	12.51%	NA	0.66%
2015-2020	0.59%	2.78%	0	0	0.61%	0.42%	2.14%	0.00%	NA	0.66%
2020-2025	0.61%	2.95%	0	0	0.64%	0.54%	1.95%	0.00%	NA	0.75%
2025-2030	0.61%	3.23%	0	0	0.64%	1.12%	2.68%	0.00%	NA	1.36%
1999-2009	1.15%	4.64%	-1	0	1.17%	1.49%	5.01%	-14.83%	NA	1.66%
2010-2030	0.55%	2.95%	0	0	0.57%	0.65%	2.21%	2.99%	NA	0.91%

***** BASE SCENARIO WITH DSM IMPACTS *****											
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK		
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)	
ACTUAL	1999	2.83%	12,986	458,861	46.7%	108,291	112,105	97.4%	96.5%	105,483	108,183
ACTUAL	2000	1.26%	6,100	484,090	50.9%	108,654	101,736	96.0%	96.6%	104,260	98,229
ACTUAL	2001	5.56%	27,186	488,953	46.0%	121,370	115,121	90.3%	93.7%	109,610	107,920
ACTUAL	2002	4.55%	24,147	530,710	50.3%	110,472	120,355	98.2%	95.7%	108,523	115,185
ACTUAL	2003	5.62%	29,734	529,071	47.3%	127,659	116,421	97.0%	93.9%	123,797	109,300
ACTUAL	2004	5.40%	29,278	542,178	47.1%	131,507	114,365	97.6%	95.1%	128,304	108,729
ACTUAL	2005	6.34%	36,598	577,261	49.8%	131,518	132,310	95.8%	97.3%	128,055	128,794
ACTUAL	2006	4.78%	26,748	559,588	48.4%	129,269	131,982	98.8%	97.3%	127,662	128,447
ACTUAL	2007	5.49%	32,606	593,924	47.3%	143,243	136,976	98.4%	95.0%	140,930	130,189
ACTUAL	2008	5.17%	30,247	585,042	45.5%	146,727	124,336	96.7%	87.7%	141,881	109,037
ACTUAL	2009	4.68%	25,804	551,374	39.2%	160,569	121,705	95.9%	93.5%	153,913	113,778
FRCST	2010	5.30%	30,215	570,091	46.6%	139,729	119,525	95.9%	94.8%	134,039	113,479
FRCST	2011	5.30%	30,620	577,735	47.0%	140,261	120,324	95.9%	94.9%	134,478	114,179
FRCST	2012	5.30%	30,930	583,584	47.3%	140,486	120,755	95.8%	94.8%	134,629	114,532
FRCST	2013	5.30%	31,158	587,890	47.8%	140,381	120,854	95.8%	94.8%	134,466	114,570
FRCST	2014	5.30%	31,328	591,089	48.2%	140,022	120,769	95.7%	94.8%	134,056	114,429
FRCST	2015	5.30%	31,540	595,100	48.6%	139,908	120,887	95.7%	94.7%	133,880	114,482
FRCST	2016	5.30%	31,765	599,348	48.7%	140,058	121,193	95.7%	94.7%	133,968	114,722
FRCST	2017	5.30%	31,969	603,188	49.1%	140,167	121,506	95.6%	94.6%	134,013	114,968
FRCST	2018	5.30%	32,158	606,760	49.4%	140,269	121,831	95.6%	94.6%	134,050	115,223
FRCST	2019	5.30%	32,369	610,735	49.6%	140,608	122,368	95.5%	94.5%	134,322	115,689
FRCST	2020	5.30%	32,588	614,872	49.4%	141,572	123,398	95.5%	94.5%	135,219	116,648
FRCST	2021	5.30%	32,803	618,926	49.6%	142,527	124,478	95.5%	94.5%	136,107	117,657
FRCST	2022	5.30%	33,032	623,249	49.6%	143,518	125,598	95.5%	94.5%	137,031	118,708
FRCST	2023	5.30%	33,283	627,981	49.6%	144,528	126,740	95.5%	94.5%	137,973	119,775
FRCST	2024	5.30%	33,547	632,954	49.5%	145,556	127,898	95.5%	94.5%	138,934	120,861
FRCST	2025	5.30%	33,831	638,314	49.7%	146,616	129,090	95.4%	94.5%	139,925	121,980
FRCST	2026	5.30%	34,237	645,978	49.8%	148,114	130,702	95.4%	94.5%	141,342	123,507
FRCST	2027	5.30%	34,680	654,334	49.8%	150,077	132,408	95.4%	94.5%	143,222	125,125
FRCST	2028	5.30%	35,172	663,625	49.6%	152,370	134,254	95.4%	94.5%	145,430	126,880
FRCST	2029	5.30%	35,682	673,255	49.7%	154,744	136,175	95.5%	94.5%	147,716	128,708
FRCST	2030	5.30%	36,197	682,961	49.7%	157,003	138,115	95.5%	94.5%	149,886	130,554

***** BASE SCENARIO WITH DSM IMPACTS *****										
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHG.)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999 -2004	4.20%	17.86%	3.39%	48.1%	3.96%	0.40%	96.1%	95.3%	3.99%	0.10%
2004 -2009	5.31%	-2.49%	0.34%	46.2%	4.07%	1.25%	97.2%	94.3%	3.71%	0.91%
2010 -2015	5.30%	0.86%	0.86%	47.6%	0.03%	0.23%	95.8%	94.8%	-0.02%	0.18%
2015 -2020	5.30%	0.66%	0.66%	49.1%	0.24%	0.41%	95.6%	94.6%	0.20%	0.38%
2020 -2025	5.30%	0.75%	0.75%	49.6%	0.70%	0.91%	95.5%	94.5%	0.69%	0.90%
2025 -2030	5.30%	1.36%	1.36%	49.7%	1.38%	1.36%	95.4%	94.5%	1.38%	1.37%
1999 -2009	4.70%	7.11%	1.85%	47.1%	4.02%	0.83%	96.6%	94.8%	3.85%	0.51%
2010 -2030	5.30%	0.91%	0.91%	49.0%	0.58%	0.73%	95.6%	94.6%	0.56%	0.70%

***** BASE SCENARIO WITH DSM IMPACTS *****						***** BASE SCENARIO WITH DSM IMPACTS *****			
PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES						Percent Total E.E. Reductions			
YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)		Sales to End-Consumers %	Total Member Purchase %		
		WINTER	SUMMER	WINTER	SUMMER				
ACTUAL	1999	*****	*****	*****	*****	*****	*****	*****	
ACTUAL	2000	*****	*****	*****	*****	*****	*****	*****	
ACTUAL	2001	*****	*****	*****	*****	*****	*****	*****	
ACTUAL	2002	*****	*****	*****	*****	*****	*****	*****	
ACTUAL	2003	*****	*****	*****	*****	*****	*****	*****	
ACTUAL	2004	*****	*****	*****	*****	*****	*****	*****	
ACTUAL	2005	*****	*****	*****	*****	*****	*****	*****	
ACTUAL	2006	*****	*****	*****	*****	*****	*****	*****	
ACTUAL	2007	*****	*****	*****	*****	*****	*****	*****	
ACTUAL	2008	*****	*****	*****	*****	*****	*****	*****	
ACTUAL	2009	*****	*****	*****	*****	*****	*****	*****	
FRCST	2010	41.4%	157.078	134.271	150.684	127.488	0.5%	0.5%	
FRCST	2011	41.8%	157.893	135.311	151.405	128.417	0.8%	0.8%	
FRCST	2012	42.0%	158.342	135.933	151.771	128.951	1.1%	1.1%	
FRCST	2013	42.4%	158.412	136.181	151.776	129.130	1.3%	1.3%	
FRCST	2014	42.6%	158.213	136.231	151.519	129.118	1.7%	1.7%	
FRCST	2015	42.9%	158.289	136.511	151.525	129.324	2.0%	2.0%	
FRCST	2016	43.0%	158.626	136.975	151.793	129.715	2.3%	2.3%	
FRCST	2017	43.3%	158.929	137.454	152.024	130.118	2.7%	2.7%	
FRCST	2018	43.5%	159.230	137.948	152.252	130.534	3.2%	3.2%	
FRCST	2019	43.6%	159.772	138.657	152.719	131.164	3.6%	3.6%	
FRCST	2020	43.5%	160.940	139.862	153.813	132.288	3.9%	3.9%	
FRCST	2021	43.6%	162.100	141.116	154.897	133.462	4.3%	4.3%	
FRCST	2022	43.6%	163.297	142.410	156.018	134.677	4.6%	4.6%	
FRCST	2023	43.6%	164.512	143.727	157.158	135.913	4.9%	4.9%	
FRCST	2024	43.5%	165.748	145.061	158.317	137.166	5.1%	5.1%	
FRCST	2025	43.6%	167.015	146.429	159.508	138.453	5.3%	5.3%	
FRCST	2026	43.7%	168.757	148.249	161.160	140.177	5.3%	5.3%	
FRCST	2027	43.7%	170.976	150.172	163.285	142.001	5.2%	5.2%	
FRCST	2028	43.5%	173.531	152.241	165.744	143.967	5.1%	5.1%	
FRCST	2029	43.6%	176.171	154.389	168.286	146.011	4.9%	4.9%	
FRCST	2030	43.6%	178.700	156.557	170.715	148.074	4.7%	4.7%	

***** BASE SCENARIO WITH DSM IMPACTS *****						***** BASE SCENARIO WITH DSM IMPACTS *****			
TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)					
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)				
1999 -2004	46.0%	131.507	120.355	128.304	115.185				
2004 -2009	39.2%	160.569	136.976	153.913	130.189				
2010 -2015	41.4%	158.412	136.511	151.776	129.324				
2015 -2020	42.9%	160.940	139.862	153.813	132.288				
2020 -2025	43.5%	167.015	146.429	159.508	138.453				
2025 -2030	43.5%	178.700	156.557	170.715	148.074				
1999 -2009	39.2%	160.569	136.976	153.913	130.189				
2010 -2030	41.4%	178.700	156.557	170.715	148.074				

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	22,381	832	7	0	23,220	308,133	38,428	34,056	0	380,617
ACTUAL 2000	22,597	848	6	0	23,451	318,529	52,546	32,690	0	403,765
ACTUAL 2001	23,079	879	13	0	23,971	334,370	38,577	61,317	0	434,264
ACTUAL 2002	23,548	909	13	0	24,470	359,794	36,127	68,666	0	463,587
ACTUAL 2003	23,983	939	14	0	24,936	357,822	38,920	73,829	0	470,571
ACTUAL 2004	24,416	972	14	0	25,402	363,038	42,211	85,278	0	490,527
ACTUAL 2005	24,724	1,113	14	0	25,851	390,780	45,260	111,478	0	547,518
ACTUAL 2006	25,030	1,131	12	0	26,173	372,598	45,029	126,757	0	544,384
ACTUAL 2007	25,258	1,139	12	0	26,409	396,073	48,058	110,874	0	555,005
ACTUAL 2008	25,325	1,157	12	0	26,494	398,993	48,663	103,057	0	550,713
ACTUAL 2009	25,367	1,164	12	0	26,543	376,299	47,362	87,709	0	511,370
FRCST 2010	25,343	1,171	13	0	26,527	368,888	47,577	111,383	0	527,846
FRCST 2011	25,378	1,178	13	0	26,569	367,130	47,492	111,516	0	526,138
FRCST 2012	25,472	1,185	13	0	26,670	367,208	47,295	111,650	0	526,153
FRCST 2013	25,626	1,192	13	0	26,831	369,133	46,885	111,784	0	527,802
FRCST 2014	25,840	1,199	13	0	27,052	371,364	46,432	111,916	0	529,713
FRCST 2015	26,068	1,206	13	0	27,287	374,782	46,047	112,053	0	532,882
FRCST 2016	26,317	1,219	13	0	27,549	379,393	46,054	112,474	0	537,921
FRCST 2017	26,568	1,232	13	0	27,813	383,691	46,130	112,897	0	542,718
FRCST 2018	26,821	1,245	13	0	28,079	388,019	46,285	113,321	0	547,625
FRCST 2019	27,076	1,258	13	0	28,347	392,059	46,449	113,747	0	552,255
FRCST 2020	27,334	1,271	13	0	28,618	396,218	46,638	114,174	0	557,030
FRCST 2021	27,611	1,289	13	0	28,913	400,598	47,181	114,174	0	561,953
FRCST 2022	27,891	1,307	13	0	29,211	405,073	47,762	114,174	0	567,009
FRCST 2023	28,173	1,325	13	0	29,511	409,680	48,371	114,174	0	572,225
FRCST 2024	28,458	1,343	13	0	29,814	414,476	49,065	114,174	0	577,715
FRCST 2025	28,745	1,361	13	0	30,119	419,467	49,809	114,174	0	583,449
FRCST 2026	29,048	1,383	13	0	30,444	425,374	51,091	114,174	0	590,639
FRCST 2027	29,354	1,405	13	0	30,772	432,127	52,506	114,174	0	598,806
FRCST 2028	29,663	1,427	13	0	31,103	439,340	54,151	114,174	0	607,665
FRCST 2029	29,974	1,449	13	0	31,436	447,019	55,854	114,174	0	617,046
FRCST 2030	30,288	1,471	13	0	31,772	454,860	57,501	114,174	0	626,535

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	1.76%	3.16%	7	0	1.81%	3.33%	1.90%	20.15%	NA	5.20%
2004 -2009	0.77%	3.67%	-2	0	0.88%	0.72%	2.33%	0.56%	NA	0.84%
2010 -2015	0.57%	0.59%	0	0	0.57%	0.32%	-0.65%	0.12%	NA	0.19%
2015 -2020	0.95%	1.06%	0	0	0.96%	1.12%	0.26%	0.38%	NA	0.89%
2020 -2025	1.01%	1.38%	0	0	1.03%	1.15%	1.32%	0.00%	NA	0.93%
2025 -2030	1.05%	1.57%	0	0	1.07%	1.63%	2.91%	0.00%	NA	1.44%
1999 -2009	1.26%	3.41%	5	0	1.35%	2.02%	2.11%	9.92%	NA	3.00%
2010 -2030	0.90%	1.15%	0	0	0.91%	1.05%	0.95%	0.12%	NA	0.86%

***** BASE SCENARIO WITH DSM IMPACTS *****					***** BASE SCENARIO WITH DSM IMPACTS *****					
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)
ACTUAL 1999	6.50%	26,460	407,077	45.4%	102,282	93,488	93.5%	91.0%	95,633	85,104
ACTUAL 2000	8.41%	37,075	440,840	47.2%	106,707	87,017	98.0%	96.2%	102,391	83,746
ACTUAL 2001	4.50%	20,463	454,727	44.7%	116,063	97,409	93.3%	96.3%	108,334	93,772
ACTUAL 2002	5.54%	27,189	480,776	53.1%	105,609	103,388	97.1%	92.5%	102,549	95,674
ACTUAL 2003	5.84%	29,186	499,757	46.0%	124,007	101,678	96.4%	95.7%	119,546	97,299
ACTUAL 2004	6.70%	35,225	525,752	46.4%	129,461	102,236	93.0%	96.4%	120,384	98,519
ACTUAL 2005	5.35%	30,948	578,466	47.7%	138,452	124,782	95.1%	95.0%	131,721	118,564
ACTUAL 2006	4.94%	28,290	572,674	47.5%	137,678	123,457	92.4%	96.5%	127,146	119,131
ACTUAL 2007	5.60%	32,924	587,929	44.5%	150,898	130,534	92.1%	91.3%	138,741	119,213
ACTUAL 2008	4.79%	27,706	578,419	43.8%	150,619	115,685	92.4%	91.7%	139,190	106,080
ACTUAL 2009	5.62%	30,450	541,820	39.0%	158,609	116,157	88.8%	89.2%	140,851	103,848
FRCST 2010	5.20%	28,954	556,802	46.9%	135,606	112,080	87.8%	90.9%	119,100	101,929
FRCST 2011	5.20%	28,860	554,988	47.2%	134,177	110,933	87.7%	90.8%	117,652	100,770
FRCST 2012	5.20%	28,861	555,014	47.4%	133,195	110,131	87.5%	90.7%	116,599	99,925
FRCST 2013	5.20%	28,951	556,754	49.1%	129,486	106,404	87.1%	90.4%	112,791	98,137
FRCST 2014	5.20%	29,056	558,769	50.7%	125,860	102,831	86.6%	89.9%	109,027	92,478
FRCST 2015	5.20%	29,230	562,112	52.4%	122,498	99,475	86.1%	89.5%	105,504	89,024
FRCST 2016	5.20%	29,506	567,428	52.6%	122,791	99,604	86.0%	89.4%	105,608	89,037
FRCST 2017	5.20%	29,769	572,487	53.1%	123,125	99,880	85.9%	89.3%	105,751	89,195
FRCST 2018	5.20%	30,039	577,664	53.4%	123,483	100,213	85.8%	89.2%	105,914	89,409
FRCST 2019	5.20%	30,292	582,547	53.7%	123,917	100,546	85.7%	89.1%	106,153	89,621
FRCST 2020	5.20%	30,554	587,585	53.8%	124,408	100,963	85.6%	89.1%	106,448	89,916
FRCST 2021	5.20%	30,824	592,778	54.0%	125,419	102,258	85.5%	89.1%	107,254	91,086
FRCST 2022	5.20%	31,102	598,111	54.0%	126,437	103,579	85.5%	89.1%	108,067	92,282
FRCST 2023	5.20%	31,388	603,613	54.1%	127,460	104,920	85.4%	89.1%	108,883	93,495
FRCST 2024	5.20%	31,689	609,404	54.0%	128,529	106,306	85.4%	89.1%	109,743	94,753
FRCST 2025	5.20%	32,004	615,453	54.1%	129,865	107,949	85.4%	89.2%	110,888	96,266
FRCST 2026	5.20%	32,388	623,037	54.2%	131,307	109,667	85.3%	89.2%	112,070	97,856
FRCST 2027	5.20%	32,846	631,652	54.1%	133,215	111,477	85.4%	89.2%	113,728	99,492
FRCST 2028	5.20%	33,332	640,996	53.8%	135,547	113,427	85.4%	89.3%	115,802	101,284
FRCST 2029	5.20%	33,846	650,893	53.9%	137,899	115,436	85.5%	89.3%	117,890	103,131
FRCST 2030	5.20%	34,367	660,902	53.8%	140,292	117,457	85.5%	89.4%	120,016	104,987

***** BASE SCENARIO WITH DSM IMPACTS *****					***** BASE SCENARIO WITH DSM IMPACTS *****					
TIME PERIOD	ENERGY LOSS FACTOR	ANNUAL ENERGY LOSSES	ANNUAL ENERGY PURCHASES	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
	(AVERAGE %)	(% CHANGE)	(% CHG.)	(AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999 -2004	6.25%	5.89%	5.25%	47.1%	4.83%	1.81%	94.9%	94.7%	4.71%	2.97%
2004 -2009	5.50%	-2.87%	0.60%	44.8%	4.14%	2.59%	92.3%	93.4%	3.19%	1.02%
2010 -2015	5.20%	0.19%	0.19%	48.9%	-2.01%	-2.36%	87.1%	90.4%	-2.40%	-2.67%
2015 -2020	5.20%	0.89%	0.89%	53.2%	0.31%	0.30%	85.9%	89.3%	0.18%	0.20%
2020 -2025	5.20%	0.93%	0.93%	54.0%	0.86%	1.35%	85.5%	89.1%	0.82%	1.37%
2025 -2030	5.20%	1.44%	1.44%	54.0%	1.56%	1.70%	85.4%	89.3%	1.60%	1.75%
1999 -2009	5.80%	1.41%	2.90%	45.9%	4.48%	2.19%	93.6%	93.8%	3.85%	1.99%
2010 -2030	5.20%	0.86%	0.86%	52.4%	0.17%	0.23%	86.0%	89.5%	0.04%	0.15%

***** BASE SCENARIO WITH DSM IMPACTS *****						***** BASE SCENARIO WITH DSM IMPACTS *****			
PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES						Percent Total E.E. Reductions			
YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)		Sales to End-Consumers %	Total Member Purchase %		
		WINTER	SUMMER	WINTER	SUMMER				
ACTUAL	1999	*****	*****	*****	*****	*****	*****		
ACTUAL	2000	*****	*****	*****	*****	*****	*****		
ACTUAL	2001	*****	*****	*****	*****	*****	*****		
ACTUAL	2002	*****	*****	*****	*****	*****	*****		
ACTUAL	2003	*****	*****	*****	*****	*****	*****		
ACTUAL	2004	*****	*****	*****	*****	*****	*****		
ACTUAL	2005	*****	*****	*****	*****	*****	*****		
ACTUAL	2006	*****	*****	*****	*****	*****	*****		
ACTUAL	2007	*****	*****	*****	*****	*****	*****		
ACTUAL	2008	*****	*****	*****	*****	*****	*****		
ACTUAL	2009	*****	*****	*****	*****	*****	*****		
FRCST	2010	40.2%	157.957	130.408	138.770	118.607	0.6%	0.6%	
FRCST	2011	40.5%	156.556	129.283	137.345	117.468	1.1%	1.1%	
FRCST	2012	40.6%	155.669	128.560	136.376	116.695	1.5%	1.5%	
FRCST	2013	41.8%	152.093	124.942	132.686	113.006	1.8%	1.8%	
FRCST	2014	42.9%	148.655	121.523	129.087	109.488	2.2%	2.2%	
FRCST	2015	44.1%	145.510	118.345	125.755	106.195	2.6%	2.6%	
FRCST	2016	44.2%	146.059	118.684	126.084	106.400	2.7%	2.7%	
FRCST	2017	44.6%	146.653	119.173	126.455	106.752	2.9%	2.9%	
FRCST	2018	44.8%	147.273	119.721	126.850	107.161	3.1%	3.1%	
FRCST	2019	44.9%	147.973	120.271	127.322	107.571	3.4%	3.4%	
FRCST	2020	45.0%	148.732	120.909	127.851	108.067	3.6%	3.6%	
FRCST	2021	45.1%	150.018	122.429	128.901	109.442	3.9%	3.9%	
FRCST	2022	45.1%	151.313	123.978	129.958	110.845	4.1%	4.1%	
FRCST	2023	45.1%	152.616	125.548	131.020	112.267	4.3%	4.3%	
FRCST	2024	45.1%	153.968	127.166	132.130	113.736	4.4%	4.4%	
FRCST	2025	45.2%	155.590	129.043	133.506	115.462	4.6%	4.6%	
FRCST	2026	45.2%	157.357	131.048	134.994	117.295	4.6%	4.6%	
FRCST	2027	45.2%	159.605	133.116	136.950	119.184	4.5%	4.5%	
FRCST	2028	45.0%	162.285	135.353	139.332	121.236	4.4%	4.4%	
FRCST	2029	45.0%	164.993	137.654	141.734	123.349	4.2%	4.2%	
FRCST	2030	45.0%	167.749	139.972	144.178	125.476	4.0%	4.0%	

***** BASE SCENARIO WITH DSM IMPACTS *****						***** BASE SCENARIO WITH DSM IMPACTS *****			
TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)					
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)				
1999 -2004	44.7%	129.461	103.388	120.384	98.519				
2004 -2009	39.0%	158.609	130.534	140.851	119.213				
2010 -2015	40.2%	157.957	130.408	138.770	118.607				
2015 -2020	44.1%	148.732	120.909	127.851	108.067				
2020 -2025	45.0%	155.590	129.043	133.506	115.462				
2025 -2030	45.0%	167.749	139.972	144.178	125.476				
1999 -2009	39.0%	158.609	130.534	140.851	119.213				
2010 -2030	40.2%	167.749	139.972	144.178	125.476				

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	7,575	514	16	86	8,171	97,451	20,139	232,550	635	350,775
ACTUAL 2000	7,716	532	16	85	8,329	100,329	20,420	274,166	632	395,547
ACTUAL 2001	7,820	554	15	85	8,454	101,360	21,428	271,384	638	394,810
ACTUAL 2002	7,908	574	16	63	8,561	108,757	31,160	290,130	658	430,705
ACTUAL 2003	7,998	574	15	65	8,652	105,867	36,062	290,173	590	432,692
ACTUAL 2004	8,070	585	16	66	8,737	106,962	40,923	304,618	573	453,076
ACTUAL 2005	8,140	593	18	86	8,817	112,906	42,733	304,087	668	460,394
ACTUAL 2006	8,219	603	18	86	8,906	110,016	46,504	307,910	626	465,056
ACTUAL 2007	8,312	610	19	66	9,007	116,841	50,655	301,725	675	469,896
ACTUAL 2008	8,345	597	21	66	9,030	115,334	48,939	280,827	642	445,742
ACTUAL 2009	8,358	601	11	85	9,035	109,517	40,333	263,463	639	413,952
FRCST 2010	8,428	606	11	63	9,108	109,146	38,245	290,598	701	438,690
FRCST 2011	8,498	611	11	63	9,183	109,786	37,584	292,733	701	440,804
FRCST 2012	8,569	616	11	63	9,259	110,405	36,761	295,929	701	443,796
FRCST 2013	8,640	621	11	63	9,335	111,722	35,551	300,891	701	448,864
FRCST 2014	8,711	626	11	63	9,411	112,082	34,032	304,121	701	450,938
FRCST 2015	8,782	631	11	63	9,487	112,592	32,618	306,493	701	452,404
FRCST 2016	8,855	638	11	63	9,567	114,116	31,565	307,758	701	454,140
FRCST 2017	8,929	645	11	63	9,648	115,141	30,628	309,031	701	455,501
FRCST 2018	9,003	652	11	63	9,729	116,220	30,075	310,311	701	457,307
FRCST 2019	9,077	659	11	63	9,810	117,110	29,560	311,588	701	458,969
FRCST 2020	9,152	666	11	63	9,892	118,113	29,110	312,893	701	460,817
FRCST 2021	9,230	675	11	63	9,979	119,220	28,877	312,893	701	461,691
FRCST 2022	9,309	684	11	63	10,067	120,317	28,731	312,893	701	462,642
FRCST 2023	9,388	693	11	63	10,155	121,423	28,649	312,893	701	463,666
FRCST 2024	9,468	702	11	63	10,244	122,558	28,701	312,893	701	464,852
FRCST 2025	9,547	711	11	63	10,332	123,742	28,755	312,893	701	466,091
FRCST 2026	9,630	724	11	63	10,428	125,156	30,133	312,893	701	468,883
FRCST 2027	9,713	737	11	63	10,524	126,782	31,714	312,893	701	472,069
FRCST 2028	9,796	750	11	63	10,620	128,545	33,721	312,893	701	475,860
FRCST 2029	9,880	763	11	63	10,717	130,374	36,057	312,893	701	480,026
FRCST 2030	9,964	776	11	63	10,814	132,248	38,309	312,893	701	484,151

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	1.27%	2.62%	0	0	1.35%	1.88%	15.24%	5.55%	-2.03%	5.25%
2004 -2009	0.70%	0.54%	-5	-1	0.67%	0.47%	-0.29%	-2.86%	2.20%	-1.79%
2010 -2015	0.83%	0.81%	0	0	0.82%	0.62%	-3.13%	1.07%	0.00%	0.62%
2015 -2020	0.83%	1.09%	0	0	0.84%	0.96%	-2.25%	0.41%	0.00%	0.37%
2020 -2025	0.85%	1.32%	0	0	0.87%	0.94%	-0.24%	0.00%	0.00%	0.23%
2025 -2030	0.86%	1.76%	0	0	0.92%	1.34%	5.91%	0.00%	0.00%	0.76%
1999 -2009	0.99%	1.58%	-5	-1	1.01%	1.17%	7.19%	1.26%	0.06%	1.67%
2010 -2030	0.84%	1.24%	0	0	0.86%	0.96%	0.01%	0.37%	0.00%	0.49%

***** BASE SCENARIO WITH DSM IMPACTS *****					***** BASE SCENARIO WITH DSM IMPACTS *****						
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK		
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)	
ACTUAL	1999	4.00%	8,974	359,749	55.6%	63,815	73,901	76.2%	88.7%	48,604	65,538
ACTUAL	2000	4.22%	9,899	405,446	58.5%	71,461	79,175	87.4%	79.1%	62,473	62,588
ACTUAL	2001	4.14%	9,541	404,351	58.0%	78,008	79,540	88.8%	88.7%	69,261	70,558
ACTUAL	2002	3.96%	10,080	440,785	61.5%	76,771	81,863	93.1%	87.9%	71,479	71,976
ACTUAL	2003	4.18%	10,650	443,342	60.7%	78,409	83,357	86.0%	79.6%	67,395	66,321
ACTUAL	2004	3.79%	10,037	463,113	63.8%	79,100	82,846	88.6%	89.7%	70,057	74,339
ACTUAL	2005	3.88%	10,809	471,203	60.8%	83,122	88,464	83.8%	87.6%	69,657	77,476
ACTUAL	2006	3.97%	11,147	476,203	59.1%	85,634	92,027	81.9%	74.0%	70,106	68,138
ACTUAL	2007	4.63%	13,834	483,730	59.9%	88,002	92,223	88.4%	76.0%	77,775	70,073
ACTUAL	2008	3.78%	10,866	456,628	59.5%	86,295	87,578	77.7%	77.3%	67,081	67,692
ACTUAL	2009	3.99%	10,701	424,653	54.1%	84,099	89,604	68.5%	75.6%	57,596	67,770
FRCST	2010	4.00%	11,096	449,785	60.1%	80,345	85,484	80.8%	81.9%	64,916	65,990
FRCST	2011	4.00%	11,140	451,944	60.2%	80,535	85,677	80.7%	81.7%	64,955	70,032
FRCST	2012	4.00%	11,197	454,994	60.2%	80,889	85,995	80.5%	81.6%	65,134	70,173
FRCST	2013	4.00%	11,340	460,205	60.7%	81,643	86,560	80.4%	81.5%	65,658	70,509
FRCST	2014	4.00%	11,358	462,294	60.9%	81,769	86,593	80.2%	81.3%	65,619	70,375
FRCST	2015	4.00%	11,350	463,754	61.2%	81,797	86,504	80.1%	81.1%	65,510	70,149
FRCST	2016	4.00%	11,381	465,521	61.3%	81,948	86,396	80.0%	80.5%	65,555	69,934
FRCST	2017	4.00%	11,397	466,897	61.8%	82,017	86,272	79.9%	80.8%	65,517	69,702
FRCST	2018	4.00%	11,430	468,737	62.0%	82,193	86,273	79.8%	80.7%	65,585	69,595
FRCST	2019	4.00%	11,458	470,427	62.3%	82,333	86,268	79.7%	80.5%	65,615	69,480
FRCST	2020	4.00%	11,492	472,310	62.1%	82,633	86,517	79.6%	80.5%	65,806	69,619
FRCST	2021	4.00%	11,529	473,220	62.4%	82,722	86,536	79.6%	80.4%	65,825	69,588
FRCST	2022	4.00%	11,568	474,211	62.5%	82,818	86,581	79.5%	80.3%	65,849	69,541
FRCST	2023	4.00%	11,611	475,277	62.6%	82,931	86,675	79.5%	80.3%	65,892	69,584
FRCST	2024	4.00%	11,661	476,513	62.5%	83,080	86,803	79.4%	80.2%	65,970	69,620
FRCST	2025	4.00%	11,712	477,803	62.7%	83,234	86,946	79.4%	80.2%	66,052	69,692
FRCST	2026	4.00%	11,828	480,711	62.7%	83,703	87,463	79.4%	80.2%	66,434	70,120
FRCST	2027	4.00%	11,962	484,051	62.7%	84,282	88,093	79.4%	80.2%	66,922	70,659
FRCST	2028	4.00%	12,119	487,979	62.5%	85,096	88,886	79.5%	80.3%	67,642	71,359
FRCST	2029	4.00%	12,293	492,319	62.6%	85,921	89,761	79.6%	80.4%	68,372	72,158
FRCST	2030	4.00%	12,465	496,616	62.5%	86,765	90,714	79.7%	80.5%	69,119	72,983

***** BASE SCENARIO WITH DSM IMPACTS *****					***** BASE SCENARIO WITH DSM IMPACTS *****					
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHG.)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999 -2004	4.05%	2.26%	5.18%	59.7%	4.39%	2.31%	86.7%	85.6%	7.59%	2.55%
2004 -2009	4.01%	1.29%	-1.72%	59.5%	1.23%	1.58%	81.5%	80.0%	-3.84%	-1.83%
2010 -2015	4.00%	0.45%	0.61%	60.6%	0.36%	0.24%	80.5%	81.5%	0.18%	0.05%
2015 -2020	4.00%	0.25%	0.37%	61.8%	0.20%	0.00%	79.9%	80.8%	0.09%	-0.15%
2020 -2025	4.00%	0.38%	0.23%	62.5%	0.14%	0.10%	79.5%	80.3%	0.07%	0.02%
2025 -2030	4.00%	1.25%	0.78%	62.6%	0.83%	0.85%	79.5%	80.3%	0.91%	0.93%

1999 -2009	4.05%	1.78%	1.67%	59.2%	2.80%	1.95%	83.7%	82.2%	1.71%	0.34%
2010 -2030	4.00%	0.58%	0.50%	61.8%	0.39%	0.30%	79.8%	80.7%	0.31%	0.21%

***** BASE SCENARIO WITH DSM IMPACTS *****						***** BASE SCENARIO WITH DSM IMPACTS *****		
PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES								
YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)		Percent Total E.F. Reductions		
		WINTER	SUMMER	WINTER	SUMMER	Sales to End-Consumers %	Total Member Purchase %	
ACTUAL	1999	*****	*****	*****	*****	*****	*****	
ACTUAL	2000	*****	*****	*****	*****	*****	*****	
ACTUAL	2001	*****	*****	*****	*****	*****	*****	
ACTUAL	2002	*****	*****	*****	*****	*****	*****	
ACTUAL	2003	*****	*****	*****	*****	*****	*****	
ACTUAL	2004	*****	*****	*****	*****	*****	*****	
ACTUAL	2005	*****	*****	*****	*****	*****	*****	
ACTUAL	2006	*****	*****	*****	*****	*****	*****	
ACTUAL	2007	*****	*****	*****	*****	*****	*****	
ACTUAL	2008	*****	*****	*****	*****	*****	*****	
ACTUAL	2009	*****	*****	*****	*****	*****	*****	
FRCST	2010	57.1%	84.479	89.866	68.265	73.583	0.6%	0.6%
FRCST	2011	57.3%	84.704	90.097	68.332	73.656	1.1%	1.1%
FRCST	2012	57.3%	85.103	90.461	68.548	73.836	1.5%	1.5%
FRCST	2013	57.7%	85.911	91.084	69.115	74.218	1.8%	1.8%
FRCST	2014	57.9%	86.080	91.163	69.111	74.122	2.3%	2.4%
FRCST	2015	58.1%	86.145	91.113	69.033	73.929	2.8%	2.9%
FRCST	2016	58.2%	86.323	91.034	69.099	73.737	3.1%	3.2%
FRCST	2017	58.6%	86.420	90.939	69.083	73.529	3.4%	3.5%
FRCST	2018	58.8%	86.623	90.969	69.173	73.445	3.7%	3.8%
FRCST	2019	59.0%	86.790	90.993	69.226	73.355	4.0%	4.0%
FRCST	2020	58.9%	87.118	91.271	69.439	73.518	4.2%	4.3%
FRCST	2021	59.2%	87.220	91.304	69.468	73.477	4.4%	4.5%
FRCST	2022	59.3%	87.329	91.363	69.503	73.462	4.6%	4.7%
FRCST	2023	59.3%	87.455	91.470	69.556	73.496	4.8%	4.9%
FRCST	2024	59.2%	87.617	91.612	69.645	73.563	5.0%	5.0%
FRCST	2025	59.4%	87.784	91.769	69.737	73.646	5.1%	5.2%
FRCST	2026	59.5%	88.269	92.302	70.132	74.089	5.0%	5.1%
FRCST	2027	59.4%	88.864	92.949	70.633	74.642	4.8%	4.9%
FRCST	2028	59.2%	89.695	93.761	71.368	75.356	4.6%	4.7%
FRCST	2029	59.4%	90.538	94.674	72.111	76.170	4.3%	4.3%
FRCST	2030	59.3%	91.399	95.626	72.872	77.021	4.0%	4.0%

***** BASE SCENARIO WITH DSM IMPACTS *****						***** BASE SCENARIO WITH DSM IMPACTS *****		
TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)				
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)			
1999 -2004	55.6%	79.100	83.357	71.479	74.339			
2004 -2009	54.1%	88.002	92.223	77.775	77.476			
2010 -2015	57.1%	86.145	91.163	69.115	74.218			
2015 -2020	58.1%	87.118	91.271	69.439	73.929			
2020 -2025	58.9%	87.784	91.769	69.737	73.646			
2025 -2030	59.2%	91.399	95.626	72.872	77.021			
1999 -2009	54.1%	88.002	92.223	77.775	77.476			
2010 -2030	57.1%	91.399	95.626	72.872	77.021			

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	16,585	821	20	0	17,426	209,679	29,671	34,454	0	273,804
ACTUAL 2000	16,960	861	20	0	17,841	217,543	30,071	35,332	0	282,946
ACTUAL 2001	17,264	863	20	1	18,148	221,712	29,505	32,788	3	284,008
ACTUAL 2002	17,496	944	20	1	18,461	239,785	30,881	30,665	6	301,337
ACTUAL 2003	17,833	939	20	1	18,593	237,058	30,797	31,042	11	298,908
ACTUAL 2004	17,825	934	18	1	18,778	241,323	30,497	30,062	11	301,893
ACTUAL 2005	17,987	950	20	1	18,958	256,363	33,082	30,958	11	320,414
ACTUAL 2006	18,119	982	18	1	19,120	245,481	34,113	33,250	11	312,855
ACTUAL 2007	18,183	995	18	1	19,197	261,956	36,420	29,929	11	328,316
ACTUAL 2008	18,161	1,004	19	1	19,185	258,863	35,637	31,681	12	326,193
ACTUAL 2009	18,104	1,020	20	1	19,145	245,078	35,746	33,704	14	314,542
FRCST 2010	18,171	1,026	19	1	19,217	245,335	35,991	36,463	14	317,803
FRCST 2011	18,238	1,032	19	1	19,290	246,568	35,716	36,533	14	318,831
FRCST 2012	18,305	1,036	19	1	19,363	247,952	35,441	36,604	14	320,021
FRCST 2013	18,373	1,044	19	1	19,437	249,806	35,166	36,674	14	321,660
FRCST 2014	18,441	1,050	19	1	19,511	251,007	35,038	36,745	14	322,805
FRCST 2015	18,509	1,056	19	1	19,585	252,419	34,943	36,816	14	324,193
FRCST 2016	18,581	1,066	19	1	19,667	254,229	35,067	36,887	14	326,197
FRCST 2017	18,654	1,076	19	1	19,750	255,985	35,221	36,958	14	328,178
FRCST 2018	18,727	1,086	19	1	19,833	257,800	35,456	37,030	14	330,300
FRCST 2019	18,800	1,096	19	1	19,916	259,344	35,553	37,101	14	332,112
FRCST 2020	18,874	1,106	19	1	20,000	260,965	35,880	37,173	14	334,013
FRCST 2021	18,953	1,120	19	1	20,093	262,619	36,224	37,173	14	336,030
FRCST 2022	19,033	1,134	19	1	20,187	264,234	36,605	37,173	14	338,026
FRCST 2023	19,112	1,148	19	1	20,280	265,834	36,997	37,173	14	340,018
FRCST 2024	19,192	1,162	19	1	20,374	267,462	37,397	37,173	14	342,046
FRCST 2025	19,303	1,176	19	1	20,499	269,582	37,807	37,173	14	344,576
FRCST 2026	19,448	1,194	19	1	20,662	272,542	38,884	37,173	14	348,613
FRCST 2027	19,593	1,212	19	1	20,825	275,882	39,968	37,173	14	353,037
FRCST 2028	19,739	1,230	19	1	20,989	279,408	41,061	37,173	14	357,656
FRCST 2029	19,886	1,248	19	1	21,154	283,036	42,012	37,173	14	362,235
FRCST 2030	20,003	1,266	19	1	21,289	286,287	42,936	37,173	14	366,411

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	1.45%	2.61%	-2	1	1.51%	2.85%	0.55%	-2.69%	NA	1.97%
2004 -2009	0.31%	1.78%	2	0	0.39%	0.31%	3.23%	2.31%	4.94%	0.82%
2010 -2015	0.37%	0.58%	0	0	0.38%	0.57%	-0.59%	0.19%	0.00%	0.40%
2015 -2020	0.39%	0.93%	0	0	0.42%	0.67%	0.52%	0.19%	0.00%	0.60%
2020 -2025	0.45%	1.23%	0	0	0.49%	0.65%	1.06%	0.00%	0.00%	0.62%
2025 -2030	0.71%	1.49%	0	0	0.76%	1.21%	2.58%	0.00%	0.00%	1.24%
1999 -2009	0.88%	2.19%	0	1	0.95%	1.57%	1.88%	-0.22%	NA	1.40%
2010 -2030	0.48%	1.06%	0	0	0.51%	0.77%	0.89%	0.10%	0.00%	0.71%

***** BASE SCENARIO WITH DSM IMPACTS *****					***** BASE SCENARIO WITH DSM IMPACTS *****						
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK		
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)	
ACTUAL	1999	6.62%	19,411	293,215	47.6%	63,913	70,374	103.9%	92.8%	66,408	65,283
ACTUAL	2000	6.76%	20,514	303,460	51.2%	62,750	67,638	101.1%	100.6%	63,469	68,064
ACTUAL	2001	6.37%	19,322	303,330	46.9%	70,874	69,893	101.8%	93.1%	72,161	65,092
ACTUAL	2002	6.33%	20,364	321,701	49.5%	64,228	74,133	116.7%	87.2%	74,938	84,652
ACTUAL	2003	6.60%	21,122	320,030	49.2%	74,216	69,222	98.5%	107.4%	73,087	74,336
ACTUAL	2004	6.75%	21,853	323,746	48.6%	75,985	67,807	97.4%	111.1%	74,002	75,351
ACTUAL	2005	6.52%	22,348	342,762	50.8%	76,262	77,005	104.3%	98.4%	79,575	75,773
ACTUAL	2006	7.10%	23,910	336,765	50.2%	75,839	76,531	108.3%	85.0%	82,155	65,026
ACTUAL	2007	6.64%	23,351	351,667	49.4%	81,308	79,149	104.5%	83.6%	84,992	66,180
ACTUAL	2008	6.29%	21,895	348,088	47.1%	84,404	68,898	97.3%	94.4%	82,155	65,026
ACTUAL	2009	6.90%	23,312	337,854	43.4%	88,855	70,056	96.1%	96.7%	85,403	67,718
FRCST	2010	6.60%	22,457	340,261	49.5%	79,436	71,066	95.9%	95.0%	75,246	67,478
FRCST	2011	6.60%	22,530	341,361	49.9%	78,128	70,803	95.9%	94.9%	74,909	67,182
FRCST	2012	6.60%	22,614	342,635	50.1%	77,804	70,493	95.8%	94.8%	74,557	66,841
FRCST	2013	6.60%	22,730	344,390	50.7%	77,567	70,134	95.8%	94.8%	74,296	66,454
FRCST	2014	6.60%	22,811	345,615	51.1%	77,195	69,740	95.7%	94.7%	73,899	66,032
FRCST	2015	6.60%	22,909	347,101	51.5%	76,948	69,447	95.7%	94.6%	73,623	65,709
FRCST	2016	6.60%	23,050	349,247	51.7%	76,849	69,232	95.6%	94.6%	73,500	65,464
FRCST	2017	6.60%	23,190	351,369	52.2%	76,799	69,012	95.6%	94.5%	73,423	65,214
FRCST	2018	6.60%	23,340	353,640	52.6%	76,777	68,826	95.6%	94.4%	73,374	64,999
FRCST	2019	6.60%	23,468	355,581	52.9%	76,682	68,598	95.5%	94.4%	73,254	64,741
FRCST	2020	6.60%	23,603	357,616	53.0%	76,778	68,655	95.5%	94.3%	73,324	64,770
FRCST	2021	6.60%	23,745	359,775	53.3%	77,121	69,253	95.5%	94.3%	73,640	65,337
FRCST	2022	6.60%	23,886	361,912	53.3%	77,451	69,855	95.5%	94.3%	73,944	65,908
FRCST	2023	6.60%	24,027	364,045	53.4%	77,811	70,529	95.5%	94.4%	74,276	66,553
FRCST	2024	6.60%	24,170	366,217	53.2%	78,350	71,406	95.5%	94.4%	74,789	67,400
FRCST	2025	6.60%	24,349	368,925	53.3%	79,011	72,398	95.5%	94.4%	75,418	68,356
FRCST	2026	6.60%	24,634	373,247	53.2%	80,017	73,756	95.5%	94.5%	76,384	69,669
FRCST	2027	6.60%	24,947	377,984	53.1%	81,254	75,208	95.5%	94.5%	77,580	71,075
FRCST	2028	6.60%	25,273	382,929	52.7%	82,798	76,700	95.5%	94.6%	79,082	72,520
FRCST	2029	6.60%	25,597	387,831	52.6%	84,226	78,178	95.5%	94.6%	80,467	73,950
FRCST	2030	6.60%	25,892	392,303	52.3%	85,660	79,699	95.6%	94.6%	81,863	75,427

***** BASE SCENARIO WITH DSM IMPACTS *****					***** BASE SCENARIO WITH DSM IMPACTS *****					
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHG.)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999-2004	6.57%	2.40%	2.00%	49.2%	3.52%	-0.74%	103.2%	98.7%	2.19%	2.91%
2004-2009	6.70%	1.30%	0.86%	48.3%	3.18%	0.65%	101.3%	94.9%	2.91%	-2.11%
2010-2015	6.60%	0.40%	0.40%	50.5%	-0.38%	-0.46%	95.8%	94.8%	-0.44%	-0.53%
2015-2020	6.60%	0.60%	0.60%	52.3%	-0.04%	-0.23%	95.6%	94.5%	-0.08%	-0.29%
2020-2025	6.60%	0.62%	0.62%	53.3%	0.58%	1.07%	95.5%	94.4%	0.56%	1.08%
2025-2030	6.60%	1.24%	1.24%	52.9%	1.63%	1.84%	95.5%	94.5%	1.65%	1.99%

1999-2009	6.63%	1.85%	1.43%	48.7%	3.35%	-0.05%	102.7%	95.5%	2.55%	0.37%
2010-2030	6.60%	0.71%	0.71%	52.2%	0.44%	0.57%	95.6%	94.6%	0.42%	0.56%

***** BASE SCENARIO WITH DSM IMPACTS *****						***** BASE SCENARIO WITH DSM IMPACTS *****		
PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES								
YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)		Percent Sales to End-Consumers %	Total E.F. Reductions %	Total Member Purchase %
		WINTER	SUMMER	WINTER	SUMMER			
ACTUAL	1999	*****	*****	*****	*****	*****	*****	*****
ACTUAL	2000	*****	*****	*****	*****	*****	*****	*****
ACTUAL	2001	*****	*****	*****	*****	*****	*****	*****
ACTUAL	2002	*****	*****	*****	*****	*****	*****	*****
ACTUAL	2003	*****	*****	*****	*****	*****	*****	*****
ACTUAL	2004	*****	*****	*****	*****	*****	*****	*****
ACTUAL	2005	*****	*****	*****	*****	*****	*****	*****
ACTUAL	2006	*****	*****	*****	*****	*****	*****	*****
ACTUAL	2007	*****	*****	*****	*****	*****	*****	*****
ACTUAL	2008	*****	*****	*****	*****	*****	*****	*****
ACTUAL	2009	*****	*****	*****	*****	*****	*****	*****
FRCST	2010	44.4%	87,497	79,221	83,945	75,225	0.6%	0.6%
FRCST	2011	44.7%	87,273	79,034	83,688	75,001	1.2%	1.2%
FRCST	2012	44.8%	87,027	78,793	83,411	74,726	1.6%	1.6%
FRCST	2013	45.3%	86,880	78,497	83,217	74,399	1.9%	1.9%
FRCST	2014	45.6%	86,558	78,167	82,887	74,038	2.3%	2.3%
FRCST	2015	45.9%	86,384	77,942	82,684	73,779	2.6%	2.6%
FRCST	2016	46.0%	86,365	77,797	82,635	73,600	2.8%	2.8%
FRCST	2017	46.4%	86,390	77,644	82,630	73,414	3.0%	3.0%
FRCST	2018	46.7%	86,442	77,525	82,653	73,263	3.1%	3.1%
FRCST	2019	47.0%	86,421	77,363	82,603	73,068	3.3%	3.3%
FRCST	2020	47.0%	86,591	77,487	82,744	73,160	3.5%	3.5%
FRCST	2021	47.2%	87,011	78,154	83,134	73,793	3.7%	3.7%
FRCST	2022	47.3%	87,417	78,824	83,511	74,429	3.9%	3.9%
FRCST	2023	47.3%	87,853	79,567	83,917	75,139	4.0%	4.0%
FRCST	2024	47.1%	88,468	80,513	84,502	76,051	4.2%	4.2%
FRCST	2025	47.2%	89,218	81,585	85,217	77,083	4.3%	4.3%
FRCST	2026	47.2%	90,337	83,044	86,291	78,493	4.3%	4.3%
FRCST	2027	47.1%	91,691	84,602	87,599	79,999	4.1%	4.1%
FRCST	2028	46.7%	93,354	86,201	89,216	81,545	4.0%	4.0%
FRCST	2029	46.7%	94,904	87,788	90,718	83,079	3.8%	3.8%
FRCST	2030	46.4%	96,448	89,408	92,219	84,650	3.7%	3.7%

***** BASE SCENARIO WITH DSM IMPACTS *****						***** BASE SCENARIO WITH DSM IMPACTS *****		
TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)				
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)			
1999 -2004	47.6%	75,985	74,133	74,938	75,351			
2004 -2009	43.4%	88,855	79,149	85,403	75,773			
2010 -2015	44.4%	87,497	79,221	83,945	75,225			
2015 -2020	45.9%	86,591	77,942	82,744	73,779			
2020 -2025	47.0%	89,218	81,585	85,217	77,083			
2025 -2030	46.4%	96,448	89,408	92,219	84,650			
1999 -2009	43.4%	88,855	79,149	85,403	75,773			
2010 -2030	44.4%	96,448	89,408	92,219	84,650			

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	14,450	1,303	13	1	15,767	202,146	63,051	87,944	16,940	370,081
ACTUAL 2000	14,527	1,326	17	1	15,871	208,395	64,722	101,193	17,208	391,518
ACTUAL 2001	14,466	1,362	19	2	15,849	206,160	68,058	123,170	17,238	414,626
ACTUAL 2002	14,453	1,407	23	2	15,885	216,774	73,958	170,521	17,832	479,085
ACTUAL 2003	14,528	1,451	25	2	16,006	215,978	74,697	183,596	16,559	490,830
ACTUAL 2004	14,639	1,496	22	7	16,164	214,142	81,318	190,858	16,936	503,254
ACTUAL 2005	14,674	1,551	22	7	16,254	227,489	79,672	199,532	17,035	523,728
ACTUAL 2006	14,745	1,591	26	6	16,368	222,482	85,555	219,097	16,474	543,608
ACTUAL 2007	14,771	1,629	32	6	16,438	235,819	84,406	241,196	16,646	578,067
ACTUAL 2008	14,725	1,692	32	6	16,455	233,759	86,378	248,638	16,125	584,900
ACTUAL 2009	14,678	1,755	32	6	16,471	224,428	88,279	274,410	15,169	602,286
FRCST 2010	14,628	1,795	34	6	16,463	225,743	90,431	264,745	15,413	596,332
FRCST 2011	14,628	1,835	31	6	16,500	227,729	92,065	233,398	15,413	568,605
FRCST 2012	14,654	1,875	31	6	16,566	229,559	93,052	230,678	15,413	568,702
FRCST 2013	14,680	1,915	32	6	16,633	231,134	93,449	275,624	15,413	615,619
FRCST 2014	14,705	1,955	32	6	16,698	232,466	93,612	317,050	15,413	658,541
FRCST 2015	14,757	1,995	32	6	16,790	234,256	93,945	352,562	15,413	696,176
FRCST 2016	14,812	2,033	32	6	16,883	236,044	94,508	382,649	15,413	728,614
FRCST 2017	14,868	2,071	31	6	16,976	237,828	95,249	382,109	15,413	730,599
FRCST 2018	14,924	2,109	31	6	17,070	239,675	96,449	382,109	15,413	733,646
FRCST 2019	14,979	2,147	31	6	17,163	241,509	97,053	382,109	15,413	736,084
FRCST 2020	15,036	2,185	31	6	17,258	243,343	98,085	382,109	15,413	738,950
FRCST 2021	15,101	2,221	30	6	17,358	245,268	99,228	369,097	15,413	729,006
FRCST 2022	15,167	2,257	30	6	17,460	247,241	100,468	369,097	15,413	732,218
FRCST 2023	15,233	2,293	30	6	17,562	249,237	101,776	369,097	15,413	735,523
FRCST 2024	15,299	2,329	30	6	17,664	251,266	103,151	369,097	15,413	738,927
FRCST 2025	15,365	2,365	30	6	17,766	253,344	104,581	369,097	15,413	742,435
FRCST 2026	15,433	2,399	30	6	17,868	255,686	106,476	369,097	15,413	746,671
FRCST 2027	15,501	2,433	30	6	17,970	258,444	109,065	369,097	15,413	752,019
FRCST 2028	15,570	2,467	30	6	18,073	261,389	112,290	369,097	15,413	758,189
FRCST 2029	15,639	2,501	30	6	18,176	264,325	115,775	369,097	15,413	764,610
FRCST 2030	15,708	2,535	30	6	18,279	267,375	119,119	369,097	15,413	771,005

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	0.26%	2.80%	9	6	0.50%	1.16%	5.22%	16.76%	0.00%	6.34%
2004 -2009	0.05%	3.25%	10	-1	0.38%	0.94%	1.66%	7.53%	-2.18%	3.66%
2010 -2015	0.18%	2.14%	-2	0	0.39%	0.74%	0.77%	5.90%	0.00%	3.14%
2015 -2020	0.38%	1.84%	-1	0	0.55%	0.76%	0.87%	1.62%	0.00%	1.20%
2020 -2025	0.43%	1.60%	-1	0	0.58%	0.81%	1.29%	-0.69%	0.00%	0.09%
2025 -2030	0.44%	1.40%	0	0	0.57%	1.08%	2.64%	0.00%	0.00%	0.76%
1999 -2009	0.16%	3.02%	19	5	0.44%	1.05%	3.42%	12.05%	-1.10%	4.99%
2010 -2030	0.36%	1.74%	-4	0	0.52%	0.85%	1.39%	1.68%	0.00%	1.29%

***** BASE SCENARIO WITH DSM IMPACTS *****					***** BASE SCENARIO WITH DSM IMPACTS *****						
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK		
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)	
ACTUAL	1999	5.33%	20,836	390,917	49.7%	79,062	89,871	90.4%	91.1%	71,463	81,914
ACTUAL	2000	4.83%	19,870	411,388	53.5%	78,767	87,819	94.1%	90.1%	74,137	79,144
ACTUAL	2001	5.03%	21,960	436,586	52.9%	87,725	94,174	86.9%	86.7%	76,265	81,622
ACTUAL	2002	4.70%	23,627	502,712	52.9%	98,068	108,427	85.3%	84.8%	83,688	91,920
ACTUAL	2003	4.01%	20,505	511,335	53.7%	104,875	108,680	87.2%	89.9%	91,482	97,571
ACTUAL	2004	4.45%	23,438	526,692	54.6%	108,218	110,060	80.1%	86.6%	86,710	95,338
ACTUAL	2005	4.20%	22,961	546,689	54.5%	112,228	114,514	84.8%	88.0%	95,201	100,724
ACTUAL	2006	3.05%	17,102	560,710	52.6%	107,718	121,741	87.9%	89.4%	94,728	108,894
ACTUAL	2007	3.57%	21,401	599,468	52.5%	122,302	130,372	82.2%	83.5%	100,566	108,899
ACTUAL	2008	3.66%	22,221	607,121	56.1%	123,429	122,369	82.3%	82.7%	101,594	101,234
ACTUAL	2009	3.63%	22,687	624,973	52.0%	137,186	129,906	81.4%	81.7%	111,655	106,138
FRCST	2010	3.70%	22,912	619,244	54.2%	130,515	128,321	82.9%	85.0%	108,226	109,048
FRCST	2011	3.70%	21,847	590,452	54.3%	124,165	122,347	82.8%	84.9%	102,863	103,927
FRCST	2012	3.70%	21,850	590,552	54.3%	123,921	122,327	82.7%	84.9%	102,543	103,841
FRCST	2013	3.70%	23,653	639,272	58.1%	124,521	125,612	82.6%	85.3%	102,907	107,177
FRCST	2014	3.70%	25,302	683,843	50.2%	155,425	128,513	67.2%	85.2%	104,410	107,848
FRCST	2015	3.70%	26,748	722,924	52.8%	156,409	129,749	67.1%	85.2%	104,970	110,520
FRCST	2016	3.70%	27,995	756,608	48.3%	178,296	130,430	59.6%	85.1%	106,222	111,018
FRCST	2017	3.70%	28,071	758,670	48.5%	178,600	131,568	59.7%	85.1%	106,680	111,915
FRCST	2018	3.70%	28,188	761,834	48.5%	179,161	132,031	59.6%	85.0%	106,793	112,255
FRCST	2019	3.70%	28,282	764,366	48.6%	179,587	132,331	59.5%	85.0%	106,770	112,432
FRCST	2020	3.70%	28,392	767,342	48.5%	180,112	132,757	59.3%	84.9%	106,843	112,734
FRCST	2021	3.70%	28,010	757,016	48.6%	177,857	132,089	59.6%	84.9%	105,975	112,107
FRCST	2022	3.70%	28,133	760,351	48.6%	178,458	132,610	59.5%	84.8%	106,121	112,502
FRCST	2023	3.70%	28,260	763,783	48.7%	179,076	133,155	59.4%	84.8%	106,283	112,921
FRCST	2024	3.70%	28,391	767,318	48.6%	179,714	133,726	59.2%	84.8%	106,465	113,364
FRCST	2025	3.70%	28,526	770,960	48.8%	180,373	134,324	59.1%	84.7%	106,665	113,834
FRCST	2026	3.70%	28,688	775,360	48.8%	181,191	136,070	59.5%	84.7%	107,783	115,311
FRCST	2027	3.70%	28,894	780,913	48.9%	182,427	137,137	59.5%	84.8%	108,546	116,245
FRCST	2028	3.70%	29,131	787,320	48.7%	183,925	138,434	59.6%	84.8%	109,563	117,405
FRCST	2029	3.70%	29,378	793,987	48.8%	185,552	139,800	59.7%	84.9%	110,702	118,633
FRCST	2030	3.70%	29,623	800,628	48.8%	187,157	141,140	59.7%	84.9%	111,814	119,834

***** BASE SCENARIO WITH DSM IMPACTS *****					***** BASE SCENARIO WITH DSM IMPACTS *****					
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHG.)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999 -2004	4.73%	2.38%	6.14%	52.9%	6.48%	4.14%	87.3%	88.2%	3.94%	3.08%
2004 -2009	3.76%	-0.65%	3.48%	53.7%	4.86%	3.37%	83.1%	85.3%	5.19%	2.17%
2010 -2015	3.70%	3.14%	3.14%	54.0%	3.68%	0.22%	77.6%	85.1%	-0.61%	0.27%
2015 -2020	3.70%	1.20%	1.20%	49.2%	2.86%	0.46%	60.8%	85.1%	0.35%	0.40%
2020 -2025	3.70%	0.09%	0.09%	48.6%	0.03%	0.23%	59.4%	84.8%	-0.03%	0.19%
2025 -2030	3.70%	0.76%	0.76%	48.8%	0.74%	0.99%	59.5%	84.8%	0.95%	1.03%

1999 -2009	4.22%	0.85%	4.80%	53.2%	5.67%	3.75%	85.7%	86.8%	4.56%	2.62%
2010 -2030	3.70%	1.29%	1.29%	50.2%	1.82%	0.48%	64.7%	84.9%	0.16%	0.47%

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES

YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)		Percent Total E.E. Reductions	
		WINTER	SUMMER	WINTER	SUMMER	Sales to End-Consumers %	Total Member Purchase %
ACTUAL 1999	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2000	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2001	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2002	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2003	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2004	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2005	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2006	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2007	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****	*****	*****
FRCST 2010	52.1%	135,558	133,263	112,412	113,248	0.2%	0.2%
FRCST 2011	52.3%	128,985	127,070	106,863	107,941	0.4%	0.4%
FRCST 2012	52.2%	128,757	127,067	106,557	107,870	0.7%	0.7%
FRCST 2013	55.9%	129,533	130,624	107,068	111,463	1.0%	1.0%
FRCST 2014	48.4%	161,385	131,341	108,457	111,975	1.4%	1.4%
FRCST 2015	51.3%	160,839	133,404	107,982	113,645	1.6%	1.6%
FRCST 2016	47.0%	183,401	134,157	109,320	114,204	1.9%	1.9%
FRCST 2017	46.9%	184,549	135,941	110,309	115,853	2.2%	2.2%
FRCST 2018	47.0%	185,147	136,430	110,444	116,016	2.4%	2.4%
FRCST 2019	47.0%	185,610	136,758	110,444	116,217	2.6%	2.6%
FRCST 2020	46.9%	186,172	137,211	110,540	116,543	2.9%	2.9%
FRCST 2021	47.1%	183,464	136,238	109,417	115,654	3.1%	3.1%
FRCST 2022	47.1%	184,101	136,785	109,585	116,071	3.3%	3.3%
FRCST 2023	47.2%	184,753	137,357	109,769	116,513	3.5%	3.5%
FRCST 2024	47.1%	185,427	137,954	109,973	116,979	3.6%	3.6%
FRCST 2025	47.3%	186,122	138,578	110,195	117,472	3.8%	3.8%
FRCST 2026	47.3%	186,976	140,380	111,359	118,996	3.8%	3.8%
FRCST 2027	47.4%	188,250	141,476	112,145	119,954	3.8%	3.8%
FRCST 2028	47.2%	189,788	142,801	113,185	121,139	3.6%	3.6%
FRCST 2029	47.3%	191,451	144,195	114,348	122,391	3.4%	3.4%
FRCST 2030	47.3%	193,095	145,564	115,484	123,616	3.3%	3.3%

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)	
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)
1999 -2004	49.7%	108,218	110,060	91,482	97,671
2004 -2009	52.0%	137,186	130,372	111,655	108,894
2010 -2015	48.4%	161,385	133,404	112,412	113,645
2015 -2020	46.9%	186,172	137,211	110,540	116,543
2020 -2025	46.9%	186,172	138,578	110,540	117,472
2025 -2030	47.2%	193,095	145,564	115,484	123,616
1999 -2009	49.7%	137,186	130,372	111,655	108,894
2010 -2030	46.9%	193,095	145,564	115,484	123,616

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	11,830	1,252	7	325	13,514	122,720	37,293	66,332	63,780	310,125
ACTUAL 2000	12,022	1,264	7	333	13,626	124,143	40,945	62,878	85,661	313,627
ACTUAL 2001	12,082	1,270	8	338	13,698	129,828	43,412	69,335	82,565	325,140
ACTUAL 2002	12,138	1,263	8	341	13,750	136,371	43,698	70,028	85,081	335,178
ACTUAL 2003	12,094	1,237	8	345	13,684	132,105	41,978	62,088	80,219	316,390
ACTUAL 2004	12,021	1,215	8	349	13,593	132,562	44,151	67,551	79,452	323,716
ACTUAL 2005	12,011	1,221	8	361	13,601	141,487	35,079	82,507	10,983	270,056
ACTUAL 2006	12,038	1,225	8	363	13,634	140,839	35,456	87,280	5,321	268,896
ACTUAL 2007	12,075	1,235	8	365	13,683	146,859	41,868	86,616	7,013	282,356
ACTUAL 2008	12,072	1,258	8	369	13,707	144,865	39,833	82,371	5,646	272,715
ACTUAL 2009	12,042	1,266	8	368	13,684	144,946	43,473	74,090	4,666	267,175
FRCST 2010	12,043	1,270	8	368	13,689	147,583	43,593	67,555	6,953	265,684
FRCST 2011	12,045	1,274	9	368	13,696	149,473	43,374	69,836	6,953	269,636
FRCST 2012	12,047	1,278	9	368	13,702	150,904	43,091	99,119	6,953	300,067
FRCST 2013	12,048	1,282	9	368	13,707	152,329	42,684	165,843	6,953	367,809
FRCST 2014	12,050	1,286	9	368	13,713	153,084	42,188	209,564	6,953	411,789
FRCST 2015	12,052	1,290	9	368	13,719	153,857	41,749	286,941	6,953	489,500
FRCST 2016	12,064	1,296	9	368	13,737	155,033	41,530	327,219	6,953	530,735
FRCST 2017	12,076	1,302	9	368	13,755	156,127	41,367	338,241	6,953	542,688
FRCST 2018	12,088	1,308	9	368	13,773	157,262	41,343	338,391	6,953	543,949
FRCST 2019	12,100	1,314	9	368	13,791	158,211	41,262	338,542	6,953	544,968
FRCST 2020	12,111	1,320	9	368	13,808	159,171	41,201	338,692	6,953	546,017
FRCST 2021	12,132	1,330	9	368	13,839	160,195	41,291	338,692	6,953	547,131
FRCST 2022	12,153	1,340	9	368	13,870	161,186	41,409	338,692	6,953	548,240
FRCST 2023	12,174	1,350	9	368	13,901	162,145	41,547	338,692	6,953	549,337
FRCST 2024	12,194	1,360	9	368	13,931	163,138	41,710	338,692	6,953	550,493
FRCST 2025	12,215	1,370	9	368	13,962	164,180	41,888	338,692	6,953	551,713
FRCST 2026	12,242	1,380	9	368	13,999	165,469	42,468	338,692	6,953	553,582
FRCST 2027	12,268	1,390	9	368	14,035	166,971	43,124	338,692	6,953	555,739
FRCST 2028	12,295	1,400	9	368	14,072	168,579	43,917	338,692	6,953	558,141
FRCST 2029	12,321	1,410	9	368	14,108	170,237	44,805	338,692	6,953	560,687
FRCST 2030	12,348	1,420	9	368	14,145	171,927	45,644	338,692	6,953	563,216

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG.)	OTHER (TOT.CHG.)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	0.15%	-0.60%	1	24	0.12%	1.55%	3.43%	0.36%	-1.06%	0.86%
2004 -2009	0.03%	0.83%	0	19	0.13%	1.80%	-0.31%	1.67%	-43.28%	-3.77%
2010 -2015	0.01%	0.31%	1	0	0.04%	0.84%	-0.86%	33.54%	0.00%	13.00%
2015 -2020	0.10%	0.46%	0	0	0.13%	0.68%	-0.26%	3.37%	0.00%	2.21%
2020 -2025	0.17%	0.75%	0	0	0.22%	0.62%	0.33%	0.00%	0.00%	0.21%
2025 -2030	0.22%	0.72%	0	0	0.26%	0.93%	1.73%	0.00%	0.00%	0.41%
1999 -2009	0.09%	0.11%	1	43	0.13%	1.68%	1.55%	1.11%	-25.08%	-1.48%
2010 -2030	0.13%	0.56%	1	0	0.16%	0.77%	0.23%	8.39%	0.00%	3.83%

***** BASE SCENARIO WITH DSM IMPACTS *****					***** BASE SCENARIO WITH DSM IMPACTS *****					
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)
ACTUAL 1999	1.83%	5,781	315,906	56.8%	60.834	63.533	78.1%	98.7%	47.505	62.682
ACTUAL 2000	3.85%	12,558	326,185	56.8%	62.810	65.596	78.1%	98.7%	49.049	64.718
ACTUAL 2001	0.51%	1,667	326,807	53.0%	62.930	70.337	78.1%	94.9%	49.143	66.759
ACTUAL 2002	4.01%	14,002	349,180	54.8%	60.369	72.731	69.5%	88.9%	41.968	54.677
ACTUAL 2003	2.34%	7,581	323,971	53.0%	57.452	69.841	75.0%	98.7%	43.075	68.906
ACTUAL 2004	3.45%	11,567	335,263	52.5%	53.239	72.920	78.1%	96.3%	41.575	70.230
ACTUAL 2005	0.41%	1,112	271,168	50.3%	60.029	61.562	89.2%	97.7%	41.529	60.144
ACTUAL 2006	2.94%	8,145	277,041	47.5%	52.197	66.559	78.7%	84.5%	41.081	56.215
ACTUAL 2007	3.00%	8,733	291,089	53.1%	49.019	62.542	75.4%	100.0%	36.940	62.542
ACTUAL 2008	3.00%	8,434	281,149	58.8%	48.871	54.607	91.3%	80.9%	44.442	44.179
ACTUAL 2009	4.97%	13,973	281,148	47.3%	50.875	67.904	91.3%	89.7%	46.454	60.886
FRCST 2010	5.00%	13,983	279,667	51.9%	51.902	61.498	89.9%	89.0%	46.681	54.722
FRCST 2011	5.00%	14,191	283,827	51.9%	52.575	62.467	89.9%	88.9%	47.254	55.560
FRCST 2012	5.00%	15,793	315,860	46.4%	58.426	77.425	86.8%	74.4%	50.690	57.597
FRCST 2013	5.00%	19,358	387,168	51.9%	74.212	85.198	89.8%	89.5%	66.648	76.273
FRCST 2014	5.00%	21,673	433,463	48.1%	78.392	102.911	92.8%	75.9%	72.769	78.157
FRCST 2015	5.00%	25,763	515,263	53.4%	98.960	110.195	92.8%	91.6%	91.864	100.950
FRCST 2016	5.00%	27,933	558,668	58.2%	102.000	109.303	94.9%	92.6%	96.762	101.236
FRCST 2017	5.00%	28,563	571,251	58.5%	104.093	111.423	94.9%	92.6%	98.733	103.168
FRCST 2018	5.00%	28,629	572,578	58.7%	104.106	111.263	94.8%	92.6%	98.730	102.985
FRCST 2019	5.00%	28,683	573,651	59.0%	104.062	111.065	94.8%	92.5%	98.671	102.763
FRCST 2020	5.00%	28,738	574,755	59.0%	104.004	110.833	94.8%	92.5%	98.598	102.507
FRCST 2021	5.00%	28,796	575,928	59.5%	103.943	110.583	94.8%	93.0%	98.520	102.829
FRCST 2022	5.00%	28,855	577,095	59.5%	104.046	110.705	94.8%	93.0%	98.608	102.928
FRCST 2023	5.00%	28,912	578,250	59.6%	104.132	110.826	94.8%	93.0%	98.678	103.027
FRCST 2024	5.00%	28,973	579,467	59.4%	104.245	110.998	94.8%	93.0%	98.776	103.176
FRCST 2025	5.00%	29,038	580,751	59.6%	104.366	111.181	94.7%	92.9%	98.880	103.336
FRCST 2026	5.00%	29,136	582,718	59.7%	104.617	111.513	94.7%	92.9%	99.113	103.642
FRCST 2027	5.00%	29,249	584,869	59.7%	104.920	111.913	94.7%	92.9%	99.397	104.015
FRCST 2028	5.00%	29,376	587,516	59.5%	105.365	112.375	94.7%	92.9%	99.822	104.449
FRCST 2029	5.00%	29,510	590,197	59.7%	105.844	112.875	94.7%	93.0%	100.281	104.921
FRCST 2030	5.00%	29,643	592,859	59.7%	106.333	113.406	94.8%	93.0%	100.751	105.423

***** BASE SCENARIO WITH DSM IMPACTS *****					***** BASE SCENARIO WITH DSM IMPACTS *****					
TIME PERIOD	ENERGY LOSS FACTOR (AVERAGE %)	ANNUAL ENERGY LOSSES (% CHANGE)	ANNUAL ENERGY PURCHASES (% CHG.)	ANNUAL LOAD FACTOR (AVERAGE %)	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
					WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999 -2004	2.67%	14.88%	1.20%	54.5%	-2.63%	2.79%	76.2%	96.0%	-2.63%	2.30%
2004 -2009	2.96%	3.85%	-3.46%	51.6%	-0.90%	-1.42%	80.7%	91.5%	2.24%	-2.82%
2010 -2015	5.00%	13.00%	13.00%	50.6%	13.78%	12.37%	90.3%	84.9%	14.50%	13.03%
2015 -2020	5.00%	2.21%	2.21%	57.8%	1.00%	0.12%	94.5%	92.4%	1.42%	0.31%
2020 -2025	5.00%	0.21%	0.21%	59.4%	0.07%	0.06%	94.8%	92.9%	0.06%	0.16%
2025 -2030	5.00%	0.41%	0.41%	59.6%	0.37%	0.40%	94.7%	92.9%	0.38%	0.40%
1999 -2009	2.76%	9.23%	-1.16%	53.1%	-1.77%	0.67%	78.4%	93.5%	-0.22%	-0.29%
2010 -2030	5.00%	3.83%	3.83%	56.8%	3.65%	3.11%	93.5%	90.6%	3.92%	3.33%

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES

YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)		Percent Total E.E. Reductions	
		WINTER	SUMMER	WINTER	SUMMER	Sales to End-Consumers %	Total Member Purchase %
ACTUAL 1999	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2000	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2001	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2002	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2003	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2004	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2005	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2006	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2007	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****	*****	*****
FRCST 2010	46.9%	57.455	68.052	51.679	60.555	0.3%	0.3%
FRCST 2011	46.9%	58.236	69.146	52.349	61.505	0.8%	0.8%
FRCST 2012	42.1%	64.231	85.321	55.741	63.558	1.0%	1.0%
FRCST 2013	48.1%	79.905	91.916	71.772	82.319	1.0%	1.0%
FRCST 2014	45.4%	82.955	109.027	77.013	82.866	1.1%	1.1%
FRCST 2015	50.1%	105.230	117.343	97.695	107.526	1.2%	1.2%
FRCST 2016	54.9%	107.931	115.826	102.396	107.303	1.2%	1.2%
FRCST 2017	55.2%	110.161	118.098	104.498	109.376	1.3%	1.3%
FRCST 2018	55.4%	110.192	117.958	104.512	109.210	1.3%	1.3%
FRCST 2019	55.6%	110.165	117.779	104.469	109.006	1.4%	1.4%
FRCST 2020	55.7%	110.125	117.566	104.412	108.769	1.5%	1.5%
FRCST 2021	56.0%	110.081	117.335	104.352	109.142	1.6%	1.6%
FRCST 2022	56.1%	110.203	117.477	104.456	109.260	1.7%	1.7%
FRCST 2023	56.1%	110.306	117.618	104.544	109.377	1.8%	1.8%
FRCST 2024	56.0%	110.438	117.810	104.658	109.545	1.8%	1.8%
FRCST 2025	56.2%	110.576	118.012	104.780	109.723	1.9%	1.9%
FRCST 2026	56.2%	110.848	118.367	105.033	110.050	1.9%	1.9%
FRCST 2027	56.2%	111.173	118.791	105.337	110.445	1.9%	1.9%
FRCST 2028	56.1%	111.640	119.277	105.783	110.803	1.8%	1.8%
FRCST 2029	56.2%	112.141	119.802	106.264	111.397	1.7%	1.7%
FRCST 2030	56.2%	112.653	120.358	106.754	111.923	1.6%	1.6%

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)	
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)
1999 -2004	52.5%	62.930	72.920	49.143	70.230
2004 -2009	47.3%	60.029	72.920	46.454	70.230
2010 -2015	42.1%	105.230	117.343	97.695	107.526
2015 -2020	50.1%	110.192	118.098	104.512	109.376
2020 -2025	55.7%	110.576	118.012	104.780	109.723
2025 -2030	56.1%	112.653	120.358	106.754	111.923
1999 -2009	47.3%	62.930	72.920	49.143	70.230
2010 -2030	42.1%	112.653	120.358	106.754	111.923

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS (MWH)				
	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	10,984	277	3	88	11,352	145,889	12,661	9,714	4,710	172,974
ACTUAL 2000	11,273	278	3	74	11,628	146,576	12,727	9,289	4,302	172,894
ACTUAL 2001	11,335	279	3	67	11,684	152,094	12,896	8,704	4,443	178,137
ACTUAL 2002	11,447	283	4	74	11,808	160,254	12,807	9,754	4,710	187,525
ACTUAL 2003	11,489	303	4	80	11,876	160,024	12,142	11,691	5,032	188,889
ACTUAL 2004	11,525	332	4	80	11,941	159,933	12,122	11,747	5,118	188,920
ACTUAL 2005	11,551	365	5	79	12,000	170,544	13,252	13,274	5,250	202,320
ACTUAL 2006	11,574	390	5	79	12,048	165,127	13,346	15,045	5,299	198,817
ACTUAL 2007	11,552	436	6	80	12,084	169,038	14,902	16,327	5,982	206,249
ACTUAL 2008	11,492	470	7	79	12,048	169,539	18,501	19,374	5,662	213,076
ACTUAL 2009	11,438	492	8	77	12,015	164,891	18,500	22,951	5,630	211,972
FRCST 2010	11,367	497	8	77	11,949	164,721	18,665	18,041	6,124	207,551
FRCST 2011	11,314	502	8	77	11,901	164,227	18,749	18,041	6,124	207,141
FRCST 2012	11,297	507	8	77	11,889	163,725	18,813	18,041	6,124	206,704
FRCST 2013	11,298	512	8	77	11,895	163,758	18,644	18,041	6,124	206,567
FRCST 2014	11,306	517	8	77	11,908	163,291	18,578	18,041	6,124	206,034
FRCST 2015	11,314	522	8	77	11,921	162,970	18,532	21,688	6,124	209,314
FRCST 2016	11,338	531	8	77	11,954	163,661	18,675	21,688	6,124	210,148
FRCST 2017	11,363	540	8	77	11,988	163,961	18,837	21,688	6,124	210,610
FRCST 2018	11,390	549	8	77	12,024	164,397	18,758	21,688	6,124	210,967
FRCST 2019	11,418	558	8	77	12,061	164,642	18,918	21,688	6,124	211,372
FRCST 2020	11,450	567	8	77	12,102	164,977	19,086	21,688	6,124	211,875
FRCST 2021	11,488	582	8	77	12,155	166,242	19,483	21,688	6,124	213,537
FRCST 2022	11,530	597	8	77	12,212	167,101	19,891	21,688	6,124	214,804
FRCST 2023	11,572	612	8	77	12,269	167,720	20,308	21,688	6,124	215,840
FRCST 2024	11,618	627	8	77	12,330	168,307	20,722	21,688	6,124	216,842
FRCST 2025	11,664	642	8	77	12,391	168,875	21,156	21,688	6,124	217,843
FRCST 2026	11,710	662	8	77	12,457	170,476	21,882	21,688	6,124	220,170
FRCST 2027	11,757	682	8	77	12,524	172,008	22,632	21,688	6,124	222,452
FRCST 2028	11,808	702	8	77	12,595	173,517	23,622	21,688	6,124	224,951
FRCST 2029	11,859	722	8	77	12,666	175,093	24,514	21,688	6,124	227,419
FRCST 2030	11,915	742	8	77	12,742	176,753	25,391	21,688	6,124	229,956

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	NUMBER OF CONSUMERS					SYSTEM ENERGY SALES TO END CONSUMERS				
	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (TOT.CHG)	OTHER (TOT.CHG)	TOTAL (% CHANGE)	RESIDENTIAL (% CHANGE)	COMMERCIAL (% CHANGE)	INDUSTRIAL (% CHANGE)	OTHER (% CHANGE)	TOTAL (% CHANGE)
1999 -2004	0.97%	3.69%	1	-8	1.02%	1.86%	-0.87%	3.87%	1.68%	1.78%
2004 -2009	-0.15%	8.18%	4	-3	0.12%	0.61%	8.82%	14.33%	1.93%	2.33%
2010 -2015	-0.09%	0.99%	0	0	-0.05%	-0.21%	-0.14%	3.75%	0.00%	0.17%
2015 -2020	0.24%	1.67%	0	0	0.30%	0.25%	0.59%	0.00%	0.00%	0.24%
2020 -2025	0.37%	2.52%	0	0	0.47%	0.47%	2.08%	0.00%	0.00%	0.56%
2025 -2030	0.43%	2.94%	0	0	0.56%	0.92%	3.72%	0.00%	0.00%	1.09%
1999 -2009	0.41%	5.91%	5	-11	0.57%	1.23%	3.87%	8.98%	1.80%	2.05%
2010 -2030	0.24%	2.02%	0	0	0.32%	0.35%	1.55%	0.92%	0.00%	0.51%

***** BASE SCENARIO WITH DSM IMPACTS *****					***** BASE SCENARIO WITH DSM IMPACTS *****						
YEAR	ANNUAL ENERGY LOSS FACTOR	TOTAL ANNUAL ENERGY LOSSES (MWH)	TOTAL ANNUAL ENERGY PURCHASES (MWH)	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK		
					WINTER DEMAND (MW)	SUMMER DEMAND (MW)	WINTER SEASON	SUMMER SEASON	WINTER DEMAND (MW)	SUMMER DEMAND (MW)	
ACTUAL	1999	7.62%	14,268	187,242	49.5%	40,742	43,152	98.1%	95.6%	39,980	41,271
ACTUAL	2000	9.63%	18,424	191,318	51.6%	42,298	37,439	94.8%	91.3%	40,110	34,190
ACTUAL	2001	6.89%	12,772	190,909	48.4%	45,024	41,434	94.3%	96.5%	42,469	39,970
ACTUAL	2002	8.17%	16,684	204,209	49.9%	40,343	46,693	98.5%	92.2%	39,734	43,029
ACTUAL	2003	7.26%	14,787	203,676	50.3%	46,184	43,189	92.3%	90.9%	42,616	39,255
ACTUAL	2004	7.13%	14,504	203,424	50.4%	46,073	41,454	93.4%	92.3%	43,039	38,254
ACTUAL	2005	6.33%	13,672	215,992	51.5%	46,667	47,925	95.6%	95.9%	44,598	45,971
ACTUAL	2006	7.00%	14,965	213,782	50.5%	48,186	48,291	95.9%	94.3%	46,191	45,517
ACTUAL	2007	8.84%	20,000	226,249	51.2%	50,468	48,878	94.9%	93.6%	47,889	45,732
ACTUAL	2008	6.60%	15,057	228,133	51.8%	50,282	44,921	93.9%	91.1%	47,230	40,939
ACTUAL	2009	6.71%	15,246	227,218	45.6%	56,872	46,118	93.6%	92.7%	53,259	42,774
FRCST	2010	7.00%	15,622	223,173	52.5%	48,508	45,238	94.9%	94.0%	46,038	42,511
FRCST	2011	7.00%	15,591	222,732	52.9%	48,074	45,164	94.8%	93.9%	45,595	42,428
FRCST	2012	7.00%	16,558	222,262	53.2%	47,536	44,869	94.8%	93.9%	45,053	42,129
FRCST	2013	7.00%	15,548	222,115	54.0%	46,971	44,363	94.7%	93.8%	44,486	41,621
FRCST	2014	7.00%	15,508	221,541	54.6%	46,299	43,847	94.6%	93.7%	43,810	41,100
FRCST	2015	7.00%	15,755	225,069	55.2%	46,534	44,155	94.5%	93.7%	43,997	41,355
FRCST	2016	7.00%	15,818	225,966	55.7%	46,200	43,849	94.5%	93.6%	43,653	41,038
FRCST	2017	7.00%	15,852	226,462	56.5%	45,777	43,508	94.4%	93.5%	43,221	40,685
FRCST	2018	7.00%	15,879	226,846	57.1%	45,327	43,129	94.3%	93.4%	42,760	40,295
FRCST	2019	7.00%	15,910	227,282	57.8%	44,887	42,796	94.3%	93.3%	42,309	39,950
FRCST	2020	7.00%	15,948	227,823	58.4%	44,403	42,389	94.2%	93.3%	41,814	39,531
FRCST	2021	7.00%	16,073	229,610	59.3%	44,190	42,237	94.1%	93.2%	41,575	39,351
FRCST	2022	7.00%	16,188	230,972	59.9%	43,994	42,191	94.0%	93.1%	41,359	39,282
FRCST	2023	7.00%	16,246	232,086	60.4%	43,853	42,282	94.0%	93.1%	41,200	39,354
FRCST	2024	7.00%	16,321	233,163	60.7%	43,700	42,364	93.9%	93.0%	41,031	39,417
FRCST	2025	7.00%	16,397	234,240	61.4%	43,546	42,445	93.8%	93.0%	40,859	39,479
FRCST	2026	7.00%	16,572	236,742	61.8%	43,698	42,615	93.8%	93.0%	40,981	39,815
FRCST	2027	7.00%	16,744	239,196	62.0%	44,020	43,175	93.8%	93.0%	41,276	40,145
FRCST	2028	7.00%	16,932	241,882	62.0%	44,431	43,598	93.8%	93.0%	41,659	40,538
FRCST	2029	7.00%	17,118	244,536	62.1%	44,943	44,005	93.8%	93.0%	42,144	40,916
FRCST	2030	7.00%	17,309	247,265	62.0%	45,528	44,518	93.8%	93.0%	42,702	41,398

***** BASE SCENARIO WITH DSM IMPACTS *****					***** BASE SCENARIO WITH DSM IMPACTS *****					
TIME PERIOD	ENERGY LOSS FACTOR	ANNUAL ENERGY LOSSES	ANNUAL ENERGY PURCHASES	ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK		COINCIDENT FACTOR		COINCIDENT PEAK	
	(AVERAGE %)	(% CHANGE)	(% CHG.)	(AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)	WIN. SEASON (AVERAGE %)	SUM. SEASON (AVERAGE %)	WINTER (% CHANGE)	SUMMER (% CHANGE)
1999 -2004	7.75%	0.33%	1.67%	50.0%	2.49%	-0.80%	95.2%	93.1%	1.49%	-1.51%
2004 -2009	7.10%	1.00%	2.24%	50.2%	4.30%	2.16%	94.6%	93.3%	4.35%	2.26%
2010 -2015	7.00%	0.17%	0.17%	53.7%	-0.83%	-0.48%	94.7%	93.8%	-0.90%	-0.55%
2015 -2020	7.00%	0.24%	0.24%	56.8%	-0.93%	-0.81%	94.4%	93.5%	-1.01%	-0.90%
2020 -2025	7.00%	0.56%	0.56%	60.0%	-0.39%	0.03%	94.0%	93.1%	-0.46%	-0.03%
2025 -2030	7.00%	1.09%	1.09%	61.9%	0.89%	0.96%	93.8%	93.0%	0.89%	0.95%
1999 -2009	7.45%	0.67%	1.95%	50.1%	3.39%	0.67%	95.0%	93.3%	2.91%	0.36%
2010 -2030	7.00%	0.51%	0.51%	58.1%	-0.32%	-0.08%	94.2%	93.4%	-0.38%	-0.13%

***** BASE SCENARIO WITH DSM IMPACTS *****						***** BASE SCENARIO WITH DSM IMPACTS *****			
PEAK SEASONAL DEMANDS DUE TO SINGLE TEMPERATURE EXTREMES						Percent Total E.E. Reductions			
YEAR	EXTREME ANNUAL LOAD FACTOR	NON-COINCIDENT PEAK (MW)		COINCIDENT PEAK (MW)		Sales to End-Consumers %	Total Member Purchase %		
		WINTER	SUMMER	WINTER	SUMMER				
ACTUAL 1999	*****	*****	*****	*****	*****	*****	*****		
ACTUAL 2000	*****	*****	*****	*****	*****	*****	*****		
ACTUAL 2001	*****	*****	*****	*****	*****	*****	*****		
ACTUAL 2002	*****	*****	*****	*****	*****	*****	*****		
ACTUAL 2003	*****	*****	*****	*****	*****	*****	*****		
ACTUAL 2004	*****	*****	*****	*****	*****	*****	*****		
ACTUAL 2005	*****	*****	*****	*****	*****	*****	*****		
ACTUAL 2006	*****	*****	*****	*****	*****	*****	*****		
ACTUAL 2007	*****	*****	*****	*****	*****	*****	*****		
ACTUAL 2008	*****	*****	*****	*****	*****	*****	*****		
ACTUAL 2009	*****	*****	*****	*****	*****	*****	*****		
FRCST 2010	45.3%	56.193	52.309	53.339	49.157	0.8%	0.8%		
FRCST 2011	45.6%	55.784	52.258	52.920	49.066	1.4%	1.4%		
FRCST 2012	46.8%	54.012	50.828	51.206	47.729	1.7%	1.7%		
FRCST 2013	46.4%	54.700	51.475	51.829	48.305	1.9%	1.9%		
FRCST 2014	46.8%	54.040	50.969	51.165	47.795	2.3%	2.3%		
FRCST 2015	47.2%	54.426	51.416	51.494	48.179	2.6%	2.6%		
FRCST 2016	47.5%	54.123	51.138	51.180	47.889	2.6%	2.6%		
FRCST 2017	48.1%	53.731	50.825	50.777	47.564	2.8%	2.8%		
FRCST 2018	48.6%	53.314	50.477	50.347	47.202	3.0%	3.0%		
FRCST 2019	49.0%	52.907	50.175	49.928	46.886	3.2%	3.2%		
FRCST 2020	49.4%	52.458	49.800	49.466	46.497	3.4%	3.4%		
FRCST 2021	50.1%	52.322	49.719	49.301	46.384	3.6%	3.6%		
FRCST 2022	50.5%	52.190	49.731	49.146	46.370	3.8%	3.8%		
FRCST 2023	50.8%	52.105	49.874	49.040	46.490	4.0%	4.0%		
FRCST 2024	51.0%	52.006	50.005	48.921	46.599	4.1%	4.1%		
FRCST 2025	51.5%	51.903	50.133	48.799	46.706	4.3%	4.3%		
FRCST 2026	51.8%	52.152	50.592	49.012	47.126	4.4%	4.4%		
FRCST 2027	52.0%	52.559	51.030	49.387	47.529	4.3%	4.3%		
FRCST 2028	51.9%	53.053	51.530	49.850	47.994	4.2%	4.2%		
FRCST 2029	52.0%	53.649	52.015	50.415	48.445	4.1%	4.1%		
FRCST 2030	52.0%	54.322	52.608	51.056	49.002	4.0%	4.0%		

***** BASE SCENARIO WITH DSM IMPACTS *****						***** BASE SCENARIO WITH DSM IMPACTS *****			
TIME PERIOD	SINGLE TEMP. EXTREME ANNUAL (MIN) LOAD FACTOR	EXTREME SINGLE TEMP. NON-COINCIDENT PEAK(MW)		EXTREME SINGLE TEMP. COINCIDENT PEAK (MW)					
		WIN (MAX)	SUM (MAX)	WIN (MAX)	SUM (MAX)				
1999 -2004	48.4%	46.184	46.693	43.039	43.029				
2004 -2009	45.6%	56.872	46.878	53.259	45.971				
2010 -2015	45.3%	56.193	52.309	53.339	49.157				
2015 -2020	47.2%	54.426	51.416	51.494	48.179				
2020 -2025	49.4%	52.458	50.133	49.466	46.706				
2025 -2030	51.5%	54.322	52.608	51.056	49.002				
1999 -2009	45.6%	56.872	46.878	53.259	45.971				
2010 -2030	45.3%	56.193	52.608	53.339	49.157				

## **Appendix E**

### **Historical/Forecast Annual Values Summary Base Severe Case**

**Appendix E: Historical/Forecast Annual Values Summary  
Base Severe Case**

**APPENDIX E**

**HEREC “BASE-SEVERE” CASE SCENARIO TABLES  
HISTORICAL/FORECAST ANNUAL SUMMARY**

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 34 YEARS)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

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\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

Aggregated Member System Data  
NUMBER OF CONSUMERS

Aggregated Member System Data  
SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	242,823	11,747	129	1,225	255,924	3,301,206	679,879	954,026	113,744	5,048,855
ACTUAL 2000	248,463	12,109	139	1,363	262,074	3,408,837	742,554	1,177,210	116,332	5,444,933
ACTUAL 2001	253,162	12,265	155	1,444	267,026	3,522,968	729,098	1,261,060	113,891	5,627,017
ACTUAL 2002	257,347	12,533	163	1,501	271,544	3,772,856	750,481	1,372,372	117,598	6,013,307
ACTUAL 2003	261,300	12,711	176	1,654	275,841	3,744,229	760,700	1,406,637	112,443	6,024,009
ACTUAL 2004	265,436	12,930	173	1,793	280,332	3,816,332	797,926	1,498,284	112,624	6,225,166
ACTUAL 2005	269,261	13,031	173	1,934	284,399	4,087,081	833,664	1,583,193	44,652	6,548,590
ACTUAL 2006	272,892	13,211	177	2,070	288,350	3,997,738	859,810	1,632,862	37,999	6,528,409
ACTUAL 2007	275,983	13,481	199	2,186	291,849	4,235,636	896,961	1,706,767	41,253	6,880,617
ACTUAL 2008	277,143	13,424	208	2,202	292,977	4,225,769	896,208	1,712,574	38,855	6,873,406
ACTUAL 2009	277,179	13,547	200	2,204	293,130	4,049,085	862,271	1,638,530	36,404	6,586,290
FRCST 2010	278,058	13,684	204	2,222	294,168	4,385,383	879,903	1,747,689	40,028	7,053,003
FRCST 2011	279,471	13,817	202	2,222	295,712	4,606,699	890,741	1,728,364	40,028	7,265,832
FRCST 2012	281,258	13,950	201	2,222	297,631	4,751,727	901,640	1,822,016	40,028	7,515,411
FRCST 2013	283,305	14,083	202	2,222	299,812	4,851,425	912,597	1,947,217	40,028	7,751,267
FRCST 2014	285,534	14,216	202	2,222	302,174	4,931,163	923,618	2,043,312	40,028	7,938,121
FRCST 2015	287,915	14,349	202	2,222	304,688	5,003,772	934,706	2,174,080	40,028	8,152,586
FRCST 2016	290,544	14,538	202	2,222	307,506	5,076,442	950,411	2,251,632	40,028	8,318,513
FRCST 2017	293,251	14,727	201	2,222	310,401	5,148,303	966,183	2,270,024	40,028	8,424,538
FRCST 2018	296,054	14,916	201	2,222	313,393	5,219,424	982,019	2,278,123	40,028	8,519,594
FRCST 2019	298,916	15,105	201	2,222	316,444	5,290,594	997,922	2,284,521	40,028	8,613,065
FRCST 2020	301,845	15,294	200	2,222	319,561	5,361,829	1,013,898	2,290,962	40,028	8,706,717
FRCST 2021	305,026	15,548	199	2,222	322,995	5,435,342	1,033,417	2,277,950	40,028	8,786,737
FRCST 2022	308,274	15,802	199	2,222	326,497	5,510,139	1,052,975	2,277,950	40,028	8,881,092
FRCST 2023	311,588	16,056	199	2,222	330,065	5,586,339	1,072,583	2,277,950	40,028	8,976,900
FRCST 2024	314,977	16,310	199	2,222	333,708	5,664,132	1,092,238	2,277,950	40,028	9,074,348
FRCST 2025	318,468	16,564	199	2,222	337,453	5,744,079	1,111,936	2,277,950	40,028	9,173,993
FRCST 2026	322,163	16,885	199	2,222	341,469	5,834,376	1,136,563	2,277,950	40,028	9,288,917
FRCST 2027	325,914	17,206	199	2,222	345,541	5,928,726	1,161,244	2,277,950	40,028	9,407,948
FRCST 2028	329,731	17,527	199	2,222	349,679	6,026,313	1,185,989	2,277,950	40,028	9,530,280
FRCST 2029	333,607	17,848	199	2,222	353,876	6,126,630	1,210,790	2,277,950	40,028	9,655,398
FRCST 2030	337,521	18,169	199	2,222	358,111	6,228,903	1,235,656	2,277,950	40,028	9,782,537

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

AGGREGATED NUMBER OF CONSUMERS

AGGREGATED SYSTEM ENERGY SALES

TIME PERIOD	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT.CHG.)	OTHER (ACT.CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
1999 -2004	1.80%	1.94%	44	568	1.84%	2.94%	3.25%	9.45%	-0.20%	4.28%
2004 -2009	0.87%	0.94%	27	411	0.90%	1.19%	1.56%	1.81%	-20.22%	1.13%
2010 -2015	0.70%	0.95%	-2	0	0.71%	2.67%	1.22%	4.46%	0.00%	2.94%
2015 -2020	0.95%	1.28%	-2	0	0.96%	1.39%	1.84%	1.05%	0.00%	1.32%
2020 -2025	1.08%	1.61%	-1	0	1.10%	1.39%	1.86%	-0.11%	0.00%	1.05%
2025 -2030	1.17%	1.87%	0	0	1.20%	1.63%	2.13%	0.00%	0.00%	1.29%
1999 -2009	1.33%	1.44%	71	979	1.37%	2.06%	2.41%	5.56%	-10.77%	2.69%
2010 -2030	0.97%	1.43%	-5	0	0.99%	1.77%	1.71%	1.33%	0.00%	1.65%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

YEAR	AGGREGATED TOTAL MEMBER ENERGY PURCHASED (MWH)	TOTAL ENERGY GENERATED for H.E. MEMBERS (MWH)	HE SYSTEM AVERAGE MONTHLY LOSS FACTORS due to MEMBER SYSTEM LOAD (excludes pass-throughs)		H.E. AVERAGE WHOLESALE POWER COSTS (MILLS/MWH)	AGGREGATED MEMBER SYSTEM DEMANDS (WITHOUT LOSSES, 30 MINUTE DEMAND)			
			FOR ENERGY	FOR DEMAND		NONCOINCIDENT (MW)		COINCIDENT (MW) (EST. BEFORE 1984)	
						WINTER	SUMMER	WINTER	SUMMER
ACTUAL 1999	5,320,840	5,535,309	3.97%	4.54%	*****	1,117	1,223	1,037	1,155
ACTUAL 2000	5,758,399	6,009,930	4.31%	4.52%	*****	1,173	1,187	1,110	1,117
ACTUAL 2001	5,864,880	6,118,847	4.27%	4.53%	*****	1,285	1,274	1,178	1,187
ACTUAL 2002	6,314,792	6,600,361	4.45%	4.78%	*****	1,211	1,348	1,151	1,229
ACTUAL 2003	6,320,460	6,593,113	4.26%	4.26%	*****	1,354	1,313	1,265	1,229
ACTUAL 2004	6,549,574	6,831,431	4.25%	4.81%	*****	1,381	1,321	1,268	1,255
ACTUAL 2005	6,850,535	7,115,713	3.83%	4.22%	*****	1,429	1,472	1,335	1,393
ACTUAL 2006	6,802,245	7,091,068	4.19%	4.47%	*****	1,414	1,502	1,336	1,393
ACTUAL 2007	7,215,322	7,533,291	4.33%	4.84%	*****	1,533	1,558	1,421	1,403
ACTUAL 2008	7,193,537	7,471,337	3.80%	5.10%	*****	1,575	1,442	1,440	1,289
ACTUAL 2009	6,898,809	7,174,754	3.93%	4.86%	*****	1,674	1,453	1,519	1,307
FRCST 2010	7,386,478	7,706,701	4.25%	4.73%	68.830	1,595	1,532	1,469	1,411
FRCST 2011	7,610,510	7,928,492	4.10%	4.80%	70.910	1,644	1,580	1,515	1,457
FRCST 2012	7,871,564	8,200,639	4.10%	4.80%	75.360	1,699	1,647	1,564	1,506
FRCST 2013	8,118,781	8,458,356	4.10%	4.80%	79.430	1,743	1,685	1,606	1,554
FRCST 2014	8,314,504	8,662,378	4.10%	4.80%	82.230	1,802	1,726	1,634	1,576
FRCST 2015	8,539,462	8,896,883	4.10%	4.80%	83.810	1,846	1,758	1,675	1,623
FRCST 2016	8,713,296	9,078,107	4.10%	4.80%	85.486	1,891	1,779	1,700	1,641
FRCST 2017	8,824,497	9,194,020	4.10%	4.80%	87.196	1,915	1,804	1,723	1,664
FRCST 2018	8,924,142	9,297,883	4.10%	4.80%	88.940	1,936	1,825	1,743	1,684
FRCST 2019	9,022,120	9,400,008	4.10%	4.80%	90.719	1,958	1,846	1,763	1,703
FRCST 2020	9,120,288	9,502,329	4.10%	4.80%	92.533	1,979	1,867	1,782	1,723
FRCST 2021	9,204,411	9,590,049	4.10%	4.80%	94.384	1,996	1,887	1,800	1,742
FRCST 2022	9,303,424	9,693,295	4.10%	4.80%	96.271	2,018	1,908	1,820	1,761
FRCST 2023	9,403,955	9,798,125	4.10%	4.80%	98.197	2,040	1,929	1,840	1,782
FRCST 2024	9,506,206	9,904,748	4.10%	4.80%	100.161	2,062	1,951	1,861	1,802
FRCST 2025	9,610,773	10,013,785	4.10%	4.80%	102.164	2,085	1,974	1,882	1,823
FRCST 2026	9,731,412	10,139,583	4.10%	4.80%	102.164	2,112	2,001	1,907	1,848
FRCST 2027	9,856,355	10,269,867	4.10%	4.80%	102.164	2,139	2,027	1,932	1,873
FRCST 2028	9,984,761	10,403,764	4.10%	4.80%	102.164	2,168	2,055	1,958	1,898
FRCST 2029	10,116,094	10,540,712	4.10%	4.80%	102.164	2,196	2,083	1,985	1,925
FRCST 2030	10,249,538	10,679,862	4.10%	4.80%	102.164	2,226	2,112	2,012	1,951

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	AGGREGATED H.E. ENERGY TOTAL ENERGY GENERATED PURCHASED FOR MEMBERS (% CHG.)	H.E. ENERGY GENERATED FOR MEMBERS (% CHG.)	AVG. MONTHLY LOSS FACTORS due to MEMBERS		H.E. AVERAGE WHOLESALE POWER COSTS (% CHG.)	AGGREGATED MEMBER PEAK SEASONAL DEMANDS (WITHOUT LOSSES, 30 MINUTE DEMAND)			
			ENERGY (AVERAGE)	DEMAND (AVERAGE)		Non-Coincident (% Chg)		Coincident (% Chg)	
						WINTER	SUMMER	WINTER	SUMMER
1999 -2004	4.24%	4.30%	4.25%	4.57%	*****	4.34%	1.55%	4.09%	1.68%
2004 -2009	1.04%	0.99%	4.06%	4.71%	*****	3.92%	1.92%	3.68%	0.81%
2010 -2015	2.94%	2.91%	4.13%	4.79%	4.02%	2.96%	2.80%	2.66%	2.84%
2015 -2020	1.32%	1.33%	4.10%	4.80%	2.00%	1.40%	1.21%	1.25%	1.20%
2020 -2025	1.05%	1.05%	4.10%	4.80%	2.00%	1.05%	1.12%	1.09%	1.14%
2025 -2030	1.30%	1.30%	4.10%	4.80%	0.00%	1.31%	1.36%	1.35%	1.37%
1999 -2009	2.63%	2.63%	4.14%	4.63%	*****	4.13%	1.74%	3.88%	1.25%
2010 -2030	1.65%	1.64%	4.11%	4.79%	1.99%	1.68%	1.62%	1.59%	1.63%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

HOOSIER ENERGY SYSTEM PEAK SEASONAL COINCIDENT DEMAND (MW) (All values are estimated 60 minute values)					H.E. ANNUAL LOAD FACTOR Due To COINCIDENT PEAK	HOOSIER ENERGY SYSTEM PEAK SEASONAL NON-COINCIDENT DEMAND (MW) (All values are estimated 60 minute values)					H.E. ANNUAL LOAD FACTOR Due To NON-COIN. PEAK
YEAR	WITHOUT LOSSES		WITH LOSSES		COINCIDENT PEAK	WITHOUT LOSSES		WITH LOSSES		NON-COIN. PEAK	
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER		
ACTUAL 1999	1,024	1,142	1,071	1,196	52.9%	1,103	1,209	1,154	1,266	49.8%	
ACTUAL 2000	1,086	1,099	1,136	1,150	59.5%	1,149	1,167	1,202	1,221	56.0%	
ACTUAL 2001	1,159	1,174	1,213	1,228	56.9%	1,271	1,259	1,329	1,317	52.5%	
ACTUAL 2002	1,105	1,218	1,159	1,278	59.0%	1,161	1,334	1,217	1,399	53.9%	
ACTUAL 2003	1,244	1,214	1,298	1,267	58.0%	1,332	1,298	1,390	1,354	54.2%	
ACTUAL 2004	1,252	1,235	1,314	1,296	59.2%	1,364	1,300	1,432	1,364	54.3%	
ACTUAL 2005	1,301	1,378	1,357	1,438	56.5%	1,393	1,456	1,453	1,519	53.5%	
ACTUAL 2006	1,304	1,374	1,364	1,437	56.3%	1,380	1,481	1,443	1,548	52.3%	
ACTUAL 2007	1,387	1,400	1,456	1,470	58.5%	1,498	1,555	1,571	1,632	52.7%	
ACTUAL 2008	1,424	1,269	1,499	1,336	56.7%	1,558	1,420	1,640	1,494	51.9%	
ACTUAL 2009	1,519	1,304	1,595	1,370	51.4%	1,674	1,450	1,758	1,522	46.6%	
FRCST 2010	1,452	1,401	1,523	1,469	57.8%	1,577	1,521	1,653	1,595	53.2%	
FRCST 2011	1,498	1,447	1,572	1,518	57.6%	1,625	1,569	1,706	1,647	53.1%	
FRCST 2012	1,546	1,495	1,622	1,569	57.5%	1,679	1,636	1,762	1,716	53.0%	
FRCST 2013	1,587	1,543	1,666	1,619	58.0%	1,723	1,673	1,808	1,756	53.4%	
FRCST 2014	1,615	1,566	1,695	1,643	58.3%	1,781	1,714	1,869	1,799	52.9%	
FRCST 2015	1,656	1,612	1,738	1,692	58.4%	1,825	1,746	1,915	1,833	53.0%	
FRCST 2016	1,681	1,630	1,764	1,711	58.6%	1,869	1,767	1,962	1,855	52.7%	
FRCST 2017	1,703	1,653	1,788	1,735	58.7%	1,893	1,792	1,966	1,880	52.8%	
FRCST 2018	1,723	1,672	1,808	1,755	58.7%	1,914	1,813	2,009	1,903	52.8%	
FRCST 2019	1,742	1,692	1,829	1,776	58.7%	1,935	1,834	2,031	1,924	52.8%	
FRCST 2020	1,762	1,711	1,849	1,796	58.5%	1,956	1,854	2,053	1,946	52.7%	
FRCST 2021	1,779	1,730	1,867	1,816	58.6%	1,973	1,874	2,071	1,967	52.9%	
FRCST 2022	1,799	1,749	1,888	1,836	58.6%	1,995	1,895	2,094	1,989	52.9%	
FRCST 2023	1,819	1,769	1,909	1,857	58.6%	2,017	1,916	2,117	2,011	52.8%	
FRCST 2024	1,839	1,790	1,930	1,878	58.4%	2,039	1,938	2,140	2,034	52.7%	
FRCST 2025	1,860	1,810	1,952	1,900	58.6%	2,061	1,960	2,164	2,057	52.8%	
FRCST 2026	1,885	1,835	1,979	1,926	58.5%	2,088	1,987	2,191	2,085	52.8%	
FRCST 2027	1,910	1,860	2,005	1,952	58.5%	2,116	2,014	2,220	2,113	52.8%	
FRCST 2028	1,936	1,885	2,032	1,979	58.3%	2,143	2,041	2,249	2,142	52.7%	
FRCST 2029	1,962	1,911	2,059	2,006	58.4%	2,171	2,069	2,279	2,171	52.8%	
FRCST 2030	1,989	1,938	2,088	2,034	58.4%	2,200	2,097	2,309	2,201	52.8%	

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	HOOSIER ENERGY COINCIDENT PEAK DEMAND (60 MINUTE VALUE, ALL VALUES EST.)				H.E. ANNUAL COINCIDENT LOAD FACTOR (AVERAGE)	HOOSIER ENERGY NON-COINCIDENT PEAK DEMAND (60 MINUTE VALUE, ALL VALUES EST.)				H.E. ANNUAL NON-COIN. LOAD FACTOR (AVERAGE)
	Without Losses (% Chg)		With Losses (% Chg)			Without Losses (% Chg)		With Losses (% Chg)		
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	4.10%	1.57%	4.16%	1.62%	57.57%	4.34%	1.45%	4.40%	1.50%	53.48%
2004 -2009	3.94%	1.10%	3.96%	1.12%	56.43%	4.18%	2.21%	4.20%	2.22%	51.87%
2010 -2015	2.66%	2.84%	2.68%	2.86%	57.94%	2.96%	2.80%	2.98%	2.82%	53.10%
2015 -2020	1.25%	1.20%	1.25%	1.20%	58.60%	1.40%	1.21%	1.40%	1.21%	52.82%
2020 -2025	1.09%	1.14%	1.09%	1.14%	58.55%	1.05%	1.12%	1.05%	1.12%	52.80%
2025 -2030	1.35%	1.37%	1.35%	1.37%	58.44%	1.31%	1.36%	1.31%	1.36%	52.79%
1999 -2009	4.02%	1.33%	4.06%	1.37%	56.80%	4.26%	1.83%	4.30%	1.86%	52.52%
2010 -2030	1.59%	1.63%	1.59%	1.64%	58.37%	1.68%	1.62%	1.68%	1.62%	52.86%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** BASE-SEVERE SCENARIO RESULTS *****						***** BASE-SEVERE SCENARIO RESULTS *****					
YEAR	***** EXTREME TEMPERATURE CONDITIONS ***** HOOSIER ENERGY SYSTEM PEAK SEASONAL COINCIDENT DEMAND (MW); 60 MINUTE VALUE (WITHOUT LOSSES)				H.E. ANNUAL LOAD FACTOR Due to EXTREME COINCIDENT PEAK	***** EXTREME TEMPERATURE CONDITIONS ***** HOOSIER ENERGY SYSTEM PEAK SEASONAL NON-COINCIDENT DEMAND (MW); 60 MINUTE VALUE (WITHOUT LOSSES)				H.E. ANNUAL LOAD FACTOR Due To EXTREME NON- COIN. PEAK	
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER		
ACTUAL 1999	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2000	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2001	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2002	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2003	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2004	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2005	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2006	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2007	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2008	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
FRCST 2010	1,597	1,533	1,675	1,608	52.5%	1,732	1,663	1,817	1,744	48.4%	
FRCST 2011	1,647	1,583	1,729	1,661	52.3%	1,786	1,716	1,875	1,801	48.3%	
FRCST 2012	1,698	1,634	1,783	1,715	52.4%	1,844	1,787	1,935	1,875	48.2%	
FRCST 2013	1,744	1,686	1,830	1,769	52.7%	1,891	1,827	1,985	1,918	48.6%	
FRCST 2014	1,773	1,709	1,861	1,794	53.1%	1,951	1,870	2,048	1,962	48.3%	
FRCST 2015	1,816	1,759	1,907	1,846	53.3%	1,998	1,904	2,097	1,998	48.4%	
FRCST 2016	1,840	1,774	1,931	1,862	53.5%	2,041	1,922	2,142	2,017	48.2%	
FRCST 2017	1,865	1,799	1,957	1,889	53.6%	2,067	1,949	2,170	2,046	48.4%	
FRCST 2018	1,886	1,821	1,980	1,911	53.6%	2,091	1,972	2,194	2,070	48.4%	
FRCST 2019	1,907	1,842	2,002	1,933	53.6%	2,114	1,995	2,219	2,094	48.4%	
FRCST 2020	1,929	1,862	2,024	1,955	53.4%	2,137	2,017	2,243	2,117	48.2%	
FRCST 2021	1,947	1,883	2,044	1,976	53.6%	2,155	2,038	2,262	2,139	48.4%	
FRCST 2022	1,969	1,904	2,067	1,999	53.5%	2,179	2,061	2,287	2,163	48.4%	
FRCST 2023	1,991	1,926	2,090	2,021	53.5%	2,202	2,084	2,312	2,188	48.4%	
FRCST 2024	2,013	1,948	2,113	2,044	53.4%	2,227	2,108	2,337	2,212	48.2%	
FRCST 2025	2,036	1,970	2,137	2,068	53.5%	2,251	2,132	2,363	2,238	48.4%	
FRCST 2026	2,063	1,997	2,165	2,096	53.5%	2,280	2,161	2,393	2,268	48.4%	
FRCST 2027	2,090	2,024	2,194	2,124	53.4%	2,309	2,190	2,424	2,298	48.4%	
FRCST 2028	2,118	2,051	2,224	2,153	53.3%	2,340	2,219	2,456	2,330	48.2%	
FRCST 2029	2,147	2,080	2,254	2,183	53.4%	2,371	2,250	2,489	2,361	48.3%	
FRCST 2030	2,176	2,109	2,285	2,213	53.4%	2,403	2,281	2,522	2,394	48.3%	

***** BASE-SEVERE SCENARIO RESULTS *****						***** BASE-SEVERE SCENARIO RESULTS *****					
TIME PERIOD	***** EXTREME TEMPERATURE CONDITIONS ***** HOOSIER ENERGY COINCIDENT PEAK (60 MIN.) Without Losses (% Chg)				EXTREME COIN. H.E. ANNUAL LOAD FACTOR (AVERAGE)	***** EXTREME TEMPERATURE CONDITIONS ***** HOOSIER ENERGY NON-COINCIDENT PEAK (60 MIN.) Without Losses (% Chg)				EXT. NON-COIN H.E. ANNUAL LOAD FACTOR (AVERAGE)	
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER		
1999 -2004	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2004 -2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2010 -2015	2.61%	2.78%	2.63%	2.80%	52.73%	2.89%	2.74%	2.91%	2.76%	48.39%	
2015 -2020	1.20%	1.15%	1.21%	1.16%	53.51%	1.35%	1.17%	1.35%	1.17%	48.33%	
2020 -2025	1.09%	1.13%	1.09%	1.13%	53.49%	1.05%	1.11%	1.05%	1.11%	48.34%	
2025 -2030	1.35%	1.37%	1.35%	1.37%	53.40%	1.31%	1.36%	1.31%	1.36%	48.34%	
1999 -2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2010 -2030	1.56%	1.61%	1.57%	1.61%	53.27%	1.65%	1.59%	1.65%	1.60%	48.35%	

1971 : BEGINNING HISTORICAL DATA YEAR ?  
2009 : FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 : NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\* Adjusted for IN #72, IN #16 and IN#92 \*\*\*\*  
Aggregated Member System Data  
NUMBER OF CONSUMERS

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\* Adjusted for IN #72, IN #16 and IN#92 \*\*\*\*  
Aggregated Member System Data  
SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

	YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL	1999	209,962	9,568	112	887	220,529	2,864,229	599,227	862,060	29,908	4,355,424
ACTUAL	2000	215,011	9,890	120	1,018	226,039	2,948,957	656,492	1,088,160	30,617	4,724,226
ACTUAL	2001	219,228	10,003	132	1,093	230,456	3,052,360	639,446	1,164,603	31,271	4,887,680
ACTUAL	2002	223,044	10,265	139	1,144	234,592	3,261,617	663,738	1,272,906	32,441	5,230,702
ACTUAL	2003	226,749	10,462	151	1,293	238,655	3,243,405	673,235	1,316,094	32,150	5,264,884
ACTUAL	2004	230,760	10,690	151	1,429	243,030	3,305,807	706,497	1,403,535	33,098	5,448,937
ACTUAL	2005	257,250	11,810	165	1,573	270,798	3,749,514	774,714	1,484,489	33,634	6,042,351
ACTUAL	2006	260,854	11,986	169	1,707	274,716	3,856,899	824,354	1,545,582	32,678	6,259,513
ACTUAL	2007	263,908	12,246	191	1,821	278,166	4,088,777	855,093	1,620,151	34,240	6,598,261
ACTUAL	2008	265,071	12,166	200	1,833	279,270	4,080,904	856,375	1,630,203	33,209	6,600,691
ACTUAL	2009	265,137	12,281	192	1,836	279,446	3,904,139	818,798	1,564,440	31,738	6,319,115
FRCST	2010	266,015	12,414	196	1,854	280,479	4,226,701	836,310	1,680,134	33,075	6,776,220
FRCST	2011	279,471	13,817	202	2,222	295,712	4,606,699	890,741	1,728,364	40,028	7,265,832
FRCST	2012	281,258	13,950	201	2,222	297,631	4,751,727	901,640	1,822,016	40,028	7,515,411
FRCST	2013	283,305	14,083	202	2,222	299,812	4,851,425	912,597	1,947,217	40,028	7,751,267
FRCST	2014	285,534	14,216	202	2,222	302,174	4,931,163	923,618	2,043,312	40,028	7,938,121
FRCST	2015	287,915	14,349	202	2,222	304,688	5,003,772	934,706	2,174,080	40,028	8,152,586
FRCST	2016	290,544	14,538	202	2,222	307,506	5,076,442	950,411	2,251,632	40,028	8,318,513
FRCST	2017	293,251	14,727	201	2,222	310,401	5,148,303	966,183	2,270,024	40,028	8,424,538
FRCST	2018	296,054	14,916	201	2,222	313,393	5,219,424	982,019	2,278,123	40,028	8,519,594
FRCST	2019	298,916	15,105	201	2,222	316,444	5,290,594	997,922	2,284,521	40,028	8,613,065
FRCST	2020	301,845	15,294	200	2,222	319,561	5,361,829	1,013,898	2,290,962	40,028	8,706,717
FRCST	2021	305,026	15,548	199	2,222	322,995	5,435,342	1,033,417	2,277,950	40,028	8,786,737
FRCST	2022	308,274	15,802	199	2,222	326,497	5,510,139	1,052,975	2,277,950	40,028	8,881,092
FRCST	2023	311,588	16,056	199	2,222	330,065	5,586,339	1,072,583	2,277,950	40,028	8,976,900
FRCST	2024	314,977	16,310	199	2,222	333,708	5,664,132	1,092,238	2,277,950	40,028	9,074,348
FRCST	2025	318,468	16,564	199	2,222	337,453	5,744,079	1,111,936	2,277,950	40,028	9,173,993
FRCST	2026	322,163	16,885	199	2,222	341,469	5,834,376	1,136,563	2,277,950	40,028	9,288,917
FRCST	2027	325,914	17,206	199	2,222	345,541	5,928,726	1,161,244	2,277,950	40,028	9,407,948
FRCST	2028	329,731	17,527	199	2,222	349,679	6,026,313	1,185,989	2,277,950	40,028	9,530,280
FRCST	2029	333,607	17,848	199	2,222	353,876	6,126,630	1,210,790	2,277,950	40,028	9,655,398
FRCST	2030	337,521	18,169	199	2,222	358,111	6,228,903	1,235,656	2,277,950	40,028	9,782,537

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

Adjusted for Systems - AGGREGATED NUMBER OF CONSUMERS

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

Adjusted for Systems - AGGREGATED ENERGY SALES

TIME PERIOD	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT.CHG.)	OTHER (ACT.CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
1999 -2004	1.91%	2.24%	39	542	1.96%	2.91%	3.35%	10.24%	2.05%	4.58%
2004 -2009	2.82%	2.81%	41	407	2.83%	3.38%	2.99%	2.19%	-0.84%	3.01%
2010 -2015	1.59%	2.94%	6	368	1.67%	3.43%	2.25%	5.29%	3.89%	3.77%
2015 -2020	0.95%	1.28%	-2	0	0.96%	1.39%	1.64%	1.05%	0.00%	1.32%
2020 -2025	1.08%	1.61%	-1	0	1.10%	1.39%	1.86%	-0.11%	0.00%	1.05%
2025 -2030	1.17%	1.87%	0	0	1.20%	1.63%	2.13%	0.00%	0.00%	1.29%
1999 -2009	2.36%	2.53%	80	949	2.40%	3.15%	3.17%	6.14%	0.60%	3.79%
2010 -2030	1.20%	1.92%	3	368	1.23%	1.96%	1.97%	1.53%	0.96%	1.85%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN #72, IN # 16 and IN#92										
YEAR	AGGREGATED TOTAL MEMBER ENERGY PURCHASED (MWH)	ENERGY GENERATED FOR MEMBERS (MWH)	AGGREGATED MEMBER 30 MIN. COINCIDENT PEAK W/O LOSSES (MW)		HE COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984)				ANNUAL LOAD FACTOR	
			WINTER	SUMMER	(WITHOUT LOSSES)		(WITH LOSSES)			
					WINTER	SUMMER	WINTER	SUMMER		
ACTUAL 1999	4,592,866	4,777,226	900	1,004	888	993	929	1,039	52.5%	
ACTUAL 2000	4,998,042	5,215,344	958	969	937	953	980	997	59.6%	
ACTUAL 2001	5,106,079	5,326,182	1,023	1,032	1,006	1,020	1,052	1,067	57.0%	
ACTUAL 2002	5,499,105	5,746,866	1,012	1,077	972	1,066	1,019	1,118	58.7%	
ACTUAL 2003	5,527,292	5,764,676	1,102	1,072	1,084	1,059	1,130	1,105	58.2%	
ACTUAL 2004	5,736,200	5,981,961	1,103	1,095	1,089	1,077	1,143	1,130	59.6%	
ACTUAL 2005	6,332,029	6,576,556	1,172	1,333	1,142	1,319	1,191	1,376	54.6%	
ACTUAL 2006	6,525,204	6,801,916	1,295	1,337	1,264	1,318	1,322	1,379	56.3%	
ACTUAL 2007	6,924,233	7,229,037	1,384	1,341	1,351	1,338	1,418	1,405	58.2%	
ACTUAL 2008	6,912,387	7,179,069	1,395	1,245	1,380	1,226	1,453	1,290	56.2%	
ACTUAL 2009	6,617,661	6,882,100	1,472	1,247	1,472	1,243	1,546	1,306	50.8%	
FRCST 2010	7,095,127	7,402,418	1,420	1,354	1,404	1,345	1,472	1,410	57.4%	
FRCST 2011	7,610,510	7,928,492	1,515	1,457	1,498	1,447	1,572	1,518	57.6%	
FRCST 2012	7,871,564	8,200,639	1,564	1,506	1,546	1,495	1,622	1,569	57.5%	
FRCST 2013	8,118,781	8,458,356	1,606	1,554	1,587	1,543	1,666	1,619	58.0%	
FRCST 2014	8,314,504	8,662,378	1,634	1,576	1,615	1,566	1,695	1,643	58.3%	
FRCST 2015	8,539,462	8,896,883	1,675	1,623	1,656	1,612	1,738	1,692	58.4%	
FRCST 2016	8,713,296	9,078,107	1,700	1,641	1,681	1,630	1,764	1,711	58.6%	
FRCST 2017	8,824,497	9,194,020	1,723	1,664	1,703	1,653	1,788	1,735	58.7%	
FRCST 2018	8,924,142	9,297,883	1,743	1,684	1,723	1,672	1,808	1,755	58.7%	
FRCST 2019	9,022,120	9,400,008	1,763	1,703	1,742	1,692	1,829	1,776	58.7%	
FRCST 2020	9,120,288	9,502,329	1,782	1,723	1,762	1,711	1,849	1,796	58.5%	
FRCST 2021	9,204,411	9,590,049	1,800	1,742	1,779	1,730	1,867	1,816	58.6%	
FRCST 2022	9,303,424	9,693,295	1,820	1,761	1,799	1,749	1,888	1,836	58.6%	
FRCST 2023	9,403,955	9,798,125	1,840	1,782	1,819	1,769	1,909	1,857	58.6%	
FRCST 2024	9,506,206	9,904,748	1,861	1,802	1,839	1,790	1,930	1,878	58.4%	
FRCST 2025	9,610,773	10,013,785	1,882	1,823	1,860	1,810	1,952	1,900	58.6%	
FRCST 2026	9,731,412	10,139,583	1,907	1,848	1,885	1,835	1,979	1,926	58.5%	
FRCST 2027	9,856,355	10,269,867	1,932	1,873	1,910	1,860	2,005	1,952	58.5%	
FRCST 2028	9,984,761	10,403,764	1,958	1,898	1,936	1,885	2,032	1,979	58.3%	
FRCST 2029	10,116,094	10,540,712	1,985	1,925	1,962	1,911	2,059	2,006	58.4%	
FRCST 2030	10,249,538	10,679,862	2,012	1,951	1,989	1,938	2,088	2,034	58.4%	

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	Adjusted for Systems		Adjusted for Systems		Adjusted for Systems - HE COIN. 60 MINUTE DEMAND				ADJUSTED ANNUAL LOAD FACTOR (AVERAGE)
	ENERGY PURCHASED (% CHG.)	ENERGY GENERATED (% CHG.)	AGGREGATED 30 MIN. COIN. PEAK W/O LOSSES (% CHG)		Without Losses (% Chg)		With Losses (% Chg)		
			WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	4.55%	4.60%	4.15%	1.76%	4.17%	1.65%	4.23%	1.70%	57.58%
2004 -2009	2.90%	2.84%	5.94%	2.62%	6.21%	2.91%	6.23%	2.93%	55.96%
2010 -2015	3.78%	3.75%	3.36%	3.70%	3.36%	3.69%	3.38%	3.71%	57.87%
2015 -2020	1.32%	1.33%	1.25%	1.20%	1.25%	1.20%	1.25%	1.20%	58.60%
2020 -2025	1.05%	1.05%	1.09%	1.14%	1.09%	1.14%	1.09%	1.14%	58.55%
2025 -2030	1.30%	1.30%	1.35%	1.37%	1.35%	1.37%	1.35%	1.37%	58.44%
1999 -2009	3.72%	3.72%	5.05%	2.19%	5.19%	2.28%	5.22%	2.31%	56.51%
2010 -2030	1.86%	1.85%	1.76%	1.84%	1.76%	1.84%	1.76%	1.85%	58.35%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN #72, IN #16 and IN#92  
EXTREME COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984)  
(WITHOUT LOSSES) (WITH LOSSES) EXTREME ANNUAL LOAD FACTOR

YEAR	WINTER	SUMMER	WINTER	SUMMER	EXTREME ANNUAL LOAD FACTOR
ACTUAL 1999	*****	*****	*****	*****	*****
ACTUAL 2000	*****	*****	*****	*****	*****
ACTUAL 2001	*****	*****	*****	*****	*****
ACTUAL 2002	*****	*****	*****	*****	*****
ACTUAL 2003	*****	*****	*****	*****	*****
ACTUAL 2004	*****	*****	*****	*****	*****
ACTUAL 2005	*****	*****	*****	*****	*****
ACTUAL 2006	*****	*****	*****	*****	*****
ACTUAL 2007	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****
FRCST 2010	1,543	1,470	1,619	1,542	52.2%
FRCST 2011	1,647	1,583	1,729	1,661	52.3%
FRCST 2012	1,698	1,634	1,783	1,715	52.4%
FRCST 2013	1,744	1,686	1,830	1,769	52.7%
FRCST 2014	1,773	1,709	1,861	1,794	53.1%
FRCST 2015	1,816	1,759	1,907	1,846	53.3%
FRCST 2016	1,840	1,774	1,931	1,862	53.5%
FRCST 2017	1,865	1,799	1,957	1,889	53.6%
FRCST 2018	1,886	1,821	1,980	1,911	53.6%
FRCST 2019	1,907	1,842	2,002	1,933	53.6%
FRCST 2020	1,929	1,862	2,024	1,955	53.4%
FRCST 2021	1,947	1,883	2,044	1,976	53.6%
FRCST 2022	1,969	1,904	2,067	1,999	53.5%
FRCST 2023	1,991	1,926	2,090	2,021	53.5%
FRCST 2024	2,013	1,948	2,113	2,044	53.4%
FRCST 2025	2,036	1,970	2,137	2,068	53.5%
FRCST 2026	2,063	1,997	2,165	2,096	53.5%
FRCST 2027	2,090	2,024	2,194	2,124	53.4%
FRCST 2028	2,118	2,051	2,224	2,153	53.3%
FRCST 2029	2,147	2,080	2,254	2,183	53.4%
FRCST 2030	2,176	2,109	2,285	2,213	53.4%

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	<u>Adjusted for Systems HE EXT. COIN. 60 MINUTE DEMAND</u>		<u>Adjusted for Systems HE EXT. COIN. 60 MINUTE DEMAND</u>		ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)
	<u>Without Losses (% Chg)</u>	<u>With Losses (% Chg)</u>	<u>Without Losses (% Chg)</u>	<u>With Losses (% Chg)</u>	
1999 -2004	*****	*****	*****	*****	*****
2004 -2009	*****	*****	*****	*****	*****
2010 -2015	3.31%	3.64%	3.33%	3.66%	52.68%
2015 -2020	1.20%	1.15%	1.21%	1.16%	53.51%
2020 -2025	1.09%	1.13%	1.09%	1.13%	53.49%
2025 -2030	1.35%	1.37%	1.35%	1.37%	53.40%

1999 -2009	*****	*****	*****	*****	*****
2010 -2030	1.73%	1.82%	1.74%	1.82%	53.25%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

Values Adjusted for IN#72,IN#16,IN#92 and Special Industrial Loads  
Aggregated Member System Data  
NUMBER OF CONSUMERS

Values Adjusted for IN#72,IN#16,IN#92 and Special Industrial Loads  
Aggregated Member System Data  
SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	209,962	9,568	112	887	220,529	2,864,229	599,227	726,658	29,908	4,220,022
ACTUAL 2000	215,011	9,890	119	1,018	226,038	2,948,957	656,492	917,277	30,617	4,553,343
ACTUAL 2001	219,228	10,003	131	1,093	230,455	3,052,360	639,446	990,705	31,271	4,713,782
ACTUAL 2002	223,044	10,265	138	1,144	234,591	3,261,617	663,738	1,086,676	32,441	5,044,472
ACTUAL 2003	226,749	10,462	150	1,293	238,654	3,243,405	673,235	1,127,531	32,150	5,076,321
ACTUAL 2004	230,760	10,690	150	1,429	243,029	3,305,807	706,497	1,205,248	33,098	5,250,650
ACTUAL 2005	257,250	11,810	164	1,573	270,797	3,749,514	774,714	1,291,857	33,634	5,849,719
ACTUAL 2006	260,854	11,986	168	1,707	274,715	3,856,899	824,354	1,350,149	32,678	6,064,080
ACTUAL 2007	263,908	12,246	190	1,821	278,165	4,088,777	855,093	1,435,203	34,240	6,413,313
ACTUAL 2008	265,071	12,166	199	1,833	279,269	4,080,904	856,375	1,461,568	33,209	6,432,056
ACTUAL 2009	265,137	12,281	191	1,836	279,445	3,904,139	818,798	1,407,974	31,738	6,162,649
FRCST 2010	266,015	12,414	195	1,854	280,478	4,226,701	836,310	1,507,744	33,075	6,603,830
FRCST 2011	279,471	13,817	201	2,222	295,711	4,606,899	890,741	1,554,914	40,028	7,092,382
FRCST 2012	281,258	13,950	200	2,222	297,630	4,751,727	901,640	1,646,951	40,028	7,340,346
FRCST 2013	283,305	14,083	201	2,222	299,811	4,851,425	912,597	1,770,523	40,028	7,574,573
FRCST 2014	285,534	14,216	201	2,222	302,173	4,931,163	923,618	1,864,972	40,028	7,759,781
FRCST 2015	287,915	14,349	201	2,222	304,687	5,003,772	934,706	1,994,080	40,028	7,972,586
FRCST 2016	290,544	14,538	201	2,222	307,505	5,076,442	950,411	2,070,643	40,028	8,137,524
FRCST 2017	293,251	14,727	200	2,222	310,400	5,148,303	966,183	2,088,040	40,028	8,242,554
FRCST 2018	296,054	14,916	200	2,222	313,392	5,219,424	982,019	2,095,139	40,028	8,336,610
FRCST 2019	298,916	15,105	200	2,222	316,443	5,290,594	997,922	2,100,532	40,028	8,429,076
FRCST 2020	301,845	15,294	199	2,222	319,560	5,361,829	1,013,898	2,105,962	40,028	8,521,717
FRCST 2021	305,026	15,548	198	2,222	322,994	5,435,342	1,033,417	2,092,950	40,028	8,601,737
FRCST 2022	308,274	15,802	198	2,222	326,496	5,510,139	1,052,975	2,092,950	40,028	8,696,092
FRCST 2023	311,588	16,056	198	2,222	330,064	5,586,339	1,072,583	2,092,950	40,028	8,791,900
FRCST 2024	314,977	16,310	198	2,222	333,707	5,664,132	1,092,238	2,092,950	40,028	8,889,348
FRCST 2025	318,468	16,564	198	2,222	337,452	5,744,079	1,111,936	2,092,950	40,028	8,988,993
FRCST 2026	322,163	16,885	198	2,222	341,468	5,834,376	1,136,563	2,092,950	40,028	9,103,917
FRCST 2027	325,914	17,206	198	2,222	345,540	5,928,726	1,161,244	2,092,950	40,028	9,222,948
FRCST 2028	329,731	17,527	198	2,222	349,678	6,026,313	1,185,989	2,092,950	40,028	9,345,280
FRCST 2029	333,607	17,848	198	2,222	353,875	6,126,630	1,210,790	2,092,950	40,028	9,470,398
FRCST 2030	337,521	18,169	198	2,222	358,110	6,228,903	1,235,656	2,092,950	40,028	9,597,537

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

Adjusted for Systems -- AGGREGATED NUMBER OF CONSUMERS

Adjusted for Systems & Ind. -- AGGREGATED ENERGY SALES

TIME PERIOD	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT.CHG.)	OTHER (ACT.CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
1999 -2004	1.91%	2.24%	38	542	1.96%	2.91%	3.35%	10.65%	2.05%	4.47%
2004 -2009	2.82%	2.81%	41	407	2.83%	3.38%	2.99%	3.16%	-0.84%	3.25%
2010 -2015	1.59%	2.94%	6	368	1.67%	3.43%	2.25%	5.75%	3.89%	3.84%
2015 -2020	0.95%	1.28%	-2	0	0.96%	1.39%	1.64%	1.10%	0.00%	1.34%
2020 -2025	1.08%	1.61%	-1	0	1.10%	1.39%	1.86%	-0.12%	0.00%	1.07%
2025 -2030	1.17%	1.87%	0	0	1.20%	1.63%	2.13%	0.00%	0.00%	1.32%
1999 -2009	2.36%	2.53%	79	949	2.40%	3.15%	3.17%	6.84%	0.60%	3.86%
2010 -2030	1.20%	1.92%	3	368	1.23%	1.96%	1.97%	1.65%	0.96%	1.89%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN#72,IN#16,IN#92 and Special Industrial Loads

YEAR	AGGREGATED TOTAL MEMBER ENERGY PUR- CHASED (MWH)	ENERGY GEN- ERATED FOR MEMBERS (MWH)	H.E. 30 MINUTE COINCIDENT DEMAND (MW) (WITHOUT LOSSES)		H.E. COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984)				ANNUAL LOAD FACTOR
			WINTER	SUMMER	(WITHOUT LOSSES)		(WITH LOSSES)		
					WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999	4,457,464	4,641,824	884	984	874	974	913	1,023	51.8%
ACTUAL 2000	4,827,158	5,044,460	934	927	915	912	952	972	59.1%
ACTUAL 2001	4,932,180	5,152,284	987	1,004	976	992	1,022	1,045	56.3%
ACTUAL 2002	5,312,874	5,560,435	968	1,040	929	1,030	965	1,091	58.2%
ACTUAL 2003	5,338,729	5,576,113	1,079	1,040	1,061	1,027	1,106	1,079	57.6%
ACTUAL 2004	5,537,913	5,783,674	1,066	1,055	1,052	1,037	1,106	1,093	59.5%
ACTUAL 2005	6,139,397	6,383,924	1,138	1,305	1,109	1,291	1,150	1,355	53.8%
ACTUAL 2006	6,329,771	6,606,483	1,260	1,322	1,229	1,303	1,283	1,366	55.2%
ACTUAL 2007	6,739,285	7,044,089	1,354	1,337	1,321	1,334	1,387	1,397	57.6%
ACTUAL 2008	6,743,752	7,010,434	1,394	1,235	1,379	1,215	1,442	1,327	55.3%
ACTUAL 2009	6,461,195	6,725,634	1,465	1,232	1,465	1,229	1,525	1,292	50.3%
FRCST 2010	6,922,737	7,230,028	1,395	1,329	1,378	1,320	1,447	1,365	57.1%
FRCST 2011	7,437,060	7,755,042	1,490	1,432	1,472	1,422	1,546	1,493	57.2%
FRCST 2012	7,696,499	8,025,574	1,538	1,480	1,520	1,470	1,598	1,544	57.2%
FRCST 2013	7,942,086	8,281,662	1,580	1,528	1,561	1,517	1,640	1,594	57.6%
FRCST 2014	8,136,165	8,484,038	1,608	1,551	1,589	1,540	1,669	1,617	58.0%
FRCST 2015	8,359,462	8,716,883	1,649	1,597	1,629	1,586	1,711	1,666	58.1%
FRCST 2016	8,532,307	8,897,118	1,674	1,615	1,654	1,604	1,737	1,685	58.3%
FRCST 2017	8,642,513	9,012,036	1,696	1,638	1,677	1,626	1,761	1,708	58.4%
FRCST 2018	8,741,158	9,114,899	1,716	1,657	1,696	1,646	1,781	1,729	58.4%
FRCST 2019	8,838,131	9,216,019	1,735	1,677	1,715	1,665	1,802	1,749	58.4%
FRCST 2020	8,935,288	9,317,329	1,755	1,696	1,734	1,684	1,822	1,769	58.2%
FRCST 2021	9,019,411	9,405,049	1,772	1,715	1,752	1,703	1,840	1,789	58.4%
FRCST 2022	9,118,424	9,508,295	1,792	1,735	1,771	1,723	1,861	1,809	58.3%
FRCST 2023	9,218,955	9,613,125	1,813	1,755	1,791	1,743	1,882	1,830	58.3%
FRCST 2024	9,321,206	9,719,748	1,833	1,775	1,812	1,763	1,903	1,852	58.1%
FRCST 2025	9,425,773	9,828,785	1,854	1,796	1,833	1,784	1,925	1,873	58.3%
FRCST 2026	9,546,412	9,954,583	1,880	1,821	1,858	1,808	1,951	1,899	58.2%
FRCST 2027	9,671,355	10,084,867	1,905	1,846	1,883	1,833	1,977	1,925	58.2%
FRCST 2028	9,799,761	10,218,764	1,931	1,872	1,908	1,859	2,004	1,952	58.0%
FRCST 2029	9,931,094	10,355,712	1,958	1,898	1,935	1,885	2,032	1,980	58.2%
FRCST 2030	10,064,538	10,494,862	1,985	1,924	1,961	1,911	2,060	2,007	58.2%

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	Adjusted for Systems & Ind ENERGY PURCHASED (% CHG.)	Systems & Ind ENERGY GENERATED (% CHG.)	Adj. Sys. & Ind. - H.E. 30 MINUTE COINCIDENT DEMAND (MW) (WITHOUT LOSSES)		Adjusted for Sys. & Ind. - HE COIN. 60 MINUTE DEMAND Without Losses (% Chg) / With Losses (% Chg)				ADJUSTED ANNUAL LOAD FACTOR (AVERAGE)
			WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
2004 -2009	3.13%	3.06%	6.58%	3.15%	6.85%	3.46%	6.64%	3.40%	55.30%
2010 -2015	3.84%	3.81%	3.40%	3.75%	3.40%	3.75%	3.42%	3.76%	57.56%
2015 -2020	1.34%	1.34%	1.26%	1.21%	1.26%	1.21%	1.26%	1.21%	58.32%
2020 -2025	1.07%	1.07%	1.11%	1.15%	1.11%	1.15%	1.11%	1.15%	58.28%
2025 -2030	1.32%	1.32%	1.37%	1.39%	1.37%	1.39%	1.37%	1.39%	58.18%
1999 -2009	3.78%	3.78%	5.18%	2.27%	5.30%	2.35%	5.26%	2.36%	55.88%
2010 -2030	1.89%	1.88%	1.78%	1.87%	1.78%	1.87%	1.78%	1.87%	58.07%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN#72,IN#16,IN#92 and Special Industrial Loads

EXTREME COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984)

YEAR	(WITHOUT LOSSES)		(WITH LOSSES)		EXTREME ANNUAL LOAD FACTOR
	WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999	*****	*****	*****	*****	*****
ACTUAL 2000	*****	*****	*****	*****	*****
ACTUAL 2001	*****	*****	*****	*****	*****
ACTUAL 2002	*****	*****	*****	*****	*****
ACTUAL 2003	*****	*****	*****	*****	*****
ACTUAL 2004	*****	*****	*****	*****	*****
ACTUAL 2005	*****	*****	*****	*****	*****
ACTUAL 2006	*****	*****	*****	*****	*****
ACTUAL 2007	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****
FRCST 2010	1,518	1,445	1,593	1,517	51.8%
FRCST 2011	1,622	1,558	1,703	1,636	52.0%
FRCST 2012	1,672	1,609	1,757	1,690	52.0%
FRCST 2013	1,718	1,660	1,804	1,744	52.4%
FRCST 2014	1,747	1,683	1,835	1,768	52.8%
FRCST 2015	1,790	1,732	1,880	1,820	52.9%
FRCST 2016	1,813	1,748	1,904	1,836	53.2%
FRCST 2017	1,838	1,773	1,931	1,862	53.3%
FRCST 2018	1,859	1,794	1,953	1,885	53.3%
FRCST 2019	1,880	1,815	1,975	1,906	53.3%
FRCST 2020	1,901	1,836	1,997	1,928	53.1%
FRCST 2021	1,920	1,856	2,017	1,950	53.2%
FRCST 2022	1,941	1,877	2,039	1,972	53.2%
FRCST 2023	1,963	1,899	2,062	1,994	53.2%
FRCST 2024	1,986	1,921	2,086	2,018	53.1%
FRCST 2025	2,008	1,943	2,110	2,041	53.2%
FRCST 2026	2,036	1,970	2,138	2,069	53.1%
FRCST 2027	2,063	1,997	2,167	2,098	53.1%
FRCST 2028	2,091	2,025	2,196	2,127	53.0%
FRCST 2029	2,120	2,053	2,227	2,156	53.1%
FRCST 2030	2,149	2,082	2,257	2,187	53.1%

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

Adjusted for Sys. & Ind. HE EXT. COIN. 60 MINUTE DEMAND

ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)

TIME PERIOD	Without Losses (% Chg)		With Losses (% Chg)		ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)
	WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	*****	*****	*****	*****	*****
2004 -2009	*****	*****	*****	*****	*****
2010 -2015	3.35%	3.69%	3.37%	3.70%	52.32%
2015 -2020	1.21%	1.16%	1.21%	1.16%	53.18%
2020 -2025	1.10%	1.15%	1.10%	1.15%	53.17%
2025 -2030	1.36%	1.39%	1.36%	1.39%	53.10%
1999 -2009	*****	*****	*****	*****	*****
2010 -2030	1.75%	1.84%	1.76%	1.84%	52.92%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

YEAR	H.E. Time Factor Ratio from 30 to 60 Minute excludes pass-throughs (Est. before 1984)		PERCENTAGE of IN #72 Served by H.E.	IN #72 served by H.E. (Yes=0, No=1)		PERCENTAGE of IN #16 Served by H.E.	IN #16 served by H.E. (Yes=0, No=1)	
	WINTER	SUMMER		WINTER	SUMMER		WINTER	SUMMER
ACTUAL 1999	98.85%	98.99%	100.0%	0	0	100.0%	0	0
ACTUAL 2000	97.92%	98.42%	100.0%	0	0	100.0%	0	0
ACTUAL 2001	98.92%	98.85%	100.0%	0	0	100.0%	0	0
ACTUAL 2002	96.00%	99.02%	100.0%	0	0	100.0%	0	0
ACTUAL 2003	98.31%	98.80%	100.0%	0	0	100.0%	0	0
ACTUAL 2004	98.73%	98.31%	100.0%	0	0	100.0%	0	0
ACTUAL 2005	97.45%	98.93%	100.0%	0	0	100.0%	0	0
ACTUAL 2006	97.54%	98.57%	100.0%	0	0	100.0%	0	0
ACTUAL 2007	97.56%	99.78%	100.0%	0	0	100.0%	0	0
ACTUAL 2008	98.92%	98.38%	100.0%	0	0	100.0%	0	0
ACTUAL 2009	100.00%	99.76%	100.0%	0	0	100.0%	0	0
FRCST 2010	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2011	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2012	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2013	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2014	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2015	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2016	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2017	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2018	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2019	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2020	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2021	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2022	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2023	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2024	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2025	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2026	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2027	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2028	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2029	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2030	98.83%	99.30%	100.00%	0	0	100.00%	0	0

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	HE TIME FACTOR RATIO (30 to 60 MINUTE)	
	WINTER (AVERAGE)	SUMMER (AVERAGE)
1999 -2004	98.12%	98.73%
2004 -2009	98.37%	98.95%
2010 -2015	98.83%	99.30%
2015 -2020	98.83%	99.30%
2020 -2025	98.83%	99.30%
2025 -2030	98.83%	99.30%
1999 -2009	98.20%	98.89%
2010 -2030	98.83%	99.30%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

YEAR	PERCENTAGE of IN #92 Served by H.E.	IN #92 served by H.E. ( Yes=0 , No= 1 )		PERCENTAGE of IL #2 Served by H.E.	IL #2 served by H.E. ( Yes=0 , No= 1 )	
		WINTER	SUMMER		WINTER	SUMMER
ACTUAL 1999	0.0%	1	1	0.0%	1	1
ACTUAL 2000	0.0%	1	1	0.0%	1	1
ACTUAL 2001	0.0%	1	1	0.0%	1	1
ACTUAL 2002	0.0%	1	1	0.0%	1	1
ACTUAL 2003	0.0%	1	1	0.0%	1	1
ACTUAL 2004	0.0%	1	1	0.0%	1	1
ACTUAL 2005	51.0%	1	0	0.0%	1	1
ACTUAL 2006	100.0%	0	0	0.0%	1	1
ACTUAL 2007	100.0%	0	0	0.0%	1	1
ACTUAL 2008	100.0%	0	0	0.0%	1	1
ACTUAL 2009	100.0%	0	0	0.0%	1	1
FRCST 2010	100.00%	0	0	0.00%	1	1
FRCST 2011	100.00%	0	0	100.00%	0	0
FRCST 2012	100.00%	0	0	100.00%	0	0
FRCST 2013	100.00%	0	0	100.00%	0	0
FRCST 2014	100.00%	0	0	100.00%	0	0
FRCST 2015	100.00%	0	0	100.00%	0	0
FRCST 2016	100.00%	0	0	100.00%	0	0
FRCST 2017	100.00%	0	0	100.00%	0	0
FRCST 2018	100.00%	0	0	100.00%	0	0
FRCST 2019	100.00%	0	0	100.00%	0	0
FRCST 2020	100.00%	0	0	100.00%	0	0
FRCST 2021	100.00%	0	0	100.00%	0	0
FRCST 2022	100.00%	0	0	100.00%	0	0
FRCST 2023	100.00%	0	0	100.00%	0	0
FRCST 2024	100.00%	0	0	100.00%	0	0
FRCST 2025	100.00%	0	0	100.00%	0	0
FRCST 2026	100.00%	0	0	100.00%	0	0
FRCST 2027	100.00%	0	0	100.00%	0	0
FRCST 2028	100.00%	0	0	100.00%	0	0
FRCST 2029	100.00%	0	0	100.00%	0	0
FRCST 2030	100.00%	0	0	100.00%	0	0

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD

1999 -2004  
2004 -2009

2010 -2015  
2015 -2020  
2020 -2025  
2025 -2030

1999 -2009  
2010 -2030

**APPENDIX E**

**HEREC "BASE-SEVERE" DSM CASE SCENARIO TABLES  
HISTORICAL/FORECAST ANNUAL SUMMARY**

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 34 YEARS)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

Aggregated Member System Data  
NUMBER OF CONSUMERS

Aggregated Member System Data  
SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	242,823	11,747	129	1,225	255,924	3,301,206	679,879	954,026	113,744	5,048,855
ACTUAL 2000	248,463	12,109	139	1,363	262,074	3,408,837	742,554	1,177,210	116,332	5,444,933
ACTUAL 2001	253,162	12,265	155	1,444	267,026	3,522,968	729,098	1,261,060	113,891	5,627,017
ACTUAL 2002	257,347	12,533	163	1,501	271,544	3,772,856	750,481	1,372,372	117,598	6,013,307
ACTUAL 2003	261,300	12,711	176	1,654	275,841	3,744,229	760,700	1,406,637	112,443	6,024,009
ACTUAL 2004	265,436	12,930	173	1,793	280,332	3,816,332	797,926	1,498,284	112,624	6,225,166
ACTUAL 2005	269,261	13,031	173	1,934	284,399	4,087,081	833,664	1,583,193	44,652	6,548,590
ACTUAL 2006	272,892	13,211	177	2,070	288,350	3,997,738	859,810	1,632,862	37,999	6,528,409
ACTUAL 2007	275,983	13,481	199	2,186	291,849	4,235,636	896,961	1,706,767	41,253	6,880,617
ACTUAL 2008	277,143	13,424	208	2,202	292,977	4,225,769	896,208	1,712,574	38,855	6,873,406
ACTUAL 2009	277,179	13,547	200	2,204	293,130	4,049,085	862,271	1,638,530	36,404	6,586,290
FRCST 2010	278,058	13,684	204	2,222	294,168	4,344,680	875,689	1,747,689	40,028	7,008,086
FRCST 2011	279,471	13,817	202	2,222	295,712	4,542,630	876,942	1,728,364	40,028	7,187,964
FRCST 2012	281,258	13,950	201	2,222	297,631	4,669,867	876,919	1,822,016	40,028	7,408,829
FRCST 2013	283,305	14,083	202	2,222	299,812	4,761,667	873,736	1,947,217	40,028	7,622,648
FRCST 2014	285,534	14,216	202	2,222	302,174	4,824,729	869,406	2,043,312	40,028	7,777,474
FRCST 2015	287,915	14,349	202	2,222	304,688	4,881,390	866,521	2,174,080	40,028	7,962,018
FRCST 2016	290,544	14,538	202	2,222	307,506	4,951,803	869,701	2,251,632	40,028	8,113,164
FRCST 2017	293,251	14,727	201	2,222	310,401	5,014,604	874,029	2,270,024	40,028	8,198,685
FRCST 2018	296,054	14,916	201	2,222	313,393	5,076,990	880,017	2,278,123	40,028	8,275,159
FRCST 2019	298,916	15,105	201	2,222	316,444	5,141,251	886,229	2,284,521	40,028	8,352,029
FRCST 2020	301,845	15,294	200	2,222	319,561	5,201,285	893,425	2,290,962	40,028	8,425,700
FRCST 2021	305,026	15,548	199	2,222	322,995	5,263,292	904,834	2,277,950	40,028	8,486,104
FRCST 2022	308,274	15,802	199	2,222	326,497	5,326,628	917,035	2,277,950	40,028	8,561,642
FRCST 2023	311,588	16,056	199	2,222	330,065	5,391,820	929,722	2,277,950	40,028	8,639,520
FRCST 2024	314,977	16,310	199	2,222	333,708	5,459,657	944,143	2,277,950	40,028	8,721,778
FRCST 2025	318,468	16,564	199	2,222	337,453	5,531,267	960,507	2,277,950	40,028	8,809,752
FRCST 2026	322,163	16,885	199	2,222	341,469	5,616,001	988,782	2,277,950	40,028	8,922,761
FRCST 2027	325,914	17,206	199	2,222	345,541	5,709,587	1,018,713	2,277,950	40,028	9,046,277
FRCST 2028	329,731	17,527	199	2,222	349,679	5,808,814	1,052,172	2,277,950	40,028	9,178,964
FRCST 2029	333,607	17,848	199	2,222	353,876	5,911,907	1,087,062	2,277,950	40,028	9,316,947
FRCST 2030	337,521	18,169	199	2,222	358,111	6,017,006	1,120,796	2,277,950	40,028	9,455,780

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

AGGREGATED NUMBER OF CONSUMERS

AGGREGATED SYSTEM ENERGY SALES

TIME PERIOD	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT.CHG.)	OTHER (ACT.CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
1999 -2004	1.80%	1.94%	44	568	1.84%	2.94%	3.25%	9.45%	-0.20%	4.28%
2004 -2009	0.87%	0.94%	27	411	0.90%	1.19%	1.56%	1.81%	-20.22%	1.13%
2010 -2015	0.70%	0.95%	-2	0	0.71%	2.36%	-0.21%	4.46%	0.00%	2.59%
2015 -2020	0.95%	1.28%	-2	0	0.96%	1.28%	0.61%	1.05%	0.00%	1.14%
2020 -2025	1.08%	1.61%	-1	0	1.10%	1.24%	1.46%	-0.11%	0.00%	0.90%
2025 -2030	1.17%	1.87%	0	0	1.20%	1.70%	3.13%	0.00%	0.00%	1.43%
1999 -2009	1.33%	1.44%	71	979	1.37%	2.06%	2.41%	5.56%	-10.77%	2.69%
2010 -2030	0.97%	1.43%	-5	0	0.99%	1.64%	1.24%	1.33%	0.00%	1.51%

1971 : BEGINNING HISTORICAL DATA YEAR ?  
2009 : FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 : NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	AGGREGATED TOTAL MEMBER ENERGY PURCHASED (MWH)	TOTAL ENERGY GENERATED for H.E. MEMBERS (MWH)	HE SYSTEM AVERAGE MONTHLY LOSS FACTORS due to MEMBER SYSTEM LOAD (excludes pass-throughs)		H.E. AVERAGE WHOLESALE POWER COSTS (MILLS/MWH)	AGGREGATED MEMBER SYSTEM DEMANDS (WITHOUT LOSSES, 30 MINUTE DEMAND)			
			FOR ENERGY	FOR DEMAND		NONCOINCIDENT (MW)		COINCIDENT (MW) (EST. BEFORE 1984)	
						WINTER	SUMMER	WINTER	SUMMER
ACTUAL 1999	5,320,840	5,535,309	3.97%	4.54%	*****	1,117	1,223	1,037	1,155
ACTUAL 2000	5,758,389	6,009,930	4.31%	4.52%	*****	1,173	1,187	1,110	1,117
ACTUAL 2001	5,864,880	6,118,847	4.27%	4.53%	*****	1,285	1,274	1,178	1,187
ACTUAL 2002	6,314,792	6,600,361	4.45%	4.78%	*****	1,211	1,346	1,151	1,229
ACTUAL 2003	6,320,460	6,593,113	4.26%	4.26%	*****	1,354	1,313	1,265	1,229
ACTUAL 2004	6,549,574	6,831,431	4.25%	4.81%	*****	1,381	1,321	1,268	1,255
ACTUAL 2005	6,850,535	7,115,713	3.83%	4.22%	*****	1,429	1,472	1,335	1,393
ACTUAL 2006	6,802,245	7,091,068	4.19%	4.47%	*****	1,414	1,502	1,336	1,393
ACTUAL 2007	7,215,322	7,533,291	4.33%	4.84%	*****	1,533	1,558	1,421	1,403
ACTUAL 2008	7,193,537	7,471,337	3.80%	5.10%	*****	1,575	1,442	1,440	1,289
ACTUAL 2009	6,898,809	7,174,754	3.93%	4.86%	*****	1,674	1,453	1,519	1,307
FRCST 2010	7,339,322	7,657,452	4.25%	4.73%	68.830	1,573	1,519	1,446	1,399
FRCST 2011	7,528,760	7,843,247	4.10%	4.80%	70.910	1,606	1,556	1,477	1,433
FRCST 2012	7,759,692	8,083,983	4.10%	4.80%	75.360	1,646	1,607	1,511	1,466
FRCST 2013	7,983,830	8,317,636	4.10%	4.80%	79.430	1,674	1,627	1,537	1,495
FRCST 2014	8,145,991	8,486,660	4.10%	4.80%	82.230	1,714	1,651	1,546	1,501
FRCST 2015	8,339,593	8,688,468	4.10%	4.80%	83.810	1,740	1,666	1,569	1,531
FRCST 2016	8,497,949	8,853,553	4.10%	4.80%	85.486	1,774	1,674	1,584	1,536
FRCST 2017	8,587,671	8,947,068	4.10%	4.80%	87.196	1,785	1,685	1,594	1,545
FRCST 2018	8,667,835	9,030,617	4.10%	4.80%	88.940	1,795	1,694	1,602	1,553
FRCST 2019	8,748,425	9,114,610	4.10%	4.80%	90.719	1,805	1,703	1,610	1,560
FRCST 2020	8,825,644	9,195,087	4.10%	4.80%	92.533	1,819	1,717	1,622	1,572
FRCST 2021	8,889,192	9,261,353	4.10%	4.80%	94.384	1,827	1,728	1,630	1,583
FRCST 2022	8,968,467	9,344,017	4.10%	4.80%	96.271	1,841	1,742	1,642	1,596
FRCST 2023	9,050,193	9,429,237	4.10%	4.80%	98.197	1,855	1,758	1,655	1,610
FRCST 2024	9,136,498	9,519,232	4.10%	4.80%	100.161	1,870	1,776	1,668	1,627
FRCST 2025	9,228,823	9,615,505	4.10%	4.80%	102.164	1,887	1,796	1,684	1,644
FRCST 2026	9,347,447	9,739,200	4.10%	4.80%	102.164	1,910	1,822	1,705	1,669
FRCST 2027	9,477,076	9,874,372	4.10%	4.80%	102.164	1,937	1,850	1,730	1,695
FRCST 2028	9,616,314	10,019,563	4.10%	4.80%	102.164	1,967	1,880	1,758	1,723
FRCST 2029	9,761,100	10,170,540	4.10%	4.80%	102.164	2,000	1,911	1,788	1,753
FRCST 2030	9,906,777	10,322,446	4.10%	4.80%	102.164	2,033	1,944	1,819	1,783

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	AGGREGATED H.E. ENERGY TOTAL ENERGY GENERATED PURCHASED FOR MEMBERS (% CHG.)	H.E. ENERGY TOTAL ENERGY GENERATED FOR MEMBERS (% CHG.)	AVG. MONTHLY LOSS FACTORS due to MEMBERS		H.E. AVERAGE WHOLESALE POWER COSTS (% CHG.)	AGGREGATED MEMBER PEAK SEASONAL DEMANDS (WITHOUT LOSSES, 30 MINUTE DEMAND)			
			ENERGY (AVERAGE)	DEMAND (AVERAGE)		Non-Coincident (% Chg)		Coincident (% Chg)	
						WINTER	SUMMER	WINTER	SUMMER
1999 -2004	4.24%	4.30%	4.25%	4.57%	*****	4.34%	1.55%	4.09%	1.68%
2004 -2009	1.04%	0.99%	4.06%	4.71%	*****	3.92%	1.92%	3.68%	0.81%
2010 -2015	2.59%	2.56%	4.13%	4.79%	4.02%	2.05%	1.85%	1.65%	1.82%
2015 -2020	1.14%	1.14%	4.10%	4.80%	2.00%	0.89%	0.60%	0.66%	0.54%
2020 -2025	0.90%	0.90%	4.10%	4.80%	2.00%	0.74%	0.90%	0.75%	0.90%
2025 -2030	1.43%	1.43%	4.10%	4.80%	0.00%	1.49%	1.60%	1.56%	1.63%
1999 -2009	2.63%	2.63%	4.14%	4.63%	*****	4.13%	1.74%	3.88%	1.25%
2010 -2030	1.51%	1.50%	4.11%	4.79%	1.99%	1.29%	1.24%	1.15%	1.22%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

		HOOSIER ENERGY SYSTEM PEAK SEASONAL COINCIDENT DEMAND (MW) (All values are estimated 60 minute values)				H.E. ANNUAL LOAD FACTOR Due To COINCIDENT PEAK	HOOSIER ENERGY SYSTEM PEAK SEASONAL NON-COINCIDENT DEMAND (MW) (All values are estimated 60 minute values)				H.E. ANNUAL LOAD FACTOR Due To NON-COIN. PEAK
YEAR		WITHOUT LOSSES		WITH LOSSES			WITHOUT LOSSES		WITH LOSSES		
		WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER	
ACTUAL	1999	1,024	1,142	1,071	1,196	52.9%	1,103	1,209	1,154	1,266	49.9%
ACTUAL	2000	1,086	1,099	1,136	1,150	59.5%	1,149	1,167	1,202	1,221	56.0%
ACTUAL	2001	1,159	1,174	1,213	1,228	56.9%	1,271	1,259	1,329	1,317	52.5%
ACTUAL	2002	1,105	1,218	1,159	1,278	59.0%	1,161	1,334	1,217	1,399	53.9%
ACTUAL	2003	1,244	1,214	1,298	1,267	58.0%	1,332	1,298	1,390	1,354	54.2%
ACTUAL	2004	1,252	1,235	1,314	1,296	59.2%	1,364	1,300	1,432	1,364	54.3%
ACTUAL	2005	1,301	1,378	1,357	1,438	56.5%	1,393	1,456	1,453	1,519	53.5%
ACTUAL	2006	1,304	1,374	1,364	1,437	56.3%	1,380	1,481	1,443	1,548	52.3%
ACTUAL	2007	1,387	1,400	1,456	1,470	58.5%	1,496	1,555	1,571	1,632	52.7%
ACTUAL	2008	1,424	1,269	1,499	1,336	56.7%	1,558	1,420	1,640	1,494	51.9%
ACTUAL	2009	1,519	1,304	1,595	1,370	51.4%	1,674	1,450	1,758	1,522	46.6%
FRCST	2010	1,430	1,389	1,499	1,457	58.3%	1,554	1,509	1,630	1,582	53.6%
FRCST	2011	1,460	1,423	1,533	1,493	58.4%	1,588	1,546	1,666	1,622	53.7%
FRCST	2012	1,493	1,456	1,567	1,528	58.7%	1,627	1,596	1,707	1,675	53.9%
FRCST	2013	1,519	1,485	1,594	1,559	59.6%	1,655	1,616	1,736	1,695	54.7%
FRCST	2014	1,528	1,491	1,604	1,565	60.4%	1,694	1,639	1,778	1,720	54.5%
FRCST	2015	1,551	1,520	1,628	1,595	60.9%	1,720	1,654	1,805	1,736	54.9%
FRCST	2016	1,566	1,528	1,643	1,602	61.3%	1,754	1,663	1,841	1,745	54.8%
FRCST	2017	1,575	1,535	1,653	1,611	61.8%	1,765	1,674	1,852	1,756	55.2%
FRCST	2018	1,583	1,542	1,662	1,619	62.0%	1,774	1,683	1,862	1,766	55.4%
FRCST	2019	1,581	1,550	1,670	1,626	62.3%	1,784	1,692	1,873	1,775	55.6%
FRCST	2020	1,604	1,561	1,683	1,639	62.2%	1,798	1,705	1,887	1,789	55.5%
FRCST	2021	1,612	1,572	1,691	1,650	62.5%	1,806	1,716	1,895	1,801	55.8%
FRCST	2022	1,623	1,585	1,704	1,664	62.6%	1,819	1,731	1,909	1,816	55.9%
FRCST	2023	1,636	1,599	1,717	1,679	62.7%	1,833	1,746	1,924	1,833	55.9%
FRCST	2024	1,649	1,615	1,731	1,695	62.6%	1,849	1,764	1,940	1,851	55.9%
FRCST	2025	1,664	1,633	1,747	1,714	62.8%	1,866	1,783	1,958	1,871	56.1%
FRCST	2026	1,685	1,657	1,769	1,740	62.9%	1,888	1,809	1,981	1,899	56.1%
FRCST	2027	1,710	1,683	1,794	1,767	62.8%	1,914	1,837	2,009	1,928	56.1%
FRCST	2028	1,738	1,711	1,824	1,796	62.5%	1,945	1,867	2,041	1,959	55.9%
FRCST	2029	1,767	1,741	1,855	1,827	62.6%	1,977	1,898	2,075	1,992	56.0%
FRCST	2030	1,798	1,771	1,887	1,859	62.4%	2,009	1,930	2,109	2,026	55.9%

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	HOOSIER ENERGY COINCIDENT PEAK DEMAND (60 MINUTE VALUE, ALL VALUES EST.)				H.E. ANNUAL COINCIDENT LOAD FACTOR (AVERAGE)	HOOSIER ENERGY NON-COINCIDENT PEAK DEMAND (60 MINUTE VALUE, ALL VALUES EST.)				H.E. ANNUAL NON-COIN. LOAD FACTOR (AVERAGE)
	Without Losses (% Chg)		With Losses (% Chg)			Without Losses (% Chg)		With Losses (% Chg)		
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	4.10%	1.57%	4.16%	1.62%	57.57%	4.34%	1.45%	4.40%	1.50%	53.48%
2004 -2009	3.94%	1.10%	3.96%	1.12%	56.43%	4.18%	2.21%	4.20%	2.22%	51.87%
2010 -2015	1.65%	1.82%	1.66%	1.83%	59.38%	2.05%	1.85%	2.06%	1.87%	54.23%
2015 -2020	0.66%	0.54%	0.66%	0.54%	61.76%	0.89%	0.60%	0.89%	0.60%	55.21%
2020 -2025	0.75%	0.90%	0.75%	0.90%	62.58%	0.74%	0.90%	0.74%	0.90%	55.83%
2025 -2030	1.56%	1.63%	1.56%	1.63%	62.68%	1.49%	1.60%	1.49%	1.60%	56.00%
1999 -2009	4.02%	1.33%	4.06%	1.37%	56.80%	4.26%	1.83%	4.30%	1.86%	52.52%
2010 -2030	1.15%	1.22%	1.16%	1.23%	61.55%	1.29%	1.24%	1.30%	1.24%	55.29%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** BASE-SEVERE SCENARIO WITH DSM IMPACTS *****						***** BASE-SEVERE SCENARIO WITH DSM IMPACTS *****					
**** EXTREME TEMPERATURE CONDITIONS ****					H.E. ANNUAL LOAD FACTOR Due to EXTREME COINCIDENT PEAK	**** EXTREME TEMPERATURE CONDITIONS ****					H.E. ANNUAL LOAD FACTOR Due To EXTREME NON- COIN. PEAK
HOOSIER ENERGY SYSTEM PEAK SEASONAL COINCIDENT DEMAND (MW): 60 MINUTE VALUE (WITHOUT LOSSES)						HOOSIER ENERGY SYSTEM PEAK SEASONAL NON-COINCIDENT DEMAND (MW): 60 MINUTE VALUE (WITHOUT LOSSES)					
YEAR	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER		
ACTUAL 1999	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2000	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2001	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2002	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2003	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2004	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2005	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2006	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2007	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2008	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
FRCST 2010	1,574	1,521	1,651	1,595	52.9%	1,710	1,651	1,793	1,731	48.7%	
FRCST 2011	1,610	1,559	1,690	1,636	53.0%	1,749	1,692	1,835	1,776	48.8%	
FRCST 2012	1,646	1,595	1,728	1,674	53.3%	1,791	1,747	1,880	1,833	49.0%	
FRCST 2013	1,676	1,628	1,759	1,709	54.0%	1,823	1,769	1,913	1,857	49.6%	
FRCST 2014	1,686	1,634	1,770	1,715	54.7%	1,865	1,795	1,957	1,883	49.5%	
FRCST 2015	1,712	1,666	1,797	1,749	55.2%	1,893	1,812	1,987	1,901	49.9%	
FRCST 2016	1,725	1,670	1,810	1,753	55.7%	1,926	1,818	2,021	1,908	49.9%	
FRCST 2017	1,737	1,681	1,823	1,765	56.0%	1,939	1,831	2,035	1,922	50.2%	
FRCST 2018	1,747	1,690	1,833	1,774	56.2%	1,951	1,842	2,048	1,933	50.3%	
FRCST 2019	1,756	1,699	1,844	1,784	56.4%	1,963	1,853	2,060	1,944	50.5%	
FRCST 2020	1,770	1,713	1,858	1,798	56.3%	1,979	1,868	2,077	1,960	50.4%	
FRCST 2021	1,780	1,725	1,868	1,811	56.6%	1,988	1,881	2,086	1,974	50.7%	
FRCST 2022	1,793	1,740	1,882	1,826	56.7%	2,003	1,897	2,102	1,991	50.7%	
FRCST 2023	1,808	1,756	1,897	1,843	56.7%	2,019	1,914	2,119	2,009	50.8%	
FRCST 2024	1,823	1,773	1,913	1,861	56.6%	2,037	1,934	2,138	2,029	50.7%	
FRCST 2025	1,840	1,793	1,931	1,882	56.8%	2,055	1,955	2,157	2,052	50.9%	
FRCST 2026	1,863	1,819	1,956	1,910	56.9%	2,080	1,983	2,183	2,082	50.9%	
FRCST 2027	1,890	1,847	1,984	1,939	56.8%	2,109	2,013	2,214	2,113	50.9%	
FRCST 2028	1,920	1,877	2,016	1,971	56.6%	2,142	2,045	2,248	2,147	50.7%	
FRCST 2029	1,953	1,909	2,050	2,004	56.6%	2,176	2,079	2,285	2,182	50.8%	
FRCST 2030	1,985	1,942	2,084	2,038	56.5%	2,212	2,114	2,322	2,218	50.8%	

***** BASE-SEVERE SCENARIO WITH DSM IMPACTS *****						***** BASE-SEVERE SCENARIO WITH DSM IMPACTS *****					
**** EXTREME TEMPERATURE CONDITIONS ****					EXTREME COIN. H.E. ANNUAL LOAD FACTOR (AVERAGE)	**** EXTREME TEMPERATURE CONDITIONS ****					EXT. NON-COIN H.E. ANNUAL LOAD FACTOR (AVERAGE)
HOOSIER ENERGY COINCIDENT PEAK (60 MIN.) Without Losses (% Chg)						HOOSIER ENERGY NON-COINCIDENT PEAK (60 MIN.) Without Losses (% Chg)					
TIME PERIOD	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER		
1999 -2004	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2004 -2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2010 -2015	1.69%	1.85%	1.70%	1.86%	53.85%	2.06%	1.87%	2.08%	1.89%	49.26%	
2015 -2020	0.67%	0.55%	0.67%	0.55%	55.99%	0.88%	0.61%	0.88%	0.61%	50.20%	
2020 -2025	0.77%	0.92%	0.77%	0.92%	56.63%	0.76%	0.92%	0.76%	0.92%	50.70%	
2025 -2030	1.53%	1.60%	1.54%	1.61%	56.71%	1.48%	1.57%	1.48%	1.57%	50.84%	
1999 -2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2010 -2030	1.17%	1.23%	1.17%	1.23%	55.75%	1.29%	1.24%	1.30%	1.25%	50.23%	

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\* Adjusted for IN #72, IN #16 and IN#92 \*\*\*\*  
Aggregated Member System Data  
NUMBER OF CONSUMERS

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\* Adjusted for IN #72, IN #16 and IN#92 \*\*\*\*  
Aggregated Member System Data  
SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

	YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL	1999	209,962	9,568	112	887	220,529	2,864,229	599,227	862,060	29,908	4,355,424
ACTUAL	2000	215,011	9,890	120	1,018	226,039	2,948,957	656,492	1,088,160	30,617	4,724,226
ACTUAL	2001	219,228	10,003	132	1,093	230,456	3,052,360	639,446	1,164,603	31,271	4,887,680
ACTUAL	2002	223,044	10,265	139	1,144	234,592	3,261,817	663,738	1,272,906	32,441	5,230,702
ACTUAL	2003	226,749	10,462	151	1,293	238,655	3,243,405	673,235	1,316,094	32,150	5,264,884
ACTUAL	2004	230,760	10,690	151	1,429	243,030	3,305,807	706,497	1,403,535	33,098	5,448,937
ACTUAL	2005	257,250	11,810	165	1,573	270,798	3,749,514	774,714	1,484,489	33,634	6,042,351
ACTUAL	2006	260,854	11,986	169	1,707	274,716	3,856,899	824,354	1,545,582	32,678	6,259,513
ACTUAL	2007	263,908	12,246	191	1,821	278,166	4,088,777	855,093	1,620,151	34,240	6,598,261
ACTUAL	2008	265,071	12,166	200	1,833	279,270	4,080,904	856,375	1,630,203	33,209	6,600,691
ACTUAL	2009	265,137	12,281	192	1,836	279,446	3,904,139	818,798	1,584,440	31,738	6,319,115
FRCST	2010	266,015	12,414	196	1,854	280,479	4,185,998	832,096	1,680,134	33,075	6,731,303
FRCST	2011	279,471	13,817	202	2,222	295,712	4,542,630	876,942	1,728,364	40,028	7,187,964
FRCST	2012	281,258	13,950	201	2,222	297,631	4,669,867	876,919	1,822,016	40,028	7,408,829
FRCST	2013	283,305	14,083	202	2,222	299,812	4,761,667	873,736	1,947,217	40,028	7,622,648
FRCST	2014	285,534	14,216	202	2,222	302,174	4,824,729	869,406	2,043,312	40,028	7,777,474
FRCST	2015	287,915	14,349	202	2,222	304,688	4,881,390	866,521	2,174,080	40,028	7,962,018
FRCST	2016	290,544	14,538	202	2,222	307,506	4,951,803	869,701	2,251,632	40,028	8,113,164
FRCST	2017	293,251	14,727	201	2,222	310,401	5,014,604	874,029	2,270,024	40,028	8,198,685
FRCST	2018	296,054	14,916	201	2,222	313,393	5,076,990	880,017	2,278,123	40,028	8,275,159
FRCST	2019	298,916	15,105	201	2,222	316,444	5,141,251	886,229	2,284,521	40,028	8,352,029
FRCST	2020	301,845	15,294	200	2,222	319,561	5,201,285	893,425	2,290,962	40,028	8,425,700
FRCST	2021	305,026	15,548	199	2,222	322,995	5,263,292	904,834	2,277,950	40,028	8,486,104
FRCST	2022	308,274	15,802	199	2,222	326,497	5,326,628	917,035	2,277,950	40,028	8,561,642
FRCST	2023	311,588	16,056	199	2,222	330,065	5,391,820	929,722	2,277,950	40,028	8,639,520
FRCST	2024	314,977	16,310	199	2,222	333,708	5,459,657	944,143	2,277,950	40,028	8,721,778
FRCST	2025	318,468	16,564	199	2,222	337,453	5,531,267	960,507	2,277,950	40,028	8,809,752
FRCST	2026	322,163	16,885	199	2,222	341,469	5,616,001	988,782	2,277,950	40,028	8,922,761
FRCST	2027	325,914	17,206	199	2,222	345,541	5,709,587	1,018,713	2,277,950	40,028	9,046,277
FRCST	2028	329,731	17,527	199	2,222	349,679	5,808,814	1,052,172	2,277,950	40,028	9,178,964
FRCST	2029	333,607	17,848	199	2,222	353,876	5,911,907	1,087,062	2,277,950	40,028	9,316,947
FRCST	2030	337,521	18,169	199	2,222	358,111	6,017,006	1,120,796	2,277,950	40,028	9,455,780

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

Adjusted for Systems -- AGGREGATED NUMBER OF CONSUMERS

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

Adjusted for Systems -- AGGREGATED ENERGY SALES

TIME PERIOD	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT.CHG.)	OTHER (ACT.CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
1999 -2004	1.91%	2.24%	39	542	1.96%	2.91%	3.35%	10.24%	2.05%	4.58%
2004 -2009	2.82%	2.81%	41	407	2.83%	3.38%	2.99%	2.19%	-0.84%	3.01%
2010 -2015	1.59%	2.94%	6	368	1.67%	3.12%	0.81%	5.29%	3.89%	3.42%
2015 -2020	0.95%	1.28%	-2	0	0.98%	1.28%	0.61%	1.05%	0.00%	1.14%
2020 -2025	1.08%	1.61%	-1	0	1.10%	1.24%	1.46%	-0.11%	0.00%	0.90%
2025 -2030	1.17%	1.87%	0	0	1.20%	1.70%	3.13%	0.00%	0.00%	1.43%
1999 -2009	2.36%	2.53%	80	949	2.40%	3.15%	3.17%	6.14%	0.60%	3.79%
2010 -2030	1.20%	1.92%	3	368	1.23%	1.83%	1.50%	1.53%	0.96%	1.71%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN #72, IN # 16 and IN#92									
YEAR	AGGREGATED TOTAL MEMBER ENERGY PURCHASED (MWH)	ENERGY GENERATED FOR MEMBERS (MWH)	AGGREGATED MEMBER 30 MIN. COINCIDENT PEAK W/O LOSSES (MW)		HE COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984) (WITHOUT LOSSES)		HE COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984) (WITH LOSSES)		ANNUAL LOAD FACTOR
			WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999	4,592,866	4,777,226	900	1,004	888	993	929	1,039	52.5%
ACTUAL 2000	4,998,042	5,215,344	958	969	937	953	980	997	59.6%
ACTUAL 2001	5,106,079	5,326,182	1,023	1,032	1,006	1,020	1,052	1,067	57.0%
ACTUAL 2002	5,499,105	5,746,666	1,012	1,077	972	1,066	1,019	1,118	58.7%
ACTUAL 2003	5,527,292	5,764,676	1,102	1,072	1,084	1,059	1,130	1,105	58.2%
ACTUAL 2004	5,736,200	5,981,981	1,103	1,095	1,089	1,077	1,143	1,130	59.6%
ACTUAL 2005	6,332,029	6,576,556	1,172	1,333	1,142	1,319	1,191	1,376	54.6%
ACTUAL 2006	6,525,204	6,801,916	1,295	1,337	1,264	1,318	1,322	1,379	56.3%
ACTUAL 2007	6,924,233	7,229,037	1,384	1,341	1,351	1,338	1,418	1,405	58.2%
ACTUAL 2008	6,912,387	7,179,069	1,395	1,245	1,380	1,226	1,453	1,290	56.2%
ACTUAL 2009	6,617,661	6,882,100	1,472	1,247	1,472	1,243	1,546	1,306	50.8%
FRCST 2010	7,047,972	7,353,169	1,398	1,342	1,382	1,333	1,449	1,397	57.9%
FRCST 2011	7,528,760	7,843,247	1,477	1,433	1,460	1,423	1,533	1,493	58.4%
FRCST 2012	7,759,692	8,083,983	1,511	1,466	1,493	1,456	1,567	1,528	58.7%
FRCST 2013	7,983,830	8,317,636	1,537	1,495	1,519	1,485	1,594	1,559	59.6%
FRCST 2014	8,145,991	8,486,660	1,546	1,501	1,528	1,491	1,604	1,565	60.4%
FRCST 2015	8,339,593	8,688,468	1,569	1,531	1,551	1,520	1,628	1,595	60.9%
FRCST 2016	8,497,949	8,853,553	1,584	1,536	1,566	1,526	1,643	1,602	61.3%
FRCST 2017	8,587,671	8,947,068	1,594	1,545	1,575	1,535	1,653	1,611	61.8%
FRCST 2018	8,667,835	9,030,617	1,602	1,553	1,583	1,542	1,662	1,619	62.0%
FRCST 2019	8,748,425	9,114,610	1,610	1,560	1,591	1,550	1,670	1,626	62.3%
FRCST 2020	8,825,644	9,195,087	1,622	1,572	1,604	1,561	1,683	1,639	62.2%
FRCST 2021	8,889,192	9,261,353	1,630	1,583	1,612	1,572	1,691	1,650	62.5%
FRCST 2022	8,968,467	9,344,017	1,642	1,596	1,623	1,585	1,704	1,664	62.6%
FRCST 2023	9,050,193	9,429,237	1,655	1,610	1,636	1,599	1,717	1,679	62.7%
FRCST 2024	9,136,498	9,519,232	1,668	1,627	1,649	1,615	1,731	1,695	62.6%
FRCST 2025	9,228,823	9,615,505	1,684	1,644	1,664	1,633	1,747	1,714	62.8%
FRCST 2026	9,347,447	9,739,200	1,705	1,669	1,685	1,657	1,769	1,740	62.9%
FRCST 2027	9,477,076	9,874,372	1,730	1,695	1,710	1,683	1,794	1,767	62.8%
FRCST 2028	9,616,314	10,019,563	1,758	1,723	1,738	1,711	1,824	1,796	62.5%
FRCST 2029	9,761,100	10,170,540	1,788	1,753	1,767	1,741	1,855	1,827	62.6%
FRCST 2030	9,906,777	10,322,446	1,819	1,783	1,798	1,771	1,887	1,859	62.4%

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	Adjusted for Systems ENERGY PURCHASED (% CHG.)		Adjusted for Systems ENERGY AGGREGATED 30 MIN. COIN. PEAK W/O LOSSES (% CHG)		Adjusted for Systems - HE COIN. 60 MINUTE DEMAND Without Losses (% Chg)		Adjusted for Systems - HE COIN. 60 MINUTE DEMAND With Losses (% Chg)		ADJUSTED ANNUAL LOAD FACTOR (AVERAGE)
	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	4.55%	4.60%	4.15%	1.76%	4.17%	1.65%	4.23%	1.70%	57.58%
2004 -2009	2.90%	2.84%	5.94%	2.62%	6.21%	2.91%	6.23%	2.93%	55.96%
2010 -2015	3.42%	3.39%	2.35%	2.67%	2.35%	2.67%	2.36%	2.68%	59.32%
2015 -2020	1.14%	1.14%	0.66%	0.54%	0.66%	0.54%	0.66%	0.54%	61.76%
2020 -2025	0.90%	0.90%	0.75%	0.90%	0.75%	0.90%	0.75%	0.90%	62.58%
2025 -2030	1.43%	1.43%	1.56%	1.63%	1.56%	1.63%	1.56%	1.63%	62.68%
1999 -2009	3.72%	3.72%	5.05%	2.19%	5.19%	2.28%	5.22%	2.31%	56.51%
2010 -2030	1.72%	1.71%	1.33%	1.43%	1.33%	1.43%	1.33%	1.44%	61.53%

1971 : BEGINNING HISTORICAL DATA YEAR ?  
2009 : FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 : NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN #72, IN #16 and IN#92  
EXTREME COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984)  
(WITHOUT LOSSES) (WITH LOSSES) EXTREME ANNUAL LOAD FACTOR

YEAR	WINTER	SUMMER	WINTER	SUMMER	EXTREME ANNUAL LOAD FACTOR
ACTUAL 1999	*****	*****	*****	*****	*****
ACTUAL 2000	*****	*****	*****	*****	*****
ACTUAL 2001	*****	*****	*****	*****	*****
ACTUAL 2002	*****	*****	*****	*****	*****
ACTUAL 2003	*****	*****	*****	*****	*****
ACTUAL 2004	*****	*****	*****	*****	*****
ACTUAL 2005	*****	*****	*****	*****	*****
ACTUAL 2006	*****	*****	*****	*****	*****
ACTUAL 2007	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****
FRCST 2010	1,521	1,458	1,596	1,530	52.6%
FRCST 2011	1,610	1,559	1,690	1,636	53.0%
FRCST 2012	1,646	1,595	1,728	1,674	53.3%
FRCST 2013	1,676	1,628	1,759	1,709	54.0%
FRCST 2014	1,686	1,634	1,770	1,715	54.7%
FRCST 2015	1,712	1,666	1,797	1,749	55.2%
FRCST 2016	1,725	1,670	1,810	1,753	55.7%
FRCST 2017	1,737	1,681	1,823	1,765	56.0%
FRCST 2018	1,747	1,690	1,833	1,774	56.2%
FRCST 2019	1,756	1,699	1,844	1,784	56.4%
FRCST 2020	1,770	1,713	1,858	1,798	56.3%
FRCST 2021	1,780	1,725	1,868	1,811	56.6%
FRCST 2022	1,793	1,740	1,882	1,826	56.7%
FRCST 2023	1,808	1,756	1,897	1,843	56.7%
FRCST 2024	1,823	1,773	1,913	1,861	56.6%
FRCST 2025	1,840	1,793	1,931	1,882	56.8%
FRCST 2026	1,863	1,819	1,956	1,910	56.9%
FRCST 2027	1,890	1,847	1,984	1,939	56.8%
FRCST 2028	1,920	1,877	2,016	1,971	56.6%
FRCST 2029	1,953	1,909	2,050	2,004	56.6%
FRCST 2030	1,985	1,942	2,084	2,038	56.5%

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	<u>Adjusted for Systems HE EXT. COIN. 60 MINUTE DEMAND</u>		<u>Adjusted for Systems HE EXT. COIN. 60 MINUTE DEMAND</u>		ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)
	<u>Without Losses (% Chg)</u>	<u>With Losses (% Chg)</u>	<u>Without Losses (% Chg)</u>	<u>With Losses (% Chg)</u>	
1999 -2004	*****	*****	*****	*****	*****
2004 -2009	*****	*****	*****	*****	*****
2010 -2015	2.39%	2.70%	2.40%	2.72%	53.80%
2015 -2020	0.67%	0.55%	0.67%	0.55%	55.99%
2020 -2025	0.77%	0.92%	0.77%	0.92%	56.63%
2025 -2030	1.53%	1.60%	1.54%	1.61%	56.71%

1999 -2009	*****	*****	*****	*****	*****
2010 -2030	1.34%	1.44%	1.34%	1.45%	55.73%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

Values Adjusted for IN#72,IN#16,IN#92 and Special Industrial Loads  
Aggregated Member System Data  
NUMBER OF CONSUMERS

Values Adjusted for IN#72,IN#16,IN#92 and Special Industrial Loads  
Aggregated Member System Data  
SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	209,962	9,568	112	887	220,529	2,864,229	599,227	726,658	29,908	4,220,022
ACTUAL 2000	215,011	9,890	119	1,018	226,038	2,948,957	656,492	917,277	30,617	4,553,343
ACTUAL 2001	219,228	10,003	131	1,093	230,455	3,052,360	639,446	990,705	31,271	4,713,782
ACTUAL 2002	223,044	10,265	138	1,144	234,591	3,261,617	663,738	1,086,676	32,441	5,044,472
ACTUAL 2003	226,749	10,462	150	1,293	238,654	3,243,405	673,235	1,127,531	32,150	5,076,321
ACTUAL 2004	230,760	10,690	150	1,429	243,029	3,305,807	706,497	1,205,248	33,098	5,250,650
ACTUAL 2005	257,250	11,810	164	1,573	270,797	3,749,514	774,714	1,291,857	33,634	5,849,719
ACTUAL 2006	280,854	11,986	168	1,707	274,715	3,856,899	824,354	1,350,149	32,678	6,064,080
ACTUAL 2007	283,908	12,246	190	1,821	278,165	4,088,777	855,093	1,435,203	34,240	6,413,313
ACTUAL 2008	265,071	12,166	199	1,833	279,269	4,080,904	856,375	1,461,568	33,209	6,432,056
ACTUAL 2009	265,137	12,281	191	1,836	279,445	3,904,139	818,798	1,407,974	31,738	6,162,649
FRCST 2010	266,015	12,414	195	1,854	280,478	4,185,998	832,096	1,507,744	33,075	6,558,913
FRCST 2011	279,471	13,817	201	2,222	295,711	4,542,630	876,942	1,554,914	40,028	7,014,515
FRCST 2012	281,258	13,950	200	2,222	297,630	4,669,867	876,919	1,646,951	40,028	7,233,765
FRCST 2013	283,305	14,083	201	2,222	299,811	4,761,667	873,736	1,770,523	40,028	7,445,954
FRCST 2014	285,534	14,216	201	2,222	302,173	4,824,729	869,406	1,864,972	40,028	7,599,135
FRCST 2015	287,915	14,349	201	2,222	304,687	4,881,390	866,521	1,994,080	40,028	7,782,018
FRCST 2016	290,544	14,538	201	2,222	307,505	4,951,803	869,701	2,070,643	40,028	7,932,175
FRCST 2017	293,251	14,727	200	2,222	310,400	5,014,604	874,029	2,088,040	40,028	8,016,702
FRCST 2018	296,054	14,916	200	2,222	313,392	5,076,990	880,017	2,095,139	40,028	8,092,175
FRCST 2019	298,916	15,105	200	2,222	316,443	5,141,251	886,229	2,100,532	40,028	8,168,040
FRCST 2020	301,845	15,294	199	2,222	319,560	5,201,285	893,425	2,105,962	40,028	8,240,700
FRCST 2021	305,026	15,548	198	2,222	322,994	5,263,292	904,834	2,092,950	40,028	8,301,104
FRCST 2022	308,274	15,802	198	2,222	326,496	5,326,628	917,035	2,092,950	40,028	8,376,642
FRCST 2023	311,588	16,056	198	2,222	330,064	5,391,820	929,722	2,092,950	40,028	8,454,520
FRCST 2024	314,977	16,310	198	2,222	333,707	5,459,657	944,143	2,092,950	40,028	8,536,778
FRCST 2025	318,468	16,564	198	2,222	337,452	5,531,267	960,507	2,092,950	40,028	8,624,752
FRCST 2026	322,163	16,885	198	2,222	341,468	5,616,001	988,782	2,092,950	40,028	8,737,761
FRCST 2027	325,914	17,206	198	2,222	345,540	5,709,587	1,018,713	2,092,950	40,028	8,861,277
FRCST 2028	329,731	17,527	198	2,222	349,678	5,808,814	1,052,172	2,092,950	40,028	8,993,964
FRCST 2029	333,607	17,848	198	2,222	353,875	5,911,907	1,087,062	2,092,950	40,028	9,131,947
FRCST 2030	337,521	18,169	198	2,222	358,110	6,017,006	1,120,796	2,092,950	40,028	9,270,780

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

Adjusted for Systems -- AGGREGATED NUMBER OF CONSUMERS

Adjusted for Systems & Ind. -- AGGREGATED ENERGY SALES

TIME PERIOD	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT.CHG.)	OTHER (ACT.CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
1999 -2004	1.91%	2.24%	38	542	1.96%	2.91%	3.35%	10.65%	2.05%	4.47%
2004 -2009	2.82%	2.81%	41	407	2.83%	3.38%	2.99%	3.16%	-0.84%	3.25%
2010 -2015	1.59%	2.94%	6	368	1.67%	3.12%	0.81%	5.75%	3.89%	3.48%
2015 -2020	0.95%	1.28%	-2	0	0.96%	1.28%	0.61%	1.10%	0.00%	1.15%
2020 -2025	1.08%	1.61%	-1	0	1.10%	1.24%	1.46%	-0.12%	0.00%	0.92%
2025 -2030	1.17%	1.87%	0	0	1.20%	1.70%	3.13%	0.00%	0.00%	1.46%
1999 -2009	2.36%	2.53%	79	949	2.40%	3.15%	3.17%	6.84%	0.60%	3.86%
2010 -2030	1.20%	1.92%	3	368	1.23%	1.83%	1.50%	1.65%	0.96%	1.75%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	AGGREGATED TOTAL MEMBER ENERGY PURCHASED (MWH)	ENERGY GENERATED FOR MEMBERS (MWH)	Energy and Demand Values Adjusted for IN#72,IN#16,IN#92 and Special Industrial Loads						ANNUAL LOAD FACTOR
			H.E. 30 MINUTE COINCIDENT DEMAND (MW) (WITHOUT LOSSES)		H.E. COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984) (WITHOUT LOSSES)		H.E. COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984) (WITH LOSSES)		
			WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999	4,457,464	4,641,824	884	984	874	974	913	1,023	51.8%
ACTUAL 2000	4,827,158	5,044,460	934	927	915	912	952	972	59.1%
ACTUAL 2001	4,932,180	5,152,284	987	1,004	976	992	1,022	1,045	56.3%
ACTUAL 2002	5,312,874	5,560,435	968	1,040	929	1,030	965	1,091	58.2%
ACTUAL 2003	5,338,729	5,576,113	1,079	1,040	1,061	1,027	1,106	1,079	57.6%
ACTUAL 2004	5,537,913	5,783,674	1,066	1,055	1,052	1,037	1,106	1,093	59.5%
ACTUAL 2005	6,139,397	6,383,924	1,138	1,305	1,109	1,291	1,150	1,355	53.8%
ACTUAL 2006	6,329,771	6,606,483	1,260	1,322	1,229	1,303	1,283	1,366	55.2%
ACTUAL 2007	6,739,285	7,044,089	1,354	1,337	1,321	1,334	1,387	1,397	57.6%
ACTUAL 2008	6,743,752	7,010,434	1,394	1,235	1,379	1,215	1,442	1,327	55.3%
ACTUAL 2009	6,461,195	6,725,634	1,465	1,232	1,465	1,229	1,525	1,292	50.3%
FRCST 2010	6,875,582	7,180,779	1,372	1,317	1,356	1,308	1,423	1,372	57.6%
FRCST 2011	7,355,310	7,669,797	1,452	1,408	1,435	1,398	1,507	1,468	58.1%
FRCST 2012	7,584,627	7,908,919	1,485	1,440	1,467	1,430	1,541	1,502	58.4%
FRCST 2013	7,807,136	8,140,941	1,511	1,470	1,493	1,460	1,568	1,533	59.3%
FRCST 2014	7,967,652	8,308,320	1,520	1,475	1,502	1,465	1,578	1,539	60.1%
FRCST 2015	8,159,593	8,508,468	1,543	1,504	1,525	1,494	1,602	1,569	60.6%
FRCST 2016	8,316,960	8,672,564	1,557	1,510	1,539	1,500	1,616	1,575	61.1%
FRCST 2017	8,405,687	8,765,085	1,567	1,519	1,548	1,509	1,626	1,585	61.5%
FRCST 2018	8,484,851	8,847,633	1,575	1,526	1,556	1,516	1,635	1,592	61.8%
FRCST 2019	8,584,436	8,930,621	1,583	1,534	1,564	1,523	1,643	1,600	62.1%
FRCST 2020	8,640,644	9,010,087	1,595	1,545	1,576	1,535	1,656	1,612	62.0%
FRCST 2021	8,704,192	9,076,353	1,603	1,556	1,584	1,545	1,664	1,623	62.3%
FRCST 2022	8,783,467	9,159,017	1,615	1,569	1,596	1,558	1,676	1,637	62.4%
FRCST 2023	8,865,193	9,244,237	1,627	1,584	1,608	1,573	1,689	1,652	62.5%
FRCST 2024	8,951,498	9,334,232	1,641	1,600	1,622	1,589	1,703	1,669	62.4%
FRCST 2025	9,043,823	9,430,505	1,656	1,618	1,637	1,606	1,719	1,687	62.6%
FRCST 2026	9,162,447	9,554,200	1,677	1,642	1,658	1,631	1,741	1,713	62.6%
FRCST 2027	9,292,076	9,689,372	1,702	1,668	1,682	1,656	1,767	1,740	62.6%
FRCST 2028	9,431,314	9,834,563	1,731	1,696	1,710	1,685	1,796	1,769	62.3%
FRCST 2029	9,576,100	9,985,540	1,761	1,726	1,740	1,714	1,828	1,800	62.4%
FRCST 2030	9,721,777	10,137,446	1,791	1,756	1,771	1,744	1,860	1,832	62.2%

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	Adjusted for Systems & Ind ENERGY PURCHASED (% CHG.)	Systems & Ind ENERGY GENERATED (% CHG.)	Adj. Sys. & Ind. - H.E. 30 MINUTE COINCIDENT DEMAND (MW) (WITHOUT LOSSES)		Adjusted for Sys. & Ind. - HE COIN. 60 MINUTE DEMAND Without Losses (% Chg)		HE COIN. 60 MINUTE DEMAND With Losses (% Chg)		ADJUSTED ANNUAL LOAD FACTOR (AVERAGE)
			WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	4.44%	4.50%	3.80%	1.40%	3.78%	1.26%	3.91%	1.33%	57.07%
2004 -2009	3.13%	3.06%	6.58%	3.15%	6.85%	3.46%	6.64%	3.40%	55.30%
2010 -2015	3.48%	3.45%	2.37%	2.70%	2.37%	2.70%	2.39%	2.72%	59.02%
2015 -2020	1.15%	1.15%	0.67%	0.54%	0.67%	0.54%	0.67%	0.54%	61.51%
2020 -2025	0.92%	0.92%	0.76%	0.92%	0.76%	0.92%	0.76%	0.92%	62.34%
2025 -2030	1.46%	1.46%	1.58%	1.66%	1.58%	1.66%	1.58%	1.66%	62.46%
1999 -2009	3.78%	3.78%	5.18%	2.27%	5.30%	2.35%	5.26%	2.36%	55.88%
2010 -2030	1.75%	1.74%	1.34%	1.45%	1.34%	1.45%	1.35%	1.45%	61.27%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN#72,IN#16,IN#92 and Special Industrial Loads

EXTREME COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984)

YEAR	(WITHOUT LOSSES)		(WITH LOSSES)		EXTREME ANNUAL LOAD FACTOR
	WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999	*****	*****	*****	*****	*****
ACTUAL 2000	*****	*****	*****	*****	*****
ACTUAL 2001	*****	*****	*****	*****	*****
ACTUAL 2002	*****	*****	*****	*****	*****
ACTUAL 2003	*****	*****	*****	*****	*****
ACTUAL 2004	*****	*****	*****	*****	*****
ACTUAL 2005	*****	*****	*****	*****	*****
ACTUAL 2006	*****	*****	*****	*****	*****
ACTUAL 2007	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****
FRCST 2010	1,496	1,433	1,570	1,505	52.2%
FRCST 2011	1,584	1,534	1,664	1,611	52.6%
FRCST 2012	1,620	1,569	1,702	1,648	52.9%
FRCST 2013	1,649	1,602	1,733	1,683	53.6%
FRCST 2014	1,660	1,608	1,743	1,689	54.4%
FRCST 2015	1,685	1,640	1,770	1,723	54.9%
FRCST 2016	1,698	1,644	1,783	1,727	55.4%
FRCST 2017	1,710	1,655	1,796	1,738	55.7%
FRCST 2018	1,720	1,664	1,806	1,748	55.9%
FRCST 2019	1,729	1,673	1,816	1,757	56.1%
FRCST 2020	1,743	1,686	1,831	1,771	56.0%
FRCST 2021	1,752	1,698	1,841	1,784	56.3%
FRCST 2022	1,766	1,713	1,855	1,799	56.4%
FRCST 2023	1,780	1,729	1,870	1,816	56.4%
FRCST 2024	1,796	1,747	1,886	1,835	56.3%
FRCST 2025	1,813	1,766	1,904	1,855	56.5%
FRCST 2026	1,836	1,793	1,928	1,883	56.6%
FRCST 2027	1,863	1,820	1,956	1,912	56.5%
FRCST 2028	1,893	1,851	1,988	1,944	56.3%
FRCST 2029	1,925	1,882	2,022	1,977	56.4%
FRCST 2030	1,958	1,915	2,057	2,011	56.3%

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO RESULTS \*\*\*\*\*

Adjusted for Sys. & Ind. HE EXT. COIN. 60 MINUTE DEMAND

ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)

TIME PERIOD	Without Losses (% Chg)		With Losses (% Chg)		ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)
	WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	*****	*****	*****	*****	*****
2004 -2009	*****	*****	*****	*****	*****
2010 -2015	2.41%	2.73%	2.43%	2.75%	53.44%
2015 -2020	0.67%	0.55%	0.67%	0.56%	55.67%
2020 -2025	0.79%	0.93%	0.79%	0.93%	56.33%
2025 -2030	1.56%	1.63%	1.56%	1.63%	56.43%
1999 -2009	*****	*****	*****	*****	*****
2010 -2030	1.36%	1.46%	1.36%	1.46%	55.42%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	H.E. Time Factor Ratio from 30 to 60 Minute excludes pass-throughs (Est. before 1984)		PERCENTAGE of IN #72 Served by H.E.	IN #72 served by H.E. ( Yes=0, No= 1 )		PERCENTAGE of IN #16 Served by H.E.	IN #16 served by H.E. ( Yes=0, No= 1 )	
	WINTER	SUMMER		WINTER	SUMMER		WINTER	SUMMER
ACTUAL 1999	98.85%	98.99%	100.0%	0	0	100.0%	0	0
ACTUAL 2000	97.92%	98.42%	100.0%	0	0	100.0%	0	0
ACTUAL 2001	98.92%	98.85%	100.0%	0	0	100.0%	0	0
ACTUAL 2002	96.00%	99.02%	100.0%	0	0	100.0%	0	0
ACTUAL 2003	98.31%	98.80%	100.0%	0	0	100.0%	0	0
ACTUAL 2004	98.73%	98.31%	100.0%	0	0	100.0%	0	0
ACTUAL 2005	97.45%	98.93%	100.0%	0	0	100.0%	0	0
ACTUAL 2006	97.54%	98.57%	100.0%	0	0	100.0%	0	0
ACTUAL 2007	97.56%	99.78%	100.0%	0	0	100.0%	0	0
ACTUAL 2008	98.92%	98.38%	100.0%	0	0	100.0%	0	0
ACTUAL 2009	100.00%	99.76%	100.0%	0	0	100.0%	0	0
FRCST 2010	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2011	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2012	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2013	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2014	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2015	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2016	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2017	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2018	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2019	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2020	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2021	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2022	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2023	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2024	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2025	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2026	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2027	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2028	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2029	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2030	98.83%	99.30%	100.00%	0	0	100.00%	0	0

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	HE TIME FACTOR RATIO (30 to 60 MINUTE)	
	WINTER (AVERAGE)	SUMMER (AVERAGE)
1999 -2004	98.12%	98.73%
2004 -2009	98.37%	98.95%
2010 -2015	98.83%	99.30%
2015 -2020	98.83%	99.30%
2020 -2025	98.83%	99.30%
2025 -2030	98.83%	99.30%
1999 -2009	98.20%	98.89%
2010 -2030	98.83%	99.30%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	PERCENTAGE of IN #92 Served by H.E.	IN #92 served by H.E. (Yes=0, No=1)		PERCENTAGE of IL #2 Served by H.E.	IL #2 served by H.E. (Yes=0, No=1)	
		WINTER	SUMMER		WINTER	SUMMER
ACTUAL 1999	0.0%	1	1	0.0%	1	1
ACTUAL 2000	0.0%	1	1	0.0%	1	1
ACTUAL 2001	0.0%	1	1	0.0%	1	1
ACTUAL 2002	0.0%	1	1	0.0%	1	1
ACTUAL 2003	0.0%	1	1	0.0%	1	1
ACTUAL 2004	0.0%	1	1	0.0%	1	1
ACTUAL 2005	51.0%	1	0	0.0%	1	1
ACTUAL 2006	100.0%	0	0	0.0%	1	1
ACTUAL 2007	100.0%	0	0	0.0%	1	1
ACTUAL 2008	100.0%	0	0	0.0%	1	1
ACTUAL 2009	100.0%	0	0	0.0%	1	1
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FRCST 2010	100.00%	0	0	0.00%	1	1
FRCST 2011	100.00%	0	0	100.00%	0	0
FRCST 2012	100.00%	0	0	100.00%	0	0
FRCST 2013	100.00%	0	0	100.00%	0	0
FRCST 2014	100.00%	0	0	100.00%	0	0
FRCST 2015	100.00%	0	0	100.00%	0	0
FRCST 2016	100.00%	0	0	100.00%	0	0
FRCST 2017	100.00%	0	0	100.00%	0	0
FRCST 2018	100.00%	0	0	100.00%	0	0
FRCST 2019	100.00%	0	0	100.00%	0	0
FRCST 2020	100.00%	0	0	100.00%	0	0
FRCST 2021	100.00%	0	0	100.00%	0	0
FRCST 2022	100.00%	0	0	100.00%	0	0
FRCST 2023	100.00%	0	0	100.00%	0	0
FRCST 2024	100.00%	0	0	100.00%	0	0
FRCST 2025	100.00%	0	0	100.00%	0	0
FRCST 2026	100.00%	0	0	100.00%	0	0
FRCST 2027	100.00%	0	0	100.00%	0	0
FRCST 2028	100.00%	0	0	100.00%	0	0
FRCST 2029	100.00%	0	0	100.00%	0	0
FRCST 2030	100.00%	0	0	100.00%	0	0

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD

1999 -2004  
2004 -2009

2010 -2015  
2015 -2020  
2020 -2025  
2025 -2030

1999 -2009  
2010 -2030

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

DSM EE Program Energy Impact

DSM Demand Impacts-- Both EE & DR Programs)  
Coincident 60 Minute Demand MW

YEAR	Aggregated Total Member Energy		Total Member Energy		Savings w/o Losses		Savings with Losses	
	Purchased Savings MWH	Percent of Total	Generated Savings MWH	Percent of Total	Winter	Summer	Winter	Summer
ACTUAL 1999								
ACTUAL 2000								
ACTUAL 2001								
ACTUAL 2002								
ACTUAL 2003								
ACTUAL 2004								
ACTUAL 2005								
ACTUAL 2006								
ACTUAL 2007								
ACTUAL 2008								
ACTUAL 2009								
FRCST 2010	47,155	0.7%	49,248	0.7%	22.515	12.187	23.631	12.792
FRCST 2011	81,750	1.1%	85,245	1.1%	37.975	23.890	39.889	25.093
FRCST 2012	111,872	1.5%	116,655	1.5%	53.018	39.908	55.688	41.919
FRCST 2013	134,951	1.7%	140,721	1.7%	69.186	58.148	72.672	61.079
FRCST 2014	168,513	2.1%	175,718	2.1%	87.761	75.440	92.184	79.242
FRCST 2015	199,869	2.4%	208,415	2.4%	105.721	92.709	111.049	97.381
FRCST 2016	215,347	2.5%	224,554	2.5%	116.598	104.956	122.474	110.246
FRCST 2017	236,826	2.7%	246,952	2.7%	129.595	118.699	136.126	124.681
FRCST 2018	256,307	2.9%	267,266	2.9%	141.288	131.145	148.408	137.754
FRCST 2019	273,695	3.1%	285,397	3.1%	152.765	143.050	160.464	150.259
FRCST 2020	294,644	3.3%	307,242	3.3%	160.071	150.607	168.138	158.197
FRCST 2021	315,219	3.5%	328,696	3.5%	169.286	158.804	177.817	168.807
FRCST 2022	334,957	3.7%	349,278	3.7%	177.509	165.605	186.455	173.846
FRCST 2023	353,763	3.8%	368,888	3.8%	185.273	171.092	194.610	179.714
FRCST 2024	369,708	4.0%	385,516	4.0%	192.204	175.352	201.890	184.189
FRCST 2025	381,950	4.1%	398,281	4.1%	198.084	178.333	208.067	187.320
FRCST 2026	383,966	4.0%	400,383	4.0%	202.224	178.852	212.415	187.865
FRCST 2027	379,279	3.9%	395,496	3.9%	202.695	177.884	212.909	186.848
FRCST 2028	368,448	3.8%	384,201	3.8%	200.366	175.228	210.463	184.059
FRCST 2029	354,993	3.6%	370,172	3.6%	196.817	171.870	206.735	180.531
FRCST 2030	342,761	3.4%	357,417	3.4%	193.128	168.144	202.861	176.617

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD

1999 -2004  
2004 -2009

2010 -2015  
2015 -2020  
2020 -2025  
2025 -2030

1999 -2009  
2010 -2030

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-SEVERE SCENARIO WITH DSM IMPACTS \*\*\*\*\*

DSM -- EE Program Demand Impacts  
Coincident 60 Minute Demand MW

DSM -- DR Program Demand Impacts  
Coincident 60 Minute Demand MW

YEAR	Savings w/o Losses		Savings with Losses		Savings w/o Losses		Savings with Losses	
	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer
ACTUAL 1999								
ACTUAL 2000								
ACTUAL 2001								
ACTUAL 2002								
ACTUAL 2003								
ACTUAL 2004								
ACTUAL 2005								
ACTUAL 2006								
ACTUAL 2007								
ACTUAL 2008								
ACTUAL 2009								
FRCST 2010	20.094	8.866	21.091	9.305	2.421	3.322	2.541	3.487
FRCST 2011	31.653	15.483	33.249	16.263	6.322	8.407	6.641	8.830
FRCST 2012	42.118	21.830	44.241	22.930	10.898	18.078	11.447	18.989
FRCST 2013	49.965	27.978	52.483	29.388	19.221	30.170	20.189	31.691
FRCST 2014	61.008	35.447	64.082	37.233	26.754	39.994	28.102	42.009
FRCST 2015	71.421	42.520	75.021	44.662	34.300	50.190	36.028	52.719
FRCST 2016	77.833	47.586	81.756	49.984	38.765	57.370	40.718	60.262
FRCST 2017	85.273	53.026	89.570	55.698	44.322	65.673	46.555	68.982
FRCST 2018	92.375	58.073	97.030	60.999	48.912	73.072	51.377	76.754
FRCST 2019	99.170	62.454	104.168	65.601	53.595	80.596	56.296	84.658
FRCST 2020	103.760	65.080	108.989	68.359	56.311	85.527	59.148	89.837
FRCST 2021	110.785	69.340	116.368	72.835	58.501	89.464	61.449	93.973
FRCST 2022	117.571	73.147	123.496	76.833	59.938	92.358	62.958	97.012
FRCST 2023	124.496	76.815	130.770	80.686	60.777	94.277	63.840	99.028
FRCST 2024	131.019	79.987	137.622	84.017	61.185	95.365	64.268	100.171
FRCST 2025	136.611	82.358	143.496	86.508	61.473	95.975	64.571	100.812
FRCST 2026	140.546	82.416	147.629	86.569	61.678	96.436	64.786	101.295
FRCST 2027	140.853	81.059	147.952	85.144	61.841	96.825	64.958	101.704
FRCST 2028	138.460	78.187	145.438	82.127	61.905	97.041	65.025	101.932
FRCST 2029	134.939	74.738	141.739	78.504	61.878	97.132	64.996	102.027
FRCST 2030	131.732	71.649	138.371	75.260	61.396	96.494	64.490	101.357

TIME PERIOD

1999 -2004  
2004 -2009

2010 -2015  
2015 -2020  
2020 -2025  
2025 -2030

1999 -2009  
2010 -2030

## Appendix F

### Historical/Forecast Annual Values Summary Base Mild Case

**Appendix F: Historical/Forecast Annual Values Summary  
Base Mild Case**

**APPENDIX F**

**HEREC "BASE-MILD" CASE SCENARIO TABLES  
HISTORICAL/FORECAST ANNUAL SUMMARY**

MENU

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 34 YEARS)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

Aggregated Member System Data  
NUMBER OF CONSUMERS

Aggregated Member System Data  
SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

	YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL	1999	242,823	11,747	129	1,225	255,924	3,301,206	679,879	954,026	113,744	5,048,855
ACTUAL	2000	248,463	12,109	139	1,363	262,074	3,408,837	742,554	1,177,210	118,332	5,444,933
ACTUAL	2001	253,162	12,265	155	1,444	267,026	3,522,968	729,098	1,261,060	113,891	5,627,017
ACTUAL	2002	257,347	12,533	163	1,501	271,544	3,772,856	750,481	1,372,372	117,598	6,013,307
ACTUAL	2003	261,300	12,711	176	1,654	275,841	3,744,229	760,700	1,406,637	112,443	6,024,009
ACTUAL	2004	265,436	12,930	173	1,793	280,332	3,816,332	797,926	1,498,284	112,624	6,225,166
ACTUAL	2005	269,261	13,031	173	1,934	284,399	4,087,081	833,664	1,583,193	44,652	6,548,590
ACTUAL	2006	272,892	13,211	177	2,070	288,350	3,997,738	859,810	1,632,862	37,999	6,528,409
ACTUAL	2007	275,983	13,481	199	2,186	291,849	4,235,636	896,961	1,706,767	41,253	6,880,617
ACTUAL	2008	277,143	13,424	208	2,202	292,977	4,225,769	896,208	1,712,574	38,855	6,873,406
ACTUAL	2009	277,179	13,547	200	2,204	293,130	4,049,085	862,271	1,638,530	36,404	6,586,290
FRCST	2010	278,058	13,684	204	2,222	294,168	3,738,337	879,903	1,747,689	40,028	6,405,957
FRCST	2011	279,471	13,817	202	2,222	295,712	3,609,943	890,741	1,728,364	40,028	6,269,076
FRCST	2012	281,258	13,950	201	2,222	297,631	3,580,436	901,640	1,822,016	40,028	6,324,120
FRCST	2013	283,305	14,083	202	2,222	299,812	3,548,622	912,597	1,947,217	40,028	6,448,464
FRCST	2014	285,534	14,216	202	2,222	302,174	3,559,985	923,618	2,043,312	40,028	6,566,943
FRCST	2015	287,915	14,349	202	2,222	304,688	3,586,240	934,706	2,174,080	40,028	6,735,054
FRCST	2016	290,544	14,538	202	2,222	307,506	3,623,392	950,411	2,251,632	40,028	6,865,463
FRCST	2017	293,251	14,727	201	2,222	310,401	3,685,940	966,183	2,270,024	40,028	6,942,175
FRCST	2018	296,054	14,916	201	2,222	313,393	3,711,277	982,019	2,278,123	40,028	7,011,447
FRCST	2019	298,916	15,105	201	2,222	316,444	3,758,545	997,922	2,284,521	40,028	7,081,016
FRCST	2020	301,845	15,294	200	2,222	319,561	3,807,021	1,013,898	2,290,962	40,028	7,151,909
FRCST	2021	305,026	15,548	199	2,222	322,995	3,858,052	1,033,417	2,277,950	40,028	7,209,447
FRCST	2022	308,274	15,802	199	2,222	326,497	3,910,326	1,052,975	2,277,950	40,028	7,281,279
FRCST	2023	311,588	16,056	199	2,222	330,065	3,963,812	1,072,583	2,277,950	40,028	7,354,373
FRCST	2024	314,977	16,310	199	2,222	333,708	4,018,584	1,092,238	2,277,950	40,028	7,428,800
FRCST	2025	318,468	16,564	199	2,222	337,453	4,074,988	1,111,936	2,277,950	40,028	7,504,902
FRCST	2026	322,163	16,885	199	2,222	341,469	4,138,851	1,136,563	2,277,950	40,028	7,593,392
FRCST	2027	325,914	17,206	199	2,222	345,541	4,205,597	1,161,244	2,277,950	40,028	7,684,819
FRCST	2028	329,731	17,527	199	2,222	349,679	4,274,656	1,185,989	2,277,950	40,028	7,778,623
FRCST	2029	333,607	17,848	199	2,222	353,876	4,345,661	1,210,790	2,277,950	40,028	7,874,429
FRCST	2030	337,521	18,169	199	2,222	358,111	4,418,069	1,235,656	2,277,950	40,028	7,971,703

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

AGGREGATED NUMBER OF CONSUMERS

AGGREGATED SYSTEM ENERGY SALES

TIME PERIOD	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT.CHG.)	OTHER (ACT.CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
1999 -2004	1.80%	1.94%	44	568	1.84%	2.94%	3.25%	9.45%	-0.20%	4.28%
2004 -2009	0.87%	0.94%	27	411	0.90%	1.19%	1.56%	1.81%	-20.22%	1.13%
2010 -2015	0.70%	0.95%	-2	0	0.71%	-0.83%	1.22%	4.46%	0.00%	1.01%
2015 -2020	0.95%	1.28%	-2	0	0.96%	1.20%	1.64%	1.05%	0.00%	1.21%
2020 -2025	1.08%	1.61%	-1	0	1.10%	1.37%	1.86%	-0.11%	0.00%	0.97%
2025 -2030	1.17%	1.87%	0	0	1.20%	1.63%	2.13%	0.00%	0.00%	1.21%
1999 -2009	1.33%	1.44%	71	979	1.37%	2.06%	2.41%	5.56%	-10.77%	2.69%
2010 -2030	0.97%	1.43%	-5	0	0.99%	0.84%	1.71%	1.33%	0.00%	1.10%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** BASE-MILD SCENARIO RESULTS *****						***** BASE-MILD SCENARIO RESULTS *****			
YEAR	AGGREGATED TOTAL MEMBER ENERGY PURCHASED (MWH)	TOTAL ENERGY GENERATED for H.E. MEMBERS (MWH)	HE SYSTEM AVERAGE MONTHLY LOSS FACTORS due to MEMBER SYSTEM LOAD (excludes pass-throughs)		H.E. AVERAGE WHOLESALE POWER COSTS (MILLS/MWH)	AGGREGATED MEMBER SYSTEM DEMANDS (WITHOUT LOSSES, 30 MINUTE DEMAND)			
			FOR ENERGY	FOR DEMAND		NONCOINCIDENT (MW)		COINCIDENT (MW) (EST. BEFORE 1994)	
						WINTER	SUMMER	WINTER	SUMMER
ACTUAL 1999	5,320,840	5,535,309	3.97%	4.54%	*****	1,117	1,223	1,037	1,155
ACTUAL 2000	5,758,399	6,009,930	4.31%	4.52%	*****	1,173	1,187	1,110	1,117
ACTUAL 2001	5,864,880	6,118,847	4.27%	4.53%	*****	1,285	1,274	1,178	1,187
ACTUAL 2002	6,314,792	6,800,361	4.45%	4.78%	*****	1,211	1,346	1,151	1,229
ACTUAL 2003	6,320,460	6,593,113	4.26%	4.26%	*****	1,354	1,313	1,265	1,229
ACTUAL 2004	6,549,574	6,831,431	4.25%	4.81%	*****	1,381	1,321	1,268	1,255
ACTUAL 2005	6,850,535	7,115,713	3.83%	4.22%	*****	1,429	1,472	1,335	1,393
ACTUAL 2006	6,802,245	7,091,068	4.19%	4.47%	*****	1,414	1,502	1,336	1,393
ACTUAL 2007	7,215,322	7,533,291	4.33%	4.84%	*****	1,533	1,558	1,421	1,403
ACTUAL 2008	7,193,537	7,471,337	3.80%	5.10%	*****	1,575	1,442	1,440	1,289
ACTUAL 2009	6,898,809	7,174,754	3.93%	4.86%	*****	1,674	1,453	1,519	1,307
FRCST 2010	6,706,527	6,996,568	4.25%	4.73%	68.830	1,444	1,388	1,328	1,277
FRCST 2011	6,562,993	6,836,187	4.10%	4.80%	70.910	1,411	1,359	1,298	1,250
FRCST 2012	6,619,542	6,895,085	4.10%	4.80%	75.360	1,421	1,381	1,305	1,259
FRCST 2013	6,749,512	7,030,543	4.10%	4.80%	79.430	1,439	1,395	1,323	1,284
FRCST 2014	6,873,338	7,159,593	4.10%	4.80%	82.230	1,481	1,421	1,337	1,294
FRCST 2015	7,049,557	7,343,274	4.10%	4.80%	83.810	1,514	1,445	1,369	1,331
FRCST 2016	7,186,060	7,485,572	4.10%	4.80%	85.486	1,551	1,459	1,387	1,343
FRCST 2017	7,266,463	7,569,370	4.10%	4.80%	87.196	1,568	1,477	1,404	1,360
FRCST 2018	7,339,027	7,644,993	4.10%	4.80%	88.940	1,584	1,493	1,418	1,374
FRCST 2019	7,411,906	7,720,946	4.10%	4.80%	90.719	1,600	1,508	1,433	1,388
FRCST 2020	7,486,179	7,798,351	4.10%	4.80%	92.533	1,616	1,524	1,448	1,403
FRCST 2021	7,546,696	7,861,456	4.10%	4.80%	94.384	1,628	1,538	1,461	1,417
FRCST 2022	7,622,064	7,940,047	4.10%	4.80%	96.271	1,645	1,554	1,476	1,432
FRCST 2023	7,698,754	8,020,015	4.10%	4.80%	98.197	1,661	1,571	1,491	1,447
FRCST 2024	7,776,843	8,101,443	4.10%	4.80%	100.161	1,679	1,587	1,507	1,463
FRCST 2025	7,856,697	8,184,712	4.10%	4.80%	102.164	1,696	1,604	1,523	1,479
FRCST 2026	7,949,580	8,281,566	4.10%	4.80%	102.164	1,717	1,625	1,543	1,498
FRCST 2027	8,045,540	8,381,629	4.10%	4.80%	102.164	1,738	1,646	1,562	1,517
FRCST 2028	8,143,995	8,484,293	4.10%	4.80%	102.164	1,759	1,667	1,582	1,537
FRCST 2029	8,244,552	8,589,150	4.10%	4.80%	102.164	1,782	1,688	1,603	1,557
FRCST 2030	8,346,644	8,695,607	4.10%	4.80%	102.164	1,804	1,710	1,623	1,577

***** BASE-MILD SCENARIO RESULTS *****						***** BASE-MILD SCENARIO RESULTS *****			
TIME PERIOD	AGGREGATED H.E. ENERGY TOTAL ENERGY GENERATED PURCHASED FOR MEMBERS (% CHG.)	TOTAL ENERGY GENERATED (% CHG.)	AVG. MONTHLY LOSS FACTORS due to MEMBERS ENERGY DEMAND (AVERAGE)		H.E. AVERAGE WHOLESALE POWER COSTS (% CHG.)	AGGREGATED MEMBER PEAK SEASONAL DEMANDS (WITHOUT LOSSES, 30 MINUTE DEMAND)			
			ENERGY (AVERAGE)	DEMAND (AVERAGE)		Non-Coincident (% Chg)		Coincident (% Chg)	
						WINTER	SUMMER	WINTER	SUMMER
1999 -2004	4.24%	4.30%	4.25%	4.57%	*****	4.34%	1.55%	4.09%	1.68%
2004 -2009	1.04%	0.99%	4.06%	4.71%	*****	3.92%	1.92%	3.68%	0.81%
2010 -2015	1.00%	0.97%	4.13%	4.79%	4.02%	0.96%	0.81%	0.61%	0.83%
2015 -2020	1.21%	1.21%	4.10%	4.80%	2.00%	1.30%	1.07%	1.13%	1.06%
2020 -2025	0.97%	0.97%	4.10%	4.80%	2.00%	0.97%	1.04%	1.02%	1.06%
2025 -2030	1.22%	1.22%	4.10%	4.80%	0.00%	1.24%	1.28%	1.28%	1.29%
1999 -2009	2.63%	2.63%	4.14%	4.63%	*****	4.13%	1.74%	3.88%	1.25%
2010 -2030	1.10%	1.09%	4.11%	4.79%	1.99%	1.12%	1.05%	1.01%	1.06%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

HOOSIER ENERGY SYSTEM PEAK SEASONAL COINCIDENT DEMAND (MW) (All values are estimated 60 minute values)					H.E. ANNUAL LOAD FACTOR Due To COINCIDENT PEAK	HOOSIER ENERGY SYSTEM PEAK SEASONAL NON-COINCIDENT DEMAND (MW) (All values are estimated 60 minute values)					H.E. ANNUAL LOAD FACTOR Due To NON-COIN. PEAK
YEAR	WITHOUT LOSSES		WITH LOSSES			WITHOUT LOSSES		WITH LOSSES			
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER		
ACTUAL 1999	1,024	1,142	1,071	1,196	52.9%	1,103	1,209	1,154	1,266	49.9%	
ACTUAL 2000	1,086	1,099	1,136	1,150	59.5%	1,149	1,167	1,202	1,221	56.0%	
ACTUAL 2001	1,159	1,174	1,213	1,228	56.9%	1,271	1,259	1,329	1,317	52.5%	
ACTUAL 2002	1,105	1,218	1,159	1,278	59.0%	1,161	1,334	1,217	1,399	53.9%	
ACTUAL 2003	1,244	1,214	1,298	1,267	58.0%	1,332	1,298	1,390	1,354	54.2%	
ACTUAL 2004	1,252	1,235	1,314	1,298	59.2%	1,364	1,300	1,432	1,364	54.3%	
ACTUAL 2005	1,301	1,378	1,357	1,438	56.5%	1,393	1,456	1,453	1,519	53.5%	
ACTUAL 2006	1,304	1,374	1,364	1,437	56.3%	1,380	1,481	1,443	1,548	52.3%	
ACTUAL 2007	1,387	1,400	1,456	1,470	58.5%	1,496	1,555	1,571	1,632	52.7%	
ACTUAL 2008	1,424	1,269	1,499	1,336	56.7%	1,558	1,420	1,640	1,494	51.9%	
ACTUAL 2009	1,519	1,304	1,595	1,370	51.4%	1,674	1,450	1,758	1,522	46.8%	
FRCST 2010	1,312	1,268	1,376	1,330	58.0%	1,427	1,378	1,496	1,445	53.4%	
FRCST 2011	1,283	1,242	1,346	1,303	58.0%	1,395	1,350	1,464	1,416	53.3%	
FRCST 2012	1,290	1,250	1,353	1,312	58.0%	1,404	1,371	1,473	1,439	53.3%	
FRCST 2013	1,308	1,275	1,373	1,338	58.5%	1,423	1,386	1,493	1,454	53.8%	
FRCST 2014	1,322	1,285	1,387	1,349	58.9%	1,464	1,412	1,536	1,481	53.2%	
FRCST 2015	1,353	1,322	1,420	1,387	59.0%	1,497	1,435	1,571	1,506	53.4%	
FRCST 2016	1,371	1,334	1,439	1,400	59.2%	1,533	1,449	1,609	1,521	53.0%	
FRCST 2017	1,388	1,350	1,456	1,417	59.3%	1,550	1,467	1,626	1,539	53.1%	
FRCST 2018	1,402	1,365	1,471	1,432	59.3%	1,566	1,482	1,643	1,555	53.1%	
FRCST 2019	1,416	1,379	1,486	1,447	59.3%	1,581	1,498	1,659	1,572	53.1%	
FRCST 2020	1,431	1,393	1,502	1,462	59.1%	1,597	1,513	1,676	1,588	53.0%	
FRCST 2021	1,444	1,407	1,515	1,477	59.2%	1,609	1,528	1,689	1,603	53.1%	
FRCST 2022	1,459	1,422	1,531	1,493	59.2%	1,626	1,544	1,706	1,620	53.1%	
FRCST 2023	1,474	1,437	1,547	1,508	59.2%	1,642	1,560	1,723	1,637	53.1%	
FRCST 2024	1,490	1,453	1,563	1,525	59.0%	1,659	1,577	1,741	1,654	53.0%	
FRCST 2025	1,506	1,469	1,580	1,541	59.1%	1,677	1,594	1,760	1,672	53.1%	
FRCST 2026	1,525	1,488	1,600	1,561	59.1%	1,697	1,614	1,781	1,694	53.1%	
FRCST 2027	1,544	1,507	1,621	1,581	59.0%	1,718	1,634	1,803	1,715	53.1%	
FRCST 2028	1,564	1,526	1,641	1,602	58.8%	1,739	1,655	1,825	1,737	52.9%	
FRCST 2029	1,584	1,546	1,663	1,622	59.0%	1,761	1,677	1,848	1,759	53.1%	
FRCST 2030	1,605	1,566	1,684	1,644	58.9%	1,783	1,698	1,871	1,782	53.0%	

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	HOOSIER ENERGY COINCIDENT PEAK DEMAND (60 MINUTE VALUE, ALL VALUES EST.)				H.E. ANNUAL COINCIDENT LOAD FACTOR (AVERAGE)	HOOSIER ENERGY NON-COINCIDENT PEAK DEMAND (60 MINUTE VALUE, ALL VALUES EST.)				H.E. ANNUAL NON-COIN. LOAD FACTOR (AVERAGE)
	Without Losses (% Chg)		With Losses (% Chg)			Without Losses (% Chg)		With Losses (% Chg)		
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	4.10%	1.57%	4.18%	1.62%	57.57%	4.34%	1.45%	4.40%	1.50%	53.48%
2004 -2009	3.94%	1.10%	3.96%	1.12%	56.43%	4.18%	2.21%	4.20%	2.22%	51.87%
2010 -2015	0.61%	0.83%	0.63%	0.84%	58.40%	0.96%	0.81%	0.98%	0.82%	53.38%
2015 -2020	1.13%	1.06%	1.13%	1.06%	59.22%	1.30%	1.07%	1.30%	1.07%	53.11%
2020 -2025	1.02%	1.06%	1.02%	1.06%	59.14%	0.97%	1.04%	0.98%	1.04%	53.07%
2025 -2030	1.28%	1.29%	1.28%	1.30%	59.00%	1.24%	1.28%	1.24%	1.28%	53.05%
1999 -2009	4.02%	1.33%	4.06%	1.37%	56.80%	4.26%	1.83%	4.30%	1.86%	52.52%
2010 -2030	1.01%	1.06%	1.01%	1.06%	58.92%	1.12%	1.05%	1.12%	1.05%	53.15%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** BASE-MILD SCENARIO RESULTS *****					***** BASE-MILD SCENARIO RESULTS *****					
***** EXTREME TEMPERATURE CONDITIONS *****					***** EXTREME TEMPERATURE CONDITIONS *****					
HOOSIER ENERGY SYSTEM PEAK SEASONAL COINCIDENT DEMAND (MW); 60 MINUTE VALUE (WITHOUT LOSSES)					HOOSIER ENERGY SYSTEM PEAK SEASONAL NON-COINCIDENT DEMAND (MW); 60 MINUTE VALUE (WITHOUT LOSSES)					
HOOSIER ENERGY SYSTEM PEAK SEASONAL COINCIDENT DEMAND (MW); 60 MINUTE VALUE (WITH LOSSES)					HOOSIER ENERGY SYSTEM PEAK SEASONAL NON-COINCIDENT DEMAND (MW); 60 MINUTE VALUE (WITH LOSSES)					
YEAR	WINTER	SUMMER	WINTER	SUMMER	H.E. ANNUAL LOAD FACTOR Due To EXTREME COINCIDENT PEAK	WINTER	SUMMER	WINTER	SUMMER	H.E. ANNUAL LOAD FACTOR Due To EXTREME NON-COIN. PEAK
ACTUAL 1999	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2000	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2001	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2002	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2003	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2004	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2005	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2006	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2007	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
FRCST 2010	1,442	1,387	1,512	1,454	52.8%	1,587	1,506	1,643	1,579	48.6%
FRCST 2011	1,410	1,358	1,480	1,425	52.7%	1,531	1,474	1,607	1,547	48.6%
FRCST 2012	1,416	1,366	1,486	1,433	52.8%	1,540	1,497	1,616	1,570	48.6%
FRCST 2013	1,435	1,392	1,506	1,460	53.3%	1,560	1,512	1,637	1,586	49.0%
FRCST 2014	1,449	1,401	1,521	1,471	53.7%	1,602	1,538	1,681	1,614	48.6%
FRCST 2015	1,482	1,440	1,556	1,511	53.9%	1,637	1,562	1,718	1,639	48.8%
FRCST 2016	1,499	1,450	1,573	1,522	54.2%	1,671	1,574	1,754	1,652	48.6%
FRCST 2017	1,517	1,468	1,592	1,541	54.3%	1,690	1,594	1,774	1,673	48.7%
FRCST 2018	1,533	1,484	1,609	1,557	54.3%	1,707	1,611	1,792	1,690	48.7%
FRCST 2019	1,548	1,499	1,625	1,573	54.2%	1,724	1,627	1,810	1,708	48.7%
FRCST 2020	1,564	1,515	1,642	1,590	54.1%	1,742	1,644	1,828	1,725	48.8%
FRCST 2021	1,578	1,530	1,656	1,606	54.2%	1,755	1,660	1,842	1,742	48.7%
FRCST 2022	1,595	1,546	1,673	1,622	54.2%	1,773	1,677	1,860	1,760	48.7%
FRCST 2023	1,611	1,562	1,691	1,640	54.1%	1,791	1,695	1,879	1,778	48.7%
FRCST 2024	1,628	1,579	1,709	1,657	54.0%	1,809	1,713	1,899	1,797	48.6%
FRCST 2025	1,646	1,596	1,727	1,675	54.1%	1,828	1,731	1,919	1,816	48.7%
FRCST 2026	1,667	1,617	1,749	1,697	54.0%	1,850	1,753	1,942	1,840	48.7%
FRCST 2027	1,688	1,637	1,772	1,719	54.0%	1,873	1,775	1,966	1,863	48.7%
FRCST 2028	1,709	1,659	1,794	1,741	53.8%	1,897	1,798	1,990	1,887	48.5%
FRCST 2029	1,731	1,680	1,817	1,763	54.0%	1,920	1,821	2,016	1,911	48.6%
FRCST 2030	1,754	1,702	1,841	1,786	53.9%	1,945	1,845	2,041	1,936	48.6%

***** BASE-MILD SCENARIO RESULTS *****					***** BASE-MILD SCENARIO RESULTS *****					
***** EXTREME TEMPERATURE CONDITIONS *****					***** EXTREME TEMPERATURE CONDITIONS *****					
HOOSIER ENERGY COINCIDENT PEAK (60 MIN.)					HOOSIER ENERGY NON-COINCIDENT PEAK (60 MIN.)					
Without Losses (% Chg)					Without Losses (% Chg)					
With Losses (% Chg)					With Losses (% Chg)					
TIME PERIOD	WINTER	SUMMER	WINTER	SUMMER	EXTREME COIN. H.E. ANNUAL LOAD FACTOR (AVERAGE)	WINTER	SUMMER	WINTER	SUMMER	EXT. NON-COIN H.E. ANNUAL LOAD FACTOR (AVERAGE)
1999 -2004	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
2004 -2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
2010 -2015	0.55%	0.76%	0.56%	0.77%	53.22%	0.88%	0.73%	0.89%	0.75%	48.70%
2015 -2020	1.08%	1.02%	1.09%	1.02%	54.15%	1.25%	1.03%	1.25%	1.03%	48.68%
2020 -2025	1.02%	1.05%	1.02%	1.05%	54.10%	0.97%	1.03%	0.97%	1.03%	48.67%
2025 -2030	1.28%	1.29%	1.28%	1.29%	53.98%	1.24%	1.28%	1.24%	1.28%	48.64%
1999 -2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
2010 -2030	0.98%	1.03%	0.99%	1.03%	53.84%	1.09%	1.02%	1.09%	1.02%	48.67%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

\*\*\*\* Adjusted for IN #72, IN #16 and IN#92 \*\*\*\*

\*\*\*\* Adjusted for IN #72, IN #16 and IN#92 \*\*\*\*

Aggregated Member System Data  
NUMBER OF CONSUMERS

Aggregated Member System Data  
SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	209,962	9,568	112	887	220,529	2,864,229	599,227	862,060	29,908	4,355,424
ACTUAL 2000	215,011	9,890	120	1,018	226,039	2,948,957	656,492	1,088,160	30,617	4,724,226
ACTUAL 2001	219,228	10,003	132	1,093	230,456	3,052,360	639,446	1,164,603	31,271	4,887,680
ACTUAL 2002	223,044	10,265	139	1,144	234,592	3,261,617	663,738	1,272,906	32,441	5,230,702
ACTUAL 2003	226,749	10,462	151	1,293	238,655	3,243,405	673,235	1,316,094	32,150	5,264,884
ACTUAL 2004	230,760	10,690	151	1,429	243,030	3,305,807	706,497	1,403,535	33,098	5,448,937
ACTUAL 2005	257,250	11,810	165	1,573	270,798	3,749,514	774,714	1,484,489	33,634	6,042,351
ACTUAL 2006	260,854	11,986	169	1,707	274,716	3,856,899	824,354	1,545,582	32,678	6,259,513
ACTUAL 2007	263,908	12,246	191	1,821	278,166	4,088,777	855,093	1,620,151	34,240	6,598,261
ACTUAL 2008	265,071	12,166	200	1,833	279,270	4,080,904	856,375	1,630,203	33,209	6,600,691
ACTUAL 2009	265,137	12,281	192	1,836	279,446	3,904,139	818,798	1,564,440	31,738	6,319,115
FRCST 2010	266,015	12,414	196	1,854	280,479	3,800,253	836,310	1,680,134	33,075	6,149,772
FRCST 2011	279,471	13,817	202	2,222	295,712	3,609,943	890,741	1,728,364	40,028	6,269,076
FRCST 2012	281,258	13,950	201	2,222	297,631	3,560,436	901,640	1,822,016	40,028	6,324,120
FRCST 2013	283,305	14,083	202	2,222	299,812	3,548,622	912,597	1,947,217	40,028	6,448,464
FRCST 2014	285,534	14,216	202	2,222	302,174	3,559,985	923,618	2,043,312	40,028	6,566,943
FRCST 2015	287,915	14,349	202	2,222	304,688	3,586,240	934,706	2,174,080	40,028	6,735,054
FRCST 2016	290,544	14,538	202	2,222	307,506	3,623,392	950,411	2,251,632	40,028	6,865,463
FRCST 2017	293,251	14,727	201	2,222	310,401	3,665,940	966,183	2,270,024	40,028	6,942,175
FRCST 2018	296,054	14,916	201	2,222	313,393	3,711,277	982,019	2,278,123	40,028	7,011,447
FRCST 2019	298,916	15,105	201	2,222	316,444	3,758,545	997,922	2,284,521	40,028	7,081,016
FRCST 2020	301,845	15,294	200	2,222	319,561	3,807,021	1,013,898	2,290,962	40,028	7,151,909
FRCST 2021	305,026	15,548	199	2,222	322,995	3,858,052	1,033,417	2,277,950	40,028	7,209,447
FRCST 2022	308,274	15,802	199	2,222	326,497	3,910,326	1,052,975	2,277,950	40,028	7,281,279
FRCST 2023	311,588	16,056	199	2,222	330,065	3,963,812	1,072,583	2,277,950	40,028	7,354,373
FRCST 2024	314,977	16,310	199	2,222	333,708	4,018,584	1,092,238	2,277,950	40,028	7,428,800
FRCST 2025	318,468	16,564	199	2,222	337,453	4,074,988	1,111,936	2,277,950	40,028	7,504,902
FRCST 2026	322,163	16,885	199	2,222	341,469	4,138,851	1,136,563	2,277,950	40,028	7,593,392
FRCST 2027	325,914	17,206	199	2,222	345,541	4,205,597	1,161,244	2,277,950	40,028	7,684,819
FRCST 2028	329,731	17,527	199	2,222	349,679	4,274,856	1,185,989	2,277,950	40,028	7,778,623
FRCST 2029	333,607	17,848	199	2,222	353,876	4,345,661	1,210,790	2,277,950	40,028	7,874,429
FRCST 2030	337,521	18,169	199	2,222	358,111	4,418,069	1,235,656	2,277,950	40,028	7,971,703

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

Adjusted for Systems -- AGGREGATED NUMBER OF CONSUMERS

Adjusted for Systems -- AGGREGATED ENERGY SALES

TIME PERIOD	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT.CHG.)	OTHER (ACT.CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
1999 -2004	1.91%	2.24%	39	542	1.96%	2.91%	3.35%	10.24%	2.05%	4.58%
2004 -2009	2.82%	2.81%	41	407	2.83%	3.38%	2.99%	2.19%	-0.84%	3.01%
2010 -2015	1.59%	2.94%	6	368	1.67%	-0.08%	2.25%	5.29%	3.89%	1.83%
2015 -2020	0.95%	1.28%	-2	0	0.96%	1.20%	1.64%	1.05%	0.00%	1.21%
2020 -2025	1.08%	1.61%	-1	0	1.10%	1.37%	1.86%	-0.11%	0.00%	0.97%
2025 -2030	1.17%	1.87%	0	0	1.20%	1.63%	2.13%	0.00%	0.00%	1.21%
1999 -2009	2.36%	2.53%	80	949	2.40%	3.15%	3.17%	6.14%	0.60%	3.79%
2010 -2030	1.20%	1.92%	3	368	1.23%	1.03%	1.97%	1.53%	0.96%	1.31%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN #72, IN # 16 and IN#92

YEAR	AGGREGATED TOTAL MEMBER ENERGY PURCHASED (MWH)	ENERGY GENERATED FOR MEMBERS (MWH)	AGGREGATED MEMBER 30 MIN. COINCIDENT PEAK W/O LOSSES (MW)		HE COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984) (WITHOUT LOSSES)		HE COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984) (WITH LOSSES)		ANNUAL LOAD FACTOR
			WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
			ACTUAL 1999	4,592,866	4,777,226	900	1,004	888	
ACTUAL 2000	4,998,042	5,215,344	958	969	937	953	980	997	59.6%
ACTUAL 2001	5,106,079	5,326,182	1,023	1,032	1,006	1,020	1,052	1,067	57.0%
ACTUAL 2002	5,499,105	5,746,666	1,012	1,077	972	1,066	1,019	1,118	58.7%
ACTUAL 2003	5,527,292	5,764,676	1,102	1,072	1,084	1,059	1,130	1,105	58.2%
ACTUAL 2004	5,736,200	5,981,961	1,103	1,095	1,089	1,077	1,143	1,130	59.6%
ACTUAL 2005	6,332,029	6,576,556	1,172	1,333	1,142	1,319	1,191	1,376	54.6%
ACTUAL 2006	6,525,204	6,801,916	1,295	1,337	1,318	1,318	1,322	1,379	56.3%
ACTUAL 2007	6,924,233	7,229,037	1,384	1,341	1,351	1,338	1,418	1,405	58.2%
ACTUAL 2008	6,912,387	7,179,069	1,395	1,245	1,380	1,226	1,453	1,290	56.2%
ACTUAL 2009	6,617,661	6,882,100	1,472	1,247	1,472	1,243	1,546	1,306	50.8%
FRCST 2010	6,436,859	6,714,930	1,282	1,224	1,268	1,216	1,329	1,275	57.7%
FRCST 2011	6,562,993	6,836,187	1,298	1,250	1,283	1,242	1,346	1,303	58.0%
FRCST 2012	6,619,542	6,895,085	1,305	1,259	1,290	1,250	1,353	1,312	58.0%
FRCST 2013	6,749,512	7,030,543	1,323	1,284	1,308	1,275	1,373	1,338	58.5%
FRCST 2014	6,873,338	7,159,593	1,337	1,294	1,322	1,285	1,387	1,349	58.9%
FRCST 2015	7,049,557	7,343,274	1,369	1,331	1,353	1,322	1,420	1,387	59.0%
FRCST 2016	7,186,060	7,485,572	1,387	1,343	1,371	1,334	1,439	1,400	59.2%
FRCST 2017	7,266,463	7,569,370	1,404	1,360	1,388	1,350	1,456	1,417	59.3%
FRCST 2018	7,339,027	7,644,993	1,418	1,374	1,402	1,365	1,471	1,432	59.3%
FRCST 2019	7,411,906	7,720,946	1,433	1,388	1,416	1,379	1,486	1,447	59.3%
FRCST 2020	7,486,179	7,798,351	1,448	1,403	1,431	1,393	1,502	1,462	59.1%
FRCST 2021	7,546,696	7,861,456	1,461	1,417	1,444	1,407	1,515	1,477	59.2%
FRCST 2022	7,622,064	7,940,047	1,476	1,432	1,459	1,422	1,531	1,493	59.2%
FRCST 2023	7,698,754	8,020,015	1,491	1,447	1,474	1,437	1,547	1,508	59.2%
FRCST 2024	7,776,843	8,101,443	1,507	1,463	1,490	1,453	1,563	1,525	59.0%
FRCST 2025	7,856,697	8,184,712	1,523	1,479	1,506	1,469	1,580	1,541	59.1%
FRCST 2026	7,949,580	8,281,566	1,543	1,498	1,525	1,488	1,600	1,561	59.1%
FRCST 2027	8,045,540	8,381,629	1,562	1,517	1,544	1,507	1,621	1,581	59.0%
FRCST 2028	8,143,995	8,484,293	1,582	1,537	1,564	1,526	1,641	1,602	58.8%
FRCST 2029	8,244,552	8,589,150	1,603	1,557	1,584	1,546	1,663	1,622	59.0%
FRCST 2030	8,346,644	8,695,607	1,623	1,577	1,605	1,566	1,684	1,644	58.9%

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	Adjusted for Systems		Adjusted for Systems		Adjusted for Systems -- HE COIN. 60 MINUTE DEMAND		HE COIN. 60 MINUTE DEMAND		ADJUSTED ANNUAL LOAD FACTOR (AVERAGE)
	ENERGY PURCHASED (% CHG.)	ENERGY GENERATED (% CHG.)	AGGREGATED 30 MIN. COIN. PEAK W/O LOSSES (% CHG)	AGGREGATED 30 MIN. COIN. PEAK W/O LOSSES (% CHG)	Without Losses (% Chg)	Without Losses (% Chg)	With Losses (% Chg)	With Losses (% Chg)	
1999 -2004	4.55%	4.60%	4.15%	1.76%	4.17%	1.65%	4.23%	1.70%	57.58%
2004 -2009	2.90%	2.84%	5.94%	2.62%	6.21%	2.91%	6.23%	2.93%	55.96%
2010 -2015	1.84%	1.81%	1.31%	1.68%	1.31%	1.68%	1.33%	1.70%	58.34%
2015 -2020	1.21%	1.21%	1.13%	1.06%	1.13%	1.06%	1.13%	1.06%	59.22%
2020 -2025	0.97%	0.97%	1.02%	1.06%	1.02%	1.06%	1.02%	1.06%	59.14%
2025 -2030	1.22%	1.22%	1.28%	1.29%	1.28%	1.29%	1.28%	1.30%	59.00%
1999 -2009	3.72%	3.72%	5.05%	2.19%	5.19%	2.28%	5.22%	2.31%	56.51%
2010 -2030	1.31%	1.30%	1.19%	1.27%	1.19%	1.27%	1.19%	1.28%	58.90%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN #72, IN #16 and IN#92

EXTREME COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984)

YEAR	(WITHOUT LOSSES)		(WITH LOSSES)		EXTREME ANNUAL LOAD FACTOR
	WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999	*****	*****	*****	*****	*****
ACTUAL 2000	*****	*****	*****	*****	*****
ACTUAL 2001	*****	*****	*****	*****	*****
ACTUAL 2002	*****	*****	*****	*****	*****
ACTUAL 2003	*****	*****	*****	*****	*****
ACTUAL 2004	*****	*****	*****	*****	*****
ACTUAL 2005	*****	*****	*****	*****	*****
ACTUAL 2006	*****	*****	*****	*****	*****
ACTUAL 2007	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****
FRCST 2010	1,393	1,329	1,461	1,393	52.5%
FRCST 2011	1,410	1,358	1,480	1,425	52.7%
FRCST 2012	1,416	1,366	1,486	1,433	52.8%
FRCST 2013	1,435	1,392	1,506	1,460	53.3%
FRCST 2014	1,449	1,401	1,521	1,471	53.7%
FRCST 2015	1,482	1,440	1,556	1,511	53.9%
FRCST 2016	1,499	1,450	1,573	1,522	54.2%
FRCST 2017	1,517	1,468	1,592	1,541	54.3%
FRCST 2018	1,533	1,484	1,609	1,557	54.3%
FRCST 2019	1,548	1,499	1,625	1,573	54.2%
FRCST 2020	1,564	1,515	1,642	1,590	54.1%
FRCST 2021	1,578	1,530	1,656	1,606	54.2%
FRCST 2022	1,595	1,546	1,673	1,622	54.2%
FRCST 2023	1,611	1,562	1,691	1,640	54.1%
FRCST 2024	1,628	1,579	1,709	1,657	54.0%
FRCST 2025	1,646	1,596	1,727	1,675	54.1%
FRCST 2026	1,667	1,617	1,749	1,697	54.0%
FRCST 2027	1,688	1,637	1,772	1,719	54.0%
FRCST 2028	1,709	1,659	1,794	1,741	53.8%
FRCST 2029	1,731	1,680	1,817	1,763	54.0%
FRCST 2030	1,754	1,702	1,841	1,786	53.9%

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

Adjusted for Systems HE EXT. COIN. 60 MINUTE DEMAND

Without Losses (% Chg)

With Losses (% Chg)

ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)

TIME PERIOD	WINTER	SUMMER	WINTER	SUMMER	ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)
1999 -2004	*****	*****	*****	*****	*****
2004 -2009	*****	*****	*****	*****	*****
2010 -2015	1.25%	1.62%	1.27%	1.63%	53.16%
2015 -2020	1.08%	1.02%	1.09%	1.02%	54.15%
2020 -2025	1.02%	1.05%	1.02%	1.05%	54.10%
2025 -2030	1.28%	1.29%	1.28%	1.29%	53.98%
1999 -2009	*****	*****	*****	*****	*****
2010 -2030	1.16%	1.25%	1.16%	1.25%	53.82%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

Values Adjusted for IN#72,IN#16,IN#92 and Special Industrial Loads  
Aggregated Member System Data  
NUMBER OF CONSUMERS

Values Adjusted for IN#72,IN#16,IN#92 and Special Industrial Loads  
Aggregated Member System Data  
SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	209,962	9,568	112	887	220,529	2,864,229	599,227	726,658	29,908	4,220,022
ACTUAL 2000	215,011	9,890	119	1,018	226,038	2,948,957	656,492	917,277	30,617	4,553,343
ACTUAL 2001	219,228	10,003	131	1,093	230,455	3,052,360	639,446	990,705	31,271	4,713,782
ACTUAL 2002	223,044	10,265	138	1,144	234,591	3,261,617	663,738	1,086,676	32,441	5,044,472
ACTUAL 2003	226,749	10,462	150	1,293	238,654	3,243,405	673,235	1,127,531	32,150	5,076,321
ACTUAL 2004	230,760	10,690	150	1,429	243,029	3,305,807	706,497	1,205,248	33,098	5,250,650
ACTUAL 2005	257,250	11,810	164	1,573	270,797	3,749,514	774,714	1,291,857	33,634	5,849,719
ACTUAL 2006	260,854	11,986	168	1,707	274,715	3,856,899	824,354	1,350,149	32,678	6,064,080
ACTUAL 2007	263,908	12,246	190	1,821	278,165	4,088,777	855,093	1,435,203	34,240	6,413,313
ACTUAL 2008	265,071	12,166	199	1,833	279,269	4,080,904	856,375	1,461,568	33,209	6,432,056
ACTUAL 2009	265,137	12,281	191	1,836	279,445	3,904,139	818,798	1,407,974	31,738	6,162,649
FRCST 2010	266,015	12,414	195	1,854	280,478	3,600,253	836,310	1,507,744	33,075	5,977,382
FRCST 2011	279,471	13,817	201	2,222	295,711	3,609,943	890,741	1,554,914	40,028	6,095,626
FRCST 2012	281,258	13,950	200	2,222	297,630	3,560,436	901,640	1,646,951	40,028	6,149,055
FRCST 2013	283,305	14,083	201	2,222	299,811	3,548,622	912,597	1,770,523	40,028	6,271,770
FRCST 2014	285,534	14,216	201	2,222	302,173	3,559,985	923,618	1,864,972	40,028	6,388,603
FRCST 2015	287,915	14,349	201	2,222	304,687	3,586,240	934,706	1,994,080	40,028	6,555,054
FRCST 2016	290,544	14,538	201	2,222	307,505	3,623,392	950,411	2,070,643	40,028	6,684,474
FRCST 2017	293,251	14,727	200	2,222	310,400	3,665,940	966,183	2,088,040	40,028	6,760,191
FRCST 2018	296,054	14,916	200	2,222	313,392	3,711,277	982,019	2,095,139	40,028	6,828,463
FRCST 2019	298,916	15,105	200	2,222	316,443	3,758,545	997,922	2,100,532	40,028	6,897,027
FRCST 2020	301,845	15,294	199	2,222	319,560	3,807,021	1,013,898	2,105,962	40,028	6,966,909
FRCST 2021	305,026	15,548	198	2,222	322,994	3,858,052	1,033,417	2,092,950	40,028	7,024,447
FRCST 2022	308,274	15,802	198	2,222	326,496	3,910,326	1,052,975	2,092,950	40,028	7,096,279
FRCST 2023	311,588	16,056	198	2,222	330,064	3,963,812	1,072,583	2,092,950	40,028	7,169,373
FRCST 2024	314,977	16,310	198	2,222	333,707	4,018,584	1,092,238	2,092,950	40,028	7,243,800
FRCST 2025	318,468	16,564	198	2,222	337,452	4,074,988	1,111,936	2,092,950	40,028	7,319,902
FRCST 2026	322,163	16,885	198	2,222	341,468	4,138,851	1,136,563	2,092,950	40,028	7,408,392
FRCST 2027	325,914	17,206	198	2,222	345,540	4,205,597	1,161,244	2,092,950	40,028	7,499,819
FRCST 2028	329,731	17,527	198	2,222	349,678	4,274,656	1,185,989	2,092,950	40,028	7,593,623
FRCST 2029	333,607	17,848	198	2,222	353,875	4,345,661	1,210,790	2,092,950	40,028	7,689,429
FRCST 2030	337,521	18,169	198	2,222	358,110	4,418,069	1,235,656	2,092,950	40,028	7,786,703

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

Adjusted for Systems -- AGGREGATED NUMBER OF CONSUMERS

Adjusted for Systems & Ind. -- AGGREGATED ENERGY SALES

TIME PERIOD	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT.CHG.)	OTHER (ACT.CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
1999 -2004	1.91%	2.24%	38	542	1.96%	2.91%	3.35%	10.65%	2.05%	4.47%
2004 -2009	2.82%	2.81%	41	407	2.83%	3.38%	2.99%	3.16%	-0.84%	3.25%
2010 -2015	1.59%	2.94%	6	368	1.67%	-0.08%	2.25%	5.75%	3.89%	1.86%
2015 -2020	0.95%	1.28%	-2	0	0.96%	1.20%	1.64%	1.10%	0.00%	1.23%
2020 -2025	1.08%	1.61%	-1	0	1.10%	1.37%	1.86%	-0.12%	0.00%	0.99%
2025 -2030	1.17%	1.87%	0	0	1.20%	1.63%	2.13%	0.00%	0.00%	1.24%
1999 -2009	2.36%	2.53%	79	949	2.40%	3.15%	3.17%	6.84%	0.60%	3.86%
2010 -2030	1.20%	1.92%	3	368	1.23%	1.03%	1.97%	1.65%	0.96%	1.33%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

YEAR	AGGREGATED TOTAL MEMBER ENERGY PUR- CHASED (MWH)	ENERGY GEN- ERATED FOR MEMBERS (MWH)	Energy and Demand Values Adjusted for IN#72,IN#16,IN#92 and Special Industrial Loads						ANNUAL LOAD FACTOR
			H.E. 30 MINUTE COINCIDENT DEMAND (MW) (WITHOUT LOSSES)		H.E. COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984)				
			WINTER	SUMMER	(WITHOUT LOSSES)		(WITH LOSSES)		
ACTUAL 1999	4,457,464	4,641,824	884	984	874	974	913	1,023	51.8%
ACTUAL 2000	4,827,158	5,044,460	934	927	915	912	952	972	59.1%
ACTUAL 2001	4,932,180	5,152,284	987	1,004	976	992	1,022	1,045	56.3%
ACTUAL 2002	5,312,874	5,560,435	968	1,040	929	1,030	965	1,091	58.2%
ACTUAL 2003	5,338,729	5,576,113	1,079	1,040	1,061	1,027	1,106	1,079	57.6%
ACTUAL 2004	5,537,913	5,783,674	1,066	1,055	1,052	1,037	1,106	1,093	59.5%
ACTUAL 2005	6,139,397	6,383,924	1,138	1,305	1,109	1,291	1,150	1,355	53.8%
ACTUAL 2006	6,329,771	6,606,483	1,260	1,322	1,229	1,303	1,283	1,366	55.2%
ACTUAL 2007	6,739,285	7,044,089	1,354	1,337	1,321	1,334	1,387	1,397	57.6%
ACTUAL 2008	6,743,752	7,010,434	1,394	1,235	1,379	1,215	1,442	1,327	55.3%
ACTUAL 2009	6,461,195	6,725,634	1,465	1,232	1,465	1,229	1,525	1,292	50.3%
FRCST 2010	6,264,469	6,542,540	1,257	1,199	1,242	1,191	1,304	1,250	57.3%
FRCST 2011	6,389,543	6,662,737	1,272	1,225	1,257	1,217	1,321	1,278	57.6%
FRCST 2012	6,444,477	6,720,020	1,279	1,234	1,264	1,225	1,327	1,287	57.6%
FRCST 2013	6,572,818	6,853,848	1,297	1,258	1,282	1,249	1,346	1,312	58.1%
FRCST 2014	6,694,999	6,981,253	1,311	1,268	1,296	1,259	1,361	1,323	58.6%
FRCST 2015	6,869,557	7,163,274	1,342	1,305	1,326	1,296	1,393	1,361	58.7%
FRCST 2016	7,005,071	7,304,583	1,361	1,317	1,345	1,308	1,412	1,374	58.9%
FRCST 2017	7,084,480	7,387,387	1,377	1,333	1,361	1,324	1,429	1,391	59.0%
FRCST 2018	7,156,043	7,462,010	1,391	1,347	1,375	1,338	1,444	1,406	59.0%
FRCST 2019	7,227,917	7,536,957	1,406	1,362	1,389	1,352	1,459	1,420	59.0%
FRCST 2020	7,301,179	7,613,351	1,420	1,376	1,404	1,367	1,475	1,435	58.8%
FRCST 2021	7,361,696	7,676,456	1,433	1,390	1,416	1,381	1,488	1,450	58.9%
FRCST 2022	7,437,064	7,755,047	1,448	1,405	1,431	1,395	1,504	1,466	58.9%
FRCST 2023	7,513,754	7,835,015	1,464	1,420	1,447	1,411	1,520	1,482	58.9%
FRCST 2024	7,591,843	7,916,443	1,480	1,436	1,462	1,426	1,536	1,498	58.7%
FRCST 2025	7,671,697	7,999,712	1,496	1,452	1,478	1,442	1,553	1,514	58.8%
FRCST 2026	7,764,580	8,096,566	1,515	1,471	1,498	1,461	1,573	1,534	58.8%
FRCST 2027	7,860,540	8,198,629	1,535	1,490	1,517	1,480	1,593	1,554	58.7%
FRCST 2028	7,958,995	8,299,293	1,555	1,510	1,537	1,499	1,614	1,575	58.5%
FRCST 2029	8,059,552	8,404,150	1,575	1,530	1,557	1,519	1,635	1,596	58.7%
FRCST 2030	8,161,644	8,510,607	1,596	1,550	1,577	1,539	1,657	1,617	58.6%

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	Adjusted for Systems & Ind ENERGY PURCHASED (% CHG.)	ENERGY GENERATED (% CHG.)	Adj. Sys. & Ind. - H.E. 30 MINUTE COINCIDENT DEMAND (MW) (WITHOUT LOSSES)		Adjusted for Sys. & Ind. -- HE COIN. 60 MINUTE DEMAND Without Losses (% Chg)				ADJUSTED ANNUAL LOAD FACTOR (AVERAGE)
			WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	4.44%	4.50%	3.80%	1.40%	3.78%	1.26%	3.91%	1.33%	57.07%
2004 -2009	3.13%	3.06%	6.58%	3.15%	6.85%	3.46%	6.64%	3.40%	55.30%
2010 -2015	1.86%	1.83%	1.32%	1.70%	1.32%	1.70%	1.34%	1.71%	57.98%
2015 -2020	1.23%	1.23%	1.14%	1.07%	1.14%	1.07%	1.14%	1.07%	58.88%
2020 -2025	0.99%	0.99%	1.04%	1.08%	1.04%	1.08%	1.04%	1.08%	58.82%
2025 -2030	1.25%	1.25%	1.31%	1.32%	1.31%	1.32%	1.31%	1.32%	58.69%
1999 -2009	3.78%	3.78%	5.18%	2.27%	5.30%	2.35%	5.26%	2.36%	55.88%
2010 -2030	1.33%	1.32%	1.20%	1.29%	1.20%	1.29%	1.21%	1.29%	58.57%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN#72,IN#16,IN#92 and Special Industrial Loads

EXTREME COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984)

YEAR	(WITHOUT LOSSES)		(WITH LOSSES)		EXTREME ANNUAL LOAD FACTOR
	WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999	*****	*****	*****	*****	*****
ACTUAL 2000	*****	*****	*****	*****	*****
ACTUAL 2001	*****	*****	*****	*****	*****
ACTUAL 2002	*****	*****	*****	*****	*****
ACTUAL 2003	*****	*****	*****	*****	*****
ACTUAL 2004	*****	*****	*****	*****	*****
ACTUAL 2005	*****	*****	*****	*****	*****
ACTUAL 2006	*****	*****	*****	*****	*****
ACTUAL 2007	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****
FRCST 2010	1,367	1,304	1,435	1,369	52.0%
FRCST 2011	1,384	1,332	1,454	1,400	52.3%
FRCST 2012	1,390	1,340	1,460	1,408	52.4%
FRCST 2013	1,409	1,366	1,480	1,435	52.9%
FRCST 2014	1,423	1,375	1,495	1,445	53.3%
FRCST 2015	1,456	1,414	1,529	1,485	53.5%
FRCST 2016	1,472	1,424	1,546	1,495	53.8%
FRCST 2017	1,490	1,442	1,565	1,514	53.9%
FRCST 2018	1,506	1,457	1,581	1,530	53.9%
FRCST 2019	1,521	1,472	1,598	1,547	53.8%
FRCST 2020	1,537	1,488	1,615	1,563	53.7%
FRCST 2021	1,551	1,503	1,629	1,579	53.8%
FRCST 2022	1,567	1,519	1,646	1,596	53.8%
FRCST 2023	1,584	1,536	1,664	1,613	53.8%
FRCST 2024	1,601	1,552	1,682	1,630	53.6%
FRCST 2025	1,618	1,569	1,700	1,648	53.7%
FRCST 2026	1,639	1,590	1,722	1,670	53.7%
FRCST 2027	1,660	1,611	1,744	1,692	53.6%
FRCST 2028	1,682	1,632	1,767	1,714	53.5%
FRCST 2029	1,704	1,653	1,790	1,737	53.6%
FRCST 2030	1,727	1,675	1,814	1,760	53.6%

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

Adjusted for Sys. & Ind. HE EXT. COIN. 60 MINUTE DEMAND

ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)

TIME PERIOD	Without Losses (% Chg)		With Losses (% Chg)		ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)
	WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	*****	*****	*****	*****	*****
2004 -2009	*****	*****	*****	*****	*****
2010 -2015	1.26%	1.63%	1.27%	1.65%	52.74%
2015 -2020	1.09%	1.03%	1.09%	1.03%	53.76%
2020 -2025	1.04%	1.07%	1.04%	1.07%	53.72%
2025 -2030	1.30%	1.31%	1.30%	1.31%	53.61%
1999 -2009	*****	*****	*****	*****	*****
2010 -2030	1.17%	1.26%	1.18%	1.26%	53.43%

1971 : BEGINNING HISTORICAL DATA YEAR ?  
2009 : FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 : NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

YEAR	H.E. Time Factor Ratio from 30 to 60 Minute excludes pass-throughs (Est. before 1984)		PERCENTAGE of IN #72 Served by H.E.	IN #72 served by H.E. (Yes=0, No=1)		PERCENTAGE of IN #16 Served by H.E.	IN #16 served by H.E. (Yes=0, No=1)	
	WINTER	SUMMER		WINTER	SUMMER		WINTER	SUMMER
ACTUAL 1999	98.85%	98.99%	100.0%	0	0	100.0%	0	0
ACTUAL 2000	97.92%	98.42%	100.0%	0	0	100.0%	0	0
ACTUAL 2001	98.92%	98.85%	100.0%	0	0	100.0%	0	0
ACTUAL 2002	98.00%	99.02%	100.0%	0	0	100.0%	0	0
ACTUAL 2003	98.31%	98.80%	100.0%	0	0	100.0%	0	0
ACTUAL 2004	98.73%	98.31%	100.0%	0	0	100.0%	0	0
ACTUAL 2005	97.45%	98.93%	100.0%	0	0	100.0%	0	0
ACTUAL 2006	97.54%	98.57%	100.0%	0	0	100.0%	0	0
ACTUAL 2007	97.56%	99.78%	100.0%	0	0	100.0%	0	0
ACTUAL 2008	98.92%	98.38%	100.0%	0	0	100.0%	0	0
ACTUAL 2009	100.00%	99.76%	100.0%	0	0	100.0%	0	0
FRCST 2010	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2011	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2012	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2013	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2014	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2015	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2016	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2017	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2018	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2019	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2020	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2021	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2022	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2023	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2024	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2025	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2026	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2027	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2028	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2029	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2030	98.83%	99.30%	100.00%	0	0	100.00%	0	0

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	HE TIME FACTOR RATIO (30 to 60 MINUTE)	
	WINTER (AVERAGE)	SUMMER (AVERAGE)
1999 -2004	98.12%	98.73%
2004 -2009	98.37%	98.95%
2010 -2015	98.83%	99.30%
2015 -2020	98.83%	99.30%
2020 -2025	98.83%	99.30%
2025 -2030	98.83%	99.30%
1999 -2009	98.20%	98.89%
2010 -2030	98.83%	99.30%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

YEAR	PERCENTAGE of IN #92 Served by H.E.	IN #92 served by H.E. ( Yes=0 , No= 1 )		PERCENTAGE of IL #2 Served by H.E.	IL #2 served by H.E. ( Yes=0 , No= 1 )	
		WINTER	SUMMER		WINTER	SUMMER
ACTUAL 1999	0.0%	1	1	0.0%	1	1
ACTUAL 2000	0.0%	1	1	0.0%	1	1
ACTUAL 2001	0.0%	1	1	0.0%	1	1
ACTUAL 2002	0.0%	1	1	0.0%	1	1
ACTUAL 2003	0.0%	1	1	0.0%	1	1
ACTUAL 2004	0.0%	1	1	0.0%	1	1
ACTUAL 2005	51.0%	1	0	0.0%	1	1
ACTUAL 2006	100.0%	0	0	0.0%	1	1
ACTUAL 2007	100.0%	0	0	0.0%	1	1
ACTUAL 2008	100.0%	0	0	0.0%	1	1
ACTUAL 2009	100.0%	0	0	0.0%	1	1
FRCST 2010	100.00%	0	0	0.00%	1	1
FRCST 2011	100.00%	0	0	100.00%	0	0
FRCST 2012	100.00%	0	0	100.00%	0	0
FRCST 2013	100.00%	0	0	100.00%	0	0
FRCST 2014	100.00%	0	0	100.00%	0	0
FRCST 2015	100.00%	0	0	100.00%	0	0
FRCST 2016	100.00%	0	0	100.00%	0	0
FRCST 2017	100.00%	0	0	100.00%	0	0
FRCST 2018	100.00%	0	0	100.00%	0	0
FRCST 2019	100.00%	0	0	100.00%	0	0
FRCST 2020	100.00%	0	0	100.00%	0	0
FRCST 2021	100.00%	0	0	100.00%	0	0
FRCST 2022	100.00%	0	0	100.00%	0	0
FRCST 2023	100.00%	0	0	100.00%	0	0
FRCST 2024	100.00%	0	0	100.00%	0	0
FRCST 2025	100.00%	0	0	100.00%	0	0
FRCST 2026	100.00%	0	0	100.00%	0	0
FRCST 2027	100.00%	0	0	100.00%	0	0
FRCST 2028	100.00%	0	0	100.00%	0	0
FRCST 2029	100.00%	0	0	100.00%	0	0
FRCST 2030	100.00%	0	0	100.00%	0	0

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD

1999 -2004  
2004 -2009

2010 -2015  
2015 -2020  
2020 -2025  
2025 -2030

1999 -2009  
2010 -2030

**APPENDIX F**

**HEREC "BASE-MILD" DSM CASE SCENARIO TABLES  
HISTORICAL/FORECAST ANNUAL SUMMARY**

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 34 YEARS)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

Aggregated Member System Data  
NUMBER OF CONSUMERS

Aggregated Member System Data  
SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	242,823	11,747	129	1,225	255,924	3,301,206	679,879	954,026	113,744	5,048,855
ACTUAL 2000	248,463	12,109	139	1,363	262,074	3,408,837	742,554	1,177,210	116,332	5,444,933
ACTUAL 2001	253,162	12,265	155	1,444	267,026	3,522,958	729,098	1,261,060	113,891	5,627,017
ACTUAL 2002	257,347	12,533	163	1,501	271,544	3,772,856	750,481	1,372,372	117,598	6,013,307
ACTUAL 2003	261,300	12,711	176	1,654	275,841	3,744,229	760,700	1,406,637	112,443	6,024,009
ACTUAL 2004	265,436	12,930	173	1,793	280,332	3,816,332	797,926	1,498,284	112,624	6,225,166
ACTUAL 2005	269,261	13,031	173	1,934	284,399	4,087,081	833,664	1,583,193	44,652	6,548,590
ACTUAL 2006	272,892	13,211	177	2,070	288,350	3,997,738	859,810	1,632,862	37,999	6,528,409
ACTUAL 2007	275,983	13,481	199	2,186	291,849	4,235,636	896,961	1,706,767	41,253	6,880,617
ACTUAL 2008	277,143	13,424	208	2,202	292,977	4,225,769	896,208	1,712,574	38,855	6,873,406
ACTUAL 2009	277,179	13,547	200	2,204	293,130	4,049,085	862,271	1,638,530	36,404	6,586,290
FRCST 2010	278,058	13,684	204	2,222	294,168	3,897,634	875,689	1,747,689	40,028	6,361,040
FRCST 2011	279,471	13,817	202	2,222	295,712	3,545,874	876,942	1,728,364	40,028	6,191,208
FRCST 2012	281,258	13,950	201	2,222	297,631	3,478,576	876,919	1,822,016	40,028	6,217,538
FRCST 2013	283,305	14,083	202	2,222	299,812	3,458,864	873,736	1,947,217	40,028	6,319,845
FRCST 2014	285,534	14,216	202	2,222	302,174	3,453,551	869,406	2,043,312	40,028	6,406,296
FRCST 2015	287,915	14,349	202	2,222	304,688	3,463,858	866,521	2,174,080	40,028	6,544,466
FRCST 2016	290,544	14,538	202	2,222	307,506	3,498,753	869,701	2,251,632	40,028	6,660,114
FRCST 2017	293,251	14,727	201	2,222	310,401	3,532,241	874,029	2,270,024	40,028	6,716,322
FRCST 2018	296,054	14,916	201	2,222	313,393	3,568,843	880,017	2,278,123	40,028	6,767,012
FRCST 2019	298,916	15,105	201	2,222	316,444	3,609,202	886,229	2,284,521	40,028	6,819,980
FRCST 2020	301,845	15,294	200	2,222	319,561	3,646,477	893,425	2,290,962	40,028	6,870,892
FRCST 2021	305,026	15,548	199	2,222	322,995	3,686,002	904,834	2,277,950	40,028	6,908,814
FRCST 2022	308,274	15,802	199	2,222	326,497	3,726,815	917,035	2,277,950	40,028	6,961,829
FRCST 2023	311,588	16,056	199	2,222	330,065	3,769,293	929,722	2,277,950	40,028	7,016,993
FRCST 2024	314,977	16,310	199	2,222	333,708	3,814,109	944,143	2,277,950	40,028	7,076,230
FRCST 2025	318,468	16,564	199	2,222	337,453	3,862,176	960,507	2,277,950	40,028	7,140,661
FRCST 2026	322,163	16,885	199	2,222	341,469	3,920,476	988,782	2,277,950	40,028	7,227,236
FRCST 2027	325,914	17,206	199	2,222	345,541	3,986,458	1,018,713	2,277,950	40,028	7,323,148
FRCST 2028	329,731	17,527	199	2,222	349,679	4,057,157	1,052,172	2,277,950	40,028	7,427,307
FRCST 2029	333,607	17,848	199	2,222	353,876	4,130,938	1,087,062	2,277,950	40,028	7,535,978
FRCST 2030	337,521	18,169	199	2,222	358,111	4,206,172	1,120,796	2,277,950	40,028	7,644,946

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

AGGREGATED NUMBER OF CONSUMERS

AGGREGATED SYSTEM ENERGY SALES

TIME PERIOD	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT.CHG.)	OTHER (ACT.CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
1999 -2004	1.80%	1.94%	44	568	1.84%	2.94%	3.25%	9.45%	-0.20%	4.28%
2004 -2009	0.87%	0.94%	27	411	0.90%	1.19%	1.56%	1.81%	-20.22%	1.13%
2010 -2015	0.70%	0.95%	-2	0	0.71%	-1.30%	-0.21%	4.46%	0.00%	0.57%
2015 -2020	0.95%	1.28%	-2	0	0.96%	1.03%	0.61%	1.05%	0.00%	0.98%
2020 -2025	1.08%	1.61%	-1	0	1.10%	1.16%	1.46%	-0.11%	0.00%	0.77%
2025 -2030	1.17%	1.87%	0	0	1.20%	1.72%	3.13%	0.00%	0.00%	1.37%
1999 -2009	1.33%	1.44%	71	979	1.37%	2.06%	2.41%	5.56%	-10.77%	2.69%
2010 -2030	0.97%	1.43%	-5	0	0.99%	0.65%	1.24%	1.33%	0.00%	0.82%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** BASE-MILD SCENARIO WITH DSM IMPACTS *****							***** BASE-MILD SCENARIO WITH DSM IMPACTS *****			
YEAR	AGGREGATED TOTAL MEMBER ENERGY PURCHASED (MWH)	TOTAL ENERGY GENERATED for H.E. MEMBERS (MWH)	HE SYSTEM AVERAGE MONTHLY LOSS FACTORS due to MEMBER SYSTEM LOAD (excludes pass-throughs)		H.E. AVERAGE WHOLESALE POWER COSTS (MILLS/MWH)	AGGREGATED MEMBER SYSTEM DEMANDS (WITHOUT LOSSES, 30 MINUTE DEMAND)				
			FOR ENERGY	FOR DEMAND		NONCOINCIDENT (MW)		COINCIDENT (MW) (EST. BEFORE 1984)		
						WINTER	SUMMER	WINTER	SUMMER	
ACTUAL	1999	5,320,840	5,535,309	3.97%	4.54%	*****	1,117	1,223	1,037	1,155
ACTUAL	2000	5,758,399	6,009,930	4.31%	4.52%	*****	1,173	1,187	1,110	1,117
ACTUAL	2001	5,864,880	6,118,847	4.27%	4.53%	*****	1,285	1,274	1,178	1,187
ACTUAL	2002	6,314,792	6,600,361	4.45%	4.78%	*****	1,211	1,346	1,151	1,229
ACTUAL	2003	6,320,460	6,593,113	4.26%	4.26%	*****	1,354	1,313	1,265	1,229
ACTUAL	2004	6,549,574	6,831,431	4.25%	4.81%	*****	1,381	1,321	1,268	1,255
ACTUAL	2005	6,850,535	7,115,713	3.83%	4.22%	*****	1,429	1,472	1,335	1,393
ACTUAL	2006	6,802,245	7,091,068	4.19%	4.47%	*****	1,414	1,502	1,336	1,393
ACTUAL	2007	7,215,322	7,533,291	4.33%	4.84%	*****	1,533	1,558	1,421	1,403
ACTUAL	2008	7,193,537	7,471,337	3.80%	5.10%	*****	1,575	1,442	1,440	1,289
ACTUAL	2009	6,898,809	7,174,754	3.93%	4.86%	*****	1,674	1,453	1,519	1,307
FRCST	2010	6,659,372	6,947,320	4.25%	4.73%	68.830	1,421	1,376	1,305	1,265
FRCST	2011	6,481,243	6,750,942	4.10%	4.80%	70.910	1,373	1,335	1,260	1,226
FRCST	2012	6,507,670	6,778,429	4.10%	4.80%	75.360	1,368	1,341	1,252	1,219
FRCST	2013	6,614,562	6,889,822	4.10%	4.80%	79.430	1,370	1,337	1,254	1,226
FRCST	2014	6,704,825	6,983,874	4.10%	4.80%	82.230	1,393	1,346	1,250	1,219
FRCST	2015	6,849,688	7,134,860	4.10%	4.80%	83.810	1,409	1,352	1,263	1,238
FRCST	2016	6,970,714	7,261,018	4.10%	4.80%	85.486	1,434	1,354	1,271	1,238
FRCST	2017	7,029,637	7,322,419	4.10%	4.80%	87.196	1,438	1,358	1,274	1,241
FRCST	2018	7,082,720	7,377,728	4.10%	4.80%	88.940	1,442	1,361	1,277	1,243
FRCST	2019	7,138,211	7,435,548	4.10%	4.80%	90.719	1,447	1,365	1,280	1,245
FRCST	2020	7,191,535	7,491,109	4.10%	4.80%	92.533	1,456	1,373	1,288	1,252
FRCST	2021	7,231,477	7,532,759	4.10%	4.80%	94.384	1,459	1,380	1,291	1,258
FRCST	2022	7,287,107	7,590,768	4.10%	4.80%	96.271	1,467	1,389	1,298	1,266
FRCST	2023	7,344,991	7,651,127	4.10%	4.80%	98.197	1,476	1,400	1,306	1,276
FRCST	2024	7,407,134	7,715,927	4.10%	4.80%	100.161	1,486	1,412	1,315	1,287
FRCST	2025	7,474,747	7,786,431	4.10%	4.80%	102.164	1,498	1,426	1,325	1,300
FRCST	2026	7,565,615	7,881,184	4.10%	4.80%	102.164	1,514	1,446	1,341	1,319
FRCST	2027	7,666,261	7,986,133	4.10%	4.80%	102.164	1,535	1,468	1,360	1,339
FRCST	2028	7,775,547	8,100,092	4.10%	4.80%	102.164	1,559	1,491	1,382	1,361
FRCST	2029	7,889,559	8,218,978	4.10%	4.80%	102.164	1,585	1,516	1,406	1,385
FRCST	2030	8,003,882	8,338,190	4.10%	4.80%	102.164	1,611	1,542	1,430	1,409

***** BASE-MILD SCENARIO WITH DSM IMPACTS *****							***** BASE-MILD SCENARIO WITH DSM IMPACTS *****			
TIME PERIOD	AGGREGATED H.E. ENERGY TOTAL ENERGY GENERATED PURCHASED FOR MEMBERS (% CHG.)	TOTAL ENERGY GENERATED for H.E. MEMBERS (% CHG.)	AVG. MONTHLY LOSS FACTORS due to MEMBERS ENERGY DEMAND (AVERAGE)		H.E. AVERAGE WHOLESALE POWER COSTS (% CHG.)	AGGREGATED MEMBER PEAK SEASONAL DEMANDS (WITHOUT LOSSES, 30 MINUTE DEMAND)				
			FOR ENERGY	FOR DEMAND		Non-Coincident (% Chg)		Coincident (% Chg)		
						WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	4.24%	4.30%	4.25%	4.57%	*****	4.34%	1.55%	4.09%	1.68%	
2004 -2009	1.04%	0.99%	4.06%	4.71%	*****	3.92%	1.92%	3.68%	0.81%	
2010 -2015	0.57%	0.53%	4.13%	4.79%	4.02%	-0.17%	-0.35%	-0.65%	-0.43%	
2015 -2020	0.98%	0.98%	4.10%	4.80%	2.00%	0.66%	0.31%	0.39%	0.23%	
2020 -2025	0.78%	0.78%	4.10%	4.80%	2.00%	0.57%	0.76%	0.57%	0.75%	
2025 -2030	1.38%	1.38%	4.10%	4.80%	0.00%	1.46%	1.57%	1.54%	1.61%	
1999 -2009	2.63%	2.63%	4.14%	4.63%	*****	4.13%	1.74%	3.88%	1.25%	
2010 -2030	0.92%	0.92%	4.11%	4.79%	1.99%	0.63%	0.57%	0.46%	0.54%	

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

HOOSIER ENERGY SYSTEM PEAK SEASONAL COINCIDENT DEMAND (MW) (All values are estimated 60 minute values)					H.E. ANNUAL LOAD FACTOR Due To COINCIDENT PEAK	HOOSIER ENERGY SYSTEM PEAK SEASONAL NON-COINCIDENT DEMAND (MW) (All values are estimated 60 minute values)					H.E. ANNUAL LOAD FACTOR Due To NON-COIN. PEAK
YEAR	WITHOUT LOSSES		WITH LOSSES		PEAK	WITHOUT LOSSES		WITH LOSSES		PEAK	
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER		
ACTUAL 1999	1,024	1,142	1,071	1,196	52.9%	1,103	1,209	1,154	1,266	49.9%	
ACTUAL 2000	1,086	1,099	1,136	1,150	59.5%	1,149	1,167	1,202	1,221	56.0%	
ACTUAL 2001	1,159	1,174	1,213	1,228	56.9%	1,271	1,259	1,329	1,317	52.5%	
ACTUAL 2002	1,105	1,218	1,159	1,278	59.0%	1,161	1,334	1,217	1,399	53.9%	
ACTUAL 2003	1,244	1,214	1,298	1,267	58.0%	1,332	1,298	1,390	1,354	54.2%	
ACTUAL 2004	1,252	1,235	1,314	1,296	59.2%	1,364	1,300	1,432	1,364	54.3%	
ACTUAL 2005	1,301	1,378	1,357	1,438	56.5%	1,393	1,456	1,453	1,519	53.5%	
ACTUAL 2006	1,304	1,374	1,364	1,437	56.3%	1,380	1,481	1,443	1,548	52.3%	
ACTUAL 2007	1,387	1,400	1,456	1,470	58.5%	1,496	1,555	1,571	1,632	52.7%	
ACTUAL 2008	1,424	1,269	1,499	1,336	56.7%	1,558	1,420	1,640	1,494	51.9%	
ACTUAL 2009	1,519	1,304	1,595	1,370	51.4%	1,674	1,450	1,758	1,522	46.6%	
FRCST 2010	1,290	1,256	1,353	1,317	58.6%	1,405	1,366	1,473	1,433	53.8%	
FRCST 2011	1,246	1,218	1,307	1,278	59.0%	1,358	1,326	1,424	1,391	54.1%	
FRCST 2012	1,237	1,211	1,298	1,271	59.4%	1,352	1,332	1,418	1,397	54.4%	
FRCST 2013	1,240	1,217	1,301	1,277	60.5%	1,355	1,328	1,421	1,393	55.3%	
FRCST 2014	1,235	1,210	1,296	1,270	61.5%	1,377	1,337	1,445	1,402	55.2%	
FRCST 2015	1,249	1,230	1,310	1,290	62.2%	1,393	1,343	1,461	1,409	55.7%	
FRCST 2016	1,256	1,230	1,318	1,290	62.7%	1,418	1,345	1,488	1,411	55.6%	
FRCST 2017	1,260	1,232	1,322	1,293	63.2%	1,422	1,349	1,492	1,416	56.0%	
FRCST 2018	1,262	1,234	1,325	1,295	63.6%	1,426	1,352	1,496	1,419	56.3%	
FRCST 2019	1,265	1,237	1,328	1,298	63.9%	1,430	1,356	1,501	1,422	56.6%	
FRCST 2020	1,273	1,244	1,336	1,305	63.8%	1,439	1,364	1,510	1,431	56.5%	
FRCST 2021	1,276	1,250	1,339	1,311	64.2%	1,442	1,370	1,513	1,438	56.8%	
FRCST 2022	1,283	1,258	1,347	1,320	64.3%	1,450	1,379	1,522	1,447	56.9%	
FRCST 2023	1,291	1,267	1,355	1,330	64.5%	1,459	1,390	1,531	1,458	57.0%	
FRCST 2024	1,300	1,279	1,364	1,342	64.4%	1,469	1,402	1,542	1,471	57.0%	
FRCST 2025	1,310	1,291	1,375	1,355	64.7%	1,481	1,416	1,554	1,486	57.2%	
FRCST 2026	1,325	1,310	1,391	1,375	64.7%	1,497	1,436	1,571	1,507	57.3%	
FRCST 2027	1,344	1,330	1,410	1,396	64.6%	1,517	1,458	1,592	1,530	57.3%	
FRCST 2028	1,366	1,352	1,433	1,419	64.3%	1,541	1,481	1,617	1,554	57.0%	
FRCST 2029	1,390	1,375	1,458	1,443	64.3%	1,567	1,506	1,644	1,580	57.1%	
FRCST 2030	1,414	1,399	1,484	1,468	64.2%	1,592	1,531	1,671	1,607	57.0%	

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	HOOSIER ENERGY COINCIDENT PEAK DEMAND (60 MINUTE VALUE, ALL VALUES EST.)				H.E. ANNUAL COINCIDENT LOAD FACTOR (AVERAGE)	HOOSIER ENERGY NON-COINCIDENT PEAK DEMAND (60 MINUTE VALUE, ALL VALUES EST.)				H.E. ANNUAL NON-COIN. LOAD FACTOR (AVERAGE)
	Without Losses (% Chg)		With Losses (% Chg)			Without Losses (% Chg)		With Losses (% Chg)		
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	4.10%	1.57%	4.16%	1.62%	57.57%	4.34%	1.45%	4.40%	1.50%	53.48%
2004 -2009	3.94%	1.10%	3.96%	1.12%	56.43%	4.18%	2.21%	4.20%	2.22%	51.87%
2010 -2015	-0.65%	-0.43%	-0.64%	-0.41%	60.19%	-0.17%	-0.35%	-0.16%	-0.33%	54.77%
2015 -2020	0.39%	0.23%	0.39%	0.23%	63.24%	0.66%	0.31%	0.66%	0.31%	56.11%
2020 -2025	0.57%	0.75%	0.57%	0.76%	64.32%	0.57%	0.76%	0.57%	0.76%	56.91%
2025 -2030	1.54%	1.61%	1.54%	1.62%	64.47%	1.46%	1.57%	1.46%	1.57%	57.13%
1999 -2009	4.02%	1.33%	4.06%	1.37%	56.80%	4.26%	1.83%	4.30%	1.86%	52.52%
2010 -2030	0.46%	0.54%	0.46%	0.54%	62.99%	0.63%	0.57%	0.63%	0.58%	56.20%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** BASE-MILD SCENARIO WITH DSM IMPACTS *****						***** BASE-MILD SCENARIO WITH DSM IMPACTS *****					
***** EXTREME TEMPERATURE CONDITIONS *****					H.E. ANNUAL LOAD FACTOR Due to EXTREME COINCIDENT PEAK	***** EXTREME TEMPERATURE CONDITIONS *****					H.E. ANNUAL LOAD FACTOR Due To EXTREME NON- COIN. PEAK
HOOSIER ENERGY SYSTEM PEAK SEASONAL COINCIDENT DEMAND (MW); 60 MINUTE VALUE (WITHOUT LOSSES) (WITH LOSSES)						HOOSIER ENERGY SYSTEM PEAK SEASONAL NON-COINCIDENT DEMAND (MW); 60 MINUTE VALUE (WITHOUT LOSSES) (WITH LOSSES)					
YEAR	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER		
ACTUAL 1999	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2000	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2001	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2002	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2003	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2004	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2005	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2006	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2007	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2008	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
FRCST 2010	1,420	1,375	1,489	1,442	53.3%	1,545	1,494	1,620	1,567	49.0%	
FRCST 2011	1,372	1,334	1,440	1,400	53.5%	1,494	1,451	1,568	1,522	49.2%	
FRCST 2012	1,363	1,326	1,430	1,391	53.9%	1,488	1,457	1,561	1,529	49.4%	
FRCST 2013	1,367	1,334	1,434	1,400	54.8%	1,492	1,454	1,565	1,525	50.3%	
FRCST 2014	1,363	1,326	1,430	1,392	55.8%	1,515	1,463	1,590	1,535	50.2%	
FRCST 2015	1,378	1,348	1,446	1,414	56.3%	1,532	1,470	1,608	1,543	50.7%	
FRCST 2016	1,384	1,346	1,452	1,412	56.9%	1,556	1,470	1,633	1,542	50.8%	
FRCST 2017	1,389	1,350	1,458	1,417	57.3%	1,562	1,476	1,639	1,549	51.0%	
FRCST 2018	1,393	1,353	1,462	1,420	57.6%	1,568	1,480	1,645	1,553	51.2%	
FRCST 2019	1,397	1,357	1,466	1,424	57.9%	1,573	1,485	1,651	1,558	51.4%	
FRCST 2020	1,406	1,365	1,476	1,433	57.8%	1,584	1,495	1,662	1,568	51.3%	
FRCST 2021	1,411	1,372	1,480	1,440	58.1%	1,587	1,502	1,666	1,576	51.6%	
FRCST 2022	1,419	1,382	1,489	1,450	58.2%	1,597	1,513	1,676	1,587	51.7%	
FRCST 2023	1,428	1,392	1,499	1,461	58.3%	1,608	1,525	1,687	1,600	51.8%	
FRCST 2024	1,438	1,405	1,509	1,474	58.2%	1,619	1,538	1,699	1,614	51.7%	
FRCST 2025	1,450	1,419	1,522	1,489	58.4%	1,633	1,554	1,713	1,630	51.9%	
FRCST 2026	1,467	1,439	1,539	1,510	58.4%	1,651	1,576	1,732	1,653	51.9%	
FRCST 2027	1,488	1,461	1,561	1,533	58.4%	1,673	1,599	1,756	1,677	51.9%	
FRCST 2028	1,511	1,485	1,586	1,558	58.1%	1,699	1,624	1,782	1,704	51.7%	
FRCST 2029	1,537	1,509	1,613	1,584	58.2%	1,726	1,650	1,811	1,732	51.8%	
FRCST 2030	1,563	1,535	1,640	1,611	58.0%	1,754	1,678	1,841	1,760	51.7%	

***** BASE-MILD SCENARIO WITH DSM IMPACTS *****						***** BASE-MILD SCENARIO WITH DSM IMPACTS *****					
***** EXTREME TEMPERATURE CONDITIONS *****					EXTREME COIN. H.E. ANNUAL LOAD FACTOR (AVERAGE)	***** EXTREME TEMPERATURE CONDITIONS *****					EXT. NON-COIN H.E. ANNUAL LOAD FACTOR (AVERAGE)
HOOSIER ENERGY COINCIDENT PEAK (60 MIN.) Without Losses (% Chg) With Losses (% Chg)						HOOSIER ENERGY NON-COINCIDENT PEAK (60 MIN.) Without Losses (% Chg) With Losses (% Chg)					
TIME PERIOD	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER		
1999 -2004	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2004 -2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2010 -2015	-0.60%	-0.39%	-0.59%	-0.38%	54.61%	-0.16%	-0.32%	-0.14%	-0.31%	49.77%	
2015 -2020	0.41%	0.26%	0.41%	0.26%	57.32%	0.66%	0.33%	0.66%	0.33%	51.04%	
2020 -2025	0.61%	0.78%	0.61%	0.78%	58.16%	0.61%	0.78%	0.61%	0.78%	51.66%	
2025 -2030	1.51%	1.58%	1.51%	1.59%	58.26%	1.44%	1.54%	1.44%	1.55%	51.83%	
1999 -2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2010 -2030	0.48%	0.55%	0.48%	0.56%	57.03%	0.64%	0.58%	0.64%	0.58%	51.05%	

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\* Adjusted for IN #72, IN #16 and IN#92 \*\*\*\*

\*\*\*\* Adjusted for IN #72, IN #16 and IN#92 \*\*\*\*

Aggregated Member System Data  
NUMBER OF CONSUMERS

Aggregated Member System Data  
SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

	YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL	1999	209,962	9,568	112	887	220,529	2,864,229	599,227	862,060	29,908	4,355,424
ACTUAL	2000	215,011	9,890	120	1,018	226,039	2,948,957	656,492	1,088,160	30,617	4,724,226
ACTUAL	2001	219,228	10,003	132	1,093	230,456	3,052,360	639,446	1,164,603	31,271	4,887,680
ACTUAL	2002	223,044	10,265	139	1,144	234,592	3,261,617	663,738	1,272,906	32,441	5,230,702
ACTUAL	2003	226,749	10,462	151	1,293	238,655	3,243,405	673,235	1,316,094	32,150	5,264,884
ACTUAL	2004	230,760	10,690	151	1,429	243,030	3,305,807	706,497	1,403,535	33,098	5,448,937
ACTUAL	2005	257,250	11,810	165	1,573	270,798	3,749,514	774,714	1,484,489	33,634	6,042,351
ACTUAL	2006	260,854	11,986	169	1,707	274,716	3,856,899	824,354	1,545,582	32,678	6,259,513
ACTUAL	2007	263,908	12,246	191	1,821	278,166	4,088,777	855,093	1,620,151	34,240	6,598,261
ACTUAL	2008	265,071	12,166	200	1,833	279,270	4,080,904	856,375	1,630,203	33,209	6,600,691
ACTUAL	2009	265,137	12,281	192	1,836	279,446	3,904,139	818,798	1,564,440	31,738	6,319,115
FRCST	2010	266,015	12,414	196	1,854	280,479	3,559,550	832,096	1,680,134	33,075	6,104,855
FRCST	2011	279,471	13,817	202	2,222	295,712	3,545,874	876,942	1,728,364	40,028	6,191,208
FRCST	2012	281,258	13,950	201	2,222	297,631	3,478,576	876,919	1,822,016	40,028	6,217,538
FRCST	2013	283,305	14,083	202	2,222	299,812	3,458,864	873,736	1,947,217	40,028	6,319,845
FRCST	2014	285,534	14,216	202	2,222	302,174	3,453,551	869,406	2,043,312	40,028	6,406,296
FRCST	2015	287,915	14,349	202	2,222	304,688	3,463,858	866,521	2,174,080	40,028	6,544,486
FRCST	2016	290,544	14,538	202	2,222	307,506	3,498,753	869,701	2,251,632	40,028	6,660,114
FRCST	2017	293,251	14,727	201	2,222	310,401	3,532,241	874,029	2,270,024	40,028	6,716,322
FRCST	2018	296,054	14,916	201	2,222	313,393	3,568,843	880,017	2,278,123	40,028	6,767,012
FRCST	2019	298,916	15,105	201	2,222	316,444	3,609,202	886,229	2,284,521	40,028	6,819,980
FRCST	2020	301,845	15,294	200	2,222	319,561	3,646,477	893,425	2,290,962	40,028	6,870,892
FRCST	2021	305,026	15,548	199	2,222	322,995	3,686,002	904,834	2,277,950	40,028	6,908,814
FRCST	2022	308,274	15,802	199	2,222	326,497	3,726,815	917,035	2,277,950	40,028	6,961,829
FRCST	2023	311,588	16,056	199	2,222	330,065	3,769,293	929,722	2,277,950	40,028	7,016,993
FRCST	2024	314,977	16,310	199	2,222	333,708	3,814,109	944,143	2,277,950	40,028	7,076,230
FRCST	2025	318,468	16,564	199	2,222	337,453	3,862,176	960,507	2,277,950	40,028	7,140,661
FRCST	2026	322,163	16,885	199	2,222	341,469	3,920,476	988,782	2,277,950	40,028	7,227,236
FRCST	2027	325,914	17,206	199	2,222	345,541	3,986,458	1,018,713	2,277,950	40,028	7,323,148
FRCST	2028	329,731	17,527	199	2,222	349,679	4,057,157	1,052,172	2,277,950	40,028	7,427,307
FRCST	2029	333,607	17,848	199	2,222	353,876	4,130,938	1,087,062	2,277,950	40,028	7,535,978
FRCST	2030	337,521	18,169	199	2,222	358,111	4,206,172	1,120,796	2,277,950	40,028	7,644,946

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

Adjusted for Systems – AGGREGATED NUMBER OF CONSUMERS

Adjusted for Systems – AGGREGATED ENERGY SALES

TIME PERIOD	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT.CHG.)	OTHER (ACT.CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
1999 -2004	1.91%	2.24%	39	542	1.96%	2.91%	3.35%	10.24%	2.05%	4.58%
2004 -2009	2.82%	2.81%	41	407	2.83%	3.38%	2.99%	2.19%	-0.84%	3.01%
2010 -2015	1.59%	2.94%	6	368	1.67%	-0.54%	0.81%	5.29%	3.89%	1.40%
2015 -2020	0.95%	1.28%	-2	0	0.96%	1.03%	0.61%	1.05%	0.00%	0.98%
2020 -2025	1.08%	1.61%	-1	0	1.10%	1.16%	1.46%	-0.11%	0.00%	0.77%
2025 -2030	1.17%	1.87%	0	0	1.20%	1.72%	3.13%	0.00%	0.00%	1.37%
1999 -2009	2.36%	2.53%	80	949	2.40%	3.15%	3.17%	6.14%	0.60%	3.79%
2010 -2030	1.20%	1.92%	3	368	1.23%	0.84%	1.50%	1.53%	0.96%	1.13%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	AGGREGATED TOTAL MEMBER ENERGY PURCHASED (MWH)	ENERGY GENERATED FOR MEMBERS (MWH)	Energy and Demand Values Adjusted for IN #72, IN # 16 and IN#92						ANNUAL LOAD FACTOR
			AGGREGATED MEMBER 30 MIN. COINCIDENT PEAK W/O LOSSES (MW)		HE COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984) (WITHOUT LOSSES)		HE COINCIDENT 60 MINUTE DEMAND (MW) (WITH LOSSES)		
			WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999	4,592,866	4,777,226	900	1,004	888	993	929	1,039	52.5%
ACTUAL 2000	4,998,042	5,215,344	958	969	937	953	980	997	59.6%
ACTUAL 2001	5,106,079	5,328,182	1,023	1,032	1,006	1,020	1,052	1,067	57.0%
ACTUAL 2002	5,499,105	5,746,666	1,012	1,077	972	1,066	1,019	1,118	58.7%
ACTUAL 2003	5,527,292	5,764,676	1,102	1,072	1,084	1,059	1,130	1,105	58.2%
ACTUAL 2004	5,736,200	5,981,961	1,103	1,095	1,089	1,077	1,143	1,130	59.6%
ACTUAL 2005	6,332,029	6,576,556	1,172	1,333	1,142	1,319	1,191	1,376	54.6%
ACTUAL 2006	6,525,204	6,801,916	1,295	1,337	1,264	1,318	1,322	1,379	56.3%
ACTUAL 2007	6,924,233	7,229,037	1,384	1,341	1,351	1,338	1,418	1,405	58.2%
ACTUAL 2008	6,912,387	7,179,069	1,395	1,245	1,380	1,226	1,453	1,290	56.2%
ACTUAL 2009	6,617,661	6,882,100	1,472	1,247	1,472	1,243	1,546	1,306	50.8%
FRCST 2010	6,389,703	6,665,681	1,260	1,212	1,245	1,204	1,306	1,262	58.3%
FRCST 2011	6,481,243	6,750,942	1,260	1,226	1,246	1,218	1,307	1,278	59.0%
FRCST 2012	6,507,670	6,778,429	1,252	1,219	1,237	1,211	1,298	1,271	59.4%
FRCST 2013	6,614,562	6,889,822	1,254	1,226	1,240	1,217	1,301	1,277	60.5%
FRCST 2014	6,704,825	6,983,874	1,250	1,219	1,235	1,210	1,296	1,270	61.5%
FRCST 2015	6,849,688	7,134,860	1,263	1,238	1,249	1,230	1,310	1,290	62.2%
FRCST 2016	6,970,714	7,261,018	1,271	1,238	1,256	1,230	1,318	1,290	62.7%
FRCST 2017	7,029,637	7,322,419	1,274	1,241	1,260	1,232	1,322	1,293	63.2%
FRCST 2018	7,082,720	7,377,728	1,277	1,243	1,262	1,234	1,325	1,295	63.6%
FRCST 2019	7,138,211	7,435,548	1,280	1,245	1,265	1,237	1,328	1,298	63.9%
FRCST 2020	7,191,535	7,491,109	1,288	1,252	1,273	1,244	1,336	1,305	63.8%
FRCST 2021	7,231,477	7,532,759	1,291	1,258	1,276	1,250	1,339	1,311	64.2%
FRCST 2022	7,287,107	7,590,768	1,298	1,266	1,283	1,258	1,347	1,320	64.3%
FRCST 2023	7,344,991	7,651,127	1,306	1,276	1,291	1,267	1,355	1,330	64.5%
FRCST 2024	7,407,134	7,715,927	1,315	1,287	1,300	1,279	1,364	1,342	64.4%
FRCST 2025	7,474,747	7,786,431	1,325	1,300	1,310	1,291	1,375	1,355	64.7%
FRCST 2026	7,565,615	7,881,184	1,341	1,319	1,325	1,310	1,391	1,375	64.7%
FRCST 2027	7,666,261	7,986,133	1,360	1,339	1,344	1,330	1,410	1,396	64.6%
FRCST 2028	7,775,547	8,100,092	1,382	1,361	1,366	1,352	1,433	1,419	64.3%
FRCST 2029	7,889,559	8,218,978	1,406	1,385	1,390	1,375	1,458	1,443	64.3%
FRCST 2030	8,003,882	8,338,190	1,430	1,409	1,414	1,399	1,484	1,468	64.2%

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	Adjusted for Systems ENERGY PURCHASED (% CHG.)		Adjusted for Systems ENERGY GENERATED (% CHG.)		Adjusted for Systems AGGREGATED 30 MIN. COIN. PEAK W/O LOSSES (% CHG)		Adjusted for Systems - HE COIN. 60 MINUTE DEMAND Without Losses (% Chg)		Adjusted for Systems - HE COIN. 60 MINUTE DEMAND With Losses (% Chg)		ADJUSTED ANNUAL LOAD FACTOR (AVERAGE)
					WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	4.55%	4.60%	4.15%	1.76%	4.17%	1.65%	4.23%	1.70%	57.58%		
2004 -2009	2.90%	2.84%	5.94%	2.62%	6.21%	2.91%	6.23%	2.93%	55.96%		
2010 -2015	1.40%	1.37%	0.05%	0.42%	0.05%	0.42%	0.06%	0.44%	60.13%		
2015 -2020	0.98%	0.98%	0.39%	0.23%	0.39%	0.23%	0.39%	0.23%	63.24%		
2020 -2025	0.78%	0.78%	0.57%	0.75%	0.57%	0.75%	0.57%	0.76%	64.32%		
2025 -2030	1.38%	1.38%	1.54%	1.61%	1.54%	1.61%	1.54%	1.62%	64.47%		
1999 -2009	3.72%	3.72%	5.05%	2.19%	5.19%	2.28%	5.22%	2.31%	56.51%		
2010 -2030	1.13%	1.13%	0.64%	0.75%	0.64%	0.75%	0.64%	0.76%	62.97%		

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN #72, IN #16 and IN#92

EXTREME COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984)

YEAR	(WITHOUT LOSSES)		(WITH LOSSES)		EXTREME ANNUAL LOAD FACTOR
	WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999	*****	*****	*****	*****	*****
ACTUAL 2000	*****	*****	*****	*****	*****
ACTUAL 2001	*****	*****	*****	*****	*****
ACTUAL 2002	*****	*****	*****	*****	*****
ACTUAL 2003	*****	*****	*****	*****	*****
ACTUAL 2004	*****	*****	*****	*****	*****
ACTUAL 2005	*****	*****	*****	*****	*****
ACTUAL 2006	*****	*****	*****	*****	*****
ACTUAL 2007	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****
FRCST 2010	1,371	1,317	1,438	1,381	52.9%
FRCST 2011	1,372	1,334	1,440	1,400	53.5%
FRCST 2012	1,363	1,326	1,430	1,391	53.9%
FRCST 2013	1,367	1,334	1,434	1,400	54.8%
FRCST 2014	1,363	1,326	1,430	1,392	55.8%
FRCST 2015	1,378	1,348	1,446	1,414	56.3%
FRCST 2016	1,384	1,346	1,452	1,412	56.9%
FRCST 2017	1,389	1,350	1,458	1,417	57.3%
FRCST 2018	1,393	1,353	1,462	1,420	57.6%
FRCST 2019	1,397	1,357	1,466	1,424	57.9%
FRCST 2020	1,406	1,365	1,476	1,433	57.8%
FRCST 2021	1,411	1,372	1,480	1,440	58.1%
FRCST 2022	1,419	1,382	1,489	1,450	58.2%
FRCST 2023	1,428	1,392	1,499	1,461	58.3%
FRCST 2024	1,438	1,405	1,509	1,474	58.2%
FRCST 2025	1,450	1,419	1,522	1,489	58.4%
FRCST 2026	1,467	1,439	1,539	1,510	58.4%
FRCST 2027	1,488	1,461	1,561	1,533	58.4%
FRCST 2028	1,511	1,485	1,586	1,558	58.1%
FRCST 2029	1,537	1,509	1,613	1,584	58.2%
FRCST 2030	1,563	1,535	1,640	1,611	58.0%

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

Adjusted for Systems HE EXT. COIN. 60 MINUTE DEMAND

Without Losses (% Chg)

With Losses (% Chg)

ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)

TIME PERIOD	WINTER	SUMMER	WINTER	SUMMER	ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)
1999 -2004	*****	*****	*****	*****	*****
2004 -2009	*****	*****	*****	*****	*****
2010 -2015	0.10%	0.47%	0.11%	0.48%	54.55%
2015 -2020	0.41%	0.26%	0.41%	0.26%	57.32%
2020 -2025	0.61%	0.78%	0.61%	0.78%	58.16%
2025 -2030	1.51%	1.58%	1.51%	1.59%	58.26%
1999 -2009	*****	*****	*****	*****	*****
2010 -2030	0.66%	0.77%	0.66%	0.77%	57.01%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR. ) ?

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

Values Adjusted for IN#72,IN#16,IN#92 and Special Industrial Loads  
Aggregated Member System Data  
NUMBER OF CONSUMERS

Values Adjusted for IN#72,IN#16,IN#92 and Special Industrial Loads  
Aggregated Member System Data  
SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	209,962	9,568	112	887	220,529	2,864,229	599,227	726,658	29,908	4,220,022
ACTUAL 2000	215,011	9,890	119	1,018	226,038	2,948,957	656,492	917,277	30,617	4,553,343
ACTUAL 2001	219,228	10,003	131	1,093	230,455	3,052,360	639,446	990,705	31,271	4,713,782
ACTUAL 2002	223,044	10,265	138	1,144	234,591	3,261,617	663,738	1,086,676	32,441	5,044,472
ACTUAL 2003	226,749	10,462	150	1,293	238,654	3,243,405	673,235	1,127,531	32,150	5,076,321
ACTUAL 2004	230,760	10,690	150	1,429	243,029	3,305,807	706,497	1,205,248	33,098	5,250,650
ACTUAL 2005	257,250	11,810	164	1,573	270,797	3,749,514	774,714	1,291,857	33,634	5,849,719
ACTUAL 2006	260,854	11,986	168	1,707	274,715	3,856,899	824,354	1,350,149	32,678	6,064,080
ACTUAL 2007	263,908	12,246	190	1,821	278,165	4,088,777	855,093	1,435,203	34,240	6,413,313
ACTUAL 2008	265,071	12,166	199	1,833	279,269	4,080,904	856,375	1,461,568	33,209	6,432,056
ACTUAL 2009	265,137	12,281	191	1,836	279,445	3,904,139	818,796	1,407,974	31,738	6,162,649
FRCST 2010	266,015	12,414	195	1,854	280,478	3,559,550	832,096	1,507,744	33,075	5,932,465
FRCST 2011	279,471	13,817	201	2,222	295,711	3,545,874	876,942	1,554,914	40,028	6,017,759
FRCST 2012	281,258	13,950	200	2,222	297,630	3,478,576	876,919	1,646,951	40,028	6,042,474
FRCST 2013	283,305	14,083	201	2,222	299,811	3,458,864	873,736	1,770,523	40,028	6,143,151
FRCST 2014	285,534	14,216	201	2,222	302,173	3,453,551	869,406	1,864,972	40,028	6,227,957
FRCST 2015	287,915	14,349	201	2,222	304,687	3,463,858	866,521	1,994,080	40,028	6,364,486
FRCST 2016	290,544	14,538	201	2,222	307,505	3,498,753	869,701	2,070,643	40,028	6,479,125
FRCST 2017	293,251	14,727	200	2,222	310,400	3,532,241	874,029	2,088,040	40,028	6,534,339
FRCST 2018	296,054	14,916	200	2,222	313,392	3,568,843	880,017	2,095,139	40,028	6,584,028
FRCST 2019	298,916	15,105	200	2,222	316,443	3,609,202	886,229	2,100,532	40,028	6,635,991
FRCST 2020	301,845	15,294	199	2,222	319,560	3,646,477	893,425	2,105,962	40,028	6,685,892
FRCST 2021	305,026	15,548	198	2,222	322,994	3,686,002	904,834	2,092,950	40,028	6,723,814
FRCST 2022	308,274	15,802	198	2,222	326,496	3,726,815	917,035	2,092,950	40,028	6,776,829
FRCST 2023	311,588	16,056	198	2,222	330,064	3,769,293	929,722	2,092,950	40,028	6,831,993
FRCST 2024	314,977	16,310	198	2,222	333,707	3,814,109	944,143	2,092,950	40,028	6,891,230
FRCST 2025	318,468	16,564	198	2,222	337,452	3,862,176	960,507	2,092,950	40,028	6,955,661
FRCST 2026	322,163	16,885	198	2,222	341,468	3,920,476	988,782	2,092,950	40,028	7,042,236
FRCST 2027	325,914	17,206	198	2,222	345,540	3,988,458	1,018,713	2,092,950	40,028	7,138,148
FRCST 2028	329,731	17,527	198	2,222	349,678	4,057,157	1,052,172	2,092,950	40,028	7,242,307
FRCST 2029	333,607	17,848	198	2,222	353,875	4,130,938	1,087,062	2,092,950	40,028	7,350,978
FRCST 2030	337,521	18,169	198	2,222	358,110	4,208,172	1,120,796	2,092,950	40,028	7,459,946

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

Adjusted for Systems – AGGREGATED NUMBER OF CONSUMERS

Adjusted for Systems & Ind. – AGGREGATED ENERGY SALES

TIME PERIOD	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT.CHG.)	OTHER (ACT.CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
1999 -2004	1.91%	2.24%	38	542	1.96%	2.91%	3.35%	10.65%	2.05%	4.47%
2004 -2009	2.82%	2.81%	41	407	2.83%	3.38%	2.99%	3.16%	-0.84%	3.25%
2010 -2015	1.59%	2.94%	6	368	1.67%	-0.54%	0.81%	5.75%	3.89%	1.42%
2015 -2020	0.95%	1.28%	-2	0	0.96%	1.03%	0.61%	1.10%	0.00%	0.99%
2020 -2025	1.08%	1.61%	-1	0	1.10%	1.16%	1.46%	-0.12%	0.00%	0.79%
2025 -2030	1.17%	1.87%	0	0	1.20%	1.72%	3.13%	0.00%	0.00%	1.41%
1999 -2009	2.36%	2.53%	79	949	2.40%	3.15%	3.17%	6.84%	0.60%	3.86%
2010 -2030	1.20%	1.92%	3	368	1.23%	0.84%	1.50%	1.65%	0.96%	1.15%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	AGGREGATED TOTAL MEMBER ENERGY PURCHASED (MWH)	ENERGY GENERATED FOR MEMBERS (MWH)	Energy and Demand Values Adjusted for IN#72,IN#16,IN#92 and Special Industrial Loads						ANNUAL LOAD FACTOR
			H.E. 30 MINUTE COINCIDENT DEMAND (MW) (WITHOUT LOSSES)		H.E. COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984) (WITHOUT LOSSES)		H.E. COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984) (WITH LOSSES)		
			WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999	4,457,464	4,641,824	884	984	874	974	913	1,023	51.8%
ACTUAL 2000	4,827,158	5,044,460	934	927	915	912	952	972	59.1%
ACTUAL 2001	4,932,180	5,152,284	987	1,004	976	992	1,022	1,045	56.3%
ACTUAL 2002	5,312,874	5,560,435	968	1,040	929	1,030	965	1,091	58.2%
ACTUAL 2003	5,338,729	5,576,113	1,079	1,040	1,061	1,027	1,106	1,079	57.6%
ACTUAL 2004	5,537,913	5,783,674	1,066	1,055	1,052	1,037	1,106	1,093	59.5%
ACTUAL 2005	6,139,397	6,383,924	1,138	1,305	1,109	1,291	1,150	1,355	53.8%
ACTUAL 2006	6,329,771	6,606,483	1,260	1,322	1,229	1,303	1,283	1,366	55.2%
ACTUAL 2007	6,739,285	7,044,089	1,354	1,337	1,321	1,334	1,387	1,397	57.6%
ACTUAL 2008	6,743,752	7,010,434	1,394	1,235	1,379	1,215	1,442	1,327	55.3%
ACTUAL 2009	6,461,195	6,725,634	1,465	1,232	1,465	1,229	1,525	1,292	50.3%
FRCST 2010	6,217,313	6,493,291	1,234	1,187	1,220	1,179	1,281	1,237	57.9%
FRCST 2011	6,307,793	6,577,492	1,234	1,201	1,220	1,193	1,281	1,253	58.6%
FRCST 2012	6,332,605	6,603,365	1,226	1,194	1,211	1,185	1,272	1,245	59.1%
FRCST 2013	6,437,867	6,713,127	1,228	1,200	1,213	1,192	1,275	1,252	60.1%
FRCST 2014	6,526,485	6,805,535	1,223	1,193	1,209	1,184	1,270	1,244	61.2%
FRCST 2015	6,669,688	6,954,860	1,236	1,212	1,222	1,204	1,284	1,264	61.9%
FRCST 2016	6,789,725	7,080,029	1,244	1,212	1,229	1,203	1,291	1,264	62.4%
FRCST 2017	6,847,654	7,140,435	1,247	1,215	1,233	1,206	1,295	1,267	62.9%
FRCST 2018	6,899,736	7,194,744	1,250	1,216	1,235	1,208	1,298	1,269	63.3%
FRCST 2019	6,954,222	7,251,659	1,253	1,219	1,238	1,210	1,301	1,271	63.6%
FRCST 2020	7,006,535	7,306,109	1,260	1,226	1,246	1,217	1,308	1,278	63.6%
FRCST 2021	7,046,477	7,347,759	1,264	1,231	1,249	1,223	1,312	1,285	63.9%
FRCST 2022	7,102,107	7,405,768	1,271	1,240	1,256	1,231	1,319	1,293	64.1%
FRCST 2023	7,159,991	7,466,127	1,279	1,249	1,264	1,241	1,327	1,303	64.2%
FRCST 2024	7,222,134	7,530,927	1,287	1,261	1,272	1,252	1,337	1,315	64.1%
FRCST 2025	7,289,747	7,601,431	1,298	1,274	1,283	1,265	1,347	1,328	64.4%
FRCST 2026	7,380,615	7,696,184	1,313	1,292	1,298	1,283	1,363	1,348	64.4%
FRCST 2027	7,481,261	7,801,133	1,332	1,312	1,317	1,303	1,383	1,369	64.4%
FRCST 2028	7,590,547	7,915,092	1,354	1,335	1,339	1,325	1,406	1,392	64.1%
FRCST 2029	7,704,559	8,033,978	1,378	1,358	1,362	1,348	1,431	1,416	64.1%
FRCST 2030	7,818,882	8,153,190	1,403	1,382	1,386	1,372	1,456	1,441	63.9%

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	Adjusted for ENERGY PURCHASED (% CHG.)	Systems & Ind ENERGY GENERATED (% CHG.)	Adj. Sys. & Ind. -- H.E. 30 MINUTE COINCIDENT DEMAND (MW) (WITHOUT LOSSES)		Adjusted for Sys. & Ind. -- HE COIN. 60 MINUTE DEMAND Without Losses (% Chg)		HE COIN. 60 MINUTE DEMAND With Losses (% Chg)		ADJUSTED ANNUAL LOAD FACTOR (AVERAGE)
			WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	4.44%	4.50%	3.80%	1.40%	3.78%	1.26%	3.91%	1.33%	57.07%
2004 -2009	3.13%	3.06%	6.58%	3.15%	6.85%	3.46%	6.64%	3.40%	55.30%
2010 -2015	1.41%	1.38%	0.03%	0.42%	0.03%	0.42%	0.05%	0.43%	59.79%
2015 -2020	0.99%	0.99%	0.38%	0.22%	0.38%	0.22%	0.38%	0.22%	62.95%
2020 -2025	0.80%	0.80%	0.59%	0.77%	0.59%	0.77%	0.59%	0.77%	64.06%
2025 -2030	1.41%	1.41%	1.57%	1.65%	1.57%	1.65%	1.57%	1.65%	64.22%
1999 -2009	3.78%	3.78%	5.18%	2.27%	5.30%	2.35%	5.26%	2.36%	55.88%
2010 -2030	1.15%	1.14%	0.64%	0.76%	0.64%	0.76%	0.65%	0.77%	62.68%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN#72,IN#16,IN#92 and Special Industrial Loads

EXTREME COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984)

YEAR	(WITHOUT LOSSES)		(WITH LOSSES)		EXTREME ANNUAL LOAD FACTOR
	WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999	*****	*****	*****	*****	*****
ACTUAL 2000	*****	*****	*****	*****	*****
ACTUAL 2001	*****	*****	*****	*****	*****
ACTUAL 2002	*****	*****	*****	*****	*****
ACTUAL 2003	*****	*****	*****	*****	*****
ACTUAL 2004	*****	*****	*****	*****	*****
ACTUAL 2005	*****	*****	*****	*****	*****
ACTUAL 2006	*****	*****	*****	*****	*****
ACTUAL 2007	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****
FRCST 2010	1,345	1,292	1,412	1,356	52.5%
FRCST 2011	1,347	1,309	1,414	1,375	53.1%
FRCST 2012	1,337	1,301	1,405	1,366	53.5%
FRCST 2013	1,341	1,308	1,408	1,374	54.4%
FRCST 2014	1,336	1,300	1,404	1,366	55.4%
FRCST 2015	1,351	1,322	1,419	1,388	55.9%
FRCST 2016	1,357	1,319	1,425	1,386	56.6%
FRCST 2017	1,362	1,324	1,431	1,391	57.0%
FRCST 2018	1,366	1,327	1,435	1,394	57.2%
FRCST 2019	1,370	1,330	1,439	1,397	57.5%
FRCST 2020	1,379	1,338	1,448	1,406	57.4%
FRCST 2021	1,383	1,345	1,453	1,413	57.7%
FRCST 2022	1,392	1,355	1,462	1,423	57.8%
FRCST 2023	1,401	1,366	1,471	1,434	57.9%
FRCST 2024	1,411	1,378	1,482	1,448	57.8%
FRCST 2025	1,423	1,392	1,494	1,462	58.1%
FRCST 2026	1,440	1,412	1,512	1,484	58.1%
FRCST 2027	1,460	1,434	1,534	1,506	58.1%
FRCST 2028	1,484	1,458	1,559	1,531	57.8%
FRCST 2029	1,510	1,483	1,586	1,557	57.8%
FRCST 2030	1,536	1,508	1,613	1,584	57.7%

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO RESULTS \*\*\*\*\*

Adjusted for Sys. & Ind. HE EXT. COIN. 60 MINUTE DEMAND

ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)

TIME PERIOD	Without Losses (% Chg)		With Losses (% Chg)		ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)
	WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	*****	*****	*****	*****	*****
2004 -2009	*****	*****	*****	*****	*****
2010 -2015	0.09%	0.46%	0.10%	0.47%	54.13%
2015 -2020	0.41%	0.25%	0.41%	0.25%	56.94%
2020 -2025	0.63%	0.79%	0.63%	0.79%	57.81%
2025 -2030	1.54%	1.61%	1.54%	1.61%	57.93%
1999 -2009	*****	*****	*****	*****	*****
2010 -2030	0.66%	0.78%	0.67%	0.78%	56.64%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	H.E. Time Factor Ratio from 30 to 60 Minute excludes pass-throughs (Est. before 1984)		PERCENTAGE of IN #72 Served by H.E.	IN #72 served by H.E. (Yes=0, No=1)		PERCENTAGE of IN #16 Served by H.E.	IN #16 served by H.E. (Yes=0, No=1)	
	WINTER	SUMMER		WINTER	SUMMER		WINTER	SUMMER
ACTUAL 1999	98.85%	98.99%	100.0%	0	0	100.0%	0	0
ACTUAL 2000	97.92%	98.42%	100.0%	0	0	100.0%	0	0
ACTUAL 2001	98.92%	98.85%	100.0%	0	0	100.0%	0	0
ACTUAL 2002	96.00%	99.02%	100.0%	0	0	100.0%	0	0
ACTUAL 2003	98.31%	98.80%	100.0%	0	0	100.0%	0	0
ACTUAL 2004	98.73%	98.31%	100.0%	0	0	100.0%	0	0
ACTUAL 2005	97.45%	98.93%	100.0%	0	0	100.0%	0	0
ACTUAL 2006	97.54%	98.57%	100.0%	0	0	100.0%	0	0
ACTUAL 2007	97.56%	99.78%	100.0%	0	0	100.0%	0	0
ACTUAL 2008	98.92%	98.38%	100.0%	0	0	100.0%	0	0
ACTUAL 2009	100.00%	99.76%	100.0%	0	0	100.0%	0	0
FRCST 2010	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2011	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2012	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2013	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2014	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2015	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2016	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2017	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2018	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2019	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2020	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2021	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2022	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2023	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2024	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2025	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2026	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2027	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2028	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2029	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2030	98.83%	99.30%	100.00%	0	0	100.00%	0	0

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	HE TIME FACTOR RATIO (30 to 60 MINUTE)	
	WINTER (AVERAGE)	SUMMER (AVERAGE)
1999 -2004	98.12%	98.73%
2004 -2009	98.37%	98.95%
2010 -2015	98.83%	99.30%
2015 -2020	98.83%	99.30%
2020 -2025	98.83%	99.30%
2025 -2030	98.83%	99.30%
1999 -2009	98.20%	98.89%
2010 -2030	98.83%	99.30%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	PERCENTAGE	IN #92 served by H.E.		PERCENTAGE	IL #2 served by H.E.	
	of IN #92 Served by H.E.	(Yes=0, No=1)		of IL #2 Served by H.E.	(Yes=0, No=1)	
		WINTER	SUMMER		WINTER	SUMMER
ACTUAL 1999	0.0%	1	1	0.0%	1	1
ACTUAL 2000	0.0%	1	1	0.0%	1	1
ACTUAL 2001	0.0%	1	1	0.0%	1	1
ACTUAL 2002	0.0%	1	1	0.0%	1	1
ACTUAL 2003	0.0%	1	1	0.0%	1	1
ACTUAL 2004	0.0%	1	1	0.0%	1	1
ACTUAL 2005	51.0%	1	0	0.0%	1	1
ACTUAL 2006	100.0%	0	0	0.0%	1	1
ACTUAL 2007	100.0%	0	0	0.0%	1	1
ACTUAL 2008	100.0%	0	0	0.0%	1	1
ACTUAL 2009	100.0%	0	0	0.0%	1	1
FRCST 2010	100.00%	0	0	0.00%	1	1
FRCST 2011	100.00%	0	0	100.00%	0	0
FRCST 2012	100.00%	0	0	100.00%	0	0
FRCST 2013	100.00%	0	0	100.00%	0	0
FRCST 2014	100.00%	0	0	100.00%	0	0
FRCST 2015	100.00%	0	0	100.00%	0	0
FRCST 2016	100.00%	0	0	100.00%	0	0
FRCST 2017	100.00%	0	0	100.00%	0	0
FRCST 2018	100.00%	0	0	100.00%	0	0
FRCST 2019	100.00%	0	0	100.00%	0	0
FRCST 2020	100.00%	0	0	100.00%	0	0
FRCST 2021	100.00%	0	0	100.00%	0	0
FRCST 2022	100.00%	0	0	100.00%	0	0
FRCST 2023	100.00%	0	0	100.00%	0	0
FRCST 2024	100.00%	0	0	100.00%	0	0
FRCST 2025	100.00%	0	0	100.00%	0	0
FRCST 2026	100.00%	0	0	100.00%	0	0
FRCST 2027	100.00%	0	0	100.00%	0	0
FRCST 2028	100.00%	0	0	100.00%	0	0
FRCST 2029	100.00%	0	0	100.00%	0	0
FRCST 2030	100.00%	0	0	100.00%	0	0

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD

1999 -2004  
2004 -2009

2010 -2015  
2015 -2020  
2020 -2025  
2025 -2030

1999 -2009  
2010 -2030

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

DSM EE Program Energy Impact

DSM Demand Impacts-- Both EE & DR Programs)  
Coincident 60 Minute Demand MW

YEAR	Aggregated Total Member Energy		Total Member Energy		Savings w/o Losses		Savings with Losses		
	Purchased Savings MWH	Percent of Total	Generated Savings MWH	Percent of Total	Winter	Summer	Winter	Summer	
ACTUAL	1999								
ACTUAL	2000								
ACTUAL	2001								
ACTUAL	2002								
ACTUAL	2003								
ACTUAL	2004								
ACTUAL	2005								
ACTUAL	2006								
ACTUAL	2007								
ACTUAL	2008								
ACTUAL	2009								
FRCST	2010	47,155	0.8%	49,248	0.8%	22.515	12.187	23.631	12.792
FRCST	2011	81,750	1.3%	85,245	1.3%	37.975	23.890	39.889	25.093
FRCST	2012	111,872	1.7%	116,655	1.7%	53.016	39.908	55.688	41.919
FRCST	2013	134,951	2.1%	140,721	2.1%	69.186	58.148	72.672	61.079
FRCST	2014	168,513	2.5%	175,718	2.5%	87.761	75.440	92.184	79.242
FRCST	2015	199,869	2.9%	208,415	2.9%	105.721	92.709	111.049	97.381
FRCST	2016	215,347	3.1%	224,554	3.1%	116.598	104.956	122.474	110.246
FRCST	2017	236,826	3.3%	246,952	3.3%	129.595	118.699	136.126	124.681
FRCST	2018	256,307	3.6%	267,266	3.6%	141.288	131.145	148.408	137.754
FRCST	2019	273,695	3.8%	285,397	3.8%	152.765	143.050	160.464	150.259
FRCST	2020	294,644	4.0%	307,242	4.0%	160.071	150.607	168.138	158.197
FRCST	2021	315,219	4.3%	328,696	4.3%	169.286	158.804	177.817	166.807
FRCST	2022	334,957	4.5%	349,278	4.5%	177.509	165.505	186.455	173.846
FRCST	2023	353,763	4.7%	368,888	4.7%	185.273	171.092	194.610	179.714
FRCST	2024	369,708	4.9%	385,516	4.9%	192.204	175.352	201.890	184.189
FRCST	2025	381,950	5.0%	398,281	5.0%	198.084	178.333	208.067	187.320
FRCST	2026	383,966	4.9%	400,383	4.9%	202.224	178.852	212.415	187.865
FRCST	2027	379,279	4.8%	395,496	4.8%	202.695	177.884	212.909	186.848
FRCST	2028	368,448	4.6%	384,201	4.6%	200.366	175.228	210.463	184.059
FRCST	2029	354,993	4.4%	370,172	4.4%	196.817	171.870	206.735	180.531
FRCST	2030	342,761	4.2%	357,417	4.2%	193.128	168.144	202.861	178.617

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD

1999 -2004  
2004 -2009

2010 -2015  
2015 -2020  
2020 -2025  
2025 -2030

1999 -2009  
2010 -2030

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* BASE-MILD SCENARIO WITH DSM IMPACTS \*\*\*\*\*

DSM -- EE Program Demand Impacts  
Coincident 60 Minute Demand MW

DSM -- DR Program Demand Impacts  
Coincident 60 Minute Demand MW

YEAR	Savings w/o Losses		Savings with Losses		Savings w/o Losses		Savings with Losses	
	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer
ACTUAL 1999								
ACTUAL 2000								
ACTUAL 2001								
ACTUAL 2002								
ACTUAL 2003								
ACTUAL 2004								
ACTUAL 2005								
ACTUAL 2006								
ACTUAL 2007								
ACTUAL 2008								
ACTUAL 2009								
FRCST 2010	20.094	8.866	21.091	9.305	2.421	3.322	2.541	3.487
FRCST 2011	31.653	15.483	33.249	16.263	6.322	8.407	6.641	8.830
FRCST 2012	42.118	21.830	44.241	22.930	10.898	18.078	11.447	18.989
FRCST 2013	49.985	27.978	52.483	29.388	19.221	30.170	20.189	31.691
FRCST 2014	61.008	35.447	64.082	37.233	26.754	39.994	28.102	42.009
FRCST 2015	71.421	42.520	75.021	44.662	34.300	50.190	36.028	52.719
FRCST 2016	77.833	47.586	81.756	49.984	38.765	57.370	40.718	60.262
FRCST 2017	85.273	53.026	89.570	55.698	44.322	65.673	46.555	68.982
FRCST 2018	92.375	58.073	97.030	60.999	48.912	73.072	51.377	76.754
FRCST 2019	99.170	62.454	104.168	65.601	53.595	80.596	56.296	84.658
FRCST 2020	103.760	65.080	108.989	68.359	56.311	85.527	59.148	89.837
FRCST 2021	110.785	69.340	116.368	72.835	58.501	89.464	61.449	93.973
FRCST 2022	117.571	73.147	123.496	76.833	59.938	92.358	62.958	97.012
FRCST 2023	124.496	76.815	130.770	80.686	60.777	94.277	63.840	99.028
FRCST 2024	131.019	79.987	137.622	84.017	61.185	95.365	64.268	100.171
FRCST 2025	136.611	82.358	143.496	86.508	61.473	95.975	64.571	100.812
FRCST 2026	140.546	82.416	147.629	86.569	61.678	96.436	64.786	101.295
FRCST 2027	140.853	81.059	147.952	85.144	61.841	96.825	64.958	101.704
FRCST 2028	138.460	78.187	145.438	82.127	61.905	97.041	65.025	101.932
FRCST 2029	134.939	74.738	141.739	78.504	61.878	97.132	64.996	102.027
FRCST 2030	131.732	71.649	138.371	75.260	61.396	96.494	64.490	101.357

TIME PERIOD

1999 -2004  
2004 -2009

2010 -2015  
2015 -2020  
2020 -2025  
2025 -2030

1999 -2009  
2010 -2030

## **Appendix G**

### **Historical/Forecast Annual Values Summary High Case**

**Appendix G: Historical/Forecast Annual Values Summary  
High Case**

**APPENDIX G**  
**HEREC “HIGH” CASE SCENARIO TABLES**  
**HISTORICAL/FORECAST ANNUAL SUMMARY**

MENU

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 34 YEARS)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

Aggregated Member System Data  
NUMBER OF CONSUMERS

Aggregated Member System Data  
SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	242,823	11,747	129	1,225	255,924	3,301,206	679,879	954,026	113,744	5,048,855
ACTUAL 2000	248,463	12,109	139	1,363	262,074	3,408,837	742,554	1,177,210	116,332	5,444,933
ACTUAL 2001	253,162	12,265	155	1,444	267,026	3,522,968	729,098	1,261,060	113,891	5,627,017
ACTUAL 2002	257,347	12,533	163	1,501	271,544	3,772,856	750,481	1,372,372	117,598	6,013,307
ACTUAL 2003	261,300	12,711	176	1,654	275,841	3,744,229	760,700	1,406,637	112,443	6,024,009
ACTUAL 2004	265,436	12,930	173	1,793	280,332	3,816,332	797,926	1,498,284	112,624	6,225,166
ACTUAL 2005	269,261	13,031	173	1,934	284,399	4,087,081	833,664	1,583,193	44,652	6,548,590
ACTUAL 2006	272,892	13,211	177	2,070	288,350	3,997,738	859,810	1,632,862	37,999	6,528,409
ACTUAL 2007	275,983	13,481	199	2,186	291,849	4,235,636	896,961	1,706,767	41,253	6,880,617
ACTUAL 2008	277,143	13,424	208	2,202	292,977	4,225,769	896,208	1,712,574	38,855	6,873,408
ACTUAL 2009	277,179	13,547	200	2,204	293,130	4,049,085	862,271	1,638,530	36,404	6,586,290
FRCST 2010	278,990	13,751	222	2,222	295,185	4,114,442	884,213	1,818,881	40,028	6,857,564
FRCST 2011	281,351	13,954	220	2,222	297,747	4,191,884	899,526	1,808,650	40,028	6,940,088
FRCST 2012	284,092	14,161	219	2,222	300,694	4,267,269	915,029	1,911,345	40,028	7,133,671
FRCST 2013	287,118	14,365	220	2,222	303,925	4,339,537	930,724	2,046,105	40,028	7,356,394
FRCST 2014	290,347	14,572	220	2,222	307,361	4,414,926	946,615	2,152,431	40,028	7,554,000
FRCST 2015	293,751	14,780	220	2,222	310,973	4,495,762	962,709	2,293,957	40,028	7,792,456
FRCST 2016	297,429	15,052	220	2,222	314,923	4,583,634	983,696	2,382,983	40,028	7,990,341
FRCST 2017	301,207	15,323	219	2,222	318,971	4,675,179	1,004,938	2,413,286	40,028	8,133,431
FRCST 2018	305,106	15,595	219	2,222	323,142	4,769,008	1,026,431	2,433,452	40,028	8,268,919
FRCST 2019	309,094	15,869	219	2,222	327,404	4,865,062	1,048,186	2,452,016	40,028	8,405,292
FRCST 2020	313,170	16,149	218	2,222	331,759	4,962,964	1,070,206	2,470,722	40,028	8,543,920
FRCST 2021	317,534	16,496	217	2,222	336,469	5,064,674	1,096,156	2,470,063	40,028	8,670,921
FRCST 2022	321,992	16,847	217	2,222	341,278	5,168,973	1,122,381	2,482,413	40,028	8,813,795
FRCST 2023	326,553	17,205	217	2,222	346,197	5,275,939	1,148,893	2,494,825	40,028	8,959,685
FRCST 2024	331,215	17,562	217	2,222	351,216	5,385,760	1,175,690	2,507,299	40,028	9,108,777
FRCST 2025	336,013	17,923	217	2,222	356,375	5,498,991	1,202,771	2,519,836	40,028	9,261,626
FRCST 2026	341,058	18,359	217	2,222	361,856	5,623,610	1,235,419	2,532,436	40,028	9,431,493
FRCST 2027	346,195	18,800	217	2,222	367,434	5,753,641	1,268,425	2,545,096	40,028	9,607,190
FRCST 2028	351,430	19,247	217	2,222	373,116	5,888,391	1,301,795	2,557,823	40,028	9,788,037
FRCST 2029	356,761	19,693	217	2,222	378,893	6,027,432	1,335,525	2,570,610	40,028	9,973,595
FRCST 2030	362,163	20,147	217	2,222	384,749	6,170,062	1,369,627	2,583,463	40,028	10,163,180

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

AGGREGATED NUMBER OF CONSUMERS

AGGREGATED SYSTEM ENERGY SALES

TIME PERIOD	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT.CHG.)	OTHER (ACT.CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
1999 -2004	1.80%	1.94%	44	568	1.84%	2.94%	3.25%	9.45%	-0.20%	4.28%
2004 -2009	0.87%	0.94%	27	411	0.90%	1.19%	1.56%	1.81%	-20.22%	1.13%
2010 -2015	1.04%	1.45%	-2	0	1.05%	1.79%	1.72%	4.75%	0.00%	2.59%
2015 -2020	1.29%	1.79%	-2	0	1.30%	2.00%	2.14%	1.50%	0.00%	1.86%
2020 -2025	1.42%	2.11%	-1	0	1.44%	2.07%	2.36%	0.39%	0.00%	1.63%
2025 -2030	1.51%	2.37%	0	0	1.54%	2.33%	2.63%	0.50%	0.00%	1.88%
1999 -2009	1.33%	1.44%	71	979	1.37%	2.06%	2.41%	5.56%	-10.77%	2.69%
2010 -2030	1.31%	1.93%	-5	0	1.33%	2.05%	2.21%	1.77%	0.00%	1.99%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

YEAR	AGGREGATED TOTAL MEMBER ENERGY PURCHASED (MWH)	TOTAL ENERGY GENERATED for H.E. MEMBERS (MWH)	HE SYSTEM AVERAGE MONTHLY LOSS FACTORS due to MEMBER SYSTEM LOAD (excludes pass-throughs)		H.E. AVERAGE WHOLESALE POWER COSTS (MILLS/MWH)	AGGREGATED MEMBER SYSTEM DEMANDS (WITHOUT LOSSES, 30 MINUTE DEMAND)			
			FOR ENERGY	FOR DEMAND		NONCOINCIDENT (MW)		COINCIDENT (MW) (EST. BEFORE 1984)	
						WINTER	SUMMER	WINTER	SUMMER
ACTUAL 1999	5,320,840	5,535,309	3.97%	4.54%	*****	1,117	1,223	1,037	1,155
ACTUAL 2000	5,758,399	6,009,930	4.31%	4.52%	*****	1,173	1,187	1,110	1,117
ACTUAL 2001	5,864,880	6,118,847	4.27%	4.53%	*****	1,285	1,274	1,178	1,187
ACTUAL 2002	6,314,792	6,600,361	4.45%	4.78%	*****	1,211	1,346	1,151	1,229
ACTUAL 2003	6,320,460	6,593,113	4.26%	4.26%	*****	1,354	1,313	1,265	1,229
ACTUAL 2004	6,549,574	6,831,431	4.25%	4.81%	*****	1,381	1,321	1,268	1,255
ACTUAL 2005	6,850,535	7,115,713	3.83%	4.22%	*****	1,429	1,472	1,335	1,393
ACTUAL 2006	6,802,245	7,091,068	4.19%	4.47%	*****	1,414	1,502	1,336	1,393
ACTUAL 2007	7,215,322	7,533,291	4.33%	4.84%	*****	1,533	1,558	1,421	1,403
ACTUAL 2008	7,193,537	7,471,337	3.80%	5.10%	*****	1,575	1,442	1,440	1,289
ACTUAL 2009	6,898,809	7,174,754	3.93%	4.86%	*****	1,674	1,453	1,519	1,307
FRCST 2010	7,181,002	7,492,104	4.25%	4.73%	68.830	1,549	1,488	1,426	1,370
FRCST 2011	7,267,982	7,571,319	4.10%	4.80%	70.910	1,568	1,507	1,443	1,388
FRCST 2012	7,470,062	7,781,970	4.10%	4.80%	75.360	1,609	1,561	1,480	1,426
FRCST 2013	7,703,342	8,025,155	4.10%	4.80%	79.430	1,850	1,596	1,519	1,471
FRCST 2014	7,910,231	8,240,819	4.10%	4.80%	82.230	1,711	1,639	1,549	1,496
FRCST 2015	8,160,269	8,501,477	4.10%	4.80%	83.810	1,761	1,677	1,596	1,547
FRCST 2016	8,367,561	8,717,589	4.10%	4.80%	85.486	1,813	1,705	1,628	1,572
FRCST 2017	8,517,588	8,873,969	4.10%	4.80%	87.196	1,845	1,737	1,658	1,602
FRCST 2018	8,659,599	9,022,029	4.10%	4.80%	88.940	1,876	1,767	1,686	1,629
FRCST 2019	8,802,538	9,171,037	4.10%	4.80%	90.719	1,908	1,797	1,715	1,657
FRCST 2020	8,947,845	9,322,513	4.10%	4.80%	92.533	1,939	1,828	1,744	1,685
FRCST 2021	9,081,211	9,461,581	4.10%	4.80%	94.384	1,967	1,857	1,771	1,714
FRCST 2022	9,231,082	9,617,861	4.10%	4.80%	96.271	2,000	1,889	1,801	1,743
FRCST 2023	9,384,114	9,777,435	4.10%	4.80%	98.197	2,034	1,921	1,832	1,773
FRCST 2024	9,540,504	9,940,512	4.10%	4.80%	100.161	2,068	1,954	1,863	1,803
FRCST 2025	9,700,846	10,107,710	4.10%	4.80%	102.164	2,103	1,988	1,895	1,835
FRCST 2026	9,879,085	10,293,569	4.10%	4.80%	102.164	2,143	2,026	1,932	1,871
FRCST 2027	10,063,434	10,485,801	4.10%	4.80%	102.164	2,183	2,065	1,969	1,907
FRCST 2028	10,253,189	10,683,669	4.10%	4.80%	102.164	2,225	2,105	2,008	1,944
FRCST 2029	10,447,888	10,886,693	4.10%	4.80%	102.164	2,268	2,146	2,047	1,982
FRCST 2030	10,646,806	11,094,115	4.10%	4.80%	102.164	2,311	2,188	2,087	2,021

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	AGGREGATED H.E. ENERGY TOTAL ENERGY GENERATED PURCHASED FOR MEMBERS (% CHG.)	H.E. ENERGY GENERATED FOR MEMBERS (% CHG.)	AVG. MONTHLY LOSS FACTORS due to MEMBERS		H.E. AVERAGE WHOLESALE POWER COSTS (% CHG.)	AGGREGATED MEMBER PEAK SEASONAL DEMANDS (WITHOUT LOSSES, 30 MINUTE DEMAND)			
			ENERGY (AVERAGE)	DEMAND (AVERAGE)		Non-Coincident (% Chg)		Coincident (% Chg)	
						WINTER	SUMMER	WINTER	SUMMER
1999 -2004	4.24%	4.30%	4.25%	4.57%	*****	4.34%	1.55%	4.09%	1.68%
2004 -2009	1.04%	0.99%	4.06%	4.71%	*****	3.92%	1.92%	3.68%	0.81%
2010 -2015	2.59%	2.56%	4.13%	4.79%	4.02%	2.60%	2.42%	2.28%	2.46%
2015 -2020	1.85%	1.86%	4.10%	4.80%	2.00%	1.95%	1.74%	1.79%	1.73%
2020 -2025	1.63%	1.63%	4.10%	4.80%	2.00%	1.64%	1.69%	1.68%	1.71%
2025 -2030	1.88%	1.88%	4.10%	4.80%	0.00%	1.90%	1.94%	1.95%	1.96%
1999 -2009	2.63%	2.63%	4.14%	4.63%	*****	4.13%	1.74%	3.88%	1.25%
2010 -2030	1.99%	1.98%	4.11%	4.79%	1.99%	2.02%	1.95%	1.92%	1.96%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** HIGH SCENARIO RESULTS *****					***** HIGH SCENARIO RESULTS *****					
HOOSIER ENERGY SYSTEM PEAK SEASONAL COINCIDENT DEMAND (MW)					HOOSIER ENERGY SYSTEM PEAK SEASONAL NON-COINCIDENT DEMAND (MW)					
(All values are estimated 60 minute values)					(All values are estimated 60 minute values)					
YEAR	(WITHOUT LOSSES)		(WITH LOSSES)		H.E. ANNUAL COINCIDENT PEAK LOAD FACTOR	(WITHOUT LOSSES)		(WITH LOSSES)		H.E. ANNUAL NON-COIN. PEAK LOAD FACTOR
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999	1,024	1,142	1,071	1,196	52.9%	1,103	1,209	1,154	1,266	49.9%
ACTUAL 2000	1,086	1,099	1,136	1,150	59.5%	1,149	1,167	1,202	1,221	56.0%
ACTUAL 2001	1,159	1,174	1,213	1,228	56.9%	1,271	1,259	1,329	1,317	52.5%
ACTUAL 2002	1,105	1,218	1,159	1,278	58.0%	1,161	1,334	1,217	1,399	53.9%
ACTUAL 2003	1,244	1,214	1,298	1,267	58.0%	1,332	1,298	1,390	1,354	54.2%
ACTUAL 2004	1,252	1,235	1,314	1,296	59.2%	1,364	1,300	1,432	1,364	54.3%
ACTUAL 2005	1,301	1,378	1,357	1,438	56.5%	1,393	1,456	1,453	1,519	53.5%
ACTUAL 2006	1,304	1,374	1,364	1,437	56.3%	1,380	1,481	1,443	1,548	52.3%
ACTUAL 2007	1,387	1,400	1,456	1,470	58.5%	1,496	1,555	1,571	1,632	52.7%
ACTUAL 2008	1,424	1,269	1,499	1,336	56.7%	1,558	1,420	1,640	1,494	51.9%
ACTUAL 2009	1,519	1,304	1,595	1,370	51.4%	1,674	1,450	1,758	1,522	46.6%
FRCST 2010	1,409	1,361	1,478	1,427	57.9%	1,531	1,478	1,605	1,549	53.3%
FRCST 2011	1,427	1,379	1,497	1,447	57.7%	1,550	1,497	1,626	1,571	53.2%
FRCST 2012	1,463	1,416	1,535	1,486	57.7%	1,590	1,550	1,669	1,626	53.1%
FRCST 2013	1,502	1,460	1,576	1,533	58.1%	1,631	1,585	1,712	1,663	53.5%
FRCST 2014	1,532	1,485	1,607	1,559	58.5%	1,691	1,628	1,775	1,709	53.0%
FRCST 2015	1,577	1,536	1,655	1,613	58.6%	1,740	1,666	1,826	1,748	53.1%
FRCST 2016	1,609	1,561	1,689	1,638	58.8%	1,792	1,693	1,881	1,777	52.8%
FRCST 2017	1,639	1,591	1,720	1,669	58.9%	1,824	1,726	1,914	1,811	52.9%
FRCST 2018	1,667	1,618	1,750	1,698	58.9%	1,855	1,755	1,946	1,842	52.9%
FRCST 2019	1,695	1,646	1,779	1,727	58.8%	1,886	1,785	1,979	1,873	52.9%
FRCST 2020	1,724	1,674	1,809	1,757	58.7%	1,917	1,815	2,012	1,905	52.7%
FRCST 2021	1,751	1,702	1,837	1,786	58.8%	1,945	1,845	2,041	1,936	52.9%
FRCST 2022	1,780	1,731	1,869	1,817	58.8%	1,977	1,876	2,075	1,969	52.9%
FRCST 2023	1,811	1,761	1,901	1,848	58.7%	2,010	1,908	2,110	2,002	52.9%
FRCST 2024	1,842	1,791	1,933	1,880	58.5%	2,044	1,941	2,146	2,037	52.7%
FRCST 2025	1,874	1,822	1,967	1,913	58.7%	2,079	1,974	2,182	2,072	52.9%
FRCST 2026	1,910	1,858	2,005	1,950	58.6%	2,118	2,012	2,223	2,112	52.9%
FRCST 2027	1,947	1,894	2,043	1,988	58.6%	2,158	2,051	2,265	2,153	52.8%
FRCST 2028	1,985	1,931	2,083	2,027	58.4%	2,199	2,091	2,308	2,194	52.7%
FRCST 2029	2,023	1,969	2,124	2,066	58.5%	2,242	2,132	2,353	2,237	52.8%
FRCST 2030	2,063	2,007	2,166	2,107	58.5%	2,285	2,173	2,398	2,281	52.8%

***** HIGH SCENARIO RESULTS *****					***** HIGH SCENARIO RESULTS *****					
HOOSIER ENERGY COINCIDENT PEAK DEMAND (60 MINUTE VALUE, ALL VALUES EST.)					HOOSIER ENERGY NON-COINCIDENT PEAK DEMAND (60 MINUTE VALUE, ALL VALUES EST.)					
TIME PERIOD	Without Losses (% Chg)		With Losses (% Chg)		H.E. ANNUAL COINCIDENT LOAD FACTOR (AVERAGE)	Without Losses (% Chg)		With Losses (% Chg)		H.E. ANNUAL NON-COIN. LOAD FACTOR (AVERAGE)
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	4.10%	1.57%	4.16%	1.62%	57.57%	4.34%	1.45%	4.40%	1.50%	53.48%
2004 -2009	3.94%	1.10%	3.96%	1.12%	56.43%	4.18%	2.21%	4.20%	2.22%	51.87%
2010 -2015	2.28%	2.46%	2.30%	2.48%	58.10%	2.60%	2.42%	2.61%	2.44%	53.20%
2015 -2020	1.79%	1.73%	1.79%	1.73%	58.78%	1.95%	1.74%	1.95%	1.74%	52.90%
2020 -2025	1.68%	1.71%	1.68%	1.71%	58.69%	1.64%	1.69%	1.64%	1.69%	52.85%
2025 -2030	1.95%	1.96%	1.95%	1.96%	58.54%	1.90%	1.94%	1.91%	1.94%	52.82%
1999 -2009	4.02%	1.33%	4.06%	1.37%	58.80%	4.26%	1.83%	4.30%	1.86%	52.52%
2010 -2030	1.92%	1.96%	1.93%	1.97%	58.51%	2.02%	1.95%	2.03%	1.95%	52.94%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** HIGH SCENARIO RESULTS *****						***** HIGH SCENARIO RESULTS *****					
***** EXTREME TEMPERATURE CONDITIONS *****						***** EXTREME TEMPERATURE CONDITIONS *****					
HOOSIER ENERGY SYSTEM PEAK SEASONAL COINCIDENT DEMAND (MW); 60 MINUTE VALUE (WITHOUT LOSSES)						HOOSIER ENERGY SYSTEM PEAK SEASONAL NON-COINCIDENT DEMAND (MW); 60 MINUTE VALUE (WITHOUT LOSSES)					
HOOSIER ENERGY SYSTEM PEAK SEASONAL COINCIDENT DEMAND (MW); 60 MINUTE VALUE (WITH LOSSES)						HOOSIER ENERGY SYSTEM PEAK SEASONAL NON-COINCIDENT DEMAND (MW); 60 MINUTE VALUE (WITH LOSSES)					
YEAR	WINTER	SUMMER	WINTER	SUMMER	H.E. ANNUAL LOAD FACTOR Due to EXTREME COINCIDENT PEAK	WINTER	SUMMER	WINTER	SUMMER	H.E. ANNUAL LOAD FACTOR Due To EXTREME NON-COIN. PEAK	
ACTUAL 1999	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2000	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2001	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2002	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2003	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2004	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2005	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2006	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2007	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2008	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
FRCST 2010	1,549	1,488	1,625	1,561	52.6%	1,682	1,615	1,764	1,694	48.5%	
FRCST 2011	1,569	1,508	1,647	1,583	52.5%	1,702	1,636	1,786	1,717	48.4%	
FRCST 2012	1,607	1,547	1,686	1,624	52.5%	1,745	1,693	1,832	1,776	48.4%	
FRCST 2013	1,649	1,595	1,731	1,674	52.9%	1,790	1,730	1,878	1,816	48.8%	
FRCST 2014	1,681	1,621	1,764	1,701	53.3%	1,852	1,775	1,944	1,863	48.4%	
FRCST 2015	1,729	1,675	1,815	1,758	53.5%	1,905	1,815	1,999	1,905	48.5%	
FRCST 2016	1,760	1,698	1,848	1,782	53.7%	1,956	1,841	2,053	1,932	48.3%	
FRCST 2017	1,794	1,731	1,883	1,817	53.8%	1,991	1,877	2,090	1,969	48.5%	
FRCST 2018	1,824	1,761	1,915	1,848	53.8%	2,025	1,909	2,125	2,003	48.5%	
FRCST 2019	1,855	1,791	1,947	1,880	53.8%	2,059	1,941	2,161	2,037	48.5%	
FRCST 2020	1,886	1,821	1,980	1,912	53.6%	2,093	1,974	2,197	2,072	48.3%	
FRCST 2021	1,915	1,852	2,011	1,944	53.7%	2,123	2,006	2,228	2,105	48.5%	
FRCST 2022	1,948	1,883	2,045	1,977	53.7%	2,158	2,040	2,266	2,141	48.5%	
FRCST 2023	1,981	1,915	2,080	2,011	53.7%	2,195	2,074	2,304	2,177	48.4%	
FRCST 2024	2,015	1,948	2,115	2,045	53.5%	2,232	2,110	2,343	2,215	48.3%	
FRCST 2025	2,050	1,982	2,152	2,081	53.6%	2,270	2,146	2,383	2,253	48.4%	
FRCST 2026	2,090	2,021	2,194	2,122	53.6%	2,312	2,188	2,427	2,297	48.4%	
FRCST 2027	2,130	2,060	2,236	2,163	53.5%	2,356	2,230	2,473	2,341	48.4%	
FRCST 2028	2,171	2,100	2,279	2,205	53.4%	2,401	2,273	2,520	2,386	48.3%	
FRCST 2029	2,214	2,142	2,324	2,248	53.5%	2,447	2,318	2,569	2,433	48.4%	
FRCST 2030	2,257	2,184	2,370	2,293	53.4%	2,495	2,363	2,619	2,480	48.4%	

***** HIGH SCENARIO RESULTS *****						***** HIGH SCENARIO RESULTS *****					
***** EXTREME TEMPERATURE CONDITIONS *****						***** EXTREME TEMPERATURE CONDITIONS *****					
HOOSIER ENERGY COINCIDENT PEAK (60 MIN.) Without Losses (% Chg)						HOOSIER ENERGY NON-COINCIDENT PEAK (60 MIN.) Without Losses (% Chg)					
HOOSIER ENERGY COINCIDENT PEAK (60 MIN.) With Losses (% Chg)						HOOSIER ENERGY NON-COINCIDENT PEAK (60 MIN.) With Losses (% Chg)					
TIME PERIOD	WINTER	SUMMER	WINTER	SUMMER	EXTREME COIN. H.E. ANNUAL LOAD FACTOR (AVERAGE)	WINTER	SUMMER	WINTER	SUMMER	EXT. NON-COIN. H.E. ANNUAL LOAD FACTOR (AVERAGE)	
1999 -2004	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2004 -2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2010 -2015	2.23%	2.40%	2.24%	2.41%	52.90%	2.52%	2.36%	2.54%	2.38%	48.49%	
2015 -2020	1.75%	1.68%	1.75%	1.69%	53.69%	1.90%	1.69%	1.90%	1.70%	48.43%	
2020 -2025	1.68%	1.71%	1.68%	1.71%	53.63%	1.64%	1.69%	1.64%	1.69%	48.41%	
2025 -2030	1.95%	1.95%	1.95%	1.96%	53.50%	1.91%	1.94%	1.91%	1.94%	48.37%	
1999 -2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2010 -2030	1.90%	1.94%	1.90%	1.94%	53.41%	1.99%	1.92%	2.00%	1.93%	48.43%	

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

\*\*\*\* Adjusted for IN #72, IN #16 and IN#92 \*\*\*\*  
Aggregated Member System Data  
NUMBER OF CONSUMERS

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

\*\*\*\* Adjusted for IN #72, IN #16 and IN#92 \*\*\*\*  
Aggregated Member System Data  
SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

	YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL	1999	209,962	9,568	112	887	220,529	2,864,229	599,227	862,060	29,908	4,355,424
ACTUAL	2000	215,011	9,890	120	1,018	226,039	2,948,957	656,492	1,088,160	30,617	4,724,226
ACTUAL	2001	219,228	10,003	132	1,093	230,456	3,052,360	639,446	1,164,603	31,271	4,887,680
ACTUAL	2002	223,044	10,265	139	1,144	234,592	3,261,617	663,738	1,272,906	32,441	5,230,702
ACTUAL	2003	226,749	10,462	151	1,293	238,655	3,243,405	673,235	1,316,094	32,150	5,264,884
ACTUAL	2004	230,760	10,690	151	1,429	243,030	3,305,807	706,497	1,403,535	33,098	5,448,937
ACTUAL	2005	257,250	11,810	165	1,573	270,798	3,749,514	774,714	1,484,489	33,634	6,042,351
ACTUAL	2006	260,854	11,986	169	1,707	274,716	3,856,899	824,354	1,545,582	32,678	6,259,513
ACTUAL	2007	263,908	12,246	191	1,821	278,166	4,088,777	855,093	1,620,151	34,240	6,598,261
ACTUAL	2008	265,071	12,166	200	1,833	279,270	4,080,904	856,375	1,630,203	33,209	6,600,691
ACTUAL	2009	265,137	12,281	192	1,836	279,446	3,904,139	818,798	1,564,440	31,738	6,319,115
FRCST	2010	266,911	12,474	213	1,854	281,452	3,965,181	840,403	1,747,456	33,075	6,586,115
FRCST	2011	281,351	13,954	220	2,222	297,747	4,191,884	899,526	1,808,650	40,028	6,940,088
FRCST	2012	284,092	14,161	219	2,222	300,694	4,267,269	915,029	1,911,345	40,028	7,133,671
FRCST	2013	287,118	14,365	220	2,222	303,925	4,339,537	930,724	2,046,105	40,028	7,356,394
FRCST	2014	290,347	14,572	220	2,222	307,361	4,414,926	946,615	2,152,431	40,028	7,554,000
FRCST	2015	293,751	14,780	220	2,222	310,973	4,495,762	962,709	2,293,957	40,028	7,792,456
FRCST	2016	297,429	15,052	220	2,222	314,923	4,583,634	983,696	2,382,983	40,028	7,990,341
FRCST	2017	301,207	15,323	219	2,222	318,971	4,675,179	1,004,938	2,413,286	40,028	8,133,431
FRCST	2018	305,106	15,595	219	2,222	323,142	4,769,008	1,026,431	2,433,452	40,028	8,268,919
FRCST	2019	309,094	15,869	219	2,222	327,404	4,865,062	1,048,186	2,452,016	40,028	8,405,292
FRCST	2020	313,170	16,149	218	2,222	331,759	4,962,964	1,070,206	2,470,722	40,028	8,543,920
FRCST	2021	317,534	16,496	217	2,222	336,469	5,064,674	1,096,156	2,470,063	40,028	8,670,921
FRCST	2022	321,992	16,847	217	2,222	341,278	5,168,973	1,122,381	2,482,413	40,028	8,813,795
FRCST	2023	326,553	17,205	217	2,222	346,197	5,275,939	1,148,893	2,494,825	40,028	8,959,685
FRCST	2024	331,215	17,582	217	2,222	351,216	5,385,760	1,175,690	2,507,299	40,028	9,108,777
FRCST	2025	336,013	17,923	217	2,222	356,375	5,498,991	1,202,771	2,519,836	40,028	9,261,626
FRCST	2026	341,058	18,359	217	2,222	361,856	5,623,610	1,235,419	2,532,436	40,028	9,431,493
FRCST	2027	346,195	18,800	217	2,222	367,434	5,753,641	1,268,425	2,545,096	40,028	9,607,190
FRCST	2028	351,430	19,247	217	2,222	373,116	5,888,391	1,301,795	2,557,823	40,028	9,788,037
FRCST	2029	356,761	19,693	217	2,222	378,893	6,027,432	1,335,525	2,570,610	40,028	9,973,595
FRCST	2030	362,163	20,147	217	2,222	384,749	6,170,062	1,369,627	2,583,463	40,028	10,163,180

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

Adjusted for Systems -- AGGREGATED NUMBER OF CONSUMERS

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

Adjusted for Systems -- AGGREGATED ENERGY SALES

TIME PERIOD	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT.CHG.)	OTHER (ACT.CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
1999 -2004	1.91%	2.24%	39	542	1.96%	2.91%	3.35%	10.24%	2.05%	4.58%
2004 -2009	2.82%	2.81%	41	407	2.83%	3.38%	2.99%	2.19%	-0.84%	3.01%
2010 -2015	1.93%	3.45%	7	368	2.01%	2.54%	2.75%	5.59%	3.89%	3.42%
2015 -2020	1.29%	1.79%	-2	0	1.30%	2.00%	2.14%	1.50%	0.00%	1.86%
2020 -2025	1.42%	2.11%	-1	0	1.44%	2.07%	2.36%	0.39%	0.00%	1.63%
2025 -2030	1.51%	2.37%	0	0	1.54%	2.33%	2.63%	0.50%	0.00%	1.88%
1999 -2009	2.36%	2.53%	80	949	2.40%	3.15%	3.17%	6.14%	0.60%	3.79%
2010 -2030	1.54%	2.43%	4	368	1.58%	2.24%	2.47%	1.97%	0.96%	2.19%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN #72, IN # 16 and IN#92										
YEAR	AGGREGATED TOTAL MEMBER ENERGY PURCHASED (MWH)	ENERGY GENERATED FOR MEMBERS (MWH)	AGGREGATED MEMBER 30 MIN. COINCIDENT PEAK W/O LOSSES (MW)		HE COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984) (WITHOUT LOSSES)		HE COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984) (WITH LOSSES)		ANNUAL LOAD FACTOR	
			WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER		
			ACTUAL 1999	4,592,866	4,777,226	900	1,004	888		993
ACTUAL 2000	4,998,042	5,215,344	958	969	937	953	980	997	59.6%	
ACTUAL 2001	5,106,079	5,326,182	1,023	1,032	1,006	1,020	1,052	1,067	57.0%	
ACTUAL 2002	5,499,105	5,746,666	1,012	1,077	972	1,066	1,019	1,118	58.7%	
ACTUAL 2003	5,527,292	5,764,676	1,102	1,072	1,084	1,059	1,130	1,105	58.2%	
ACTUAL 2004	5,736,200	5,981,961	1,103	1,095	1,089	1,077	1,143	1,130	59.6%	
ACTUAL 2005	6,332,029	6,576,556	1,172	1,333	1,142	1,319	1,191	1,376	54.6%	
ACTUAL 2006	6,525,204	6,801,916	1,295	1,337	1,264	1,318	1,322	1,379	56.3%	
ACTUAL 2007	6,924,233	7,229,037	1,384	1,341	1,351	1,338	1,418	1,405	58.2%	
ACTUAL 2008	6,912,387	7,179,069	1,395	1,245	1,380	1,226	1,453	1,290	56.2%	
ACTUAL 2009	6,617,661	6,882,100	1,472	1,247	1,472	1,243	1,546	1,306	50.8%	
FRCST 2010	6,895,266	7,193,685	1,378	1,314	1,362	1,305	1,428	1,369	57.5%	
FRCST 2011	7,267,982	7,571,319	1,443	1,388	1,427	1,379	1,497	1,447	57.7%	
FRCST 2012	7,470,062	7,781,970	1,480	1,426	1,463	1,416	1,535	1,486	57.7%	
FRCST 2013	7,703,342	8,025,155	1,519	1,471	1,502	1,460	1,576	1,533	58.1%	
FRCST 2014	7,910,231	8,240,819	1,549	1,496	1,532	1,485	1,607	1,559	58.5%	
FRCST 2015	8,160,269	8,501,477	1,596	1,547	1,577	1,536	1,655	1,613	58.6%	
FRCST 2016	8,367,561	8,717,589	1,628	1,572	1,609	1,561	1,689	1,638	58.8%	
FRCST 2017	8,517,588	8,873,989	1,658	1,602	1,639	1,591	1,720	1,669	58.9%	
FRCST 2018	8,659,599	9,022,029	1,686	1,629	1,667	1,618	1,750	1,698	58.9%	
FRCST 2019	8,802,538	9,171,037	1,715	1,657	1,695	1,646	1,779	1,727	58.8%	
FRCST 2020	8,947,845	9,322,513	1,744	1,685	1,724	1,674	1,809	1,757	58.7%	
FRCST 2021	9,081,211	9,461,581	1,771	1,714	1,751	1,702	1,837	1,786	58.8%	
FRCST 2022	9,231,082	9,617,861	1,801	1,743	1,780	1,731	1,869	1,817	58.8%	
FRCST 2023	9,384,114	9,777,435	1,832	1,773	1,811	1,761	1,901	1,848	58.7%	
FRCST 2024	9,540,504	9,940,512	1,863	1,803	1,842	1,791	1,933	1,880	58.5%	
FRCST 2025	9,700,846	10,107,710	1,895	1,835	1,874	1,822	1,967	1,913	58.7%	
FRCST 2026	9,879,085	10,293,569	1,932	1,871	1,910	1,858	2,005	1,950	58.6%	
FRCST 2027	10,063,434	10,485,801	1,969	1,907	1,947	1,894	2,043	1,988	58.6%	
FRCST 2028	10,253,189	10,683,669	2,008	1,944	1,985	1,931	2,083	2,027	58.4%	
FRCST 2029	10,447,888	10,886,693	2,047	1,982	2,023	1,969	2,124	2,066	58.5%	
FRCST 2030	10,646,806	11,094,115	2,087	2,021	2,063	2,007	2,166	2,107	58.5%	

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	Adjusted for Systems ENERGY PURCHASED (% CHG.)		Adjusted for Systems ENERGY GENERATED (% CHG.)		Adjusted for Systems AGGREGATED 30 MIN. COIN. PEAK W/O LOSSES (% CHG)		Adjusted for Systems - HE COIN. 60 MINUTE DEMAND Without Losses (% Chg)		Adjusted for Systems - HE COIN. 60 MINUTE DEMAND With Losses (% Chg)		ADJUSTED ANNUAL LOAD FACTOR (AVERAGE)
	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	4.55%	4.60%	4.15%	1.76%	4.17%	1.65%	4.23%	1.70%	57.58%		
2004 -2009	2.90%	2.84%	5.94%	2.62%	6.21%	2.91%	6.23%	2.93%	55.96%		
2010 -2015	3.43%	3.40%	2.98%	3.32%	2.98%	3.32%	3.00%	3.33%	58.04%		
2015 -2020	1.86%	1.86%	1.79%	1.73%	1.79%	1.73%	1.79%	1.73%	58.78%		
2020 -2025	1.63%	1.63%	1.68%	1.71%	1.68%	1.71%	1.68%	1.71%	58.69%		
2025 -2030	1.88%	1.88%	1.95%	1.96%	1.95%	1.96%	1.95%	1.96%	58.54%		
1999 -2009	3.72%	3.72%	5.05%	2.19%	5.19%	2.28%	5.22%	2.31%	56.51%		
2010 -2030	2.20%	2.19%	2.10%	2.18%	2.10%	2.18%	2.10%	2.18%	58.49%		

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN #72, IN #16 and IN#92

EXTREME COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984)

YEAR	(WITHOUT LOSSES)		(WITH LOSSES)		EXTREME ANNUAL LOAD FACTOR
	WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999	*****	*****	*****	*****	*****
ACTUAL 2000	*****	*****	*****	*****	*****
ACTUAL 2001	*****	*****	*****	*****	*****
ACTUAL 2002	*****	*****	*****	*****	*****
ACTUAL 2003	*****	*****	*****	*****	*****
ACTUAL 2004	*****	*****	*****	*****	*****
ACTUAL 2005	*****	*****	*****	*****	*****
ACTUAL 2006	*****	*****	*****	*****	*****
ACTUAL 2007	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****
FRCST 2010	1,497	1,427	1,570	1,496	52.3%
FRCST 2011	1,569	1,508	1,647	1,583	52.5%
FRCST 2012	1,607	1,547	1,686	1,624	52.5%
FRCST 2013	1,649	1,595	1,731	1,674	52.9%
FRCST 2014	1,681	1,621	1,764	1,701	53.3%
FRCST 2015	1,729	1,675	1,815	1,758	53.5%
FRCST 2016	1,760	1,698	1,848	1,782	53.7%
FRCST 2017	1,794	1,731	1,883	1,817	53.8%
FRCST 2018	1,824	1,761	1,915	1,848	53.8%
FRCST 2019	1,855	1,791	1,947	1,880	53.8%
FRCST 2020	1,886	1,821	1,980	1,912	53.6%
FRCST 2021	1,915	1,852	2,011	1,944	53.7%
FRCST 2022	1,948	1,883	2,045	1,977	53.7%
FRCST 2023	1,981	1,915	2,080	2,011	53.7%
FRCST 2024	2,015	1,948	2,115	2,045	53.5%
FRCST 2025	2,050	1,982	2,152	2,081	53.6%
FRCST 2026	2,090	2,021	2,194	2,122	53.6%
FRCST 2027	2,130	2,060	2,236	2,163	53.5%
FRCST 2028	2,171	2,100	2,279	2,205	53.4%
FRCST 2029	2,214	2,142	2,324	2,248	53.5%
FRCST 2030	2,257	2,184	2,370	2,293	53.4%

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

Adjusted for Systems HE EXT. COIN. 60 MINUTE DEMAND

TIME PERIOD	Without Losses (% Chg)		With Losses (% Chg)		ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)
	WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	*****	*****	*****	*****	*****
2004 -2009	*****	*****	*****	*****	*****
2010 -2015	2.93%	3.26%	2.95%	3.28%	52.84%
2015 -2020	1.75%	1.68%	1.75%	1.69%	53.69%
2020 -2025	1.68%	1.71%	1.68%	1.71%	53.63%
2025 -2030	1.95%	1.95%	1.95%	1.96%	53.50%
1999 -2009	*****	*****	*****	*****	*****
2010 -2030	2.07%	2.15%	2.08%	2.16%	53.40%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

Values Adjusted for IN#72,IN#15,IN#92 and Special Industrial Loads  
Aggregated Member System Data  
NUMBER OF CONSUMERS

Values Adjusted for IN#72,IN#15,IN#92 and Special Industrial Loads  
Aggregated Member System Data  
SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	209,962	9,568	112	887	220,529	2,864,229	599,227	726,658	29,908	4,220,022
ACTUAL 2000	215,011	9,890	119	1,018	226,038	2,948,957	656,492	917,277	30,617	4,553,343
ACTUAL 2001	219,228	10,003	131	1,093	230,455	3,052,360	639,446	990,705	31,271	4,713,782
ACTUAL 2002	223,044	10,265	138	1,144	234,591	3,261,617	663,738	1,086,676	32,441	5,044,472
ACTUAL 2003	226,749	10,462	150	1,293	238,654	3,243,405	673,235	1,127,531	32,150	5,076,321
ACTUAL 2004	230,760	10,690	150	1,429	243,029	3,305,807	706,497	1,205,248	33,098	5,250,650
ACTUAL 2005	257,250	11,810	164	1,573	270,797	3,749,514	774,714	1,291,857	33,634	5,849,719
ACTUAL 2006	260,854	11,986	168	1,707	274,715	3,856,899	824,354	1,350,149	32,678	6,064,080
ACTUAL 2007	263,908	12,246	190	1,821	278,165	4,068,777	855,093	1,435,203	34,240	6,413,313
ACTUAL 2008	265,071	12,166	199	1,833	279,269	4,080,904	856,375	1,461,568	33,209	6,432,056
ACTUAL 2009	265,137	12,281	191	1,836	279,445	3,904,139	818,798	1,407,974	31,738	6,162,649
FRCST 2010	266,911	12,474	212	1,854	281,451	3,965,181	840,403	1,575,066	33,075	6,413,725
FRCST 2011	281,351	13,954	219	2,222	297,746	4,191,884	899,526	1,635,200	40,028	6,766,638
FRCST 2012	284,092	14,161	218	2,222	300,693	4,267,269	915,029	1,736,280	40,028	6,958,606
FRCST 2013	287,118	14,365	219	2,222	303,924	4,339,537	930,724	1,869,411	40,028	7,179,700
FRCST 2014	290,347	14,572	219	2,222	307,360	4,414,926	946,615	1,974,091	40,028	7,375,660
FRCST 2015	293,751	14,780	219	2,222	310,972	4,495,762	962,709	2,113,957	40,028	7,612,456
FRCST 2016	297,429	15,052	219	2,222	314,922	4,583,634	983,696	2,201,994	40,028	7,809,352
FRCST 2017	301,207	15,323	218	2,222	318,970	4,675,179	1,004,938	2,231,302	40,028	7,951,447
FRCST 2018	305,106	15,595	218	2,222	323,141	4,769,008	1,026,431	2,250,468	40,028	8,085,935
FRCST 2019	309,094	15,869	218	2,222	327,403	4,865,062	1,048,186	2,268,027	40,028	8,221,303
FRCST 2020	313,170	16,149	217	2,222	331,758	4,962,964	1,070,206	2,285,722	40,028	8,358,920
FRCST 2021	317,534	16,496	216	2,222	336,468	5,064,674	1,096,156	2,285,063	40,028	8,485,921
FRCST 2022	321,992	16,847	216	2,222	341,277	5,168,973	1,122,381	2,297,413	40,028	8,628,795
FRCST 2023	326,553	17,205	216	2,222	346,196	5,275,939	1,148,893	2,309,825	40,028	8,774,685
FRCST 2024	331,215	17,562	216	2,222	351,215	5,385,760	1,175,690	2,322,299	40,028	8,923,777
FRCST 2025	336,013	17,923	216	2,222	356,374	5,498,991	1,202,771	2,334,836	40,028	9,076,626
FRCST 2026	341,058	18,359	216	2,222	361,855	5,623,610	1,235,419	2,347,436	40,028	9,246,493
FRCST 2027	346,195	18,800	216	2,222	367,433	5,753,641	1,268,425	2,360,096	40,028	9,422,190
FRCST 2028	351,430	19,247	216	2,222	373,115	5,888,391	1,301,795	2,372,823	40,028	9,603,037
FRCST 2029	356,761	19,693	216	2,222	378,892	6,027,432	1,335,525	2,385,610	40,028	9,788,595
FRCST 2030	362,163	20,147	216	2,222	384,748	6,170,062	1,369,627	2,398,463	40,028	9,978,180

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

Adjusted for Systems & Ind. -- AGGREGATED NUMBER OF CONSUMERS

Adjusted for Systems & Ind. -- AGGREGATED ENERGY SALES

TIME PERIOD	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT.CHG.)	OTHER (ACT.CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
1999 -2004	1.91%	2.24%	38	542	1.96%	2.91%	3.35%	10.65%	2.05%	4.47%
2004 -2009	2.82%	2.81%	41	407	2.83%	3.38%	2.99%	3.16%	-0.84%	3.25%
2010 -2015	1.93%	3.45%	7	368	2.01%	2.54%	2.75%	6.06%	3.89%	3.49%
2015 -2020	1.29%	1.79%	-2	0	1.30%	2.00%	2.14%	1.57%	0.00%	1.89%
2020 -2025	1.42%	2.11%	-1	0	1.44%	2.07%	2.36%	0.43%	0.00%	1.66%
2025 -2030	1.51%	2.37%	0	0	1.54%	2.33%	2.63%	0.54%	0.00%	1.91%
1999 -2009	2.36%	2.53%	79	949	2.40%	3.15%	3.17%	6.84%	0.60%	3.86%
2010 -2030	1.54%	2.43%	4	368	1.58%	2.24%	2.47%	2.12%	0.96%	2.23%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

YEAR	AGGREGATED TOTAL MEMBER ENERGY PUR- CHASED (MWH)	ENERGY GEN- ERATED FOR MEMBERS (MWH)	Energy and Demand Values Adjusted for IN#72,IN#16,IN#92 and Special Industrial Loads						ANNUAL LOAD FACTOR
			H.E. 30 MINUTE COINCIDENT DEMAND (MW) (WITHOUT LOSSES)		H.E. COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984)				
			WINTER	SUMMER	(WITHOUT LOSSES)		(WITH LOSSES)		
ACTUAL 1999	4,457,464	4,641,824	884	984	874	974	913	1,023	51.8%
ACTUAL 2000	4,827,158	5,044,460	934	927	915	912	952	972	59.1%
ACTUAL 2001	4,932,180	5,152,284	987	1,004	976	992	1,022	1,045	56.3%
ACTUAL 2002	5,312,874	5,560,435	968	1,040	929	1,030	965	1,091	58.2%
ACTUAL 2003	5,338,729	5,576,113	1,079	1,040	1,061	1,027	1,106	1,079	57.6%
ACTUAL 2004	5,537,913	5,783,674	1,066	1,055	1,052	1,037	1,106	1,093	59.5%
ACTUAL 2005	6,139,397	6,383,924	1,138	1,305	1,109	1,291	1,150	1,355	53.8%
ACTUAL 2006	6,329,771	6,606,483	1,260	1,322	1,229	1,303	1,283	1,366	55.2%
ACTUAL 2007	6,739,285	7,044,089	1,354	1,337	1,321	1,334	1,387	1,397	57.6%
ACTUAL 2008	6,743,752	7,010,434	1,394	1,235	1,379	1,215	1,442	1,327	55.3%
ACTUAL 2009	6,461,195	6,725,634	1,465	1,232	1,465	1,229	1,525	1,292	50.3%
FRCST 2010	6,722,876	7,021,295	1,352	1,289	1,336	1,280	1,403	1,344	57.1%
FRCST 2011	7,094,532	7,397,869	1,418	1,363	1,401	1,354	1,472	1,422	57.4%
FRCST 2012	7,294,997	7,606,906	1,454	1,400	1,437	1,390	1,509	1,461	57.4%
FRCST 2013	7,526,648	7,848,461	1,493	1,445	1,475	1,435	1,550	1,507	57.8%
FRCST 2014	7,731,891	8,062,479	1,523	1,470	1,505	1,460	1,581	1,533	58.2%
FRCST 2015	7,980,269	8,321,477	1,569	1,521	1,551	1,510	1,629	1,586	58.3%
FRCST 2016	8,186,572	8,536,600	1,601	1,545	1,582	1,535	1,662	1,612	58.5%
FRCST 2017	8,335,604	8,692,005	1,631	1,575	1,612	1,564	1,693	1,643	58.6%
FRCST 2018	8,476,615	8,839,045	1,659	1,603	1,640	1,592	1,723	1,672	58.6%
FRCST 2019	8,618,549	8,987,048	1,688	1,630	1,668	1,619	1,752	1,701	58.6%
FRCST 2020	8,762,845	9,137,513	1,716	1,658	1,696	1,647	1,782	1,730	58.4%
FRCST 2021	8,896,211	9,276,581	1,744	1,687	1,723	1,675	1,810	1,759	58.5%
FRCST 2022	9,046,082	9,432,861	1,774	1,716	1,753	1,704	1,841	1,790	58.5%
FRCST 2023	9,199,114	9,592,435	1,804	1,746	1,783	1,734	1,873	1,821	58.5%
FRCST 2024	9,355,504	9,755,512	1,836	1,776	1,814	1,764	1,906	1,853	58.3%
FRCST 2025	9,515,846	9,922,710	1,868	1,808	1,846	1,795	1,939	1,886	58.4%
FRCST 2026	9,694,085	10,108,569	1,905	1,844	1,883	1,831	1,977	1,923	58.4%
FRCST 2027	9,878,434	10,300,801	1,942	1,880	1,919	1,867	2,016	1,961	58.3%
FRCST 2028	10,068,189	10,498,669	1,980	1,917	1,957	1,904	2,056	2,000	58.1%
FRCST 2029	10,262,888	10,701,693	2,020	1,955	1,996	1,942	2,097	2,040	58.3%
FRCST 2030	10,461,806	10,909,115	2,060	1,995	2,036	1,981	2,138	2,080	58.2%

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	Adjusted for Systems & Ind ENERGY PURCHASED (% CHG.)	ENERGY GENERATED (% CHG.)	Adj. Sys. & Ind. -- H.E. 30 MINUTE COINCIDENT DEMAND (MW) (WITHOUT LOSSES)		Adjusted for Sys. & Ind. -- HE COIN. 60 MINUTE DEMAND Without Losses (% Chg) / With Losses (% Chg)				ADJUSTED ANNUAL LOAD FACTOR (AVERAGE)
			WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	4.44%	4.50%	3.80%	1.40%	3.78%	1.26%	3.91%	1.33%	57.07%
2004 -2009	3.13%	3.06%	6.58%	3.15%	6.65%	3.46%	6.64%	3.40%	55.30%
2010 -2015	3.49%	3.46%	3.02%	3.36%	3.02%	3.36%	3.03%	3.38%	57.71%
2015 -2020	1.89%	1.89%	1.81%	1.75%	1.81%	1.75%	1.81%	1.75%	58.49%
2020 -2025	1.66%	1.66%	1.71%	1.74%	1.71%	1.74%	1.71%	1.74%	58.42%
2025 -2030	1.91%	1.91%	1.97%	1.98%	1.97%	1.98%	1.97%	1.98%	58.29%
1999 -2009	3.78%	3.78%	5.18%	2.27%	5.30%	2.35%	5.26%	2.36%	55.88%
2010 -2030	2.24%	2.23%	2.13%	2.21%	2.13%	2.21%	2.13%	2.21%	58.20%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN#72,IN#16,IN#92 and Special Industrial Loads

EXTREME COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984)

YEAR	(WITHOUT LOSSES)		(WITH LOSSES)		EXTREME ANNUAL LOAD FACTOR
	WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999	*****	*****	*****	*****	*****
ACTUAL 2000	*****	*****	*****	*****	*****
ACTUAL 2001	*****	*****	*****	*****	*****
ACTUAL 2002	*****	*****	*****	*****	*****
ACTUAL 2003	*****	*****	*****	*****	*****
ACTUAL 2004	*****	*****	*****	*****	*****
ACTUAL 2005	*****	*****	*****	*****	*****
ACTUAL 2006	*****	*****	*****	*****	*****
ACTUAL 2007	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****
FRCST 2010	1,471	1,402	1,544	1,471	51.9%
FRCST 2011	1,543	1,483	1,621	1,558	52.1%
FRCST 2012	1,581	1,522	1,660	1,598	52.2%
FRCST 2013	1,623	1,570	1,705	1,649	52.6%
FRCST 2014	1,654	1,595	1,738	1,676	53.0%
FRCST 2015	1,703	1,649	1,789	1,732	53.1%
FRCST 2016	1,733	1,672	1,821	1,756	53.4%
FRCST 2017	1,767	1,705	1,856	1,791	53.5%
FRCST 2018	1,797	1,734	1,888	1,822	53.5%
FRCST 2019	1,828	1,764	1,920	1,853	53.4%
FRCST 2020	1,859	1,795	1,953	1,885	53.3%
FRCST 2021	1,888	1,825	1,983	1,917	53.4%
FRCST 2022	1,921	1,856	2,017	1,950	53.4%
FRCST 2023	1,954	1,889	2,052	1,984	53.4%
FRCST 2024	1,988	1,922	2,088	2,019	53.2%
FRCST 2025	2,023	1,956	2,125	2,054	53.3%
FRCST 2026	2,062	1,994	2,166	2,095	53.3%
FRCST 2027	2,103	2,033	2,209	2,136	53.2%
FRCST 2028	2,144	2,074	2,252	2,178	53.1%
FRCST 2029	2,187	2,115	2,297	2,221	53.2%
FRCST 2030	2,230	2,157	2,342	2,266	53.2%

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

Adjusted for Sys. & Ind. HE EXT. COIN. 60 MINUTE DEMAND

ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)

TIME PERIOD	<u>Without Losses (% Chg)</u>		<u>With Losses (% Chg)</u>		ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)
	WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	*****	*****	*****	*****	*****
2004 -2009	*****	*****	*****	*****	*****
2010 -2015	2.96%	3.30%	2.98%	3.32%	52.47%
2015 -2020	1.77%	1.70%	1.77%	1.70%	53.35%
2020 -2025	1.70%	1.73%	1.70%	1.73%	53.32%
2025 -2030	1.97%	1.98%	1.97%	1.98%	53.21%
1999 -2009	*****	*****	*****	*****	*****
2010 -2030	2.10%	2.18%	2.10%	2.18%	53.07%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

YEAR	H.E. Time Factor Ratio from 30 to 60 Minute excludes pass-throughs (Est. before 1984)		PERCENTAGE of IN #72 Served by H.E.	IN #72 served by H.E. (Yes=0, No=1)		PERCENTAGE of IN #16 Served by H.E.	IN #16 served by H.E. (Yes=0, No=1)	
	WINTER	SUMMER		WINTER	SUMMER		WINTER	SUMMER
ACTUAL 1999	98.85%	98.99%	100.0%	0	0	100.0%	0	0
ACTUAL 2000	97.92%	98.42%	100.0%	0	0	100.0%	0	0
ACTUAL 2001	98.92%	98.85%	100.0%	0	0	100.0%	0	0
ACTUAL 2002	96.00%	99.02%	100.0%	0	0	100.0%	0	0
ACTUAL 2003	98.31%	98.80%	100.0%	0	0	100.0%	0	0
ACTUAL 2004	98.73%	98.31%	100.0%	0	0	100.0%	0	0
ACTUAL 2005	97.45%	98.93%	100.0%	0	0	100.0%	0	0
ACTUAL 2006	97.54%	98.57%	100.0%	0	0	100.0%	0	0
ACTUAL 2007	97.56%	99.78%	100.0%	0	0	100.0%	0	0
ACTUAL 2008	98.92%	98.38%	100.0%	0	0	100.0%	0	0
ACTUAL 2009	100.00%	99.76%	100.0%	0	0	100.0%	0	0
FRCST 2010	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2011	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2012	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2013	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2014	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2015	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2016	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2017	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2018	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2019	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2020	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2021	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2022	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2023	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2024	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2025	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2026	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2027	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2028	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2029	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2030	98.83%	99.30%	100.00%	0	0	100.00%	0	0

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	HE TIME FACTOR RATIO (30 to 60 MINUTE)	
	WINTER (AVERAGE)	SUMMER (AVERAGE)
1999 -2004	98.12%	98.73%
2004 -2009	98.37%	98.95%
2010 -2015	98.83%	99.30%
2015 -2020	98.83%	99.30%
2020 -2025	98.83%	99.30%
2025 -2030	98.83%	99.30%
1999 -2009	98.20%	98.89%
2010 -2030	98.83%	99.30%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

YEAR	PERCENTAGE of IN #92 Served by H.E.	IN #92 served by H.E. (Yes=0, No= 1)		PERCENTAGE of IL #2 Served by H.E.	IL #2 served by H.E. (Yes=0, No= 1)	
		WINTER	SUMMER		WINTER	SUMMER
ACTUAL 1999	0.0%	1	1	0.0%	1	1
ACTUAL 2000	0.0%	1	1	0.0%	1	1
ACTUAL 2001	0.0%	1	1	0.0%	1	1
ACTUAL 2002	0.0%	1	1	0.0%	1	1
ACTUAL 2003	0.0%	1	1	0.0%	1	1
ACTUAL 2004	0.0%	1	1	0.0%	1	1
ACTUAL 2005	51.0%	1	0	0.0%	1	1
ACTUAL 2006	100.0%	0	0	0.0%	1	1
ACTUAL 2007	100.0%	0	0	0.0%	1	1
ACTUAL 2008	100.0%	0	0	0.0%	1	1
ACTUAL 2009	100.0%	0	0	0.0%	1	1
FRCST 2010	100.00%	0	0	0.00%	1	1
FRCST 2011	100.00%	0	0	100.00%	0	0
FRCST 2012	100.00%	0	0	100.00%	0	0
FRCST 2013	100.00%	0	0	100.00%	0	0
FRCST 2014	100.00%	0	0	100.00%	0	0
FRCST 2015	100.00%	0	0	100.00%	0	0
FRCST 2016	100.00%	0	0	100.00%	0	0
FRCST 2017	100.00%	0	0	100.00%	0	0
FRCST 2018	100.00%	0	0	100.00%	0	0
FRCST 2019	100.00%	0	0	100.00%	0	0
FRCST 2020	100.00%	0	0	100.00%	0	0
FRCST 2021	100.00%	0	0	100.00%	0	0
FRCST 2022	100.00%	0	0	100.00%	0	0
FRCST 2023	100.00%	0	0	100.00%	0	0
FRCST 2024	100.00%	0	0	100.00%	0	0
FRCST 2025	100.00%	0	0	100.00%	0	0
FRCST 2026	100.00%	0	0	100.00%	0	0
FRCST 2027	100.00%	0	0	100.00%	0	0
FRCST 2028	100.00%	0	0	100.00%	0	0
FRCST 2029	100.00%	0	0	100.00%	0	0
FRCST 2030	100.00%	0	0	100.00%	0	0

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD

1999 -2004  
2004 -2009

2010 -2015  
2015 -2020  
2020 -2025  
2025 -2030

1999 -2009  
2010 -2030

**APPENDIX G**

**HEREC "HIGH" DSM CASE SCENARIO TABLES  
HISTORICAL/FORECAST ANNUAL SUMMARY**

1971 : BEGINNING HISTORICAL DATA YEAR ?  
2009 : FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 34 YEARS)  
20 : NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

Aggregated Member System Data  
NUMBER OF CONSUMERS

Aggregated Member System Data  
SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

	YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL	1999	242,823	11,747	129	1,225	255,924	3,301,206	679,879	954,026	113,744	5,048,855
ACTUAL	2000	248,483	12,109	139	1,363	262,074	3,408,837	742,554	1,177,210	116,332	5,444,933
ACTUAL	2001	253,162	12,265	155	1,444	267,026	3,522,968	729,098	1,261,060	113,891	5,627,017
ACTUAL	2002	257,347	12,533	163	1,501	271,544	3,772,856	750,481	1,372,372	117,598	6,013,307
ACTUAL	2003	261,300	12,711	176	1,654	275,841	3,744,229	760,700	1,406,637	112,443	6,024,009
ACTUAL	2004	265,436	12,930	173	1,793	280,332	3,816,332	797,926	1,498,284	112,624	6,225,166
ACTUAL	2005	269,261	13,031	173	1,934	284,399	4,087,081	833,664	1,583,193	44,652	6,548,590
ACTUAL	2006	272,892	13,211	177	2,070	288,350	3,997,738	859,810	1,632,862	37,999	6,528,409
ACTUAL	2007	275,983	13,481	199	2,186	291,849	4,235,636	896,961	1,706,767	41,253	6,880,617
ACTUAL	2008	277,143	13,424	208	2,202	292,977	4,225,769	896,208	1,712,574	38,855	6,873,406
ACTUAL	2009	277,179	13,547	200	2,204	293,130	4,049,085	862,271	1,638,530	36,404	6,586,290
FRCST	2010	278,990	13,751	222	2,222	295,185	4,073,739	879,999	1,818,881	40,028	6,812,647
FRCST	2011	281,351	13,954	220	2,222	297,747	4,127,815	885,727	1,808,650	40,028	6,862,220
FRCST	2012	284,092	14,161	219	2,222	300,694	4,185,409	890,308	1,911,345	40,028	7,027,089
FRCST	2013	287,118	14,365	220	2,222	303,925	4,249,779	891,863	2,046,105	40,028	7,227,775
FRCST	2014	290,347	14,572	220	2,222	307,361	4,308,492	892,403	2,152,431	40,028	7,393,353
FRCST	2015	293,751	14,780	220	2,222	310,973	4,373,380	894,524	2,293,957	40,028	7,601,888
FRCST	2016	297,429	15,052	220	2,222	314,923	4,458,995	902,986	2,382,983	40,028	7,784,992
FRCST	2017	301,207	15,323	219	2,222	318,971	4,541,480	912,784	2,413,286	40,028	7,907,578
FRCST	2018	305,106	15,595	219	2,222	323,142	4,626,574	924,429	2,433,452	40,028	8,024,484
FRCST	2019	309,094	15,869	219	2,222	327,404	4,715,719	936,493	2,452,016	40,028	8,144,256
FRCST	2020	313,170	16,149	218	2,222	331,759	4,802,420	949,733	2,470,722	40,028	8,262,903
FRCST	2021	317,534	16,496	217	2,222	336,469	4,892,624	967,573	2,470,063	40,028	8,370,288
FRCST	2022	321,992	16,847	217	2,222	341,278	4,985,462	986,441	2,482,413	40,028	8,494,345
FRCST	2023	326,553	17,205	217	2,222	346,197	5,081,420	1,008,032	2,494,825	40,028	8,622,305
FRCST	2024	331,215	17,562	217	2,222	351,216	5,181,285	1,027,595	2,507,299	40,028	8,756,207
FRCST	2025	336,013	17,923	217	2,222	356,375	5,286,179	1,051,342	2,519,836	40,028	8,897,385
FRCST	2026	341,058	18,359	217	2,222	361,856	5,405,235	1,087,638	2,532,436	40,028	9,065,337
FRCST	2027	346,195	18,800	217	2,222	367,434	5,534,502	1,125,894	2,545,096	40,028	9,245,519
FRCST	2028	351,430	19,247	217	2,222	373,116	5,670,892	1,167,978	2,557,823	40,028	9,436,721
FRCST	2029	356,761	19,693	217	2,222	378,893	5,812,709	1,211,797	2,570,610	40,028	9,635,144
FRCST	2030	362,163	20,147	217	2,222	384,749	5,958,165	1,254,767	2,583,463	40,028	9,836,423

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

AGGREGATED NUMBER OF CONSUMERS

AGGREGATED SYSTEM ENERGY SALES

TIME PERIOD	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT.CHG.)	OTHER (ACT.CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
1999 -2004	1.80%	1.94%	44	568	1.84%	2.94%	3.25%	9.45%	-0.20%	4.28%
2004 -2009	0.87%	0.94%	27	411	0.90%	1.19%	1.56%	1.81%	-20.22%	1.13%
2010 -2015	1.04%	1.45%	-2	0	1.05%	1.43%	0.33%	-4.75%	0.00%	2.22%
2015 -2020	1.29%	1.79%	-2	0	1.30%	1.89%	1.20%	-1.50%	0.00%	1.88%
2020 -2025	1.42%	2.11%	-1	0	1.44%	1.94%	2.05%	0.39%	0.00%	1.49%
2025 -2030	1.51%	2.37%	0	0	1.54%	2.42%	3.60%	0.50%	0.00%	2.03%
1999 -2009	1.33%	1.44%	71	979	1.37%	2.06%	2.41%	5.56%	-10.77%	2.69%
2010 -2030	1.31%	1.93%	-5	0	1.33%	1.92%	1.79%	1.77%	0.00%	1.85%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** HIGH SCENARIO WITH DSM IMPACTS *****						***** HIGH SCENARIO WITH DSM IMPACTS *****				
YEAR	AGGREGATED TOTAL MEMBER ENERGY PURCHASED (MWH)	TOTAL ENERGY GENERATED for H.E. MEMBERS (MWH)	HE SYSTEM AVERAGE MONTHLY LOSS FACTORS due to MEMBER SYSTEM LOAD (excludes pass-throughs)		H.E. AVERAGE WHOLESALE POWER COSTS (MILLS/MWH)	AGGREGATED MEMBER SYSTEM DEMANDS (WITHOUT LOSSES, 30 MINUTE DEMAND)				
			FOR ENERGY	FOR DEMAND		NONCOINCIDENT (MW)		COINCIDENT (MW) (EST. BEFORE 1984)		
						WINTER	SUMMER	WINTER	SUMMER	
ACTUAL	1999	5,320,840	5,535,309	3.97%	4.54%	*****	1,117	1,223	1,037	1,155
ACTUAL	2000	5,758,399	6,009,930	4.31%	4.52%	*****	1,173	1,187	1,110	1,117
ACTUAL	2001	5,864,880	6,118,847	4.27%	4.53%	*****	1,285	1,274	1,178	1,187
ACTUAL	2002	6,314,792	6,600,361	4.45%	4.78%	*****	1,211	1,346	1,151	1,229
ACTUAL	2003	6,320,460	6,593,113	4.28%	4.26%	*****	1,354	1,313	1,265	1,229
ACTUAL	2004	6,549,574	6,831,431	4.25%	4.81%	*****	1,381	1,321	1,268	1,255
ACTUAL	2005	6,850,535	7,115,713	3.83%	4.22%	*****	1,429	1,472	1,335	1,393
ACTUAL	2006	6,802,245	7,091,068	4.19%	4.47%	*****	1,414	1,502	1,336	1,393
ACTUAL	2007	7,215,322	7,533,291	4.33%	4.84%	*****	1,533	1,558	1,421	1,403
ACTUAL	2008	7,193,537	7,471,337	3.80%	5.10%	*****	1,575	1,442	1,440	1,289
ACTUAL	2009	6,898,809	7,174,754	3.93%	4.86%	*****	1,674	1,453	1,519	1,307
FRCST	2010	7,133,846	7,442,855	4.25%	4.73%	68.830	1,526	1,476	1,403	1,358
FRCST	2011	7,186,232	7,486,074	4.10%	4.80%	70.910	1,530	1,483	1,405	1,365
FRCST	2012	7,358,190	7,665,315	4.10%	4.80%	75.360	1,556	1,521	1,427	1,366
FRCST	2013	7,568,391	7,884,434	4.10%	4.80%	79.430	1,581	1,538	1,450	1,412
FRCST	2014	7,741,718	8,065,101	4.10%	4.80%	82.230	1,623	1,564	1,462	1,420
FRCST	2015	7,960,400	8,293,062	4.10%	4.80%	83.810	1,655	1,584	1,490	1,454
FRCST	2016	8,152,214	8,493,035	4.10%	4.80%	85.486	1,696	1,600	1,511	1,467
FRCST	2017	8,280,762	8,627,037	4.10%	4.80%	87.196	1,716	1,619	1,529	1,483
FRCST	2018	8,403,292	8,754,763	4.10%	4.80%	88.940	1,735	1,636	1,545	1,498
FRCST	2019	8,528,843	8,885,639	4.10%	4.80%	90.719	1,755	1,654	1,562	1,514
FRCST	2020	8,653,201	9,015,271	4.10%	4.80%	92.533	1,779	1,677	1,584	1,535
FRCST	2021	8,765,992	9,132,885	4.10%	4.80%	94.384	1,798	1,699	1,602	1,555
FRCST	2022	8,896,126	9,268,583	4.10%	4.80%	96.271	1,823	1,723	1,624	1,577
FRCST	2023	9,030,351	9,408,547	4.10%	4.80%	98.197	1,849	1,750	1,647	1,602
FRCST	2024	9,170,796	9,554,966	4.10%	4.80%	100.161	1,876	1,779	1,671	1,628
FRCST	2025	9,318,896	9,709,429	4.10%	4.80%	102.164	1,905	1,809	1,697	1,656
FRCST	2026	9,495,119	9,893,187	4.10%	4.80%	102.164	1,940	1,847	1,730	1,692
FRCST	2027	9,684,155	10,090,305	4.10%	4.80%	102.164	1,980	1,887	1,767	1,729
FRCST	2028	9,884,741	10,299,467	4.10%	4.80%	102.164	2,025	1,930	1,807	1,769
FRCST	2029	10,092,895	10,516,522	4.10%	4.80%	102.164	2,071	1,974	1,850	1,810
FRCST	2030	10,304,044	10,736,698	4.10%	4.80%	102.164	2,118	2,020	1,894	1,853

***** HIGH SCENARIO WITH DSM IMPACTS *****						***** HIGH SCENARIO WITH DSM IMPACTS *****			
TIME PERIOD	AGGREGATED TOTAL MEMBER ENERGY PURCHASED FOR MEMBERS (% CHG.)	H.E. ENERGY GENERATED FOR MEMBERS (% CHG.)	AVG. MONTHLY LOSS FACTORS due to MEMBERS		H.E. AVERAGE WHOLESALE POWER COSTS (% CHG.)	AGGREGATED MEMBER PEAK SEASONAL DEMANDS (WITHOUT LOSSES, 30 MINUTE DEMAND)			
			ENERGY (AVERAGE)	DEMAND (AVERAGE)		Non-Coincident (% Chg)		Coincident (% Chg)	
						WINTER	SUMMER	WINTER	SUMMER
1999 -2004	4.24%	4.30%	4.25%	4.57%	*****	4.34%	1.55%	4.09%	1.68%
2004 -2009	1.04%	0.99%	4.06%	4.71%	*****	3.92%	1.92%	3.68%	0.81%
2010 -2015	2.22%	2.19%	4.13%	4.79%	4.02%	1.63%	1.43%	1.21%	1.38%
2015 -2020	1.68%	1.68%	4.10%	4.80%	2.00%	1.46%	1.14%	1.23%	1.08%
2020 -2025	1.49%	1.49%	4.10%	4.80%	2.00%	1.38%	1.53%	1.39%	1.54%
2025 -2030	2.03%	2.03%	4.10%	4.80%	0.00%	2.14%	2.23%	2.22%	2.27%
1999 -2009	2.63%	2.63%	4.14%	4.63%	*****	4.13%	1.74%	3.88%	1.25%
2010 -2030	1.86%	1.85%	4.11%	4.79%	1.99%	1.65%	1.58%	1.51%	1.57%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** HIGH SCENARIO WITH DSM IMPACTS *****						***** HIGH SCENARIO WITH DSM IMPACTS *****					
HOOSIER ENERGY SYSTEM PEAK SEASONAL COINCIDENT DEMAND (MW)					H.E. ANNUAL LOAD FACTOR	HOOSIER ENERGY SYSTEM PEAK SEASONAL NON-COINCIDENT DEMAND (MW)					H.E. ANNUAL LOAD FACTOR
(All values are estimated 60 minute values)					Due To	(All values are estimated 60 minute values)					Due To
YEAR	WITHOUT LOSSES		WITH LOSSES		COINCIDENT PEAK	WITHOUT LOSSES		WITH LOSSES		NON-COIN. PEAK	
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER		
ACTUAL 1999	1,024	1,142	1,071	1,196	52.9%	1,103	1,209	1,154	1,266	49.9%	
ACTUAL 2000	1,086	1,099	1,136	1,150	59.5%	1,149	1,167	1,202	1,221	56.0%	
ACTUAL 2001	1,159	1,174	1,213	1,228	56.9%	1,271	1,259	1,329	1,317	52.5%	
ACTUAL 2002	1,105	1,218	1,159	1,278	59.0%	1,161	1,334	1,217	1,399	53.9%	
ACTUAL 2003	1,244	1,214	1,298	1,267	58.0%	1,332	1,298	1,390	1,354	54.2%	
ACTUAL 2004	1,252	1,235	1,314	1,296	59.2%	1,364	1,300	1,432	1,364	54.3%	
ACTUAL 2005	1,301	1,378	1,357	1,438	56.5%	1,393	1,456	1,453	1,519	53.5%	
ACTUAL 2006	1,304	1,374	1,364	1,437	56.3%	1,380	1,481	1,443	1,548	52.3%	
ACTUAL 2007	1,387	1,400	1,456	1,470	58.5%	1,496	1,555	1,571	1,632	52.7%	
ACTUAL 2008	1,424	1,269	1,499	1,336	56.7%	1,558	1,420	1,640	1,494	51.9%	
ACTUAL 2009	1,519	1,304	1,595	1,370	51.4%	1,674	1,450	1,758	1,522	46.6%	
FRCST 2010	1,387	1,348	1,454	1,414	58.4%	1,509	1,466	1,582	1,537	53.7%	
FRCST 2011	1,389	1,355	1,458	1,422	58.6%	1,512	1,473	1,587	1,546	53.9%	
FRCST 2012	1,410	1,376	1,480	1,444	59.0%	1,538	1,510	1,614	1,585	54.1%	
FRCST 2013	1,433	1,403	1,504	1,472	59.8%	1,563	1,527	1,640	1,603	54.9%	
FRCST 2014	1,445	1,411	1,516	1,480	60.7%	1,604	1,553	1,684	1,630	54.7%	
FRCST 2015	1,473	1,444	1,546	1,516	61.2%	1,636	1,573	1,717	1,651	55.1%	
FRCST 2016	1,494	1,457	1,568	1,529	61.7%	1,677	1,589	1,760	1,668	54.9%	
FRCST 2017	1,511	1,473	1,586	1,546	62.1%	1,696	1,608	1,790	1,687	55.3%	
FRCST 2018	1,527	1,488	1,603	1,561	62.3%	1,715	1,625	1,800	1,705	55.5%	
FRCST 2019	1,544	1,504	1,621	1,578	62.6%	1,735	1,643	1,820	1,724	55.7%	
FRCST 2020	1,566	1,524	1,643	1,600	62.5%	1,759	1,666	1,846	1,748	55.6%	
FRCST 2021	1,583	1,544	1,662	1,621	62.7%	1,777	1,687	1,865	1,770	55.9%	
FRCST 2022	1,605	1,566	1,684	1,644	62.8%	1,802	1,712	1,891	1,796	56.0%	
FRCST 2023	1,628	1,591	1,708	1,669	62.9%	1,827	1,738	1,918	1,824	56.0%	
FRCST 2024	1,652	1,617	1,734	1,697	62.7%	1,854	1,766	1,946	1,854	55.9%	
FRCST 2025	1,678	1,645	1,761	1,727	62.9%	1,883	1,797	1,977	1,886	56.1%	
FRCST 2026	1,710	1,680	1,795	1,763	62.9%	1,918	1,835	2,013	1,926	56.1%	
FRCST 2027	1,746	1,717	1,833	1,802	62.8%	1,958	1,874	2,055	1,967	56.1%	
FRCST 2028	1,787	1,757	1,875	1,844	62.5%	2,001	1,917	2,100	2,012	55.8%	
FRCST 2029	1,829	1,798	1,920	1,887	62.5%	2,047	1,961	2,149	2,058	55.9%	
FRCST 2030	1,872	1,840	1,965	1,932	62.4%	2,094	2,006	2,198	2,106	55.8%	

***** HIGH SCENARIO WITH DSM IMPACTS *****						***** HIGH SCENARIO WITH DSM IMPACTS *****					
TIME PERIOD	HOOSIER ENERGY COINCIDENT PEAK DEMAND (60 MINUTE VALUE, ALL VALUES EST.)				H.E. ANNUAL COINCIDENT LOAD FACTOR (AVERAGE)	HOOSIER ENERGY NON-COINCIDENT PEAK DEMAND (60 MINUTE VALUE, ALL VALUES EST.)				H.E. ANNUAL NON-COIN. LOAD FACTOR (AVERAGE)	
	Without Losses (% Chg)		With Losses (% Chg)			Without Losses (% Chg)		With Losses (% Chg)			
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER		
1999 -2004	4.10%	1.57%	4.16%	1.62%	57.57%	4.34%	1.45%	4.40%	1.50%	53.48%	
2004 -2009	3.94%	1.10%	3.96%	1.12%	56.43%	4.18%	2.21%	4.20%	2.22%	51.87%	
2010 -2015	1.21%	1.38%	1.22%	1.40%	59.63%	1.63%	1.43%	1.65%	1.45%	54.39%	
2015 -2020	1.23%	1.08%	1.23%	1.08%	62.07%	1.46%	1.14%	1.46%	1.15%	55.38%	
2020 -2025	1.39%	1.54%	1.40%	1.54%	62.76%	1.38%	1.53%	1.38%	1.53%	55.90%	
2025 -2030	2.22%	2.27%	2.22%	2.27%	62.69%	2.14%	2.23%	2.14%	2.23%	55.95%	
1999 -2009	4.02%	1.33%	4.06%	1.37%	56.80%	4.26%	1.83%	4.30%	1.86%	52.52%	
2010 -2030	1.51%	1.57%	1.52%	1.57%	61.73%	1.65%	1.58%	1.66%	1.59%	55.38%	

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** HIGH SCENARIO WITH DSM IMPACTS *****						***** HIGH SCENARIO WITH DSM IMPACTS *****					
YEAR	**** EXTREME TEMPERATURE CONDITIONS **** HOOSIER ENERGY SYSTEM PEAK SEASONAL COINCIDENT DEMAND (MW); 60 MINUTE VALUE (WITHOUT LOSSES)				H.E. ANNUAL LOAD FACTOR Due to EXTREME COINCIDENT PEAK	**** EXTREME TEMPERATURE CONDITIONS **** HOOSIER ENERGY SYSTEM PEAK SEASONAL NON-COINCIDENT DEMAND (MW); 60 MINUTE VALUE (WITHOUT LOSSES)				H.E. ANNUAL LOAD FACTOR Due To EXTREME NON- COIN. PEAK	
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER		
ACTUAL	1999	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL	2000	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL	2001	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL	2002	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL	2003	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL	2004	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL	2005	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL	2006	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL	2007	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL	2008	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL	2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	
FRCST	2010	1,527	1,476	1,601	1,548	53.1%	1,659	1,603	1,740	1,681	48.8%
FRCST	2011	1,531	1,485	1,607	1,558	53.2%	1,665	1,613	1,747	1,692	48.9%
FRCST	2012	1,554	1,507	1,631	1,582	53.5%	1,693	1,653	1,777	1,735	49.1%
FRCST	2013	1,581	1,537	1,659	1,614	54.3%	1,721	1,672	1,806	1,755	49.8%
FRCST	2014	1,594	1,546	1,673	1,623	55.0%	1,765	1,700	1,853	1,784	49.7%
FRCST	2015	1,625	1,583	1,706	1,662	55.5%	1,800	1,723	1,889	1,808	50.1%
FRCST	2016	1,645	1,594	1,727	1,673	56.0%	1,841	1,737	1,932	1,823	50.1%
FRCST	2017	1,666	1,613	1,748	1,693	56.3%	1,863	1,759	1,956	1,846	50.4%
FRCST	2018	1,684	1,631	1,768	1,711	56.5%	1,885	1,778	1,979	1,866	50.5%
FRCST	2019	1,704	1,649	1,788	1,730	56.7%	1,908	1,799	2,002	1,888	50.7%
FRCST	2020	1,728	1,672	1,814	1,755	56.8%	1,935	1,824	2,031	1,915	50.5%
FRCST	2021	1,748	1,694	1,835	1,778	56.8%	1,956	1,848	2,053	1,939	50.8%
FRCST	2022	1,773	1,719	1,861	1,804	56.9%	1,983	1,875	2,081	1,968	50.8%
FRCST	2023	1,798	1,746	1,887	1,832	56.9%	2,012	1,905	2,111	1,999	50.9%
FRCST	2024	1,825	1,774	1,916	1,862	56.8%	2,042	1,936	2,143	2,032	50.8%
FRCST	2025	1,854	1,805	1,946	1,895	56.9%	2,074	1,969	2,177	2,067	50.9%
FRCST	2026	1,890	1,843	1,984	1,935	56.9%	2,112	2,010	2,217	2,110	50.9%
FRCST	2027	1,930	1,883	2,025	1,977	56.9%	2,156	2,053	2,263	2,155	50.9%
FRCST	2028	1,973	1,926	2,071	2,022	56.6%	2,203	2,099	2,312	2,203	50.7%
FRCST	2029	2,019	1,971	2,120	2,069	56.6%	2,253	2,147	2,365	2,253	50.8%
FRCST	2030	2,066	2,017	2,169	2,117	56.5%	2,304	2,196	2,418	2,305	50.7%

***** HIGH SCENARIO WITH DSM IMPACTS *****						***** HIGH SCENARIO WITH DSM IMPACTS *****					
TIME PERIOD	**** EXTREME TEMPERATURE CONDITIONS **** HOOSIER ENERGY COINCIDENT PEAK (60 MIN.) Without Losses (% Chg)				EXTREME COIN. H.E. ANNUAL LOAD FACTOR (AVERAGE)	**** EXTREME TEMPERATURE CONDITIONS **** HOOSIER ENERGY NON-COINCIDENT PEAK (60 MIN.) Without Losses (% Chg)				EXT. NON-COIN H.E. ANNUAL LOAD FACTOR (AVERAGE)	
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER		
1999 -2004	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2004 -2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2010 -2015	1.25%	1.41%	1.27%	1.43%	54.09%	1.64%	1.45%	1.66%	1.47%	49.41%	
2015 -2020	1.24%	1.09%	1.24%	1.09%	56.28%	1.45%	1.15%	1.45%	1.15%	50.37%	
2020 -2025	1.42%	1.55%	1.42%	1.55%	56.82%	1.40%	1.54%	1.40%	1.54%	50.79%	
2025 -2030	2.19%	2.24%	2.19%	2.24%	56.75%	2.12%	2.20%	2.12%	2.20%	50.82%	
1999 -2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2010 -2030	1.52%	1.57%	1.53%	1.58%	55.93%	1.65%	1.59%	1.66%	1.59%	50.32%	

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\* Adjusted for IN #72, IN #16 and IN#92 \*\*\*\*

\*\*\*\* Adjusted for IN #72, IN #16 and IN#92 \*\*\*\*

Aggregated Member System Data  
NUMBER OF CONSUMERS

Aggregated Member System Data  
SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

	YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL	1999	209,962	9,568	112	887	220,529	2,864,229	599,227	862,060	29,908	4,355,424
ACTUAL	2000	215,011	9,890	120	1,018	226,039	2,948,957	656,492	1,088,160	30,617	4,724,226
ACTUAL	2001	219,228	10,003	132	1,093	230,456	3,052,360	639,446	1,164,603	31,271	4,887,680
ACTUAL	2002	223,044	10,265	139	1,144	234,592	3,261,617	663,738	1,272,906	32,441	5,230,702
ACTUAL	2003	226,749	10,462	151	1,293	238,655	3,243,405	673,235	1,316,094	32,150	5,264,884
ACTUAL	2004	230,760	10,690	151	1,429	243,030	3,305,807	706,497	1,403,535	33,098	5,448,937
ACTUAL	2005	257,250	11,810	165	1,573	270,798	3,749,514	774,714	1,484,489	33,634	6,042,351
ACTUAL	2006	260,854	11,986	169	1,707	274,716	3,856,899	824,354	1,545,582	32,678	6,259,513
ACTUAL	2007	263,908	12,246	191	1,821	278,166	4,088,777	855,093	1,620,151	34,240	6,598,281
ACTUAL	2008	265,071	12,166	200	1,833	279,270	4,080,904	856,375	1,630,203	33,209	6,600,691
ACTUAL	2009	265,137	12,281	192	1,836	279,446	3,904,139	818,798	1,564,440	31,738	6,319,115
FRCST	2010	266,911	12,474	213	1,854	281,452	3,924,478	836,189	1,747,456	33,075	6,541,198
FRCST	2011	281,351	13,954	220	2,222	297,747	4,127,815	885,727	1,808,650	40,028	6,862,220
FRCST	2012	284,092	14,161	219	2,222	300,694	4,185,409	890,308	1,911,345	40,028	7,027,089
FRCST	2013	287,118	14,365	220	2,222	303,925	4,249,779	891,863	2,046,105	40,028	7,227,775
FRCST	2014	290,347	14,572	220	2,222	307,361	4,308,492	892,403	2,152,431	40,028	7,393,353
FRCST	2015	293,751	14,780	220	2,222	310,973	4,373,380	894,524	2,293,957	40,028	7,601,888
FRCST	2016	297,429	15,052	220	2,222	314,923	4,458,995	902,986	2,382,983	40,028	7,784,992
FRCST	2017	301,207	15,323	219	2,222	318,971	4,541,480	912,784	2,413,286	40,028	7,907,578
FRCST	2018	305,106	15,595	219	2,222	323,142	4,626,574	924,429	2,433,452	40,028	8,024,484
FRCST	2019	309,094	15,869	219	2,222	327,404	4,715,719	936,493	2,452,016	40,028	8,144,256
FRCST	2020	313,170	16,149	218	2,222	331,759	4,802,420	949,733	2,470,722	40,028	8,262,903
FRCST	2021	317,534	16,496	217	2,222	336,469	4,892,624	967,573	2,470,063	40,028	8,370,288
FRCST	2022	321,992	16,847	217	2,222	341,278	4,985,462	986,441	2,482,413	40,028	8,494,345
FRCST	2023	326,553	17,205	217	2,222	346,197	5,081,420	1,006,032	2,494,825	40,028	8,622,305
FRCST	2024	331,215	17,562	217	2,222	351,216	5,181,285	1,027,595	2,507,299	40,028	8,756,207
FRCST	2025	336,013	17,923	217	2,222	356,375	5,286,179	1,051,342	2,519,836	40,028	8,897,385
FRCST	2026	341,058	18,359	217	2,222	361,856	5,405,235	1,087,638	2,532,436	40,028	9,065,337
FRCST	2027	346,195	18,800	217	2,222	367,434	5,534,502	1,125,894	2,545,096	40,028	9,245,519
FRCST	2028	351,430	19,247	217	2,222	373,116	5,670,892	1,167,978	2,557,823	40,028	9,436,721
FRCST	2029	356,761	19,693	217	2,222	378,893	5,812,709	1,211,797	2,570,610	40,028	9,635,144
FRCST	2030	362,163	20,147	217	2,222	384,749	5,958,165	1,254,767	2,583,463	40,028	9,836,423

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

Adjusted for Systems – AGGREGATED NUMBER OF CONSUMERS

Adjusted for Systems – AGGREGATED ENERGY SALES

TIME PERIOD	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT.CHG.)	OTHER (ACT.CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
1999 -2004	1.91%	2.24%	39	542	1.96%	2.91%	3.35%	10.24%	2.05%	4.58%
2004 -2009	2.82%	2.81%	41	407	2.83%	3.38%	2.99%	2.19%	-0.84%	3.01%
2010 -2015	1.93%	3.45%	7	368	2.01%	2.19%	1.36%	5.59%	3.89%	3.05%
2015 -2020	1.29%	1.79%	-2	0	1.30%	1.89%	1.20%	1.50%	0.00%	1.68%
2020 -2025	1.42%	2.11%	-1	0	1.44%	1.94%	2.05%	0.39%	0.00%	1.49%
2025 -2030	1.51%	2.37%	0	0	1.54%	2.42%	3.60%	0.50%	0.00%	2.03%
1999 -2009	2.36%	2.53%	80	949	2.40%	3.15%	3.17%	6.14%	0.60%	3.79%
2010 -2030	1.54%	2.43%	4	368	1.58%	2.11%	2.05%	1.97%	0.96%	2.06%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	AGGREGATED TOTAL MEMBER ENERGY PURCHASED (MWH)	ENERGY GENERATED FOR MEMBERS (MWH)	Energy and Demand Values Adjusted for IN #72, IN # 16 and IN#92						ANNUAL LOAD FACTOR
			AGGREGATED MEMBER 30 MIN. COINCIDENT PEAK W/O LOSSES (MW)		HE COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984) (WITHOUT LOSSES)		HE COINCIDENT 60 MINUTE DEMAND (MW) (WITH LOSSES)		
			WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999	4,592,866	4,777,226	900	1,004	.888	993	929	1,039	52.5%
ACTUAL 2000	4,998,042	5,215,344	958	969	937	953	980	997	59.6%
ACTUAL 2001	5,106,079	5,326,182	1,023	1,032	1,006	1,020	1,052	1,067	57.0%
ACTUAL 2002	5,499,105	5,746,666	1,012	1,077	972	1,066	1,019	1,118	58.7%
ACTUAL 2003	5,527,292	5,764,676	1,102	1,072	1,084	1,059	1,130	1,105	58.2%
ACTUAL 2004	5,736,200	5,981,961	1,103	1,095	1,089	1,077	1,143	1,130	59.6%
ACTUAL 2005	6,332,029	6,576,556	1,172	1,333	1,142	1,319	1,191	1,376	54.6%
ACTUAL 2006	6,525,204	6,801,916	1,295	1,337	1,264	1,318	1,322	1,379	56.3%
ACTUAL 2007	6,924,233	7,229,037	1,384	1,341	1,351	1,338	1,418	1,405	58.2%
ACTUAL 2008	6,912,387	7,179,069	1,395	1,245	1,380	1,226	1,453	1,290	56.2%
ACTUAL 2009	6,617,861	6,882,100	1,472	1,247	1,472	1,243	1,546	1,306	50.8%
FRCST 2010	6,848,110	7,144,436	1,355	1,302	1,340	1,293	1,405	1,356	58.1%
FRCST 2011	7,186,232	7,486,074	1,405	1,365	1,389	1,355	1,458	1,422	58.6%
FRCST 2012	7,358,190	7,665,315	1,427	1,386	1,410	1,376	1,480	1,444	59.0%
FRCST 2013	7,568,391	7,884,434	1,450	1,412	1,433	1,403	1,504	1,472	59.8%
FRCST 2014	7,741,718	8,065,101	1,462	1,420	1,445	1,411	1,516	1,480	60.7%
FRCST 2015	7,960,400	8,293,062	1,490	1,454	1,473	1,444	1,546	1,516	61.2%
FRCST 2016	8,152,214	8,493,035	1,511	1,467	1,494	1,457	1,568	1,529	61.7%
FRCST 2017	8,280,762	8,627,037	1,529	1,483	1,511	1,473	1,586	1,546	62.1%
FRCST 2018	8,403,292	8,754,763	1,545	1,498	1,527	1,488	1,603	1,561	62.3%
FRCST 2019	8,528,843	8,885,639	1,562	1,514	1,544	1,504	1,621	1,578	62.6%
FRCST 2020	8,653,201	9,015,271	1,584	1,535	1,566	1,524	1,643	1,600	62.5%
FRCST 2021	8,765,992	9,132,885	1,602	1,555	1,583	1,544	1,662	1,621	62.7%
FRCST 2022	8,896,126	9,268,583	1,624	1,577	1,605	1,566	1,684	1,644	62.8%
FRCST 2023	9,030,351	9,408,547	1,647	1,602	1,628	1,591	1,708	1,669	62.9%
FRCST 2024	9,170,796	9,554,996	1,671	1,628	1,652	1,617	1,734	1,697	62.7%
FRCST 2025	9,318,896	9,709,429	1,697	1,656	1,678	1,645	1,761	1,727	62.9%
FRCST 2026	9,495,119	9,893,187	1,730	1,692	1,710	1,680	1,795	1,763	62.9%
FRCST 2027	9,684,155	10,090,305	1,767	1,729	1,746	1,717	1,833	1,802	62.8%
FRCST 2028	9,884,741	10,299,467	1,807	1,769	1,787	1,757	1,875	1,844	62.5%
FRCST 2029	10,092,895	10,516,522	1,850	1,810	1,829	1,798	1,920	1,887	62.5%
FRCST 2030	10,304,044	10,736,698	1,894	1,853	1,872	1,840	1,965	1,932	62.4%

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	Adjusted for Systems ENERGY PURCHASED (% CHG.)		Adjusted for Systems ENERGY GENERATED (% CHG.)		Adjusted for Systems AGGREGATED 30 MIN. COIN. PEAK W/O LOSSES (% CHG)		Adjusted for Systems - HE COIN. 80 MINUTE DEMAND Without Losses (% Chg)		Adjusted for Systems - HE COIN. 80 MINUTE DEMAND With Losses (% Chg)		ADJUSTED ANNUAL LOAD FACTOR (AVERAGE)
	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	4.55%	4.60%	4.15%	1.76%	4.17%	1.65%	4.23%	1.70%	57.58%		
2004 -2009	2.90%	2.84%	5.94%	2.62%	6.21%	2.91%	6.23%	2.93%	55.96%		
2010 -2015	3.06%	3.03%	1.91%	2.24%	1.91%	2.24%	1.93%	2.26%	59.57%		
2015 -2020	1.68%	1.68%	1.23%	1.08%	1.23%	1.08%	1.23%	1.08%	62.07%		
2020 -2025	1.49%	1.49%	1.39%	1.54%	1.39%	1.54%	1.40%	1.54%	62.76%		
2025 -2030	2.03%	2.03%	2.22%	2.27%	2.22%	2.27%	2.22%	2.27%	62.69%		
1999 -2009	3.72%	3.72%	5.05%	2.19%	5.19%	2.28%	5.22%	2.31%	56.51%		
2010 -2030	2.08%	2.06%	1.69%	1.78%	1.69%	1.78%	1.69%	1.79%	61.71%		

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN #72, IN #16 and IN#92  
EXTREME COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984)  
(WITHOUT LOSSES) (WITH LOSSES) EXTREME ANNUAL LOAD FACTOR

YEAR	WINTER	SUMMER	WINTER	SUMMER	EXTREME ANNUAL LOAD FACTOR
ACTUAL 1999	*****	*****	*****	*****	*****
ACTUAL 2000	*****	*****	*****	*****	*****
ACTUAL 2001	*****	*****	*****	*****	*****
ACTUAL 2002	*****	*****	*****	*****	*****
ACTUAL 2003	*****	*****	*****	*****	*****
ACTUAL 2004	*****	*****	*****	*****	*****
ACTUAL 2005	*****	*****	*****	*****	*****
ACTUAL 2006	*****	*****	*****	*****	*****
ACTUAL 2007	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****
FRCST 2010	1,475	1,415	1,547	1,484	52.7%
FRCST 2011	1,531	1,485	1,607	1,558	53.2%
FRCST 2012	1,554	1,507	1,631	1,582	53.5%
FRCST 2013	1,581	1,537	1,659	1,614	54.3%
FRCST 2014	1,594	1,546	1,673	1,623	55.0%
FRCST 2015	1,625	1,583	1,706	1,662	55.5%
FRCST 2016	1,645	1,594	1,727	1,673	56.0%
FRCST 2017	1,666	1,613	1,748	1,693	56.3%
FRCST 2018	1,684	1,631	1,768	1,711	56.5%
FRCST 2019	1,704	1,649	1,788	1,730	56.7%
FRCST 2020	1,728	1,672	1,814	1,755	56.6%
FRCST 2021	1,748	1,694	1,835	1,778	56.8%
FRCST 2022	1,773	1,719	1,861	1,804	56.9%
FRCST 2023	1,798	1,746	1,887	1,832	56.9%
FRCST 2024	1,825	1,774	1,916	1,862	56.8%
FRCST 2025	1,854	1,805	1,946	1,895	56.9%
FRCST 2026	1,890	1,843	1,984	1,935	56.9%
FRCST 2027	1,930	1,883	2,025	1,977	56.9%
FRCST 2028	1,973	1,926	2,071	2,022	56.6%
FRCST 2029	2,019	1,971	2,120	2,069	56.6%
FRCST 2030	2,066	2,017	2,169	2,117	56.5%

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

Adjusted for Systems HE EXT. COIN. 60 MINUTE DEMAND  
Without Losses (% Chg) With Losses (% Chg) ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)

TIME PERIOD	WINTER	SUMMER	WINTER	SUMMER	ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)
1999 -2004	*****	*****	*****	*****	*****
2004 -2009	*****	*****	*****	*****	*****
2010 -2015	1.96%	2.28%	1.97%	2.29%	54.03%
2015 -2020	1.24%	1.09%	1.24%	1.09%	56.28%
2020 -2025	1.42%	1.55%	1.42%	1.55%	56.82%
2025 -2030	2.19%	2.24%	2.19%	2.24%	56.75%
1999 -2009	*****	*****	*****	*****	*****
2010 -2030	1.70%	1.79%	1.70%	1.79%	55.92%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

Values Adjusted for IN#72,IN#16,IN#92 and Special Industrial Loads  
Aggregated Member System Data  
NUMBER OF CONSUMERS

Values Adjusted for IN#72,IN#16,IN#92 and Special Industrial Loads  
Aggregated Member System Data  
SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	209,962	9,568	112	887	220,529	2,864,229	599,227	726,658	29,908	4,220,022
ACTUAL 2000	215,011	9,890	119	1,018	226,038	2,948,957	656,492	917,277	30,617	4,553,343
ACTUAL 2001	219,228	10,003	131	1,093	230,455	3,052,360	639,446	990,705	31,271	4,713,782
ACTUAL 2002	223,044	10,265	138	1,144	234,591	3,261,617	663,738	1,086,676	32,441	5,044,472
ACTUAL 2003	226,749	10,462	150	1,293	238,654	3,243,405	673,235	1,127,531	32,160	5,076,321
ACTUAL 2004	230,760	10,690	150	1,429	243,029	3,305,807	706,497	1,205,248	33,098	5,250,650
ACTUAL 2005	257,250	11,810	164	1,573	270,797	3,749,514	774,714	1,291,857	33,634	5,849,719
ACTUAL 2006	260,854	11,986	168	1,707	274,715	3,856,899	824,354	1,350,149	32,678	6,064,080
ACTUAL 2007	263,908	12,246	190	1,821	278,165	4,088,777	855,093	1,435,203	34,240	6,413,313
ACTUAL 2008	265,071	12,166	199	1,833	279,269	4,080,904	856,375	1,461,568	33,209	6,432,056
ACTUAL 2009	265,137	12,281	191	1,836	279,445	3,904,139	818,798	1,407,974	31,738	6,162,649
FRCST 2010	266,911	12,474	212	1,854	281,451	3,924,478	836,189	1,575,066	33,075	6,368,808
FRCST 2011	281,351	13,954	219	2,222	297,746	4,127,815	885,727	1,635,200	40,028	6,888,771
FRCST 2012	284,092	14,181	218	2,222	300,693	4,185,409	890,308	1,736,280	40,028	6,852,025
FRCST 2013	287,118	14,365	219	2,222	303,924	4,249,779	891,863	1,869,411	40,028	7,051,081
FRCST 2014	290,347	14,572	219	2,222	307,360	4,308,492	892,403	1,974,091	40,028	7,215,014
FRCST 2015	293,751	14,780	219	2,222	310,972	4,373,380	894,524	2,113,957	40,028	7,421,888
FRCST 2016	297,429	15,052	219	2,222	314,922	4,458,995	902,986	2,201,994	40,028	7,604,003
FRCST 2017	301,207	15,323	218	2,222	318,970	4,541,480	912,784	2,231,302	40,028	7,725,595
FRCST 2018	305,106	15,595	218	2,222	323,141	4,626,574	924,429	2,250,468	40,028	7,841,500
FRCST 2019	309,094	15,869	218	2,222	327,403	4,715,719	936,493	2,268,027	40,028	7,960,267
FRCST 2020	313,170	16,149	217	2,222	331,758	4,802,420	949,733	2,285,722	40,028	8,077,903
FRCST 2021	317,534	16,496	216	2,222	336,468	4,892,624	967,573	2,285,063	40,028	8,185,288
FRCST 2022	321,992	16,847	216	2,222	341,277	4,985,462	986,441	2,297,413	40,028	8,309,345
FRCST 2023	326,553	17,205	216	2,222	346,196	5,081,420	1,006,032	2,309,825	40,028	8,437,305
FRCST 2024	331,215	17,562	216	2,222	351,215	5,181,285	1,027,595	2,322,299	40,028	8,571,207
FRCST 2025	336,013	17,923	216	2,222	356,374	5,286,179	1,051,342	2,334,836	40,028	8,712,385
FRCST 2026	341,058	18,359	216	2,222	361,855	5,405,235	1,087,638	2,347,436	40,028	8,880,337
FRCST 2027	346,195	18,800	216	2,222	367,433	5,534,502	1,125,894	2,360,096	40,028	9,060,519
FRCST 2028	351,430	19,247	216	2,222	373,115	5,670,892	1,167,978	2,372,823	40,028	9,251,721
FRCST 2029	356,761	19,693	216	2,222	378,892	5,812,709	1,211,797	2,385,610	40,028	9,450,144
FRCST 2030	362,163	20,147	216	2,222	384,748	5,958,165	1,254,767	2,398,463	40,028	9,651,423

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

Adjusted for Systems & Ind. -- AGGREGATED NUMBER OF CONSUMERS

Adjusted for Systems & Ind. -- AGGREGATED ENERGY SALES

TIME PERIOD	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT.CHG.)	OTHER (ACT.CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
1999 -2004	1.91%	2.24%	38	542	1.96%	2.91%	3.35%	10.65%	2.05%	4.47%
2004 -2009	2.82%	2.81%	41	407	2.83%	3.38%	2.99%	3.16%	-0.84%	3.25%
2010 -2015	1.83%	3.45%	7	368	2.01%	2.19%	1.36%	6.06%	3.89%	3.11%
2015 -2020	1.29%	1.79%	-2	0	1.30%	1.89%	1.20%	1.57%	0.00%	1.71%
2020 -2025	1.42%	2.11%	-1	0	1.44%	1.94%	2.05%	0.43%	0.00%	1.52%
2025 -2030	1.51%	2.37%	0	0	1.54%	2.42%	3.60%	0.54%	0.00%	2.07%
1999 -2009	2.36%	2.53%	79	949	2.40%	3.15%	3.17%	6.84%	0.60%	3.86%
2010 -2030	1.54%	2.43%	4	368	1.58%	2.11%	2.05%	2.12%	0.96%	2.10%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	AGGREGATED TOTAL MEMBER ENERGY PURCHASED (MWH)	ENERGY GENERATED FOR MEMBERS (MWH)	Energy and Demand Values Adjusted for IN#72, IN#16, IN#92 and Special Industrial Loads						ANNUAL LOAD FACTOR
			H.E. 30 MINUTE COINCIDENT DEMAND (MW) (WITHOUT LOSSES)		H.E. COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984) (WITHOUT LOSSES)		H.E. COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984) (WITH LOSSES)		
			WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999	4,457,464	4,641,824	884	984	874	974	913	1,023	51.8%
ACTUAL 2000	4,827,158	5,044,460	934	927	915	912	952	972	59.1%
ACTUAL 2001	4,932,180	5,152,284	987	1,004	976	992	1,022	1,045	56.3%
ACTUAL 2002	5,312,874	5,560,435	968	1,040	929	1,030	965	1,091	58.2%
ACTUAL 2003	5,338,729	5,576,113	1,079	1,040	1,061	1,027	1,106	1,079	57.6%
ACTUAL 2004	5,537,913	5,783,674	1,066	1,055	1,052	1,037	1,106	1,093	59.5%
ACTUAL 2005	6,139,397	6,383,924	1,138	1,305	1,109	1,291	1,150	1,355	53.8%
ACTUAL 2006	6,329,771	6,606,483	1,260	1,322	1,229	1,303	1,283	1,366	55.2%
ACTUAL 2007	6,739,285	7,044,089	1,354	1,337	1,321	1,334	1,387	1,397	57.6%
ACTUAL 2008	6,743,752	7,010,434	1,394	1,235	1,379	1,215	1,442	1,327	55.3%
ACTUAL 2009	6,461,195	6,725,634	1,465	1,232	1,465	1,229	1,525	1,292	50.3%
FRCST 2010	6,675,720	6,972,046	1,330	1,277	1,314	1,268	1,379	1,331	57.7%
FRCST 2011	7,012,783	7,312,624	1,380	1,339	1,364	1,330	1,432	1,397	58.3%
FRCST 2012	7,183,125	7,490,250	1,401	1,360	1,384	1,351	1,454	1,419	58.6%
FRCST 2013	7,391,697	7,707,740	1,424	1,387	1,407	1,377	1,478	1,447	59.5%
FRCST 2014	7,563,378	7,886,761	1,435	1,394	1,418	1,385	1,490	1,455	60.4%
FRCST 2015	7,780,400	8,113,062	1,463	1,428	1,446	1,418	1,519	1,490	61.0%
FRCST 2016	7,971,225	8,312,046	1,484	1,440	1,467	1,430	1,541	1,503	61.4%
FRCST 2017	8,098,778	8,445,053	1,502	1,457	1,484	1,446	1,559	1,519	61.8%
FRCST 2018	8,220,308	8,571,779	1,518	1,472	1,500	1,461	1,576	1,535	62.1%
FRCST 2019	8,344,854	8,701,650	1,535	1,487	1,517	1,477	1,593	1,551	62.3%
FRCST 2020	8,468,201	8,830,271	1,556	1,508	1,538	1,497	1,616	1,573	62.2%
FRCST 2021	8,580,992	8,947,885	1,574	1,528	1,556	1,517	1,634	1,594	62.5%
FRCST 2022	8,711,126	9,083,583	1,596	1,550	1,578	1,540	1,657	1,617	62.6%
FRCST 2023	8,845,351	9,223,547	1,619	1,575	1,600	1,564	1,681	1,643	62.6%
FRCST 2024	8,985,796	9,369,996	1,644	1,601	1,624	1,590	1,706	1,670	62.5%
FRCST 2025	9,133,896	9,524,429	1,670	1,630	1,650	1,618	1,734	1,700	62.7%
FRCST 2026	9,310,119	9,708,187	1,703	1,665	1,683	1,653	1,768	1,737	62.7%
FRCST 2027	9,499,155	9,905,305	1,739	1,702	1,719	1,690	1,806	1,775	62.6%
FRCST 2028	9,699,741	10,114,467	1,780	1,742	1,759	1,730	1,848	1,817	62.3%
FRCST 2029	9,907,895	10,331,522	1,823	1,784	1,802	1,771	1,892	1,860	62.3%
FRCST 2030	10,119,044	10,551,698	1,867	1,826	1,845	1,814	1,938	1,905	62.2%

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	Adjusted for ENERGY PURCHASED (% CHG.)	Systems & Ind ENERGY GENERATED (% CHG.)	Adj. Sys. & Ind. - H.E. 30 MINUTE COINCIDENT DEMAND (MW) (WITHOUT LOSSES)		Adjusted for Sys. & Ind. - HE COIN. 60 MINUTE DEMAND Without Losses (% Chg)		HE COIN. 60 MINUTE DEMAND With Losses (% Chg)		ADJUSTED ANNUAL LOAD FACTOR (AVERAGE)
			WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	4.44%	4.50%	3.80%	1.40%	3.78%	1.26%	3.91%	1.33%	57.07%
2004 -2009	3.13%	3.06%	6.58%	3.15%	6.85%	3.46%	6.64%	3.40%	55.30%
2010 -2015	3.11%	3.08%	1.93%	2.27%	1.93%	2.27%	1.95%	2.28%	59.26%
2015 -2020	1.71%	1.71%	1.24%	1.09%	1.24%	1.09%	1.24%	1.09%	61.81%
2020 -2025	1.52%	1.52%	1.42%	1.56%	1.42%	1.56%	1.42%	1.56%	62.53%
2025 -2030	2.07%	2.07%	2.25%	2.31%	2.25%	2.31%	2.25%	2.31%	62.47%
1999 -2009	3.78%	3.78%	5.18%	2.27%	5.30%	2.35%	5.26%	2.36%	55.88%
2010 -2030	2.10%	2.09%	1.71%	1.81%	1.71%	1.81%	1.71%	1.81%	61.45%

1971 : BEGINNING HISTORICAL DATA YEAR ?  
2009 : FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 : NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN#72, IN#15, IN#92 and Special Industrial Loads

EXTREME COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984)

YEAR	(WITHOUT LOSSES)		(WITH LOSSES)		EXTREME ANNUAL LOAD FACTOR
	WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999	*****	*****	*****	*****	*****
ACTUAL 2000	*****	*****	*****	*****	*****
ACTUAL 2001	*****	*****	*****	*****	*****
ACTUAL 2002	*****	*****	*****	*****	*****
ACTUAL 2003	*****	*****	*****	*****	*****
ACTUAL 2004	*****	*****	*****	*****	*****
ACTUAL 2005	*****	*****	*****	*****	*****
ACTUAL 2006	*****	*****	*****	*****	*****
ACTUAL 2007	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****
FRCST 2010	1,450	1,390	1,521	1,459	52.3%
FRCST 2011	1,506	1,460	1,581	1,533	52.8%
FRCST 2012	1,528	1,482	1,605	1,557	53.1%
FRCST 2013	1,554	1,512	1,633	1,588	53.9%
FRCST 2014	1,567	1,520	1,646	1,597	54.7%
FRCST 2015	1,598	1,557	1,679	1,636	55.2%
FRCST 2016	1,618	1,568	1,700	1,647	55.7%
FRCST 2017	1,639	1,587	1,721	1,667	56.0%
FRCST 2018	1,657	1,604	1,741	1,685	56.2%
FRCST 2019	1,677	1,622	1,761	1,704	56.4%
FRCST 2020	1,701	1,645	1,786	1,728	56.3%
FRCST 2021	1,721	1,667	1,808	1,751	56.5%
FRCST 2022	1,745	1,692	1,833	1,777	56.6%
FRCST 2023	1,771	1,719	1,860	1,805	56.6%
FRCST 2024	1,798	1,748	1,888	1,836	56.5%
FRCST 2025	1,827	1,779	1,919	1,868	56.7%
FRCST 2026	1,862	1,817	1,956	1,908	56.6%
FRCST 2027	1,902	1,857	1,998	1,950	56.6%
FRCST 2028	1,946	1,900	2,044	1,995	56.3%
FRCST 2029	1,992	1,944	2,092	2,042	56.4%
FRCST 2030	2,039	1,990	2,142	2,090	56.2%

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* HIGH SCENARIO RESULTS \*\*\*\*\*

Adjusted for Sys. & Ind. HE EXT. COIN. 60 MINUTE DEMAND

ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)

TIME PERIOD	Without Losses (% Chg)		With Losses (% Chg)		ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)
	WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	*****	*****	*****	*****	*****
2004 -2009	*****	*****	*****	*****	*****
2010 -2015	1.97%	2.30%	1.99%	2.32%	53.66%
2015 -2020	1.25%	1.10%	1.25%	1.10%	55.95%
2020 -2025	1.44%	1.57%	1.44%	1.57%	56.52%
2025 -2030	2.22%	2.27%	2.22%	2.27%	56.47%
1999 -2009	*****	*****	*****	*****	*****
2010 -2030	1.72%	1.81%	1.72%	1.81%	55.60%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	H.E. Time Factor Ratio from 30 to 60 Minute excludes pass-throughs (Est. before 1984)		PERCENTAGE of IN #72 Served by H.E.	IN #72 served by H.E. (Yes=0, No=1)		PERCENTAGE of IN #16 Served by H.E.	IN #16 served by H.E. (Yes=0, No=1)	
	WINTER	SUMMER		WINTER	SUMMER		WINTER	SUMMER
ACTUAL 1999	98.85%	98.99%	100.0%	0	0	100.0%	0	0
ACTUAL 2000	97.92%	98.42%	100.0%	0	0	100.0%	0	0
ACTUAL 2001	98.92%	98.85%	100.0%	0	0	100.0%	0	0
ACTUAL 2002	96.00%	99.02%	100.0%	0	0	100.0%	0	0
ACTUAL 2003	98.31%	98.80%	100.0%	0	0	100.0%	0	0
ACTUAL 2004	98.73%	98.31%	100.0%	0	0	100.0%	0	0
ACTUAL 2005	97.45%	98.93%	100.0%	0	0	100.0%	0	0
ACTUAL 2006	97.54%	98.57%	100.0%	0	0	100.0%	0	0
ACTUAL 2007	97.56%	99.78%	100.0%	0	0	100.0%	0	0
ACTUAL 2008	98.92%	98.38%	100.0%	0	0	100.0%	0	0
ACTUAL 2009	100.00%	99.76%	100.0%	0	0	100.0%	0	0
FRCST 2010	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2011	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2012	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2013	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2014	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2015	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2016	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2017	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2018	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2019	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2020	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2021	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2022	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2023	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2024	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2025	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2026	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2027	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2028	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2029	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2030	98.83%	99.30%	100.00%	0	0	100.00%	0	0

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	HE TIME FACTOR RATIO (30 to 60 MINUTE)	
	WINTER (AVERAGE)	SUMMER (AVERAGE)
1999 -2004	98.12%	98.73%
2004 -2009	98.37%	98.95%
2010 -2015	98.83%	99.30%
2015 -2020	98.83%	99.30%
2020 -2025	98.83%	99.30%
2025 -2030	98.83%	99.30%
1999 -2009	98.20%	98.89%
2010 -2030	98.83%	99.30%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	PERCENTAGE of IN #92 Served by H.E.	IN #92 served by H.E. (Yes=0, No=1)		PERCENTAGE of IL #2 Served by H.E.	IL #2 served by H.E. (Yes=0, No=1)	
		WINTER	SUMMER		WINTER	SUMMER
ACTUAL 1999	0.0%	1	1	0.0%	1	1
ACTUAL 2000	0.0%	1	1	0.0%	1	1
ACTUAL 2001	0.0%	1	1	0.0%	1	1
ACTUAL 2002	0.0%	1	1	0.0%	1	1
ACTUAL 2003	0.0%	1	1	0.0%	1	1
ACTUAL 2004	0.0%	1	1	0.0%	1	1
ACTUAL 2005	51.0%	1	0	0.0%	1	1
ACTUAL 2006	100.0%	0	0	0.0%	1	1
ACTUAL 2007	100.0%	0	0	0.0%	1	1
ACTUAL 2008	100.0%	0	0	0.0%	1	1
ACTUAL 2009	100.0%	0	0	0.0%	1	1
-----						
FRCST 2010	100.00%	0	0	0.00%	1	1
FRCST 2011	100.00%	0	0	100.00%	0	0
FRCST 2012	100.00%	0	0	100.00%	0	0
FRCST 2013	100.00%	0	0	100.00%	0	0
FRCST 2014	100.00%	0	0	100.00%	0	0
FRCST 2015	100.00%	0	0	100.00%	0	0
FRCST 2016	100.00%	0	0	100.00%	0	0
FRCST 2017	100.00%	0	0	100.00%	0	0
FRCST 2018	100.00%	0	0	100.00%	0	0
FRCST 2019	100.00%	0	0	100.00%	0	0
FRCST 2020	100.00%	0	0	100.00%	0	0
FRCST 2021	100.00%	0	0	100.00%	0	0
FRCST 2022	100.00%	0	0	100.00%	0	0
FRCST 2023	100.00%	0	0	100.00%	0	0
FRCST 2024	100.00%	0	0	100.00%	0	0
FRCST 2025	100.00%	0	0	100.00%	0	0
FRCST 2026	100.00%	0	0	100.00%	0	0
FRCST 2027	100.00%	0	0	100.00%	0	0
FRCST 2028	100.00%	0	0	100.00%	0	0
FRCST 2029	100.00%	0	0	100.00%	0	0
FRCST 2030	100.00%	0	0	100.00%	0	0

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD

1999 -2004  
2004 -2009

2010 -2015  
2015 -2020  
2020 -2025  
2025 -2030

1999 -2009  
2010 -2030

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

DSM EE Program Energy Impact

DSM Demand Impacts-- Both EE & DR Programs)  
Coincident 60 Minute Demand MW

YEAR	Aggregated Total Member Energy		Total Member Energy		Savings w/o Losses		Savings with Losses		
	Purchased Savings MWH	Percent of Total	Generated Savings MWH	Percent of Total	Winter	Summer	Winter	Summer	
ACTUAL	1999								
ACTUAL	2000								
ACTUAL	2001								
ACTUAL	2002								
ACTUAL	2003								
ACTUAL	2004								
ACTUAL	2005								
ACTUAL	2006								
ACTUAL	2007								
ACTUAL	2008								
ACTUAL	2009								
FRCST	2010	47,155	0.7%	49,248	0.7%	22.515	12.187	23.631	12.792
FRCST	2011	81,750	1.2%	85,245	1.2%	37.975	23.890	39.889	25.093
FRCST	2012	111,872	1.5%	116,655	1.5%	53.016	39.908	55.688	41.919
FRCST	2013	134,951	1.8%	140,721	1.8%	69.186	58.148	72.672	61.079
FRCST	2014	168,513	2.2%	175,718	2.2%	87.761	75.440	92.184	79.242
FRCST	2015	199,869	2.5%	208,415	2.5%	105.721	92.709	111.049	97.381
FRCST	2016	215,347	2.6%	224,554	2.6%	116.598	104.956	122.474	110.246
FRCST	2017	236,826	2.8%	246,952	2.8%	129.595	118.699	136.126	124.681
FRCST	2018	256,307	3.0%	267,266	3.0%	141.288	131.145	148.408	137.754
FRCST	2019	273,695	3.2%	285,397	3.2%	152.765	143.050	160.464	150.259
FRCST	2020	294,644	3.4%	307,242	3.4%	160.071	150.607	168.138	158.197
FRCST	2021	315,219	3.5%	328,696	3.5%	169.286	158.804	177.817	166.807
FRCST	2022	334,957	3.7%	349,278	3.7%	177.509	165.505	186.455	173.846
FRCST	2023	353,763	3.8%	368,888	3.8%	185.273	171.092	194.610	179.714
FRCST	2024	369,708	4.0%	385,516	4.0%	192.204	175.352	201.890	184.189
FRCST	2025	381,950	4.0%	398,281	4.0%	198.084	178.333	208.067	187.320
FRCST	2026	383,966	4.0%	400,383	4.0%	202.224	178.852	212.415	187.865
FRCST	2027	379,279	3.8%	395,496	3.8%	202.695	177.884	212.909	186.848
FRCST	2028	368,448	3.7%	384,201	3.7%	200.366	175.228	210.463	184.059
FRCST	2029	354,993	3.5%	370,172	3.5%	196.817	171.870	206.735	180.531
FRCST	2030	342,761	3.3%	357,417	3.3%	193.128	168.144	202.861	176.617

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD

1999 -2004  
2004 -2009

2010 -2015  
2015 -2020  
2020 -2025  
2025 -2030

1999 -2009  
2010 -2030

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* HIGH SCENARIO WITH DSM IMPACTS \*\*\*\*\*

DSM -- EE Program Demand Impacts  
Coincident 60 Minute Demand MW

DSM -- DR Program Demand Impacts  
Coincident 60 Minute Demand MW

YEAR	Savings w/o Losses		Savings with Losses		Savings w/o Losses		Savings with Losses	
	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer
ACTUAL 1999								
ACTUAL 2000								
ACTUAL 2001								
ACTUAL 2002								
ACTUAL 2003								
ACTUAL 2004								
ACTUAL 2005								
ACTUAL 2006								
ACTUAL 2007								
ACTUAL 2008								
ACTUAL 2009								
FRCST 2010	20.094	8.866	21.091	9.305	2.421	3.322	2.541	3.487
FRCST 2011	31.653	15.483	33.249	16.263	6.322	8.407	6.641	8.830
FRCST 2012	42.118	21.830	44.241	22.930	10.898	18.078	11.447	18.989
FRCST 2013	49.965	27.978	52.483	29.388	19.221	30.170	20.189	31.691
FRCST 2014	61.008	35.447	64.082	37.233	26.754	39.994	28.102	42.009
FRCST 2015	71.421	42.520	75.021	44.662	34.300	50.190	36.028	52.719
FRCST 2016	77.833	47.586	81.756	49.984	38.765	57.370	40.718	60.262
FRCST 2017	85.273	53.026	89.570	55.698	44.322	65.673	46.555	68.982
FRCST 2018	92.375	58.073	97.030	60.999	48.912	73.072	51.377	76.754
FRCST 2019	99.170	62.454	104.168	65.601	53.595	80.596	56.296	84.658
FRCST 2020	103.760	65.080	108.989	68.359	58.311	85.527	59.148	89.837
FRCST 2021	110.785	69.340	116.368	72.835	58.501	89.464	61.449	93.973
FRCST 2022	117.571	73.147	123.496	76.833	59.938	92.358	62.958	97.012
FRCST 2023	124.496	76.815	130.770	80.686	60.777	94.277	63.840	99.028
FRCST 2024	131.019	79.987	137.622	84.017	61.185	95.365	64.268	100.171
FRCST 2025	136.611	82.358	143.496	86.508	61.473	95.975	64.571	100.812
FRCST 2026	140.546	82.416	147.629	86.569	61.678	96.436	64.786	101.295
FRCST 2027	140.853	81.059	147.952	85.144	61.841	96.825	64.958	101.704
FRCST 2028	138.460	78.187	145.438	82.127	61.905	97.041	65.025	101.932
FRCST 2029	134.939	74.738	141.739	78.504	61.878	97.132	64.996	102.027
FRCST 2030	131.732	71.649	138.371	75.260	61.396	96.494	64.490	101.357

TIME PERIOD

1999 -2004  
2004 -2009

2010 -2015  
2015 -2020  
2020 -2025  
2025 -2030

1999 -2009  
2010 -2030

## **Appendix H**

### **Historical/Forecast Annual Values Summary Low Case**

**Appendix H: Historical/Forecast Annual Values Summary  
Low Case**

**APPENDIX H**

**HEREC "LOW" CASE SCENARIO TABLES  
HISTORICAL/FORECAST ANNUAL SUMMARY**

MENU

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 34 YEARS)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

Aggregated Member System Data  
NUMBER OF CONSUMERS

Aggregated Member System Data  
SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	242,823	11,747	129	1,225	255,924	3,301,206	679,879	954,026	113,744	5,048,855
ACTUAL 2000	248,463	12,109	139	1,363	262,074	3,408,837	742,554	1,177,210	116,332	5,444,933
ACTUAL 2001	253,162	12,265	155	1,444	267,026	3,522,968	729,098	1,261,060	113,891	5,627,017
ACTUAL 2002	257,347	12,533	163	1,501	271,544	3,772,856	750,481	1,372,372	117,598	6,013,307
ACTUAL 2003	261,300	12,711	176	1,654	275,841	3,744,229	760,700	1,406,637	112,443	6,024,009
ACTUAL 2004	265,436	12,930	173	1,793	280,332	3,816,332	797,926	1,498,284	112,624	6,225,166
ACTUAL 2005	269,261	13,031	173	1,934	284,399	4,087,081	833,664	1,583,193	44,652	6,548,590
ACTUAL 2006	272,892	13,211	177	2,070	288,350	3,997,738	859,810	1,632,862	37,999	6,528,409
ACTUAL 2007	275,983	13,481	199	2,186	291,849	4,235,636	896,961	1,706,767	41,253	6,880,617
ACTUAL 2008	277,143	13,424	208	2,202	292,977	4,225,769	896,208	1,712,574	38,855	6,873,406
ACTUAL 2009	277,179	13,547	200	2,204	293,130	4,049,085	862,271	1,638,530	36,404	6,586,290
FRCST 2010	277,127	13,617	187	2,222	293,153	4,073,219	875,591	1,512,940	40,028	6,501,778
FRCST 2011	277,602	13,682	185	2,222	293,691	4,101,530	882,001	1,485,468	40,028	6,509,027
FRCST 2012	278,435	13,745	184	2,222	294,586	4,123,100	888,382	1,571,035	40,028	6,622,545
FRCST 2013	279,524	13,807	185	2,222	295,738	4,138,524	894,738	1,687,654	40,028	6,760,944
FRCST 2014	280,775	13,868	185	2,222	297,050	4,154,717	901,072	1,774,502	40,028	6,870,319
FRCST 2015	282,166	13,928	185	2,222	298,501	4,174,247	907,384	1,895,493	40,028	7,017,152
FRCST 2016	283,787	14,044	185	2,222	300,238	4,198,664	918,095	1,963,569	40,028	7,120,356
FRCST 2017	285,469	14,155	184	2,222	302,030	4,224,858	928,741	1,972,142	40,028	7,165,769
FRCST 2018	287,228	14,267	184	2,222	303,901	4,251,534	939,321	1,970,380	40,028	7,201,263
FRCST 2019	289,029	14,376	184	2,222	305,811	4,278,641	949,840	1,966,925	40,028	7,235,434
FRCST 2020	290,878	14,483	183	2,222	307,766	4,305,804	960,299	1,963,534	40,028	7,269,665
FRCST 2021	292,955	14,651	182	2,222	310,010	4,334,649	973,981	1,940,703	40,028	7,289,361
FRCST 2022	295,077	14,817	182	2,222	312,298	4,364,094	987,550	1,930,999	40,028	7,322,671
FRCST 2023	297,243	14,982	182	2,222	314,629	4,394,158	1,001,002	1,921,347	40,028	7,356,535
FRCST 2024	299,465	15,143	182	2,222	317,012	4,424,925	1,014,342	1,911,740	40,028	7,391,035
FRCST 2025	301,764	15,306	182	2,222	319,474	4,456,795	1,027,566	1,902,180	40,028	7,426,569
FRCST 2026	304,235	15,525	182	2,222	322,164	4,496,050	1,045,185	1,892,670	40,028	7,473,933
FRCST 2027	306,741	15,742	182	2,222	324,887	4,537,673	1,062,659	1,883,206	40,028	7,523,566
FRCST 2028	309,282	15,954	182	2,222	327,640	4,580,990	1,079,991	1,873,792	40,028	7,574,801
FRCST 2029	311,863	16,170	182	2,222	330,437	4,625,580	1,097,180	1,864,421	40,028	7,627,209
FRCST 2030	314,452	16,378	182	2,222	333,234	4,670,841	1,114,227	1,855,099	40,028	7,680,195

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

AGGREGATED NUMBER OF CONSUMERS

AGGREGATED SYSTEM ENERGY SALES

TIME PERIOD	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT.CHG.)	OTHER (ACT.CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
1999 -2004	1.80%	1.94%	44	568	1.84%	2.94%	3.25%	9.45%	-0.20%	4.28%
2004 -2009	0.87%	0.94%	27	411	0.90%	1.19%	1.56%	1.81%	-20.22%	1.13%
2010 -2015	0.36%	0.45%	-2	0	0.36%	0.49%	0.72%	4.61%	0.00%	1.54%
2015 -2020	0.61%	0.78%	-2	0	0.61%	0.62%	1.14%	0.71%	0.00%	0.71%
2020 -2025	0.74%	1.11%	-1	0	0.75%	0.69%	1.36%	-0.63%	0.00%	0.43%
2025 -2030	0.83%	1.36%	0	0	0.85%	0.94%	1.63%	-0.50%	0.00%	0.67%
1999 -2009	1.33%	1.44%	71	979	1.37%	2.06%	2.41%	5.56%	-10.77%	2.69%
2010 -2030	0.63%	0.93%	-5	0	0.64%	0.69%	1.21%	1.02%	0.00%	0.84%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

YEAR	AGGREGATED TOTAL MEMBER ENERGY PURCHASED (MWH)	TOTAL ENERGY GENERATED for H.E. MEMBERS (MWH)	HE SYSTEM AVERAGE MONTHLY LOSS FACTORS due to MEMBER SYSTEM LOAD (excludes pass-throughs)		H.E. AVERAGE WHOLESALE POWER COSTS (MILLS/MWH)	AGGREGATED MEMBER SYSTEM DEMANDS (WITHOUT LOSSES, 30 MINUTE DEMAND)			
			FOR ENERGY	FOR DEMAND		NONCOINCIDENT (MW)		COINCIDENT (MW) (EST. BEFORE 1984)	
						WINTER	SUMMER	WINTER	SUMMER
ACTUAL 1999	5,320,840	5,535,309	3.97%	4.54%	*****	1,117	1,223	1,037	1,155
ACTUAL 2000	5,758,399	6,009,930	4.31%	4.52%	*****	1,173	1,187	1,110	1,117
ACTUAL 2001	5,864,880	6,118,847	4.27%	4.53%	*****	1,285	1,274	1,178	1,187
ACTUAL 2002	6,314,792	6,600,361	4.45%	4.78%	*****	1,211	1,346	1,151	1,229
ACTUAL 2003	6,320,460	6,593,113	4.26%	4.26%	*****	1,354	1,313	1,265	1,229
ACTUAL 2004	6,549,574	6,831,431	4.25%	4.81%	*****	1,381	1,321	1,268	1,255
ACTUAL 2005	6,850,535	7,115,713	3.83%	4.22%	*****	1,429	1,472	1,335	1,393
ACTUAL 2006	6,802,245	7,091,068	4.19%	4.47%	*****	1,414	1,502	1,336	1,393
ACTUAL 2007	7,215,322	7,533,291	4.33%	4.84%	*****	1,533	1,558	1,421	1,403
ACTUAL 2008	7,193,537	7,471,337	3.80%	5.10%	*****	1,575	1,442	1,440	1,289
ACTUAL 2009	6,898,809	7,174,754	3.93%	4.86%	*****	1,674	1,453	1,519	1,307
FRCST 2010	6,810,154	7,104,795	4.25%	4.73%	68.830	1,476	1,416	1,360	1,304
FRCST 2011	6,818,211	7,102,318	4.10%	4.80%	70.910	1,478	1,419	1,362	1,308
FRCST 2012	6,936,333	7,225,421	4.10%	4.80%	75.360	1,501	1,455	1,381	1,329
FRCST 2013	7,081,194	7,376,406	4.10%	4.80%	79.430	1,523	1,472	1,403	1,357
FRCST 2014	7,195,564	7,495,596	4.10%	4.80%	82.230	1,563	1,497	1,415	1,365
FRCST 2015	7,349,528	7,656,071	4.10%	4.80%	83.810	1,592	1,515	1,442	1,398
FRCST 2016	7,457,545	7,768,664	4.10%	4.80%	85.486	1,622	1,524	1,455	1,405
FRCST 2017	7,505,156	7,818,269	4.10%	4.80%	87.196	1,631	1,535	1,465	1,415
FRCST 2018	7,542,320	7,856,979	4.10%	4.80%	88.940	1,639	1,544	1,472	1,423
FRCST 2019	7,578,097	7,894,243	4.10%	4.80%	90.719	1,647	1,552	1,480	1,430
FRCST 2020	7,613,939	7,931,574	4.10%	4.80%	92.533	1,655	1,560	1,487	1,438
FRCST 2021	7,634,788	7,953,314	4.10%	4.80%	94.384	1,658	1,566	1,492	1,445
FRCST 2022	7,669,772	7,989,794	4.10%	4.80%	96.271	1,666	1,574	1,499	1,452
FRCST 2023	7,705,333	8,026,876	4.10%	4.80%	98.197	1,674	1,582	1,506	1,459
FRCST 2024	7,741,561	8,064,653	4.10%	4.80%	100.161	1,682	1,590	1,514	1,467
FRCST 2025	7,778,883	8,103,570	4.10%	4.80%	102.164	1,690	1,599	1,521	1,475
FRCST 2026	7,828,650	8,155,465	4.10%	4.80%	102.164	1,701	1,611	1,532	1,486
FRCST 2027	7,880,792	8,209,836	4.10%	4.80%	102.164	1,712	1,622	1,543	1,497
FRCST 2028	7,934,615	8,265,961	4.10%	4.80%	102.164	1,724	1,634	1,554	1,508
FRCST 2029	7,989,671	8,323,371	4.10%	4.80%	102.164	1,736	1,646	1,565	1,520
FRCST 2030	8,045,326	8,381,406	4.10%	4.80%	102.164	1,748	1,659	1,577	1,531

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	AGGREGATED H.E. ENERGY TOTAL ENERGY GENERATED PURCHASED FOR MEMBERS (% CHG.)	AVG. MONTHLY LOSS FACTORS due to MEMBERS ENERGY DEMAND (AVERAGE)	H.E. AVERAGE WHOLESALE POWER COSTS (% CHG.)	AGGREGATED MEMBER PEAK SEASONAL DEMANDS (WITHOUT LOSSES, 30 MINUTE DEMAND)					
				Non-Coincident (% Chg)		Coincident (% Chg)			
				WINTER	SUMMER	WINTER	SUMMER		
1999 -2004	4.24%	4.30%	4.25%	4.57%	*****	4.34%	1.55%	4.09%	1.68%
2004 -2009	1.04%	0.99%	4.06%	4.71%	*****	3.92%	1.92%	3.68%	0.81%
2010 -2015	1.54%	1.51%	4.13%	4.79%	4.02%	1.51%	1.36%	1.18%	1.39%
2015 -2020	0.71%	0.71%	4.10%	4.80%	2.00%	0.78%	0.58%	0.61%	0.57%
2020 -2025	0.43%	0.43%	4.10%	4.80%	2.00%	0.42%	0.49%	0.46%	0.51%
2025 -2030	0.68%	0.68%	4.10%	4.80%	0.00%	0.68%	0.74%	0.72%	0.75%
1999 -2009	2.63%	2.63%	4.14%	4.63%	*****	4.13%	1.74%	3.88%	1.25%
2010 -2030	0.84%	0.83%	4.11%	4.79%	1.99%	0.85%	0.79%	0.74%	0.80%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

YEAR	HOOSIER ENERGY SYSTEM PEAK SEASONAL COINCIDENT DEMAND (MW) (All values are estimated 60 minute values)				H.E. ANNUAL LOAD FACTOR Due To COINCIDENT PEAK	HOOSIER ENERGY SYSTEM PEAK SEASONAL NON-COINCIDENT DEMAND (MW) (All values are estimated 60 minute values)				H.E. ANNUAL LOAD FACTOR Due To NON-COIN. PEAK
	<u>(WITHOUT LOSSES)</u>		<u>(WITH LOSSES)</u>			<u>(WITHOUT LOSSES)</u>		<u>(WITH LOSSES)</u>		
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999	1,024	1,142	1,071	1,196	52.9%	1,103	1,209	1,154	1,266	49.9%
ACTUAL 2000	1,086	1,099	1,136	1,150	59.5%	1,149	1,167	1,202	1,221	56.0%
ACTUAL 2001	1,159	1,174	1,213	1,228	56.9%	1,271	1,259	1,329	1,317	52.5%
ACTUAL 2002	1,105	1,218	1,159	1,278	59.0%	1,161	1,334	1,217	1,399	53.9%
ACTUAL 2003	1,244	1,214	1,298	1,267	58.0%	1,332	1,298	1,390	1,354	54.2%
ACTUAL 2004	1,252	1,235	1,314	1,296	59.2%	1,364	1,300	1,432	1,364	54.3%
ACTUAL 2005	1,301	1,378	1,357	1,438	56.5%	1,393	1,456	1,453	1,519	53.5%
ACTUAL 2006	1,304	1,374	1,364	1,437	56.3%	1,380	1,481	1,443	1,548	52.3%
ACTUAL 2007	1,387	1,400	1,456	1,470	58.5%	1,496	1,555	1,571	1,632	52.7%
ACTUAL 2008	1,424	1,269	1,499	1,336	56.7%	1,558	1,420	1,640	1,494	51.9%
ACTUAL 2009	1,519	1,304	1,595	1,370	51.4%	1,674	1,450	1,758	1,522	46.6%
FRCST 2010	1,344	1,295	1,410	1,359	57.5%	1,460	1,407	1,530	1,475	53.0%
FRCST 2011	1,346	1,299	1,413	1,363	57.4%	1,461	1,410	1,533	1,479	52.9%
FRCST 2012	1,365	1,320	1,433	1,385	57.4%	1,484	1,445	1,557	1,516	52.8%
FRCST 2013	1,387	1,348	1,455	1,414	57.9%	1,506	1,462	1,580	1,535	53.3%
FRCST 2014	1,399	1,356	1,468	1,423	58.3%	1,545	1,486	1,621	1,560	52.8%
FRCST 2015	1,426	1,388	1,496	1,457	58.4%	1,573	1,505	1,651	1,579	52.9%
FRCST 2016	1,438	1,395	1,509	1,464	58.6%	1,603	1,514	1,682	1,588	52.6%
FRCST 2017	1,448	1,406	1,520	1,475	58.7%	1,613	1,525	1,692	1,600	52.7%
FRCST 2018	1,456	1,413	1,527	1,483	58.7%	1,620	1,533	1,701	1,609	52.7%
FRCST 2019	1,463	1,421	1,535	1,491	58.7%	1,628	1,541	1,709	1,617	52.7%
FRCST 2020	1,470	1,428	1,542	1,499	58.5%	1,636	1,549	1,717	1,626	52.6%
FRCST 2021	1,475	1,435	1,547	1,506	58.7%	1,639	1,556	1,720	1,632	52.8%
FRCST 2022	1,482	1,442	1,555	1,513	58.7%	1,647	1,563	1,728	1,640	52.8%
FRCST 2023	1,489	1,450	1,563	1,521	58.6%	1,654	1,571	1,736	1,649	52.8%
FRCST 2024	1,496	1,457	1,570	1,529	58.5%	1,662	1,579	1,744	1,657	52.6%
FRCST 2025	1,504	1,465	1,578	1,537	58.6%	1,670	1,588	1,753	1,666	52.8%
FRCST 2026	1,515	1,476	1,590	1,549	58.6%	1,681	1,600	1,764	1,679	52.8%
FRCST 2027	1,525	1,487	1,601	1,560	58.5%	1,692	1,611	1,776	1,691	52.8%
FRCST 2028	1,536	1,498	1,612	1,572	58.4%	1,704	1,623	1,788	1,703	52.6%
FRCST 2029	1,547	1,509	1,624	1,584	58.5%	1,716	1,635	1,801	1,716	52.8%
FRCST 2030	1,559	1,521	1,636	1,596	58.5%	1,728	1,647	1,813	1,729	52.8%

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	HOOSIER ENERGY COINCIDENT PEAK DEMAND (60 MINUTE VALUE, ALL VALUES EST.)				H.E. ANNUAL COINCIDENT LOAD FACTOR (AVERAGE)	HOOSIER ENERGY NON-COINCIDENT PEAK DEMAND (60 MINUTE VALUE, ALL VALUES EST.)				H.E. ANNUAL NON-COIN. LOAD FACTOR (AVERAGE)
	<u>Without Losses (% Chg)</u>		<u>With Losses (% Chg)</u>			<u>Without Losses (% Chg)</u>		<u>With Losses (% Chg)</u>		
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	4.10%	1.57%	4.16%	1.62%	57.57%	4.34%	1.45%	4.40%	1.50%	53.48%
2004 -2009	3.94%	1.10%	3.96%	1.12%	56.43%	4.18%	2.21%	4.20%	2.22%	51.87%
2010 -2015	1.18%	1.39%	1.20%	1.41%	57.82%	1.51%	1.36%	1.53%	1.38%	52.95%
2015 -2020	0.61%	0.57%	0.61%	0.57%	58.62%	0.78%	0.58%	0.78%	0.58%	52.73%
2020 -2025	0.46%	0.51%	0.46%	0.51%	58.60%	0.42%	0.49%	0.42%	0.49%	52.73%
2025 -2030	0.72%	0.75%	0.72%	0.75%	58.51%	0.68%	0.74%	0.68%	0.74%	52.74%
1999 -2009	4.02%	1.33%	4.06%	1.37%	58.80%	4.26%	1.83%	4.30%	1.86%	52.52%
2010 -2030	0.74%	0.80%	0.75%	0.81%	58.37%	0.85%	0.79%	0.85%	0.80%	52.79%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** LOW SCENARIO RESULTS *****											
***** EXTREME TEMPERATURE CONDITIONS *****					H.E. ANNUAL	***** EXTREME TEMPERATURE CONDITIONS *****					H.E. ANNUAL
HOOSIER ENERGY SYSTEM PEAK SEASONAL					LOAD FACTOR	HOOSIER ENERGY SYSTEM PEAK SEASONAL					LOAD FACTOR
COINCIDENT DEMAND (MW); 60 MINUTE VALUE					Due to EXTREME	NON-COINCIDENT DEMAND (MW); 60 MINUTE VALUE					Due To
(WITHOUT LOSSES)					COINCIDENT	(WITHOUT LOSSES)					EXTREME NON-
(WITH LOSSES)					PEAK	(WITH LOSSES)					COIN. PEAK
YEAR	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER		
ACTUAL 1999	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2000	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2001	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2002	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2003	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2004	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2005	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2006	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2007	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2008	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
FRCST 2010	1,479	1,418	1,551	1,487	52.3%	1,605	1,539	1,683	1,614	48.2%	
FRCST 2011	1,481	1,422	1,555	1,492	52.2%	1,606	1,542	1,686	1,618	48.1%	
FRCST 2012	1,501	1,443	1,575	1,515	52.2%	1,630	1,579	1,710	1,657	48.1%	
FRCST 2013	1,524	1,473	1,599	1,546	52.6%	1,653	1,597	1,735	1,676	48.5%	
FRCST 2014	1,536	1,481	1,612	1,554	53.1%	1,693	1,621	1,777	1,702	48.2%	
FRCST 2015	1,564	1,515	1,641	1,590	53.2%	1,723	1,641	1,808	1,722	48.3%	
FRCST 2016	1,574	1,519	1,652	1,594	53.5%	1,750	1,647	1,837	1,728	48.2%	
FRCST 2017	1,585	1,530	1,664	1,606	53.6%	1,761	1,659	1,848	1,741	48.3%	
FRCST 2018	1,593	1,539	1,672	1,615	53.6%	1,770	1,668	1,857	1,751	48.3%	
FRCST 2019	1,601	1,547	1,680	1,623	53.6%	1,778	1,677	1,866	1,760	48.3%	
FRCST 2020	1,609	1,555	1,689	1,632	53.5%	1,786	1,685	1,875	1,769	48.2%	
FRCST 2021	1,614	1,562	1,694	1,639	53.6%	1,790	1,692	1,878	1,776	48.3%	
FRCST 2022	1,622	1,570	1,702	1,647	53.6%	1,798	1,700	1,887	1,784	48.3%	
FRCST 2023	1,630	1,578	1,710	1,656	53.6%	1,807	1,709	1,896	1,793	48.3%	
FRCST 2024	1,638	1,586	1,719	1,664	53.4%	1,815	1,718	1,905	1,803	48.2%	
FRCST 2025	1,646	1,594	1,727	1,673	53.6%	1,824	1,727	1,914	1,812	48.3%	
FRCST 2026	1,658	1,606	1,740	1,686	53.5%	1,836	1,740	1,926	1,826	48.3%	
FRCST 2027	1,669	1,618	1,752	1,698	53.5%	1,848	1,752	1,939	1,839	48.3%	
FRCST 2028	1,681	1,630	1,764	1,711	53.3%	1,861	1,765	1,953	1,852	48.2%	
FRCST 2029	1,693	1,642	1,777	1,723	53.5%	1,874	1,778	1,966	1,866	48.3%	
FRCST 2030	1,706	1,654	1,790	1,736	53.4%	1,887	1,791	1,980	1,880	48.3%	

***** LOW SCENARIO RESULTS *****											
***** EXTREME TEMPERATURE CONDITIONS *****					EXTREME COIN.	***** EXTREME TEMPERATURE CONDITIONS *****					EXT. NON-COIN.
HOOSIER ENERGY COINCIDENT PEAK (60 MIN.)					H.E. ANNUAL	HOOSIER ENERGY NON-COINCIDENT PEAK (60 MIN.)					H.E. ANNUAL
Without Losses (% Chg)					LOAD FACTOR	Without Losses (% Chg)					LOAD FACTOR
(WITH LOSSES)					(AVERAGE)	(WITH LOSSES)					(AVERAGE)
TIME PERIOD	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER		
1999 -2004	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2004 -2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2010 -2015	1.12%	1.33%	1.14%	1.34%	52.61%	1.43%	1.29%	1.45%	1.31%	48.24%	
2015 -2020	0.57%	0.52%	0.57%	0.52%	53.52%	0.73%	0.53%	0.73%	0.53%	48.25%	
2020 -2025	0.45%	0.50%	0.46%	0.50%	53.53%	0.41%	0.49%	0.42%	0.49%	48.28%	
2025 -2030	0.72%	0.74%	0.72%	0.75%	53.47%	0.68%	0.73%	0.68%	0.74%	48.30%	
1999 -2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2010 -2030	0.72%	0.77%	0.72%	0.78%	53.26%	0.81%	0.76%	0.82%	0.77%	48.27%	

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

\*\*\*\* Adjusted for IN #72, IN #16 and IN#92 \*\*\*\*  
Aggregated Member System Data  
NUMBER OF CONSUMERS

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

\*\*\*\* Adjusted for IN #72, IN #16 and IN#92 \*\*\*\*  
Aggregated Member System Data  
SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

	YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL	1999	209,962	9,568	112	887	220,529	2,864,229	599,227	862,060	29,908	4,355,424
ACTUAL	2000	215,011	9,890	120	1,018	226,039	2,948,957	656,492	1,088,160	30,617	4,724,226
ACTUAL	2001	219,228	10,003	132	1,093	230,456	3,052,360	639,446	1,164,603	31,271	4,887,680
ACTUAL	2002	223,044	10,265	139	1,144	234,592	3,261,617	663,738	1,272,906	32,441	5,230,702
ACTUAL	2003	226,749	10,462	151	1,293	238,655	3,243,405	673,235	1,316,094	32,150	5,264,884
ACTUAL	2004	230,760	10,690	151	1,429	243,030	3,305,807	706,497	1,403,535	33,098	5,448,937
ACTUAL	2005	257,250	11,810	165	1,573	270,798	3,749,514	774,714	1,484,489	33,634	6,042,351
ACTUAL	2006	260,854	11,986	169	1,707	274,716	3,856,899	824,354	1,545,582	32,678	6,259,513
ACTUAL	2007	263,908	12,246	191	1,821	278,166	4,088,777	855,093	1,620,151	34,240	6,598,261
ACTUAL	2008	265,071	12,166	200	1,833	279,270	4,080,904	856,375	1,630,203	33,209	6,600,691
ACTUAL	2009	265,137	12,281	192	1,836	279,446	3,904,139	818,798	1,564,440	31,738	6,319,115
FRCST	2010	265,120	12,353	180	1,854	279,507	3,925,529	832,216	1,455,017	33,075	6,245,837
FRCST	2011	277,602	13,682	185	2,222	293,691	4,101,530	882,001	1,485,468	40,028	6,509,027
FRCST	2012	278,435	13,745	184	2,222	294,586	4,123,100	888,382	1,571,035	40,028	6,622,545
FRCST	2013	279,524	13,807	185	2,222	295,738	4,138,524	894,738	1,687,654	40,028	6,760,944
FRCST	2014	280,775	13,868	185	2,222	297,050	4,154,717	901,072	1,774,502	40,028	6,870,319
FRCST	2015	282,166	13,928	185	2,222	298,501	4,174,247	907,384	1,895,493	40,028	7,017,152
FRCST	2016	283,787	14,044	185	2,222	300,238	4,198,664	918,095	1,963,569	40,028	7,120,356
FRCST	2017	285,469	14,155	184	2,222	302,030	4,224,858	928,741	1,972,142	40,028	7,165,769
FRCST	2018	287,228	14,267	184	2,222	303,901	4,251,534	939,321	1,970,380	40,028	7,201,263
FRCST	2019	289,029	14,376	184	2,222	305,811	4,278,641	949,840	1,966,925	40,028	7,235,434
FRCST	2020	290,878	14,483	183	2,222	307,766	4,305,804	960,299	1,963,534	40,028	7,269,665
FRCST	2021	292,955	14,651	182	2,222	310,010	4,334,649	973,981	1,940,703	40,028	7,289,361
FRCST	2022	295,077	14,817	182	2,222	312,298	4,364,094	987,550	1,930,999	40,028	7,322,671
FRCST	2023	297,243	14,982	182	2,222	314,629	4,394,158	1,001,002	1,921,347	40,028	7,356,535
FRCST	2024	299,465	15,143	182	2,222	317,012	4,424,925	1,014,342	1,911,740	40,028	7,391,035
FRCST	2025	301,764	15,306	182	2,222	319,474	4,456,795	1,027,566	1,902,180	40,028	7,426,569
FRCST	2026	304,235	15,525	182	2,222	322,164	4,496,050	1,045,185	1,892,670	40,028	7,473,933
FRCST	2027	306,741	15,742	182	2,222	324,887	4,537,673	1,062,659	1,883,206	40,028	7,523,566
FRCST	2028	309,282	15,954	182	2,222	327,640	4,580,990	1,079,991	1,873,792	40,028	7,574,801
FRCST	2029	311,863	16,170	182	2,222	330,437	4,625,580	1,097,180	1,864,421	40,028	7,627,209
FRCST	2030	314,452	16,378	182	2,222	333,234	4,670,841	1,114,227	1,855,099	40,028	7,680,195

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

Adjusted for Systems -- AGGREGATED NUMBER OF CONSUMERS

Adjusted for Systems -- AGGREGATED ENERGY SALES

TIME PERIOD	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT.CHG.)	OTHER (ACT.CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
1999 -2004	1.91%	2.24%	39	542	1.96%	2.91%	3.35%	10.24%	2.05%	4.58%
2004 -2009	2.82%	2.81%	41	407	2.83%	3.38%	2.99%	2.19%	-0.84%	3.01%
2010 -2015	1.25%	2.43%	5	368	1.32%	1.24%	1.74%	5.43%	3.89%	2.36%
2015 -2020	0.61%	0.78%	-2	0	0.61%	0.62%	1.14%	0.71%	0.00%	0.71%
2020 -2025	0.74%	1.11%	-1	0	0.75%	0.69%	1.36%	-0.63%	0.00%	0.43%
2025 -2030	0.83%	1.36%	0	0	0.85%	0.94%	1.63%	-0.50%	0.00%	0.67%
1999 -2009	2.36%	2.53%	80	949	2.40%	3.15%	3.17%	6.14%	0.60%	3.79%
2010 -2030	0.86%	1.42%	2	368	0.88%	0.87%	1.47%	1.22%	0.96%	1.04%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN #72, IN # 16 and IN#92										
YEAR	AGGREGATED TOTAL MEMBER ENERGY PURCHASED (MWH)	ENERGY GENERATED FOR MEMBERS (MWH)	AGGREGATED MEMBER 30 MIN. COINCIDENT PEAK W/O LOSSES (MW)		HE COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984) (WITHOUT LOSSES)		HE COINCIDENT 60 MINUTE DEMAND (MW) (WITH LOSSES)		ANNUAL LOAD FACTOR	
			WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER		
ACTUAL	1999	4,592,866	4,777,226	900	1,004	888	993	929	1,039	52.5%
ACTUAL	2000	4,998,042	5,215,344	958	969	937	953	980	997	59.6%
ACTUAL	2001	5,106,079	5,326,182	1,023	1,032	1,006	1,020	1,052	1,067	57.0%
ACTUAL	2002	5,499,105	5,746,666	1,012	1,077	972	1,066	1,019	1,118	58.7%
ACTUAL	2003	5,527,292	5,764,676	1,102	1,072	1,084	1,059	1,130	1,105	58.2%
ACTUAL	2004	5,736,200	5,981,961	1,103	1,095	1,089	1,077	1,143	1,130	59.6%
ACTUAL	2005	6,332,029	6,576,556	1,172	1,333	1,142	1,319	1,191	1,376	54.6%
ACTUAL	2006	6,525,204	6,801,916	1,295	1,337	1,264	1,318	1,322	1,379	56.3%
ACTUAL	2007	6,924,233	7,229,037	1,384	1,341	1,351	1,338	1,418	1,405	58.2%
ACTUAL	2008	6,912,387	7,179,069	1,395	1,245	1,380	1,226	1,453	1,290	56.2%
ACTUAL	2009	6,617,661	6,882,100	1,472	1,247	1,472	1,243	1,546	1,306	50.8%
FRCST	2010	6,540,743	6,823,425	1,315	1,252	1,300	1,243	1,363	1,304	57.2%
FRCST	2011	6,818,211	7,102,318	1,362	1,308	1,346	1,299	1,413	1,363	57.4%
FRCST	2012	6,936,333	7,225,421	1,381	1,329	1,365	1,320	1,433	1,385	57.4%
FRCST	2013	7,081,194	7,376,406	1,403	1,357	1,387	1,348	1,455	1,414	57.9%
FRCST	2014	7,195,564	7,495,596	1,415	1,365	1,399	1,356	1,468	1,423	58.3%
FRCST	2015	7,349,528	7,656,071	1,442	1,398	1,426	1,388	1,496	1,457	58.4%
FRCST	2016	7,457,545	7,768,664	1,455	1,405	1,438	1,395	1,509	1,464	58.6%
FRCST	2017	7,505,156	7,818,269	1,465	1,415	1,448	1,406	1,520	1,475	58.7%
FRCST	2018	7,542,320	7,856,979	1,472	1,423	1,456	1,413	1,527	1,483	58.7%
FRCST	2019	7,578,097	7,894,243	1,480	1,430	1,463	1,421	1,535	1,491	58.7%
FRCST	2020	7,613,939	7,931,574	1,487	1,438	1,470	1,428	1,542	1,499	58.5%
FRCST	2021	7,634,788	7,953,314	1,492	1,445	1,475	1,435	1,547	1,506	58.7%
FRCST	2022	7,669,772	7,989,794	1,499	1,452	1,482	1,442	1,555	1,513	58.7%
FRCST	2023	7,705,333	8,026,876	1,506	1,459	1,489	1,450	1,563	1,521	58.6%
FRCST	2024	7,741,561	8,064,653	1,514	1,467	1,496	1,457	1,570	1,529	58.5%
FRCST	2025	7,778,883	8,103,570	1,521	1,475	1,504	1,465	1,578	1,537	58.6%
FRCST	2026	7,828,650	8,155,465	1,532	1,486	1,515	1,476	1,590	1,549	58.6%
FRCST	2027	7,880,792	8,209,836	1,543	1,497	1,525	1,487	1,601	1,560	58.5%
FRCST	2028	7,934,615	8,265,961	1,554	1,508	1,536	1,498	1,612	1,572	58.4%
FRCST	2029	7,989,671	8,323,371	1,565	1,520	1,547	1,509	1,624	1,584	58.5%
FRCST	2030	8,045,326	8,381,406	1,577	1,531	1,559	1,521	1,636	1,596	58.5%

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	Adjusted for Systems		Adjusted for Systems		Adjusted for Systems -- HE COIN. 60 MINUTE DEMAND		Adjusted for Systems -- HE COIN. 60 MINUTE DEMAND		ADJUSTED ANNUAL LOAD FACTOR (AVERAGE)
	ENERGY PURCHASED (% CHG.)	ENERGY GENERATED (% CHG.)	AGGREGATED 30 MIN. COIN. PEAK W/O LOSSES (% CHG)	AGGREGATED 30 MIN. COIN. PEAK W/O LOSSES (% CHG)	Without Losses (% Chg)	Without Losses (% Chg)	With Losses (% Chg)	With Losses (% Chg)	
1999 -2004	4.55%	4.60%	4.15%	1.76%	4.17%	1.65%	4.23%	1.70%	57.58%
2004 -2009	2.90%	2.84%	5.94%	2.62%	6.21%	2.91%	6.23%	2.93%	55.96%
2010 -2015	2.36%	2.33%	1.87%	2.23%	1.87%	2.23%	1.88%	2.25%	57.76%
2015 -2020	0.71%	0.71%	0.61%	0.57%	0.61%	0.57%	0.61%	0.57%	58.62%
2020 -2025	0.43%	0.43%	0.46%	0.51%	0.46%	0.51%	0.46%	0.51%	58.60%
2025 -2030	0.68%	0.68%	0.72%	0.75%	0.72%	0.75%	0.72%	0.75%	58.51%
1999 -2009	3.72%	3.72%	5.05%	2.19%	5.19%	2.28%	5.22%	2.31%	56.51%
2010 -2030	1.04%	1.03%	0.91%	1.01%	0.91%	1.01%	0.92%	1.02%	58.35%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN #72, IN #16 and IN#92

EXTREME COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984)

YEAR	(WITHOUT LOSSES)		(WITH LOSSES)		EXTREME ANNUAL LOAD FACTOR
	WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999	*****	*****	*****	*****	*****
ACTUAL 2000	*****	*****	*****	*****	*****
ACTUAL 2001	*****	*****	*****	*****	*****
ACTUAL 2002	*****	*****	*****	*****	*****
ACTUAL 2003	*****	*****	*****	*****	*****
ACTUAL 2004	*****	*****	*****	*****	*****
ACTUAL 2005	*****	*****	*****	*****	*****
ACTUAL 2006	*****	*****	*****	*****	*****
ACTUAL 2007	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****
FRCST 2010	1,430	1,360	1,499	1,427	52.0%
FRCST 2011	1,481	1,422	1,555	1,492	52.2%
FRCST 2012	1,501	1,443	1,575	1,515	52.2%
FRCST 2013	1,524	1,473	1,599	1,546	52.6%
FRCST 2014	1,536	1,481	1,612	1,554	53.1%
FRCST 2015	1,564	1,515	1,641	1,590	53.2%
FRCST 2016	1,574	1,519	1,652	1,594	53.5%
FRCST 2017	1,585	1,530	1,664	1,606	53.8%
FRCST 2018	1,593	1,539	1,672	1,615	53.6%
FRCST 2019	1,601	1,547	1,680	1,623	53.6%
FRCST 2020	1,609	1,555	1,689	1,632	53.5%
FRCST 2021	1,614	1,562	1,694	1,639	53.6%
FRCST 2022	1,622	1,570	1,702	1,647	53.6%
FRCST 2023	1,630	1,578	1,710	1,656	53.6%
FRCST 2024	1,638	1,586	1,719	1,664	53.4%
FRCST 2025	1,646	1,594	1,727	1,673	53.6%
FRCST 2026	1,658	1,606	1,740	1,686	53.5%
FRCST 2027	1,669	1,618	1,752	1,698	53.5%
FRCST 2028	1,681	1,630	1,764	1,711	53.3%
FRCST 2029	1,693	1,642	1,777	1,723	53.5%
FRCST 2030	1,706	1,654	1,790	1,736	53.4%

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

Adjusted for Systems HE EXT. COIN. 60 MINUTE DEMAND

Without Losses (% Chg)

With Losses (% Chg)

ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)

TIME PERIOD	WINTER	SUMMER	WINTER	SUMMER	ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)
1999 -2004	*****	*****	*****	*****	*****
2004 -2009	*****	*****	*****	*****	*****
2010 -2015	1.81%	2.17%	1.83%	2.19%	52.55%
2015 -2020	0.57%	0.52%	0.57%	0.52%	53.52%
2020 -2025	0.45%	0.50%	0.46%	0.50%	53.53%
2025 -2030	0.72%	0.74%	0.72%	0.75%	53.47%

1999 -2009	*****	*****	*****	*****	*****
2010 -2030	0.89%	0.98%	0.89%	0.99%	53.25%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

Values Adjusted for IN#72, IN#16, IN#92 and Special Industrial Loads  
Aggregated Member System Data  
NUMBER OF CONSUMERS

Values Adjusted for IN#72, IN#16, IN#92 and Special Industrial Loads  
Aggregated Member System Data  
SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

	YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL	1999	209,962	9,568	112	887	220,529	2,864,229	599,227	726,658	29,908	4,220,022
ACTUAL	2000	215,011	9,890	119	1,018	226,038	2,948,957	656,492	917,277	30,617	4,553,343
ACTUAL	2001	219,228	10,003	131	1,093	230,455	3,052,360	639,446	990,705	31,271	4,713,782
ACTUAL	2002	223,044	10,265	138	1,144	234,591	3,261,617	663,738	1,086,676	32,441	5,044,472
ACTUAL	2003	226,749	10,462	150	1,293	238,654	3,243,405	673,235	1,127,531	32,150	5,076,321
ACTUAL	2004	230,760	10,690	150	1,429	243,029	3,305,807	706,497	1,205,248	33,098	5,250,650
ACTUAL	2005	257,250	11,810	164	1,573	270,797	3,749,514	774,714	1,291,857	33,634	5,849,719
ACTUAL	2006	260,854	11,986	168	1,707	274,715	3,856,899	824,354	1,350,149	32,678	6,064,080
ACTUAL	2007	263,908	12,246	190	1,821	278,165	4,088,777	855,093	1,435,203	34,240	6,413,313
ACTUAL	2008	265,071	12,166	199	1,833	279,269	4,080,904	856,375	1,461,568	33,209	6,432,056
ACTUAL	2009	265,137	12,281	191	1,836	279,445	3,904,139	818,798	1,407,974	31,738	6,162,649
FRCST	2010	265,120	12,353	179	1,854	279,506	3,925,529	832,216	1,282,627	33,075	6,073,447
FRCST	2011	277,602	13,682	184	2,222	293,690	4,101,530	882,001	1,312,018	40,028	6,335,577
FRCST	2012	278,435	13,745	183	2,222	294,585	4,123,100	888,382	1,395,970	40,028	6,447,480
FRCST	2013	279,524	13,807	184	2,222	295,737	4,138,524	894,738	1,510,960	40,028	6,584,250
FRCST	2014	280,775	13,868	184	2,222	297,049	4,154,717	901,072	1,596,162	40,028	6,691,979
FRCST	2015	282,166	13,928	184	2,222	298,500	4,174,247	907,384	1,715,493	40,028	6,837,152
FRCST	2016	283,787	14,044	184	2,222	300,237	4,198,664	918,095	1,782,580	40,028	6,939,367
FRCST	2017	285,469	14,155	183	2,222	302,029	4,224,858	928,741	1,790,158	40,028	6,983,785
FRCST	2018	287,228	14,267	183	2,222	303,900	4,251,534	939,321	1,787,396	40,028	7,018,279
FRCST	2019	289,029	14,376	183	2,222	305,810	4,278,641	949,840	1,782,936	40,028	7,051,445
FRCST	2020	290,878	14,483	182	2,222	307,765	4,305,804	960,299	1,778,534	40,028	7,084,665
FRCST	2021	292,955	14,651	181	2,222	310,009	4,334,649	973,981	1,755,703	40,028	7,104,361
FRCST	2022	295,077	14,817	181	2,222	312,297	4,364,094	987,550	1,745,999	40,028	7,137,671
FRCST	2023	297,243	14,982	181	2,222	314,628	4,394,158	1,001,002	1,736,347	40,028	7,171,535
FRCST	2024	299,465	15,143	181	2,222	317,011	4,424,925	1,014,342	1,726,740	40,028	7,206,035
FRCST	2025	301,764	15,306	181	2,222	319,473	4,456,795	1,027,566	1,717,180	40,028	7,241,569
FRCST	2026	304,235	15,525	181	2,222	322,163	4,489,050	1,045,185	1,707,670	40,028	7,288,933
FRCST	2027	306,741	15,742	181	2,222	324,886	4,537,673	1,062,659	1,698,206	40,028	7,338,566
FRCST	2028	309,282	15,954	181	2,222	327,639	4,580,990	1,079,991	1,688,792	40,028	7,389,801
FRCST	2029	311,863	16,170	181	2,222	330,436	4,625,580	1,097,180	1,679,421	40,028	7,442,209
FRCST	2030	314,452	16,378	181	2,222	333,233	4,670,841	1,114,227	1,670,099	40,028	7,495,195

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

Adjusted for Systems & Ind. -- AGGREGATED NUMBER OF CONSUMERS

Adjusted for Systems & Ind. -- AGGREGATED ENERGY SALES

TIME PERIOD	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT.CHG.)	OTHER (ACT.CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
1999 -2004	1.91%	2.24%	38	542	1.96%	2.91%	3.35%	10.65%	2.05%	4.47%
2004 -2009	2.82%	2.81%	41	407	2.83%	3.38%	2.99%	3.16%	-0.84%	3.25%
2010 -2015	1.25%	2.43%	5	368	1.32%	1.24%	1.74%	5.99%	3.89%	2.40%
2015 -2020	0.61%	0.78%	-2	0	0.61%	0.62%	1.14%	0.72%	0.00%	0.71%
2020 -2025	0.74%	1.11%	-1	0	0.75%	0.69%	1.36%	-0.70%	0.00%	0.44%
2025 -2030	0.83%	1.36%	0	0	0.85%	0.94%	1.63%	-0.55%	0.00%	0.69%
1999 -2009	2.36%	2.53%	79	949	2.40%	3.15%	3.17%	6.84%	0.60%	3.86%
2010 -2030	0.86%	1.42%	2	368	0.88%	0.87%	1.47%	1.33%	0.96%	1.06%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

YEAR	AGGREGATED TOTAL MEMBER ENERGY PURCHASED (MWH)	ENERGY GENERATED FOR MEMBERS (MWH)	Energy and Demand Values Adjusted for IN#72, IN#16, IN#92 and Special Industrial Loads						ANNUAL LOAD FACTOR
			H.E. 30 MINUTE COINCIDENT DEMAND (MW) (WITHOUT LOSSES)		H.E. COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984)				
			WINTER	SUMMER	(WITHOUT LOSSES)		(WITH LOSSES)		
ACTUAL 1999	4,457,464	4,641,824	884	984	874	974	913	1,023	51.8%
ACTUAL 2000	4,827,158	5,044,460	934	927	915	912	952	972	59.1%
ACTUAL 2001	4,932,180	5,152,284	987	1,004	976	992	1,022	1,045	56.3%
ACTUAL 2002	5,312,874	5,560,435	968	1,040	929	1,030	965	1,091	58.2%
ACTUAL 2003	5,338,729	5,576,113	1,079	1,040	1,061	1,027	1,106	1,079	57.6%
ACTUAL 2004	5,537,913	5,783,674	1,066	1,055	1,052	1,037	1,106	1,093	59.5%
ACTUAL 2005	6,139,397	6,383,924	1,138	1,305	1,109	1,291	1,150	1,355	53.8%
ACTUAL 2006	6,329,771	6,606,483	1,260	1,322	1,229	1,303	1,283	1,366	55.2%
ACTUAL 2007	6,739,285	7,044,089	1,354	1,337	1,321	1,334	1,387	1,397	57.6%
ACTUAL 2008	6,743,752	7,010,434	1,394	1,235	1,379	1,215	1,442	1,327	55.3%
ACTUAL 2009	6,461,195	6,725,634	1,465	1,232	1,465	1,229	1,525	1,292	50.3%
FRCST 2010	6,368,353	6,651,035	1,289	1,227	1,274	1,218	1,337	1,279	56.8%
FRCST 2011	6,644,761	6,928,868	1,336	1,283	1,320	1,274	1,387	1,338	57.0%
FRCST 2012	6,761,269	7,050,357	1,355	1,304	1,339	1,294	1,407	1,360	57.0%
FRCST 2013	6,904,499	7,199,711	1,377	1,331	1,361	1,322	1,429	1,389	57.5%
FRCST 2014	7,017,225	7,317,256	1,389	1,339	1,372	1,330	1,442	1,397	57.9%
FRCST 2015	7,169,528	7,476,071	1,415	1,372	1,399	1,362	1,469	1,431	58.1%
FRCST 2016	7,276,555	7,587,675	1,428	1,379	1,411	1,369	1,483	1,438	58.3%
FRCST 2017	7,323,173	7,636,285	1,438	1,389	1,421	1,379	1,493	1,449	58.4%
FRCST 2018	7,359,337	7,673,996	1,445	1,397	1,428	1,387	1,500	1,457	58.4%
FRCST 2019	7,394,108	7,710,254	1,452	1,404	1,435	1,394	1,508	1,464	58.4%
FRCST 2020	7,428,939	7,746,574	1,459	1,411	1,442	1,401	1,515	1,472	58.2%
FRCST 2021	7,449,788	7,769,314	1,464	1,418	1,447	1,408	1,520	1,479	58.3%
FRCST 2022	7,484,772	7,804,794	1,472	1,425	1,454	1,415	1,528	1,487	58.3%
FRCST 2023	7,520,333	7,841,876	1,479	1,433	1,462	1,423	1,535	1,494	58.3%
FRCST 2024	7,556,561	7,879,653	1,486	1,440	1,469	1,430	1,543	1,502	58.1%
FRCST 2025	7,593,883	7,918,570	1,494	1,448	1,476	1,438	1,551	1,511	58.3%
FRCST 2026	7,643,650	7,970,465	1,505	1,459	1,487	1,449	1,562	1,522	58.2%
FRCST 2027	7,695,792	8,024,836	1,516	1,470	1,498	1,460	1,573	1,534	58.2%
FRCST 2028	7,749,615	8,080,961	1,527	1,481	1,509	1,471	1,585	1,545	58.0%
FRCST 2029	7,804,671	8,138,371	1,538	1,493	1,520	1,482	1,597	1,557	58.2%
FRCST 2030	7,860,326	8,196,406	1,550	1,504	1,531	1,494	1,609	1,569	58.2%

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	Adjusted for Systems & Ind. ENERGY PURCHASED (% CHG.)	Adjusted for Systems & Ind. ENERGY GENERATED (% CHG.)	Adj. Sys. & Ind. - H.E. 30 MINUTE COINCIDENT DEMAND (MW) (WITHOUT LOSSES)		Adjusted for Sys. & Ind. - HE COIN. 60 MINUTE DEMAND Without Losses (% Chg)		HE COIN. 60 MINUTE DEMAND With Losses (% Chg)		ADJUSTED ANNUAL LOAD FACTOR (AVERAGE)
			WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	4.44%	4.50%	3.80%	1.40%	3.78%	1.26%	3.91%	1.33%	57.07%
2004 -2009	3.13%	3.06%	6.58%	3.15%	6.85%	3.46%	6.64%	3.40%	55.30%
2010 -2015	2.40%	2.37%	1.89%	2.26%	1.89%	2.26%	1.90%	2.28%	57.40%
2015 -2020	0.71%	0.71%	0.61%	0.57%	0.61%	0.57%	0.61%	0.57%	58.28%
2020 -2025	0.44%	0.44%	0.47%	0.52%	0.47%	0.52%	0.47%	0.52%	58.27%
2025 -2030	0.69%	0.69%	0.73%	0.76%	0.73%	0.76%	0.73%	0.76%	58.19%
1999 -2009	3.78%	3.78%	5.18%	2.27%	5.30%	2.35%	5.26%	2.36%	55.88%
2010 -2030	1.06%	1.05%	0.92%	1.02%	0.92%	1.02%	0.93%	1.03%	58.01%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN#72,IN#16,IN#92 and Special Industrial Loads

EXTREME COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984)

YEAR	(WITHOUT LOSSES)		(WITH LOSSES)		EXTREME ANNUAL LOAD FACTOR
	WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999	*****	*****	*****	*****	*****
ACTUAL 2000	*****	*****	*****	*****	*****
ACTUAL 2001	*****	*****	*****	*****	*****
ACTUAL 2002	*****	*****	*****	*****	*****
ACTUAL 2003	*****	*****	*****	*****	*****
ACTUAL 2004	*****	*****	*****	*****	*****
ACTUAL 2005	*****	*****	*****	*****	*****
ACTUAL 2006	*****	*****	*****	*****	*****
ACTUAL 2007	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****
FRCST 2010	1,404	1,335	1,474	1,402	51.5%
FRCST 2011	1,456	1,397	1,529	1,467	51.7%
FRCST 2012	1,475	1,418	1,549	1,489	51.8%
FRCST 2013	1,498	1,447	1,573	1,520	52.2%
FRCST 2014	1,510	1,455	1,586	1,528	52.7%
FRCST 2015	1,537	1,489	1,615	1,564	52.8%
FRCST 2016	1,547	1,492	1,625	1,568	53.1%
FRCST 2017	1,559	1,504	1,637	1,580	53.2%
FRCST 2018	1,566	1,512	1,645	1,588	53.2%
FRCST 2019	1,574	1,520	1,653	1,597	53.2%
FRCST 2020	1,582	1,528	1,661	1,605	53.1%
FRCST 2021	1,587	1,535	1,667	1,612	53.2%
FRCST 2022	1,594	1,543	1,675	1,620	53.2%
FRCST 2023	1,602	1,551	1,683	1,629	53.2%
FRCST 2024	1,610	1,559	1,691	1,638	53.0%
FRCST 2025	1,618	1,567	1,700	1,646	53.2%
FRCST 2026	1,630	1,579	1,712	1,659	53.1%
FRCST 2027	1,642	1,591	1,725	1,671	53.1%
FRCST 2028	1,654	1,603	1,737	1,684	53.0%
FRCST 2029	1,666	1,615	1,750	1,697	53.1%
FRCST 2030	1,678	1,628	1,763	1,710	53.1%

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

Adjusted for Sys. & Ind. HE EXT. COIN. 60 MINUTE DEMAND

ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)

TIME PERIOD	Without Losses (% Chg)		With Losses (% Chg)		ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)
	WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	*****	*****	*****	*****	*****
2004 -2009	*****	*****	*****	*****	*****
2010 -2015	1.83%	2.20%	1.84%	2.21%	52.14%
2015 -2020	0.57%	0.52%	0.57%	0.52%	53.14%
2020 -2025	0.46%	0.51%	0.46%	0.51%	53.15%
2025 -2030	0.73%	0.76%	0.73%	0.76%	53.09%
1999 -2009	*****	*****	*****	*****	*****
2010 -2030	0.90%	0.99%	0.90%	1.00%	52.86%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

YEAR	H.E. Time Factor Ratio from 30 to 60 Minute excludes pass-throughs (Est. before 1984)		PERCENTAGE of IN #72 Served by H.E.	IN #72 served by H.E. ( Yes=0 , No= 1 )		PERCENTAGE of IN #16 Served by H.E.	IN #16 served by H.E. ( Yes=0 , No= 1 )	
	WINTER	SUMMER		WINTER	SUMMER		WINTER	SUMMER
ACTUAL 1999	98.85%	98.99%	100.0%	0	0	100.0%	0	0
ACTUAL 2000	97.92%	98.42%	100.0%	0	0	100.0%	0	0
ACTUAL 2001	98.92%	98.85%	100.0%	0	0	100.0%	0	0
ACTUAL 2002	96.00%	99.02%	100.0%	0	0	100.0%	0	0
ACTUAL 2003	98.31%	98.80%	100.0%	0	0	100.0%	0	0
ACTUAL 2004	98.73%	98.31%	100.0%	0	0	100.0%	0	0
ACTUAL 2005	97.45%	98.93%	100.0%	0	0	100.0%	0	0
ACTUAL 2006	97.54%	98.57%	100.0%	0	0	100.0%	0	0
ACTUAL 2007	97.56%	99.78%	100.0%	0	0	100.0%	0	0
ACTUAL 2008	98.92%	98.38%	100.0%	0	0	100.0%	0	0
ACTUAL 2009	100.00%	99.76%	100.0%	0	0	100.0%	0	0
FRCST 2010	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2011	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2012	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2013	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2014	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2015	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2016	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2017	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2018	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2019	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2020	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2021	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2022	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2023	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2024	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2025	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2026	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2027	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2028	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2029	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2030	98.83%	99.30%	100.00%	0	0	100.00%	0	0

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD	HE TIME FACTOR RATIO (30 to 60 MINUTE)	
	WINTER (AVERAGE)	SUMMER (AVERAGE)
1999 -2004	98.12%	98.73%
2004 -2009	98.37%	98.95%
2010 -2015	98.83%	99.30%
2015 -2020	98.83%	99.30%
2020 -2025	98.83%	99.30%
2025 -2030	98.83%	99.30%
1999 -2009	98.20%	98.89%
2010 -2030	98.83%	99.30%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

YEAR	PERCENTAGE of IN #92 Served by H.E.		IN #92 served by H.E. ( Yes=0 , No= 1 )		PERCENTAGE of IL #2 Served by H.E.		IL #2 served by H.E. ( Yes=0 , No= 1 )	
			WINTER	SUMMER			WINTER	SUMMER
ACTUAL 1999	0.0%		1	1	0.0%		1	1
ACTUAL 2000	0.0%		1	1	0.0%		1	1
ACTUAL 2001	0.0%		1	1	0.0%		1	1
ACTUAL 2002	0.0%		1	1	0.0%		1	1
ACTUAL 2003	0.0%		1	1	0.0%		1	1
ACTUAL 2004	0.0%		1	1	0.0%		1	1
ACTUAL 2005	51.0%		1	0	0.0%		1	1
ACTUAL 2006	100.0%		0	0	0.0%		1	1
ACTUAL 2007	100.0%		0	0	0.0%		1	1
ACTUAL 2008	100.0%		0	0	0.0%		1	1
ACTUAL 2009	100.0%		0	0	0.0%		1	1
FRCST 2010	100.0%		0	0	0.0%		1	1
FRCST 2011	100.0%		0	0	100.0%		0	0
FRCST 2012	100.0%		0	0	100.0%		0	0
FRCST 2013	100.0%		0	0	100.0%		0	0
FRCST 2014	100.0%		0	0	100.0%		0	0
FRCST 2015	100.0%		0	0	100.0%		0	0
FRCST 2016	100.0%		0	0	100.0%		0	0
FRCST 2017	100.0%		0	0	100.0%		0	0
FRCST 2018	100.0%		0	0	100.0%		0	0
FRCST 2019	100.0%		0	0	100.0%		0	0
FRCST 2020	100.0%		0	0	100.0%		0	0
FRCST 2021	100.0%		0	0	100.0%		0	0
FRCST 2022	100.0%		0	0	100.0%		0	0
FRCST 2023	100.0%		0	0	100.0%		0	0
FRCST 2024	100.0%		0	0	100.0%		0	0
FRCST 2025	100.0%		0	0	100.0%		0	0
FRCST 2026	100.0%		0	0	100.0%		0	0
FRCST 2027	100.0%		0	0	100.0%		0	0
FRCST 2028	100.0%		0	0	100.0%		0	0
FRCST 2029	100.0%		0	0	100.0%		0	0
FRCST 2030	100.0%		0	0	100.0%		0	0

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

TIME PERIOD

1999 -2004  
2004 -2009

2010 -2015  
2015 -2020  
2020 -2025  
2025 -2030

1999 -2009  
2010 -2030

**APPENDIX H**

**HEREC "LOW" DSM CASE SCENARIO TABLES  
HISTORICAL/FORECAST ANNUAL SUMMARY**

1971 : BEGINNING HISTORICAL DATA YEAR ?  
2009 : FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 34 YEARS)  
20 : NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

Aggregated Member System Data  
NUMBER OF CONSUMERS

Aggregated Member System Data  
SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

	YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL	1999	242,823	11,747	129	1,225	255,924	3,301,206	679,879	954,026	113,744	5,048,855
ACTUAL	2000	248,463	12,109	139	1,363	262,074	3,408,837	742,554	1,177,210	116,332	5,444,933
ACTUAL	2001	253,162	12,265	155	1,444	267,026	3,522,968	729,098	1,261,060	113,891	5,627,017
ACTUAL	2002	257,347	12,533	163	1,501	271,544	3,772,856	750,481	1,372,372	117,598	6,013,307
ACTUAL	2003	261,300	12,711	176	1,654	275,841	3,744,229	760,700	1,406,637	112,443	6,024,009
ACTUAL	2004	265,436	12,930	173	1,793	280,332	3,816,332	797,926	1,498,284	112,624	6,225,166
ACTUAL	2005	269,261	13,031	173	1,934	284,399	4,087,081	833,664	1,583,193	44,652	6,548,590
ACTUAL	2006	272,892	13,211	177	2,070	288,350	3,997,738	859,810	1,632,862	37,999	6,528,409
ACTUAL	2007	275,983	13,481	199	2,186	291,849	4,235,636	896,961	1,706,767	41,253	6,880,617
ACTUAL	2008	277,143	13,424	208	2,202	292,977	4,225,769	896,208	1,712,574	38,855	6,873,406
ACTUAL	2009	277,179	13,547	200	2,204	293,130	4,049,085	862,271	1,638,530	36,404	6,586,290
FRCST	2010	277,127	13,617	187	2,222	293,153	4,032,516	871,377	1,512,940	40,028	6,456,861
FRCST	2011	277,602	13,682	185	2,222	293,691	4,037,461	868,202	1,485,468	40,028	6,431,159
FRCST	2012	278,435	13,745	184	2,222	294,586	4,041,240	863,661	1,571,035	40,028	6,515,963
FRCST	2013	279,524	13,807	185	2,222	295,738	4,048,766	855,877	1,687,654	40,028	6,632,325
FRCST	2014	280,775	13,868	185	2,222	297,050	4,048,283	846,860	1,774,502	40,028	6,709,672
FRCST	2015	282,166	13,928	185	2,222	298,501	4,051,865	839,199	1,895,493	40,028	6,826,584
FRCST	2016	283,787	14,044	185	2,222	300,238	4,074,025	837,385	1,963,569	40,028	6,915,007
FRCST	2017	285,469	14,155	184	2,222	302,030	4,091,159	836,587	1,972,142	40,028	6,939,916
FRCST	2018	287,228	14,267	184	2,222	303,901	4,109,100	837,319	1,970,380	40,028	6,956,828
FRCST	2019	289,029	14,376	184	2,222	305,811	4,129,298	838,147	1,966,925	40,028	6,974,398
FRCST	2020	290,878	14,483	183	2,222	307,766	4,145,260	839,826	1,963,534	40,028	6,988,648
FRCST	2021	292,955	14,651	182	2,222	310,010	4,162,599	845,398	1,940,703	40,028	6,988,728
FRCST	2022	295,077	14,817	182	2,222	312,298	4,180,583	851,610	1,930,999	40,028	7,003,221
FRCST	2023	297,243	14,982	182	2,222	314,629	4,199,639	858,141	1,921,347	40,028	7,019,155
FRCST	2024	299,465	15,143	182	2,222	317,012	4,220,450	866,247	1,911,740	40,028	7,038,465
FRCST	2025	301,764	15,306	182	2,222	319,474	4,243,983	876,137	1,902,180	40,028	7,062,328
FRCST	2026	304,235	15,525	182	2,222	322,164	4,277,675	897,404	1,892,670	40,028	7,107,777
FRCST	2027	306,741	15,742	182	2,222	324,887	4,318,534	920,128	1,883,206	40,028	7,161,895
FRCST	2028	309,282	15,954	182	2,222	327,640	4,363,491	946,174	1,873,792	40,028	7,223,485
FRCST	2029	311,863	16,170	182	2,222	330,437	4,410,857	973,452	1,864,421	40,028	7,288,758
FRCST	2030	314,452	16,378	182	2,222	333,234	4,458,944	999,367	1,855,099	40,028	7,353,438

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

AGGREGATED NUMBER OF CONSUMERS

AGGREGATED SYSTEM ENERGY SALES

TIME PERIOD	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT.CHG.)	OTHER (ACT.CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
1999 -2004	1.80%	1.94%	44	568	1.84%	2.94%	3.25%	9.45%	-0.20%	4.28%
2004 -2009	0.87%	0.94%	27	411	0.90%	1.19%	1.56%	1.81%	-20.22%	1.13%
2010 -2015	0.36%	0.45%	-2	0	0.36%	0.10%	-0.75%	4.61%	0.00%	1.12%
2015 -2020	0.61%	0.78%	-2	0	0.61%	0.46%	0.01%	0.71%	0.00%	0.47%
2020 -2025	0.74%	1.11%	-1	0	0.75%	0.47%	0.85%	-0.63%	0.00%	0.21%
2025 -2030	0.83%	1.36%	0	0	0.85%	0.99%	2.67%	-0.50%	0.00%	0.81%
1999 -2009	1.33%	1.44%	71	979	1.37%	2.06%	2.41%	5.56%	-10.77%	2.69%
2010 -2030	0.63%	0.93%	-5	0	0.64%	0.50%	0.69%	1.02%	0.00%	0.65%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** LOW SCENARIO WITH DSM IMPACTS *****						***** LOW SCENARIO WITH DSM IMPACTS *****			
YEAR	AGGREGATED TOTAL MEMBER ENERGY PURCHASED (MWH)	TOTAL ENERGY GENERATED for H.E. MEMBERS (MWH)	HE SYSTEM AVERAGE MONTHLY LOSS FACTORS due to MEMBER SYSTEM LOAD (excludes pass-throughs)		H.E. AVERAGE WHOLESALE POWER COSTS (MILLS/MWH)	AGGREGATED MEMBER SYSTEM DEMANDS (WITHOUT LOSSES, 30 MINUTE DEMAND)			
			FOR ENERGY	FOR DEMAND		NONCOINCIDENT (MW)		COINCIDENT (MW) (EST. BEFORE 1984)	
						WINTER	SUMMER	WINTER	SUMMER
ACTUAL 1999	5,320,840	5,535,309	3.97%	4.54%	*****	1,117	1,223	1,037	1,155
ACTUAL 2000	5,758,399	6,009,930	4.31%	4.52%	*****	1,173	1,187	1,110	1,117
ACTUAL 2001	5,864,880	6,118,847	4.27%	4.53%	*****	1,285	1,274	1,178	1,187
ACTUAL 2002	6,314,792	6,600,361	4.45%	4.78%	*****	1,211	1,346	1,151	1,229
ACTUAL 2003	6,320,460	6,593,113	4.26%	4.26%	*****	1,354	1,313	1,265	1,229
ACTUAL 2004	6,549,574	6,831,431	4.25%	4.81%	*****	1,381	1,321	1,268	1,255
ACTUAL 2005	6,850,535	7,115,713	3.83%	4.22%	*****	1,429	1,472	1,335	1,393
ACTUAL 2006	6,802,245	7,091,068	4.19%	4.47%	*****	1,414	1,502	1,336	1,393
ACTUAL 2007	7,215,322	7,533,291	4.33%	4.84%	*****	1,533	1,558	1,421	1,403
ACTUAL 2008	7,193,537	7,471,337	3.80%	5.10%	*****	1,575	1,442	1,440	1,289
ACTUAL 2009	6,898,809	7,174,754	3.93%	4.86%	*****	1,674	1,453	1,519	1,307
FRCST 2010	6,762,999	7,055,547	4.25%	4.73%	68.830	1,454	1,404	1,337	1,292
FRCST 2011	6,736,462	7,017,073	4.10%	4.80%	70.910	1,440	1,395	1,324	1,284
FRCST 2012	6,824,461	7,108,766	4.10%	4.80%	75.360	1,448	1,415	1,328	1,289
FRCST 2013	6,946,243	7,235,685	4.10%	4.80%	79.430	1,454	1,414	1,334	1,299
FRCST 2014	7,027,051	7,319,878	4.10%	4.80%	82.230	1,475	1,421	1,327	1,290
FRCST 2015	7,149,658	7,447,656	4.10%	4.80%	83.810	1,486	1,423	1,336	1,305
FRCST 2016	7,242,198	7,544,110	4.10%	4.80%	85.486	1,505	1,419	1,338	1,300
FRCST 2017	7,268,330	7,571,317	4.10%	4.80%	87.196	1,502	1,417	1,335	1,297
FRCST 2018	7,286,013	7,589,714	4.10%	4.80%	88.940	1,498	1,413	1,331	1,292
FRCST 2019	7,304,402	7,608,846	4.10%	4.80%	90.719	1,494	1,409	1,327	1,287
FRCST 2020	7,319,295	7,624,332	4.10%	4.80%	92.533	1,495	1,409	1,327	1,287
FRCST 2021	7,319,569	7,624,618	4.10%	4.80%	94.384	1,489	1,407	1,322	1,286
FRCST 2022	7,334,815	7,640,516	4.10%	4.80%	96.271	1,488	1,409	1,321	1,286
FRCST 2023	7,351,571	7,657,988	4.10%	4.80%	98.197	1,488	1,411	1,321	1,288
FRCST 2024	7,371,853	7,679,137	4.10%	4.80%	100.161	1,489	1,415	1,321	1,292
FRCST 2025	7,396,933	7,705,289	4.10%	4.80%	102.164	1,492	1,420	1,323	1,297
FRCST 2026	7,444,684	7,755,082	4.10%	4.80%	102.164	1,498	1,432	1,330	1,307
FRCST 2027	7,501,513	7,814,341	4.10%	4.80%	102.164	1,509	1,444	1,340	1,319
FRCST 2028	7,566,167	7,881,760	4.10%	4.80%	102.164	1,524	1,459	1,354	1,333
FRCST 2029	7,634,677	7,953,199	4.10%	4.80%	102.164	1,539	1,474	1,369	1,348
FRCST 2030	7,702,585	8,023,989	4.10%	4.80%	102.164	1,555	1,490	1,384	1,363

***** LOW SCENARIO WITH DSM IMPACTS *****						***** LOW SCENARIO WITH DSM IMPACTS *****			
TIME PERIOD	AGGREGATED H.E. ENERGY TOTAL ENERGY GENERATED PURCHASED FOR MEMBERS (% CHG.)	TOTAL ENERGY GENERATED for H.E. MEMBERS (% CHG.)	AVG. MONTHLY LOSS FACTORS due to MEMBERS ENERGY DEMAND (AVERAGE)		H.E. AVERAGE WHOLESALE POWER COSTS (% CHG.)	AGGREGATED MEMBER PEAK SEASONAL DEMANDS (WITHOUT LOSSES, 30 MINUTE DEMAND)			
			(AVERAGE)	(AVERAGE)		Non-Coincident (% Chg)		Coincident (% Chg)	
						WINTER	SUMMER	WINTER	SUMMER
1999 -2004	4.24%	4.30%	4.25%	4.57%	*****	4.34%	1.55%	4.09%	1.68%
2004 -2009	1.04%	0.99%	4.06%	4.71%	*****	3.92%	1.92%	3.68%	0.81%
2010 -2015	1.12%	1.09%	4.13%	4.79%	4.02%	0.43%	0.26%	-0.01%	0.20%
2015 -2020	0.47%	0.47%	4.10%	4.80%	2.00%	0.12%	-0.19%	-0.14%	-0.28%
2020 -2025	0.21%	0.21%	4.10%	4.80%	2.00%	-0.04%	0.16%	-0.05%	0.15%
2025 -2030	0.81%	0.81%	4.10%	4.80%	0.00%	0.84%	0.97%	0.90%	1.00%
1999 -2009	2.63%	2.63%	4.14%	4.63%	*****	4.13%	1.74%	3.88%	1.25%
2010 -2030	0.65%	0.65%	4.11%	4.79%	1.99%	0.34%	0.30%	0.17%	0.27%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	HOOSIER ENERGY SYSTEM PEAK SEASONAL COINCIDENT DEMAND (MW) (All values are estimated 60 minute values)				H.E. ANNUAL LOAD FACTOR Due To COINCIDENT PEAK	HOOSIER ENERGY SYSTEM PEAK SEASONAL NON-COINCIDENT DEMAND (MW) (All values are estimated 60 minute values)				H.E. ANNUAL LOAD FACTOR Due To NON-COIN. PEAK
	<u>(WITHOUT LOSSES)</u>		<u>(WITH LOSSES)</u>			<u>(WITHOUT LOSSES)</u>		<u>(WITH LOSSES)</u>		
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999	1,024	1,142	1,071	1,196	52.9%	1,103	1,209	1,154	1,266	49.9%
ACTUAL 2000	1,086	1,099	1,136	1,150	59.5%	1,149	1,167	1,202	1,221	56.0%
ACTUAL 2001	1,159	1,174	1,213	1,228	56.9%	1,271	1,259	1,329	1,317	52.5%
ACTUAL 2002	1,105	1,218	1,159	1,278	59.0%	1,161	1,334	1,217	1,399	53.9%
ACTUAL 2003	1,244	1,214	1,298	1,267	58.0%	1,332	1,298	1,390	1,354	54.2%
ACTUAL 2004	1,252	1,235	1,314	1,296	59.2%	1,364	1,300	1,432	1,364	54.3%
ACTUAL 2005	1,301	1,378	1,357	1,438	56.5%	1,393	1,456	1,453	1,519	53.5%
ACTUAL 2006	1,304	1,374	1,364	1,437	56.3%	1,380	1,481	1,443	1,548	52.3%
ACTUAL 2007	1,387	1,400	1,456	1,470	58.5%	1,496	1,555	1,571	1,632	52.7%
ACTUAL 2008	1,424	1,269	1,499	1,336	56.7%	1,558	1,420	1,640	1,494	51.9%
ACTUAL 2009	1,519	1,304	1,595	1,370	51.4%	1,674	1,450	1,758	1,522	46.6%
FRCST 2010	1,322	1,283	1,386	1,346	58.1%	1,437	1,395	1,507	1,462	53.4%
FRCST 2011	1,309	1,275	1,373	1,338	58.3%	1,424	1,386	1,494	1,454	53.6%
FRCST 2012	1,313	1,280	1,378	1,343	58.7%	1,431	1,405	1,502	1,474	53.9%
FRCST 2013	1,318	1,290	1,383	1,354	59.7%	1,437	1,405	1,508	1,474	54.8%
FRCST 2014	1,312	1,281	1,377	1,344	60.7%	1,458	1,411	1,530	1,481	54.6%
FRCST 2015	1,321	1,296	1,386	1,360	61.3%	1,469	1,413	1,541	1,483	55.2%
FRCST 2016	1,323	1,291	1,388	1,355	61.9%	1,488	1,410	1,561	1,479	55.0%
FRCST 2017	1,320	1,288	1,385	1,351	62.4%	1,485	1,407	1,558	1,476	55.5%
FRCST 2018	1,316	1,283	1,381	1,346	62.7%	1,481	1,403	1,554	1,472	55.8%
FRCST 2019	1,312	1,279	1,376	1,342	63.1%	1,477	1,399	1,550	1,468	56.0%
FRCST 2020	1,312	1,279	1,376	1,342	63.1%	1,478	1,400	1,550	1,468	56.0%
FRCST 2021	1,307	1,277	1,372	1,340	63.5%	1,472	1,398	1,544	1,467	56.4%
FRCST 2022	1,306	1,278	1,371	1,341	63.6%	1,471	1,399	1,544	1,468	56.5%
FRCST 2023	1,306	1,280	1,370	1,343	63.8%	1,471	1,401	1,544	1,470	56.6%
FRCST 2024	1,306	1,283	1,371	1,346	63.8%	1,472	1,405	1,545	1,474	56.6%
FRCST 2025	1,308	1,288	1,373	1,351	64.1%	1,475	1,411	1,547	1,480	56.9%
FRCST 2026	1,315	1,298	1,380	1,362	64.2%	1,481	1,422	1,554	1,492	57.0%
FRCST 2027	1,325	1,310	1,390	1,375	64.2%	1,492	1,434	1,566	1,505	57.0%
FRCST 2028	1,338	1,324	1,404	1,389	63.9%	1,506	1,449	1,580	1,520	56.8%
FRCST 2029	1,353	1,338	1,420	1,405	63.9%	1,521	1,464	1,597	1,536	56.9%
FRCST 2030	1,368	1,354	1,435	1,421	63.8%	1,537	1,480	1,613	1,553	56.8%

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	HOOSIER ENERGY COINCIDENT PEAK DEMAND (60 MINUTE VALUE, ALL VALUES EST.)				H.E. ANNUAL COINCIDENT LOAD FACTOR (AVERAGE)	HOOSIER ENERGY NON-COINCIDENT PEAK DEMAND (60 MINUTE VALUE, ALL VALUES EST.)				H.E. ANNUAL NON-COIN. LOAD FACTOR (AVERAGE)
	<u>Without Losses (% Chg)</u>		<u>With Losses (% Chg)</u>			<u>Without Losses (% Chg)</u>		<u>With Losses (% Chg)</u>		
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	4.10%	1.57%	4.16%	1.62%	57.57%	4.34%	1.45%	4.40%	1.50%	53.48%
2004 -2009	3.94%	1.10%	3.96%	1.12%	56.43%	4.18%	2.21%	4.20%	2.22%	51.87%
2010 -2015	-0.01%	0.20%	0.00%	0.21%	59.48%	0.43%	0.26%	0.45%	0.28%	54.25%
2015 -2020	-0.14%	-0.28%	-0.14%	-0.28%	62.42%	0.12%	-0.19%	0.12%	-0.19%	55.58%
2020 -2025	-0.05%	0.15%	-0.05%	0.15%	63.63%	-0.04%	0.16%	-0.04%	0.18%	56.49%
2025 -2030	0.90%	1.00%	0.90%	1.00%	64.01%	0.84%	0.97%	0.84%	0.97%	56.87%
1999 -2009	4.02%	1.33%	4.06%	1.37%	56.80%	4.26%	1.83%	4.30%	1.86%	52.52%
2010 -2030	0.17%	0.27%	0.17%	0.27%	62.32%	0.34%	0.30%	0.34%	0.30%	55.77%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** LOW SCENARIO WITH DSM IMPACTS *****						***** LOW SCENARIO WITH DSM IMPACTS *****					
YEAR	**** EXTREME TEMPERATURE CONDITIONS **** HOOSIER ENERGY SYSTEM PEAK SEASONAL COINCIDENT DEMAND (MW); 60 MINUTE VALUE (WITHOUT LOSSES)				H.E. ANNUAL LOAD FACTOR Due to EXTREME COINCIDENT PEAK	**** EXTREME TEMPERATURE CONDITIONS **** HOOSIER ENERGY SYSTEM PEAK SEASONAL NON-COINCIDENT DEMAND (MW); 60 MINUTE VALUE (WITHOUT LOSSES)				H.E. ANNUAL LOAD FACTOR Due To EXTREME NON- COIN. PEAK	
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER		
ACTUAL 1999	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2000	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2001	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2002	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2003	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2004	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2005	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2006	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2007	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2008	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
FRCST 2010	1,457	1,406	1,528	1,475	52.7%	1,582	1,527	1,659	1,601	48.5%	
FRCST 2011	1,444	1,398	1,515	1,467	52.9%	1,569	1,518	1,646	1,593	48.7%	
FRCST 2012	1,448	1,404	1,520	1,473	53.2%	1,577	1,539	1,655	1,615	48.9%	
FRCST 2013	1,456	1,415	1,528	1,485	54.1%	1,585	1,540	1,663	1,616	49.7%	
FRCST 2014	1,449	1,406	1,521	1,475	54.9%	1,606	1,547	1,686	1,623	49.6%	
FRCST 2015	1,460	1,423	1,532	1,493	55.5%	1,618	1,549	1,698	1,625	50.1%	
FRCST 2016	1,459	1,414	1,531	1,484	56.1%	1,635	1,542	1,716	1,618	50.1%	
FRCST 2017	1,457	1,412	1,529	1,482	56.5%	1,633	1,541	1,714	1,617	50.4%	
FRCST 2018	1,454	1,408	1,526	1,478	56.8%	1,630	1,538	1,711	1,614	50.6%	
FRCST 2019	1,450	1,405	1,522	1,474	57.1%	1,627	1,535	1,708	1,610	50.9%	
FRCST 2020	1,451	1,405	1,522	1,475	57.0%	1,628	1,536	1,709	1,611	50.8%	
FRCST 2021	1,447	1,404	1,518	1,473	57.3%	1,623	1,534	1,703	1,610	51.1%	
FRCST 2022	1,446	1,405	1,518	1,475	57.5%	1,623	1,536	1,703	1,612	51.2%	
FRCST 2023	1,446	1,408	1,518	1,477	57.6%	1,623	1,539	1,704	1,615	51.3%	
FRCST 2024	1,448	1,412	1,519	1,481	57.5%	1,625	1,544	1,705	1,620	51.3%	
FRCST 2025	1,450	1,417	1,522	1,487	57.8%	1,628	1,550	1,708	1,626	51.5%	
FRCST 2026	1,458	1,428	1,530	1,499	57.9%	1,636	1,562	1,717	1,639	51.6%	
FRCST 2027	1,469	1,441	1,541	1,512	57.9%	1,648	1,575	1,729	1,653	51.6%	
FRCST 2028	1,483	1,456	1,556	1,528	57.8%	1,663	1,591	1,745	1,669	51.4%	
FRCST 2029	1,499	1,471	1,573	1,544	57.7%	1,679	1,607	1,762	1,687	51.5%	
FRCST 2030	1,515	1,487	1,590	1,561	57.6%	1,696	1,624	1,780	1,704	51.5%	

***** LOW SCENARIO WITH DSM IMPACTS *****						***** LOW SCENARIO WITH DSM IMPACTS *****					
TIME PERIOD	**** EXTREME TEMPERATURE CONDITIONS **** HOOSIER ENERGY COINCIDENT PEAK (60 MIN.) Without Losses (% Chg)				EXTREME COIN. H.E. ANNUAL LOAD FACTOR (AVERAGE)	**** EXTREME TEMPERATURE CONDITIONS **** HOOSIER ENERGY NON-COINCIDENT PEAK (60 MIN.) Without Losses (% Chg)				EXT. NON-COIN H.E. ANNUAL LOAD FACTOR (AVERAGE)	
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER		
1999 -2004	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2004 -2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2010 -2015	0.04%	0.23%	0.05%	0.25%	53.89%	0.45%	0.29%	0.47%	0.30%	49.23%	
2015 -2020	-0.12%	-0.25%	-0.12%	-0.25%	56.50%	0.12%	-0.17%	0.12%	-0.17%	50.48%	
2020 -2025	-0.01%	0.17%	-0.01%	0.17%	57.46%	0.00%	0.18%	0.00%	0.18%	51.20%	
2025 -2030	0.88%	0.97%	0.88%	0.97%	57.75%	0.82%	0.94%	0.82%	0.94%	51.51%	
1999 -2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2010 -2030	0.20%	0.28%	0.20%	0.29%	56.35%	0.35%	0.31%	0.35%	0.31%	50.58%	

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\* Adjusted for IN #72, IN #16 and IN#92 \*\*\*\*

Aggregated Member System Data  
NUMBER OF CONSUMERS

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\* Adjusted for IN #72, IN #16 and IN#92 \*\*\*\*

Aggregated Member System Data  
SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

	YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL	1999	209,962	9,568	112	887	220,529	2,864,229	599,227	862,060	29,908	4,355,424
ACTUAL	2000	215,011	9,890	120	1,018	226,039	2,948,957	656,492	1,088,160	30,617	4,724,226
ACTUAL	2001	219,228	10,003	132	1,093	230,456	3,052,360	639,446	1,164,603	31,271	4,887,680
ACTUAL	2002	223,044	10,265	139	1,144	234,592	3,261,617	663,738	1,272,906	32,441	5,230,702
ACTUAL	2003	226,749	10,462	151	1,293	238,655	3,243,405	673,235	1,316,094	32,150	5,264,884
ACTUAL	2004	230,760	10,690	151	1,429	243,030	3,305,807	706,497	1,403,535	33,098	5,448,937
ACTUAL	2005	257,250	11,810	165	1,573	270,798	3,749,514	774,714	1,484,489	33,634	6,042,351
ACTUAL	2006	260,854	11,986	169	1,707	274,716	3,856,899	824,354	1,545,582	32,678	6,259,513
ACTUAL	2007	263,908	12,246	191	1,821	278,166	4,088,777	855,093	1,620,151	34,240	6,598,261
ACTUAL	2008	265,071	12,166	200	1,833	279,270	4,080,904	856,375	1,630,203	33,209	6,600,691
ACTUAL	2009	265,137	12,281	192	1,836	279,446	3,904,139	818,798	1,564,440	31,738	6,319,115
FRCST	2010	265,120	12,353	180	1,854	279,507	3,884,826	828,002	1,455,017	33,075	6,200,920
FRCST	2011	277,602	13,682	185	2,222	293,691	4,037,451	868,202	1,485,468	40,028	6,431,159
FRCST	2012	278,435	13,745	184	2,222	294,586	4,041,240	863,661	1,571,035	40,028	6,515,963
FRCST	2013	279,524	13,807	185	2,222	295,738	4,048,766	855,877	1,687,654	40,028	6,632,325
FRCST	2014	280,775	13,868	185	2,222	297,050	4,048,283	846,860	1,774,502	40,028	6,709,672
FRCST	2015	282,166	13,928	185	2,222	298,501	4,051,865	839,199	1,895,493	40,028	6,826,584
FRCST	2016	283,787	14,044	185	2,222	300,238	4,074,025	837,385	1,963,569	40,028	6,915,007
FRCST	2017	285,469	14,155	184	2,222	302,030	4,091,159	836,587	1,972,142	40,028	6,939,916
FRCST	2018	287,228	14,267	184	2,222	303,901	4,109,100	837,319	1,970,380	40,028	6,956,828
FRCST	2019	289,029	14,376	184	2,222	305,811	4,129,298	838,147	1,966,925	40,028	6,974,398
FRCST	2020	290,878	14,483	183	2,222	307,766	4,145,260	839,826	1,963,534	40,028	6,988,648
FRCST	2021	292,955	14,651	182	2,222	310,010	4,162,599	845,398	1,940,703	40,028	6,988,728
FRCST	2022	295,077	14,817	182	2,222	312,298	4,180,583	851,610	1,930,999	40,028	7,003,221
FRCST	2023	297,243	14,982	182	2,222	314,629	4,199,639	858,141	1,921,347	40,028	7,019,155
FRCST	2024	299,465	15,143	182	2,222	317,012	4,220,450	866,247	1,911,740	40,028	7,038,465
FRCST	2025	301,764	15,306	182	2,222	319,474	4,243,983	876,137	1,902,180	40,028	7,062,328
FRCST	2026	304,235	15,525	182	2,222	322,164	4,277,675	897,404	1,892,670	40,028	7,107,777
FRCST	2027	306,741	15,742	182	2,222	324,887	4,318,534	920,128	1,883,206	40,028	7,161,895
FRCST	2028	309,282	15,954	182	2,222	327,640	4,363,491	946,174	1,873,792	40,028	7,223,485
FRCST	2029	311,863	16,170	182	2,222	330,437	4,410,857	973,452	1,864,421	40,028	7,288,758
FRCST	2030	314,452	16,378	182	2,222	333,234	4,458,944	999,367	1,855,099	40,028	7,353,438

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

Adjusted for Systems -- AGGREGATED NUMBER OF CONSUMERS

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

Adjusted for Systems -- AGGREGATED ENERGY SALES

TIME PERIOD	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT.CHG.)	OTHER (ACT.CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
1999 -2004	1.91%	2.24%	39	542	1.96%	2.91%	3.35%	10.24%	2.05%	4.58%
2004 -2009	2.82%	2.81%	41	407	2.83%	3.38%	2.99%	2.19%	-0.84%	3.01%
2010 -2015	1.25%	2.43%	5	368	1.32%	0.85%	0.27%	5.43%	3.89%	1.94%
2015 -2020	0.61%	0.78%	-2	0	0.61%	0.46%	0.01%	0.71%	0.00%	0.47%
2020 -2025	0.74%	1.11%	-1	0	0.75%	0.47%	0.85%	-0.63%	0.00%	0.21%
2025 -2030	0.83%	1.36%	0	0	0.85%	0.99%	2.67%	-0.50%	0.00%	0.81%
1999 -2009	2.36%	2.53%	80	949	2.40%	3.15%	3.17%	6.14%	0.60%	3.79%
2010 -2030	0.86%	1.42%	2	368	0.88%	0.69%	0.94%	1.22%	0.96%	0.86%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN #72, IN # 16 and IN#92										
YEAR	AGGREGATED TOTAL MEMBER ENERGY PURCHASED (MWH)	ENERGY GENERATED FOR MEMBERS (MWH)	AGGREGATED MEMBER 30 MIN. COINCIDENT PEAK W/O LOSSES (MW)		HE COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984) (WITHOUT LOSSES)		HE COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984) (WITH LOSSES)		ANNUAL LOAD FACTOR	
			WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER		
			ACTUAL	1999	4,592,866	4,777,226	900	1,004		888
ACTUAL	2000	4,998,042	5,215,344	958	969	937	953	980	997	59.6%
ACTUAL	2001	5,106,079	5,326,182	1,023	1,032	1,006	1,020	1,052	1,067	57.0%
ACTUAL	2002	5,499,105	5,746,666	1,012	1,077	972	1,066	1,019	1,118	58.7%
ACTUAL	2003	5,527,292	5,764,676	1,102	1,072	1,084	1,059	1,130	1,105	58.2%
ACTUAL	2004	5,736,200	5,981,961	1,103	1,095	1,089	1,077	1,143	1,130	59.6%
ACTUAL	2005	6,332,029	6,576,556	1,172	1,333	1,142	1,319	1,191	1,376	54.6%
ACTUAL	2006	6,525,204	6,801,916	1,295	1,337	1,264	1,318	1,322	1,379	56.3%
ACTUAL	2007	6,924,233	7,229,037	1,384	1,341	1,351	1,338	1,418	1,405	58.2%
ACTUAL	2008	6,912,387	7,179,069	1,395	1,245	1,380	1,226	1,453	1,290	56.2%
ACTUAL	2009	6,617,661	6,882,100	1,472	1,247	1,472	1,243	1,546	1,306	50.8%
FRCST	2010	6,493,587	6,774,176	1,292	1,240	1,277	1,231	1,339	1,291	57.7%
FRCST	2011	6,736,462	7,017,073	1,324	1,284	1,309	1,275	1,373	1,338	58.3%
FRCST	2012	6,824,461	7,108,766	1,328	1,289	1,313	1,280	1,378	1,343	58.7%
FRCST	2013	6,946,243	7,235,685	1,334	1,299	1,318	1,290	1,383	1,354	59.7%
FRCST	2014	7,027,051	7,319,878	1,327	1,290	1,312	1,281	1,377	1,344	60.7%
FRCST	2015	7,149,658	7,447,656	1,336	1,305	1,321	1,296	1,386	1,360	61.3%
FRCST	2016	7,242,198	7,544,110	1,338	1,300	1,323	1,291	1,388	1,355	61.9%
FRCST	2017	7,268,330	7,571,317	1,335	1,297	1,320	1,288	1,385	1,351	62.4%
FRCST	2018	7,286,013	7,589,714	1,331	1,292	1,316	1,283	1,381	1,346	62.7%
FRCST	2019	7,304,402	7,608,846	1,327	1,287	1,312	1,279	1,376	1,342	63.1%
FRCST	2020	7,319,295	7,624,332	1,327	1,287	1,312	1,279	1,376	1,342	63.1%
FRCST	2021	7,319,569	7,624,618	1,322	1,286	1,307	1,277	1,372	1,340	63.5%
FRCST	2022	7,334,815	7,640,516	1,321	1,286	1,306	1,278	1,371	1,341	63.6%
FRCST	2023	7,351,571	7,657,988	1,321	1,288	1,306	1,280	1,370	1,343	63.8%
FRCST	2024	7,371,853	7,679,137	1,321	1,292	1,306	1,283	1,371	1,346	63.8%
FRCST	2025	7,396,933	7,705,289	1,323	1,297	1,308	1,288	1,373	1,351	64.1%
FRCST	2026	7,444,684	7,755,082	1,330	1,307	1,315	1,298	1,380	1,362	64.2%
FRCST	2027	7,501,513	7,814,341	1,340	1,319	1,325	1,310	1,390	1,375	64.2%
FRCST	2028	7,566,167	7,881,760	1,354	1,333	1,338	1,324	1,404	1,389	63.9%
FRCST	2029	7,634,677	7,953,199	1,369	1,348	1,353	1,338	1,420	1,405	63.9%
FRCST	2030	7,702,565	8,023,989	1,384	1,363	1,368	1,354	1,435	1,421	63.8%

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	Adjusted for Systems ENERGY PURCHASED (% CHG.)	Adjusted for Systems ENERGY GENERATED (% CHG.)	Adjusted for Systems AGGREGATED 30 MIN. COIN. PEAK W/O LOSSES (% CHG)		Adjusted for Systems -- HE COIN. 60 MINUTE DEMAND Without Losses (% Chg)		Adjusted for Systems -- HE COIN. 60 MINUTE DEMAND With Losses (% Chg)		ADJUSTED ANNUAL LOAD FACTOR (AVERAGE)
			WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	4.55%	4.60%	4.15%	1.76%	4.17%	1.65%	4.23%	1.70%	57.58%
2004 -2009	2.90%	2.84%	5.94%	2.62%	6.21%	2.91%	6.23%	2.93%	55.96%
2010 -2015	1.94%	1.91%	0.68%	1.04%	0.68%	1.04%	0.69%	1.05%	59.42%
2015 -2020	0.47%	0.47%	-0.14%	-0.28%	-0.14%	-0.28%	-0.14%	-0.28%	62.42%
2020 -2025	0.21%	0.21%	-0.05%	0.15%	-0.05%	0.15%	-0.05%	0.15%	63.63%
2025 -2030	0.81%	0.81%	0.90%	1.00%	0.90%	1.00%	0.90%	1.00%	64.01%
1999 -2009	3.72%	3.72%	5.05%	2.19%	5.19%	2.28%	5.22%	2.31%	56.51%
2010 -2030	0.86%	0.85%	0.34%	0.48%	0.34%	0.48%	0.35%	0.48%	62.31%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN #72, IN #16 and IN#92  
EXTREME COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984)  
(WITHOUT LOSSES) (WITH LOSSES) EXTREME ANNUAL

YEAR	WINTER	SUMMER	WINTER	SUMMER	LOAD FACTOR
ACTUAL 1999	*****	*****	*****	*****	*****
ACTUAL 2000	*****	*****	*****	*****	*****
ACTUAL 2001	*****	*****	*****	*****	*****
ACTUAL 2002	*****	*****	*****	*****	*****
ACTUAL 2003	*****	*****	*****	*****	*****
ACTUAL 2004	*****	*****	*****	*****	*****
ACTUAL 2005	*****	*****	*****	*****	*****
ACTUAL 2006	*****	*****	*****	*****	*****
ACTUAL 2007	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****
FRCST 2010	1,408	1,348	1,476	1,414	52.4%
FRCST 2011	1,444	1,398	1,515	1,467	52.9%
FRCST 2012	1,448	1,404	1,520	1,473	53.2%
FRCST 2013	1,456	1,415	1,528	1,485	54.1%
FRCST 2014	1,449	1,406	1,521	1,475	54.9%
FRCST 2015	1,460	1,423	1,532	1,493	55.5%
FRCST 2016	1,459	1,414	1,531	1,484	56.1%
FRCST 2017	1,457	1,412	1,529	1,482	56.5%
FRCST 2018	1,454	1,408	1,526	1,478	56.8%
FRCST 2019	1,450	1,405	1,522	1,474	57.1%
FRCST 2020	1,451	1,405	1,522	1,475	57.0%
FRCST 2021	1,447	1,404	1,518	1,473	57.3%
FRCST 2022	1,446	1,405	1,518	1,475	57.5%
FRCST 2023	1,446	1,408	1,518	1,477	57.6%
FRCST 2024	1,448	1,412	1,519	1,481	57.5%
FRCST 2025	1,450	1,417	1,522	1,487	57.8%
FRCST 2026	1,458	1,428	1,530	1,499	57.9%
FRCST 2027	1,469	1,441	1,541	1,512	57.9%
FRCST 2028	1,483	1,456	1,556	1,528	57.6%
FRCST 2029	1,499	1,471	1,573	1,544	57.7%
FRCST 2030	1,515	1,487	1,590	1,561	57.6%

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

Adjusted for Systems HE EXT. COIN. 60 MINUTE DEMAND  
Without Losses (% Chg) With Losses (% Chg)

ADJUSTED  
EXT. ANNUAL  
LOAD FACTOR  
(AVERAGE)

TIME PERIOD	WINTER	SUMMER	WINTER	SUMMER	LOAD FACTOR
1999 -2004	*****	*****	*****	*****	*****
2004 -2009	*****	*****	*****	*****	*****
2010 -2015	0.72%	1.08%	0.74%	1.09%	53.84%
2015 -2020	-0.12%	-0.25%	-0.12%	-0.25%	56.50%
2020 -2025	-0.01%	0.17%	-0.01%	0.17%	57.46%
2025 -2030	0.88%	0.97%	0.88%	0.97%	57.75%
1999 -2009	*****	*****	*****	*****	*****
2010 -2030	0.37%	0.49%	0.37%	0.50%	56.33%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

Values Adjusted for IN#72,IN#16,IN#92 and Special Industrial Loads  
Aggregated Member System Data  
NUMBER OF CONSUMERS

Values Adjusted for IN#72,IN#16,IN#92 and Special Industrial Loads  
Aggregated Member System Data  
SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
ACTUAL 1999	209,962	9,568	112	887	220,529	2,864,229	599,227	726,658	29,908	4,220,022
ACTUAL 2000	215,011	9,890	119	1,018	226,038	2,948,957	656,492	917,277	30,617	4,553,343
ACTUAL 2001	219,228	10,003	131	1,093	230,455	3,052,360	639,446	990,705	31,271	4,713,782
ACTUAL 2002	223,044	10,265	138	1,144	234,591	3,261,617	663,738	1,086,676	32,441	5,044,472
ACTUAL 2003	226,749	10,462	150	1,293	238,654	3,243,405	673,235	1,127,531	32,150	5,076,321
ACTUAL 2004	230,760	10,690	150	1,429	243,029	3,305,807	706,497	1,205,248	33,098	5,250,650
ACTUAL 2005	257,250	11,810	164	1,573	270,797	3,749,514	774,714	1,291,857	33,634	5,849,719
ACTUAL 2006	260,854	11,986	168	1,707	274,715	3,856,899	824,354	1,350,149	32,678	6,064,080
ACTUAL 2007	263,908	12,246	190	1,821	278,165	4,088,777	855,093	1,435,203	34,240	6,413,313
ACTUAL 2008	265,071	12,166	199	1,833	279,269	4,080,904	856,375	1,461,568	33,209	6,432,056
ACTUAL 2009	285,137	12,281	191	1,836	279,445	3,904,139	818,798	1,407,974	31,738	6,162,649
FRCST 2010	265,120	12,353	179	1,854	279,506	3,884,826	828,002	1,282,627	33,075	6,028,530
FRCST 2011	277,602	13,682	184	2,222	293,690	4,037,461	868,202	1,312,018	40,028	6,257,710
FRCST 2012	278,435	13,745	183	2,222	294,585	4,041,240	863,681	1,395,970	40,028	6,340,899
FRCST 2013	279,524	13,807	184	2,222	295,737	4,048,766	855,877	1,510,960	40,028	6,455,631
FRCST 2014	280,775	13,868	184	2,222	297,049	4,048,283	846,860	1,596,162	40,028	6,531,333
FRCST 2015	282,166	13,928	184	2,222	298,500	4,051,865	839,199	1,715,493	40,028	6,646,584
FRCST 2016	283,787	14,044	184	2,222	300,237	4,074,025	837,385	1,782,580	40,028	6,734,018
FRCST 2017	285,469	14,155	183	2,222	302,029	4,091,159	836,587	1,790,158	40,028	6,757,933
FRCST 2018	287,228	14,267	183	2,222	303,900	4,109,100	837,319	1,787,396	40,028	6,773,844
FRCST 2019	289,029	14,376	183	2,222	305,810	4,129,298	838,147	1,782,936	40,028	6,790,409
FRCST 2020	290,878	14,483	182	2,222	307,765	4,145,260	839,826	1,778,534	40,028	6,803,648
FRCST 2021	292,955	14,651	181	2,222	310,009	4,162,599	845,398	1,755,703	40,028	6,803,728
FRCST 2022	295,077	14,817	181	2,222	312,297	4,180,583	851,610	1,745,999	40,028	6,818,221
FRCST 2023	297,243	14,982	181	2,222	314,628	4,199,639	858,141	1,736,347	40,028	6,834,155
FRCST 2024	299,465	15,143	181	2,222	317,011	4,220,450	866,247	1,726,740	40,028	6,853,465
FRCST 2025	301,764	15,306	181	2,222	319,473	4,243,983	876,137	1,717,180	40,028	6,877,328
FRCST 2026	304,235	15,525	181	2,222	322,163	4,277,675	897,404	1,707,670	40,028	6,922,777
FRCST 2027	306,741	15,742	181	2,222	324,886	4,318,534	920,128	1,698,206	40,028	6,976,895
FRCST 2028	309,282	15,954	181	2,222	327,639	4,363,491	946,174	1,688,792	40,028	7,038,485
FRCST 2029	311,863	16,170	181	2,222	330,436	4,410,857	973,452	1,679,421	40,028	7,103,758
FRCST 2030	314,452	16,378	181	2,222	333,233	4,458,944	999,367	1,670,099	40,028	7,168,438

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	Adjusted for Systems & Ind. - AGGREGATED NUMBER OF CONSUMERS					Adjusted for Systems & Ind.- AGGREGATED ENERGY SALES				
	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT.CHG.)	OTHER (ACT.CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
1999 -2004	1.91%	2.24%	38	542	1.96%	2.91%	3.35%	10.65%	2.05%	4.47%
2004 -2009	2.82%	2.81%	41	407	2.83%	3.38%	2.99%	3.16%	-0.84%	3.25%
2010 -2015	1.25%	2.43%	5	368	1.32%	0.85%	0.27%	5.99%	3.89%	1.97%
2015 -2020	0.61%	0.78%	-2	0	0.61%	0.46%	0.01%	0.72%	0.00%	0.47%
2020 -2025	0.74%	1.11%	-1	0	0.75%	0.47%	0.85%	-0.70%	0.00%	0.22%
2025 -2030	0.83%	1.36%	0	0	0.85%	0.99%	2.67%	-0.55%	0.00%	0.83%
1999 -2009	2.36%	2.53%	79	949	2.40%	3.15%	3.17%	6.84%	0.60%	3.86%
2010 -2030	0.86%	1.42%	2	368	0.88%	0.69%	0.94%	1.33%	0.96%	0.87%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN#72,IN#16,IN#92 and Special Industrial Loads

YEAR	AGGREGATED TOTAL MEMBER ENERGY PUR- CHASED (MWH)	ENERGY GEN- ERATED FOR MEMBERS (MWH)	H.E. 30 MINUTE COINCIDENT DEMAND (MW) (WITHOUT LOSSES)		H.E. COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984) (WITHOUT LOSSES) (WITH LOSSES)				ANNUAL LOAD FACTOR
			WINTER	SUMMER	WITHOUT LOSSES		WITH LOSSES		
					WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999	4,457,464	4,641,824	884	984	874	974	913	1,023	51.8%
ACTUAL 2000	4,827,158	5,044,460	934	927	915	912	952	972	59.1%
ACTUAL 2001	4,932,180	5,152,284	987	1,004	976	992	1,022	1,045	56.3%
ACTUAL 2002	5,312,874	5,560,435	968	1,040	929	1,030	965	1,091	58.2%
ACTUAL 2003	5,338,729	5,576,113	1,079	1,040	1,061	1,027	1,106	1,079	57.6%
ACTUAL 2004	5,537,913	5,783,874	1,066	1,055	1,052	1,037	1,106	1,093	59.5%
ACTUAL 2005	6,139,397	6,383,924	1,138	1,305	1,109	1,291	1,150	1,355	53.8%
ACTUAL 2006	6,329,771	6,606,483	1,260	1,322	1,229	1,303	1,283	1,366	55.2%
ACTUAL 2007	6,739,285	7,044,089	1,354	1,337	1,321	1,334	1,387	1,397	57.6%
ACTUAL 2008	6,743,752	7,010,434	1,394	1,235	1,379	1,215	1,442	1,327	55.3%
ACTUAL 2009	6,461,195	6,725,634	1,465	1,232	1,465	1,229	1,525	1,292	50.3%
FRCST 2010	6,321,197	6,601,786	1,267	1,215	1,252	1,206	1,314	1,266	57.4%
FRCST 2011	6,563,012	6,843,623	1,298	1,259	1,283	1,250	1,348	1,313	58.0%
FRCST 2012	6,649,397	6,933,701	1,302	1,264	1,287	1,255	1,352	1,318	58.4%
FRCST 2013	6,769,548	7,058,990	1,308	1,273	1,292	1,264	1,357	1,328	59.4%
FRCST 2014	6,848,711	7,141,538	1,301	1,264	1,286	1,255	1,351	1,318	60.4%
FRCST 2015	6,969,658	7,267,656	1,310	1,279	1,294	1,270	1,360	1,334	61.0%
FRCST 2016	7,061,209	7,363,121	1,312	1,274	1,296	1,265	1,362	1,328	61.6%
FRCST 2017	7,086,347	7,389,334	1,309	1,270	1,293	1,261	1,358	1,325	62.1%
FRCST 2018	7,103,030	7,406,730	1,304	1,265	1,289	1,257	1,354	1,320	62.5%
FRCST 2019	7,120,413	7,424,857	1,300	1,261	1,284	1,252	1,349	1,315	62.8%
FRCST 2020	7,134,295	7,439,332	1,299	1,261	1,284	1,252	1,349	1,315	62.8%
FRCST 2021	7,134,569	7,439,618	1,295	1,259	1,280	1,250	1,344	1,313	63.2%
FRCST 2022	7,149,815	7,455,516	1,294	1,260	1,279	1,251	1,343	1,314	63.4%
FRCST 2023	7,166,571	7,472,988	1,294	1,262	1,278	1,253	1,343	1,316	63.5%
FRCST 2024	7,186,853	7,494,137	1,294	1,265	1,279	1,256	1,343	1,320	63.5%
FRCST 2025	7,211,933	7,520,289	1,296	1,270	1,281	1,261	1,345	1,325	63.8%
FRCST 2026	7,259,684	7,570,082	1,303	1,280	1,287	1,272	1,352	1,336	63.9%
FRCST 2027	7,316,513	7,629,341	1,313	1,292	1,298	1,283	1,363	1,348	63.9%
FRCST 2028	7,381,167	7,696,760	1,326	1,306	1,311	1,297	1,377	1,362	63.6%
FRCST 2029	7,449,677	7,768,199	1,341	1,321	1,326	1,312	1,392	1,378	63.7%
FRCST 2030	7,517,565	7,838,989	1,356	1,336	1,341	1,327	1,408	1,394	63.6%

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	Adjusted for Systems & Ind. ENERGY PURCHASED (% CHG.)	Systems & Ind. ENERGY GENERATED (% CHG.)	Adj. Sys. & Ind. - H.E. 30 MINUTE COINCIDENT DEMAND (MW) (WITHOUT LOSSES)		Adjusted for Sys. & Ind. - HE COIN. 60 MINUTE DEMAND Without Losses (% Chg) With Losses (% Chg)				ADJUSTED ANNUAL LOAD FACTOR (AVERAGE)
			WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	4.44%	4.50%	3.80%	1.40%	3.78%	1.26%	3.91%	1.33%	57.07%
2004 -2009	3.13%	3.06%	6.58%	3.15%	6.85%	3.46%	6.64%	3.40%	55.30%
2010 -2015	1.97%	1.94%	0.67%	1.04%	0.67%	1.04%	0.69%	1.06%	59.08%
2015 -2020	0.47%	0.47%	-0.16%	-0.29%	-0.16%	-0.29%	-0.16%	-0.29%	62.12%
2020 -2025	0.22%	0.22%	-0.05%	0.15%	-0.05%	0.15%	-0.05%	0.15%	63.36%
2025 -2030	0.83%	0.83%	0.92%	1.02%	0.92%	1.02%	0.92%	1.02%	63.75%
1999 -2009	3.78%	3.78%	5.18%	2.27%	5.30%	2.35%	5.26%	2.36%	55.88%
2010 -2030	0.87%	0.86%	0.34%	0.48%	0.34%	0.48%	0.35%	0.48%	62.01%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

Energy and Demand Values Adjusted for IN#72,IN#16,IN#92 and Special Industrial Loads

EXTREME COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984)

YEAR	(WITHOUT LOSSES)		(WITH LOSSES)		EXTREME ANNUAL LOAD FACTOR
	WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 1999	*****	*****	*****	*****	*****
ACTUAL 2000	*****	*****	*****	*****	*****
ACTUAL 2001	*****	*****	*****	*****	*****
ACTUAL 2002	*****	*****	*****	*****	*****
ACTUAL 2003	*****	*****	*****	*****	*****
ACTUAL 2004	*****	*****	*****	*****	*****
ACTUAL 2005	*****	*****	*****	*****	*****
ACTUAL 2006	*****	*****	*****	*****	*****
ACTUAL 2007	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****
FRCST 2010	1,382	1,323	1,451	1,389	51.9%
FRCST 2011	1,418	1,373	1,489	1,442	52.5%
FRCST 2012	1,423	1,378	1,494	1,448	52.8%
FRCST 2013	1,429	1,389	1,501	1,460	53.7%
FRCST 2014	1,423	1,380	1,494	1,449	54.6%
FRCST 2015	1,433	1,397	1,505	1,467	55.1%
FRCST 2016	1,432	1,388	1,504	1,458	55.7%
FRCST 2017	1,430	1,386	1,503	1,456	56.1%
FRCST 2018	1,427	1,382	1,499	1,452	56.4%
FRCST 2019	1,423	1,378	1,495	1,447	56.7%
FRCST 2020	1,423	1,378	1,495	1,448	56.6%
FRCST 2021	1,419	1,377	1,491	1,447	57.0%
FRCST 2022	1,419	1,378	1,490	1,448	57.1%
FRCST 2023	1,419	1,381	1,491	1,450	57.2%
FRCST 2024	1,420	1,385	1,492	1,455	57.2%
FRCST 2025	1,423	1,390	1,494	1,460	57.4%
FRCST 2026	1,430	1,402	1,502	1,472	57.5%
FRCST 2027	1,441	1,414	1,514	1,486	57.5%
FRCST 2028	1,456	1,429	1,529	1,501	57.3%
FRCST 2029	1,471	1,445	1,546	1,517	57.4%
FRCST 2030	1,487	1,461	1,562	1,534	57.3%

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO RESULTS \*\*\*\*\*

Adjusted for Sys. & Ind. HE EXT. COIN. 60 MINUTE DEMAND

ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)

TIME PERIOD	<u>Without Losses (% Chg)</u>		<u>With Losses (% Chg)</u>		ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)
	WINTER	SUMMER	WINTER	SUMMER	
1999 -2004	*****	*****	*****	*****	*****
2004 -2009	*****	*****	*****	*****	*****
2010 -2015	0.72%	1.08%	0.74%	1.10%	53.43%
2015 -2020	-0.13%	-0.26%	-0.13%	-0.26%	56.13%
2020 -2025	-0.01%	0.17%	-0.01%	0.17%	57.10%
2025 -2030	0.89%	0.99%	0.89%	0.99%	57.41%
1999 -2009	*****	*****	*****	*****	*****
2010 -2030	0.37%	0.49%	0.37%	0.50%	55.96%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	H.E. Time Factor Ratio from 30 to 60 Minute excludes pass-throughs (Est. before 1984)		PERCENTAGE of IN #72 Served by H.E.	IN #72 served by H.E. (Yes=0, No=1)		PERCENTAGE of IN #16 Served by H.E.	IN #16 served by H.E. (Yes=0, No=1)	
	WINTER	SUMMER		WINTER	SUMMER		WINTER	SUMMER
ACTUAL 1999	98.85%	98.99%	100.0%	0	0	100.0%	0	0
ACTUAL 2000	97.92%	98.42%	100.0%	0	0	100.0%	0	0
ACTUAL 2001	98.92%	98.85%	100.0%	0	0	100.0%	0	0
ACTUAL 2002	96.00%	99.02%	100.0%	0	0	100.0%	0	0
ACTUAL 2003	98.31%	98.80%	100.0%	0	0	100.0%	0	0
ACTUAL 2004	98.73%	98.31%	100.0%	0	0	100.0%	0	0
ACTUAL 2005	97.45%	98.93%	100.0%	0	0	100.0%	0	0
ACTUAL 2006	97.54%	98.57%	100.0%	0	0	100.0%	0	0
ACTUAL 2007	97.56%	99.78%	100.0%	0	0	100.0%	0	0
ACTUAL 2008	98.92%	98.38%	100.0%	0	0	100.0%	0	0
ACTUAL 2009	100.00%	99.76%	100.0%	0	0	100.0%	0	0
FRCST 2010	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2011	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2012	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2013	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2014	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2015	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2016	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2017	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2018	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2019	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2020	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2021	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2022	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2023	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2024	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2025	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2026	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2027	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2028	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2029	98.83%	99.30%	100.00%	0	0	100.00%	0	0
FRCST 2030	98.83%	99.30%	100.00%	0	0	100.00%	0	0

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD	HE TIME FACTOR RATIO (30 to 60 MINUTE)	
	WINTER (AVERAGE)	SUMMER (AVERAGE)
1999 -2004	98.12%	98.73%
2004 -2009	98.37%	98.95%
2010 -2015	98.83%	99.30%
2015 -2020	98.83%	99.30%
2020 -2025	98.83%	99.30%
2025 -2030	98.83%	99.30%
1999 -2009	98.20%	98.89%
2010 -2030	98.83%	99.30%

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

YEAR	PERCENTAGE of IN #92 Served by H.E.	IN #92 served by H.E. ( Yes=0 , No= 1 )		PERCENTAGE of IL #2 Served by H.E.	IL #2 served by H.E. ( Yes=0 , No= 1 )	
		WINTER	SUMMER		WINTER	SUMMER
ACTUAL 1999	0.0%	1	1	0.0%	1	1
ACTUAL 2000	0.0%	1	1	0.0%	1	1
ACTUAL 2001	0.0%	1	1	0.0%	1	1
ACTUAL 2002	0.0%	1	1	0.0%	1	1
ACTUAL 2003	0.0%	1	1	0.0%	1	1
ACTUAL 2004	0.0%	1	1	0.0%	1	1
ACTUAL 2005	51.0%	1	0	0.0%	1	1
ACTUAL 2006	100.0%	0	0	0.0%	1	1
ACTUAL 2007	100.0%	0	0	0.0%	1	1
ACTUAL 2008	100.0%	0	0	0.0%	1	1
ACTUAL 2009	100.0%	0	0	0.0%	1	1
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FRCST 2010	100.00%	0	0	0.00%	1	1
FRCST 2011	100.00%	0	0	100.00%	0	0
FRCST 2012	100.00%	0	0	100.00%	0	0
FRCST 2013	100.00%	0	0	100.00%	0	0
FRCST 2014	100.00%	0	0	100.00%	0	0
FRCST 2015	100.00%	0	0	100.00%	0	0
FRCST 2016	100.00%	0	0	100.00%	0	0
FRCST 2017	100.00%	0	0	100.00%	0	0
FRCST 2018	100.00%	0	0	100.00%	0	0
FRCST 2019	100.00%	0	0	100.00%	0	0
FRCST 2020	100.00%	0	0	100.00%	0	0
FRCST 2021	100.00%	0	0	100.00%	0	0
FRCST 2022	100.00%	0	0	100.00%	0	0
FRCST 2023	100.00%	0	0	100.00%	0	0
FRCST 2024	100.00%	0	0	100.00%	0	0
FRCST 2025	100.00%	0	0	100.00%	0	0
FRCST 2026	100.00%	0	0	100.00%	0	0
FRCST 2027	100.00%	0	0	100.00%	0	0
FRCST 2028	100.00%	0	0	100.00%	0	0
FRCST 2029	100.00%	0	0	100.00%	0	0
FRCST 2030	100.00%	0	0	100.00%	0	0

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD

1999 -2004  
2004 -2009

2010 -2015  
2015 -2020  
2020 -2025  
2025 -2030

1999 -2009  
2010 -2030

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

DSM EE Program Energy Impact

DSM Demand Impacts-- Both EE & DR Programs)  
Coincident 60 Minute Demand MW

YEAR	Aggregated Total Member Energy		Total Member Energy		Savings w/o Losses		Savings with Losses	
	Purchased Savings MWH	Percent of Total	Generated Savings MWH	Percent of Total	Winter	Summer	Winter	Summer
ACTUAL 1999								
ACTUAL 2000								
ACTUAL 2001								
ACTUAL 2002								
ACTUAL 2003								
ACTUAL 2004								
ACTUAL 2005								
ACTUAL 2006								
ACTUAL 2007								
ACTUAL 2008								
ACTUAL 2009								
FRCST 2010	47,155	0.7%	49,248	0.7%	22,515	12,187	23,631	12,792
FRCST 2011	81,750	1.2%	85,245	1.2%	37,975	23,890	39,889	25,093
FRCST 2012	111,872	1.7%	116,655	1.7%	53,016	39,908	55,688	41,919
FRCST 2013	134,951	2.0%	140,721	2.0%	69,186	58,148	72,672	61,079
FRCST 2014	168,513	2.4%	175,718	2.4%	87,761	75,440	92,184	79,242
FRCST 2015	199,869	2.8%	208,415	2.8%	105,721	92,709	111,049	97,381
FRCST 2016	215,347	3.0%	224,554	3.0%	116,598	104,956	122,474	110,246
FRCST 2017	236,826	3.2%	246,952	3.2%	129,595	118,699	136,126	124,681
FRCST 2018	256,307	3.5%	267,266	3.5%	141,288	131,145	148,408	137,754
FRCST 2019	273,695	3.7%	285,397	3.7%	152,765	143,050	160,464	150,259
FRCST 2020	294,644	4.0%	307,242	4.0%	160,071	150,607	168,138	158,197
FRCST 2021	315,219	4.2%	328,696	4.2%	169,286	158,804	177,817	166,807
FRCST 2022	334,957	4.5%	349,278	4.5%	177,509	165,505	186,455	173,846
FRCST 2023	353,763	4.7%	368,888	4.7%	185,273	171,092	194,610	179,714
FRCST 2024	369,708	4.9%	385,516	4.9%	192,204	175,352	201,890	184,189
FRCST 2025	381,950	5.0%	398,281	5.0%	198,084	178,333	208,067	187,320
FRCST 2026	383,966	5.0%	400,383	5.0%	202,224	178,852	212,415	187,865
FRCST 2027	379,279	4.9%	395,496	4.9%	202,695	177,884	212,909	186,848
FRCST 2028	368,448	4.8%	384,201	4.8%	200,366	175,228	210,463	184,059
FRCST 2029	354,993	4.5%	370,172	4.5%	196,817	171,870	206,735	180,531
FRCST 2030	342,761	4.4%	357,417	4.4%	193,128	168,144	202,861	176,617

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

TIME PERIOD

1999 -2004  
2004 -2009

2010 -2015  
2015 -2020  
2020 -2025  
2025 -2030

1999 -2009  
2010 -2030

1971 :BEGINNING HISTORICAL DATA YEAR ?  
2009 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)  
20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

\*\*\*\*\* LOW SCENARIO WITH DSM IMPACTS \*\*\*\*\*

DSM -- EE Program Demand Impacts  
Coincident 60 Minute Demand MW

DSM -- DR Program Demand Impacts  
Coincident 60 Minute Demand MW

YEAR	Savings w/o Losses		Savings with Losses		Savings w/o Losses		Savings with Losses	
	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer
ACTUAL 1999								
ACTUAL 2000								
ACTUAL 2001								
ACTUAL 2002								
ACTUAL 2003								
ACTUAL 2004								
ACTUAL 2005								
ACTUAL 2006								
ACTUAL 2007								
ACTUAL 2008								
ACTUAL 2009								
FRCST 2010	20.094	8.866	21.091	9.305	2.421	3.322	2.541	3.487
FRCST 2011	31.653	15.483	33.249	16.263	6.322	8.407	6.641	8.830
FRCST 2012	42.118	21.830	44.241	22.930	10.898	18.078	11.447	18.989
FRCST 2013	49.965	27.978	52.483	29.388	19.221	30.170	20.189	31.691
FRCST 2014	61.008	35.447	64.082	37.233	26.754	39.994	28.102	42.009
FRCST 2015	71.421	42.520	75.021	44.662	34.300	50.190	36.028	52.719
FRCST 2016	77.833	47.586	81.756	49.984	38.765	57.370	40.718	60.262
FRCST 2017	85.273	53.026	89.570	55.698	44.322	65.673	46.555	68.982
FRCST 2018	92.375	58.073	97.030	60.999	48.912	73.072	51.377	76.754
FRCST 2019	99.170	62.454	104.168	65.601	53.595	80.596	56.296	84.658
FRCST 2020	103.760	65.080	108.989	68.359	56.311	85.527	59.148	89.837
FRCST 2021	110.785	69.340	116.368	72.835	58.501	89.464	61.449	93.973
FRCST 2022	117.571	73.147	123.496	76.833	59.938	92.358	62.958	97.012
FRCST 2023	124.496	76.815	130.770	80.686	60.777	94.277	63.840	99.028
FRCST 2024	131.019	79.987	137.622	84.017	61.185	95.365	64.268	100.171
FRCST 2025	136.611	82.358	143.496	86.508	61.473	95.975	64.571	100.812
FRCST 2026	140.546	82.416	147.629	86.569	61.678	96.436	64.786	101.295
FRCST 2027	140.853	81.059	147.952	85.144	61.841	96.825	64.958	101.704
FRCST 2028	138.460	78.187	145.438	82.127	61.905	97.041	65.025	101.932
FRCST 2029	134.939	74.738	141.739	78.504	61.878	97.132	64.996	102.027
FRCST 2030	131.732	71.649	138.371	75.260	61.396	96.494	64.490	101.357

TIME PERIOD

1999 -2004  
2004 -2009

2010 -2015  
2015 -2020  
2020 -2025  
2025 -2030

1999 -2009  
2010 -2030



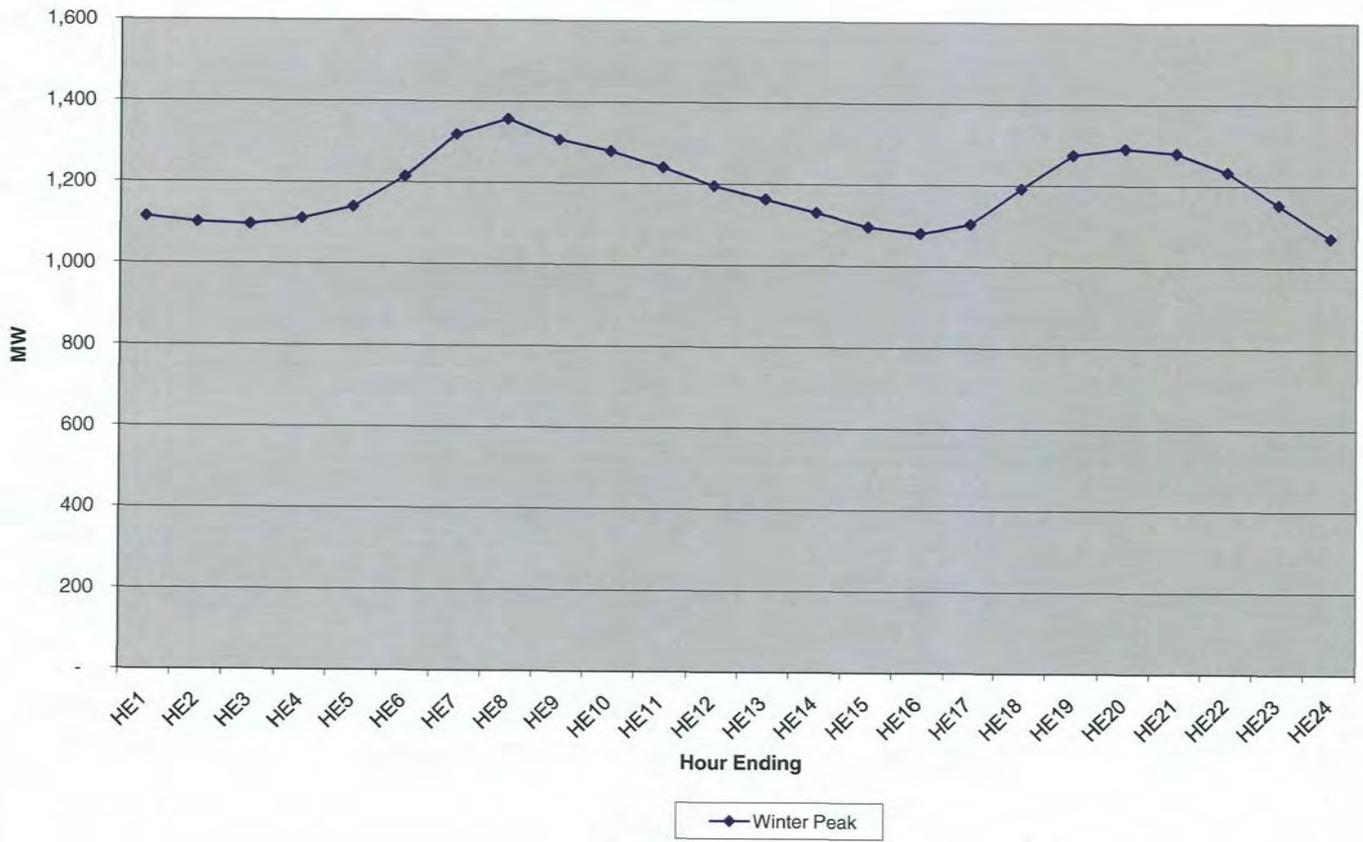
# Appendix I

## Load Shapes

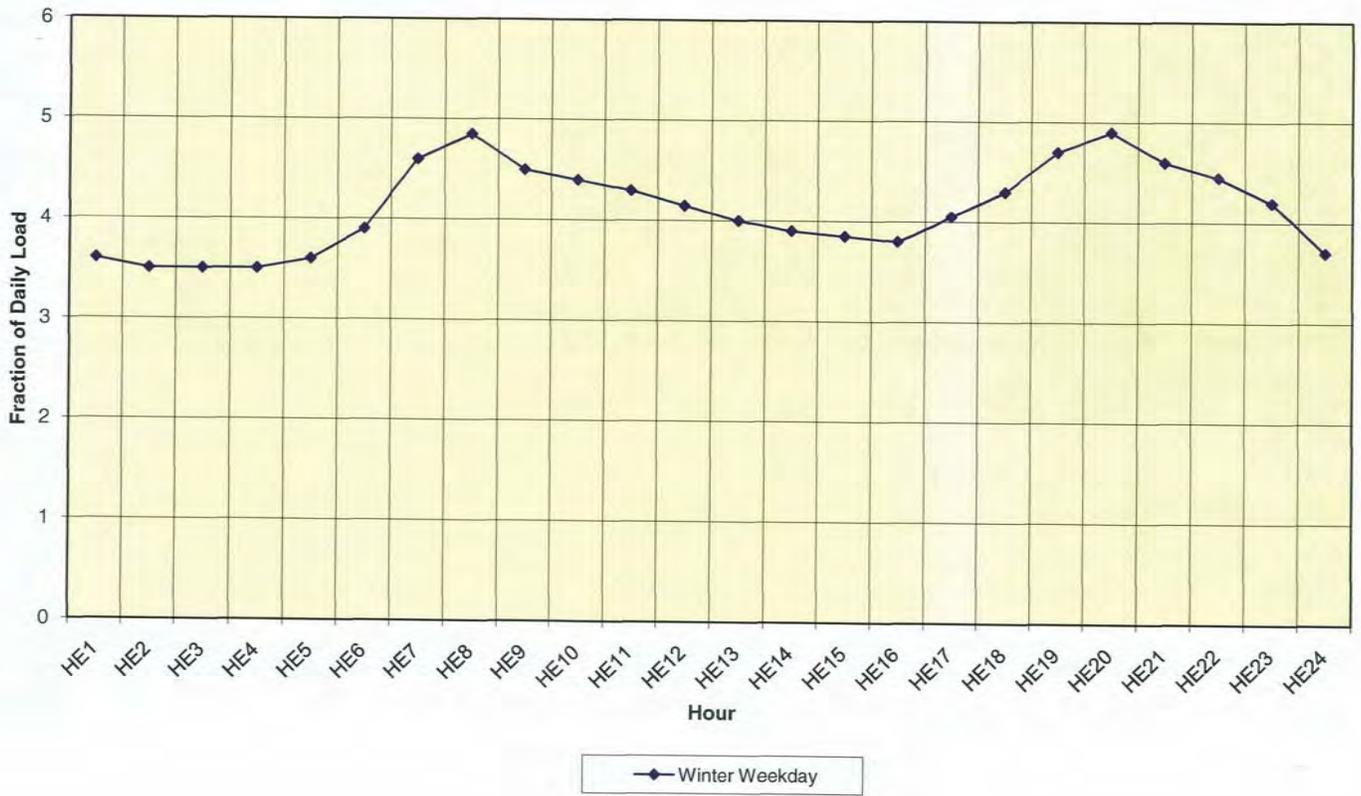


## **Appendix I: Load Shapes**

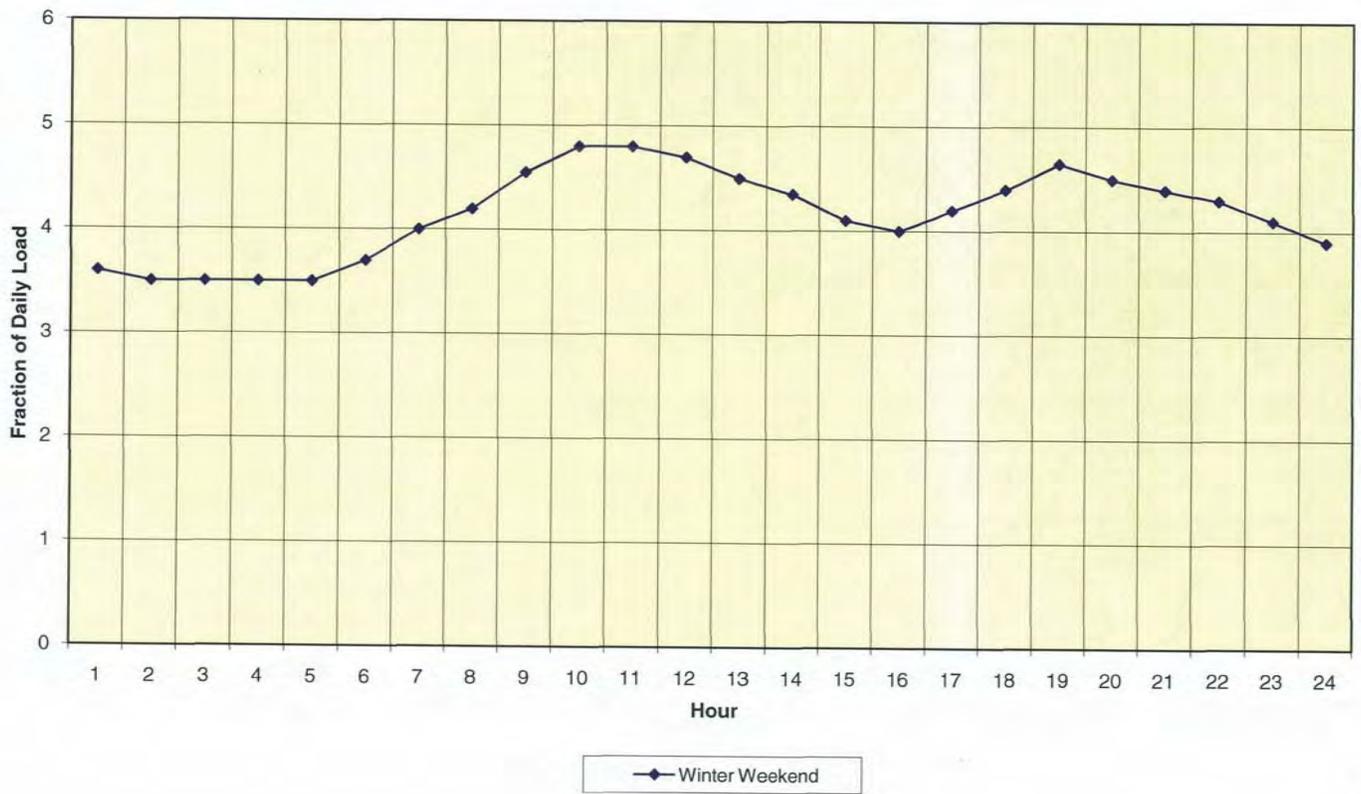
### Hourly Load Shape Peak Winter Day 2010



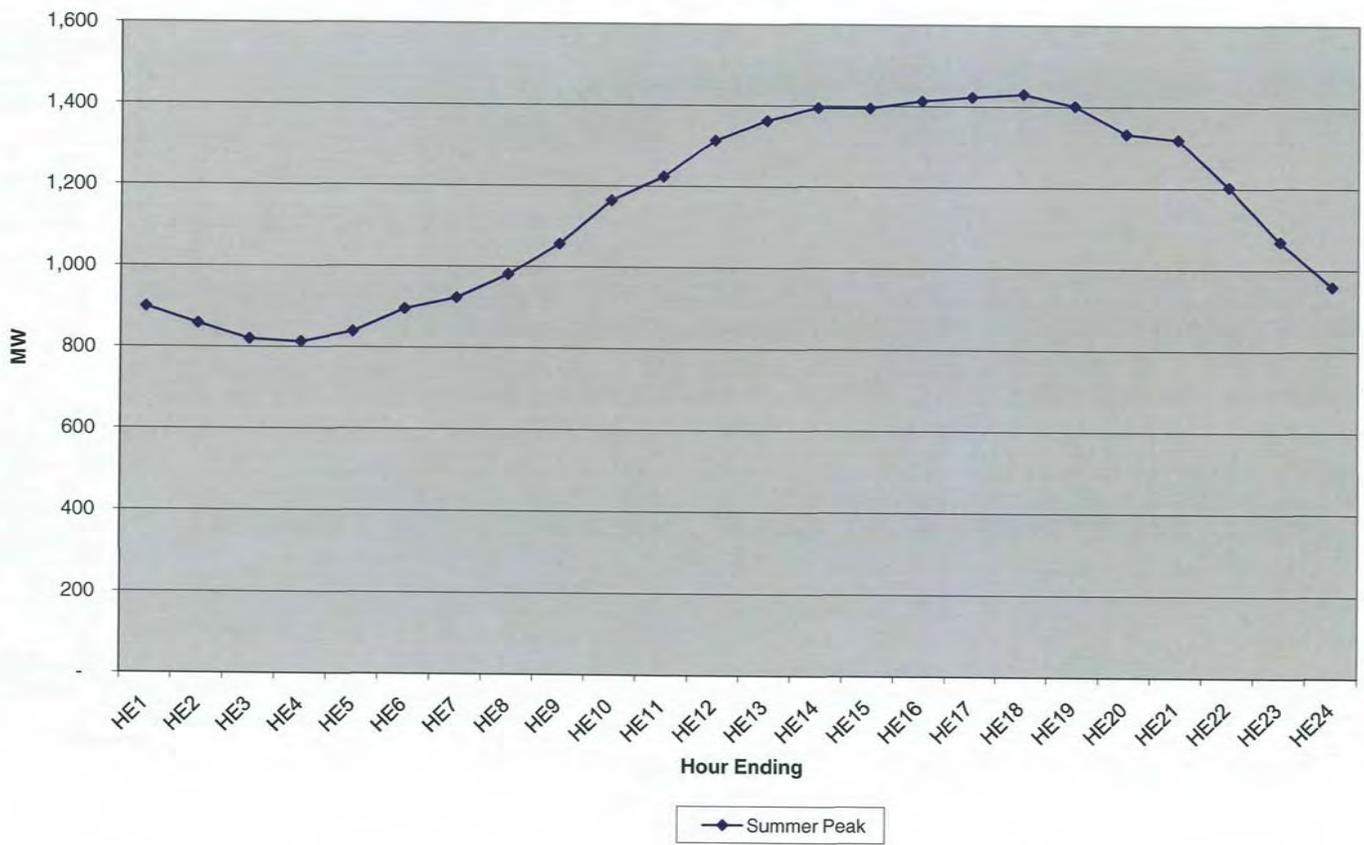
### Hourly Load Shape Typical Winter Weekday



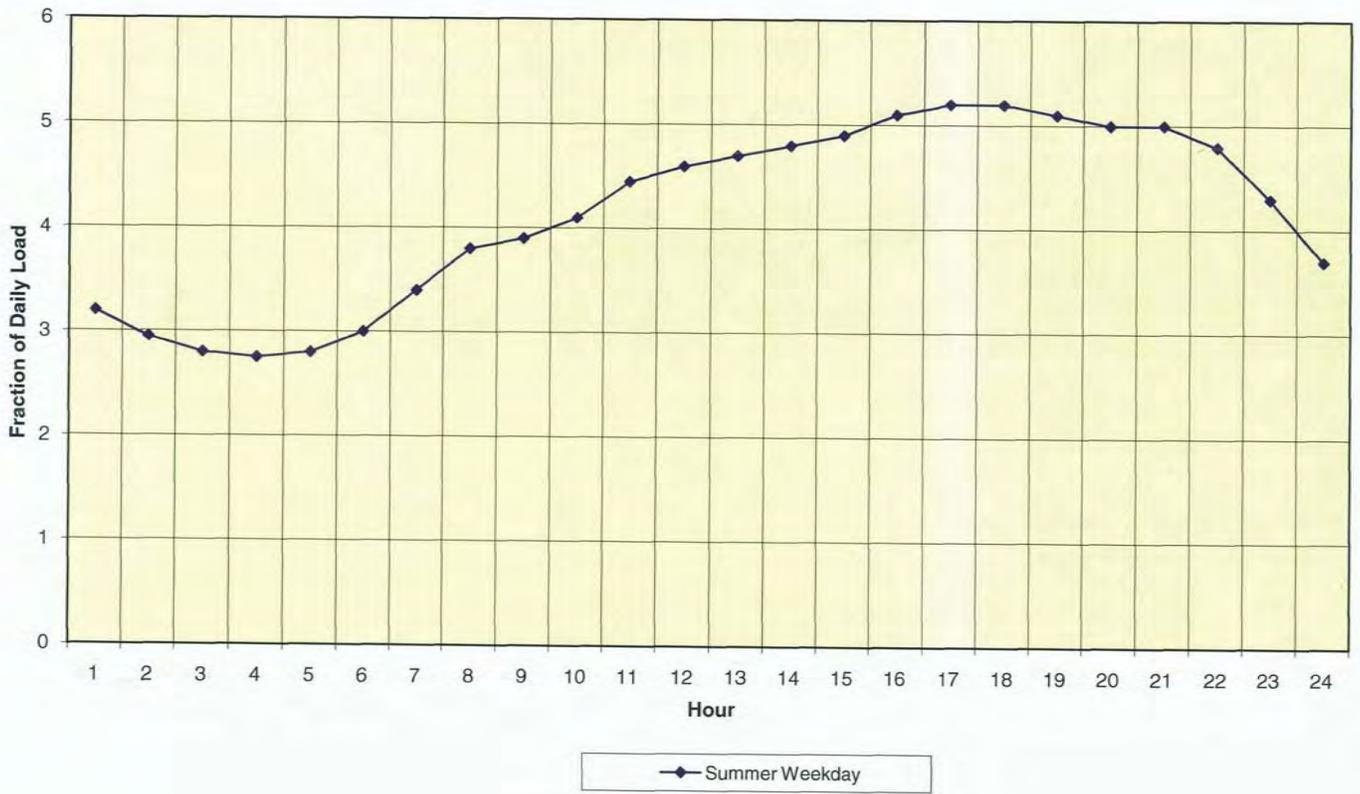
### Hourly Load Shape Typical Winter Weekend



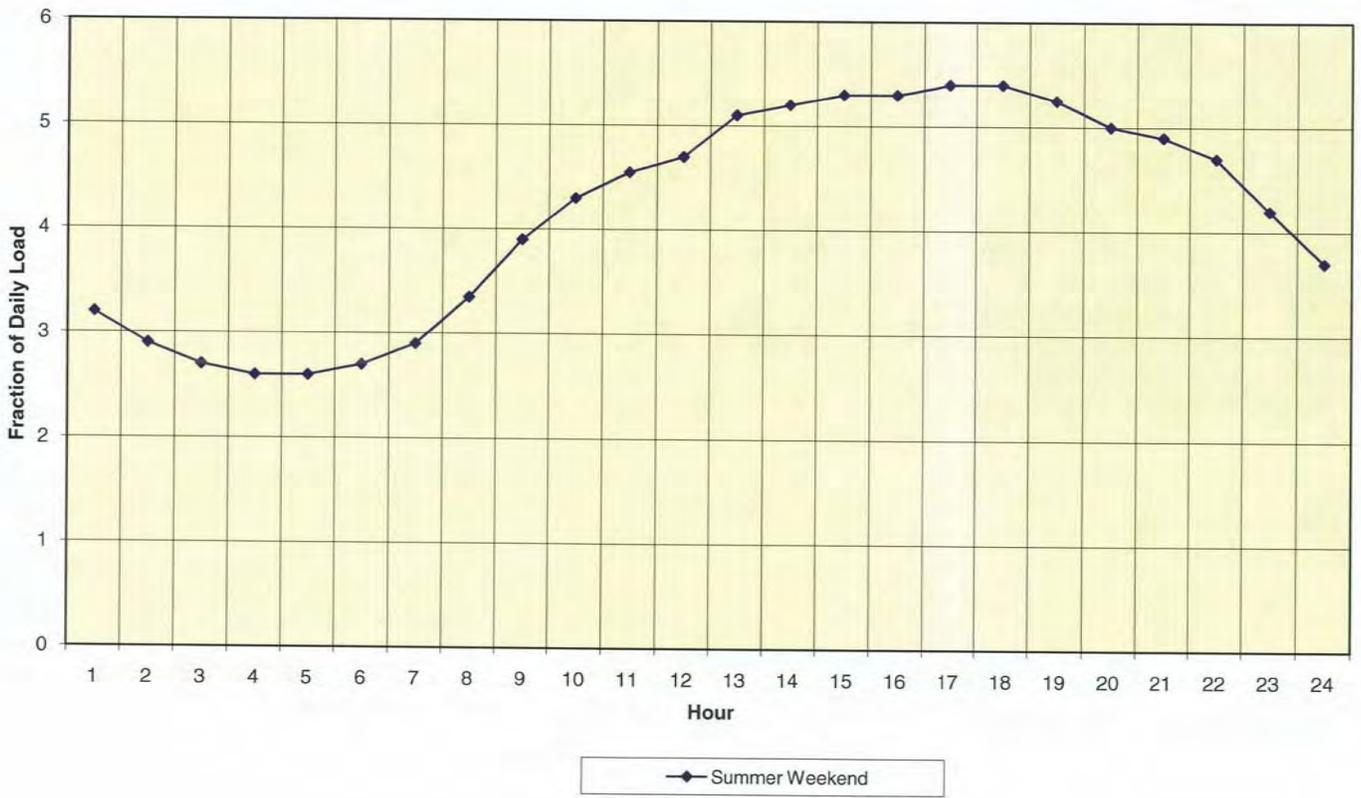
### Hourly Load Shape Peak Summer Day 2010



### Hourly Load Shape Typical Summer Weekday



### Hourly Load Shape Typical Summer Weekend



**Appendix J**  
**FERC Form 715**  
**(Redacted)**