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Cause No. 45449

Hoosier Energy
2020 Integrated Resource Plan – Public Version
Volume II: Technical Appendices

November 2020

Hoosier Energy – Technical Appendices to 2020 Integrated Resource Plan – Public Version

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Appendix A1

Historical/Forecast Annual Load Summary – Base Scenario

1979 :BEGINNING HISTORICAL DATA YEAR ?
 2017 :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 2007	275,983	13,481	199	2,184	291,847	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	4,049,084	862,271	1,638,530	36,404	6,586,290
ACTUAL 2010	277,915	13,683	201	2,222	294,021	4,313,611	889,903	1,783,519	40,028	7,027,061
ACTUAL 2011	277,750	13,765	210	2,498	294,223	4,093,233	901,706	1,806,351	40,873	6,842,163
ACTUAL 2012	278,374	13,889	204	2,564	295,031	3,958,457	930,498	1,895,575	46,875	6,831,406
ACTUAL 2013	279,339	14,031	207	2,686	296,263	4,091,997	938,827	1,924,132	40,413	6,995,370
ACTUAL 2014	280,060	14,289	205	2,805	297,359	4,204,581	952,691	2,043,777	41,306	7,242,356
ACTUAL 2015	281,173	14,255	207	2,881	298,516	4,002,897	946,635	2,069,866	37,583	7,056,982
ACTUAL 2016	283,258	13,827	214	2,984	300,283	4,024,894	949,178	2,059,447	39,010	7,072,530
ACTUAL 2017	283,538	14,030	214	4,949	302,731	3,880,889	944,811	2,133,419	56,773	7,015,892
FRCST 2018	285,222	14,161	237	5,100	304,720	4,147,937	907,640	2,249,332	57,921	7,362,830
FRCST 2019	287,082	14,295	241	5,121	306,739	4,214,622	913,659	2,272,473	58,089	7,458,842
FRCST 2020	288,894	14,436	245	5,121	308,696	4,258,731	920,970	2,304,077	57,921	7,541,700
FRCST 2021	290,621	14,577	247	5,121	310,566	4,297,167	928,228	2,382,638	57,921	7,665,954
FRCST 2022	292,473	14,718	247	5,121	312,559	4,331,292	935,438	2,431,727	57,921	7,756,378
FRCST 2023	294,288	14,859	246	5,121	314,514	4,361,739	942,621	2,462,961	57,921	7,825,241
FRCST 2024	295,900	15,007	246	5,121	316,274	4,382,503	951,378	2,478,824	57,921	7,870,626
FRCST 2025	297,387	15,155	246	5,121	317,909	4,398,910	963,537	2,485,118	57,921	7,905,485
FRCST 2026	299,006	15,303	245	5,121	319,675	4,418,350	973,865	2,480,936	57,921	7,931,072
FRCST 2027	300,563	15,451	245	5,121	321,380	4,440,658	985,362	2,469,382	57,921	7,953,323
FRCST 2028	302,276	15,599	245	5,121	323,241	4,464,643	997,978	2,391,135	57,921	7,911,677
FRCST 2029	303,746	15,757	244	5,121	324,868	4,481,171	1,014,757	2,363,796	57,921	7,917,645
FRCST 2030	305,345	15,915	244	5,121	326,625	4,504,646	1,037,555	2,373,586	57,921	7,973,708
FRCST 2031	306,844	16,073	244	5,121	328,282	4,527,242	1,068,123	2,374,476	57,921	8,027,762
FRCST 2032	308,490	16,231	244	5,121	330,086	4,554,126	1,093,230	2,354,008	57,921	8,059,285
FRCST 2033	310,060	16,389	244	5,121	331,814	4,580,010	1,106,766	2,307,069	57,921	8,051,766
FRCST 2034	311,663	16,554	241	5,121	333,579	4,610,452	1,119,898	2,296,898	57,921	8,085,169
FRCST 2035	313,155	16,719	241	5,121	335,236	4,649,416	1,133,157	2,282,494	57,921	8,122,988
FRCST 2036	314,785	16,884	241	5,121	337,031	4,690,712	1,146,554	2,263,119	57,921	8,158,306
FRCST 2037	316,306	17,049	240	5,121	338,716	4,729,411	1,160,087	2,257,135	57,921	8,204,555
FRCST 2038	317,964	17,214	240	5,121	340,539	4,771,867	1,173,763	2,247,345	57,921	8,250,896

***** BASE SCENARIO WITH DSM IMPACTS *****

***** BASE SCENARIO WITH DSM IMPACTS *****

TIME PERIOD	AGGREGATED NUMBER OF CONSUMERS					AGGREGATED SYSTEM ENERGY SALES				
	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT. CHG.)	OTHER (ACT. CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
2007 -2012	0.17%	0.60%	5	380	0.22%	-1.34%	0.74%	2.12%	2.59%	-0.14%
2012 -2017	0.37%	0.20%	10	2385	0.52%	-0.40%	0.31%	2.39%	3.91%	0.53%
2018 -2023	0.63%	0.97%	9	21	0.63%	1.01%	0.76%	1.83%	0.00%	1.23%
2023 -2028	0.54%	0.98%	-1	0	0.55%	0.47%	1.15%	-0.59%	0.00%	0.22%
2028 -2033	0.51%	0.99%	-1	0	0.52%	0.51%	2.09%	-0.71%	0.00%	0.35%
2033 -2038	0.50%	0.99%	-4	0	0.52%	0.82%	1.18%	-0.52%	0.00%	0.49%
2007 -2017	0.27%	0.40%	15	2765	0.37%	-0.87%	0.52%	2.26%	3.24%	0.19%
2018 -2038	0.54%	0.98%	3	21	0.56%	0.70%	1.29%	0.00%	0.00%	0.57%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 2007	7,215,322	7,533,291	4.33%	4.84%	*****	1,533	1,559	1,407	1,421
ACTUAL 2008	7,193,537	7,471,337	3.80%	5.10%	*****	1,579	1,442	1,435	1,317
ACTUAL 2009	6,898,781	7,174,725	3.93%	4.86%	*****	1,674	1,453	1,520	1,306
ACTUAL 2010	7,338,146	7,656,224	4.25%	4.73%	*****	1,539	1,577	1,380	1,462
ACTUAL 2011	7,133,476	7,429,116	4.07%	4.19%	*****	1,552	1,579	1,409	1,441
ACTUAL 2012	7,123,700	7,364,416	3.35%	3.77%	*****	1,426	1,631	1,278	1,478
ACTUAL 2013	7,309,346	7,498,978	2.59%	3.19%	*****	1,472	1,498	1,360	1,351
ACTUAL 2014	7,560,267	7,804,699	3.20%	3.39%	*****	1,827	1,482	1,663	1,348
ACTUAL 2015	7,353,260	7,645,777	3.91%	4.16%	*****	1,750	1,533	1,622	1,364
ACTUAL 2016	7,388,028	7,719,002	4.38%	4.63%	*****	1,577	1,566	1,440	1,376
ACTUAL 2017	7,310,241	7,636,264	4.36%	4.78%	*****	1,563	1,548	1,401	1,372
FRCST 2018	7,680,887	8,039,640	4.55%	5.00%	75.200	1,623	1,609	1,490	1,435
FRCST 2019	7,781,179	8,122,709	4.29%	4.95%	75.760	1,645	1,632	1,512	1,460
FRCST 2020	7,867,486	8,214,025	4.30%	4.70%	75.520	1,662	1,651	1,530	1,480
FRCST 2021	7,996,639	8,348,982	4.30%	4.70%	75.380	1,687	1,679	1,554	1,507
FRCST 2022	8,091,022	8,447,605	4.30%	4.70%	75.860	1,706	1,701	1,572	1,528
FRCST 2023	8,162,902	8,522,715	4.30%	4.70%	75.890	1,720	1,719	1,585	1,545
FRCST 2024	8,207,905	8,569,740	4.30%	4.70%	77.410	1,731	1,732	1,595	1,557
FRCST 2025	8,244,223	8,607,690	4.30%	4.70%	78.960	1,737	1,742	1,601	1,566
FRCST 2026	8,270,883	8,635,548	4.30%	4.70%	80.540	1,743	1,750	1,606	1,573
FRCST 2027	8,294,317	8,660,035	4.30%	4.70%	82.150	1,751	1,758	1,613	1,581
FRCST 2028	8,251,420	8,615,211	4.30%	4.70%	83.790	1,746	1,752	1,610	1,576
FRCST 2029	8,255,993	8,619,989	4.30%	4.70%	85.470	1,748	1,754	1,612	1,592
FRCST 2030	8,314,544	8,681,170	4.30%	4.70%	87.180	1,762	1,768	1,626	1,606
FRCST 2031	8,370,896	8,740,054	4.30%	4.70%	88.920	1,777	1,782	1,640	1,620
FRCST 2032	8,403,900	8,774,541	4.30%	4.70%	90.700	1,787	1,791	1,649	1,629
FRCST 2033	8,396,496	8,766,804	4.30%	4.70%	92.510	1,788	1,792	1,652	1,631
FRCST 2034	8,431,499	8,803,380	4.30%	4.70%	92.510	1,800	1,803	1,663	1,641
FRCST 2035	8,471,105	8,844,766	4.30%	4.70%	92.510	1,808	1,811	1,671	1,649
FRCST 2036	8,508,305	8,883,637	4.30%	4.70%	92.510	1,816	1,819	1,678	1,657
FRCST 2037	8,556,721	8,934,229	4.30%	4.70%	92.510	1,827	1,831	1,689	1,667
FRCST 2038	8,605,196	8,984,883	4.30%	4.70%	92.510	1,838	1,842	1,699	1,677

***** BASE SCENARIO WITH DSM IMPACTS *****						***** BASE SCENARIO WITH DSM IMPACTS *****			
TIME PERIOD	AGGREGATED TOTAL ENERGY PURCHASED FOR MEMBERS (% CHG.)	H.E. ENERGY GENERATED (% CHG.)	AVG. MONTHLY LOSS FACTORS due to MEMBERS (AVERAGE)		H.E. AVERAGE WHOLESALE POWER COSTS (% CHG.)	AGGREGATED MEMBER PEAK SEASONAL DEMANDS (WITHOUT LOSSES, 30 MINUTE DEMAND)			
			ENERGY	DEMAND		Non-Coincident (% Chg)		Coincident (% Chg)	
						WINTER	SUMMER	WINTER	SUMMER
2007 -2012	-0.26%	-0.45%	3.96%	4.58%	*****	-1.43%	0.91%	-1.91%	0.80%
2012 -2017	0.52%	0.73%	3.63%	3.99%	*****	1.85%	-1.04%	1.85%	-1.47%
2018 -2023	1.22%	1.17%	4.34%	4.79%	0.18%	1.17%	1.33%	1.25%	1.49%
2023 -2028	0.22%	0.22%	4.30%	4.70%	2.00%	0.29%	0.38%	0.31%	0.41%
2028 -2033	0.35%	0.35%	4.30%	4.70%	2.00%	0.49%	0.46%	0.52%	0.68%
2033 -2038	0.49%	0.49%	4.30%	4.70%	0.00%	0.55%	0.55%	0.56%	0.57%
2007 -2017	0.13%	0.14%	3.83%	4.33%	*****	0.19%	-0.07%	-0.05%	-0.35%
2018 -2038	0.57%	0.56%	4.31%	4.73%	1.04%	0.62%	0.68%	0.66%	0.78%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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)					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		COINCIDENT PEAK	WITHOUT LOSSES		WITH LOSSES		NON-COIN. PEAK
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 2007	1,407	1,418	1,478	1,489	57.8%	1,496	1,555	1,571	1,633	52.7%
ACTUAL 2008	1,435	1,296	1,511	1,364	56.3%	1,562	1,420	1,644	1,494	51.7%
ACTUAL 2009	1,518	1,303	1,594	1,369	51.4%	1,672	1,450	1,756	1,522	46.6%
ACTUAL 2010	1,369	1,454	1,436	1,525	57.3%	1,526	1,570	1,600	1,646	53.1%
ACTUAL 2011	1,394	1,435	1,454	1,497	56.6%	1,535	1,573	1,601	1,640	51.7%
ACTUAL 2012	1,275	1,476	1,324	1,533	54.7%	1,423	1,629	1,477	1,691	49.6%
ACTUAL 2013	1,360	1,348	1,404	1,392	61.0%	1,472	1,495	1,520	1,543	55.5%
ACTUAL 2014	1,662	1,341	1,719	1,388	51.8%	1,825	1,475	1,888	1,525	47.2%
ACTUAL 2015	1,608	1,362	1,677	1,420	52.0%	1,734	1,531	1,808	1,596	48.3%
ACTUAL 2016	1,438	1,372	1,507	1,438	58.3%	1,575	1,562	1,650	1,636	53.3%
ACTUAL 2017	1,397	1,368	1,466	1,436	59.5%	1,558	1,543	1,635	1,619	53.3%
FRCST 2018	1,483	1,432	1,560	1,506	58.8%	1,616	1,605	1,699	1,688	54.0%
FRCST 2019	1,505.702	1,457	1,583	1,532	58.6%	1,638	1,628	1,722	1,711	53.9%
FRCST 2020	1,523.458	1,477	1,598	1,548	58.5%	1,655	1,647	1,735	1,727	53.9%
FRCST 2021	1,547.179	1,503	1,622	1,576	58.7%	1,680	1,675	1,761	1,756	54.1%
FRCST 2022	1,565.346	1,525	1,641	1,599	58.7%	1,699	1,697	1,781	1,779	54.1%
FRCST 2023	1,578.414	1,541	1,655	1,616	58.8%	1,713	1,715	1,796	1,798	54.1%
FRCST 2024	1,587.721	1,553	1,665	1,628	58.6%	1,723	1,728	1,807	1,811	53.9%
FRCST 2025	1,593.942	1,562	1,671	1,638	58.8%	1,730	1,737	1,814	1,822	53.9%
FRCST 2026	1,599.001	1,569	1,677	1,646	58.8%	1,735	1,746	1,820	1,830	53.9%
FRCST 2027	1,606.329	1,577	1,684	1,654	58.7%	1,743	1,754	1,828	1,839	53.8%
FRCST 2028	1,602.941	1,573	1,681	1,649	58.3%	1,738	1,747	1,822	1,832	53.5%
FRCST 2029	1,605.536	1,588	1,684	1,666	58.4%	1,741	1,749	1,825	1,834	53.6%
FRCST 2030	1,618.894	1,602	1,698	1,680	58.4%	1,755	1,763	1,840	1,849	53.6%
FRCST 2031	1,632.939	1,616	1,712	1,695	58.3%	1,770	1,778	1,855	1,864	53.5%
FRCST 2032	1,642.325	1,625	1,722	1,704	58.0%	1,779	1,787	1,865	1,873	53.3%
FRCST 2033	1,644.686	1,627	1,725	1,706	58.0%	1,781	1,787	1,867	1,874	53.4%
FRCST 2034	1,655.459	1,637	1,736	1,716	57.9%	1,792	1,798	1,879	1,886	53.3%
FRCST 2035	1,663.604	1,645	1,745	1,725	57.9%	1,801	1,807	1,888	1,895	53.3%
FRCST 2036	1,671.256	1,653	1,753	1,733	57.7%	1,809	1,815	1,896	1,903	53.1%
FRCST 2037	1,681.286	1,663	1,763	1,744	57.8%	1,819	1,826	1,908	1,915	53.3%
FRCST 2038	1,691.625	1,673	1,774	1,755	57.8%	1,830	1,838	1,919	1,927	53.2%

***** BASE SCENARIO WITH DSM IMPACTS *****					***** BASE SCENARIO WITH DSM IMPACTS *****					
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	
2007 -2012	-1.96%	0.81%	-2.17%	0.59%	55.68%	-1.00%	0.93%	-1.22%	0.71%	50.90%
2012 -2017	1.84%	-1.51%	2.05%	-1.30%	56.21%	1.84%	-1.07%	2.05%	-0.87%	51.17%
2018 -2023	1.25%	1.49%	1.19%	1.42%	58.70%	1.17%	1.33%	1.11%	1.27%	54.02%
2023 -2028	0.31%	0.41%	0.31%	0.41%	58.67%	0.29%	0.38%	0.29%	0.38%	53.85%
2028 -2033	0.52%	0.68%	0.52%	0.68%	58.24%	0.49%	0.46%	0.49%	0.46%	53.50%
2033 -2038	0.56%	0.57%	0.56%	0.57%	57.86%	0.55%	0.55%	0.55%	0.55%	53.27%
2007 -2017	-0.08%	-0.35%	-0.08%	-0.36%	56.06%	0.41%	-0.08%	0.40%	-0.08%	51.17%
2018 -2038	0.66%	0.78%	0.64%	0.77%	58.37%	0.62%	0.68%	0.61%	0.66%	53.66%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 ****						**** 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)					
YEAR	WINTER		SUMMER		H.E. ANNUAL LOAD FACTOR Due To EXTREME COINCIDENT PEAK	WINTER		SUMMER		H.E. ANNUAL LOAD FACTOR Due To EXTREME NON- COIN. PEAK	
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER		
ACTUAL 2007	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2008	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2010	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2011	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2012	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2013	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2014	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2015	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2016	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2017	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
FRCST 2018	1,662	1,597	1,748	1,680	52.5%	1,808	1,788	1,901	1,881	48.3%	
FRCST 2019	1,687	1,625	1,773	1,708	52.3%	1,832	1,814	1,926	1,907	48.1%	
FRCST 2020	1,707	1,647	1,790	1,727	52.3%	1,852	1,835	1,942	1,925	48.2%	
FRCST 2021	1,733	1,676	1,817	1,758	52.4%	1,879	1,866	1,971	1,957	48.4%	
FRCST 2022	1,753	1,700	1,839	1,782	52.4%	1,901	1,891	1,993	1,983	48.4%	
FRCST 2023	1,768	1,718	1,854	1,801	52.5%	1,917	1,910	2,010	2,003	48.4%	
FRCST 2024	1,778	1,730	1,864	1,814	52.3%	1,927	1,923	2,021	2,017	48.3%	
FRCST 2025	1,785	1,740	1,872	1,825	52.5%	1,936	1,934	2,030	2,028	48.4%	
FRCST 2026	1,791	1,748	1,879	1,834	52.5%	1,942	1,944	2,036	2,038	48.4%	
FRCST 2027	1,800	1,757	1,887	1,843	52.4%	1,951	1,953	2,046	2,048	48.3%	
FRCST 2028	1,796	1,752	1,884	1,837	52.1%	1,945	1,946	2,040	2,040	48.1%	
FRCST 2029	1,800	1,771	1,888	1,857	52.1%	1,949	1,949	2,044	2,044	48.1%	
FRCST 2030	1,815	1,786	1,903	1,873	52.1%	1,965	1,964	2,061	2,060	48.1%	
FRCST 2031	1,830	1,801	1,919	1,889	52.0%	1,981	1,980	2,077	2,076	48.0%	
FRCST 2032	1,841	1,811	1,930	1,899	51.8%	1,991	1,990	2,088	2,086	47.8%	
FRCST 2033	1,844	1,813	1,933	1,901	51.8%	1,994	1,991	2,091	2,088	47.9%	
FRCST 2034	1,855	1,823	1,945	1,912	51.7%	2,005	2,002	2,103	2,099	47.8%	
FRCST 2035	1,864	1,832	1,955	1,922	51.7%	2,015	2,011	2,113	2,109	47.8%	
FRCST 2036	1,873	1,842	1,964	1,931	51.5%	2,024	2,021	2,123	2,119	47.6%	
FRCST 2037	1,884	1,853	1,976	1,944	51.6%	2,037	2,034	2,136	2,133	47.8%	
FRCST 2038	1,896	1,865	1,989	1,956	51.6%	2,049	2,046	2,149	2,146	47.7%	

***** BASE SCENARIO WITH DSM IMPACTS *****						***** BASE SCENARIO WITH DSM IMPACTS *****					
**** EXTREME TEMPERATURE CONDITIONS ****						**** EXTREME TEMPERATURE CONDITIONS ****					
HOOSIER ENERGY COINCIDENT PEAK (60 MIN.)						HOOSIER ENERGY NON-COINCIDENT PEAK (60 MIN.)					
TIME PERIOD	Without Losses (% Chg)		With Losses (% Chg)		H.E. ANNUAL LOAD FACTOR (AVERAGE)	Without Losses (% Chg)		With Losses (% Chg)		EXT.NON-COIN H.E. ANNUAL LOAD FACTOR (AVERAGE)	
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER		
2007 -2012	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2012 -2017	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2018 -2023	1.25%	1.47%	1.19%	1.40%	52.40%	1.18%	1.33%	1.12%	1.26%	48.29%	
2023 -2028	0.31%	0.40%	0.32%	0.40%	52.37%	0.30%	0.37%	0.30%	0.37%	48.30%	
2028 -2033	0.52%	0.69%	0.52%	0.69%	51.96%	0.49%	0.46%	0.49%	0.46%	48.00%	
2033 -2038	0.56%	0.57%	0.56%	0.57%	51.63%	0.55%	0.55%	0.55%	0.55%	47.76%	
2007 -2017	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2018 -2038	0.66%	0.78%	0.65%	0.76%	52.09%	0.63%	0.68%	0.61%	0.66%	48.08%	

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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

Aggregated Member System Data

NUMBER OF CONSUMERS

SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
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	3,904,138	818,798	1,564,440	31,738	6,319,115
ACTUAL 2010	265,890	12,407	193	1,854	280,344	4,158,334	843,557	1,712,254	33,075	6,747,220
ACTUAL 2011	277,750	13,765	210	2,498	294,223	4,093,233	901,706	1,806,351	40,873	6,842,163
ACTUAL 2012	278,374	13,889	204	2,564	295,031	3,958,457	930,498	1,895,575	46,875	6,831,406
ACTUAL 2013	279,339	14,031	207	2,686	296,263	4,091,997	938,827	1,924,132	40,413	6,995,370
ACTUAL 2014	280,060	14,289	205	2,805	297,359	4,204,581	952,691	2,043,777	41,306	7,242,356
ACTUAL 2015	281,173	14,255	207	2,881	298,516	4,002,897	946,635	2,069,866	37,583	7,056,982
ACTUAL 2016	283,258	13,827	214	2,984	300,283	4,024,894	949,178	2,059,447	39,010	7,072,530
ACTUAL 2017	283,538	14,030	214	4,949	302,731	3,880,889	944,811	2,133,419	56,773	7,015,892
FRCST 2018	285,222	14,161	237	5,100	304,720	4,147,937	907,640	2,249,332	57,921	7,362,830
FRCST 2019	287,082	14,295	241	5,121	306,739	4,214,622	913,659	2,272,473	58,089	7,458,842
FRCST 2020	288,894	14,436	245	5,121	308,696	4,258,731	920,970	2,304,077	57,921	7,541,700
FRCST 2021	290,621	14,577	247	5,121	310,566	4,297,167	928,228	2,382,638	57,921	7,665,954
FRCST 2022	292,473	14,718	247	5,121	312,559	4,331,292	935,438	2,431,727	57,921	7,756,378
FRCST 2023	294,288	14,859	246	5,121	314,514	4,361,739	942,621	2,462,961	57,921	7,825,241
FRCST 2024	295,900	15,007	246	5,121	316,274	4,382,503	951,378	2,478,824	57,921	7,870,626
FRCST 2025	297,387	15,155	246	5,121	317,909	4,398,910	963,537	2,485,118	57,921	7,905,485
FRCST 2026	299,006	15,303	245	5,121	319,675	4,418,350	973,865	2,480,936	57,921	7,931,072
FRCST 2027	300,563	15,451	245	5,121	321,380	4,440,658	985,362	2,469,382	57,921	7,953,323
FRCST 2028	302,276	15,599	245	5,121	323,241	4,464,643	997,978	2,391,135	57,921	7,911,677
FRCST 2029	303,746	15,757	244	5,121	324,868	4,481,171	1,014,757	2,363,796	57,921	7,917,645
FRCST 2030	305,345	15,915	244	5,121	326,625	4,504,646	1,037,555	2,373,586	57,921	7,973,708
FRCST 2031	306,844	16,073	244	5,121	328,282	4,527,242	1,068,123	2,374,476	57,921	8,027,762
FRCST 2032	308,490	16,231	244	5,121	330,086	4,554,126	1,093,230	2,354,008	57,921	8,059,285
FRCST 2033	310,060	16,389	244	5,121	331,814	4,580,010	1,106,766	2,307,069	57,921	8,051,766
FRCST 2034	311,663	16,554	241	5,121	333,579	4,610,452	1,119,898	2,296,898	57,921	8,085,169
FRCST 2035	313,155	16,719	241	5,121	335,236	4,649,416	1,133,157	2,282,494	57,921	8,122,988
FRCST 2036	314,785	16,884	241	5,121	337,031	4,690,712	1,146,554	2,263,119	57,921	8,158,306
FRCST 2037	316,306	17,049	240	5,121	338,716	4,729,411	1,160,087	2,257,135	57,921	8,204,555
FRCST 2038	317,964	17,214	240	5,121	340,539	4,771,867	1,173,763	2,247,345	57,921	8,250,896

***** 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.)
2007 -2012	1.07%	2.55%	13	743	1.18%	-0.65%	1.70%	3.19%	6.48%	0.70%
2012 -2017	0.37%	0.20%	10	2385	0.52%	-0.40%	0.31%	2.39%	3.91%	0.53%
2018 -2023	0.63%	0.97%	9	21	0.63%	1.01%	0.76%	1.83%	0.00%	1.23%
2023 -2028	0.54%	0.98%	-1	0	0.55%	0.47%	1.15%	-0.59%	0.00%	0.22%
2028 -2033	0.51%	0.99%	-1	0	0.52%	0.51%	2.09%	-0.71%	0.00%	0.35%
2033 -2038	0.50%	0.99%	-4	0	0.52%	0.82%	1.18%	-0.52%	0.00%	0.49%
2007 -2017	0.72%	1.37%	23	3128	0.85%	-0.52%	1.00%	2.79%	5.19%	0.62%
2018 -2038	0.54%	0.98%	3	21	0.56%	0.70%	1.29%	0.00%	0.00%	0.57%

1979 :BEGINNING HISTORICAL DATA YEAR ?
 2017 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)
 20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR. ?)

***** 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)				ANNUAL LOAD FACTOR
			WINTER	SUMMER	(WITHOUT LOSSES)		(WITH LOSSES)		
					WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 2007	6,924,233	7,229,037	1,404	1,358	1,370	1,355	1,439	1,423	57.4%
ACTUAL 2008	6,912,387	7,179,069	1,406	1,265	1,391	1,245	1,465	1,311	55.8%
ACTUAL 2009	6,617,633	6,882,071	1,474	1,249	1,472	1,247	1,546	1,309	50.8%
ACTUAL 2010	7,043,763	7,348,773	1,331	1,399	1,320	1,392	1,385	1,460	57.5%
ACTUAL 2011	7,133,476	7,429,116	1,409	1,441	1,394	1,435	1,454	1,497	56.6%
ACTUAL 2012	7,123,700	7,364,416	1,278	1,478	1,275	1,476	1,324	1,533	54.7%
ACTUAL 2013	7,309,346	7,498,978	1,360	1,351	1,360	1,348	1,404	1,392	61.0%
ACTUAL 2014	7,560,267	7,804,699	1,663	1,348	1,662	1,341	1,719	1,388	51.8%
ACTUAL 2015	7,353,260	7,645,777	1,622	1,364	1,608	1,362	1,677	1,420	52.0%
ACTUAL 2016	7,388,028	7,719,002	1,440	1,376	1,438	1,372	1,507	1,438	58.3%
ACTUAL 2017	7,310,241	7,636,264	1,401	1,372	1,397	1,368	1,466	1,436	59.5%
FRCST 2018	7,680,887	8,039,640	1,490	1,435	1,483	1,432	1,560	1,506	58.8%
FRCST 2019	7,781,179	8,122,709	1,512	1,460	1,506	1,457	1,583	1,532	58.6%
FRCST 2020	7,867,486	8,214,025	1,530	1,480	1,523	1,477	1,598	1,548	58.5%
FRCST 2021	7,996,639	8,348,982	1,554	1,507	1,547	1,503	1,622	1,576	58.7%
FRCST 2022	8,091,022	8,447,605	1,572	1,528	1,565	1,525	1,641	1,599	58.7%
FRCST 2023	8,162,902	8,522,715	1,585	1,545	1,578	1,541	1,655	1,616	58.8%
FRCST 2024	8,207,905	8,569,740	1,595	1,557	1,588	1,553	1,665	1,628	58.6%
FRCST 2025	8,244,223	8,607,690	1,601	1,566	1,594	1,562	1,671	1,638	58.8%
FRCST 2026	8,270,883	8,635,548	1,606	1,573	1,599	1,569	1,677	1,646	58.8%
FRCST 2027	8,294,317	8,660,035	1,613	1,581	1,606	1,577	1,684	1,654	58.7%
FRCST 2028	8,251,420	8,615,211	1,610	1,576	1,603	1,573	1,681	1,649	58.3%
FRCST 2029	8,255,993	8,619,989	1,612	1,592	1,606	1,588	1,684	1,666	58.4%
FRCST 2030	8,314,544	8,681,170	1,626	1,606	1,619	1,602	1,698	1,680	58.4%
FRCST 2031	8,370,896	8,740,054	1,640	1,620	1,633	1,616	1,712	1,695	58.3%
FRCST 2032	8,403,900	8,774,541	1,649	1,629	1,642	1,625	1,722	1,704	58.0%
FRCST 2033	8,396,496	8,766,804	1,652	1,631	1,645	1,627	1,725	1,706	58.0%
FRCST 2034	8,431,499	8,803,380	1,663	1,641	1,655	1,637	1,736	1,716	57.9%
FRCST 2035	8,471,105	8,844,766	1,671	1,649	1,664	1,645	1,745	1,725	57.9%
FRCST 2036	8,508,305	8,883,637	1,678	1,657	1,671	1,653	1,753	1,733	57.7%
FRCST 2037	8,556,721	8,934,229	1,689	1,667	1,681	1,663	1,763	1,744	57.8%
FRCST 2038	8,605,196	8,984,883	1,699	1,677	1,692	1,673	1,774	1,755	57.8%

***** BASE 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				ADJUSTED ANNUAL LOAD FACTOR (AVERAGE)
			WINTER	SUMMER	Without Losses (% Chg)		With Losses (% Chg)		
					WINTER	SUMMER	WINTER	SUMMER	
2007 -2012	0.57%	0.37%	-1.86%	1.71%	-1.43%	1.73%	-1.65%	1.51%	55.46%
2012 -2017	0.52%	0.73%	1.85%	-1.47%	1.84%	-1.51%	2.05%	-1.30%	56.21%
2018 -2023	1.22%	1.17%	1.25%	1.49%	1.25%	1.49%	1.19%	1.42%	58.70%
2023 -2028	0.22%	0.22%	0.31%	0.41%	0.31%	0.41%	0.31%	0.41%	58.67%
2028 -2033	0.35%	0.35%	0.52%	0.68%	0.52%	0.68%	0.52%	0.68%	58.24%
2033 -2038	0.49%	0.49%	0.56%	0.57%	0.56%	0.57%	0.56%	0.57%	57.86%
2007 -2017	0.54%	0.55%	-0.02%	0.11%	0.19%	0.10%	0.19%	0.09%	55.94%
2018 -2038	0.57%	0.56%	0.66%	0.78%	0.66%	0.78%	0.64%	0.77%	58.37%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 2007	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****
ACTUAL 2010	*****	*****	*****	*****	*****
ACTUAL 2011	*****	*****	*****	*****	*****
ACTUAL 2012	*****	*****	*****	*****	*****
ACTUAL 2013	*****	*****	*****	*****	*****
ACTUAL 2014	*****	*****	*****	*****	*****
ACTUAL 2015	*****	*****	*****	*****	*****
ACTUAL 2016	*****	*****	*****	*****	*****
ACTUAL 2017	*****	*****	*****	*****	*****
FRCST 2018	1,662	1,597	1,748	1,680	52.5%
FRCST 2019	1,687	1,625	1,773	1,708	52.3%
FRCST 2020	1,707	1,647	1,790	1,727	52.3%
FRCST 2021	1,733	1,676	1,817	1,758	52.4%
FRCST 2022	1,753	1,700	1,839	1,782	52.4%
FRCST 2023	1,768	1,718	1,854	1,801	52.5%
FRCST 2024	1,778	1,730	1,864	1,814	52.3%
FRCST 2025	1,785	1,740	1,872	1,825	52.5%
FRCST 2026	1,791	1,748	1,879	1,834	52.5%
FRCST 2027	1,800	1,757	1,887	1,843	52.4%
FRCST 2028	1,796	1,752	1,884	1,837	52.1%
FRCST 2029	1,800	1,771	1,888	1,857	52.1%
FRCST 2030	1,815	1,786	1,903	1,873	52.1%
FRCST 2031	1,830	1,801	1,919	1,889	52.0%
FRCST 2032	1,841	1,811	1,930	1,899	51.8%
FRCST 2033	1,844	1,813	1,933	1,901	51.8%
FRCST 2034	1,855	1,823	1,945	1,912	51.7%
FRCST 2035	1,864	1,832	1,955	1,922	51.7%
FRCST 2036	1,873	1,842	1,964	1,931	51.5%
FRCST 2037	1,884	1,853	1,976	1,944	51.6%
FRCST 2038	1,896	1,865	1,989	1,956	51.6%

***** BASE SCENARIO WITH DSM IMPACTS *****

***** BASE SCENARIO RESULTS *****

Adjusted for Systems 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	
2007 -2012	*****	*****	*****	*****	*****
2012 -2017	*****	*****	*****	*****	*****
2018 -2023	1.25%	1.47%	1.19%	1.40%	52.40%
2023 -2028	0.31%	0.40%	0.32%	0.40%	52.37%
2028 -2033	0.52%	0.69%	0.52%	0.69%	51.96%
2033 -2038	0.56%	0.57%	0.56%	0.57%	51.63%
2007 -2017	*****	*****	*****	*****	*****
2018 -2038	0.66%	0.78%	0.65%	0.76%	52.09%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 IL#002 and Special Industrial Loads
Aggregated Member System Data
NUMBER OF CONSUMERS

Values Adjusted for 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 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	3,904,138	818,798	1,407,974	31,738	6,162,649
ACTUAL 2010	265,890	12,407	192	1,854	280,343	4,158,334	843,557	1,539,864	33,075	6,574,830
ACTUAL 2011	277,750	13,765	209	2,498	294,222	4,093,233	901,706	1,639,768	40,873	6,675,581
ACTUAL 2012	278,374	13,889	203	2,564	295,030	3,958,457	930,498	1,724,452	46,875	6,660,282
ACTUAL 2013	279,339	14,031	206	2,686	296,262	4,091,997	938,827	1,755,612	40,413	6,826,850
ACTUAL 2014	280,060	14,289	204	2,805	297,358	4,204,581	952,691	1,877,588	41,306	7,076,166
ACTUAL 2015	281,173	14,255	206	2,881	298,515	4,002,897	946,635	1,905,355	37,583	6,892,471
ACTUAL 2016	283,258	13,827	213	2,984	300,282	4,024,894	949,178	1,896,922	39,010	6,910,005
ACTUAL 2017	283,538	14,030	213	4,949	302,730	3,880,889	944,811	1,974,743	56,773	6,857,216
FRCST 2018	285,222	14,161	236	5,100	304,719	4,147,937	907,640	2,094,360	57,921	7,207,858
FRCST 2019	287,082	14,295	240	5,121	306,738	4,214,622	913,659	2,117,501	58,089	7,303,870
FRCST 2020	288,894	14,436	244	5,121	308,695	4,258,731	920,970	2,149,105	57,921	7,386,727
FRCST 2021	290,621	14,577	246	5,121	310,565	4,297,167	928,228	2,227,666	57,921	7,510,981
FRCST 2022	292,473	14,718	246	5,121	312,558	4,331,292	935,438	2,276,755	57,921	7,601,406
FRCST 2023	294,288	14,859	245	5,121	314,513	4,361,739	942,621	2,307,989	57,921	7,670,269
FRCST 2024	295,900	15,007	245	5,121	316,273	4,382,503	951,378	2,323,852	57,921	7,715,653
FRCST 2025	297,387	15,155	245	5,121	317,908	4,398,910	963,537	2,330,146	57,921	7,750,513
FRCST 2026	299,006	15,303	244	5,121	319,674	4,418,350	973,865	2,325,964	57,921	7,776,100
FRCST 2027	300,563	15,451	244	5,121	321,379	4,440,658	985,362	2,314,410	57,921	7,798,351
FRCST 2028	302,276	15,599	244	5,121	323,240	4,464,643	997,978	2,236,163	57,921	7,756,705
FRCST 2029	303,746	15,757	243	5,121	324,867	4,481,171	1,014,757	2,208,824	57,921	7,762,673
FRCST 2030	305,345	15,915	243	5,121	326,624	4,504,646	1,037,555	2,218,614	57,921	7,818,736
FRCST 2031	306,844	16,073	243	5,121	328,281	4,527,242	1,068,123	2,219,504	57,921	7,872,790
FRCST 2032	308,490	16,231	243	5,121	330,085	4,554,126	1,093,230	2,199,036	57,921	7,904,313
FRCST 2033	310,060	16,389	243	5,121	331,813	4,580,010	1,106,766	2,152,097	57,921	7,896,794
FRCST 2034	311,663	16,554	240	5,121	333,578	4,610,452	1,119,898	2,141,926	57,921	7,930,197
FRCST 2035	313,155	16,719	240	5,121	335,235	4,649,416	1,133,157	2,127,522	57,921	7,968,015
FRCST 2036	314,785	16,884	240	5,121	337,030	4,690,712	1,146,554	2,108,147	57,921	8,003,333
FRCST 2037	316,306	17,049	239	5,121	338,715	4,729,411	1,160,087	2,102,163	57,921	8,049,583
FRCST 2038	317,964	17,214	239	5,121	340,538	4,771,867	1,173,763	2,092,373	57,921	8,095,924

***** 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.)
2007 -2012	1.07%	2.55%	13	743	1.18%	-0.65%	1.70%	3.74%	6.48%	0.76%
2012 -2017	0.37%	0.20%	10	2385	0.52%	-0.40%	0.31%	2.75%	3.91%	0.58%
2018 -2023	0.63%	0.97%	9	21	0.63%	1.01%	0.76%	1.96%	0.00%	1.25%
2023 -2028	0.54%	0.98%	-1	0	0.55%	0.47%	1.15%	-0.63%	0.00%	0.22%
2028 -2033	0.51%	0.99%	-1	0	0.52%	0.51%	2.09%	-0.76%	0.00%	0.36%
2033 -2038	0.50%	0.99%	-4	0	0.52%	0.82%	1.18%	-0.56%	0.00%	0.50%
2007 -2017	0.72%	1.37%	23	3128	0.85%	-0.52%	1.00%	3.24%	5.19%	0.67%
2018 -2038	0.54%	0.98%	3	21	0.56%	0.70%	1.29%	0.00%	0.00%	0.58%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 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)				ANNUAL LOAD FACTOR
			WINTER	SUMMER	(WITHOUT LOSSES)		(WITH LOSSES)		
					WINTER	SUMMER	WINTER	SUMMER	
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	6,461,167	6,725,605	1,467	1,232	1,465	1,229	1,525	1,292	50.3%
ACTUAL 2010	6,871,372	7,176,383	1,317	1,373	1,306	1,366	1,357	1,431	57.2%
ACTUAL 2011	6,966,893	7,262,533	1,392	1,424	1,377	1,418	1,453	1,478	56.1%
ACTUAL 2012	6,952,576	7,193,293	1,257	1,459	1,254	1,457	1,287	1,537	53.3%
ACTUAL 2013	7,140,826	7,330,458	1,336	1,334	1,336	1,331	1,376	1,385	60.4%
ACTUAL 2014	7,394,078	7,638,510	1,646	1,328	1,645	1,321	1,698	1,369	51.4%
ACTUAL 2015	7,188,749	7,481,266	1,593	1,346	1,579	1,344	1,643	1,412	52.0%
ACTUAL 2016	7,225,503	7,556,477	1,425	1,354	1,423	1,350	1,498	1,412	57.4%
ACTUAL 2017	7,151,565	7,477,588	1,384	1,348	1,380	1,344	1,444	1,416	59.1%
FRCST 2018	7,525,915	7,884,668	1,468	1,413	1,461	1,410	1,538	1,484	58.5%
FRCST 2019	7,626,207	7,967,737	1,490	1,439	1,484	1,435	1,561	1,510	58.3%
FRCST 2020	7,712,514	8,059,053	1,508	1,458	1,501	1,455	1,575	1,526	58.2%
FRCST 2021	7,841,667	8,194,009	1,532	1,485	1,525	1,482	1,600	1,555	58.5%
FRCST 2022	7,936,050	8,292,633	1,550	1,507	1,543	1,503	1,619	1,577	58.5%
FRCST 2023	8,007,930	8,367,743	1,563	1,523	1,556	1,519	1,633	1,594	58.5%
FRCST 2024	8,052,933	8,414,768	1,572	1,535	1,566	1,531	1,643	1,607	58.3%
FRCST 2025	8,089,251	8,452,718	1,579	1,544	1,572	1,540	1,649	1,616	58.5%
FRCST 2026	8,115,911	8,480,575	1,584	1,552	1,577	1,548	1,655	1,624	58.5%
FRCST 2027	8,139,345	8,505,062	1,591	1,559	1,584	1,555	1,662	1,632	58.4%
FRCST 2028	8,096,448	8,460,239	1,588	1,555	1,581	1,551	1,659	1,627	58.1%
FRCST 2029	8,101,021	8,465,016	1,590	1,570	1,583	1,567	1,661	1,644	58.2%
FRCST 2030	8,159,572	8,526,198	1,604	1,584	1,597	1,580	1,676	1,658	58.1%
FRCST 2031	8,215,923	8,585,082	1,618	1,598	1,611	1,594	1,690	1,673	58.0%
FRCST 2032	8,248,928	8,619,569	1,627	1,607	1,620	1,603	1,700	1,682	57.7%
FRCST 2033	8,241,524	8,611,832	1,630	1,609	1,623	1,605	1,703	1,684	57.7%
FRCST 2034	8,276,527	8,648,408	1,640	1,619	1,633	1,615	1,714	1,695	57.6%
FRCST 2035	8,316,133	8,689,794	1,649	1,627	1,641	1,623	1,722	1,703	57.6%
FRCST 2036	8,353,332	8,728,665	1,656	1,635	1,649	1,631	1,730	1,711	57.4%
FRCST 2037	8,401,748	8,779,256	1,666	1,645	1,659	1,641	1,741	1,722	57.6%
FRCST 2038	8,450,224	8,829,910	1,677	1,656	1,669	1,652	1,752	1,733	57.5%

***** BASE SCENARIO WITH DSM IMPACTS *****

***** BASE 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	
2007 -2012	0.63%	0.42%	-1.48%	1.76%	-1.04%	1.78%	-1.49%	1.93%	54.98%
2012 -2017	0.57%	0.78%	1.94%	-1.57%	1.93%	-1.60%	2.33%	-1.63%	55.60%
2018 -2023	1.25%	1.20%	1.27%	1.51%	1.27%	1.51%	1.21%	1.44%	58.41%
2023 -2028	0.22%	0.22%	0.31%	0.41%	0.31%	0.41%	0.31%	0.41%	58.38%
2028 -2033	0.36%	0.36%	0.52%	0.69%	0.52%	0.69%	0.52%	0.69%	57.96%
2033 -2038	0.50%	0.50%	0.57%	0.58%	0.57%	0.58%	0.57%	0.58%	57.58%
2007 -2017	0.60%	0.60%	0.22%	0.08%	0.44%	0.07%	0.40%	0.14%	55.47%
2018 -2038	0.58%	0.57%	0.67%	0.79%	0.67%	0.79%	0.65%	0.78%	58.08%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 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 2007	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****
ACTUAL 2010	*****	*****	*****	*****	*****
ACTUAL 2011	*****	*****	*****	*****	*****
ACTUAL 2012	*****	*****	*****	*****	*****
ACTUAL 2013	*****	*****	*****	*****	*****
ACTUAL 2014	*****	*****	*****	*****	*****
ACTUAL 2015	*****	*****	*****	*****	*****
ACTUAL 2016	*****	*****	*****	*****	*****
ACTUAL 2017	*****	*****	*****	*****	*****
FRCST 2018	1,639	1,575	1,726	1,658	52.2%
FRCST 2019	1,665	1,603	1,751	1,687	51.9%
FRCST 2020	1,684	1,625	1,768	1,705	51.9%
FRCST 2021	1,711	1,654	1,795	1,736	52.1%
FRCST 2022	1,731	1,678	1,816	1,760	52.1%
FRCST 2023	1,746	1,696	1,832	1,780	52.1%
FRCST 2024	1,756	1,708	1,842	1,792	52.0%
FRCST 2025	1,763	1,718	1,850	1,803	52.2%
FRCST 2026	1,769	1,727	1,856	1,812	52.1%
FRCST 2027	1,778	1,735	1,865	1,821	52.1%
FRCST 2028	1,774	1,730	1,861	1,816	51.7%
FRCST 2029	1,778	1,749	1,866	1,836	51.8%
FRCST 2030	1,793	1,764	1,881	1,851	51.7%
FRCST 2031	1,808	1,779	1,897	1,867	51.7%
FRCST 2032	1,818	1,789	1,908	1,877	51.4%
FRCST 2033	1,821	1,791	1,911	1,880	51.4%
FRCST 2034	1,832	1,802	1,923	1,890	51.3%
FRCST 2035	1,842	1,811	1,933	1,900	51.3%
FRCST 2036	1,851	1,820	1,942	1,910	51.2%
FRCST 2037	1,862	1,832	1,954	1,922	51.3%
FRCST 2038	1,874	1,843	1,966	1,934	51.3%

***** BASE SCENARIO WITH DSM IMPACTS *****

***** BASE SCENARIO RESULTS *****

Adjusted for Sys. & Ind. HE EXT. COIN. 60 MINUTE DEMAND

TIME PERIOD	Without Losses (% Chg)		With Losses (% Chg)		ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)
	WINTER	SUMMER	WINTER	SUMMER	
2007 -2012	*****	*****	*****	*****	*****
2012 -2017	*****	*****	*****	*****	*****
2018 -2023	1.27%	1.49%	1.20%	1.42%	52.06%
2023 -2028	0.32%	0.40%	0.32%	0.40%	52.04%
2028 -2033	0.53%	0.69%	0.53%	0.69%	51.63%
2033 -2038	0.57%	0.57%	0.57%	0.57%	51.30%
2007 -2017	*****	*****	*****	*****	*****
2018 -2038	0.67%	0.79%	0.65%	0.77%	51.76%

1979 :BEGINNING HISTORICAL DATA YEAR ?
 2017 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)
 20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** 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 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	99.86%	99.76%	100.0%		0	0	100.0%		0	0
ACTUAL 2010	99.16%	99.49%	100.0%		0	0	100.0%		0	0
ACTUAL 2011	98.92%	99.58%	100.0%		0	0	100.0%		0	0
ACTUAL 2012	99.76%	99.86%	100.0%		0	0	100.0%		0	0
ACTUAL 2013	100.00%	99.78%	100.0%		0	0	100.0%		0	0
ACTUAL 2014	99.94%	99.47%	100.0%		0	0	100.0%		0	0
ACTUAL 2015	99.12%	99.85%	100.0%		0	0	100.0%		0	0
ACTUAL 2016	99.86%	99.70%	100.0%		0	0	100.0%		0	0
ACTUAL 2017	99.71%	99.70%	100.0%		0	0	100.0%		0	0
FRCST 2018	99.56%	99.75%	100.0%		0	0	100.0%		0	0
FRCST 2019	99.56%	99.75%	100.0%		0	0	100.0%		0	0
FRCST 2020	99.56%	99.75%	100.0%		0	0	100.0%		0	0
FRCST 2021	99.56%	99.75%	100.0%		0	0	100.0%		0	0
FRCST 2022	99.56%	99.75%	100.0%		0	0	100.0%		0	0
FRCST 2023	99.56%	99.75%	100.0%		0	0	100.0%		0	0
FRCST 2024	99.56%	99.75%	100.0%		0	0	100.0%		0	0
FRCST 2025	99.56%	99.75%	100.0%		0	0	100.0%		0	0
FRCST 2026	99.56%	99.75%	100.0%		0	0	100.0%		0	0
FRCST 2027	99.56%	99.75%	100.0%		0	0	100.0%		0	0
FRCST 2028	99.56%	99.75%	100.0%		0	0	100.0%		0	0
FRCST 2029	99.56%	99.75%	100.0%		0	0	100.0%		0	0
FRCST 2030	99.56%	99.75%	100.0%		0	0	100.0%		0	0
FRCST 2031	99.56%	99.75%	100.0%		0	0	100.0%		0	0
FRCST 2032	99.56%	99.75%	100.0%		0	0	100.0%		0	0
FRCST 2033	99.56%	99.75%	100.0%		0	0	100.0%		0	0
FRCST 2034	99.56%	99.75%	100.0%		0	0	100.0%		0	0
FRCST 2035	99.56%	99.75%	100.0%		0	0	100.0%		0	0
FRCST 2036	99.56%	99.75%	100.0%		0	0	100.0%		0	0
FRCST 2037	99.56%	99.75%	100.0%		0	0	100.0%		0	0
FRCST 2038	99.56%	99.75%	100.0%		0	0	100.0%		0	0

***** BASE SCENARIO WITH DSM IMPACTS *****

TIME PERIOD	HE TIME FACTOR RATIO (30 to 60 MINUTE)	
	WINTER (AVERAGE)	SUMMER (AVERAGE)
2007 -2012	99.03%	99.47%
2012 -2017	99.73%	99.73%
2018 -2023	99.56%	99.75%
2023 -2028	99.56%	99.75%
2028 -2033	99.56%	99.75%
2033 -2038	99.56%	99.75%
2007 -2017	99.35%	99.58%
2018 -2038	99.56%	99.75%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 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
ACTUAL 2010	100.0%	0	0	0.0%	1	1
ACTUAL 2011	100.0%	0	0	100.0%	0	0
ACTUAL 2012	100.0%	0	0	100.0%	0	0
ACTUAL 2013	100.0%	0	0	100.0%	0	0
ACTUAL 2014	100.0%	0	0	100.0%	0	0
ACTUAL 2015	100.0%	0	0	100.0%	0	0
ACTUAL 2016	100.0%	0	0	100.0%	0	0
ACTUAL 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
FRCST 2031	100.0%	0	0	100.0%	0	0
FRCST 2032	100.0%	0	0	100.0%	0	0
FRCST 2033	100.0%	0	0	100.0%	0	0
FRCST 2034	100.0%	0	0	100.0%	0	0
FRCST 2035	100.0%	0	0	100.0%	0	0
FRCST 2036	100.0%	0	0	100.0%	0	0
FRCST 2037	100.0%	0	0	100.0%	0	0
FRCST 2038	100.0%	0	0	100.0%	0	0

***** BASE SCENARIO WITH DSM IMPACTS *****

TIME PERIOD

2007 -2012
2012 -2017

2018 -2023
2023 -2028
2028 -2033
2033 -2038

2007 -2017
2018 -2038

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 Energy Impact

DSM Demand Impacts-- Both EE & DR Programs)
Coincident 60 Minute Demand MW

YEAR	DSM EE Program Energy Impact				DSM Demand Impacts-- Both EE & DR Programs)			
	Aggregated Total Member Energy Purchased Savings MWH	Percent of Total Purchases w/o DSM	Total Member Energy Generated Savings MWH	Percent of Total Generated w/o DSM	Savings w/o Losses		Savings with Losses	
					Winter	Summer	Winter	Summer
ACTUAL 2007	0	0.0%	0	0.0%	0.000	0.000	0.000	0.000
ACTUAL 2008	0	0.0%	0	0.0%	0.000	0.000	0.000	0.000
ACTUAL 2009	25,159	0.4%	26,189	0.4%	8.978	3.703	9.436	3.892
ACTUAL 2010	49,468	0.7%	51,663	0.7%	20.610	10.768	21.633	11.302
ACTUAL 2011	81,677	1.2%	85,143	1.2%	32.274	17.850	33.686	18.630
ACTUAL 2012	103,470	1.5%	107,053	1.5%	40.343	23.944	41.924	24.882
ACTUAL 2013	125,031	1.7%	128,352	1.7%	46.802	17.136	48.342	17.700
ACTUAL 2014	144,763	1.9%	149,549	1.9%	52.425	32.671	54.265	33.817
ACTUAL 2015	164,860	2.2%	171,568	2.2%	64.045	25.255	66.824	26.351
ACTUAL 2016	194,538	2.6%	203,449	2.6%	73.355	46.929	76.917	49.208
ACTUAL 2017	219,951	3.0%	229,978	3.0%	79.051	33.914	83.019	35.616
FRCST 2018	227,703	2.9%	238,557	2.9%	80.948	50.866	85.208	53.543
FRCST 2019	239,800	3.0%	250,539	3.0%	81.429	47.024	85.671	49.473
FRCST 2020	252,848	3.2%	264,209	3.2%	83.203	46.374	87.307	48.661
FRCST 2021	260,898	3.2%	272,620	3.2%	84.603	45.103	88.776	47.328
FRCST 2022	273,692	3.3%	285,990	3.3%	87.313	44.994	91.620	47.213
FRCST 2023	286,088	3.4%	298,942	3.4%	90.573	45.612	95.040	47.861
FRCST 2024	304,974	3.6%	318,678	3.6%	95.122	47.199	99.813	49.527
FRCST 2025	319,277	3.8%	333,622	3.8%	99.131	47.918	104.020	50.281
FRCST 2026	335,362	4.0%	350,431	4.0%	103.209	48.622	108.299	51.020
FRCST 2027	347,363	4.1%	362,970	4.1%	103.644	48.226	108.755	50.604
FRCST 2028	357,033	4.2%	373,075	4.2%	102.980	48.182	108.059	50.558
FRCST 2029	364,298	4.3%	380,667	4.3%	102.777	48.297	107.846	50.679
FRCST 2030	363,018	4.3%	379,329	4.3%	100.865	46.208	105.840	48.487
FRCST 2031	353,191	4.1%	369,060	4.1%	96.365	41.087	101.118	43.113
FRCST 2032	348,668	4.1%	364,334	4.1%	93.665	38.298	98.284	40.187
FRCST 2033	357,305	4.2%	373,360	4.2%	93.028	38.093	97.616	39.971
FRCST 2034	366,568	4.2%	383,039	4.2%	92.761	37.970	97.335	39.843
FRCST 2035	367,345	4.2%	383,850	4.2%	93.623	38.385	98.241	40.278
FRCST 2036	369,492	4.2%	386,094	4.2%	94.665	38.804	99.334	40.718
FRCST 2037	374,982	4.3%	391,831	4.3%	96.140	39.243	100.881	41.178
FRCST 2038	380,461	4.3%	397,556	4.3%	97.619	39.663	102.434	41.620

***** BASE SCENARIO WITH DSM IMPACTS *****

TIME PERIOD

2007 -2012
2012 -2017

2018 -2023
2023 -2028
2028 -2033
2033 -2038

2007 -2017
2018 -2038

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 2007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ACTUAL 2008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ACTUAL 2009	8.598	3.080	9.037	3.238	0.380	0.622	0.399	0.654
ACTUAL 2010	17.983	6.820	18.875	7.158	2.628	3.948	2.758	4.144
ACTUAL 2011	27.786	11.209	29.001	11.699	4.488	6.640	4.685	6.931
ACTUAL 2012	34.681	14.358	36.040	14.921	5.662	9.586	5.884	9.962
ACTUAL 2013	40.471	17.136	41.803	17.700	6.331	0.000	6.539	0.000
ACTUAL 2014	45.624	20.484	47.225	21.202	6.801	12.187	7.039	12.615
ACTUAL 2015	56.921	25.255	59.391	26.351	7.124	0.000	7.433	0.000
ACTUAL 2016	65.902	31.565	69.101	33.097	7.454	15.364	7.815	16.110
ACTUAL 2017	71.365	33.914	74.947	35.616	7.686	0.000	8.072	0.000
FRCST 2018	73.124	34.665	76.972	36.490	7.824	16.201	8.236	17.053
FRCST 2019	76.067	35.845	80.030	37.712	5.362	11.179	5.641	11.761
FRCST 2020	79.573	37.288	83.497	39.127	3.630	9.086	3.809	9.535
FRCST 2021	82.220	37.760	86.275	39.622	2.383	7.343	2.501	7.706
FRCST 2022	85.776	38.866	90.006	40.783	1.538	6.128	1.613	6.430
FRCST 2023	89.421	39.896	93.831	41.864	1.152	5.716	1.209	5.998
FRCST 2024	94.164	41.642	98.808	43.696	0.957	5.557	1.005	5.831
FRCST 2025	98.252	42.535	103.098	44.633	0.878	5.383	0.922	5.648
FRCST 2026	102.412	43.339	107.462	45.476	0.798	5.283	0.837	5.544
FRCST 2027	102.762	42.893	107.830	45.009	0.881	5.332	0.925	5.595
FRCST 2028	102.013	42.725	107.044	44.832	0.967	5.457	1.015	5.726
FRCST 2029	101.723	42.738	106.740	44.846	1.054	5.558	1.106	5.832
FRCST 2030	99.836	41.037	104.759	43.061	1.030	5.171	1.081	5.426
FRCST 2031	95.315	36.719	100.016	38.530	1.051	4.367	1.102	4.583
FRCST 2032	92.593	33.988	97.160	35.664	1.072	4.310	1.124	4.523
FRCST 2033	91.935	33.677	96.469	35.338	1.093	4.416	1.147	4.633
FRCST 2034	91.646	33.532	96.166	35.186	1.115	4.439	1.170	4.657
FRCST 2035	92.486	33.887	97.048	35.558	1.137	4.498	1.193	4.720
FRCST 2036	93.505	34.247	98.117	35.936	1.160	4.558	1.217	4.782
FRCST 2037	94.957	34.627	99.640	36.335	1.183	4.615	1.241	4.843
FRCST 2038	96.413	34.992	101.168	36.718	1.207	4.671	1.266	4.902

TIME PERIOD

2007 -2012
2012 -2017

2018 -2023
2023 -2028
2028 -2033
2033 -2038

2007 -2017
2018 -2038

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 *****

Load Control Switches

1 = Load Control on peak 0 = No load control on peak

YEAR	Winter CP	Winter NCP	Summer CP	Summer NCP
ACTUAL 2007	NA	NA	NA	NA
ACTUAL 2008	NA	NA	NA	NA
ACTUAL 2009	1	0	1	0
ACTUAL 2010	1	0	1	0
ACTUAL 2011	1	0	1	0
ACTUAL 2012	1	0	1	0
ACTUAL 2013	1	0	0	0
ACTUAL 2014	1	0	1	0
ACTUAL 2015	1	0	0	0
ACTUAL 2016	1	0	1	0
ACTUAL 2017	1	0	0	0
FRCST 2018	1	0	1	0
FRCST 2019	1	0	1	0
FRCST 2020	1	0	1	0
FRCST 2021	1	0	1	0
FRCST 2022	1	0	1	0
FRCST 2023	1	0	1	0
FRCST 2024	1	0	1	0
FRCST 2025	1	0	1	0
FRCST 2026	1	0	1	0
FRCST 2027	1	0	1	0
FRCST 2028	1	0	1	0
FRCST 2029	1	0	1	0
FRCST 2030	1	0	1	0
FRCST 2031	1	0	1	0
FRCST 2032	1	0	1	0
FRCST 2033	1	0	1	0
FRCST 2034	1	0	1	0
FRCST 2035	1	0	1	0
FRCST 2036	1	0	1	0
FRCST 2037	1	0	1	0
FRCST 2038	1	0	1	0

4.3%

TIME PERIOD

2007 -2012
2012 -2017

2018 -2023
2023 -2028
2028 -2033
2033 -2038

2007 -2017
2018 -2038

Appendix A2

Historical/Forecast Annual Load Summary – High Scenario

1979 :BEGINNING HISTORICAL DATA YEAR ?
 2017 :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 2007	275,983	13,481	199	2,184	291,847	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	4,049,084	862,271	1,638,530	36,404	6,586,290
ACTUAL 2010	277,915	13,683	201	2,222	294,021	4,313,611	889,903	1,783,519	40,028	7,027,061
ACTUAL 2011	277,750	13,765	210	2,498	294,223	4,093,233	901,706	1,806,351	40,873	6,842,163
ACTUAL 2012	278,374	13,889	204	2,564	295,031	3,958,457	930,498	1,895,575	46,875	6,831,406
ACTUAL 2013	279,339	14,031	207	2,686	296,263	4,091,997	938,827	1,924,132	40,413	6,995,370
ACTUAL 2014	280,060	14,289	205	2,805	297,359	4,204,581	952,691	2,043,777	41,306	7,242,356
ACTUAL 2015	281,173	14,255	207	2,881	298,516	4,002,897	946,635	2,069,866	37,583	7,056,982
ACTUAL 2016	283,258	13,827	214	2,984	300,283	4,024,894	949,178	2,059,447	39,010	7,072,530
ACTUAL 2017	283,538	14,030	214	4,949	302,731	3,880,889	944,811	2,133,419	56,773	7,015,892
FRCST 2018	286,202	14,231	255	5,100	305,788	4,173,060	912,780	2,322,999	57,921	7,466,760
FRCST 2019	289,055	14,439	259	5,121	308,874	4,266,009	923,874	2,357,754	58,089	7,605,725
FRCST 2020	291,878	14,653	263	5,121	311,915	4,340,384	936,399	2,401,148	57,921	7,735,853
FRCST 2021	294,625	14,867	265	5,121	314,878	4,411,527	949,027	2,491,714	57,921	7,910,189
FRCST 2022	297,522	15,088	265	5,121	317,996	4,480,217	961,766	2,553,263	57,921	8,053,167
FRCST 2023	300,396	15,307	264	5,121	321,088	4,546,485	974,626	2,597,263	57,921	8,176,294
FRCST 2024	303,077	15,537	264	5,121	323,999	4,604,218	989,232	2,626,112	57,921	8,277,483
FRCST 2025	305,647	15,764	264	5,121	326,796	4,658,301	1,007,397	2,645,537	57,921	8,369,155
FRCST 2026	308,368	15,998	263	5,121	329,750	4,716,523	1,023,894	2,654,584	57,921	8,452,922
FRCST 2027	311,040	16,233	263	5,121	332,657	4,778,528	1,041,722	2,656,299	57,921	8,534,470
FRCST 2028	313,886	16,471	263	5,121	335,741	4,843,155	1,060,839	2,591,333	57,921	8,553,248
FRCST 2029	316,499	16,718	262	5,121	338,600	4,900,695	1,084,314	2,576,952	57,921	8,619,882
FRCST 2030	319,261	16,969	262	5,121	341,613	4,966,451	1,113,983	2,599,627	57,921	8,737,982
FRCST 2031	321,933	17,223	262	5,121	344,539	5,031,978	1,151,600	2,613,515	57,921	8,855,014
FRCST 2032	324,769	17,481	262	5,121	347,633	5,103,125	1,183,937	2,606,116	57,921	8,951,099
FRCST 2033	327,545	17,736	262	5,121	350,664	5,174,150	1,204,881	2,572,203	57,921	9,009,155
FRCST 2034	330,375	18,002	259	5,121	353,757	5,251,295	1,225,626	2,574,896	57,921	9,109,738
FRCST 2035	333,099	18,273	259	5,121	356,752	5,337,977	1,246,686	2,573,369	57,921	9,215,953
FRCST 2036	335,979	18,544	259	5,121	359,903	5,428,619	1,268,070	2,566,861	57,921	9,321,471
FRCST 2037	338,766	18,820	258	5,121	362,965	5,517,846	1,289,782	2,573,709	57,921	9,439,259
FRCST 2038	341,714	19,095	258	5,121	366,188	5,612,696	1,311,826	2,576,787	57,921	9,559,230

***** HIGH SCENARIO WITH DSM IMPACTS *****

***** HIGH SCENARIO WITH DSM IMPACTS *****

TIME PERIOD	AGGREGATED NUMBER OF CONSUMERS					AGGREGATED SYSTEM ENERGY SALES				
	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT. CHG.)	OTHER (ACT. CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
2007 -2012	0.17%	0.60%	5	380	0.22%	-1.34%	0.74%	2.12%	2.59%	-0.14%
2012 -2017	0.37%	0.20%	10	2385	0.52%	-0.40%	0.31%	2.39%	3.91%	0.53%
2018 -2023	0.97%	1.47%	9	21	0.98%	1.73%	1.32%	2.26%	0.00%	1.83%
2023 -2028	0.88%	1.48%	-1	0	0.90%	1.27%	1.71%	-0.05%	0.00%	0.91%
2028 -2033	0.86%	1.49%	-1	0	0.87%	1.33%	2.58%	-0.15%	0.00%	1.04%
2033 -2038	0.85%	1.49%	-4	0	0.87%	1.64%	1.72%	0.04%	0.00%	1.19%
2007 -2017	0.27%	0.40%	15	2765	0.37%	-0.87%	0.52%	2.26%	3.24%	0.19%
2018 -2038	0.89%	1.48%	3	21	0.91%	1.49%	1.83%	0.52%	0.00%	1.24%

1979 :BEGINNING HISTORICAL DATA YEAR ?
 2017 :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 2007	7,215,322	7,533,291	4.33%	4.84%	*****	1,533	1,559	1,407	1,421
ACTUAL 2008	7,193,537	7,471,337	3.80%	5.10%	*****	1,579	1,442	1,435	1,317
ACTUAL 2009	6,898,781	7,174,725	3.93%	4.86%	*****	1,674	1,453	1,520	1,306
ACTUAL 2010	7,338,146	7,656,224	4.25%	4.73%	*****	1,539	1,577	1,380	1,462
ACTUAL 2011	7,133,476	7,429,116	4.07%	4.19%	*****	1,552	1,579	1,409	1,441
ACTUAL 2012	7,123,700	7,364,416	3.35%	3.77%	*****	1,426	1,631	1,278	1,478
ACTUAL 2013	7,309,346	7,498,978	2.59%	3.19%	*****	1,472	1,498	1,360	1,351
ACTUAL 2014	7,560,267	7,804,699	3.20%	3.39%	*****	1,827	1,482	1,663	1,348
ACTUAL 2015	7,353,260	7,645,777	3.91%	4.16%	*****	1,750	1,533	1,622	1,364
ACTUAL 2016	7,388,028	7,719,002	4.38%	4.63%	*****	1,577	1,566	1,440	1,376
ACTUAL 2017	7,310,241	7,636,264	4.36%	4.78%	*****	1,563	1,548	1,401	1,372
FRCST 2018	7,788,786	8,152,682	4.55%	5.00%	75.200	1,646	1,631	1,511	1,455
FRCST 2019	7,933,910	8,282,280	4.29%	4.95%	75.760	1,678	1,663	1,543	1,489
FRCST 2020	8,069,588	8,425,208	4.30%	4.70%	75.520	1,706	1,693	1,571	1,518
FRCST 2021	8,251,035	8,614,808	4.30%	4.70%	75.380	1,742	1,732	1,605	1,555
FRCST 2022	8,400,308	8,770,788	4.30%	4.70%	75.860	1,773	1,766	1,635	1,587
FRCST 2023	8,528,876	8,905,133	4.30%	4.70%	75.890	1,800	1,795	1,659	1,614
FRCST 2024	8,632,027	9,012,919	4.30%	4.70%	77.410	1,823	1,820	1,680	1,637
FRCST 2025	8,727,672	9,112,861	4.30%	4.70%	78.960	1,843	1,842	1,699	1,657
FRCST 2026	8,815,098	9,204,216	4.30%	4.70%	80.540	1,861	1,863	1,716	1,676
FRCST 2027	8,900,445	9,293,397	4.30%	4.70%	82.150	1,883	1,884	1,736	1,696
FRCST 2028	8,920,649	9,314,509	4.30%	4.70%	83.790	1,891	1,891	1,746	1,703
FRCST 2029	8,988,437	9,385,342	4.30%	4.70%	85.470	1,908	1,906	1,761	1,732
FRCST 2030	9,111,757	9,514,204	4.30%	4.70%	87.180	1,936	1,934	1,788	1,758
FRCST 2031	9,233,872	9,641,806	4.30%	4.70%	88.920	1,965	1,962	1,815	1,785
FRCST 2032	9,334,305	9,746,751	4.30%	4.70%	90.700	1,990	1,985	1,838	1,807
FRCST 2033	9,395,372	9,810,562	4.30%	4.70%	92.510	2,006	2,000	1,855	1,822
FRCST 2034	9,500,537	9,920,453	4.30%	4.70%	92.510	2,033	2,026	1,880	1,845
FRCST 2035	9,611,588	10,036,493	4.30%	4.70%	92.510	2,058	2,050	1,903	1,867
FRCST 2036	9,722,097	10,151,968	4.30%	4.70%	92.510	2,082	2,073	1,926	1,889
FRCST 2037	9,845,237	10,280,641	4.30%	4.70%	92.510	2,109	2,100	1,951	1,914
FRCST 2038	9,970,635	10,411,673	4.30%	4.70%	92.510	2,137	2,128	1,977	1,939

***** HIGH SCENARIO WITH DSM IMPACTS *****						***** HIGH SCENARIO WITH DSM IMPACTS *****			
TIME PERIOD	AGGREGATED TOTAL ENERGY PURCHASED FOR MEMBERS (% CHG.)	H.E. ENERGY GENERATED (% CHG.)	AVG. MONTHLY LOSS FACTORS due to MEMBERS (AVERAGE)		H.E. AVERAGE WHOLESALE POWER COSTS (% CHG.)	AGGREGATED MEMBER PEAK SEASONAL DEMANDS (WITHOUT LOSSES, 30 MINUTE DEMAND)			
			ENERGY	DEMAND		Non-Coincident (% Chg)		Coincident (% Chg)	
						WINTER	SUMMER	WINTER	SUMMER
2007 -2012	-0.26%	-0.45%	3.96%	4.58%	*****	-1.43%	0.91%	-1.91%	0.80%
2012 -2017	0.52%	0.73%	3.63%	3.99%	*****	1.85%	-1.04%	1.85%	-1.47%
2018 -2023	1.83%	1.78%	4.34%	4.79%	0.18%	1.80%	1.93%	1.88%	2.09%
2023 -2028	0.90%	0.90%	4.30%	4.70%	2.00%	1.00%	1.05%	1.02%	1.08%
2028 -2033	1.04%	1.04%	4.30%	4.70%	2.00%	1.19%	1.13%	1.22%	1.35%
2033 -2038	1.20%	1.20%	4.30%	4.70%	0.00%	1.27%	1.24%	1.29%	1.26%
2007 -2017	0.13%	0.14%	3.83%	4.33%	*****	0.19%	-0.07%	-0.05%	-0.35%
2018 -2038	1.24%	1.23%	4.31%	4.73%	1.04%	1.31%	1.34%	1.35%	1.45%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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) (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	<u>(WITHOUT LOSSES)</u>		<u>(WITH LOSSES)</u>		PEAK	<u>(WITHOUT LOSSES)</u>		<u>(WITH LOSSES)</u>		PEAK	
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER		
ACTUAL 2007	1,407	1,418	1,478	1,489	57.8%	1,496	1,555	1,571	1,633	52.7%	
ACTUAL 2008	1,435	1,296	1,511	1,364	56.3%	1,562	1,644	1,420	1,494	51.7%	
ACTUAL 2009	1,518	1,303	1,594	1,369	51.4%	1,672	1,450	1,756	1,522	46.6%	
ACTUAL 2010	1,369	1,454	1,436	1,525	57.3%	1,526	1,570	1,600	1,646	53.1%	
ACTUAL 2011	1,394	1,435	1,454	1,497	56.6%	1,535	1,573	1,601	1,640	51.7%	
ACTUAL 2012	1,275	1,476	1,324	1,533	54.7%	1,423	1,629	1,477	1,691	49.6%	
ACTUAL 2013	1,360	1,348	1,404	1,392	61.0%	1,472	1,495	1,520	1,543	55.5%	
ACTUAL 2014	1,662	1,341	1,719	1,388	51.8%	1,825	1,475	1,888	1,525	47.2%	
ACTUAL 2015	1,608	1,362	1,677	1,420	52.0%	1,734	1,531	1,808	1,596	48.3%	
ACTUAL 2016	1,438	1,372	1,507	1,438	58.3%	1,575	1,562	1,650	1,636	53.3%	
ACTUAL 2017	1,397	1,368	1,466	1,436	59.5%	1,558	1,543	1,635	1,619	53.3%	
FRCST 2018	1,505	1,452	1,583	1,527	58.8%	1,639	1,627	1,724	1,712	54.0%	
FRCST 2019	1,536	1,486	1,615	1,562	58.5%	1,671	1,659	1,756	1,744	53.8%	
FRCST 2020	1,564	1,515	1,640	1,588	58.5%	1,699	1,689	1,781	1,771	53.9%	
FRCST 2021	1,598	1,551	1,676	1,627	58.7%	1,735	1,728	1,819	1,812	54.1%	
FRCST 2022	1,628	1,583	1,707	1,660	58.7%	1,766	1,761	1,851	1,847	54.1%	
FRCST 2023	1,652	1,610	1,732	1,688	58.7%	1,792	1,791	1,879	1,878	54.1%	
FRCST 2024	1,673	1,633	1,755	1,712	58.5%	1,815	1,816	1,903	1,904	53.9%	
FRCST 2025	1,691	1,653	1,774	1,734	58.7%	1,835	1,838	1,924	1,927	54.0%	
FRCST 2026	1,709	1,672	1,792	1,754	58.6%	1,853	1,859	1,943	1,949	53.9%	
FRCST 2027	1,729	1,692	1,813	1,774	58.5%	1,874	1,880	1,966	1,971	53.8%	
FRCST 2028	1,738	1,699	1,823	1,782	58.2%	1,883	1,887	1,975	1,978	53.6%	
FRCST 2029	1,753	1,728	1,839	1,812	58.3%	1,899	1,902	1,992	1,994	53.7%	
FRCST 2030	1,780	1,754	1,867	1,839	58.2%	1,928	1,929	2,021	2,023	53.7%	
FRCST 2031	1,807	1,781	1,895	1,867	58.1%	1,957	1,957	2,052	2,053	53.6%	
FRCST 2032	1,830	1,802	1,920	1,890	57.8%	1,981	1,980	2,077	2,077	53.4%	
FRCST 2033	1,847	1,817	1,937	1,906	57.8%	1,998	1,996	2,095	2,093	53.5%	
FRCST 2034	1,872	1,841	1,963	1,931	57.7%	2,025	2,021	2,123	2,120	53.3%	
FRCST 2035	1,895	1,862	1,987	1,953	57.7%	2,049	2,045	2,148	2,144	53.3%	
FRCST 2036	1,917	1,885	2,011	1,976	57.5%	2,073	2,068	2,173	2,169	53.2%	
FRCST 2037	1,943	1,909	2,037	2,002	57.6%	2,100	2,095	2,202	2,197	53.3%	
FRCST 2038	1,969	1,935	2,065	2,029	57.6%	2,128	2,122	2,231	2,226	53.3%	

***** 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)	
	<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		
2007 -2012	-1.96%	0.81%	-2.17%	0.59%	55.68%	-1.00%	0.93%	-1.22%	0.71%	50.90%	
2012 -2017	1.84%	-1.51%	2.05%	-1.30%	56.21%	1.84%	-1.07%	2.05%	-0.87%	51.17%	
2018 -2023	1.88%	2.09%	1.82%	2.03%	58.64%	1.80%	1.93%	1.74%	1.87%	53.99%	
2023 -2028	1.02%	1.08%	1.02%	1.08%	58.52%	1.00%	1.05%	1.00%	1.05%	53.88%	
2028 -2033	1.22%	1.35%	1.22%	1.35%	58.06%	1.19%	1.13%	1.19%	1.13%	53.58%	
2033 -2038	1.29%	1.26%	1.29%	1.26%	57.64%	1.27%	1.24%	1.27%	1.24%	53.31%	
2007 -2017	-0.08%	-0.35%	-0.08%	-0.36%	56.06%	0.41%	-0.08%	0.40%	-0.08%	51.17%	
2018 -2038	1.35%	1.45%	1.34%	1.43%	58.21%	1.31%	1.34%	1.30%	1.32%	53.69%	

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 ****					
**** 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)					
YEAR	WINTER		SUMMER		H.E. ANNUAL LOAD FACTOR Due to EXTREME COINCIDENT PEAK	WINTER		SUMMER		H.E. ANNUAL LOAD FACTOR Due To EXTREME NON-COIN. PEAK	
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER		
ACTUAL 2007	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2008	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2010	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2011	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2012	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2013	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2014	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2015	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2016	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2017	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
FRCST 2018	1,686	1,620	1,773	1,704	52.5%	1,833	1,813	1,929	1,907	48.3%	
FRCST 2019	1,721	1,657	1,809	1,742	52.3%	1,869	1,849	1,965	1,944	48.1%	
FRCST 2020	1,752	1,689	1,837	1,771	52.2%	1,901	1,882	1,993	1,974	48.1%	
FRCST 2021	1,790	1,729	1,877	1,814	52.4%	1,941	1,925	2,035	2,019	48.3%	
FRCST 2022	1,823	1,764	1,911	1,850	52.4%	1,975	1,962	2,072	2,058	48.3%	
FRCST 2023	1,850	1,795	1,940	1,882	52.4%	2,005	1,995	2,103	2,092	48.3%	
FRCST 2024	1,873	1,819	1,964	1,908	52.2%	2,030	2,022	2,129	2,120	48.2%	
FRCST 2025	1,894	1,842	1,986	1,931	52.4%	2,052	2,046	2,152	2,146	48.3%	
FRCST 2026	1,914	1,863	2,007	1,954	52.3%	2,074	2,070	2,175	2,171	48.3%	
FRCST 2027	1,936	1,885	2,031	1,977	52.2%	2,097	2,093	2,200	2,195	48.2%	
FRCST 2028	1,947	1,893	2,042	1,985	51.9%	2,107	2,101	2,210	2,203	48.0%	
FRCST 2029	1,966	1,927	2,061	2,021	52.0%	2,127	2,119	2,230	2,222	48.0%	
FRCST 2030	1,995	1,955	2,092	2,051	51.9%	2,158	2,149	2,263	2,254	48.0%	
FRCST 2031	2,025	1,985	2,124	2,082	51.8%	2,190	2,180	2,297	2,286	47.9%	
FRCST 2032	2,051	2,009	2,151	2,107	51.6%	2,217	2,206	2,325	2,313	47.7%	
FRCST 2033	2,069	2,026	2,170	2,125	51.6%	2,236	2,223	2,345	2,331	47.8%	
FRCST 2034	2,097	2,051	2,199	2,151	51.5%	2,265	2,250	2,375	2,360	47.7%	
FRCST 2035	2,122	2,075	2,226	2,177	51.5%	2,292	2,277	2,404	2,388	47.7%	
FRCST 2036	2,148	2,100	2,253	2,203	51.3%	2,319	2,303	2,433	2,416	47.5%	
FRCST 2037	2,177	2,128	2,283	2,232	51.4%	2,350	2,334	2,465	2,447	47.6%	
FRCST 2038	2,206	2,157	2,314	2,262	51.4%	2,381	2,364	2,498	2,480	47.6%	

**** HIGH SCENARIO WITH DSM IMPACTS ****						**** HIGH SCENARIO WITH DSM IMPACTS ****					
**** EXTREME TEMPERATURE CONDITIONS ****						**** EXTREME TEMPERATURE CONDITIONS ****					
HOOSIER ENERGY COINCIDENT PEAK (60 MIN.)						HOOSIER ENERGY NON-COINCIDENT PEAK (60 MIN.)					
TIME PERIOD	Without Losses (% Chg)		With Losses (% Chg)		EXTREME COIN. H.E. ANNUAL LOAD FACTOR (AVERAGE)	Without Losses (% Chg)		With Losses (% Chg)		EXT.NON-COIN H.E. ANNUAL LOAD FACTOR (AVERAGE)	
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER		
2007 -2012	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2012 -2017	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2018 -2023	1.88%	2.07%	1.82%	2.01%	52.35%	1.81%	1.93%	1.74%	1.86%	48.25%	
2023 -2028	1.02%	1.07%	1.02%	1.07%	52.25%	1.00%	1.04%	1.00%	1.04%	48.24%	
2028 -2033	1.23%	1.37%	1.23%	1.37%	51.80%	1.19%	1.14%	1.20%	1.14%	47.90%	
2033 -2038	1.29%	1.26%	1.29%	1.26%	51.44%	1.27%	1.24%	1.27%	1.24%	47.64%	
2007 -2017	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2018 -2038	1.35%	1.44%	1.34%	1.43%	51.96%	1.32%	1.34%	1.30%	1.32%	48.00%	

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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, 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 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	3,904,138	818,798	1,564,440	31,738	6,319,115
ACTUAL 2010	265,890	12,407	193	1,854	280,344	4,158,334	843,557	1,712,254	33,075	6,747,220
ACTUAL 2011	277,750	13,765	210	2,498	294,223	4,093,233	901,706	1,806,351	40,873	6,842,163
ACTUAL 2012	278,374	13,889	204	2,564	295,031	3,958,457	930,498	1,895,575	46,875	6,831,406
ACTUAL 2013	279,339	14,031	207	2,686	296,263	4,091,997	938,827	1,924,132	40,413	6,995,370
ACTUAL 2014	280,060	14,289	205	2,805	297,359	4,204,581	952,691	2,043,777	41,306	7,242,356
ACTUAL 2015	281,173	14,255	207	2,881	298,516	4,002,897	946,635	2,069,866	37,583	7,056,982
ACTUAL 2016	283,258	13,827	214	2,984	300,283	4,024,894	949,178	2,059,447	39,010	7,072,530
ACTUAL 2017	283,538	14,030	214	4,949	302,731	3,880,889	944,811	2,133,419	56,773	7,015,892
FRCST 2018	286,202	14,231	255	5,100	305,788	4,173,060	912,780	2,322,999	57,921	7,466,760
FRCST 2019	289,055	14,439	259	5,121	308,874	4,266,009	923,874	2,357,754	58,089	7,605,725
FRCST 2020	291,878	14,653	263	5,121	311,915	4,340,384	936,399	2,401,148	57,921	7,735,853
FRCST 2021	294,625	14,867	265	5,121	314,878	4,411,527	949,027	2,491,714	57,921	7,910,189
FRCST 2022	297,522	15,088	265	5,121	317,996	4,480,217	961,766	2,553,263	57,921	8,053,167
FRCST 2023	300,396	15,307	264	5,121	321,088	4,546,485	974,626	2,597,263	57,921	8,176,294
FRCST 2024	303,077	15,537	264	5,121	323,999	4,604,218	989,232	2,626,112	57,921	8,277,483
FRCST 2025	305,647	15,764	264	5,121	326,796	4,658,301	1,007,397	2,645,537	57,921	8,369,155
FRCST 2026	308,368	15,998	263	5,121	329,750	4,716,523	1,023,894	2,654,584	57,921	8,452,922
FRCST 2027	311,040	16,233	263	5,121	332,657	4,778,528	1,041,722	2,656,299	57,921	8,534,470
FRCST 2028	313,886	16,471	263	5,121	335,741	4,843,155	1,060,839	2,591,333	57,921	8,553,248
FRCST 2029	316,499	16,718	262	5,121	338,600	4,900,695	1,084,314	2,576,952	57,921	8,619,882
FRCST 2030	319,261	16,969	262	5,121	341,613	4,966,451	1,113,983	2,599,627	57,921	8,737,982
FRCST 2031	321,933	17,223	262	5,121	344,539	5,031,978	1,151,600	2,613,515	57,921	8,855,014
FRCST 2032	324,769	17,481	262	5,121	347,633	5,103,125	1,183,937	2,606,116	57,921	8,951,099
FRCST 2033	327,545	17,736	262	5,121	350,664	5,174,150	1,204,881	2,572,203	57,921	9,009,155
FRCST 2034	330,375	18,002	259	5,121	353,757	5,251,295	1,225,626	2,574,896	57,921	9,109,738
FRCST 2035	333,099	18,273	259	5,121	356,752	5,337,977	1,246,686	2,573,369	57,921	9,215,953
FRCST 2036	335,979	18,544	259	5,121	359,903	5,428,619	1,268,070	2,566,861	57,921	9,321,471
FRCST 2037	338,766	18,820	258	5,121	362,965	5,517,846	1,289,782	2,573,709	57,921	9,439,259
FRCST 2038	341,714	19,095	258	5,121	366,188	5,612,696	1,311,826	2,576,787	57,921	9,559,230

***** 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.)
2007 -2012	1.07%	2.55%	13	743	1.18%	-0.65%	1.70%	3.19%	6.48%	0.70%
2012 -2017	0.37%	0.20%	10	2385	0.52%	-0.40%	0.31%	2.39%	3.91%	0.53%
2018 -2023	0.97%	1.47%	9	21	0.98%	1.73%	1.32%	2.26%	0.00%	1.83%
2023 -2028	0.88%	1.48%	-1	0	0.90%	1.27%	1.71%	-0.05%	0.00%	0.91%
2028 -2033	0.86%	1.49%	-1	0	0.87%	1.33%	2.58%	-0.15%	0.00%	1.04%
2033 -2038	0.85%	1.49%	-4	0	0.87%	1.64%	1.72%	0.04%	0.00%	1.19%
2007 -2017	0.72%	1.37%	23	3128	0.85%	-0.52%	1.00%	2.79%	5.19%	0.62%
2018 -2038	0.89%	1.48%	3	21	0.91%	1.49%	1.83%	0.52%	0.00%	1.24%

1979 :BEGINNING HISTORICAL DATA YEAR ?
 2017 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)
 20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** HIGH 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)				ANNUAL LOAD FACTOR	
			WINTER	SUMMER	(WITHOUT LOSSES)		(WITH LOSSES)			
ACTUAL	2007	6,924,233	7,229,037	1,404	1,358	1,370	1,355	1,439	1,423	57.4%
ACTUAL	2008	6,912,387	7,179,069	1,406	1,265	1,391	1,245	1,465	1,311	55.8%
ACTUAL	2009	6,617,633	6,882,071	1,474	1,249	1,472	1,247	1,546	1,309	50.8%
ACTUAL	2010	7,043,763	7,348,773	1,331	1,399	1,320	1,392	1,385	1,460	57.5%
ACTUAL	2011	7,133,476	7,429,116	1,409	1,441	1,394	1,435	1,454	1,497	56.6%
ACTUAL	2012	7,123,700	7,364,416	1,278	1,478	1,275	1,476	1,324	1,533	54.7%
ACTUAL	2013	7,309,346	7,498,978	1,360	1,351	1,360	1,348	1,404	1,392	61.0%
ACTUAL	2014	7,560,267	7,804,699	1,663	1,348	1,662	1,341	1,719	1,388	51.8%
ACTUAL	2015	7,353,260	7,645,777	1,622	1,364	1,608	1,362	1,677	1,420	52.0%
ACTUAL	2016	7,388,028	7,719,002	1,440	1,376	1,438	1,372	1,507	1,438	58.3%
ACTUAL	2017	7,310,241	7,636,264	1,401	1,372	1,397	1,368	1,466	1,436	59.5%
FRCST	2018	7,788,786	8,152,682	1,511	1,455	1,505	1,452	1,583	1,527	58.8%
FRCST	2019	7,933,910	8,282,280	1,543	1,489	1,536	1,486	1,615	1,562	58.5%
FRCST	2020	8,069,588	8,425,208	1,571	1,518	1,564	1,515	1,640	1,588	58.5%
FRCST	2021	8,251,035	8,614,808	1,605	1,555	1,598	1,551	1,676	1,627	58.7%
FRCST	2022	8,400,308	8,770,788	1,635	1,587	1,628	1,583	1,707	1,660	58.7%
FRCST	2023	8,528,876	8,905,133	1,659	1,614	1,652	1,610	1,732	1,688	58.7%
FRCST	2024	8,632,027	9,012,919	1,680	1,637	1,673	1,633	1,755	1,712	58.5%
FRCST	2025	8,727,672	9,112,861	1,699	1,657	1,691	1,653	1,774	1,734	58.7%
FRCST	2026	8,815,098	9,204,216	1,716	1,676	1,709	1,672	1,792	1,754	58.6%
FRCST	2027	8,900,445	9,293,397	1,736	1,696	1,729	1,692	1,813	1,774	58.5%
FRCST	2028	8,920,649	9,314,509	1,746	1,703	1,738	1,699	1,823	1,782	58.2%
FRCST	2029	8,988,437	9,385,342	1,761	1,732	1,753	1,728	1,839	1,812	58.3%
FRCST	2030	9,111,757	9,514,204	1,788	1,758	1,780	1,754	1,867	1,839	58.2%
FRCST	2031	9,233,872	9,641,806	1,815	1,785	1,807	1,781	1,895	1,867	58.1%
FRCST	2032	9,334,305	9,746,751	1,838	1,807	1,830	1,802	1,920	1,890	57.8%
FRCST	2033	9,395,372	9,810,562	1,855	1,822	1,847	1,817	1,937	1,906	57.8%
FRCST	2034	9,500,537	9,920,453	1,880	1,845	1,872	1,841	1,963	1,931	57.7%
FRCST	2035	9,611,588	10,036,493	1,903	1,867	1,895	1,862	1,987	1,953	57.7%
FRCST	2036	9,722,097	10,151,968	1,926	1,889	1,917	1,885	2,011	1,976	57.5%
FRCST	2037	9,845,237	10,280,641	1,951	1,914	1,943	1,909	2,037	2,002	57.6%
FRCST	2038	9,970,635	10,411,673	1,977	1,939	1,969	1,935	2,065	2,029	57.6%

***** 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. 60 MINUTE DEMAND				ADJUSTED ANNUAL LOAD FACTOR (AVERAGE)
			WINTER	SUMMER	Without Losses (% Chg)		With Losses (% Chg)		
2007 -2012	0.57%	0.37%	-1.86%	1.71%	-1.43%	1.73%	-1.65%	1.51%	55.46%
2012 -2017	0.52%	0.73%	1.85%	-1.47%	1.84%	-1.51%	2.05%	-1.30%	56.21%
2018 -2023	1.83%	1.78%	1.88%	2.09%	1.88%	2.09%	1.82%	2.03%	58.64%
2023 -2028	0.90%	0.90%	1.02%	1.08%	1.02%	1.08%	1.02%	1.08%	58.52%
2028 -2033	1.04%	1.04%	1.22%	1.35%	1.22%	1.35%	1.22%	1.35%	58.06%
2033 -2038	1.20%	1.20%	1.29%	1.26%	1.29%	1.26%	1.29%	1.26%	57.64%
2007 -2017	0.54%	0.55%	-0.02%	0.11%	0.19%	0.10%	0.19%	0.09%	55.94%
2018 -2038	1.24%	1.23%	1.35%	1.45%	1.35%	1.45%	1.34%	1.43%	58.21%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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, 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 2007	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****
ACTUAL 2010	*****	*****	*****	*****	*****
ACTUAL 2011	*****	*****	*****	*****	*****
ACTUAL 2012	*****	*****	*****	*****	*****
ACTUAL 2013	*****	*****	*****	*****	*****
ACTUAL 2014	*****	*****	*****	*****	*****
ACTUAL 2015	*****	*****	*****	*****	*****
ACTUAL 2016	*****	*****	*****	*****	*****
ACTUAL 2017	*****	*****	*****	*****	*****
FRCST 2018	1,686	1,620	1,773	1,704	52.5%
FRCST 2019	1,721	1,657	1,809	1,742	52.3%
FRCST 2020	1,752	1,689	1,837	1,771	52.2%
FRCST 2021	1,790	1,729	1,877	1,814	52.4%
FRCST 2022	1,823	1,764	1,911	1,850	52.4%
FRCST 2023	1,850	1,795	1,940	1,882	52.4%
FRCST 2024	1,873	1,819	1,964	1,908	52.2%
FRCST 2025	1,894	1,842	1,986	1,931	52.4%
FRCST 2026	1,914	1,863	2,007	1,954	52.3%
FRCST 2027	1,936	1,885	2,031	1,977	52.2%
FRCST 2028	1,947	1,893	2,042	1,985	51.9%
FRCST 2029	1,966	1,927	2,061	2,021	52.0%
FRCST 2030	1,995	1,955	2,092	2,051	51.9%
FRCST 2031	2,025	1,985	2,124	2,082	51.8%
FRCST 2032	2,051	2,009	2,151	2,107	51.6%
FRCST 2033	2,069	2,026	2,170	2,125	51.6%
FRCST 2034	2,097	2,051	2,199	2,151	51.5%
FRCST 2035	2,122	2,075	2,226	2,177	51.5%
FRCST 2036	2,148	2,100	2,253	2,203	51.3%
FRCST 2037	2,177	2,128	2,283	2,232	51.4%
FRCST 2038	2,206	2,157	2,314	2,262	51.4%

***** HIGH SCENARIO WITH DSM IMPACTS *****

***** HIGH SCENARIO RESULTS *****

Adjusted for Systems HE EXT. COIN. 60 MINUTE DEMAND

ADJUSTED

Without Losses (% Chg)

With Losses (% Chg)

EXT. ANNUAL

TIME PERIOD	WINTER	SUMMER	WINTER	SUMMER	LOAD FACTOR (AVERAGE)
2007 -2012	*****	*****	*****	*****	*****
2012 -2017	*****	*****	*****	*****	*****
2018 -2023	1.88%	2.07%	1.82%	2.01%	52.35%
2023 -2028	1.02%	1.07%	1.02%	1.07%	52.25%
2028 -2033	1.23%	1.37%	1.23%	1.37%	51.80%
2033 -2038	1.29%	1.26%	1.29%	1.26%	51.44%
2007 -2017	*****	*****	*****	*****	*****
2018 -2038	1.35%	1.44%	1.34%	1.43%	51.96%

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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,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 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	3,904,138	818,798	1,407,974	31,738	6,162,649
ACTUAL 2010	265,890	12,407	192	1,854	280,343	4,158,334	843,557	1,539,864	33,075	6,574,830
ACTUAL 2011	277,750	13,765	209	2,498	294,222	4,093,233	901,706	1,639,768	40,873	6,675,581
ACTUAL 2012	278,374	13,889	203	2,564	295,030	3,958,457	930,498	1,724,452	46,875	6,660,282
ACTUAL 2013	279,339	14,031	206	2,686	296,262	4,091,997	938,827	1,755,612	40,413	6,826,850
ACTUAL 2014	280,060	14,289	204	2,805	297,358	4,204,581	952,691	1,877,588	41,306	7,076,166
ACTUAL 2015	281,173	14,255	206	2,881	298,515	4,002,897	946,635	1,905,355	37,583	6,892,471
ACTUAL 2016	283,258	13,827	213	2,984	300,282	4,024,894	949,178	1,896,922	39,010	6,910,005
ACTUAL 2017	283,538	14,030	213	4,949	302,730	3,880,889	944,811	1,974,743	56,773	6,857,216
FRCST 2018	286,202	14,231	254	5,100	305,787	4,173,060	912,780	2,168,027	57,921	7,311,788
FRCST 2019	289,055	14,439	258	5,121	308,873	4,266,009	923,874	2,202,782	58,089	7,450,753
FRCST 2020	291,878	14,653	262	5,121	311,914	4,340,384	936,399	2,246,176	57,921	7,580,880
FRCST 2021	294,625	14,867	264	5,121	314,877	4,411,527	949,027	2,336,742	57,921	7,755,216
FRCST 2022	297,522	15,088	264	5,121	317,995	4,480,217	961,766	2,398,291	57,921	7,898,195
FRCST 2023	300,396	15,307	263	5,121	321,087	4,546,485	974,626	2,442,291	57,921	8,021,322
FRCST 2024	303,077	15,537	263	5,121	323,998	4,604,218	989,232	2,471,140	57,921	8,122,510
FRCST 2025	305,647	15,764	263	5,121	326,795	4,658,301	1,007,397	2,490,565	57,921	8,214,183
FRCST 2026	308,368	15,998	262	5,121	329,749	4,716,523	1,023,894	2,499,612	57,921	8,297,950
FRCST 2027	311,040	16,233	262	5,121	332,656	4,778,528	1,041,722	2,501,327	57,921	8,379,498
FRCST 2028	313,886	16,471	262	5,121	335,740	4,843,155	1,060,839	2,436,361	57,921	8,398,276
FRCST 2029	316,499	16,718	261	5,121	338,599	4,900,695	1,084,314	2,421,980	57,921	8,464,910
FRCST 2030	319,261	16,969	261	5,121	341,612	4,966,451	1,113,983	2,444,655	57,921	8,583,010
FRCST 2031	321,933	17,223	261	5,121	344,538	5,031,978	1,151,600	2,458,543	57,921	8,700,042
FRCST 2032	324,769	17,481	261	5,121	347,632	5,103,125	1,183,937	2,451,144	57,921	8,796,127
FRCST 2033	327,545	17,736	261	5,121	350,663	5,174,150	1,204,881	2,417,231	57,921	8,854,183
FRCST 2034	330,375	18,002	258	5,121	353,756	5,251,295	1,225,626	2,419,924	57,921	8,954,766
FRCST 2035	333,099	18,273	258	5,121	356,751	5,337,977	1,246,686	2,418,397	57,921	9,060,980
FRCST 2036	335,979	18,544	258	5,121	359,902	5,428,619	1,268,070	2,411,889	57,921	9,166,498
FRCST 2037	338,766	18,820	257	5,121	362,964	5,517,846	1,289,782	2,418,737	57,921	9,284,287
FRCST 2038	341,714	19,095	257	5,121	366,187	5,612,696	1,311,826	2,421,815	57,921	9,404,258

***** 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.)
2007 -2012	1.07%	2.55%	13	743	1.18%	-0.65%	1.70%	3.74%	6.48%	0.76%
2012 -2017	0.37%	0.20%	10	2385	0.52%	-0.40%	0.31%	2.75%	3.91%	0.58%
2018 -2023	0.97%	1.47%	9	21	0.98%	1.73%	1.32%	2.41%	0.00%	1.87%
2023 -2028	0.88%	1.48%	-1	0	0.90%	1.27%	1.71%	-0.05%	0.00%	0.92%
2028 -2033	0.86%	1.49%	-1	0	0.87%	1.33%	2.58%	-0.16%	0.00%	1.06%
2033 -2038	0.85%	1.49%	-4	0	0.87%	1.64%	1.72%	0.04%	0.00%	1.21%
2007 -2017	0.72%	1.37%	23	3128	0.85%	-0.52%	1.00%	3.24%	5.19%	0.67%
2018 -2038	0.89%	1.48%	3	21	0.91%	1.49%	1.83%	0.56%	0.00%	1.27%

1979 :BEGINNING HISTORICAL DATA YEAR ?
 2017 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)
 20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** HIGH 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) (WITHOUT LOSSES)		H.E. COINCIDENT 60 MINUTE DEMAND (MW) (EST. BEFORE 1984) (WITH LOSSES)		ANNUAL LOAD FACTOR
			WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
			ACTUAL 2007	6,739,285	7,044,089	1,354	1,337	1,321	
ACTUAL 2008	6,743,752	7,010,434	1,394	1,235	1,379	1,215	1,442	1,327	55.3%
ACTUAL 2009	6,461,167	6,725,605	1,467	1,232	1,465	1,229	1,525	1,292	50.3%
ACTUAL 2010	6,871,372	7,176,383	1,317	1,373	1,306	1,366	1,357	1,431	57.2%
ACTUAL 2011	6,966,893	7,262,533	1,392	1,424	1,377	1,418	1,453	1,478	56.1%
ACTUAL 2012	6,952,576	7,193,293	1,257	1,459	1,254	1,457	1,287	1,537	53.3%
ACTUAL 2013	7,140,826	7,330,458	1,336	1,334	1,336	1,331	1,376	1,385	60.4%
ACTUAL 2014	7,394,078	7,638,510	1,646	1,328	1,645	1,321	1,698	1,369	51.4%
ACTUAL 2015	7,188,749	7,481,266	1,593	1,346	1,579	1,344	1,643	1,412	52.0%
ACTUAL 2016	7,225,503	7,556,477	1,425	1,354	1,423	1,350	1,498	1,412	57.4%
ACTUAL 2017	7,151,565	7,477,588	1,384	1,348	1,380	1,344	1,444	1,416	59.1%
FRCST 2018	7,633,814	7,997,710	1,489	1,434	1,483	1,430	1,561	1,505	58.5%
FRCST 2019	7,778,938	8,127,308	1,521	1,467	1,514	1,464	1,593	1,540	58.2%
FRCST 2020	7,914,615	8,270,236	1,549	1,496	1,542	1,493	1,618	1,566	58.2%
FRCST 2021	8,096,063	8,459,836	1,583	1,533	1,576	1,529	1,654	1,605	58.4%
FRCST 2022	8,245,336	8,615,816	1,612	1,565	1,605	1,561	1,685	1,638	58.4%
FRCST 2023	8,373,904	8,750,161	1,637	1,592	1,630	1,588	1,710	1,667	58.4%
FRCST 2024	8,477,055	8,857,946	1,658	1,615	1,651	1,611	1,732	1,691	58.2%
FRCST 2025	8,572,700	8,957,889	1,677	1,635	1,669	1,631	1,752	1,712	58.4%
FRCST 2026	8,660,126	9,049,244	1,694	1,654	1,687	1,650	1,770	1,732	58.4%
FRCST 2027	8,745,473	9,138,425	1,714	1,674	1,706	1,670	1,791	1,752	58.3%
FRCST 2028	8,765,677	9,159,537	1,723	1,681	1,716	1,677	1,801	1,760	57.9%
FRCST 2029	8,833,464	9,230,370	1,739	1,710	1,731	1,706	1,817	1,790	58.0%
FRCST 2030	8,956,785	9,359,232	1,765	1,736	1,758	1,732	1,844	1,817	57.9%
FRCST 2031	9,078,900	9,486,833	1,793	1,763	1,785	1,759	1,873	1,846	57.8%
FRCST 2032	9,179,333	9,591,779	1,816	1,785	1,808	1,781	1,897	1,868	57.5%
FRCST 2033	9,240,399	9,655,590	1,833	1,800	1,825	1,795	1,915	1,884	57.6%
FRCST 2034	9,345,565	9,765,481	1,858	1,824	1,850	1,819	1,941	1,909	57.4%
FRCST 2035	9,456,616	9,881,521	1,881	1,845	1,873	1,841	1,965	1,931	57.4%
FRCST 2036	9,567,125	9,996,996	1,903	1,867	1,895	1,863	1,989	1,955	57.2%
FRCST 2037	9,690,265	10,125,669	1,929	1,892	1,920	1,887	2,015	1,981	57.4%
FRCST 2038	9,815,663	10,256,701	1,955	1,918	1,947	1,913	2,043	2,007	57.3%

***** HIGH 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	
			2007 -2012	0.63%	0.42%	-1.48%	1.76%	-1.04%	
2012 -2017	0.57%	0.78%	1.94%	-1.57%	1.93%	-1.60%	2.33%	-1.63%	55.60%
2018 -2023	1.87%	1.81%	1.91%	2.12%	1.91%	2.12%	1.85%	2.06%	58.35%
2023 -2028	0.92%	0.92%	1.03%	1.09%	1.03%	1.09%	1.03%	1.09%	58.26%
2028 -2033	1.06%	1.06%	1.24%	1.37%	1.24%	1.37%	1.24%	1.37%	57.80%
2033 -2038	1.22%	1.22%	1.30%	1.28%	1.30%	1.28%	1.30%	1.28%	57.39%
2007 -2017	0.60%	0.60%	0.22%	0.08%	0.44%	0.07%	0.40%	0.14%	55.47%
2018 -2038	1.26%	1.25%	1.37%	1.46%	1.37%	1.46%	1.35%	1.45%	57.95%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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,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 2007	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****
ACTUAL 2010	*****	*****	*****	*****	*****
ACTUAL 2011	*****	*****	*****	*****	*****
ACTUAL 2012	*****	*****	*****	*****	*****
ACTUAL 2013	*****	*****	*****	*****	*****
ACTUAL 2014	*****	*****	*****	*****	*****
ACTUAL 2015	*****	*****	*****	*****	*****
ACTUAL 2016	*****	*****	*****	*****	*****
ACTUAL 2017	*****	*****	*****	*****	*****
FRCST 2018	1,664	1,598	1,751	1,682	52.1%
FRCST 2019	1,699	1,635	1,787	1,720	51.9%
FRCST 2020	1,730	1,667	1,815	1,749	51.9%
FRCST 2021	1,768	1,708	1,855	1,792	52.1%
FRCST 2022	1,801	1,743	1,889	1,829	52.1%
FRCST 2023	1,828	1,773	1,918	1,860	52.1%
FRCST 2024	1,851	1,797	1,942	1,886	51.9%
FRCST 2025	1,872	1,820	1,964	1,909	52.1%
FRCST 2026	1,892	1,841	1,985	1,932	52.0%
FRCST 2027	1,914	1,863	2,009	1,955	51.9%
FRCST 2028	1,925	1,871	2,020	1,963	51.6%
FRCST 2029	1,943	1,905	2,039	1,999	51.7%
FRCST 2030	1,973	1,934	2,070	2,029	51.6%
FRCST 2031	2,003	1,963	2,102	2,060	51.5%
FRCST 2032	2,029	1,987	2,129	2,085	51.3%
FRCST 2033	2,047	2,004	2,148	2,103	51.3%
FRCST 2034	2,074	2,029	2,177	2,129	51.2%
FRCST 2035	2,100	2,054	2,204	2,155	51.2%
FRCST 2036	2,126	2,079	2,231	2,181	51.0%
FRCST 2037	2,155	2,106	2,261	2,210	51.1%
FRCST 2038	2,184	2,135	2,292	2,240	51.1%

***** HIGH SCENARIO WITH DSM IMPACTS *****

***** HIGH SCENARIO RESULTS *****

Adjusted for Sys. & Ind. HE EXT. COIN. 60 MINUTE DEMAND

ADJUSTED

TIME PERIOD	<u>Without Losses (% Chg)</u>		<u>With Losses (% Chg)</u>		ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)
	WINTER	SUMMER	WINTER	SUMMER	
2007 -2012	*****	*****	*****	*****	*****
2012 -2017	*****	*****	*****	*****	*****
2018 -2023	1.90%	2.10%	1.84%	2.03%	52.02%
2023 -2028	1.04%	1.09%	1.04%	1.09%	51.94%
2028 -2033	1.24%	1.38%	1.24%	1.38%	51.51%
2033 -2038	1.30%	1.27%	1.30%	1.27%	51.16%
2007 -2017	*****	*****	*****	*****	*****
2018 -2038	1.37%	1.46%	1.35%	1.44%	51.65%

1979 :BEGINNING HISTORICAL DATA YEAR ?
 2017 :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	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	WINTER	SUMMER	WINTER	SUMMER
ACTUAL 2007	97.56%	99.78%	100.00%	0	0	100.00%	0	0		
ACTUAL 2008	98.92%	98.38%	100.00%	0	0	100.00%	0	0		
ACTUAL 2009	99.86%	99.76%	100.00%	0	0	100.00%	0	0		
ACTUAL 2010	99.16%	99.49%	100.00%	0	0	100.00%	0	0		
ACTUAL 2011	98.92%	99.58%	100.00%	0	0	100.00%	0	0		
ACTUAL 2012	99.76%	99.86%	100.00%	0	0	100.00%	0	0		
ACTUAL 2013	100.00%	99.78%	100.00%	0	0	100.00%	0	0		
ACTUAL 2014	99.94%	99.47%	100.00%	0	0	100.00%	0	0		
ACTUAL 2015	99.12%	99.85%	100.00%	0	0	100.00%	0	0		
ACTUAL 2016	99.86%	99.70%	100.00%	0	0	100.00%	0	0		
ACTUAL 2017	99.71%	99.70%	100.00%	0	0	100.00%	0	0		
FRCST 2018	99.56%	99.75%	100.00%	0	0	100.00%	0	0		
FRCST 2019	99.56%	99.75%	100.00%	0	0	100.00%	0	0		
FRCST 2020	99.56%	99.75%	100.00%	0	0	100.00%	0	0		
FRCST 2021	99.56%	99.75%	100.00%	0	0	100.00%	0	0		
FRCST 2022	99.56%	99.75%	100.00%	0	0	100.00%	0	0		
FRCST 2023	99.56%	99.75%	100.00%	0	0	100.00%	0	0		
FRCST 2024	99.56%	99.75%	100.00%	0	0	100.00%	0	0		
FRCST 2025	99.56%	99.75%	100.00%	0	0	100.00%	0	0		
FRCST 2026	99.56%	99.75%	100.00%	0	0	100.00%	0	0		
FRCST 2027	99.56%	99.75%	100.00%	0	0	100.00%	0	0		
FRCST 2028	99.56%	99.75%	100.00%	0	0	100.00%	0	0		
FRCST 2029	99.56%	99.75%	100.00%	0	0	100.00%	0	0		
FRCST 2030	99.56%	99.75%	100.00%	0	0	100.00%	0	0		
FRCST 2031	99.56%	99.75%	100.00%	0	0	100.00%	0	0		
FRCST 2032	99.56%	99.75%	100.00%	0	0	100.00%	0	0		
FRCST 2033	99.56%	99.75%	100.00%	0	0	100.00%	0	0		
FRCST 2034	99.56%	99.75%	100.00%	0	0	100.00%	0	0		
FRCST 2035	99.56%	99.75%	100.00%	0	0	100.00%	0	0		
FRCST 2036	99.56%	99.75%	100.00%	0	0	100.00%	0	0		
FRCST 2037	99.56%	99.75%	100.00%	0	0	100.00%	0	0		
FRCST 2038	99.56%	99.75%	100.00%	0	0	100.00%	0	0		

***** HIGH SCENARIO WITH DSM IMPACTS *****

TIME PERIOD	HE TIME FACTOR RATIO (30 to 60 MINUTE)	
	WINTER (AVERAGE)	SUMMER (AVERAGE)
2007 -2012	99.03%	99.47%
2012 -2017	99.73%	99.73%
2018 -2023	99.56%	99.75%
2023 -2028	99.56%	99.75%
2028 -2033	99.56%	99.75%
2033 -2038	99.56%	99.75%
2007 -2017	99.35%	99.58%
2018 -2038	99.56%	99.75%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 2007	100.0%	0	0	0	0.0%	1	1	
ACTUAL 2008	100.0%	0	0	0	0.0%	1	1	
ACTUAL 2009	100.0%	0	0	0	0.0%	1	1	
ACTUAL 2010	100.0%	0	0	0	0.0%	1	1	
ACTUAL 2011	100.0%	0	0	0	100.0%	0	0	
ACTUAL 2012	100.0%	0	0	0	100.0%	0	0	
ACTUAL 2013	100.0%	0	0	0	100.0%	0	0	
ACTUAL 2014	100.0%	0	0	0	100.0%	0	0	
ACTUAL 2015	100.0%	0	0	0	100.0%	0	0	
ACTUAL 2016	100.0%	0	0	0	100.0%	0	0	
ACTUAL 2017	100.0%	0	0	0	100.0%	0	0	
FRCST 2018	100.00%	0	0	0	100.00%	0	0	
FRCST 2019	100.00%	0	0	0	100.00%	0	0	
FRCST 2020	100.00%	0	0	0	100.00%	0	0	
FRCST 2021	100.00%	0	0	0	100.00%	0	0	
FRCST 2022	100.00%	0	0	0	100.00%	0	0	
FRCST 2023	100.00%	0	0	0	100.00%	0	0	
FRCST 2024	100.00%	0	0	0	100.00%	0	0	
FRCST 2025	100.00%	0	0	0	100.00%	0	0	
FRCST 2026	100.00%	0	0	0	100.00%	0	0	
FRCST 2027	100.00%	0	0	0	100.00%	0	0	
FRCST 2028	100.00%	0	0	0	100.00%	0	0	
FRCST 2029	100.00%	0	0	0	100.00%	0	0	
FRCST 2030	100.00%	0	0	0	100.00%	0	0	
FRCST 2031	100.00%	0	0	0	100.00%	0	0	
FRCST 2032	100.00%	0	0	0	100.00%	0	0	
FRCST 2033	100.00%	0	0	0	100.00%	0	0	
FRCST 2034	100.00%	0	0	0	100.00%	0	0	
FRCST 2035	100.00%	0	0	0	100.00%	0	0	
FRCST 2036	100.00%	0	0	0	100.00%	0	0	
FRCST 2037	100.00%	0	0	0	100.00%	0	0	
FRCST 2038	100.00%	0	0	0	100.00%	0	0	

***** HIGH SCENARIO WITH DSM IMPACTS *****

TIME PERIOD

2007 -2012
2012 -2017

2018 -2023
2023 -2028
2028 -2033
2033 -2038

2007 -2017
2018 -2038

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 *****

		<u>DSM EE Program Energy Impact</u>				<u>DSM Demand Impacts-- Both EE & DR Programs)</u> <u>Coincident 60 Minute Demand MW</u>			
		<u>Aggregated Total Member Energy</u>		<u>Total Member Energy</u>		<u>Savings w/o Losses</u>		<u>Savings with Losses</u>	
YEAR		<u>Purchased Savings MWH</u>	<u>Percent of Total</u>	<u>Generated Savings MWH</u>	<u>Percent of Total</u>	<u>Winter</u>	<u>Summer</u>	<u>Winter</u>	<u>Summer</u>
ACTUAL	2007	0	0.0%	0	0.0%	0.000	0.000	0.000	0.000
ACTUAL	2008	0	0.0%	0	0.0%	0.000	0.000	0.000	0.000
ACTUAL	2009	25,159	0.4%	26,189	0.4%	8.978	3.703	9.436	3.892
ACTUAL	2010	49,468	0.7%	51,663	0.7%	20.610	10.768	21.633	11.302
ACTUAL	2011	81,677	1.2%	85,143	1.2%	32.274	17.850	33.686	18.630
ACTUAL	2012	103,470	1.5%	107,053	1.5%	40.343	23.944	41.924	24.882
ACTUAL	2013	125,031	1.7%	128,352	1.7%	46.802	17.136	48.342	17.700
ACTUAL	2014	144,763	1.9%	149,549	1.9%	52.425	32.671	54.265	33.817
ACTUAL	2015	164,860	2.2%	171,568	2.2%	64.045	25.255	66.824	26.351
ACTUAL	2016	194,538	2.6%	203,449	2.6%	73.355	46.929	76.917	49.208
ACTUAL	2017	219,951	3.0%	229,978	3.0%	79.051	33.914	83.019	35.616
FRCST	2018	232,480	3.0%	243,562	3.0%	80.948	50.866	85.208	53.543
FRCST	2019	244,577	3.0%	255,530	3.0%	81.429	47.024	85.671	49.473
FRCST	2020	257,626	3.2%	269,201	3.2%	83.203	46.374	87.307	48.661
FRCST	2021	265,675	3.2%	277,612	3.2%	84.603	45.103	88.776	47.328
FRCST	2022	278,470	3.3%	290,982	3.3%	87.313	44.994	91.620	47.213
FRCST	2023	290,865	3.4%	303,934	3.4%	90.573	45.612	95.040	47.861
FRCST	2024	309,751	3.5%	323,669	3.5%	95.122	47.199	99.813	49.527
FRCST	2025	324,052	3.6%	338,613	3.6%	99.131	47.918	104.020	50.281
FRCST	2026	340,138	3.8%	355,421	3.8%	103.209	48.622	108.299	51.020
FRCST	2027	352,137	3.9%	367,960	3.9%	103.644	48.226	108.755	50.604
FRCST	2028	361,808	4.0%	378,065	4.0%	102.980	48.182	108.059	50.558
FRCST	2029	369,073	4.0%	385,657	4.0%	102.777	48.297	107.846	50.679
FRCST	2030	367,793	3.9%	384,319	3.9%	100.865	46.208	105.840	48.487
FRCST	2031	357,967	3.8%	374,051	3.8%	96.365	41.087	101.118	43.113
FRCST	2032	353,446	3.7%	369,327	3.7%	93.665	38.298	98.284	40.187
FRCST	2033	362,083	3.8%	378,352	3.8%	93.028	38.093	97.616	39.971
FRCST	2034	371,345	3.8%	388,031	3.8%	92.761	37.970	97.335	39.843
FRCST	2035	372,122	3.8%	388,842	3.8%	93.623	38.385	98.241	40.278
FRCST	2036	374,270	3.8%	391,086	3.8%	94.665	38.804	99.334	40.718
FRCST	2037	379,760	3.8%	396,823	3.8%	96.140	39.243	100.881	41.178
FRCST	2038	385,238	3.8%	402,548	3.8%	97.619	39.663	102.434	41.620

***** HIGH SCENARIO WITH DSM IMPACTS *****

TIME PERIOD

2007 -2012
2012 -2017

2018 -2023
2023 -2028
2028 -2033
2033 -2038

2007 -2017
2018 -2038

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 2007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ACTUAL 2008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ACTUAL 2009	8.598	3.080	9.037	3.238	0.380	0.622	0.399	0.654
ACTUAL 2010	17.983	6.820	18.875	7.158	2.628	3.948	2.758	4.144
ACTUAL 2011	27.786	11.209	29.001	11.699	4.488	6.640	4.685	6.931
ACTUAL 2012	34.681	14.358	36.040	14.921	5.662	9.586	5.884	9.962
ACTUAL 2013	40.471	17.136	41.803	17.700	6.331	0.000	6.539	0.000
ACTUAL 2014	45.624	20.484	47.225	21.202	6.801	12.187	7.039	12.615
ACTUAL 2015	56.921	25.255	59.391	26.351	7.124	0.000	7.433	0.000
ACTUAL 2016	65.902	31.565	69.101	33.097	7.454	15.364	7.815	16.110
ACTUAL 2017	71.365	33.914	74.947	35.616	7.686	0.000	8.072	0.000
FRCST 2018	73.124	34.665	76.972	36.490	7.824	16.201	8.236	17.053
FRCST 2019	76.067	35.845	80.030	37.712	5.362	11.179	5.641	11.761
FRCST 2020	79.573	37.288	83.497	39.127	3.630	9.086	3.809	9.535
FRCST 2021	82.220	37.760	86.275	39.622	2.383	7.343	2.501	7.706
FRCST 2022	85.776	38.866	90.006	40.783	1.538	6.128	1.613	6.430
FRCST 2023	89.421	39.896	93.831	41.864	1.152	5.716	1.209	5.998
FRCST 2024	94.164	41.642	98.808	43.696	0.957	5.557	1.005	5.831
FRCST 2025	98.252	42.535	103.098	44.633	0.878	5.383	0.922	5.648
FRCST 2026	102.412	43.339	107.462	45.476	0.798	5.283	0.837	5.544
FRCST 2027	102.762	42.893	107.830	45.009	0.881	5.332	0.925	5.595
FRCST 2028	102.013	42.725	107.044	44.832	0.967	5.457	1.015	5.726
FRCST 2029	101.723	42.738	106.740	44.846	1.054	5.558	1.106	5.832
FRCST 2030	99.836	41.037	104.759	43.061	1.030	5.171	1.081	5.426
FRCST 2031	95.315	36.719	100.016	38.530	1.051	4.367	1.102	4.583
FRCST 2032	92.593	33.988	97.160	35.664	1.072	4.310	1.124	4.523
FRCST 2033	91.935	33.677	96.469	35.338	1.093	4.416	1.147	4.633
FRCST 2034	91.646	33.532	96.166	35.186	1.115	4.439	1.170	4.657
FRCST 2035	92.486	33.887	97.048	35.558	1.137	4.498	1.193	4.720
FRCST 2036	93.505	34.247	98.117	35.936	1.160	4.558	1.217	4.782
FRCST 2037	94.957	34.627	99.640	36.335	1.183	4.615	1.241	4.843
FRCST 2038	96.413	34.992	101.168	36.718	1.207	4.671	1.266	4.902

TIME PERIOD

2007 -2012
2012 -2017

2018 -2023
2023 -2028
2028 -2033
2033 -2038

2007 -2017
2018 -2038

1979 :BEGINNING HISTORICAL DATA YEAR ?
 2017 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)
 20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** HIGH SCENARIO WITH DSM IMPACTS *****

Load Control Switches

1 = Load Control on peak 0 = No load control on peak

YEAR	Winter CP	Winter NCP	Summer CP	Summer NCP
ACTUAL 2007	NA	NA	NA	NA
ACTUAL 2008	NA	NA	NA	NA
ACTUAL 2009	1	0	1	0
ACTUAL 2010	1	0	1	0
ACTUAL 2011	1	0	1	0
ACTUAL 2012	1	0	1	0
ACTUAL 2013	1	0	0	0
ACTUAL 2014	1	0	1	0
ACTUAL 2015	1	0	0	0
ACTUAL 2016	1	0	1	0
ACTUAL 2017	1	0	0	0
FRCST 2018	1	0	1	0
FRCST 2019	1	0	1	0
FRCST 2020	1	0	1	0
FRCST 2021	1	0	1	0
FRCST 2022	1	0	1	0
FRCST 2023	1	0	1	0
FRCST 2024	1	0	1	0
FRCST 2025	1	0	1	0
FRCST 2026	1	0	1	0
FRCST 2027	1	0	1	0
FRCST 2028	1	0	1	0
FRCST 2029	1	0	1	0
FRCST 2030	1	0	1	0
FRCST 2031	1	0	1	0
FRCST 2032	1	0	1	0
FRCST 2033	1	0	1	0
FRCST 2034	1	0	1	0
FRCST 2035	1	0	1	0
FRCST 2036	1	0	1	0
FRCST 2037	1	0	1	0
FRCST 2038	1	0	1	0

TIME PERIOD

2007 -2012
 2012 -2017
 2018 -2023
 2023 -2028
 2028 -2033
 2033 -2038

2007 -2017
 2018 -2038

Appendix A3

Historical/Forecast Annual Load Summary – Low Scenario

1979 :BEGINNING HISTORICAL DATA YEAR ?
 2017 :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 *****

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 2007	275,983	13,481	199	2,184	291,847	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	4,049,084	862,271	1,638,530	36,404	6,586,290
ACTUAL 2010	277,915	13,683	201	2,222	294,021	4,313,611	889,903	1,783,519	40,028	7,027,061
ACTUAL 2011	277,750	13,765	210	2,498	294,223	4,093,233	901,706	1,806,351	40,873	6,842,163
ACTUAL 2012	278,374	13,889	204	2,564	295,031	3,958,457	930,498	1,895,575	46,875	6,831,406
ACTUAL 2013	279,339	14,031	207	2,686	296,263	4,091,997	938,827	1,924,132	40,413	6,995,370
ACTUAL 2014	280,060	14,289	205	2,805	297,359	4,204,581	952,691	2,043,777	41,306	7,242,356
ACTUAL 2015	281,173	14,255	207	2,881	298,516	4,002,897	946,635	2,069,866	37,583	7,056,982
ACTUAL 2016	283,258	13,827	214	2,984	300,283	4,024,894	949,178	2,059,447	39,010	7,072,530
ACTUAL 2017	283,538	14,030	214	4,949	302,731	3,880,889	944,811	2,133,419	56,773	7,015,892
FRCST 2018	284,244	14,091	219	5,100	303,654	4,128,430	902,496	1,930,443	57,921	7,019,290
FRCST 2019	285,112	14,154	223	5,121	304,610	4,166,301	903,500	1,943,933	58,089	7,071,822
FRCST 2020	285,928	14,222	227	5,121	305,498	4,179,413	905,690	1,965,816	57,921	7,108,841
FRCST 2021	286,646	14,289	229	5,121	306,285	4,185,608	907,733	2,034,547	57,921	7,185,809
FRCST 2022	287,481	14,359	229	5,121	307,190	4,186,548	909,634	2,073,465	57,921	7,227,568
FRCST 2023	288,274	14,425	228	5,121	308,048	4,183,287	911,402	2,094,330	57,921	7,246,939
FRCST 2024	288,856	14,495	228	5,121	308,700	4,169,858	914,640	2,099,726	57,921	7,242,145
FRCST 2025	289,307	14,568	228	5,121	309,224	4,151,991	921,182	2,095,515	57,921	7,226,608
FRCST 2026	289,881	14,633	227	5,121	309,862	4,136,682	925,788	2,080,856	57,921	7,201,247
FRCST 2027	290,390	14,702	227	5,121	310,440	4,123,956	931,464	2,058,898	57,921	7,172,239
FRCST 2028	291,042	14,770	227	5,121	311,160	4,112,598	938,162	1,970,357	57,921	7,079,038
FRCST 2029	291,453	14,845	226	5,121	311,645	4,094,018	948,891	1,933,170	57,921	7,034,000
FRCST 2030	291,975	14,922	226	5,121	312,244	4,081,795	965,539	1,933,294	57,921	7,038,549
FRCST 2031	292,402	14,993	226	5,121	312,742	4,068,687	989,851	1,924,514	57,921	7,040,973
FRCST 2032	292,956	15,068	226	5,121	313,371	4,059,258	1,008,601	1,894,425	57,921	7,020,205
FRCST 2033	293,432	15,137	226	5,121	313,916	4,048,641	1,015,678	1,838,014	57,921	6,960,254
FRCST 2034	293,935	15,218	223	5,121	314,497	4,041,807	1,022,223	1,818,650	57,921	6,940,601
FRCST 2035	294,325	15,292	223	5,121	314,961	4,043,213	1,028,798	1,795,155	57,921	6,925,087
FRCST 2036	294,838	15,366	223	5,121	315,548	4,046,160	1,035,401	1,766,804	57,921	6,906,286
FRCST 2037	295,240	15,437	222	5,121	316,020	4,046,113	1,042,037	1,751,987	57,921	6,898,059
FRCST 2038	295,768	15,513	222	5,121	316,624	4,048,896	1,048,711	1,733,437	57,921	6,888,965

***** LOW SCENARIO WITH DSM IMPACTS *****

TIME PERIOD	AGGREGATED NUMBER OF CONSUMERS					AGGREGATED SYSTEM ENERGY SALES				
	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT. CHG.)	OTHER (ACT. CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
2007 -2012	0.17%	0.60%	5	380	0.22%	-1.34%	0.74%	2.12%	2.59%	-0.14%
2012 -2017	0.37%	0.20%	10	2385	0.52%	-0.40%	0.31%	2.39%	3.91%	0.53%
2018 -2023	0.28%	0.47%	9	21	0.29%	0.26%	0.20%	1.64%	0.00%	0.64%
2023 -2028	0.19%	0.47%	-1	0	0.20%	-0.34%	0.58%	-1.21%	0.00%	-0.47%
2028 -2033	0.16%	0.49%	-1	0	0.18%	-0.31%	1.60%	-1.38%	0.00%	-0.34%
2033 -2038	0.16%	0.49%	-4	0	0.17%	0.00%	0.64%	-1.16%	0.00%	-0.21%
2007 -2017	0.27%	0.40%	15	2765	0.37%	-0.87%	0.52%	2.26%	3.24%	0.19%
2018 -2038	0.20%	0.48%	3	21	0.21%	-0.10%	0.75%	-0.54%	0.00%	-0.09%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 2007	7,215,322	7,533,291	4.33%	4.84%	*****	1,533	1,559	1,407	1,421
ACTUAL 2008	7,193,537	7,471,337	3.80%	5.10%	*****	1,579	1,442	1,435	1,317
ACTUAL 2009	6,898,781	7,174,725	3.93%	4.86%	*****	1,674	1,453	1,520	1,306
ACTUAL 2010	7,338,146	7,656,224	4.25%	4.73%	*****	1,539	1,577	1,380	1,462
ACTUAL 2011	7,133,476	7,429,116	4.07%	4.19%	*****	1,552	1,579	1,409	1,441
ACTUAL 2012	7,123,700	7,364,416	3.35%	3.77%	*****	1,426	1,631	1,278	1,478
ACTUAL 2013	7,309,346	7,498,978	2.59%	3.19%	*****	1,472	1,498	1,360	1,351
ACTUAL 2014	7,560,267	7,804,699	3.20%	3.39%	*****	1,827	1,482	1,663	1,348
ACTUAL 2015	7,353,260	7,645,777	3.91%	4.16%	*****	1,750	1,533	1,622	1,364
ACTUAL 2016	7,388,028	7,719,002	4.38%	4.63%	*****	1,577	1,566	1,440	1,376
ACTUAL 2017	7,310,241	7,636,264	4.36%	4.78%	*****	1,563	1,548	1,401	1,372
FRCST 2018	7,324,769	7,666,546	4.55%	5.00%	75.200	1,557	1,542	1,429	1,375
FRCST 2019	7,379,612	7,703,158	4.29%	4.95%	75.760	1,569	1,555	1,443	1,391
FRCST 2020	7,418,021	7,744,365	4.30%	4.70%	75.520	1,576	1,565	1,451	1,402
FRCST 2021	7,497,746	7,827,672	4.30%	4.70%	75.380	1,590	1,582	1,464	1,420
FRCST 2022	7,541,275	7,873,157	4.30%	4.70%	75.860	1,598	1,594	1,472	1,431
FRCST 2023	7,561,451	7,894,240	4.30%	4.70%	75.890	1,601	1,600	1,475	1,438
FRCST 2024	7,554,183	7,886,645	4.30%	4.70%	77.410	1,599	1,602	1,473	1,440
FRCST 2025	7,537,858	7,869,586	4.30%	4.70%	78.960	1,595	1,601	1,469	1,439
FRCST 2026	7,511,308	7,841,843	4.30%	4.70%	80.540	1,589	1,598	1,463	1,436
FRCST 2027	7,481,186	7,810,368	4.30%	4.70%	82.150	1,584	1,595	1,460	1,434
FRCST 2028	7,384,434	7,709,269	4.30%	4.70%	83.790	1,568	1,577	1,445	1,419
FRCST 2029	7,335,918	7,658,572	4.30%	4.70%	85.470	1,559	1,568	1,437	1,423
FRCST 2030	7,340,652	7,663,520	4.30%	4.70%	87.180	1,561	1,571	1,439	1,426
FRCST 2031	7,343,077	7,666,053	4.30%	4.70%	88.920	1,564	1,574	1,443	1,430
FRCST 2032	7,321,471	7,643,477	4.30%	4.70%	90.700	1,562	1,572	1,441	1,429
FRCST 2033	7,259,288	7,578,500	4.30%	4.70%	92.510	1,551	1,561	1,432	1,420
FRCST 2034	7,238,869	7,557,163	4.30%	4.70%	92.510	1,550	1,560	1,431	1,419
FRCST 2035	7,222,772	7,540,343	4.30%	4.70%	92.510	1,547	1,557	1,428	1,416
FRCST 2036	7,203,423	7,520,125	4.30%	4.70%	92.510	1,542	1,553	1,424	1,413
FRCST 2037	7,194,926	7,511,246	4.30%	4.70%	92.510	1,540	1,553	1,422	1,413
FRCST 2038	7,185,496	7,501,392	4.30%	4.70%	92.510	1,539	1,552	1,421	1,412

***** LOW SCENARIO WITH DSM IMPACTS *****

***** LOW 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
2007 -2012	-0.26%	-0.45%	3.96%	4.58%	*****	-1.43%	0.91%	-1.91%	0.80%
2012 -2017	0.52%	0.73%	3.63%	3.99%	*****	1.85%	-1.04%	1.85%	-1.47%
2018 -2023	0.64%	0.59%	4.34%	4.79%	0.18%	0.56%	0.75%	0.63%	0.91%
2023 -2028	-0.47%	-0.47%	4.30%	4.70%	2.00%	-0.42%	-0.29%	-0.41%	-0.27%
2028 -2033	-0.34%	-0.34%	4.30%	4.70%	2.00%	-0.21%	-0.21%	-0.18%	0.01%
2033 -2038	-0.20%	-0.20%	4.30%	4.70%	0.00%	-0.16%	-0.12%	-0.16%	-0.11%
2007 -2017	0.13%	0.14%	3.83%	4.33%	*****	0.19%	-0.07%	-0.05%	-0.35%
2018 -2038	-0.10%	-0.11%	4.31%	4.73%	1.04%	-0.06%	0.03%	-0.03%	0.14%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 *****					
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 LOAD FACTOR DUE TO COINCIDENT PEAK	WITHOUT LOSSES		WITH LOSSES		H.E. ANNUAL LOAD FACTOR DUE TO NON-COIN. PEAK
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 2007	1,407	1,418	1,478	1,489	57.8%	1,496	1,555	1,571	1,633	52.7%
ACTUAL 2008	1,435	1,296	1,511	1,364	56.3%	1,562	1,420	1,644	1,494	51.7%
ACTUAL 2009	1,518	1,303	1,594	1,369	51.4%	1,672	1,450	1,756	1,522	46.6%
ACTUAL 2010	1,369	1,454	1,436	1,525	57.3%	1,526	1,570	1,600	1,646	53.1%
ACTUAL 2011	1,394	1,435	1,454	1,497	56.6%	1,535	1,573	1,601	1,640	51.7%
ACTUAL 2012	1,275	1,476	1,324	1,533	54.7%	1,423	1,629	1,477	1,691	49.6%
ACTUAL 2013	1,360	1,348	1,404	1,392	61.0%	1,472	1,495	1,520	1,543	55.5%
ACTUAL 2014	1,662	1,341	1,719	1,388	51.8%	1,825	1,475	1,888	1,525	47.2%
ACTUAL 2015	1,608	1,362	1,677	1,420	52.0%	1,734	1,531	1,808	1,596	48.3%
ACTUAL 2016	1,438	1,372	1,507	1,438	58.3%	1,575	1,562	1,650	1,636	53.3%
ACTUAL 2017	1,397	1,368	1,466	1,436	59.5%	1,558	1,543	1,635	1,619	53.3%
FRCST 2018	1,423	1,371	1,497	1,442	58.5%	1,550	1,538	1,630	1,618	53.7%
FRCST 2019	1,436	1,388	1,510	1,459	58.2%	1,562	1,551	1,642	1,631	53.6%
FRCST 2020	1,444	1,399	1,515	1,467	58.2%	1,569	1,561	1,645	1,636	53.6%
FRCST 2021	1,458	1,416	1,529	1,485	58.4%	1,583	1,578	1,660	1,655	53.8%
FRCST 2022	1,466	1,428	1,537	1,497	58.5%	1,591	1,590	1,668	1,667	53.9%
FRCST 2023	1,469	1,434	1,540	1,504	58.5%	1,594	1,596	1,671	1,674	53.8%
FRCST 2024	1,467	1,436	1,538	1,506	58.4%	1,593	1,599	1,670	1,676	53.6%
FRCST 2025	1,463	1,435	1,534	1,505	58.6%	1,588	1,597	1,665	1,675	53.6%
FRCST 2026	1,457	1,433	1,528	1,502	58.6%	1,582	1,594	1,658	1,672	53.6%
FRCST 2027	1,453	1,430	1,524	1,500	58.5%	1,578	1,591	1,654	1,668	53.4%
FRCST 2028	1,439	1,416	1,509	1,484	58.2%	1,561	1,574	1,636	1,650	53.2%
FRCST 2029	1,431	1,420	1,500	1,489	58.3%	1,552	1,565	1,627	1,641	53.3%
FRCST 2030	1,433	1,423	1,503	1,492	58.2%	1,554	1,567	1,630	1,643	53.2%
FRCST 2031	1,436	1,427	1,506	1,496	58.1%	1,557	1,570	1,633	1,647	53.2%
FRCST 2032	1,435	1,425	1,504	1,495	57.8%	1,555	1,568	1,630	1,644	52.9%
FRCST 2033	1,426	1,416	1,495	1,485	57.9%	1,545	1,557	1,619	1,633	53.0%
FRCST 2034	1,425	1,416	1,494	1,485	57.7%	1,544	1,556	1,619	1,632	52.9%
FRCST 2035	1,422	1,413	1,491	1,482	57.7%	1,540	1,553	1,615	1,628	52.9%
FRCST 2036	1,418	1,410	1,487	1,479	57.6%	1,536	1,549	1,610	1,625	52.7%
FRCST 2037	1,416	1,409	1,485	1,478	57.7%	1,534	1,549	1,608	1,624	52.8%
FRCST 2038	1,415	1,409	1,483	1,477	57.7%	1,532	1,548	1,606	1,623	52.8%

***** LOW SCENARIO WITH DSM IMPACTS *****					***** LOW SCENARIO WITH DSM IMPACTS *****					
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	
2007 -2012	-1.96%	0.81%	-2.17%	0.59%	55.68%	-1.00%	0.93%	-1.22%	0.71%	50.90%
2012 -2017	1.84%	-1.51%	2.05%	-1.30%	56.21%	1.84%	-1.07%	2.05%	-0.87%	51.17%
2018 -2023	0.63%	0.91%	0.57%	0.84%	58.39%	0.56%	0.75%	0.49%	0.69%	53.73%
2023 -2028	-0.41%	-0.27%	-0.41%	-0.27%	58.45%	-0.42%	-0.29%	-0.42%	-0.29%	53.54%
2028 -2033	-0.18%	0.01%	-0.18%	0.01%	58.08%	-0.21%	-0.21%	-0.21%	-0.21%	53.13%
2033 -2038	-0.16%	-0.11%	-0.16%	-0.11%	57.73%	-0.16%	-0.12%	-0.16%	-0.12%	52.83%
2007 -2017	-0.08%	-0.35%	-0.08%	-0.36%	56.06%	0.41%	-0.08%	0.40%	-0.08%	51.17%
2018 -2038	-0.03%	0.14%	-0.05%	0.12%	58.16%	-0.06%	0.03%	-0.07%	0.02%	53.30%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 *****					
**** 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)					
YEAR	WINTER		SUMMER		H.E. ANNUAL LOAD FACTOR Due to EXTREME COINCIDENT PEAK	WINTER		SUMMER		H.E. ANNUAL LOAD FACTOR Due To EXTREME NON-COIN. PEAK
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 2007	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2010	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2011	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2012	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2013	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2014	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2015	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2016	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2017	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
FRCST 2018	1,597	1,532	1,679	1,611	52.1%	1,736	1,716	1,826	1,805	47.9%
FRCST 2019	1,611	1,550	1,694	1,630	51.9%	1,750	1,731	1,840	1,820	47.8%
FRCST 2020	1,620	1,562	1,699	1,638	51.9%	1,758	1,741	1,843	1,826	47.8%
FRCST 2021	1,635	1,581	1,715	1,658	52.1%	1,773	1,760	1,860	1,846	48.1%
FRCST 2022	1,644	1,594	1,724	1,671	52.1%	1,783	1,773	1,869	1,859	48.1%
FRCST 2023	1,647	1,601	1,727	1,679	52.2%	1,786	1,781	1,872	1,867	48.1%
FRCST 2024	1,645	1,602	1,725	1,680	52.0%	1,784	1,782	1,870	1,868	48.0%
FRCST 2025	1,641	1,601	1,720	1,679	52.2%	1,779	1,780	1,865	1,867	48.1%
FRCST 2026	1,635	1,598	1,714	1,676	52.2%	1,773	1,777	1,859	1,864	48.0%
FRCST 2027	1,631	1,595	1,710	1,673	52.1%	1,768	1,774	1,854	1,860	47.9%
FRCST 2028	1,615	1,579	1,693	1,656	51.8%	1,750	1,754	1,834	1,839	47.7%
FRCST 2029	1,607	1,585	1,685	1,662	51.9%	1,741	1,745	1,825	1,830	47.8%
FRCST 2030	1,610	1,588	1,688	1,666	51.8%	1,743	1,748	1,828	1,833	47.7%
FRCST 2031	1,612	1,592	1,691	1,670	51.8%	1,746	1,751	1,831	1,836	47.7%
FRCST 2032	1,610	1,590	1,689	1,667	51.5%	1,743	1,748	1,828	1,833	47.5%
FRCST 2033	1,601	1,581	1,679	1,657	51.5%	1,732	1,736	1,816	1,821	47.5%
FRCST 2034	1,599	1,579	1,677	1,656	51.4%	1,730	1,734	1,814	1,818	47.4%
FRCST 2035	1,596	1,576	1,673	1,653	51.4%	1,726	1,731	1,810	1,815	47.4%
FRCST 2036	1,592	1,573	1,669	1,649	51.3%	1,721	1,727	1,805	1,811	47.3%
FRCST 2037	1,590	1,572	1,667	1,649	51.4%	1,720	1,726	1,803	1,810	47.4%
FRCST 2038	1,588	1,572	1,666	1,648	51.4%	1,718	1,725	1,801	1,809	47.3%

***** LOW SCENARIO WITH DSM IMPACTS *****					***** LOW SCENARIO WITH DSM IMPACTS *****					
**** EXTREME TEMPERATURE CONDITIONS ****					**** EXTREME TEMPERATURE CONDITIONS ****					
HOOSIER ENERGY COINCIDENT PEAK (60 MIN.)					HOOSIER ENERGY NON-COINCIDENT PEAK (60 MIN.)					
TIME PERIOD	Without Losses (% Chg)		With Losses (% Chg)		EXTREME COIN. H.E. ANNUAL LOAD FACTOR (AVERAGE)	Without Losses (% Chg)		With Losses (% Chg)		EXT.NON-COIN H.E. ANNUAL LOAD FACTOR (AVERAGE)
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER	
2007 -2012	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
2012 -2017	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
2018 -2023	0.63%	0.88%	0.57%	0.82%	52.05%	0.56%	0.74%	0.50%	0.68%	47.97%
2023 -2028	-0.40%	-0.27%	-0.40%	-0.27%	52.10%	-0.41%	-0.30%	-0.41%	-0.30%	47.99%
2028 -2033	-0.18%	0.02%	-0.18%	0.02%	51.73%	-0.20%	-0.21%	-0.20%	-0.21%	47.65%
2033 -2038	-0.15%	-0.11%	-0.15%	-0.11%	51.43%	-0.16%	-0.13%	-0.16%	-0.13%	47.40%
2007 -2017	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
2018 -2038	-0.03%	0.13%	-0.04%	0.11%	51.82%	-0.05%	0.03%	-0.07%	0.01%	47.75%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 *****

**** 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 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	3,904,138	818,798	1,564,440	31,738	6,319,115
ACTUAL 2010	265,890	12,407	193	1,854	280,344	4,158,334	843,557	1,712,254	33,075	6,747,220
ACTUAL 2011	277,750	13,765	210	2,498	294,223	4,093,233	901,706	1,806,351	40,873	6,842,163
ACTUAL 2012	278,374	13,889	204	2,564	295,031	3,958,457	930,498	1,895,575	46,875	6,831,406
ACTUAL 2013	279,339	14,031	207	2,686	296,263	4,091,997	938,827	1,924,132	40,413	6,995,370
ACTUAL 2014	280,060	14,289	205	2,805	297,359	4,204,581	952,691	2,043,777	41,306	7,242,356
ACTUAL 2015	281,173	14,255	207	2,881	298,516	4,002,897	946,635	2,069,866	37,583	7,056,982
ACTUAL 2016	283,258	13,827	214	2,984	300,283	4,024,894	949,178	2,059,447	39,010	7,072,530
ACTUAL 2017	283,538	14,030	214	4,949	302,731	3,880,889	944,811	2,133,419	56,773	7,015,892
FRCST 2018	284,244	14,091	219	5,100	303,654	4,128,430	902,496	1,930,443	57,921	7,019,290
FRCST 2019	285,112	14,154	223	5,121	304,610	4,166,301	903,500	1,943,933	58,089	7,071,822
FRCST 2020	285,928	14,222	227	5,121	305,498	4,179,413	905,690	1,965,816	57,921	7,108,841
FRCST 2021	286,646	14,289	229	5,121	306,285	4,185,608	907,733	2,034,547	57,921	7,185,809
FRCST 2022	287,481	14,359	229	5,121	307,190	4,186,548	909,634	2,073,465	57,921	7,227,568
FRCST 2023	288,274	14,425	228	5,121	308,048	4,183,287	911,402	2,094,330	57,921	7,246,939
FRCST 2024	288,856	14,495	228	5,121	308,700	4,169,858	914,640	2,099,726	57,921	7,242,145
FRCST 2025	289,307	14,568	228	5,121	309,224	4,151,991	921,182	2,095,515	57,921	7,226,608
FRCST 2026	289,881	14,633	227	5,121	309,862	4,136,682	925,788	2,080,856	57,921	7,201,247
FRCST 2027	290,390	14,702	227	5,121	310,440	4,123,956	931,464	2,058,898	57,921	7,172,239
FRCST 2028	291,042	14,770	227	5,121	311,160	4,112,598	938,162	1,970,357	57,921	7,079,038
FRCST 2029	291,453	14,845	226	5,121	311,645	4,094,018	948,891	1,933,170	57,921	7,034,000
FRCST 2030	291,975	14,922	226	5,121	312,244	4,081,795	965,539	1,933,294	57,921	7,038,549
FRCST 2031	292,402	14,993	226	5,121	312,742	4,068,687	989,851	1,924,514	57,921	7,040,973
FRCST 2032	292,956	15,068	226	5,121	313,371	4,059,258	1,008,601	1,894,425	57,921	7,020,205
FRCST 2033	293,432	15,137	226	5,121	313,916	4,048,641	1,015,678	1,838,014	57,921	6,960,254
FRCST 2034	293,935	15,218	223	5,121	314,497	4,041,807	1,022,223	1,818,650	57,921	6,940,601
FRCST 2035	294,325	15,292	223	5,121	314,961	4,043,213	1,028,798	1,795,155	57,921	6,925,087
FRCST 2036	294,838	15,366	223	5,121	315,548	4,046,160	1,035,401	1,766,804	57,921	6,906,286
FRCST 2037	295,240	15,437	222	5,121	316,020	4,046,113	1,042,037	1,751,987	57,921	6,898,059
FRCST 2038	295,768	15,513	222	5,121	316,624	4,048,896	1,048,711	1,733,437	57,921	6,888,965

***** LOW SCENARIO WITH DSM IMPACTS *****

***** LOW 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.)
2007 -2012	1.07%	2.55%	13	743	1.18%	-0.65%	1.70%	3.19%	6.48%	0.70%
2012 -2017	0.37%	0.20%	10	2385	0.52%	-0.40%	0.31%	2.39%	3.91%	0.53%
2018 -2023	0.28%	0.47%	9	21	0.29%	0.26%	0.20%	1.64%	0.00%	0.64%
2023 -2028	0.19%	0.47%	-1	0	0.20%	-0.34%	0.58%	-1.21%	0.00%	-0.47%
2028 -2033	0.16%	0.49%	-1	0	0.18%	-0.31%	1.60%	-1.38%	0.00%	-0.34%
2033 -2038	0.16%	0.49%	-4	0	0.17%	0.00%	0.64%	-1.16%	0.00%	-0.21%
2007 -2017	0.72%	1.37%	23	3128	0.85%	-0.52%	1.00%	2.79%	5.19%	0.62%
2018 -2038	0.20%	0.48%	3	21	0.21%	-0.10%	0.75%	-0.54%	0.00%	-0.09%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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, 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)				ANNUAL LOAD FACTOR
			WINTER	SUMMER	(WITHOUT LOSSES)		(WITH LOSSES)		
					WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 2007	6,924,233	7,229,037	1,404	1,358	1,370	1,355	1,439	1,423	57.4%
ACTUAL 2008	6,912,387	7,179,069	1,406	1,265	1,391	1,245	1,465	1,311	55.8%
ACTUAL 2009	6,617,633	6,882,071	1,474	1,249	1,472	1,247	1,546	1,309	50.8%
ACTUAL 2010	7,043,763	7,348,773	1,331	1,399	1,320	1,392	1,385	1,460	57.5%
ACTUAL 2011	7,133,476	7,429,116	1,409	1,441	1,394	1,435	1,454	1,497	56.6%
ACTUAL 2012	7,123,700	7,364,416	1,278	1,478	1,275	1,476	1,324	1,533	54.7%
ACTUAL 2013	7,309,346	7,498,978	1,360	1,351	1,360	1,348	1,404	1,392	61.0%
ACTUAL 2014	7,560,267	7,804,699	1,663	1,348	1,662	1,341	1,719	1,388	51.8%
ACTUAL 2015	7,353,260	7,645,777	1,622	1,364	1,608	1,362	1,677	1,420	52.0%
ACTUAL 2016	7,388,028	7,719,002	1,440	1,376	1,438	1,372	1,507	1,438	58.3%
ACTUAL 2017	7,310,241	7,636,264	1,401	1,372	1,397	1,368	1,466	1,436	59.5%
FRCST 2018	7,324,769	7,666,546	1,429	1,375	1,423	1,371	1,497	1,442	58.5%
FRCST 2019	7,379,612	7,703,158	1,443	1,391	1,436	1,388	1,510	1,459	58.2%
FRCST 2020	7,418,021	7,744,365	1,451	1,402	1,444	1,399	1,515	1,467	58.2%
FRCST 2021	7,497,746	7,827,672	1,464	1,420	1,458	1,416	1,529	1,485	58.4%
FRCST 2022	7,541,275	7,873,157	1,472	1,431	1,466	1,428	1,537	1,497	58.5%
FRCST 2023	7,561,451	7,894,240	1,475	1,438	1,469	1,434	1,540	1,504	58.5%
FRCST 2024	7,554,183	7,886,645	1,473	1,440	1,467	1,436	1,538	1,506	58.4%
FRCST 2025	7,537,858	7,869,586	1,469	1,439	1,463	1,435	1,534	1,505	58.6%
FRCST 2026	7,511,308	7,841,843	1,463	1,436	1,457	1,433	1,528	1,502	58.6%
FRCST 2027	7,481,186	7,810,368	1,460	1,434	1,453	1,430	1,524	1,500	58.5%
FRCST 2028	7,384,434	7,709,269	1,445	1,419	1,439	1,416	1,509	1,484	58.2%
FRCST 2029	7,335,918	7,658,572	1,437	1,423	1,431	1,420	1,500	1,489	58.3%
FRCST 2030	7,340,652	7,663,520	1,439	1,426	1,433	1,423	1,503	1,492	58.2%
FRCST 2031	7,343,077	7,666,053	1,443	1,430	1,436	1,427	1,506	1,496	58.1%
FRCST 2032	7,321,471	7,643,477	1,441	1,429	1,435	1,425	1,504	1,495	57.8%
FRCST 2033	7,259,288	7,578,500	1,432	1,420	1,426	1,416	1,495	1,485	57.9%
FRCST 2034	7,238,869	7,557,163	1,431	1,419	1,425	1,416	1,494	1,485	57.7%
FRCST 2035	7,222,772	7,540,343	1,428	1,416	1,422	1,413	1,491	1,482	57.7%
FRCST 2036	7,203,423	7,520,125	1,424	1,413	1,418	1,410	1,487	1,479	57.6%
FRCST 2037	7,194,926	7,511,246	1,422	1,413	1,416	1,409	1,485	1,478	57.7%
FRCST 2038	7,185,496	7,501,392	1,421	1,412	1,415	1,409	1,483	1,477	57.7%

***** LOW SCENARIO WITH DSM IMPACTS *****

***** LOW 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				ADJUSTED ANNUAL LOAD FACTOR (AVERAGE)
	Generated	Generated	Winter	Summer	Without Losses (% Chg)		With Losses (% Chg)		
2007 -2012	0.57%	0.37%	-1.86%	1.71%	-1.43%	1.73%	-1.65%	1.51%	55.46%
2012 -2017	0.52%	0.73%	1.85%	-1.47%	1.84%	-1.51%	2.05%	-1.30%	56.21%
2018 -2023	0.64%	0.59%	0.63%	0.91%	0.63%	0.91%	0.57%	0.84%	58.39%
2023 -2028	-0.47%	-0.47%	-0.41%	-0.27%	-0.41%	-0.27%	-0.41%	-0.27%	58.45%
2028 -2033	-0.34%	-0.34%	-0.18%	0.01%	-0.18%	0.01%	-0.18%	0.01%	58.08%
2033 -2038	-0.20%	-0.20%	-0.16%	-0.11%	-0.16%	-0.11%	-0.16%	-0.11%	57.73%
2007 -2017	0.54%	0.55%	-0.02%	0.11%	0.19%	0.10%	0.19%	0.09%	55.94%
2018 -2038	-0.10%	-0.11%	-0.03%	0.14%	-0.03%	0.14%	-0.05%	0.12%	58.16%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 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 2007	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****
ACTUAL 2010	*****	*****	*****	*****	*****
ACTUAL 2011	*****	*****	*****	*****	*****
ACTUAL 2012	*****	*****	*****	*****	*****
ACTUAL 2013	*****	*****	*****	*****	*****
ACTUAL 2014	*****	*****	*****	*****	*****
ACTUAL 2015	*****	*****	*****	*****	*****
ACTUAL 2016	*****	*****	*****	*****	*****
ACTUAL 2017	*****	*****	*****	*****	*****
FRCST 2018	1,597	1,532	1,679	1,611	52.1%
FRCST 2019	1,611	1,550	1,694	1,630	51.9%
FRCST 2020	1,620	1,562	1,699	1,638	51.9%
FRCST 2021	1,635	1,581	1,715	1,658	52.1%
FRCST 2022	1,644	1,594	1,724	1,671	52.1%
FRCST 2023	1,647	1,601	1,727	1,679	52.2%
FRCST 2024	1,645	1,602	1,725	1,680	52.0%
FRCST 2025	1,641	1,601	1,720	1,679	52.2%
FRCST 2026	1,635	1,598	1,714	1,676	52.2%
FRCST 2027	1,631	1,595	1,710	1,673	52.1%
FRCST 2028	1,615	1,579	1,693	1,656	51.8%
FRCST 2029	1,607	1,585	1,685	1,662	51.9%
FRCST 2030	1,610	1,588	1,688	1,666	51.8%
FRCST 2031	1,612	1,592	1,691	1,670	51.8%
FRCST 2032	1,610	1,590	1,689	1,667	51.5%
FRCST 2033	1,601	1,581	1,679	1,657	51.5%
FRCST 2034	1,599	1,579	1,677	1,656	51.4%
FRCST 2035	1,596	1,576	1,673	1,653	51.4%
FRCST 2036	1,592	1,573	1,669	1,649	51.3%
FRCST 2037	1,590	1,572	1,667	1,649	51.4%
FRCST 2038	1,588	1,572	1,666	1,648	51.4%

***** LOW SCENARIO WITH DSM IMPACTS *****

***** LOW 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	
2007 -2012	*****	*****	*****	*****	*****
2012 -2017	*****	*****	*****	*****	*****
2018 -2023	0.63%	0.88%	0.57%	0.82%	52.05%
2023 -2028	-0.40%	-0.27%	-0.40%	-0.27%	52.10%
2028 -2033	-0.18%	0.02%	-0.18%	0.02%	51.73%
2033 -2038	-0.15%	-0.11%	-0.15%	-0.11%	51.43%
2007 -2017	*****	*****	*****	*****	*****
2018 -2038	-0.03%	0.13%	-0.04%	0.11%	51.82%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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,IL#002 and Special Industrial Loads

Values Adjusted for IN#72,IN#16,IN#92,IL#002 and Special Industrial Loads

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 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	3,904,138	818,798	1,407,974	31,738	6,162,649
ACTUAL 2010	265,890	12,407	192	1,854	280,343	4,158,334	843,557	1,539,864	33,075	6,574,830
ACTUAL 2011	277,750	13,765	209	2,498	294,222	4,093,233	901,706	1,639,768	40,873	6,675,581
ACTUAL 2012	278,374	13,889	203	2,564	295,030	3,958,457	930,498	1,724,452	46,875	6,660,282
ACTUAL 2013	279,339	14,031	206	2,686	296,262	4,091,997	938,827	1,755,612	40,413	6,826,850
ACTUAL 2014	280,060	14,289	204	2,805	297,358	4,204,581	952,691	1,877,588	41,306	7,076,166
ACTUAL 2015	281,173	14,255	206	2,881	298,515	4,002,897	946,635	1,905,355	37,583	6,892,471
ACTUAL 2016	283,258	13,827	213	2,984	300,282	4,024,894	949,178	1,896,922	39,010	6,910,005
ACTUAL 2017	283,538	14,030	213	4,949	302,730	3,880,889	944,811	1,974,743	56,773	6,857,216
FRCST 2018	284,244	14,091	218	5,100	303,653	4,128,430	902,496	1,775,471	57,921	6,864,318
FRCST 2019	285,112	14,154	222	5,121	304,609	4,166,301	903,500	1,788,961	58,089	6,916,850
FRCST 2020	285,928	14,222	226	5,121	305,497	4,179,413	905,690	1,810,844	57,921	6,953,868
FRCST 2021	286,646	14,289	228	5,121	306,284	4,185,608	907,733	1,879,575	57,921	7,030,836
FRCST 2022	287,481	14,359	228	5,121	307,189	4,186,548	909,634	1,918,493	57,921	7,072,596
FRCST 2023	288,274	14,425	227	5,121	308,047	4,183,287	911,402	1,939,358	57,921	7,091,967
FRCST 2024	288,856	14,495	227	5,121	308,699	4,169,858	914,640	1,944,754	57,921	7,087,172
FRCST 2025	289,307	14,568	227	5,121	309,223	4,151,991	921,182	1,940,543	57,921	7,071,636
FRCST 2026	289,881	14,633	226	5,121	309,861	4,136,682	925,788	1,925,884	57,921	7,046,275
FRCST 2027	290,390	14,702	226	5,121	310,439	4,123,956	931,464	1,903,926	57,921	7,017,267
FRCST 2028	291,042	14,770	226	5,121	311,159	4,112,598	938,162	1,815,385	57,921	6,924,066
FRCST 2029	291,453	14,845	225	5,121	311,644	4,094,018	948,891	1,778,198	57,921	6,879,028
FRCST 2030	291,975	14,922	225	5,121	312,243	4,081,795	965,539	1,778,322	57,921	6,883,577
FRCST 2031	292,402	14,993	225	5,121	312,741	4,068,687	989,851	1,769,542	57,921	6,886,001
FRCST 2032	292,956	15,068	225	5,121	313,370	4,059,258	1,008,601	1,739,453	57,921	6,865,233
FRCST 2033	293,432	15,137	225	5,121	313,915	4,048,641	1,015,678	1,683,042	57,921	6,805,282
FRCST 2034	293,935	15,218	222	5,121	314,496	4,041,807	1,022,223	1,663,678	57,921	6,785,629
FRCST 2035	294,325	15,292	222	5,121	314,960	4,043,213	1,028,798	1,640,183	57,921	6,770,114
FRCST 2036	294,838	15,366	222	5,121	315,547	4,046,160	1,035,401	1,611,832	57,921	6,751,313
FRCST 2037	295,240	15,437	221	5,121	316,019	4,046,113	1,042,037	1,597,015	57,921	6,743,087
FRCST 2038	295,768	15,513	221	5,121	316,623	4,048,896	1,048,711	1,578,465	57,921	6,733,993

***** LOW SCENARIO WITH DSM IMPACTS *****

***** LOW 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.)
2007 -2012	1.07%	2.55%	13	743	1.18%	-0.65%	1.70%	3.74%	6.48%	0.76%
2012 -2017	0.37%	0.20%	10	2385	0.52%	-0.40%	0.31%	2.75%	3.91%	0.58%
2018 -2023	0.28%	0.47%	9	21	0.29%	0.26%	0.20%	1.78%	0.00%	0.65%
2023 -2028	0.19%	0.47%	-1	0	0.20%	-0.34%	0.58%	-1.31%	0.00%	-0.48%
2028 -2033	0.16%	0.49%	-1	0	0.18%	-0.31%	1.60%	-1.50%	0.00%	-0.35%
2033 -2038	0.16%	0.49%	-4	0	0.17%	0.00%	0.64%	-1.27%	0.00%	-0.21%
2007 -2017	0.72%	1.37%	23	3128	0.85%	-0.52%	1.00%	3.24%	5.19%	0.67%
2018 -2038	0.20%	0.48%	3	21	0.21%	-0.10%	0.75%	-0.59%	0.00%	-0.10%

1979 :BEGINNING HISTORICAL DATA YEAR ?
 2017 :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,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
					(WITHOUT LOSSES)		(WITH LOSSES)		
			WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
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	6,461,167	6,725,605	1,467	1,232	1,465	1,229	1,525	1,292	50.3%
ACTUAL 2010	6,871,372	7,176,383	1,317	1,373	1,306	1,366	1,357	1,431	57.2%
ACTUAL 2011	6,966,893	7,262,533	1,392	1,424	1,377	1,418	1,453	1,478	56.1%
ACTUAL 2012	6,952,576	7,193,293	1,257	1,459	1,254	1,457	1,287	1,537	53.3%
ACTUAL 2013	7,140,826	7,330,458	1,336	1,334	1,336	1,331	1,376	1,385	60.4%
ACTUAL 2014	7,394,078	7,638,510	1,646	1,328	1,645	1,321	1,698	1,369	51.4%
ACTUAL 2015	7,188,749	7,481,266	1,593	1,346	1,579	1,344	1,643	1,412	52.0%
ACTUAL 2016	7,225,503	7,556,477	1,425	1,354	1,423	1,350	1,498	1,412	57.4%
ACTUAL 2017	7,151,565	7,477,588	1,384	1,348	1,380	1,344	1,444	1,416	59.1%
FRCST 2018	7,169,797	7,511,574	1,407	1,353	1,401	1,349	1,475	1,420	58.1%
FRCST 2019	7,224,639	7,548,186	1,420	1,370	1,414	1,366	1,488	1,437	57.9%
FRCST 2020	7,263,049	7,589,392	1,428	1,380	1,422	1,377	1,492	1,445	57.9%
FRCST 2021	7,342,774	7,672,700	1,442	1,398	1,436	1,394	1,507	1,463	58.1%
FRCST 2022	7,386,303	7,718,185	1,450	1,409	1,444	1,406	1,515	1,475	58.2%
FRCST 2023	7,406,479	7,739,268	1,453	1,416	1,446	1,413	1,518	1,482	58.2%
FRCST 2024	7,399,211	7,731,673	1,451	1,418	1,445	1,415	1,516	1,484	58.1%
FRCST 2025	7,382,886	7,714,614	1,447	1,417	1,441	1,414	1,512	1,483	58.3%
FRCST 2026	7,356,336	7,686,871	1,441	1,414	1,435	1,411	1,506	1,481	58.3%
FRCST 2027	7,326,214	7,655,396	1,437	1,412	1,431	1,409	1,502	1,478	58.2%
FRCST 2028	7,229,462	7,554,297	1,423	1,397	1,417	1,394	1,487	1,462	57.8%
FRCST 2029	7,180,946	7,503,600	1,415	1,402	1,409	1,398	1,478	1,467	57.9%
FRCST 2030	7,185,680	7,508,548	1,417	1,405	1,411	1,401	1,481	1,470	57.9%
FRCST 2031	7,188,104	7,511,081	1,420	1,409	1,414	1,405	1,484	1,474	57.8%
FRCST 2032	7,166,499	7,488,505	1,419	1,407	1,412	1,404	1,482	1,473	57.5%
FRCST 2033	7,104,316	7,423,528	1,410	1,398	1,404	1,395	1,473	1,463	57.5%
FRCST 2034	7,083,897	7,402,191	1,409	1,397	1,403	1,394	1,472	1,463	57.4%
FRCST 2035	7,067,799	7,385,370	1,406	1,395	1,400	1,391	1,469	1,460	57.4%
FRCST 2036	7,048,451	7,365,153	1,402	1,392	1,396	1,388	1,465	1,457	57.2%
FRCST 2037	7,039,954	7,356,274	1,400	1,391	1,394	1,388	1,463	1,456	57.4%
FRCST 2038	7,030,524	7,346,420	1,399	1,390	1,393	1,387	1,461	1,455	57.4%

***** 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				ADJUSTED ANNUAL LOAD FACTOR (AVERAGE)
					Without Losses (% Chg)		With Losses (% Chg)		
			WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
2007 -2012	0.63%	0.42%	-1.48%	1.76%	-1.04%	1.78%	-1.49%	1.93%	54.98%
2012 -2017	0.57%	0.78%	1.94%	-1.57%	1.93%	-1.60%	2.33%	-1.63%	55.60%
2018 -2023	0.65%	0.60%	0.64%	0.92%	0.64%	0.92%	0.58%	0.86%	58.07%
2023 -2028	-0.48%	-0.48%	-0.41%	-0.27%	-0.41%	-0.27%	-0.41%	-0.27%	58.14%
2028 -2033	-0.35%	-0.35%	-0.19%	0.01%	-0.19%	0.01%	-0.19%	0.01%	57.75%
2033 -2038	-0.21%	-0.21%	-0.16%	-0.11%	-0.16%	-0.11%	-0.16%	-0.11%	57.40%
2007 -2017	0.60%	0.60%	0.22%	0.08%	0.44%	0.07%	0.40%	0.14%	55.47%
2018 -2038	-0.10%	-0.11%	-0.03%	0.14%	-0.03%	0.14%	-0.05%	0.12%	57.84%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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,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 2007	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****
ACTUAL 2010	*****	*****	*****	*****	*****
ACTUAL 2011	*****	*****	*****	*****	*****
ACTUAL 2012	*****	*****	*****	*****	*****
ACTUAL 2013	*****	*****	*****	*****	*****
ACTUAL 2014	*****	*****	*****	*****	*****
ACTUAL 2015	*****	*****	*****	*****	*****
ACTUAL 2016	*****	*****	*****	*****	*****
ACTUAL 2017	*****	*****	*****	*****	*****
FRCST 2018	1,574	1,510	1,657	1,590	51.7%
FRCST 2019	1,589	1,528	1,672	1,608	51.5%
FRCST 2020	1,598	1,540	1,677	1,616	51.5%
FRCST 2021	1,613	1,559	1,693	1,636	51.7%
FRCST 2022	1,622	1,572	1,702	1,649	51.8%
FRCST 2023	1,625	1,579	1,705	1,657	51.8%
FRCST 2024	1,623	1,580	1,703	1,658	51.7%
FRCST 2025	1,618	1,579	1,698	1,657	51.9%
FRCST 2026	1,612	1,576	1,692	1,654	51.9%
FRCST 2027	1,609	1,574	1,688	1,651	51.8%
FRCST 2028	1,593	1,557	1,671	1,634	51.5%
FRCST 2029	1,585	1,563	1,663	1,640	51.5%
FRCST 2030	1,587	1,567	1,666	1,644	51.5%
FRCST 2031	1,590	1,570	1,669	1,648	51.4%
FRCST 2032	1,588	1,568	1,666	1,646	51.2%
FRCST 2033	1,579	1,559	1,656	1,636	51.2%
FRCST 2034	1,577	1,557	1,655	1,634	51.1%
FRCST 2035	1,573	1,554	1,651	1,631	51.1%
FRCST 2036	1,569	1,551	1,647	1,628	50.9%
FRCST 2037	1,568	1,551	1,645	1,627	51.0%
FRCST 2038	1,566	1,550	1,644	1,626	51.0%

***** LOW SCENARIO WITH DSM IMPACTS *****

***** LOW SCENARIO RESULTS *****

Adjusted for Sys. & Ind. HE EXT. COIN. 60 MINUTE DEMAND

ADJUSTED EXT. ANNUAL

TIME PERIOD	<u>Without Losses (% Chg)</u>		<u>With Losses (% Chg)</u>		ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)
	WINTER	SUMMER	WINTER	SUMMER	
2007 -2012	*****	*****	*****	*****	*****
2012 -2017	*****	*****	*****	*****	*****
2018 -2023	0.64%	0.90%	0.57%	0.83%	51.69%
2023 -2028	-0.40%	-0.28%	-0.40%	-0.28%	51.74%
2028 -2033	-0.18%	0.02%	-0.18%	0.02%	51.35%
2033 -2038	-0.16%	-0.11%	-0.16%	-0.11%	51.05%
2007 -2017	*****	*****	*****	*****	*****
2018 -2038	-0.03%	0.13%	-0.04%	0.11%	51.45%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 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	99.86%	99.76%	100.0%	0	0	100.0%	0	0
ACTUAL 2010	99.16%	99.49%	100.0%	0	0	100.0%	0	0
ACTUAL 2011	98.92%	99.58%	100.0%	0	0	100.0%	0	0
ACTUAL 2012	99.76%	99.86%	100.0%	0	0	100.0%	0	0
ACTUAL 2013	100.00%	99.78%	100.0%	0	0	100.0%	0	0
ACTUAL 2014	99.94%	99.47%	100.0%	0	0	100.0%	0	0
ACTUAL 2015	99.12%	99.85%	100.0%	0	0	100.0%	0	0
ACTUAL 2016	99.86%	99.70%	100.0%	0	0	100.0%	0	0
ACTUAL 2017	99.71%	99.70%	100.0%	0	0	100.0%	0	0
FRCST 2018	99.56%	99.75%	100.00%	0	0	100.00%	0	0
FRCST 2019	99.56%	99.75%	100.00%	0	0	100.00%	0	0
FRCST 2020	99.56%	99.75%	100.00%	0	0	100.00%	0	0
FRCST 2021	99.56%	99.75%	100.00%	0	0	100.00%	0	0
FRCST 2022	99.56%	99.75%	100.00%	0	0	100.00%	0	0
FRCST 2023	99.56%	99.75%	100.00%	0	0	100.00%	0	0
FRCST 2024	99.56%	99.75%	100.00%	0	0	100.00%	0	0
FRCST 2025	99.56%	99.75%	100.00%	0	0	100.00%	0	0
FRCST 2026	99.56%	99.75%	100.00%	0	0	100.00%	0	0
FRCST 2027	99.56%	99.75%	100.00%	0	0	100.00%	0	0
FRCST 2028	99.56%	99.75%	100.00%	0	0	100.00%	0	0
FRCST 2029	99.56%	99.75%	100.00%	0	0	100.00%	0	0
FRCST 2030	99.56%	99.75%	100.00%	0	0	100.00%	0	0
FRCST 2031	99.56%	99.75%	100.00%	0	0	100.00%	0	0
FRCST 2032	99.56%	99.75%	100.00%	0	0	100.00%	0	0
FRCST 2033	99.56%	99.75%	100.00%	0	0	100.00%	0	0
FRCST 2034	99.56%	99.75%	100.00%	0	0	100.00%	0	0
FRCST 2035	99.56%	99.75%	100.00%	0	0	100.00%	0	0
FRCST 2036	99.56%	99.75%	100.00%	0	0	100.00%	0	0
FRCST 2037	99.56%	99.75%	100.00%	0	0	100.00%	0	0
FRCST 2038	99.56%	99.75%	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)
2007 -2012	99.03%	99.47%
2012 -2017	99.73%	99.73%
2018 -2023	99.56%	99.75%
2023 -2028	99.56%	99.75%
2028 -2033	99.56%	99.75%
2033 -2038	99.56%	99.75%
2007 -2017	99.35%	99.58%
2018 -2038	99.56%	99.75%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 2007	100.0%	0	0	0	0.0%	1	1	
ACTUAL 2008	100.0%	0	0	0	0.0%	1	1	
ACTUAL 2009	100.0%	0	0	0	0.0%	1	1	
ACTUAL 2010	100.0%	0	0	0	0.0%	1	1	
ACTUAL 2011	100.0%	0	0	0	100.0%	0	0	
ACTUAL 2012	100.0%	0	0	0	100.0%	0	0	
ACTUAL 2013	100.0%	0	0	0	100.0%	0	0	
ACTUAL 2014	100.0%	0	0	0	100.0%	0	0	
ACTUAL 2015	100.0%	0	0	0	100.0%	0	0	
ACTUAL 2016	100.0%	0	0	0	100.0%	0	0	
ACTUAL 2017	100.0%	0	0	0	100.0%	0	0	

FRCST 2018	100.00%	0	0	0	100.00%	0	0	
FRCST 2019	100.00%	0	0	0	100.00%	0	0	
FRCST 2020	100.00%	0	0	0	100.00%	0	0	
FRCST 2021	100.00%	0	0	0	100.00%	0	0	
FRCST 2022	100.00%	0	0	0	100.00%	0	0	
FRCST 2023	100.00%	0	0	0	100.00%	0	0	
FRCST 2024	100.00%	0	0	0	100.00%	0	0	
FRCST 2025	100.00%	0	0	0	100.00%	0	0	
FRCST 2026	100.00%	0	0	0	100.00%	0	0	
FRCST 2027	100.00%	0	0	0	100.00%	0	0	
FRCST 2028	100.00%	0	0	0	100.00%	0	0	
FRCST 2029	100.00%	0	0	0	100.00%	0	0	
FRCST 2030	100.00%	0	0	0	100.00%	0	0	
FRCST 2031	100.00%	0	0	0	100.00%	0	0	
FRCST 2032	100.00%	0	0	0	100.00%	0	0	
FRCST 2033	100.00%	0	0	0	100.00%	0	0	
FRCST 2034	100.00%	0	0	0	100.00%	0	0	
FRCST 2035	100.00%	0	0	0	100.00%	0	0	
FRCST 2036	100.00%	0	0	0	100.00%	0	0	
FRCST 2037	100.00%	0	0	0	100.00%	0	0	
FRCST 2038	100.00%	0	0	0	100.00%	0	0	

***** LOW SCENARIO WITH DSM IMPACTS *****

TIME PERIOD

2007 -2012
2012 -2017

2018 -2023
2023 -2028
2028 -2033
2033 -2038

2007 -2017
2018 -2038

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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	2007	0	0.0%	0	0.0%	0.000	0.000	0.000	0.000
ACTUAL	2008	0	0.0%	0	0.0%	0.000	0.000	0.000	0.000
ACTUAL	2009	25,159	0.4%	26,189	0.4%	8.978	3.703	9.436	3.892
ACTUAL	2010	49,468	0.7%	51,663	0.7%	20.610	10.768	21.633	11.302
ACTUAL	2011	81,677	1.2%	85,143	1.2%	32.274	17.850	33.686	18.630
ACTUAL	2012	103,470	1.5%	107,053	1.5%	40.343	23.944	41.924	24.882
ACTUAL	2013	125,031	1.7%	128,352	1.7%	46.802	17.136	48.342	17.700
ACTUAL	2014	144,763	1.9%	149,549	1.9%	52.425	32.671	54.265	33.817
ACTUAL	2015	164,860	2.2%	171,568	2.2%	64.045	25.255	66.824	26.351
ACTUAL	2016	194,538	2.6%	203,449	2.6%	73.355	46.929	76.917	49.208
ACTUAL	2017	219,951	3.0%	229,978	3.0%	79.051	33.914	83.019	35.616
FRCST	2018	227,851	3.1%	238,713	3.1%	80.948	50.866	85.208	53.543
FRCST	2019	239,949	3.2%	250,694	3.2%	81.429	47.024	85.671	49.473
FRCST	2020	252,997	3.4%	264,365	3.4%	83.203	46.374	87.307	48.661
FRCST	2021	261,046	3.4%	272,776	3.4%	84.603	45.103	88.776	47.328
FRCST	2022	273,841	3.6%	286,146	3.6%	87.313	44.994	91.620	47.213
FRCST	2023	286,236	3.7%	299,098	3.7%	90.573	45.612	95.040	47.861
FRCST	2024	305,123	4.0%	318,832	4.0%	95.122	47.199	99.813	49.527
FRCST	2025	319,424	4.1%	333,776	4.1%	99.131	47.918	104.020	50.281
FRCST	2026	335,509	4.4%	350,584	4.4%	103.209	48.622	108.299	51.020
FRCST	2027	347,509	4.5%	363,123	4.5%	103.644	48.226	108.755	50.604
FRCST	2028	357,180	4.7%	373,228	4.7%	102.980	48.182	108.059	50.558
FRCST	2029	364,445	4.8%	380,820	4.8%	102.777	48.297	107.846	50.679
FRCST	2030	363,165	4.8%	379,482	4.8%	100.865	46.208	105.840	48.487
FRCST	2031	353,338	4.7%	369,214	4.7%	96.365	41.087	101.118	43.113
FRCST	2032	348,818	4.6%	364,491	4.6%	93.665	38.298	98.284	40.187
FRCST	2033	357,455	4.8%	373,516	4.8%	93.028	38.093	97.616	39.971
FRCST	2034	366,717	4.9%	383,194	4.9%	92.761	37.970	97.335	39.843
FRCST	2035	367,494	4.9%	384,006	4.9%	93.623	38.385	98.241	40.278
FRCST	2036	369,641	5.0%	386,250	5.0%	94.665	38.804	99.334	40.718
FRCST	2037	375,132	5.1%	391,987	5.1%	96.140	39.243	100.881	41.178
FRCST	2038	380,610	5.1%	397,711	5.1%	97.619	39.663	102.434	41.620

***** LOW SCENARIO WITH DSM IMPACTS *****

TIME PERIOD

2007 -2012
2012 -2017

2018 -2023
2023 -2028
2028 -2033
2033 -2038

2007 -2017
2018 -2038

1979 :BEGINNING HISTORICAL DATA YEAR ?
 2017 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)
 20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** 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 2007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ACTUAL 2008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ACTUAL 2009	8.598	3.080	9.037	3.238	0.380	0.622	0.399	0.654
ACTUAL 2010	17.983	6.820	18.875	7.158	2.628	3.948	2.758	4.144
ACTUAL 2011	27.786	11.209	29.001	11.699	4.488	6.640	4.685	6.931
ACTUAL 2012	34.681	14.358	36.040	14.921	5.662	9.586	5.884	9.962
ACTUAL 2013	40.471	17.136	41.803	17.700	6.331	0.000	6.539	0.000
ACTUAL 2014	45.624	20.484	47.225	21.202	6.801	12.187	7.039	12.615
ACTUAL 2015	56.921	25.255	59.391	26.351	7.124	0.000	7.433	0.000
ACTUAL 2016	65.902	31.565	69.101	33.097	7.454	15.364	7.815	16.110
ACTUAL 2017	71.365	33.914	74.947	35.616	7.686	0.000	8.072	0.000
FRCST 2018	73.124	34.665	76.972	36.490	7.824	16.201	8.236	17.053
FRCST 2019	76.067	35.845	80.030	37.712	5.362	11.179	5.641	11.761
FRCST 2020	79.573	37.288	83.497	39.127	3.630	9.086	3.809	9.535
FRCST 2021	82.220	37.760	86.275	39.622	2.383	7.343	2.501	7.706
FRCST 2022	85.776	38.866	90.006	40.783	1.538	6.128	1.613	6.430
FRCST 2023	89.421	39.896	93.831	41.864	1.152	5.716	1.209	5.998
FRCST 2024	94.164	41.642	98.808	43.696	0.957	5.557	1.005	5.831
FRCST 2025	98.252	42.535	103.098	44.633	0.878	5.383	0.922	5.648
FRCST 2026	102.412	43.339	107.462	45.476	0.798	5.283	0.837	5.544
FRCST 2027	102.762	42.893	107.830	45.009	0.881	5.332	0.925	5.595
FRCST 2028	102.013	42.725	107.044	44.832	0.967	5.457	1.015	5.726
FRCST 2029	101.723	42.738	106.740	44.846	1.054	5.558	1.106	5.832
FRCST 2030	99.836	41.037	104.759	43.061	1.030	5.171	1.081	5.426
FRCST 2031	95.315	36.719	100.016	38.530	1.051	4.367	1.102	4.583
FRCST 2032	92.593	33.988	97.160	35.664	1.072	4.310	1.124	4.523
FRCST 2033	91.935	33.677	96.469	35.338	1.093	4.416	1.147	4.633
FRCST 2034	91.646	33.532	96.166	35.186	1.115	4.439	1.170	4.657
FRCST 2035	92.486	33.887	97.048	35.558	1.137	4.498	1.193	4.720
FRCST 2036	93.505	34.247	98.117	35.936	1.160	4.558	1.217	4.782
FRCST 2037	94.957	34.627	99.640	36.335	1.183	4.615	1.241	4.843
FRCST 2038	96.413	34.992	101.168	36.718	1.207	4.671	1.266	4.902

TIME PERIOD

- 2007 -2012
- 2012 -2017
- 2018 -2023
- 2023 -2028
- 2028 -2033
- 2033 -2038
- 2007 -2017
- 2018 -2038

1979 :BEGINNING HISTORICAL DATA YEAR ?
 2017 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)
 20 :NUMBER OF YEARS TO FORECAST (MAXIMUM 30 YR.) ?

***** LOW SCENARIO WITH DSM IMPACTS *****

Load Control Switches

1 = Load Control on peak 0 = No load control on peak

YEAR	Winter CP	Winter NCP	Summer CP	Summer NCP
ACTUAL 2007	NA	NA	NA	NA
ACTUAL 2008	NA	NA	NA	NA
ACTUAL 2009	1	0	1	0
ACTUAL 2010	1	0	1	0
ACTUAL 2011	1	0	1	0
ACTUAL 2012	1	0	1	0
ACTUAL 2013	1	0	0	0
ACTUAL 2014	1	0	1	0
ACTUAL 2015	1	0	0	0
ACTUAL 2016	1	0	1	0
ACTUAL 2017	1	0	0	0
FRCST 2018	1	0	1	0
FRCST 2019	1	0	1	0
FRCST 2020	1	0	1	0
FRCST 2021	1	0	1	0
FRCST 2022	1	0	1	0
FRCST 2023	1	0	1	0
FRCST 2024	1	0	1	0
FRCST 2025	1	0	1	0
FRCST 2026	1	0	1	0
FRCST 2027	1	0	1	0
FRCST 2028	1	0	1	0
FRCST 2029	1	0	1	0
FRCST 2030	1	0	1	0
FRCST 2031	1	0	1	0
FRCST 2032	1	0	1	0
FRCST 2033	1	0	1	0
FRCST 2034	1	0	1	0
FRCST 2035	1	0	1	0
FRCST 2036	1	0	1	0
FRCST 2037	1	0	1	0
FRCST 2038	1	0	1	0

TIME PERIOD

- 2007 -2012
- 2012 -2017
- 2018 -2023
- 2023 -2028
- 2028 -2033
- 2033 -2038
- 2007 -2017
- 2018 -2038

Appendix A4

Historical/Forecast Annual Load Summary – Base-Mild Scenario

1979 :BEGINNING HISTORICAL DATA YEAR ?
 2017 :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 2007	275,983	13,481	199	2,184	291,847	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	4,049,084	862,271	1,638,530	36,404	6,586,290
ACTUAL 2010	277,915	13,683	201	2,222	294,021	4,313,611	889,903	1,783,519	40,028	7,027,061
ACTUAL 2011	277,750	13,765	210	2,498	294,223	4,093,233	901,706	1,806,351	40,873	6,842,163
ACTUAL 2012	278,374	13,889	204	2,564	295,031	3,958,457	930,498	1,895,575	46,875	6,831,406
ACTUAL 2013	279,339	14,031	207	2,686	296,263	4,091,997	938,827	1,924,132	40,413	6,995,370
ACTUAL 2014	280,060	14,289	205	2,805	297,359	4,204,581	952,691	2,043,777	41,306	7,242,356
ACTUAL 2015	281,173	14,255	207	2,881	298,516	4,002,897	946,635	2,069,866	37,583	7,056,982
ACTUAL 2016	283,258	13,827	214	2,984	300,283	4,024,894	949,178	2,059,447	39,010	7,072,530
ACTUAL 2017	283,538	14,030	214	4,949	302,731	3,880,889	944,811	2,133,419	56,773	7,015,892
FRCST 2018	285,222	14,161	237	5,100	304,720	3,765,799	907,640	2,249,332	57,921	6,980,692
FRCST 2019	287,082	14,295	241	5,121	306,739	3,621,198	913,659	2,272,473	58,089	6,865,418
FRCST 2020	288,894	14,436	245	5,121	308,696	3,546,044	920,970	2,304,077	57,921	6,829,013
FRCST 2021	290,621	14,577	247	5,121	310,566	3,514,738	928,228	2,382,638	57,921	6,883,525
FRCST 2022	292,473	14,718	247	5,121	312,559	3,505,354	935,438	2,431,727	57,921	6,930,440
FRCST 2023	294,288	14,859	246	5,121	314,514	3,507,798	942,621	2,462,961	57,921	6,971,300
FRCST 2024	295,900	15,007	246	5,121	316,274	3,509,463	951,378	2,478,824	57,921	6,997,586
FRCST 2025	297,387	15,155	246	5,121	317,909	3,512,714	963,537	2,485,118	57,921	7,019,289
FRCST 2026	299,006	15,303	245	5,121	319,675	3,521,295	973,865	2,480,936	57,921	7,034,017
FRCST 2027	300,563	15,451	245	5,121	321,380	3,534,424	985,362	2,469,382	57,921	7,047,089
FRCST 2028	302,276	15,599	245	5,121	323,241	3,550,181	997,978	2,391,135	57,921	6,997,215
FRCST 2029	303,746	15,757	244	5,121	324,868	3,560,296	1,014,757	2,363,796	57,921	6,996,770
FRCST 2030	305,345	15,915	244	5,121	326,625	3,576,786	1,037,555	2,373,586	57,921	7,045,848
FRCST 2031	306,844	16,073	244	5,121	328,282	3,592,925	1,068,123	2,374,476	57,921	7,093,445
FRCST 2032	308,490	16,231	244	5,121	330,086	3,612,690	1,093,230	2,354,008	57,921	7,117,849
FRCST 2033	310,060	16,389	244	5,121	331,814	3,631,522	1,106,766	2,307,069	57,921	7,103,278
FRCST 2034	311,663	16,554	241	5,121	333,579	3,654,076	1,119,898	2,296,898	57,921	7,128,793
FRCST 2035	313,155	16,719	241	5,121	335,236	3,685,065	1,133,157	2,282,494	57,921	7,158,637
FRCST 2036	314,785	16,884	241	5,121	337,031	3,717,677	1,146,554	2,263,119	57,921	7,185,271
FRCST 2037	316,306	17,049	240	5,121	338,716	3,747,557	1,160,087	2,257,135	57,921	7,222,701
FRCST 2038	317,964	17,214	240	5,121	340,539	3,780,454	1,173,763	2,247,345	57,921	7,259,483

***** BASE-MILD SCENARIO WITH DSM IMPACTS *****

***** BASE-MILD SCENARIO WITH DSM IMPACTS *****

TIME PERIOD	AGGREGATED NUMBER OF CONSUMERS					AGGREGATED SYSTEM ENERGY SALES				
	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT. CHG.)	OTHER (ACT. CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
2007 -2012	0.17%	0.60%	5	380	0.22%	-1.34%	0.74%	2.12%	2.59%	-0.14%
2012 -2017	0.37%	0.20%	10	2385	0.52%	-0.40%	0.31%	2.39%	3.91%	0.53%
2018 -2023	0.63%	0.97%	9	21	0.63%	-1.41%	0.76%	1.83%	0.00%	-0.03%
2023 -2028	0.54%	0.98%	-1	0	0.55%	0.24%	1.15%	-0.59%	0.00%	0.07%
2028 -2033	0.51%	0.99%	-1	0	0.52%	0.45%	2.09%	-0.71%	0.00%	0.30%
2033 -2038	0.50%	0.99%	-4	0	0.52%	0.81%	1.18%	-0.52%	0.00%	0.44%
2007 -2017	0.27%	0.40%	15	2765	0.37%	-0.87%	0.52%	2.26%	3.24%	0.19%
2018 -2038	0.54%	0.98%	3	21	0.56%	0.02%	1.29%	0.00%	0.00%	0.20%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 2007	7,215,322	7,533,291	4.33%	4.84%	*****	1,533	1,559	1,407	1,421
ACTUAL 2008	7,193,537	7,471,337	3.80%	5.10%	*****	1,579	1,442	1,435	1,317
ACTUAL 2009	6,898,781	7,174,725	3.93%	4.86%	*****	1,674	1,453	1,520	1,306
ACTUAL 2010	7,338,146	7,656,224	4.25%	4.73%	*****	1,539	1,577	1,380	1,462
ACTUAL 2011	7,133,476	7,429,116	4.07%	4.19%	*****	1,552	1,579	1,409	1,441
ACTUAL 2012	7,123,700	7,364,416	3.35%	3.77%	*****	1,426	1,631	1,278	1,478
ACTUAL 2013	7,309,346	7,498,978	2.59%	3.19%	*****	1,472	1,498	1,360	1,351
ACTUAL 2014	7,560,267	7,804,699	3.20%	3.39%	*****	1,827	1,482	1,663	1,348
ACTUAL 2015	7,353,260	7,645,777	3.91%	4.16%	*****	1,750	1,533	1,622	1,364
ACTUAL 2016	7,388,028	7,719,002	4.38%	4.63%	*****	1,577	1,566	1,440	1,376
ACTUAL 2017	7,310,241	7,636,264	4.36%	4.78%	*****	1,563	1,548	1,401	1,372
FRCST 2018	7,280,106	7,619,754	4.55%	5.00%	75.200	1,533	1,524	1,405	1,357
FRCST 2019	7,159,121	7,472,793	4.29%	4.95%	75.760	1,505	1,499	1,381	1,340
FRCST 2020	7,120,531	7,433,508	4.30%	4.70%	75.520	1,494	1,492	1,373	1,335
FRCST 2021	7,176,630	7,492,128	4.30%	4.70%	75.380	1,503	1,505	1,382	1,348
FRCST 2022	7,225,446	7,543,137	4.30%	4.70%	75.860	1,512	1,517	1,391	1,360
FRCST 2023	7,268,019	7,587,623	4.30%	4.70%	75.890	1,520	1,528	1,398	1,371
FRCST 2024	7,293,236	7,613,973	4.30%	4.70%	77.410	1,525	1,537	1,403	1,379
FRCST 2025	7,315,784	7,637,535	4.30%	4.70%	78.960	1,529	1,544	1,406	1,385
FRCST 2026	7,331,091	7,653,529	4.30%	4.70%	80.540	1,532	1,550	1,409	1,391
FRCST 2027	7,344,912	7,667,971	4.30%	4.70%	82.150	1,538	1,556	1,414	1,396
FRCST 2028	7,293,411	7,614,156	4.30%	4.70%	83.790	1,531	1,548	1,409	1,390
FRCST 2029	7,291,423	7,612,079	4.30%	4.70%	85.470	1,532	1,549	1,411	1,403
FRCST 2030	7,342,659	7,665,617	4.30%	4.70%	87.180	1,545	1,561	1,422	1,415
FRCST 2031	7,392,258	7,717,445	4.30%	4.70%	88.920	1,558	1,574	1,435	1,428
FRCST 2032	7,417,826	7,744,161	4.30%	4.70%	90.700	1,566	1,581	1,443	1,435
FRCST 2033	7,403,033	7,728,704	4.30%	4.70%	92.510	1,566	1,581	1,444	1,435
FRCST 2034	7,429,784	7,756,657	4.30%	4.70%	92.510	1,576	1,590	1,453	1,444
FRCST 2035	7,461,056	7,789,334	4.30%	4.70%	92.510	1,582	1,596	1,459	1,450
FRCST 2036	7,489,159	7,818,699	4.30%	4.70%	92.510	1,588	1,603	1,465	1,456
FRCST 2037	7,528,345	7,859,646	4.30%	4.70%	92.510	1,597	1,612	1,473	1,465
FRCST 2038	7,566,828	7,899,858	4.30%	4.70%	92.510	1,605	1,621	1,481	1,473

***** BASE-MILD SCENARIO WITH DSM IMPACTS *****

***** BASE-MILD SCENARIO WITH DSM IMPACTS *****

TIME PERIOD	AGGREGATED TOTAL ENERGY PURCHASED FOR MEMBERS (% CHG.)	H.E. ENERGY GENERATED (% 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
2007 -2012	-0.26%	-0.45%	3.96%	4.58%	*****	-1.43%	0.91%	-1.91%	0.80%
2012 -2017	0.52%	0.73%	3.63%	3.99%	*****	1.85%	-1.04%	1.85%	-1.47%
2018 -2023	-0.03%	-0.08%	4.34%	4.79%	0.18%	-0.17%	0.06%	-0.11%	0.20%
2023 -2028	0.07%	0.07%	4.30%	4.70%	2.00%	0.15%	0.25%	0.16%	0.28%
2028 -2033	0.30%	0.30%	4.30%	4.70%	2.00%	0.46%	0.42%	0.49%	0.64%
2033 -2038	0.44%	0.44%	4.30%	4.70%	0.00%	0.50%	0.51%	0.51%	0.52%
2007 -2017	0.13%	0.14%	3.83%	4.33%	*****	0.19%	-0.07%	-0.05%	-0.35%
2018 -2038	0.19%	0.18%	4.31%	4.73%	1.04%	0.23%	0.31%	0.26%	0.41%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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	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 2007	1,407	1,418	1,478	1,489	57.8%	1,496	1,555	1,571	1,633	52.7%
ACTUAL 2008	1,435	1,296	1,511	1,364	56.3%	1,562	1,420	1,644	1,494	51.7%
ACTUAL 2009	1,518	1,303	1,594	1,369	51.4%	1,672	1,450	1,756	1,522	46.6%
ACTUAL 2010	1,369	1,454	1,436	1,525	57.3%	1,526	1,570	1,600	1,646	53.1%
ACTUAL 2011	1,394	1,435	1,454	1,497	56.6%	1,535	1,573	1,601	1,640	51.7%
ACTUAL 2012	1,275	1,476	1,324	1,533	54.7%	1,423	1,629	1,477	1,691	49.6%
ACTUAL 2013	1,360	1,348	1,404	1,392	61.0%	1,472	1,495	1,520	1,543	55.5%
ACTUAL 2014	1,662	1,341	1,719	1,388	51.8%	1,825	1,475	1,888	1,525	47.2%
ACTUAL 2015	1,608	1,362	1,677	1,420	52.0%	1,734	1,531	1,808	1,596	48.3%
ACTUAL 2016	1,438	1,372	1,507	1,438	58.3%	1,575	1,562	1,650	1,636	53.3%
ACTUAL 2017	1,397	1,368	1,466	1,436	59.5%	1,558	1,543	1,635	1,619	53.3%
FRCST 2018	1,399	1,354	1,472	1,424	59.1%	1,526	1,520	1,605	1,599	54.2%
FRCST 2019	1,376	1,336	1,446	1,405	59.0%	1,499	1,496	1,575	1,572	54.2%
FRCST 2020	1,367	1,332	1,434	1,396	59.0%	1,488	1,489	1,560	1,561	54.2%
FRCST 2021	1,376	1,344	1,443	1,410	59.3%	1,497	1,501	1,569	1,574	54.4%
FRCST 2022	1,385	1,357	1,452	1,423	59.3%	1,506	1,513	1,578	1,587	54.3%
FRCST 2023	1,392	1,368	1,459	1,434	59.4%	1,513	1,525	1,586	1,599	54.2%
FRCST 2024	1,397	1,376	1,465	1,442	59.2%	1,519	1,533	1,593	1,608	53.9%
FRCST 2025	1,400	1,382	1,468	1,449	59.4%	1,523	1,540	1,597	1,615	54.0%
FRCST 2026	1,403	1,387	1,471	1,455	59.4%	1,526	1,546	1,600	1,621	53.9%
FRCST 2027	1,408	1,393	1,477	1,461	59.3%	1,531	1,552	1,605	1,627	53.8%
FRCST 2028	1,403	1,387	1,471	1,454	58.9%	1,524	1,544	1,598	1,619	53.5%
FRCST 2029	1,405	1,400	1,473	1,467	59.0%	1,526	1,545	1,600	1,620	53.6%
FRCST 2030	1,416	1,411	1,485	1,480	58.9%	1,538	1,557	1,613	1,633	53.6%
FRCST 2031	1,429	1,424	1,498	1,494	58.8%	1,551	1,570	1,627	1,646	53.5%
FRCST 2032	1,437	1,432	1,507	1,501	58.5%	1,559	1,578	1,635	1,654	53.3%
FRCST 2033	1,438	1,432	1,507	1,501	58.5%	1,559	1,577	1,635	1,653	53.4%
FRCST 2034	1,447	1,440	1,517	1,510	58.4%	1,569	1,586	1,645	1,663	53.3%
FRCST 2035	1,453	1,447	1,523	1,517	58.4%	1,575	1,592	1,652	1,670	53.3%
FRCST 2036	1,459	1,453	1,529	1,523	58.2%	1,581	1,599	1,658	1,676	53.1%
FRCST 2037	1,467	1,461	1,538	1,532	58.3%	1,590	1,608	1,667	1,686	53.2%
FRCST 2038	1,475	1,470	1,547	1,541	58.3%	1,599	1,617	1,676	1,695	53.2%

***** 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)
	<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	
2007 -2012	-1.96%	0.81%	-2.17%	0.59%	55.68%	-1.00%	0.93%	-1.22%	0.71%	50.90%
2012 -2017	1.84%	-1.51%	2.05%	-1.30%	56.21%	1.84%	-1.07%	2.05%	-0.87%	51.17%
2018 -2023	-0.11%	0.20%	-0.17%	0.14%	59.18%	-0.17%	0.06%	-0.23%	0.00%	54.23%
2023 -2028	0.16%	0.28%	0.16%	0.28%	59.25%	0.15%	0.25%	0.15%	0.25%	53.89%
2028 -2033	0.49%	0.64%	0.49%	0.64%	58.78%	0.46%	0.42%	0.46%	0.42%	53.50%
2033 -2038	0.51%	0.52%	0.51%	0.52%	58.35%	0.50%	0.51%	0.50%	0.51%	53.23%
2007 -2017	-0.08%	-0.35%	-0.08%	-0.36%	56.06%	0.41%	-0.08%	0.40%	-0.08%	51.17%
2018 -2038	0.26%	0.41%	0.25%	0.40%	58.89%	0.23%	0.31%	0.22%	0.29%	53.71%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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	**** 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 COINCIDENT DEMAND (MW); 60 MINUTE VALUE (WITH LOSSES)			HOOSIER ENERGY SYSTEM PEAK SEASONAL NON-COINCIDENT DEMAND (MW); 60 MINUTE VALUE (WITHOUT LOSSES)		HOOSIER ENERGY SYSTEM PEAK SEASONAL NON-COINCIDENT DEMAND (MW); 60 MINUTE VALUE (WITH LOSSES)			
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER		
ACTUAL 2007	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2008	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2010	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2011	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2012	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2013	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2014	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2015	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2016	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
ACTUAL 2017	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
FRCST 2018	1,568	1,511	1,649	1,589	52.7%	1,708	1,694	1,796	1,781	48.4%	
FRCST 2019	1,541	1,491	1,620	1,567	52.6%	1,677	1,667	1,763	1,752	48.4%	
FRCST 2020	1,532	1,485	1,607	1,557	52.7%	1,665	1,659	1,746	1,739	48.5%	
FRCST 2021	1,541	1,499	1,616	1,572	52.9%	1,675	1,672	1,756	1,753	48.7%	
FRCST 2022	1,551	1,513	1,627	1,586	52.9%	1,685	1,686	1,767	1,768	48.7%	
FRCST 2023	1,559	1,524	1,635	1,598	53.0%	1,694	1,698	1,776	1,781	48.6%	
FRCST 2024	1,565	1,532	1,641	1,607	52.8%	1,699	1,707	1,782	1,790	48.4%	
FRCST 2025	1,569	1,539	1,645	1,614	53.0%	1,704	1,715	1,787	1,798	48.5%	
FRCST 2026	1,572	1,545	1,649	1,621	53.0%	1,708	1,721	1,791	1,805	48.4%	
FRCST 2027	1,578	1,552	1,655	1,627	52.9%	1,714	1,728	1,797	1,812	48.3%	
FRCST 2028	1,573	1,545	1,649	1,620	52.6%	1,707	1,719	1,789	1,803	48.1%	
FRCST 2029	1,575	1,560	1,652	1,636	52.6%	1,709	1,721	1,792	1,804	48.2%	
FRCST 2030	1,589	1,573	1,666	1,650	52.5%	1,723	1,734	1,807	1,819	48.1%	
FRCST 2031	1,602	1,587	1,680	1,665	52.4%	1,737	1,748	1,822	1,833	48.1%	
FRCST 2032	1,611	1,595	1,689	1,673	52.2%	1,746	1,756	1,831	1,841	47.9%	
FRCST 2033	1,612	1,596	1,690	1,673	52.2%	1,746	1,756	1,831	1,841	47.9%	
FRCST 2034	1,621	1,604	1,700	1,682	52.1%	1,756	1,765	1,841	1,850	47.9%	
FRCST 2035	1,628	1,611	1,707	1,690	52.1%	1,763	1,772	1,849	1,858	47.9%	
FRCST 2036	1,635	1,619	1,715	1,697	51.9%	1,770	1,779	1,856	1,866	47.7%	
FRCST 2037	1,644	1,628	1,724	1,707	52.0%	1,780	1,790	1,867	1,877	47.8%	
FRCST 2038	1,654	1,638	1,734	1,717	52.0%	1,790	1,800	1,877	1,888	47.8%	

***** BASE-MILD SCENARIO WITH DSM IMPACTS *****						***** BASE-MILD SCENARIO WITH DSM IMPACTS *****					
TIME PERIOD	**** 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 COINCIDENT PEAK (60 MIN.) With Losses (% Chg)			HOOSIER ENERGY NON-COINCIDENT PEAK (60 MIN.) Without Losses (% Chg)		HOOSIER ENERGY NON-COINCIDENT PEAK (60 MIN.) With Losses (% Chg)			
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER		
2007 -2012	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2012 -2017	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2018 -2023	-0.11%	0.18%	-0.17%	0.12%	52.81%	-0.16%	0.06%	-0.22%	-0.01%	48.56%	
2023 -2028	0.17%	0.27%	0.17%	0.27%	52.87%	0.15%	0.24%	0.15%	0.24%	48.39%	
2028 -2033	0.49%	0.65%	0.49%	0.65%	52.42%	0.46%	0.42%	0.46%	0.42%	48.04%	
2033 -2038	0.51%	0.52%	0.51%	0.52%	52.05%	0.50%	0.50%	0.50%	0.50%	47.82%	
2007 -2017	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
2018 -2038	0.27%	0.40%	0.25%	0.39%	52.53%	0.24%	0.31%	0.22%	0.29%	48.20%	

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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, 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 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	3,904,138	818,798	1,564,440	31,738	6,319,115
ACTUAL 2010	265,890	12,407	193	1,854	280,344	4,158,334	843,557	1,712,254	33,075	6,747,220
ACTUAL 2011	277,750	13,765	210	2,498	294,223	4,093,233	901,706	1,806,351	40,873	6,842,163
ACTUAL 2012	278,374	13,889	204	2,564	295,031	3,958,457	930,498	1,895,575	46,875	6,831,406
ACTUAL 2013	279,339	14,031	207	2,686	296,263	4,091,997	938,827	1,924,132	40,413	6,995,370
ACTUAL 2014	280,060	14,289	205	2,805	297,359	4,204,581	952,691	2,043,777	41,306	7,242,356
ACTUAL 2015	281,173	14,255	207	2,881	298,516	4,002,897	946,635	2,069,866	37,583	7,056,982
ACTUAL 2016	283,258	13,827	214	2,984	300,283	4,024,894	949,178	2,059,447	39,010	7,072,530
ACTUAL 2017	283,538	14,030	214	4,949	302,731	3,880,889	944,811	2,133,419	56,773	7,015,892
FRCST 2018	285,222	14,161	237	5,100	304,720	3,765,799	907,640	2,249,332	57,921	6,980,692
FRCST 2019	287,082	14,295	241	5,121	306,739	3,621,198	913,659	2,272,473	58,089	6,865,418
FRCST 2020	288,894	14,436	245	5,121	308,696	3,546,044	920,970	2,304,077	57,921	6,829,013
FRCST 2021	290,621	14,577	247	5,121	310,566	3,514,738	928,228	2,382,638	57,921	6,883,525
FRCST 2022	292,473	14,718	247	5,121	312,559	3,505,354	935,438	2,431,727	57,921	6,930,440
FRCST 2023	294,288	14,859	246	5,121	314,514	3,507,798	942,621	2,462,961	57,921	6,971,300
FRCST 2024	295,900	15,007	246	5,121	316,274	3,509,463	951,378	2,478,824	57,921	6,997,586
FRCST 2025	297,387	15,155	246	5,121	317,909	3,512,714	963,537	2,485,118	57,921	7,019,289
FRCST 2026	299,006	15,303	245	5,121	319,675	3,521,295	973,865	2,480,936	57,921	7,034,017
FRCST 2027	300,563	15,451	245	5,121	321,380	3,534,424	985,362	2,469,382	57,921	7,047,089
FRCST 2028	302,276	15,599	245	5,121	323,241	3,550,181	997,978	2,391,135	57,921	6,997,215
FRCST 2029	303,746	15,757	244	5,121	324,868	3,560,296	1,014,757	2,363,796	57,921	6,996,770
FRCST 2030	305,345	15,915	244	5,121	326,625	3,576,786	1,037,555	2,373,586	57,921	7,045,848
FRCST 2031	306,844	16,073	244	5,121	328,282	3,592,925	1,068,123	2,374,476	57,921	7,093,445
FRCST 2032	308,490	16,231	244	5,121	330,086	3,612,690	1,093,230	2,354,008	57,921	7,117,849
FRCST 2033	310,060	16,389	244	5,121	331,814	3,631,522	1,106,766	2,307,069	57,921	7,103,278
FRCST 2034	311,663	16,554	241	5,121	333,579	3,654,076	1,119,898	2,296,898	57,921	7,128,793
FRCST 2035	313,155	16,719	241	5,121	335,236	3,685,065	1,133,157	2,282,494	57,921	7,158,637
FRCST 2036	314,785	16,884	241	5,121	337,031	3,717,677	1,146,554	2,263,119	57,921	7,185,271
FRCST 2037	316,306	17,049	240	5,121	338,716	3,747,557	1,160,087	2,257,135	57,921	7,222,701
FRCST 2038	317,964	17,214	240	5,121	340,539	3,780,454	1,173,763	2,247,345	57,921	7,259,483

***** 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.)
2007 -2012	1.07%	2.55%	13	743	1.18%	-0.65%	1.70%	3.19%	6.48%	0.70%
2012 -2017	0.37%	0.20%	10	2385	0.52%	-0.40%	0.31%	2.39%	3.91%	0.53%
2018 -2023	0.63%	0.97%	9	21	0.63%	-1.41%	0.76%	1.83%	0.00%	-0.03%
2023 -2028	0.54%	0.98%	-1	0	0.55%	0.24%	1.15%	-0.59%	0.00%	0.07%
2028 -2033	0.51%	0.99%	-1	0	0.52%	0.45%	2.09%	-0.71%	0.00%	0.30%
2033 -2038	0.50%	0.99%	-4	0	0.52%	0.81%	1.18%	-0.52%	0.00%	0.44%
2007 -2017	0.72%	1.37%	23	3128	0.85%	-0.52%	1.00%	2.79%	5.19%	0.62%
2018 -2038	0.54%	0.98%	3	21	0.56%	0.02%	1.29%	0.00%	0.00%	0.20%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 *****

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)				ANNUAL LOAD FACTOR
			WINTER	SUMMER	(WITHOUT LOSSES)		(WITH LOSSES)		
					WINTER	SUMMER	WINTER	SUMMER	
ACTUAL 2007	6,924,233	7,229,037	1,404	1,358	1,370	1,355	1,439	1,423	57.4%
ACTUAL 2008	6,912,387	7,179,069	1,406	1,265	1,391	1,245	1,465	1,311	55.8%
ACTUAL 2009	6,617,633	6,882,071	1,474	1,249	1,472	1,247	1,546	1,309	50.8%
ACTUAL 2010	7,043,763	7,348,773	1,331	1,399	1,320	1,392	1,385	1,460	57.5%
ACTUAL 2011	7,133,476	7,429,116	1,409	1,441	1,394	1,435	1,454	1,497	56.6%
ACTUAL 2012	7,123,700	7,364,416	1,278	1,478	1,275	1,476	1,324	1,533	54.7%
ACTUAL 2013	7,309,346	7,498,978	1,360	1,351	1,360	1,348	1,404	1,392	61.0%
ACTUAL 2014	7,560,267	7,804,699	1,663	1,348	1,662	1,341	1,719	1,388	51.8%
ACTUAL 2015	7,353,260	7,645,777	1,622	1,364	1,608	1,362	1,677	1,420	52.0%
ACTUAL 2016	7,388,028	7,719,002	1,440	1,376	1,438	1,372	1,507	1,438	58.3%
ACTUAL 2017	7,310,241	7,636,264	1,401	1,372	1,397	1,368	1,466	1,436	59.5%
FRCST 2018	7,280,106	7,619,754	1,405	1,357	1,399	1,354	1,472	1,424	59.1%
FRCST 2019	7,159,121	7,472,793	1,381	1,340	1,376	1,336	1,446	1,405	59.0%
FRCST 2020	7,120,531	7,433,508	1,373	1,335	1,367	1,332	1,434	1,396	59.0%
FRCST 2021	7,176,630	7,492,128	1,382	1,348	1,376	1,344	1,443	1,410	59.3%
FRCST 2022	7,225,446	7,543,137	1,391	1,360	1,385	1,357	1,452	1,423	59.3%
FRCST 2023	7,268,019	7,587,623	1,398	1,371	1,392	1,368	1,459	1,434	59.4%
FRCST 2024	7,293,236	7,613,973	1,403	1,379	1,397	1,376	1,465	1,442	59.2%
FRCST 2025	7,315,784	7,637,535	1,406	1,385	1,400	1,382	1,468	1,449	59.4%
FRCST 2026	7,331,091	7,653,529	1,409	1,391	1,403	1,387	1,471	1,455	59.4%
FRCST 2027	7,344,912	7,667,971	1,414	1,396	1,408	1,393	1,477	1,461	59.3%
FRCST 2028	7,293,411	7,614,156	1,409	1,390	1,403	1,387	1,471	1,454	58.9%
FRCST 2029	7,291,423	7,612,079	1,411	1,403	1,405	1,400	1,473	1,467	59.0%
FRCST 2030	7,342,659	7,665,617	1,422	1,415	1,416	1,411	1,485	1,480	58.9%
FRCST 2031	7,392,258	7,717,445	1,435	1,428	1,429	1,424	1,498	1,494	58.8%
FRCST 2032	7,417,826	7,744,161	1,443	1,435	1,437	1,432	1,507	1,501	58.5%
FRCST 2033	7,403,033	7,728,704	1,444	1,435	1,438	1,432	1,507	1,501	58.5%
FRCST 2034	7,429,784	7,756,657	1,453	1,444	1,447	1,440	1,517	1,510	58.4%
FRCST 2035	7,461,056	7,789,334	1,459	1,450	1,453	1,447	1,523	1,517	58.4%
FRCST 2036	7,489,159	7,818,699	1,465	1,456	1,459	1,453	1,529	1,523	58.2%
FRCST 2037	7,528,345	7,859,646	1,473	1,465	1,467	1,461	1,538	1,532	58.3%
FRCST 2038	7,566,828	7,899,858	1,481	1,473	1,475	1,470	1,547	1,541	58.3%

***** 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	
2007 -2012	0.57%	0.37%	-1.86%	1.71%	-1.43%	1.73%	-1.65%	1.51%	55.46%
2012 -2017	0.52%	0.73%	1.85%	-1.47%	1.84%	-1.51%	2.05%	-1.30%	56.21%
2018 -2023	-0.03%	-0.08%	-0.11%	0.20%	-0.11%	0.20%	-0.17%	0.14%	59.18%
2023 -2028	0.07%	0.07%	0.16%	0.28%	0.16%	0.28%	0.16%	0.28%	59.25%
2028 -2033	0.30%	0.30%	0.49%	0.64%	0.49%	0.64%	0.49%	0.64%	58.78%
2033 -2038	0.44%	0.44%	0.51%	0.52%	0.51%	0.52%	0.51%	0.52%	58.35%
2007 -2017	0.54%	0.55%	-0.02%	0.11%	0.19%	0.10%	0.19%	0.09%	55.94%
2018 -2038	0.19%	0.18%	0.26%	0.41%	0.26%	0.41%	0.25%	0.40%	58.89%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 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 2007	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****
ACTUAL 2010	*****	*****	*****	*****	*****
ACTUAL 2011	*****	*****	*****	*****	*****
ACTUAL 2012	*****	*****	*****	*****	*****
ACTUAL 2013	*****	*****	*****	*****	*****
ACTUAL 2014	*****	*****	*****	*****	*****
ACTUAL 2015	*****	*****	*****	*****	*****
ACTUAL 2016	*****	*****	*****	*****	*****
ACTUAL 2017	*****	*****	*****	*****	*****
FRCST 2018	1,568	1,511	1,649	1,589	52.7%
FRCST 2019	1,541	1,491	1,620	1,567	52.6%
FRCST 2020	1,532	1,485	1,607	1,557	52.7%
FRCST 2021	1,541	1,499	1,616	1,572	52.9%
FRCST 2022	1,551	1,513	1,627	1,586	52.9%
FRCST 2023	1,559	1,524	1,635	1,598	53.0%
FRCST 2024	1,565	1,532	1,641	1,607	52.8%
FRCST 2025	1,569	1,539	1,645	1,614	53.0%
FRCST 2026	1,572	1,545	1,649	1,621	53.0%
FRCST 2027	1,578	1,552	1,655	1,627	52.9%
FRCST 2028	1,573	1,545	1,649	1,620	52.6%
FRCST 2029	1,575	1,560	1,652	1,636	52.6%
FRCST 2030	1,589	1,573	1,666	1,650	52.5%
FRCST 2031	1,602	1,587	1,680	1,665	52.4%
FRCST 2032	1,611	1,595	1,689	1,673	52.2%
FRCST 2033	1,612	1,596	1,690	1,673	52.2%
FRCST 2034	1,621	1,604	1,700	1,682	52.1%
FRCST 2035	1,628	1,611	1,707	1,690	52.1%
FRCST 2036	1,635	1,619	1,715	1,697	51.9%
FRCST 2037	1,644	1,628	1,724	1,707	52.0%
FRCST 2038	1,654	1,638	1,734	1,717	52.0%

***** BASE-MILD SCENARIO WITH DSM IMPACTS *****

***** BASE-MILD SCENARIO RESULTS *****

TIME PERIOD	<u>Adjusted for Systems HE EXT. COIN. 60 MINUTE DEMAND</u> <u>Without Losses (% Chg)</u>		<u>With Losses (% Chg)</u>		ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)
	WINTER	SUMMER	WINTER	SUMMER	
2007 -2012	*****	*****	*****	*****	*****
2012 -2017	*****	*****	*****	*****	*****
2018 -2023	-0.11%	0.18%	-0.17%	0.12%	52.81%
2023 -2028	0.17%	0.27%	0.17%	0.27%	52.87%
2028 -2033	0.49%	0.65%	0.49%	0.65%	52.42%
2033 -2038	0.51%	0.52%	0.51%	0.52%	52.05%
2007 -2017	*****	*****	*****	*****	*****
2018 -2038	0.27%	0.40%	0.25%	0.39%	52.53%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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,IL#002 and Special Industrial Loads

Values Adjusted for IN#72,IN#16,IN#92,IL#002 and Special Industrial Loads

Aggregated Member System Data

Aggregated Member System Data

NUMBER OF CONSUMERS

SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
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	3,904,138	818,798	1,407,974	31,738	6,162,649
ACTUAL 2010	265,890	12,407	192	1,854	280,343	4,158,334	843,557	1,539,864	33,075	6,574,830
ACTUAL 2011	277,750	13,765	209	2,498	294,222	4,093,233	901,706	1,639,768	40,873	6,675,581
ACTUAL 2012	278,374	13,889	203	2,564	295,030	3,958,457	930,498	1,724,452	46,875	6,660,282
ACTUAL 2013	279,339	14,031	206	2,686	296,262	4,091,997	938,827	1,755,612	40,413	6,826,850
ACTUAL 2014	280,060	14,289	204	2,805	297,358	4,204,581	952,691	1,877,588	41,306	7,076,166
ACTUAL 2015	281,173	14,255	206	2,881	298,515	4,002,897	946,635	1,905,355	37,583	6,892,471
ACTUAL 2016	283,258	13,827	213	2,984	300,282	4,024,894	949,178	1,896,922	39,010	6,910,005
ACTUAL 2017	283,538	14,030	213	4,949	302,730	3,880,889	944,811	1,974,743	56,773	6,857,216
FRCST 2018	285,222	14,161	236	5,100	304,719	3,765,799	907,640	2,094,360	57,921	6,825,720
FRCST 2019	287,082	14,295	240	5,121	306,738	3,621,198	913,659	2,117,501	58,089	6,710,446
FRCST 2020	288,894	14,436	244	5,121	308,695	3,546,044	920,970	2,149,105	57,921	6,674,040
FRCST 2021	290,621	14,577	246	5,121	310,565	3,514,738	928,228	2,227,666	57,921	6,728,552
FRCST 2022	292,473	14,718	246	5,121	312,558	3,505,354	935,438	2,276,755	57,921	6,775,468
FRCST 2023	294,288	14,859	245	5,121	314,513	3,507,798	942,621	2,307,989	57,921	6,816,328
FRCST 2024	295,900	15,007	245	5,121	316,273	3,509,463	951,378	2,323,852	57,921	6,842,613
FRCST 2025	297,387	15,155	245	5,121	317,908	3,512,714	963,537	2,330,146	57,921	6,864,317
FRCST 2026	299,006	15,303	244	5,121	319,674	3,521,295	973,865	2,325,964	57,921	6,879,045
FRCST 2027	300,563	15,451	244	5,121	321,379	3,534,424	985,362	2,314,410	57,921	6,892,117
FRCST 2028	302,276	15,599	244	5,121	323,240	3,550,181	997,978	2,236,163	57,921	6,842,243
FRCST 2029	303,746	15,757	243	5,121	324,867	3,560,296	1,014,757	2,208,824	57,921	6,841,798
FRCST 2030	305,345	15,915	243	5,121	326,624	3,576,786	1,037,555	2,218,614	57,921	6,890,876
FRCST 2031	306,844	16,073	243	5,121	328,281	3,592,925	1,068,123	2,219,504	57,921	6,938,473
FRCST 2032	308,490	16,231	243	5,121	330,085	3,612,690	1,093,230	2,199,036	57,921	6,962,877
FRCST 2033	310,060	16,389	243	5,121	331,813	3,631,522	1,106,766	2,152,097	57,921	6,948,306
FRCST 2034	311,663	16,554	240	5,121	333,578	3,654,076	1,119,898	2,141,926	57,921	6,973,821
FRCST 2035	313,155	16,719	240	5,121	335,235	3,685,065	1,133,157	2,127,522	57,921	7,003,664
FRCST 2036	314,785	16,884	240	5,121	337,030	3,717,677	1,146,554	2,108,147	57,921	7,030,298
FRCST 2037	316,306	17,049	239	5,121	338,715	3,747,557	1,160,087	2,102,163	57,921	7,067,729
FRCST 2038	317,964	17,214	239	5,121	340,538	3,780,454	1,173,763	2,092,373	57,921	7,104,511

***** 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.)
2007 -2012	1.07%	2.55%	13	743	1.18%	-0.65%	1.70%	3.74%	6.48%	0.76%
2012 -2017	0.37%	0.20%	10	2385	0.52%	-0.40%	0.31%	2.75%	3.91%	0.58%
2018 -2023	0.63%	0.97%	9	21	0.63%	-1.41%	0.76%	1.96%	0.00%	-0.03%
2023 -2028	0.54%	0.98%	-1	0	0.55%	0.24%	1.15%	-0.63%	0.00%	0.08%
2028 -2033	0.51%	0.99%	-1	0	0.52%	0.45%	2.09%	-0.76%	0.00%	0.31%
2033 -2038	0.50%	0.99%	-4	0	0.52%	0.81%	1.18%	-0.56%	0.00%	0.45%
2007 -2017	0.72%	1.37%	23	3128	0.85%	-0.52%	1.00%	3.24%	5.19%	0.67%
2018 -2038	0.54%	0.98%	3	21	0.56%	0.02%	1.29%	0.00%	0.00%	0.20%

1979 :BEGINNING HISTORICAL DATA YEAR ?
 2017 :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 *****

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
			(WITHOUT LOSSES)		(WITHOUT LOSSES)		(WITH LOSSES)		
			WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
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	6,461,167	6,725,605	1,467	1,232	1,465	1,229	1,525	1,292	50.3%
ACTUAL 2010	6,871,372	7,176,383	1,317	1,373	1,306	1,366	1,357	1,431	57.2%
ACTUAL 2011	6,966,893	7,262,533	1,392	1,424	1,377	1,418	1,453	1,478	56.1%
ACTUAL 2012	6,952,576	7,193,293	1,257	1,459	1,254	1,457	1,287	1,537	53.3%
ACTUAL 2013	7,140,826	7,330,458	1,336	1,334	1,336	1,331	1,376	1,385	60.4%
ACTUAL 2014	7,394,078	7,638,510	1,646	1,328	1,645	1,321	1,698	1,369	51.4%
ACTUAL 2015	7,188,749	7,481,266	1,593	1,346	1,579	1,344	1,643	1,412	52.0%
ACTUAL 2016	7,225,503	7,556,477	1,425	1,354	1,423	1,350	1,498	1,412	57.4%
ACTUAL 2017	7,151,565	7,477,588	1,384	1,348	1,380	1,344	1,444	1,416	59.1%
FRCST 2018	7,125,134	7,464,781	1,383	1,335	1,377	1,332	1,450	1,402	58.8%
FRCST 2019	7,004,149	7,317,821	1,359	1,318	1,353	1,315	1,424	1,383	58.7%
FRCST 2020	6,965,559	7,278,536	1,351	1,313	1,345	1,310	1,411	1,375	58.7%
FRCST 2021	7,021,658	7,337,155	1,360	1,326	1,354	1,323	1,420	1,388	59.0%
FRCST 2022	7,070,474	7,388,165	1,368	1,338	1,362	1,335	1,430	1,401	59.0%
FRCST 2023	7,113,047	7,432,651	1,376	1,349	1,370	1,346	1,437	1,412	59.0%
FRCST 2024	7,138,264	7,459,001	1,381	1,357	1,375	1,354	1,442	1,421	58.9%
FRCST 2025	7,160,812	7,482,563	1,384	1,363	1,378	1,360	1,446	1,427	59.1%
FRCST 2026	7,176,119	7,498,557	1,387	1,369	1,381	1,365	1,449	1,433	59.1%
FRCST 2027	7,189,939	7,512,998	1,392	1,375	1,386	1,371	1,454	1,439	59.0%
FRCST 2028	7,138,439	7,459,183	1,387	1,368	1,381	1,365	1,449	1,432	58.6%
FRCST 2029	7,136,451	7,457,106	1,388	1,381	1,382	1,378	1,451	1,446	58.7%
FRCST 2030	7,187,687	7,510,645	1,400	1,393	1,394	1,390	1,463	1,458	58.6%
FRCST 2031	7,237,286	7,562,472	1,413	1,406	1,407	1,403	1,476	1,472	58.5%
FRCST 2032	7,262,853	7,589,188	1,421	1,413	1,415	1,410	1,484	1,479	58.2%
FRCST 2033	7,248,061	7,573,731	1,422	1,414	1,415	1,410	1,485	1,480	58.2%
FRCST 2034	7,274,812	7,601,684	1,431	1,422	1,424	1,419	1,495	1,488	58.1%
FRCST 2035	7,306,084	7,634,362	1,437	1,428	1,431	1,425	1,501	1,495	58.0%
FRCST 2036	7,334,186	7,663,727	1,443	1,434	1,437	1,431	1,507	1,501	57.9%
FRCST 2037	7,373,373	7,704,674	1,451	1,443	1,445	1,439	1,516	1,510	58.0%
FRCST 2038	7,411,856	7,744,886	1,459	1,451	1,453	1,448	1,524	1,519	58.0%

***** BASE-MILD SCENARIO WITH DSM IMPACTS *****

TIME PERIOD	Adjusted for Systems & Ind ENERGY PURCHASED (% 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)
	ENERGY GENERATED (% CHG.)		(WITHOUT LOSSES)		Without Losses (% Chg)		With Losses (% Chg)		
	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	
2007 -2012	0.63%	0.42%	-1.48%	1.76%	-1.04%	1.78%	-1.49%	1.93%	54.98%
2012 -2017	0.57%	0.78%	1.94%	-1.57%	1.93%	-1.60%	2.33%	-1.63%	55.60%
2018 -2023	-0.03%	-0.09%	-0.11%	0.21%	-0.11%	0.21%	-0.18%	0.14%	58.86%
2023 -2028	0.07%	0.07%	0.17%	0.28%	0.17%	0.28%	0.17%	0.28%	58.94%
2028 -2033	0.31%	0.31%	0.50%	0.65%	0.50%	0.65%	0.50%	0.65%	58.46%
2033 -2038	0.45%	0.45%	0.52%	0.53%	0.52%	0.53%	0.52%	0.53%	58.04%
2007 -2017	0.60%	0.60%	0.22%	0.08%	0.44%	0.07%	0.40%	0.14%	55.47%
2018 -2038	0.20%	0.18%	0.27%	0.42%	0.27%	0.42%	0.25%	0.40%	58.57%

1979 :BEGINNING HISTORICAL DATA YEAR ?
 2017 :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 *****

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 2007	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****
ACTUAL 2010	*****	*****	*****	*****	*****
ACTUAL 2011	*****	*****	*****	*****	*****
ACTUAL 2012	*****	*****	*****	*****	*****
ACTUAL 2013	*****	*****	*****	*****	*****
ACTUAL 2014	*****	*****	*****	*****	*****
ACTUAL 2015	*****	*****	*****	*****	*****
ACTUAL 2016	*****	*****	*****	*****	*****
ACTUAL 2017	*****	*****	*****	*****	*****
FRCST 2018	1,546	1,489	1,627	1,567	52.4%
FRCST 2019	1,519	1,469	1,598	1,545	52.3%
FRCST 2020	1,510	1,463	1,584	1,536	52.3%
FRCST 2021	1,519	1,477	1,594	1,550	52.5%
FRCST 2022	1,529	1,491	1,605	1,564	52.6%
FRCST 2023	1,537	1,503	1,613	1,577	52.6%
FRCST 2024	1,542	1,510	1,618	1,585	52.5%
FRCST 2025	1,547	1,518	1,623	1,592	52.6%
FRCST 2026	1,550	1,524	1,627	1,599	52.6%
FRCST 2027	1,556	1,530	1,633	1,606	52.5%
FRCST 2028	1,551	1,523	1,627	1,598	52.2%
FRCST 2029	1,553	1,539	1,630	1,614	52.2%
FRCST 2030	1,566	1,552	1,644	1,628	52.2%
FRCST 2031	1,580	1,566	1,658	1,643	52.1%
FRCST 2032	1,588	1,573	1,667	1,651	51.8%
FRCST 2033	1,590	1,574	1,668	1,652	51.8%
FRCST 2034	1,599	1,583	1,678	1,661	51.7%
FRCST 2035	1,606	1,590	1,685	1,668	51.7%
FRCST 2036	1,613	1,597	1,692	1,675	51.6%
FRCST 2037	1,622	1,606	1,702	1,686	51.7%
FRCST 2038	1,632	1,616	1,712	1,696	51.6%

***** BASE-MILD SCENARIO WITH DSM IMPACTS *****

***** BASE-MILD 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	
2007 -2012	*****	*****	*****	*****	*****
2012 -2017	*****	*****	*****	*****	*****
2018 -2023	-0.11%	0.18%	-0.17%	0.12%	52.44%
2023 -2028	0.17%	0.28%	0.17%	0.28%	52.50%
2028 -2033	0.50%	0.66%	0.50%	0.66%	52.05%
2033 -2038	0.52%	0.53%	0.52%	0.53%	51.69%
2007 -2017	*****	*****	*****	*****	*****
2018 -2038	0.27%	0.41%	0.25%	0.39%	52.17%

1979 :BEGINNING HISTORICAL DATA YEAR ?
 2017 :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	WINTER	SUMMER	WINTER	SUMMER
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	99.86%	99.76%	100.0%		0	0	100.0%		0	0
ACTUAL 2010	99.16%	99.49%	100.0%		0	0	100.0%		0	0
ACTUAL 2011	98.92%	99.58%	100.0%		0	0	100.0%		0	0
ACTUAL 2012	99.76%	99.86%	100.0%		0	0	100.0%		0	0
ACTUAL 2013	100.00%	99.78%	100.0%		0	0	100.0%		0	0
ACTUAL 2014	99.94%	99.47%	100.0%		0	0	100.0%		0	0
ACTUAL 2015	99.12%	99.85%	100.0%		0	0	100.0%		0	0
ACTUAL 2016	99.86%	99.70%	100.0%		0	0	100.0%		0	0
ACTUAL 2017	99.71%	99.70%	100.0%		0	0	100.0%		0	0
FRCST 2018	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2019	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2020	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2021	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2022	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2023	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2024	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2025	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2026	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2027	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2028	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2029	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2030	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2031	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2032	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2033	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2034	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2035	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2036	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2037	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2038	99.56%	99.75%	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)
2007 -2012	99.03%	99.47%
2012 -2017	99.73%	99.73%
2018 -2023	99.56%	99.75%
2023 -2028	99.56%	99.75%
2028 -2033	99.56%	99.75%
2033 -2038	99.56%	99.75%
2007 -2017	99.35%	99.58%
2018 -2038	99.56%	99.75%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 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	WINTER	SUMMER	WINTER	SUMMER		
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		
ACTUAL 2010	100.0%		0	0	0.0%		1	1		
ACTUAL 2011	100.0%		0	0	100.0%		0	0		
ACTUAL 2012	100.0%		0	0	100.0%		0	0		
ACTUAL 2013	100.0%		0	0	100.0%		0	0		
ACTUAL 2014	100.0%		0	0	100.0%		0	0		
ACTUAL 2015	100.0%		0	0	100.0%		0	0		
ACTUAL 2016	100.0%		0	0	100.0%		0	0		
ACTUAL 2017	100.0%		0	0	100.0%		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		
FRCST 2031	100.00%		0	0	100.00%		0	0		
FRCST 2032	100.00%		0	0	100.00%		0	0		
FRCST 2033	100.00%		0	0	100.00%		0	0		
FRCST 2034	100.00%		0	0	100.00%		0	0		
FRCST 2035	100.00%		0	0	100.00%		0	0		
FRCST 2036	100.00%		0	0	100.00%		0	0		
FRCST 2037	100.00%		0	0	100.00%		0	0		
FRCST 2038	100.00%		0	0	100.00%		0	0		

***** BASE-MILD SCENARIO WITH DSM IMPACTS *****

TIME PERIOD

2007 -2012
2012 -2017

2018 -2023
2023 -2028
2028 -2033
2033 -2038

2007 -2017
2018 -2038

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 2007	0	0.0%	0	0.0%	0.000	0.000	0.000	0.000
ACTUAL 2008	0	0.0%	0	0.0%	0.000	0.000	0.000	0.000
ACTUAL 2009	25,159	0.4%	26,189	0.4%	8.978	3.703	9.436	3.892
ACTUAL 2010	49,468	0.7%	51,663	0.7%	20.610	10.768	21.633	11.302
ACTUAL 2011	81,677	1.2%	85,143	1.2%	32.274	17.850	33.686	18.630
ACTUAL 2012	103,470	1.5%	107,053	1.5%	40.343	23.944	41.924	24.882
ACTUAL 2013	125,031	1.7%	128,352	1.7%	46.802	17.136	48.342	17.700
ACTUAL 2014	144,763	1.9%	149,549	1.9%	52.425	32.671	54.265	33.817
ACTUAL 2015	164,860	2.2%	171,568	2.2%	64.045	25.255	66.824	26.351
ACTUAL 2016	194,538	2.6%	203,449	2.6%	73.355	46.929	76.917	49.208
ACTUAL 2017	219,951	3.0%	229,978	3.0%	79.051	33.914	83.019	35.616
FRCST 2018	227,851	3.1%	238,713	3.1%	80.948	50.866	85.208	53.543
FRCST 2019	239,949	3.3%	250,694	3.3%	81.429	47.024	85.671	49.473
FRCST 2020	252,997	3.5%	264,365	3.5%	83.203	46.374	87.307	48.661
FRCST 2021	261,046	3.6%	272,776	3.6%	84.603	45.103	88.776	47.328
FRCST 2022	273,841	3.7%	286,146	3.7%	87.313	44.994	91.620	47.213
FRCST 2023	286,236	3.9%	299,098	3.9%	90.573	45.612	95.040	47.861
FRCST 2024	305,123	4.1%	318,832	4.1%	95.122	47.199	99.813	49.527
FRCST 2025	319,424	4.3%	333,776	4.3%	99.131	47.918	104.020	50.281
FRCST 2026	335,509	4.5%	350,584	4.5%	103.209	48.622	108.299	51.020
FRCST 2027	347,509	4.6%	363,123	4.6%	103.644	48.226	108.755	50.604
FRCST 2028	357,180	4.8%	373,228	4.8%	102.980	48.182	108.059	50.558
FRCST 2029	364,445	4.9%	380,820	4.9%	102.777	48.297	107.846	50.679
FRCST 2030	363,165	4.8%	379,482	4.8%	100.865	46.208	105.840	48.487
FRCST 2031	353,338	4.7%	369,214	4.7%	96.365	41.087	101.118	43.113
FRCST 2032	348,818	4.6%	364,491	4.6%	93.665	38.298	98.284	40.187
FRCST 2033	357,455	4.7%	373,516	4.7%	93.028	38.093	97.616	39.971
FRCST 2034	366,717	4.8%	383,194	4.8%	92.761	37.970	97.335	39.843
FRCST 2035	367,494	4.8%	384,006	4.8%	93.623	38.385	98.241	40.278
FRCST 2036	369,641	4.8%	386,250	4.8%	94.665	38.804	99.334	40.718
FRCST 2037	375,132	4.8%	391,987	4.8%	96.140	39.243	100.881	41.178
FRCST 2038	380,610	4.9%	397,711	4.9%	97.619	39.663	102.434	41.620

***** BASE-MILD SCENARIO WITH DSM IMPACTS *****

TIME PERIOD

2007 -2012
2012 -2017

2018 -2023
2023 -2028
2028 -2033
2033 -2038

2007 -2017
2018 -2038

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 2007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ACTUAL 2008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ACTUAL 2009	8.598	3.080	9.037	3.238	0.380	0.622	0.399	0.654
ACTUAL 2010	17.983	6.820	18.875	7.158	2.628	3.948	2.758	4.144
ACTUAL 2011	27.786	11.209	29.001	11.699	4.488	6.640	4.685	6.931
ACTUAL 2012	34.681	14.358	36.040	14.921	5.662	9.586	5.884	9.962
ACTUAL 2013	40.471	17.136	41.803	17.700	6.331	0.000	6.539	0.000
ACTUAL 2014	45.624	20.484	47.225	21.202	6.801	12.187	7.039	12.615
ACTUAL 2015	56.921	25.255	59.391	26.351	7.124	0.000	7.433	0.000
ACTUAL 2016	65.902	31.565	69.101	33.097	7.454	15.364	7.815	16.110
ACTUAL 2017	71.365	33.914	74.947	35.616	7.686	0.000	8.072	0.000
FRCST 2018	73.124	34.665	76.972	36.490	7.824	16.201	8.236	17.053
FRCST 2019	76.067	35.845	80.030	37.712	5.362	11.179	5.641	11.761
FRCST 2020	79.573	37.288	83.497	39.127	3.630	9.086	3.809	9.535
FRCST 2021	82.220	37.760	86.275	39.622	2.383	7.343	2.501	7.706
FRCST 2022	85.776	38.866	90.006	40.783	1.538	6.128	1.613	6.430
FRCST 2023	89.421	39.896	93.831	41.864	1.152	5.716	1.209	5.998
FRCST 2024	94.164	41.642	98.808	43.696	0.957	5.557	1.005	5.831
FRCST 2025	98.252	42.535	103.098	44.633	0.878	5.383	0.922	5.648
FRCST 2026	102.412	43.339	107.462	45.476	0.798	5.283	0.837	5.544
FRCST 2027	102.762	42.893	107.830	45.009	0.881	5.332	0.925	5.595
FRCST 2028	102.013	42.725	107.044	44.832	0.967	5.457	1.015	5.726
FRCST 2029	101.723	42.738	106.740	44.846	1.054	5.558	1.106	5.832
FRCST 2030	99.836	41.037	104.759	43.061	1.030	5.171	1.081	5.426
FRCST 2031	95.315	36.719	100.016	38.530	1.051	4.367	1.102	4.583
FRCST 2032	92.593	33.988	97.160	35.664	1.072	4.310	1.124	4.523
FRCST 2033	91.935	33.677	96.469	35.338	1.093	4.416	1.147	4.633
FRCST 2034	91.646	33.532	96.166	35.186	1.115	4.439	1.170	4.657
FRCST 2035	92.486	33.887	97.048	35.558	1.137	4.498	1.193	4.720
FRCST 2036	93.505	34.247	98.117	35.936	1.160	4.558	1.217	4.782
FRCST 2037	94.957	34.627	99.640	36.335	1.183	4.615	1.241	4.843
FRCST 2038	96.413	34.992	101.168	36.718	1.207	4.671	1.266	4.902

TIME PERIOD

2007 -2012
2012 -2017

2018 -2023
2023 -2028
2028 -2033
2033 -2038

2007 -2017
2018 -2038

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 *****

Load Control Switches

1 = Load Control on peak 0 = No load control on peak

YEAR	Winter CP	Winter NCP	Summer CP	Summer NCP
ACTUAL 2007	NA	NA	NA	NA
ACTUAL 2008	NA	NA	NA	NA
ACTUAL 2009	1	0	1	0
ACTUAL 2010	1	0	1	0
ACTUAL 2011	1	0	1	0
ACTUAL 2012	1	0	1	0
ACTUAL 2013	1	0	0	0
ACTUAL 2014	1	0	1	0
ACTUAL 2015	1	0	0	0
ACTUAL 2016	1	0	1	0
ACTUAL 2017	1	0	0	0
FRCST 2018	1	0	1	0
FRCST 2019	1	0	1	0
FRCST 2020	1	0	1	0
FRCST 2021	1	0	1	0
FRCST 2022	1	0	1	0
FRCST 2023	1	0	1	0
FRCST 2024	1	0	1	0
FRCST 2025	1	0	1	0
FRCST 2026	1	0	1	0
FRCST 2027	1	0	1	0
FRCST 2028	1	0	1	0
FRCST 2029	1	0	1	0
FRCST 2030	1	0	1	0
FRCST 2031	1	0	1	0
FRCST 2032	1	0	1	0
FRCST 2033	1	0	1	0
FRCST 2034	1	0	1	0
FRCST 2035	1	0	1	0
FRCST 2036	1	0	1	0
FRCST 2037	1	0	1	0
FRCST 2038	1	0	1	0

TIME PERIOD

2007 -2012
2012 -2017

2018 -2023
2023 -2028
2028 -2033
2033 -2038

2007 -2017
2018 -2038

Appendix A5

Historical/Forecast Annual Load Summary – Base-Severe Scenario

1979 :BEGINNING HISTORICAL DATA YEAR ?
 2017 :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 2007	275,983	13,481	199	2,184	291,847	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	4,049,084	862,271	1,638,530	36,404	6,586,290
ACTUAL 2010	277,915	13,683	201	2,222	294,021	4,313,611	889,903	1,783,519	40,028	7,027,061
ACTUAL 2011	277,750	13,765	210	2,498	294,223	4,093,233	901,706	1,806,351	40,873	6,842,163
ACTUAL 2012	278,374	13,889	204	2,564	295,031	3,958,457	930,498	1,895,575	46,875	6,831,406
ACTUAL 2013	279,339	14,031	207	2,686	296,263	4,091,997	938,827	1,924,132	40,413	6,995,370
ACTUAL 2014	280,060	14,289	205	2,805	297,359	4,204,581	952,691	2,043,777	41,306	7,242,356
ACTUAL 2015	281,173	14,255	207	2,881	298,516	4,002,897	946,635	2,069,866	37,583	7,056,982
ACTUAL 2016	283,258	13,827	214	2,984	300,283	4,024,894	949,178	2,059,447	39,010	7,072,530
ACTUAL 2017	283,538	14,030	214	4,949	302,731	3,880,889	944,811	2,133,419	56,773	7,015,892
FRCST 2018	285,222	14,161	237	5,100	304,720	4,486,778	907,640	2,249,332	57,921	7,701,671
FRCST 2019	287,082	14,295	241	5,121	306,739	4,765,696	913,659	2,272,473	58,089	8,009,916
FRCST 2020	288,894	14,436	245	5,121	308,696	4,939,591	920,970	2,304,077	57,921	8,222,560
FRCST 2021	290,621	14,577	247	5,121	310,566	5,057,582	928,228	2,382,638	57,921	8,426,369
FRCST 2022	292,473	14,718	247	5,121	312,559	5,142,526	935,438	2,431,727	57,921	8,567,612
FRCST 2023	294,288	14,859	246	5,121	314,514	5,206,314	942,621	2,462,961	57,921	8,669,816
FRCST 2024	295,900	15,007	246	5,121	316,274	5,249,927	951,378	2,478,824	57,921	8,738,050
FRCST 2025	297,387	15,155	246	5,121	317,909	5,282,117	963,537	2,485,118	57,921	8,788,692
FRCST 2026	299,006	15,303	245	5,121	319,675	5,314,318	973,865	2,480,936	57,921	8,827,040
FRCST 2027	300,563	15,451	245	5,121	321,380	5,347,235	985,362	2,469,382	57,921	8,859,900
FRCST 2028	302,276	15,599	245	5,121	323,241	5,380,579	997,978	2,391,135	57,921	8,827,613
FRCST 2029	303,746	15,757	244	5,121	324,868	5,404,432	1,014,757	2,363,796	57,921	8,840,906
FRCST 2030	305,345	15,915	244	5,121	326,625	5,435,614	1,037,555	2,373,586	57,921	8,904,676
FRCST 2031	306,844	16,073	244	5,121	328,282	5,465,252	1,068,123	2,374,476	57,921	8,965,772
FRCST 2032	308,490	16,231	244	5,121	330,086	5,499,801	1,093,230	2,354,008	57,921	9,004,960
FRCST 2033	310,060	16,389	244	5,121	331,814	5,533,233	1,106,766	2,307,069	57,921	9,004,989
FRCST 2034	311,663	16,554	241	5,121	333,579	5,572,048	1,119,898	2,296,898	57,921	9,046,765
FRCST 2035	313,155	16,719	241	5,121	335,236	5,619,432	1,133,157	2,282,494	57,921	9,093,004
FRCST 2036	314,785	16,884	241	5,121	337,031	5,669,869	1,146,554	2,263,119	57,921	9,137,463
FRCST 2037	316,306	17,049	240	5,121	338,716	5,717,812	1,160,087	2,257,135	57,921	9,192,956
FRCST 2038	317,964	17,214	240	5,121	340,539	5,770,281	1,173,763	2,247,345	57,921	9,249,310

***** BASE-SEVERE SCENARIO WITH DSM IMPACTS *****

***** BASE-SEVERE SCENARIO WITH DSM IMPACTS *****

TIME PERIOD	AGGREGATED NUMBER OF CONSUMERS					AGGREGATED SYSTEM ENERGY SALES				
	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (ACT. CHG.)	OTHER (ACT. CHG.)	TOTAL (% CHG.)	RESIDENTIAL (% CHG.)	COMMERCIAL (% CHG.)	INDUSTRIAL (% CHG.)	OTHER (% CHG.)	TOTAL (% CHG.)
2007 -2012	0.17%	0.60%	5	380	0.22%	-1.34%	0.74%	2.12%	2.59%	-0.14%
2012 -2017	0.37%	0.20%	10	2385	0.52%	-0.40%	0.31%	2.39%	3.91%	0.53%
2018 -2023	0.63%	0.97%	9	21	0.63%	3.02%	0.76%	1.83%	0.00%	2.40%
2023 -2028	0.54%	0.98%	-1	0	0.55%	0.66%	1.15%	-0.59%	0.00%	0.36%
2028 -2033	0.51%	0.99%	-1	0	0.52%	0.56%	2.09%	-0.71%	0.00%	0.40%
2033 -2038	0.50%	0.99%	-4	0	0.52%	0.84%	1.18%	-0.52%	0.00%	0.54%
2007 -2017	0.27%	0.40%	15	2765	0.37%	-0.87%	0.52%	2.26%	3.24%	0.19%
2018 -2038	0.54%	0.98%	3	21	0.56%	1.27%	1.29%	0.00%	0.00%	0.92%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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)	H.E. ENERGY GENERATED FOR MEMBERS (MWH)	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 2007	7,215,322	7,533,291	4.33%	4.84%	*****	1,533	1,559	1,407	1,421
ACTUAL 2008	7,193,537	7,471,337	3.80%	5.10%	*****	1,579	1,442	1,435	1,317
ACTUAL 2009	6,898,781	7,174,725	3.93%	4.86%	*****	1,674	1,453	1,520	1,306
ACTUAL 2010	7,338,146	7,656,224	4.25%	4.73%	*****	1,539	1,577	1,380	1,462
ACTUAL 2011	7,133,476	7,429,116	4.07%	4.19%	*****	1,552	1,579	1,409	1,441
ACTUAL 2012	7,123,700	7,364,416	3.35%	3.77%	*****	1,426	1,631	1,278	1,478
ACTUAL 2013	7,309,346	7,498,978	2.59%	3.19%	*****	1,472	1,498	1,360	1,351
ACTUAL 2014	7,560,267	7,804,699	3.20%	3.39%	*****	1,827	1,482	1,663	1,348
ACTUAL 2015	7,353,260	7,645,777	3.91%	4.16%	*****	1,750	1,533	1,622	1,364
ACTUAL 2016	7,388,028	7,719,002	4.38%	4.63%	*****	1,577	1,566	1,440	1,376
ACTUAL 2017	7,310,241	7,636,264	4.36%	4.78%	*****	1,563	1,548	1,401	1,372
FRCST 2018	8,034,976	8,410,608	4.55%	5.00%	75.200	1,703	1,684	1,565	1,504
FRCST 2019	8,357,519	8,724,860	4.29%	4.95%	75.760	1,775	1,754	1,634	1,573
FRCST 2020	8,579,758	8,958,301	4.30%	4.70%	75.520	1,822	1,803	1,680	1,619
FRCST 2021	8,792,217	9,180,307	4.30%	4.70%	75.380	1,866	1,848	1,721	1,662
FRCST 2022	8,939,820	9,334,541	4.30%	4.70%	75.860	1,897	1,882	1,750	1,693
FRCST 2023	9,046,617	9,446,138	4.30%	4.70%	75.890	1,919	1,907	1,771	1,717
FRCST 2024	9,115,325	9,517,933	4.30%	4.70%	77.410	1,934	1,925	1,785	1,733
FRCST 2025	9,168,161	9,573,142	4.30%	4.70%	78.960	1,945	1,938	1,795	1,745
FRCST 2026	9,208,183	9,614,962	4.30%	4.70%	80.540	1,953	1,949	1,802	1,756
FRCST 2027	9,242,702	9,651,032	4.30%	4.70%	82.150	1,963	1,960	1,812	1,765
FRCST 2028	9,209,588	9,616,431	4.30%	4.70%	83.790	1,960	1,955	1,811	1,763
FRCST 2029	9,221,706	9,629,093	4.30%	4.70%	85.470	1,964	1,959	1,815	1,782
FRCST 2030	9,288,301	9,698,681	4.30%	4.70%	87.180	1,980	1,975	1,830	1,797
FRCST 2031	9,352,012	9,765,254	4.30%	4.70%	88.920	1,997	1,991	1,845	1,813
FRCST 2032	9,393,037	9,808,123	4.30%	4.70%	90.700	2,008	2,001	1,856	1,823
FRCST 2033	9,393,515	9,808,622	4.30%	4.70%	92.510	2,012	2,004	1,860	1,826
FRCST 2034	9,437,275	9,854,348	4.30%	4.70%	92.510	2,025	2,017	1,873	1,838
FRCST 2035	9,485,698	9,904,946	4.30%	4.70%	92.510	2,036	2,027	1,883	1,848
FRCST 2036	9,532,446	9,953,796	4.30%	4.70%	92.510	2,046	2,037	1,893	1,858
FRCST 2037	9,590,532	10,014,492	4.30%	4.70%	92.510	2,059	2,051	1,905	1,870
FRCST 2038	9,649,494	10,076,102	4.30%	4.70%	92.510	2,072	2,064	1,918	1,883

***** BASE-SEVERE SCENARIO WITH DSM IMPACTS *****						***** BASE-SEVERE SCENARIO WITH DSM IMPACTS *****			
TIME PERIOD	AGGREGATED TOTAL MEMBER ENERGY PURCHASED (% CHG.)	H.E. ENERGY GENERATED FOR MEMBERS (% CHG.)	AVG. MONTHLY LOSS FACTORS due to MEMBER SYSTEM LOAD (AVERAGE)		H.E. AVERAGE WHOLESALE POWER COSTS (% CHG.)	AGGREGATED MEMBER PEAK SEASONAL DEMANDS (WITHOUT LOSSES, 30 MINUTE DEMAND)			
			ENERGY	DEMAND		Non-Coincident (% Chg)		Coincident (% Chg)	
						WINTER	SUMMER	WINTER	SUMMER
2007 -2012	-0.26%	-0.45%	3.96%	4.58%	*****	-1.43%	0.91%	-1.91%	0.80%
2012 -2017	0.52%	0.73%	3.63%	3.99%	*****	1.85%	-1.04%	1.85%	-1.47%
2018 -2023	2.40%	2.35%	4.34%	4.79%	0.18%	2.42%	2.51%	2.51%	2.68%
2023 -2028	0.36%	0.36%	4.30%	4.70%	2.00%	0.43%	0.51%	0.45%	0.53%
2028 -2033	0.40%	0.40%	4.30%	4.70%	2.00%	0.52%	0.49%	0.54%	0.71%
2033 -2038	0.54%	0.54%	4.30%	4.70%	0.00%	0.59%	0.60%	0.61%	0.61%
2007 -2017	0.13%	0.14%	3.83%	4.33%	*****	0.19%	-0.07%	-0.05%	-0.35%
2018 -2038	0.92%	0.91%	4.31%	4.73%	1.04%	0.99%	1.02%	1.02%	1.13%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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)					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	<u>(WITHOUT LOSSES)</u>		<u>(WITH LOSSES)</u>		COINCIDENT PEAK	<u>(WITHOUT LOSSES)</u>		<u>(WITH LOSSES)</u>		NON-COIN. PEAK	
	WINTER	SUMMER	WINTER	SUMMER		WINTER	SUMMER	WINTER	SUMMER		
ACTUAL 2007	1,407	1,418	1,478	1,489	57.8%	1,496	1,555	1,571	1,633	52.7%	
ACTUAL 2008	1,435	1,296	1,511	1,364	56.3%	1,562	1,420	1,644	1,494	51.7%	
ACTUAL 2009	1,518	1,303	1,594	1,369	51.4%	1,672	1,450	1,756	1,522	46.6%	
ACTUAL 2010	1,369	1,454	1,436	1,525	57.3%	1,526	1,570	1,600	1,646	53.1%	
ACTUAL 2011	1,394	1,435	1,454	1,497	56.6%	1,535	1,573	1,601	1,640	51.7%	
ACTUAL 2012	1,275	1,476	1,324	1,533	54.7%	1,423	1,629	1,477	1,691	49.6%	
ACTUAL 2013	1,360	1,348	1,404	1,392	61.0%	1,472	1,495	1,520	1,543	55.5%	
ACTUAL 2014	1,662	1,341	1,719	1,388	51.8%	1,825	1,475	1,888	1,525	47.2%	
ACTUAL 2015	1,608	1,362	1,677	1,420	52.0%	1,734	1,531	1,808	1,596	48.3%	
ACTUAL 2016	1,438	1,372	1,507	1,438	58.3%	1,575	1,562	1,650	1,636	53.3%	
ACTUAL 2017	1,397	1,368	1,466	1,436	59.5%	1,558	1,543	1,635	1,619	53.3%	
FRCST 2018	1,558	1,500	1,639	1,578	58.6%	1,695	1,680	1,783	1,767	53.8%	
FRCST 2019	1,627	1,569	1,710	1,649	58.2%	1,767	1,750	1,857	1,840	53.6%	
FRCST 2020	1,673	1,615	1,754	1,693	58.1%	1,815	1,798	1,903	1,886	53.6%	
FRCST 2021	1,714	1,658	1,797	1,738	58.3%	1,858	1,844	1,948	1,933	53.8%	
FRCST 2022	1,743	1,689	1,828	1,772	58.3%	1,889	1,877	1,980	1,968	53.8%	
FRCST 2023	1,763	1,713	1,849	1,796	58.3%	1,910	1,902	2,003	1,995	53.8%	
FRCST 2024	1,777	1,729	1,864	1,813	58.1%	1,926	1,920	2,020	2,014	53.7%	
FRCST 2025	1,787	1,741	1,874	1,826	58.3%	1,936	1,933	2,031	2,027	53.8%	
FRCST 2026	1,795	1,751	1,882	1,837	58.3%	1,945	1,945	2,039	2,039	53.8%	
FRCST 2027	1,804	1,761	1,892	1,847	58.2%	1,955	1,955	2,050	2,050	53.7%	
FRCST 2028	1,803	1,758	1,891	1,844	57.9%	1,952	1,951	2,047	2,046	53.5%	
FRCST 2029	1,807	1,777	1,895	1,864	58.0%	1,956	1,954	2,051	2,049	53.6%	
FRCST 2030	1,822	1,792	1,911	1,880	58.0%	1,972	1,970	2,068	2,066	53.5%	
FRCST 2031	1,837	1,808	1,927	1,896	57.9%	1,988	1,986	2,085	2,082	53.5%	
FRCST 2032	1,848	1,819	1,938	1,907	57.6%	1,999	1,996	2,097	2,094	53.3%	
FRCST 2033	1,852	1,822	1,943	1,911	57.6%	2,003	1,999	2,100	2,096	53.3%	
FRCST 2034	1,865	1,834	1,956	1,923	57.5%	2,016	2,012	2,114	2,110	53.2%	
FRCST 2035	1,875	1,843	1,966	1,933	57.5%	2,027	2,022	2,125	2,121	53.2%	
FRCST 2036	1,885	1,853	1,977	1,944	57.3%	2,037	2,032	2,136	2,131	53.1%	
FRCST 2037	1,897	1,866	1,989	1,957	57.5%	2,050	2,046	2,150	2,145	53.2%	
FRCST 2038	1,909	1,878	2,002	1,970	57.4%	2,063	2,059	2,163	2,159	53.2%	

***** 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)
	<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	
2007 -2012	-1.96%	0.81%	-2.17%	0.59%	55.68%	-1.00%	0.93%	-1.22%	0.71%	50.90%
2012 -2017	1.84%	-1.51%	2.05%	-1.30%	56.21%	1.84%	-1.07%	2.05%	-0.87%	51.17%
2018 -2023	2.51%	2.68%	2.44%	2.62%	58.32%	2.42%	2.51%	2.35%	2.45%	53.75%
2023 -2028	0.45%	0.53%	0.45%	0.53%	58.20%	0.43%	0.51%	0.43%	0.51%	53.73%
2028 -2033	0.54%	0.71%	0.54%	0.71%	57.83%	0.52%	0.49%	0.52%	0.49%	53.44%
2033 -2038	0.61%	0.61%	0.61%	0.61%	57.48%	0.59%	0.60%	0.59%	0.60%	53.19%
2007 -2017	-0.08%	-0.35%	-0.08%	-0.36%	56.06%	0.41%	-0.08%	0.40%	-0.08%	51.17%
2018 -2038	1.02%	1.13%	1.01%	1.11%	57.96%	0.99%	1.02%	0.97%	1.01%	53.52%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 *****										
***** EXTREME TEMPERATURE CONDITIONS *****					***** EXTREME TEMPERATURE CONDITIONS *****					
HOOSIER ENERGY SYSTEM PEAK SEASONAL					HOOSIER ENERGY SYSTEM PEAK SEASONAL					
COINCIDENT DEMAND (MW); 60 MINUTE VALUE					NON-COINCIDENT DEMAND (MW); 60 MINUTE VALUE					
(WITHOUT LOSSES)					(WITH LOSSES)					
YEAR	WINTER	SUMMER	WINTER	SUMMER	COINCIDENT PEAK	WINTER	SUMMER	WINTER	SUMMER	EXTREME NON-COIN. PEAK
ACTUAL 2007	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2010	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2011	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2012	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2013	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2014	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2015	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2016	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
ACTUAL 2017	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
FRCST 2018	1,745	1,674	1,836	1,761	52.3%	1,896	1,872	1,995	1,969	48.1%
FRCST 2019	1,822	1,750	1,916	1,840	52.0%	1,977	1,950	2,078	2,050	47.9%
FRCST 2020	1,874	1,801	1,965	1,888	51.9%	2,030	2,004	2,129	2,102	47.9%
FRCST 2021	1,919	1,848	2,013	1,938	52.1%	2,078	2,054	2,179	2,154	48.1%
FRCST 2022	1,952	1,883	2,047	1,975	52.1%	2,113	2,092	2,216	2,193	48.1%
FRCST 2023	1,974	1,909	2,071	2,002	52.1%	2,137	2,119	2,241	2,222	48.1%
FRCST 2024	1,990	1,926	2,087	2,020	51.9%	2,154	2,138	2,259	2,242	48.0%
FRCST 2025	2,001	1,940	2,098	2,034	52.1%	2,166	2,153	2,271	2,258	48.1%
FRCST 2026	2,010	1,951	2,108	2,046	52.1%	2,176	2,165	2,282	2,271	48.1%
FRCST 2027	2,021	1,962	2,119	2,058	52.0%	2,187	2,177	2,294	2,283	48.0%
FRCST 2028	2,019	1,959	2,118	2,055	51.7%	2,184	2,173	2,291	2,278	47.8%
FRCST 2029	2,025	1,982	2,124	2,079	51.7%	2,190	2,177	2,297	2,283	47.9%
FRCST 2030	2,042	1,999	2,142	2,096	51.7%	2,208	2,195	2,315	2,302	47.8%
FRCST 2031	2,059	2,016	2,160	2,114	51.6%	2,226	2,212	2,334	2,320	47.8%
FRCST 2032	2,071	2,027	2,172	2,126	51.4%	2,238	2,224	2,347	2,332	47.6%
FRCST 2033	2,076	2,031	2,177	2,130	51.4%	2,242	2,227	2,352	2,336	47.6%
FRCST 2034	2,089	2,044	2,191	2,143	51.3%	2,256	2,240	2,366	2,349	47.5%
FRCST 2035	2,101	2,054	2,203	2,155	51.3%	2,268	2,252	2,379	2,362	47.5%
FRCST 2036	2,112	2,066	2,215	2,167	51.2%	2,280	2,264	2,391	2,374	47.4%
FRCST 2037	2,126	2,080	2,229	2,181	51.3%	2,294	2,279	2,406	2,390	47.5%
FRCST 2038	2,140	2,094	2,244	2,196	51.3%	2,310	2,294	2,422	2,406	47.5%

***** BASE-SEVERE SCENARIO WITH DSM IMPACTS *****										
***** 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. LOAD FACTOR (AVERAGE)	WINTER	SUMMER	WINTER	SUMMER	EXT. NON-COIN. LOAD FACTOR (AVERAGE)
2007 -2012	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
2012 -2017	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
2018 -2023	2.50%	2.66%	2.44%	2.60%	52.07%	2.42%	2.51%	2.36%	2.45%	48.04%
2023 -2028	0.45%	0.52%	0.45%	0.52%	51.97%	0.44%	0.50%	0.44%	0.50%	48.02%
2028 -2033	0.55%	0.72%	0.55%	0.72%	51.60%	0.53%	0.50%	0.53%	0.50%	47.74%
2033 -2038	0.61%	0.61%	0.61%	0.61%	51.30%	0.59%	0.59%	0.59%	0.59%	47.51%
2007 -2017	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
2018 -2038	1.03%	1.13%	1.01%	1.11%	51.73%	0.99%	1.02%	0.98%	1.01%	47.83%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 *****

**** 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 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	3,904,138	818,798	1,564,440	31,738	6,319,115
ACTUAL 2010	265,890	12,407	193	1,854	280,344	4,158,334	843,557	1,712,254	33,075	6,747,220
ACTUAL 2011	277,750	13,765	210	2,498	294,223	4,093,233	901,706	1,806,351	40,873	6,842,163
ACTUAL 2012	278,374	13,889	204	2,564	295,031	3,958,457	930,498	1,895,575	46,875	6,831,406
ACTUAL 2013	279,339	14,031	207	2,686	296,263	4,091,997	938,827	1,924,132	40,413	6,995,370
ACTUAL 2014	280,060	14,289	205	2,805	297,359	4,204,581	952,691	2,043,777	41,306	7,242,356
ACTUAL 2015	281,173	14,255	207	2,881	298,516	4,002,897	946,635	2,069,866	37,583	7,056,982
ACTUAL 2016	283,258	13,827	214	2,984	300,283	4,024,894	949,178	2,059,447	39,010	7,072,530
ACTUAL 2017	283,538	14,030	214	4,949	302,731	3,880,889	944,811	2,133,419	56,773	7,015,892
FRCST 2018	285,222	14,161	237	5,100	304,720	4,486,778	907,640	2,249,332	57,921	7,701,671
FRCST 2019	287,082	14,295	241	5,121	306,739	4,765,696	913,659	2,272,473	58,089	8,009,916
FRCST 2020	288,894	14,436	245	5,121	308,696	4,939,591	920,970	2,304,077	57,921	8,222,560
FRCST 2021	290,621	14,577	247	5,121	310,566	5,057,582	928,228	2,382,638	57,921	8,426,369
FRCST 2022	292,473	14,718	247	5,121	312,559	5,142,526	935,438	2,431,727	57,921	8,567,612
FRCST 2023	294,288	14,859	246	5,121	314,514	5,206,314	942,621	2,462,961	57,921	8,669,816
FRCST 2024	295,900	15,007	246	5,121	316,274	5,249,927	951,378	2,478,824	57,921	8,738,050
FRCST 2025	297,387	15,155	246	5,121	317,909	5,282,117	963,537	2,485,118	57,921	8,788,692
FRCST 2026	299,006	15,303	245	5,121	319,675	5,314,318	973,865	2,480,936	57,921	8,827,040
FRCST 2027	300,563	15,451	245	5,121	321,380	5,347,235	985,362	2,469,382	57,921	8,859,900
FRCST 2028	302,276	15,599	245	5,121	323,241	5,380,579	997,978	2,391,135	57,921	8,827,613
FRCST 2029	303,746	15,757	244	5,121	324,868	5,404,432	1,014,757	2,363,796	57,921	8,840,906
FRCST 2030	305,345	15,915	244	5,121	326,625	5,435,614	1,037,555	2,373,586	57,921	8,904,676
FRCST 2031	306,844	16,073	244	5,121	328,282	5,465,252	1,068,123	2,374,476	57,921	8,965,772
FRCST 2032	308,490	16,231	244	5,121	330,086	5,499,801	1,093,230	2,354,008	57,921	9,004,960
FRCST 2033	310,060	16,389	244	5,121	331,814	5,533,233	1,106,766	2,307,069	57,921	9,004,989
FRCST 2034	311,663	16,554	241	5,121	333,579	5,572,048	1,119,898	2,296,898	57,921	9,046,765
FRCST 2035	313,155	16,719	241	5,121	335,236	5,619,432	1,133,157	2,282,494	57,921	9,093,004
FRCST 2036	314,785	16,884	241	5,121	337,031	5,669,869	1,146,554	2,263,119	57,921	9,137,463
FRCST 2037	316,306	17,049	240	5,121	338,716	5,717,812	1,160,087	2,257,135	57,921	9,192,956
FRCST 2038	317,964	17,214	240	5,121	340,539	5,770,281	1,173,763	2,247,345	57,921	9,249,310

***** BASE-SEVERE SCENARIO WITH DSM IMPACTS *****

***** BASE-SEVERE 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.)
2007 -2012	1.07%	2.55%	13	743	1.18%	-0.65%	1.70%	3.19%	6.48%	0.70%
2012 -2017	0.37%	0.20%	10	2385	0.52%	-0.40%	0.31%	2.39%	3.91%	0.53%
2018 -2023	0.63%	0.97%	9	21	0.63%	3.02%	0.76%	1.83%	0.00%	2.40%
2023 -2028	0.54%	0.98%	-1	0	0.55%	0.66%	1.15%	-0.59%	0.00%	0.36%
2028 -2033	0.51%	0.99%	-1	0	0.52%	0.56%	2.09%	-0.71%	0.00%	0.40%
2033 -2038	0.50%	0.99%	-4	0	0.52%	0.84%	1.18%	-0.52%	0.00%	0.54%
2007 -2017	0.72%	1.37%	23	3128	0.85%	-0.52%	1.00%	2.79%	5.19%	0.62%
2018 -2038	0.54%	0.98%	3	21	0.56%	1.27%	1.29%	0.00%	0.00%	0.92%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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, 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)				ANNUAL LOAD FACTOR
			WINTER	SUMMER	(WITHOUT LOSSES)		(WITH LOSSES)		
ACTUAL 2007	6,924,233	7,229,037	1,404	1,358	1,370	1,355	1,439	1,423	57.4%
ACTUAL 2008	6,912,387	7,179,069	1,406	1,265	1,391	1,245	1,465	1,311	55.8%
ACTUAL 2009	6,617,633	6,882,071	1,474	1,249	1,472	1,247	1,546	1,309	50.8%
ACTUAL 2010	7,043,763	7,348,773	1,331	1,399	1,320	1,392	1,385	1,460	57.5%
ACTUAL 2011	7,133,476	7,429,116	1,409	1,441	1,394	1,435	1,454	1,497	56.6%
ACTUAL 2012	7,123,700	7,364,416	1,278	1,478	1,275	1,476	1,324	1,533	54.7%
ACTUAL 2013	7,309,346	7,498,978	1,360	1,351	1,360	1,348	1,404	1,392	61.0%
ACTUAL 2014	7,560,267	7,804,699	1,663	1,348	1,662	1,341	1,719	1,388	51.8%
ACTUAL 2015	7,353,260	7,645,777	1,622	1,364	1,608	1,362	1,677	1,420	52.0%
ACTUAL 2016	7,388,028	7,719,002	1,440	1,376	1,438	1,372	1,507	1,438	58.3%
ACTUAL 2017	7,310,241	7,636,264	1,401	1,372	1,397	1,368	1,466	1,436	59.5%
FRCST 2018	8,034,976	8,410,608	1,565	1,504	1,558	1,500	1,639	1,578	58.6%
FRCST 2019	8,357,519	8,724,860	1,634	1,573	1,627	1,569	1,710	1,649	58.2%
FRCST 2020	8,579,758	8,958,301	1,680	1,619	1,673	1,615	1,754	1,693	58.1%
FRCST 2021	8,792,217	9,180,307	1,721	1,662	1,714	1,658	1,797	1,738	58.3%
FRCST 2022	8,939,820	9,334,541	1,750	1,693	1,743	1,689	1,828	1,772	58.3%
FRCST 2023	9,046,617	9,446,138	1,771	1,717	1,763	1,713	1,849	1,796	58.3%
FRCST 2024	9,115,325	9,517,933	1,785	1,733	1,777	1,729	1,864	1,813	58.1%
FRCST 2025	9,168,161	9,573,142	1,795	1,745	1,787	1,741	1,874	1,826	58.3%
FRCST 2026	9,208,183	9,614,962	1,802	1,756	1,795	1,751	1,882	1,837	58.3%
FRCST 2027	9,242,702	9,651,032	1,812	1,765	1,804	1,761	1,892	1,847	58.2%
FRCST 2028	9,209,588	9,616,431	1,811	1,763	1,803	1,758	1,891	1,844	57.9%
FRCST 2029	9,221,706	9,629,093	1,815	1,782	1,807	1,777	1,895	1,864	58.0%
FRCST 2030	9,288,301	9,698,681	1,830	1,797	1,822	1,792	1,911	1,880	58.0%
FRCST 2031	9,352,012	9,765,254	1,845	1,813	1,837	1,808	1,927	1,896	57.9%
FRCST 2032	9,393,037	9,808,123	1,856	1,823	1,848	1,819	1,938	1,907	57.6%
FRCST 2033	9,393,515	9,808,622	1,860	1,826	1,852	1,822	1,943	1,911	57.6%
FRCST 2034	9,437,275	9,854,348	1,873	1,838	1,865	1,834	1,956	1,923	57.5%
FRCST 2035	9,485,698	9,904,946	1,883	1,848	1,875	1,843	1,966	1,933	57.5%
FRCST 2036	9,532,446	9,953,796	1,893	1,858	1,885	1,853	1,977	1,944	57.3%
FRCST 2037	9,590,532	10,014,492	1,905	1,870	1,897	1,866	1,989	1,957	57.5%
FRCST 2038	9,649,494	10,076,102	1,918	1,883	1,909	1,878	2,002	1,970	57.4%

***** 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				ADJUSTED ANNUAL LOAD FACTOR (AVERAGE)
	Generated	Generated	Winter	Summer	Without Losses (% Chg)		With Losses (% Chg)		
2007 -2012	0.57%	0.37%	-1.86%	1.71%	-1.43%	1.73%	-1.65%	1.51%	55.46%
2012 -2017	0.52%	0.73%	1.85%	-1.47%	1.84%	-1.51%	2.05%	-1.30%	56.21%
2018 -2023	2.40%	2.35%	2.51%	2.68%	2.51%	2.68%	2.44%	2.62%	58.32%
2023 -2028	0.36%	0.36%	0.45%	0.53%	0.45%	0.53%	0.45%	0.53%	58.20%
2028 -2033	0.40%	0.40%	0.54%	0.71%	0.54%	0.71%	0.54%	0.71%	57.83%
2033 -2038	0.54%	0.54%	0.61%	0.61%	0.61%	0.61%	0.61%	0.61%	57.48%
2007 -2017	0.54%	0.55%	-0.02%	0.11%	0.19%	0.10%	0.19%	0.09%	55.94%
2018 -2038	0.92%	0.91%	1.02%	1.13%	1.02%	1.13%	1.01%	1.11%	57.96%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 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 2007	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****
ACTUAL 2010	*****	*****	*****	*****	*****
ACTUAL 2011	*****	*****	*****	*****	*****
ACTUAL 2012	*****	*****	*****	*****	*****
ACTUAL 2013	*****	*****	*****	*****	*****
ACTUAL 2014	*****	*****	*****	*****	*****
ACTUAL 2015	*****	*****	*****	*****	*****
ACTUAL 2016	*****	*****	*****	*****	*****
ACTUAL 2017	*****	*****	*****	*****	*****
FRCST 2018	1,745	1,674	1,836	1,761	52.3%
FRCST 2019	1,822	1,750	1,916	1,840	52.0%
FRCST 2020	1,874	1,801	1,965	1,888	51.9%
FRCST 2021	1,919	1,848	2,013	1,938	52.1%
FRCST 2022	1,952	1,883	2,047	1,975	52.1%
FRCST 2023	1,974	1,909	2,071	2,002	52.1%
FRCST 2024	1,990	1,926	2,087	2,020	51.9%
FRCST 2025	2,001	1,940	2,098	2,034	52.1%
FRCST 2026	2,010	1,951	2,108	2,046	52.1%
FRCST 2027	2,021	1,962	2,119	2,058	52.0%
FRCST 2028	2,019	1,959	2,118	2,055	51.7%
FRCST 2029	2,025	1,982	2,124	2,079	51.7%
FRCST 2030	2,042	1,999	2,142	2,096	51.7%
FRCST 2031	2,059	2,016	2,160	2,114	51.6%
FRCST 2032	2,071	2,027	2,172	2,126	51.4%
FRCST 2033	2,076	2,031	2,177	2,130	51.4%
FRCST 2034	2,089	2,044	2,191	2,143	51.3%
FRCST 2035	2,101	2,054	2,203	2,155	51.3%
FRCST 2036	2,112	2,066	2,215	2,167	51.2%
FRCST 2037	2,126	2,080	2,229	2,181	51.3%
FRCST 2038	2,140	2,094	2,244	2,196	51.3%

***** BASE-SEVERE SCENARIO WITH DSM IMPACTS *****

***** BASE-SEVERE SCENARIO RESULTS *****

TIME PERIOD	<u>Adjusted for Systems HE EXT. COIN. 60 MINUTE DEMAND</u> <u>Without Losses (% Chg)</u>		<u>With Losses (% Chg)</u>		ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)
	WINTER	SUMMER	WINTER	SUMMER	
2007 -2012	*****	*****	*****	*****	*****
2012 -2017	*****	*****	*****	*****	*****
2018 -2023	2.50%	2.66%	2.44%	2.60%	52.07%
2023 -2028	0.45%	0.52%	0.45%	0.52%	51.97%
2028 -2033	0.55%	0.72%	0.55%	0.72%	51.60%
2033 -2038	0.61%	0.61%	0.61%	0.61%	51.30%
2007 -2017	*****	*****	*****	*****	*****
2018 -2038	1.03%	1.13%	1.01%	1.11%	51.73%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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,IL#002 and Special Industrial Loads

Values Adjusted for IN#72,IN#16,IN#92,IL#002 and Special Industrial Loads

Aggregated Member System Data

Aggregated Member System Data

NUMBER OF CONSUMERS

SYSTEM ENERGY SALES TO END CONSUMERS (MWH)

YEAR	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER	TOTAL
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	3,904,138	818,798	1,407,974	31,738	6,162,649
ACTUAL 2010	265,890	12,407	192	1,854	280,343	4,158,334	843,557	1,539,864	33,075	6,574,830
ACTUAL 2011	277,750	13,765	209	2,498	294,222	4,093,233	901,706	1,639,768	40,873	6,675,581
ACTUAL 2012	278,374	13,889	203	2,564	295,030	3,958,457	930,498	1,724,452	46,875	6,660,282
ACTUAL 2013	279,339	14,031	206	2,686	296,262	4,091,997	938,827	1,755,612	40,413	6,826,850
ACTUAL 2014	280,060	14,289	204	2,805	297,358	4,204,581	952,691	1,877,588	41,306	7,076,166
ACTUAL 2015	281,173	14,255	206	2,881	298,515	4,002,897	946,635	1,905,355	37,583	6,892,471
ACTUAL 2016	283,258	13,827	213	2,984	300,282	4,024,894	949,178	1,896,922	39,010	6,910,005
ACTUAL 2017	283,538	14,030	213	4,949	302,730	3,880,889	944,811	1,974,743	56,773	6,857,216
FRCST 2018	285,222	14,161	236	5,100	304,719	4,486,778	907,640	2,094,360	57,921	7,546,699
FRCST 2019	287,082	14,295	240	5,121	306,738	4,765,696	913,659	2,117,501	58,089	7,854,944
FRCST 2020	288,894	14,436	244	5,121	308,695	4,939,591	920,970	2,149,105	57,921	8,067,587
FRCST 2021	290,621	14,577	246	5,121	310,565	5,057,582	928,228	2,227,666	57,921	8,271,396
FRCST 2022	292,473	14,718	246	5,121	312,558	5,142,526	935,438	2,276,755	57,921	8,412,640
FRCST 2023	294,288	14,859	245	5,121	314,513	5,206,314	942,621	2,307,989	57,921	8,514,844
FRCST 2024	295,900	15,007	245	5,121	316,273	5,249,927	951,378	2,323,852	57,921	8,583,077
FRCST 2025	297,387	15,155	245	5,121	317,908	5,282,117	963,537	2,330,146	57,921	8,633,720
FRCST 2026	299,006	15,303	244	5,121	319,674	5,314,318	973,865	2,325,964	57,921	8,672,068
FRCST 2027	300,563	15,451	244	5,121	321,379	5,347,235	985,362	2,314,410	57,921	8,704,928
FRCST 2028	302,276	15,599	244	5,121	323,240	5,380,579	997,978	2,236,163	57,921	8,672,641
FRCST 2029	303,746	15,757	243	5,121	324,867	5,404,432	1,014,757	2,208,824	57,921	8,685,934
FRCST 2030	305,345	15,915	243	5,121	326,624	5,435,614	1,037,555	2,218,614	57,921	8,749,704
FRCST 2031	306,844	16,073	243	5,121	328,281	5,466,252	1,068,123	2,219,504	57,921	8,810,800
FRCST 2032	308,490	16,231	243	5,121	330,085	5,499,801	1,093,230	2,199,036	57,921	8,849,988
FRCST 2033	310,060	16,389	243	5,121	331,813	5,533,233	1,106,766	2,152,097	57,921	8,850,017
FRCST 2034	311,663	16,554	240	5,121	333,578	5,572,048	1,119,898	2,141,926	57,921	8,891,793
FRCST 2035	313,155	16,719	240	5,121	335,235	5,619,432	1,133,157	2,127,522	57,921	8,938,031
FRCST 2036	314,785	16,884	240	5,121	337,030	5,669,869	1,146,554	2,108,147	57,921	8,982,490
FRCST 2037	316,306	17,049	239	5,121	338,715	5,717,812	1,160,087	2,102,163	57,921	9,037,984
FRCST 2038	317,964	17,214	239	5,121	340,538	5,770,281	1,173,763	2,092,373	57,921	9,094,338

***** 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.)
2007 -2012	1.07%	2.55%	13	743	1.18%	-0.65%	1.70%	3.74%	6.48%	0.76%
2012 -2017	0.37%	0.20%	10	2385	0.52%	-0.40%	0.31%	2.75%	3.91%	0.58%
2018 -2023	0.63%	0.97%	9	21	0.63%	3.02%	0.76%	1.96%	0.00%	2.44%
2023 -2028	0.54%	0.98%	-1	0	0.55%	0.66%	1.15%	-0.63%	0.00%	0.37%
2028 -2033	0.51%	0.99%	-1	0	0.52%	0.56%	2.09%	-0.76%	0.00%	0.41%
2033 -2038	0.50%	0.99%	-4	0	0.52%	0.84%	1.18%	-0.56%	0.00%	0.55%
2007 -2017	0.72%	1.37%	23	3128	0.85%	-0.52%	1.00%	3.24%	5.19%	0.67%
2018 -2038	0.54%	0.98%	3	21	0.56%	1.27%	1.29%	0.00%	0.00%	0.94%

1979 :BEGINNING HISTORICAL DATA YEAR ?
 2017 :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 *****

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 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	6,461,167	6,725,605	1,467	1,232	1,465	1,229	1,525	1,292	50.3%
ACTUAL 2010	6,871,372	7,176,383	1,317	1,373	1,306	1,366	1,357	1,431	57.2%
ACTUAL 2011	6,966,893	7,262,533	1,392	1,424	1,377	1,418	1,453	1,478	56.1%
ACTUAL 2012	6,952,576	7,193,293	1,257	1,459	1,254	1,457	1,287	1,537	53.3%
ACTUAL 2013	7,140,826	7,330,458	1,336	1,334	1,336	1,331	1,376	1,385	60.4%
ACTUAL 2014	7,394,078	7,638,510	1,646	1,328	1,645	1,321	1,698	1,369	51.4%
ACTUAL 2015	7,188,749	7,481,266	1,593	1,346	1,579	1,344	1,643	1,412	52.0%
ACTUAL 2016	7,225,503	7,556,477	1,425	1,354	1,423	1,350	1,498	1,412	57.4%
ACTUAL 2017	7,151,565	7,477,588	1,384	1,348	1,380	1,344	1,444	1,416	59.1%
FRCST 2018	7,880,004	8,255,635	1,542	1,482	1,536	1,478	1,617	1,556	58.3%
FRCST 2019	8,202,547	8,569,888	1,612	1,551	1,605	1,547	1,688	1,628	57.9%
FRCST 2020	8,424,786	8,803,329	1,658	1,597	1,651	1,593	1,732	1,671	57.9%
FRCST 2021	8,637,245	9,025,334	1,699	1,640	1,692	1,636	1,775	1,717	58.0%
FRCST 2022	8,784,848	9,179,569	1,728	1,672	1,721	1,667	1,806	1,750	58.0%
FRCST 2023	8,891,645	9,291,165	1,749	1,695	1,741	1,691	1,827	1,774	58.1%
FRCST 2024	8,960,353	9,362,960	1,763	1,711	1,755	1,707	1,842	1,791	57.9%
FRCST 2025	9,013,189	9,418,170	1,772	1,724	1,765	1,719	1,852	1,804	58.1%
FRCST 2026	9,053,211	9,459,990	1,780	1,734	1,773	1,730	1,860	1,815	58.1%
FRCST 2027	9,087,730	9,496,060	1,790	1,744	1,782	1,739	1,870	1,825	58.0%
FRCST 2028	9,054,616	9,461,459	1,789	1,741	1,781	1,737	1,869	1,822	57.6%
FRCST 2029	9,066,733	9,474,121	1,792	1,760	1,785	1,756	1,873	1,842	57.8%
FRCST 2030	9,133,329	9,543,708	1,808	1,775	1,800	1,771	1,888	1,858	57.7%
FRCST 2031	9,197,040	9,610,282	1,823	1,791	1,815	1,786	1,905	1,874	57.6%
FRCST 2032	9,238,065	9,653,151	1,834	1,801	1,826	1,797	1,916	1,885	57.3%
FRCST 2033	9,238,543	9,653,650	1,838	1,804	1,830	1,800	1,921	1,899	57.4%
FRCST 2034	9,282,303	9,699,376	1,851	1,816	1,843	1,812	1,934	1,901	57.3%
FRCST 2035	9,330,725	9,749,974	1,861	1,826	1,853	1,822	1,944	1,911	57.2%
FRCST 2036	9,377,474	9,798,823	1,871	1,836	1,863	1,832	1,954	1,922	57.1%
FRCST 2037	9,435,560	9,859,519	1,883	1,848	1,875	1,844	1,967	1,935	57.2%
FRCST 2038	9,494,521	9,921,130	1,895	1,861	1,887	1,856	1,980	1,948	57.2%

***** 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				ADJUSTED ANNUAL LOAD FACTOR (AVERAGE)
			WINTER	SUMMER	Without Losses (% Chg)		With Losses (% Chg)		
					WINTER	SUMMER	WINTER	SUMMER	
2007 -2012	0.63%	0.42%	-1.48%	1.76%	-1.04%	1.78%	-1.49%	1.93%	54.98%
2012 -2017	0.57%	0.78%	1.94%	-1.57%	1.93%	-1.60%	2.33%	-1.63%	55.60%
2018 -2023	2.45%	2.39%	2.54%	2.72%	2.54%	2.72%	2.48%	2.66%	58.04%
2023 -2028	0.36%	0.36%	0.45%	0.54%	0.45%	0.54%	0.45%	0.54%	57.94%
2028 -2033	0.40%	0.40%	0.55%	0.72%	0.55%	0.72%	0.55%	0.72%	57.57%
2033 -2038	0.55%	0.55%	0.61%	0.62%	0.61%	0.62%	0.61%	0.62%	57.23%
2007 -2017	0.60%	0.60%	0.22%	0.08%	0.44%	0.07%	0.40%	0.14%	55.47%
2018 -2038	0.94%	0.92%	1.04%	1.14%	1.04%	1.14%	1.02%	1.13%	57.70%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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,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 2007	*****	*****	*****	*****	*****
ACTUAL 2008	*****	*****	*****	*****	*****
ACTUAL 2009	*****	*****	*****	*****	*****
ACTUAL 2010	*****	*****	*****	*****	*****
ACTUAL 2011	*****	*****	*****	*****	*****
ACTUAL 2012	*****	*****	*****	*****	*****
ACTUAL 2013	*****	*****	*****	*****	*****
ACTUAL 2014	*****	*****	*****	*****	*****
ACTUAL 2015	*****	*****	*****	*****	*****
ACTUAL 2016	*****	*****	*****	*****	*****
ACTUAL 2017	*****	*****	*****	*****	*****
FRCST 2018	1,723	1,652	1,814	1,739	52.0%
FRCST 2019	1,800	1,728	1,894	1,818	51.7%
FRCST 2020	1,851	1,779	1,943	1,867	51.6%
FRCST 2021	1,897	1,826	1,990	1,916	51.8%
FRCST 2022	1,930	1,861	2,025	1,953	51.8%
FRCST 2023	1,952	1,887	2,049	1,980	51.8%
FRCST 2024	1,967	1,904	2,064	1,998	51.6%
FRCST 2025	1,979	1,918	2,076	2,013	51.8%
FRCST 2026	1,988	1,929	2,086	2,025	51.8%
FRCST 2027	1,999	1,940	2,097	2,036	51.7%
FRCST 2028	1,997	1,938	2,096	2,033	51.4%
FRCST 2029	2,003	1,960	2,102	2,057	51.5%
FRCST 2030	2,020	1,977	2,120	2,074	51.4%
FRCST 2031	2,037	1,994	2,137	2,092	51.3%
FRCST 2032	2,049	2,005	2,150	2,104	51.1%
FRCST 2033	2,054	2,009	2,155	2,109	51.1%
FRCST 2034	2,067	2,022	2,169	2,121	51.0%
FRCST 2035	2,078	2,033	2,181	2,133	51.0%
FRCST 2036	2,090	2,044	2,193	2,145	50.9%
FRCST 2037	2,103	2,058	2,207	2,159	51.0%
FRCST 2038	2,118	2,072	2,222	2,174	51.0%

***** 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	<u>Without Losses (% Chg)</u>		<u>With Losses (% Chg)</u>		ADJUSTED EXT. ANNUAL LOAD FACTOR (AVERAGE)
	WINTER	SUMMER	WINTER	SUMMER	
2007 -2012	*****	*****	*****	*****	*****
2012 -2017	*****	*****	*****	*****	*****
2018 -2023	2.53%	2.70%	2.47%	2.63%	51.75%
2023 -2028	0.46%	0.53%	0.46%	0.53%	51.67%
2028 -2033	0.56%	0.73%	0.56%	0.73%	51.30%
2033 -2038	0.61%	0.62%	0.61%	0.62%	51.01%
2007 -2017	*****	*****	*****	*****	*****
2018 -2038	1.04%	1.14%	1.02%	1.12%	51.43%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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	WINTER	SUMMER	WINTER	SUMMER
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	99.86%	99.76%	100.0%		0	0	100.0%		0	0
ACTUAL 2010	99.16%	99.49%	100.0%		0	0	100.0%		0	0
ACTUAL 2011	98.92%	99.58%	100.0%		0	0	100.0%		0	0
ACTUAL 2012	99.76%	99.86%	100.0%		0	0	100.0%		0	0
ACTUAL 2013	100.00%	99.78%	100.0%		0	0	100.0%		0	0
ACTUAL 2014	99.94%	99.47%	100.0%		0	0	100.0%		0	0
ACTUAL 2015	99.12%	99.85%	100.0%		0	0	100.0%		0	0
ACTUAL 2016	99.86%	99.70%	100.0%		0	0	100.0%		0	0
ACTUAL 2017	99.71%	99.70%	100.0%		0	0	100.0%		0	0
FRCST 2018	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2019	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2020	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2021	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2022	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2023	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2024	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2025	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2026	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2027	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2028	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2029	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2030	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2031	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2032	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2033	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2034	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2035	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2036	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2037	99.56%	99.75%	100.00%		0	0	100.00%		0	0
FRCST 2038	99.56%	99.75%	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)
2007 -2012	99.03%	99.47%
2012 -2017	99.73%	99.73%
2018 -2023	99.56%	99.75%
2023 -2028	99.56%	99.75%
2028 -2033	99.56%	99.75%
2033 -2038	99.56%	99.75%
2007 -2017	99.35%	99.58%
2018 -2038	99.56%	99.75%

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 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
ACTUAL 2010	100.0%	0	0	0.0%	1	1
ACTUAL 2011	100.0%	0	0	100.0%	0	0
ACTUAL 2012	100.0%	0	0	100.0%	0	0
ACTUAL 2013	100.0%	0	0	100.0%	0	0
ACTUAL 2014	100.0%	0	0	100.0%	0	0
ACTUAL 2015	100.0%	0	0	100.0%	0	0
ACTUAL 2016	100.0%	0	0	100.0%	0	0
ACTUAL 2017	100.0%	0	0	100.0%	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
FRCST 2031	100.00%	0	0	100.00%	0	0
FRCST 2032	100.00%	0	0	100.00%	0	0
FRCST 2033	100.00%	0	0	100.00%	0	0
FRCST 2034	100.00%	0	0	100.00%	0	0
FRCST 2035	100.00%	0	0	100.00%	0	0
FRCST 2036	100.00%	0	0	100.00%	0	0
FRCST 2037	100.00%	0	0	100.00%	0	0
FRCST 2038	100.00%	0	0	100.00%	0	0

***** BASE-SEVERE SCENARIO WITH DSM IMPACTS *****

TIME PERIOD

2007 -2012
2012 -2017

2018 -2023
2023 -2028
2028 -2033
2033 -2038

2007 -2017
2018 -2038

1979 :BEGINNING HISTORICAL DATA YEAR ?
2017 :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 2007	0	0.0%	0	0.0%	0.000	0.000	0.000	0.000	
ACTUAL 2008	0	0.0%	0	0.0%	0.000	0.000	0.000	0.000	
ACTUAL 2009	25,159	0.4%	26,189	0.4%	8.978	3.703	9.436	3.892	
ACTUAL 2010	49,468	0.7%	51,663	0.7%	20.610	10.768	21.633	11.302	
ACTUAL 2011	81,677	1.2%	85,143	1.2%	32.274	17.850	33.686	18.630	
ACTUAL 2012	103,470	1.5%	107,053	1.5%	40.343	23.944	41.924	24.882	
ACTUAL 2013	125,031	1.7%	128,352	1.7%	46.802	17.136	48.342	17.700	
ACTUAL 2014	144,763	1.9%	149,549	1.9%	52.425	32.671	54.265	33.817	
ACTUAL 2015	164,860	2.2%	171,568	2.2%	64.045	25.255	66.824	26.351	
ACTUAL 2016	194,538	2.6%	203,449	2.6%	73.355	46.929	76.917	49.208	
ACTUAL 2017	219,951	3.0%	229,978	3.0%	79.051	33.914	83.019	35.616	
FRCST 2018	227,851	2.8%	238,713	2.8%	80.948	50.866	85.208	53.543	
FRCST 2019	239,949	2.8%	250,694	2.8%	81.429	47.024	85.671	49.473	
FRCST 2020	252,997	2.9%	264,365	2.9%	83.203	46.374	87.307	48.661	
FRCST 2021	261,046	2.9%	272,776	2.9%	84.603	45.103	88.776	47.328	
FRCST 2022	273,841	3.0%	286,146	3.0%	87.313	44.994	91.620	47.213	
FRCST 2023	286,236	3.1%	299,098	3.1%	90.573	45.612	95.040	47.861	
FRCST 2024	305,123	3.3%	318,832	3.3%	95.122	47.199	99.813	49.527	
FRCST 2025	319,424	3.4%	333,776	3.4%	99.131	47.918	104.020	50.281	
FRCST 2026	335,509	3.6%	350,584	3.6%	103.209	48.622	108.299	51.020	
FRCST 2027	347,509	3.7%	363,123	3.7%	103.644	48.226	108.755	50.604	
FRCST 2028	357,180	3.8%	373,228	3.8%	102.980	48.182	108.059	50.558	
FRCST 2029	364,445	3.9%	380,820	3.9%	102.777	48.297	107.846	50.679	
FRCST 2030	363,165	3.8%	379,482	3.8%	100.865	46.208	105.840	48.487	
FRCST 2031	353,338	3.7%	369,214	3.7%	96.365	41.087	101.118	43.113	
FRCST 2032	348,818	3.6%	364,491	3.6%	93.665	38.298	98.284	40.187	
FRCST 2033	357,455	3.7%	373,516	3.7%	93.028	38.093	97.616	39.971	
FRCST 2034	366,717	3.8%	383,194	3.8%	92.761	37.970	97.335	39.843	
FRCST 2035	367,494	3.8%	384,006	3.8%	93.623	38.385	98.241	40.278	
FRCST 2036	369,641	3.8%	386,250	3.8%	94.665	38.804	99.334	40.718	
FRCST 2037	375,132	3.8%	391,987	3.8%	96.140	39.243	100.881	41.178	
FRCST 2038	380,610	3.9%	397,711	3.9%	97.619	39.663	102.434	41.620	

***** BASE-SEVERE SCENARIO WITH DSM IMPACTS *****

TIME PERIOD

2007 -2012
2012 -2017

2018 -2023
2023 -2028
2028 -2033
2033 -2038

2007 -2017
2018 -2038

1979 :BEGINNING HISTORICAL DATA YEAR ?
 2017 :FINAL HISTORICAL DATA YEAR ? (15 YEARS REQUIRED, MAX IS 40)
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***** 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 2007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ACTUAL 2008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ACTUAL 2009	8.598	3.080	9.037	3.238	0.380	0.622	0.399	0.654
ACTUAL 2010	17.983	6.820	18.875	7.158	2.628	3.948	2.758	4.144
ACTUAL 2011	27.786	11.209	29.001	11.699	4.488	6.640	4.685	6.931
ACTUAL 2012	34.681	14.358	36.040	14.921	5.662	9.586	5.884	9.962
ACTUAL 2013	40.471	17.136	41.803	17.700	6.331	0.000	6.539	0.000
ACTUAL 2014	45.624	20.484	47.225	21.202	6.801	12.187	7.039	12.615
ACTUAL 2015	56.921	25.255	59.391	26.351	7.124	0.000	7.433	0.000
ACTUAL 2016	65.902	31.565	69.101	33.097	7.454	15.364	7.815	16.110
ACTUAL 2017	71.365	33.914	74.947	35.616	7.686	0.000	8.072	0.000
FRCST 2018	73.124	34.665	76.972	36.490	7.824	16.201	8.236	17.053
FRCST 2019	76.067	35.845	80.030	37.712	5.362	11.179	5.641	11.761
FRCST 2020	79.573	37.288	83.497	39.127	3.630	9.086	3.809	9.535
FRCST 2021	82.220	37.760	86.275	39.622	2.383	7.343	2.501	7.706
FRCST 2022	85.776	38.866	90.006	40.783	1.538	6.128	1.613	6.430
FRCST 2023	89.421	39.896	93.831	41.864	1.152	5.716	1.209	5.998
FRCST 2024	94.164	41.642	98.808	43.696	0.957	5.557	1.005	5.831
FRCST 2025	98.252	42.535	103.098	44.633	0.878	5.383	0.922	5.648
FRCST 2026	102.412	43.339	107.462	45.476	0.798	5.283	0.837	5.544
FRCST 2027	102.762	42.893	107.830	45.009	0.881	5.332	0.925	5.595
FRCST 2028	102.013	42.725	107.044	44.832	0.967	5.457	1.015	5.726
FRCST 2029	101.723	42.738	106.740	44.846	1.054	5.558	1.106	5.832
FRCST 2030	99.836	41.037	104.759	43.061	1.030	5.171	1.081	5.426
FRCST 2031	95.315	36.719	100.016	38.530	1.051	4.367	1.102	4.583
FRCST 2032	92.593	33.988	97.160	35.664	1.072	4.310	1.124	4.523
FRCST 2033	91.935	33.677	96.469	35.338	1.093	4.416	1.147	4.633
FRCST 2034	91.646	33.532	96.166	35.186	1.115	4.439	1.170	4.657
FRCST 2035	92.486	33.887	97.048	35.558	1.137	4.498	1.193	4.720
FRCST 2036	93.505	34.247	98.117	35.936	1.160	4.558	1.217	4.782
FRCST 2037	94.957	34.627	99.640	36.335	1.183	4.615	1.241	4.843
FRCST 2038	96.413	34.992	101.168	36.718	1.207	4.671	1.266	4.902

TIME PERIOD

2007 -2012
 2012 -2017

2018 -2023
 2023 -2028
 2028 -2033
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***** BASE-SEVERE SCENARIO WITH DSM IMPACTS *****

***** BASE-SEVERE SCENARIO WITH DSM IMPACTS *****

Load Control Switches

1 = Load Control on peak 0 = No load control on peak

YEAR	Winter CP	Winter NCP	Summer CP	Summer NCP
ACTUAL 2007	NA	NA	NA	NA
ACTUAL 2008	NA	NA	NA	NA
ACTUAL 2009	1	0	1	0
ACTUAL 2010	1	0	1	0
ACTUAL 2011	1	0	1	0
ACTUAL 2012	1	0	1	0
ACTUAL 2013	1	0	0	0
ACTUAL 2014	1	0	1	0
ACTUAL 2015	1	0	0	0
ACTUAL 2016	1	0	1	0
ACTUAL 2017	1	0	0	0
FRCST 2018	1	0	1	0
FRCST 2019	1	0	1	0
FRCST 2020	1	0	1	0
FRCST 2021	1	0	1	0
FRCST 2022	1	0	1	0
FRCST 2023	1	0	1	0
FRCST 2024	1	0	1	0
FRCST 2025	1	0	1	0
FRCST 2026	1	0	1	0
FRCST 2027	1	0	1	0
FRCST 2028	1	0	1	0
FRCST 2029	1	0	1	0
FRCST 2030	1	0	1	0
FRCST 2031	1	0	1	0
FRCST 2032	1	0	1	0
FRCST 2033	1	0	1	0
FRCST 2034	1	0	1	0
FRCST 2035	1	0	1	0
FRCST 2036	1	0	1	0
FRCST 2037	1	0	1	0
FRCST 2038	1	0	1	0

TIME PERIOD

2007 -2012
2012 -2017

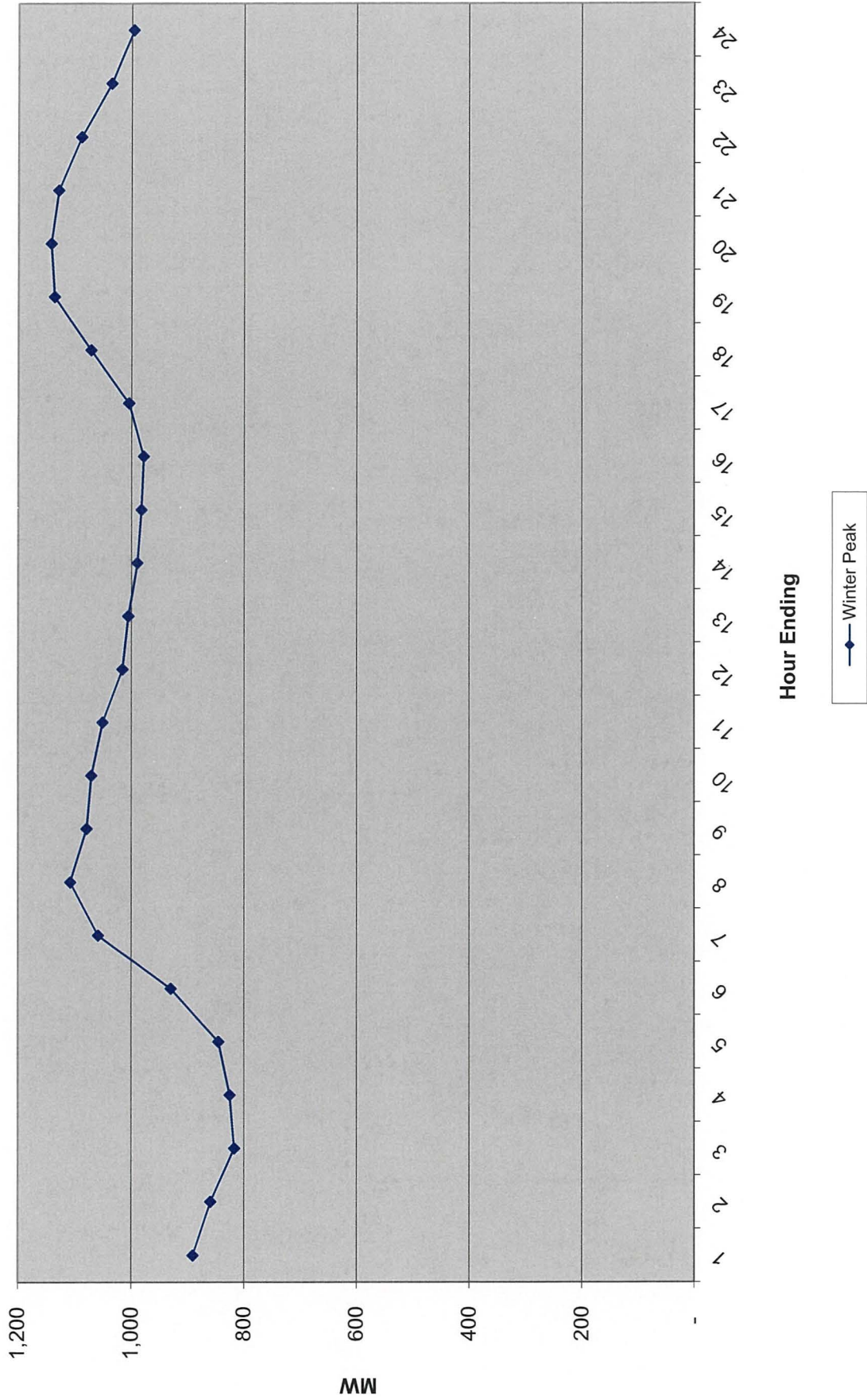
2018 -2023
2023 -2028
2028 -2033
2033 -2038

2007 -2017
2018 -2038

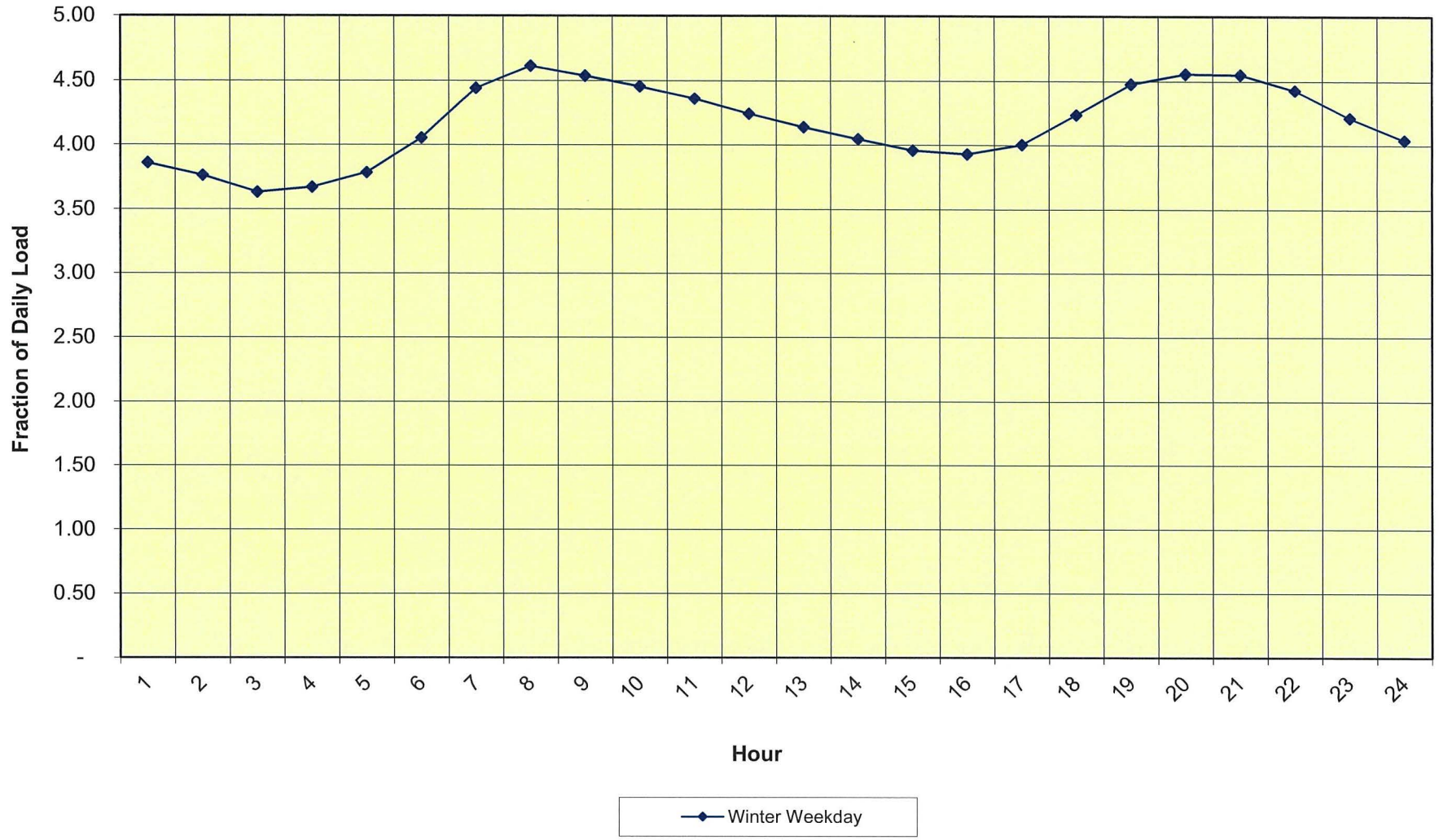
Appendix B

Load Shapes and Historical Load Comparison to Forecast

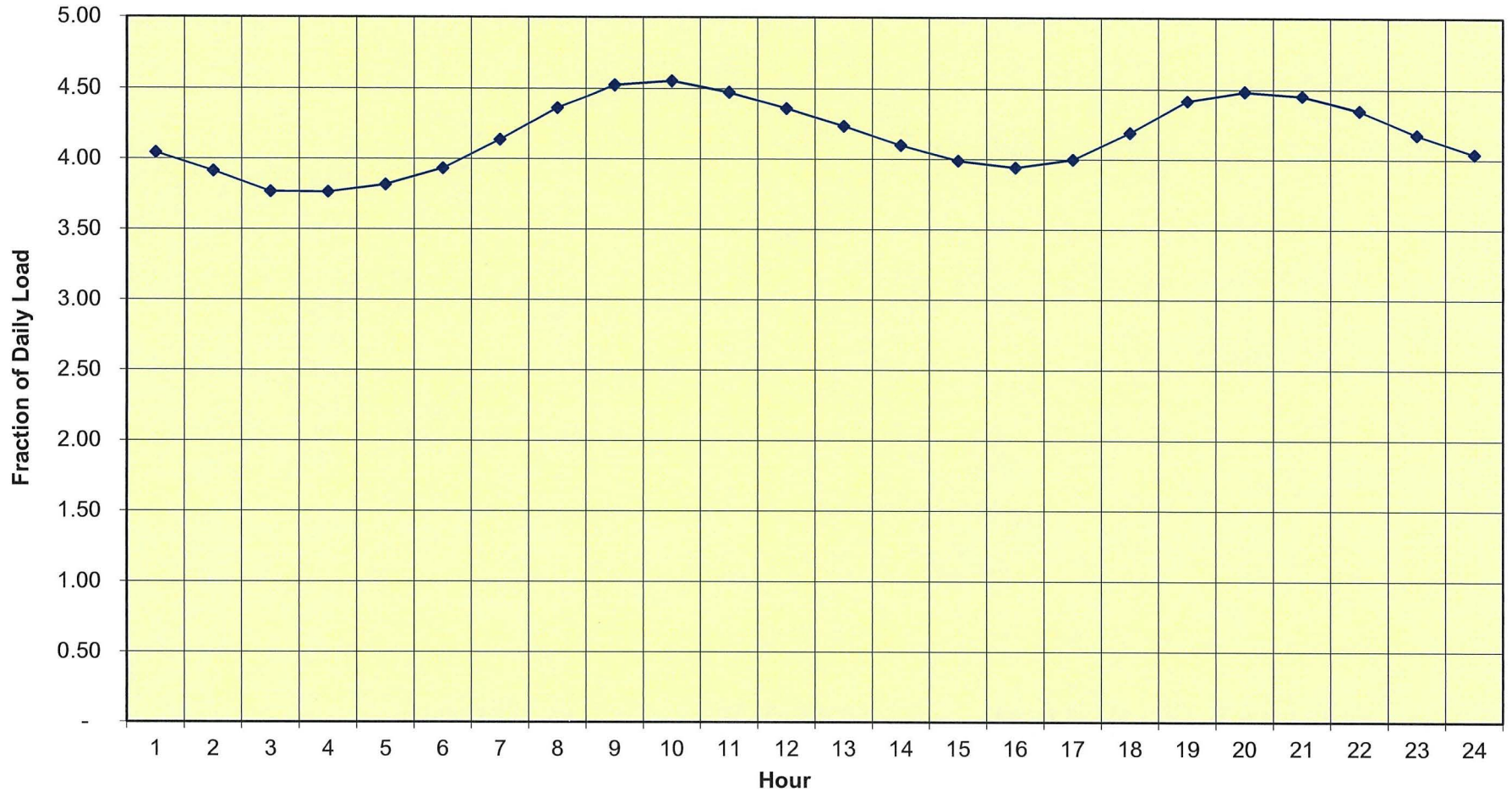
Hourly Load Shape Peak Winter Day 2021



Hourly Load Shape Typical Winter Weekday

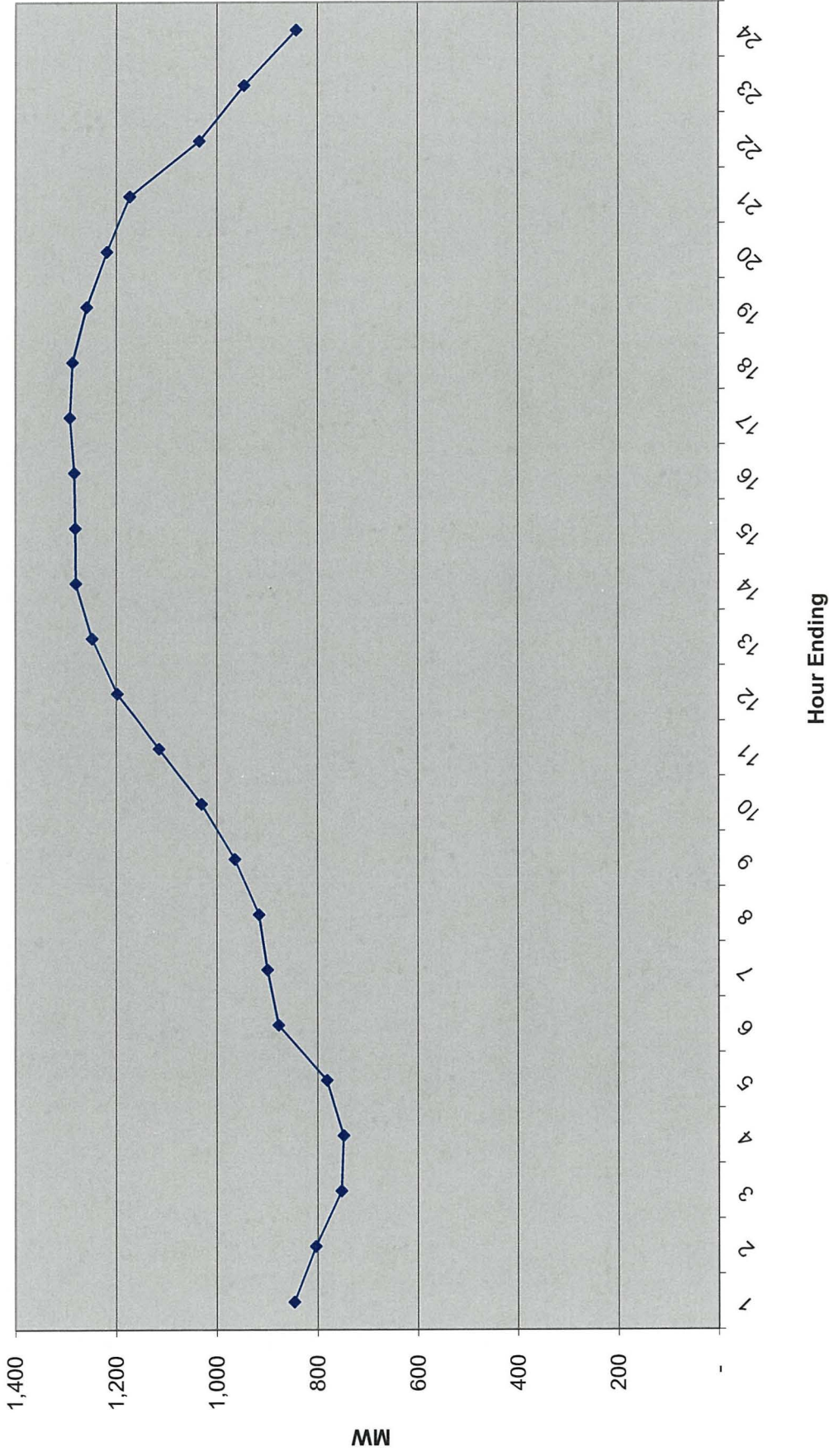


Hourly Load Shape Typical Winter Weekend



—◆— Winter Weekend

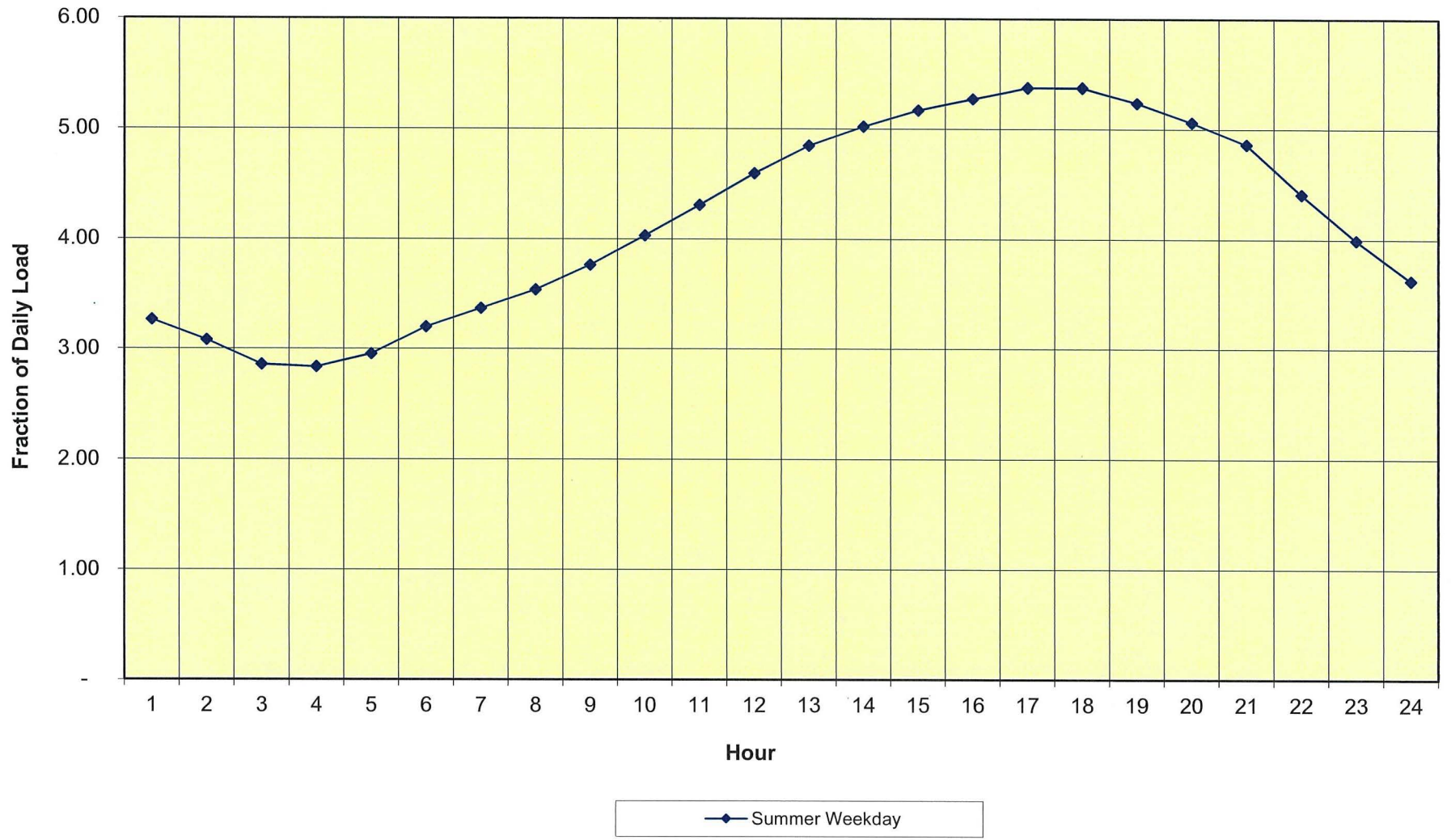
Hourly Load Shape
Peak Summer Day 2021



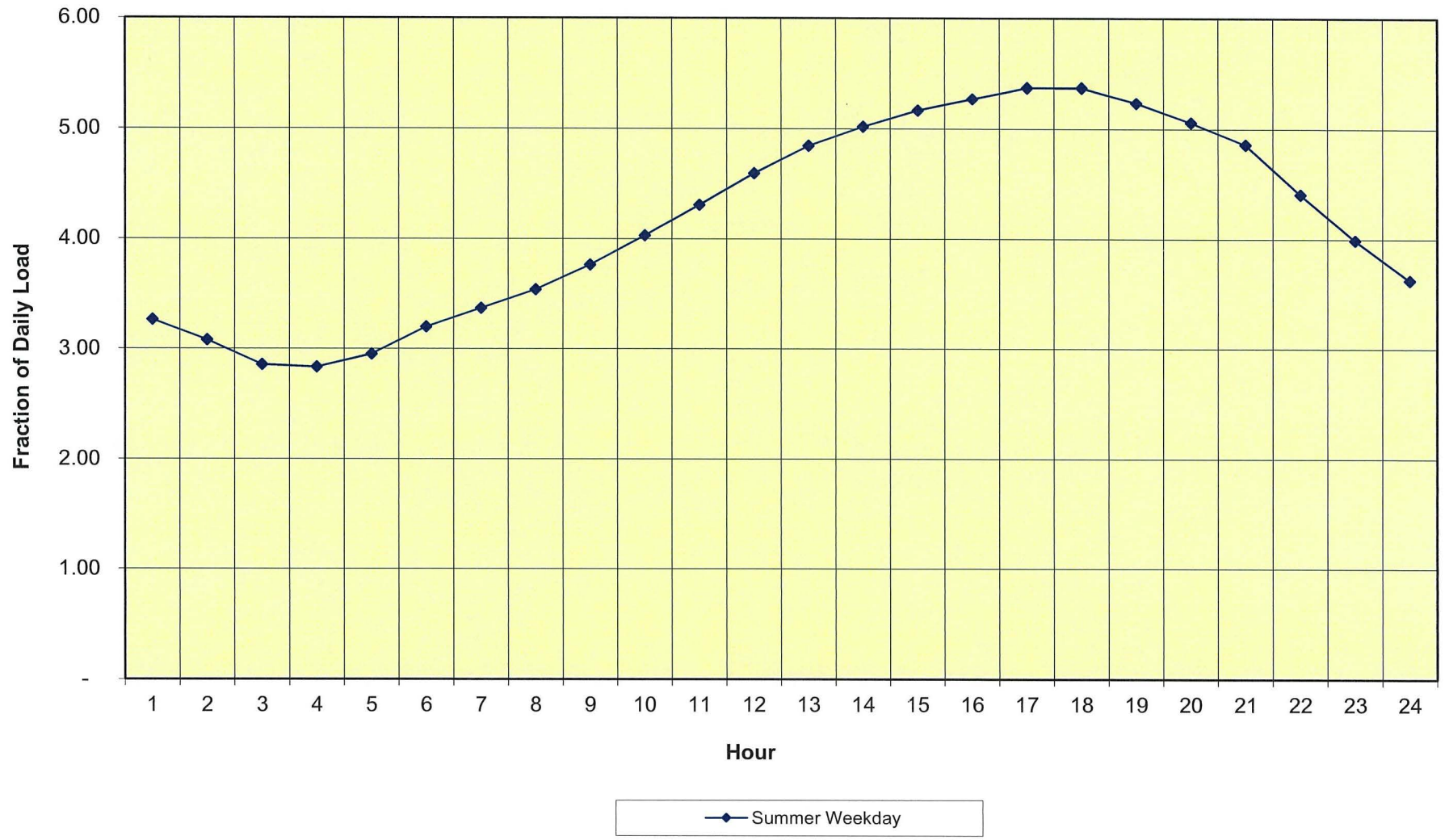
Hour Ending

—◆— Summer Peak

Hourly Load Shape Typical Summer Weekday



Hourly Load Shape
Typical Summer Weekday



Hoosier Energy Rural Electric Cooperative, Inc.
Comparison of Forecasted Summer Peak Demand to Actual (MW)
Calendar Years 2009 - 2018

Year	Actual	Forecasted											
		2007 PRS Forecast	2007 PRS Percentage Variance	2009 PRS Forecast	2009 PRS Percentage Variance	2011 PRS Forecast	2011 PRS Percentage Variance	2013 PRS Forecast	2013 PRS Percentage Variance	2015 PRS Forecast	2015 PRS Percentage Variance	2017 PRS Forecast	2017 PRS Percentage Variance
2009	1,309	1,541	-15.1%	1,392	-6.0%								
2010	1,460	1,594	-8.4%	1,407	3.8%								
2011	1,497	1,655	-9.5%	1,472	1.7%	1,370	9.3%						
2012	1,533	1,689	-9.2%	1,474	4.0%	1,383	10.9%						
2013	1,392	1,725	-19.3%	1,489	-6.5%	1,401	-0.6%	1,424	-2.2%				
2014	1,388	1,750	-20.7%	1,500	-7.5%	1,400	-0.9%	1,463	-5.1%				
2015	1,420	1,782	-20.3%	1,507	-5.8%	1,426	-0.4%	1,488	-4.6%	1,494	-5.0%		
2016	1,412	1,841	-23.3%	1,517	-6.9%	1,428	-1.1%	1,519	-7.0%	1,523	-7.3%		
2017	1,416	1,878	-24.6%	1,526	-7.2%	1,434	-1.3%	1,537	-7.9%	1,547	-8.5%	1,476	-4.1%

Hoosier Energy Rural Electric Cooperative, Inc.
 Comparison of Forecasted Winter Peak Demand to Actual (MW)
 Calendar Years 2009 - 2018

Year	Actual	Forecasted											
		2007 PRS Forecast	2007 PRS Percentage Variance	2009 PRS Forecast	2009 PRS Percentage Variance	2011 PRS Forecast	2011 PRS Percentage Variance	2013 PRS Forecast	2013 PRS Percentage Variance	2015 PRS Forecast	2015 PRS Percentage Variance	2017 PRS Forecast	2017 PRS Percentage Variance
2009	1,546	1,500	3.1%	1,398	10.6%								
2010	1,385	1,551	-10.7%	1,416	-2.2%								
2011	1,454	1,610	-9.7%	1,470	-1.1%	1,404	3.6%						
2012	1,324	1,643	-19.4%	1,477	-10.4%	1,416	-6.5%						
2013	1,404	1,678	-16.3%	1,501	-6.5%	1,431	-1.9%	1,435	-2.1%				
2014	1,719	1,701	1.1%	1,514	13.5%	1,434	19.9%	1,461	17.7%				
2015	1,677	1,732	-3.2%	1,527	9.8%	1,453	15.4%	1,491	12.5%	1,497	12.0%		
2016	1,498	1,788	-16.2%	1,544	-3.0%	1,463	2.4%	1,510	-0.8%	1,527	-1.9%		
2017	1,444	1,823	-20.8%	1,563	-7.6%	1,470	-1.8%	1,540	-6.2%	1,550	-6.8%	1,523	-5.2%

Hoosier Energy Rural Electric Cooperative, Inc.
Comparison of Forecasted Annual Energy Requirements to Actual (MWh)
Calendar Years 2009 - 2018

Forecasted													
Year	Actual	2007 PRS		2009 PRS		2011 PRS		2013 PRS		2015 PRS		2017 PRS	
		Forecast	Percentage Variance	Forecast	Percentage Variance	Forecast	Percentage Variance	Forecast	Percentage Variance	Forecast	Percentage Variance	Forecast	Percentage Variance
2009	6,725,605	7,817,530	-14.0%	6,930,213	-3.0%								
2010	7,176,383	8,083,978	-11.2%	7,040,762	1.9%								
2011	7,262,533	8,386,054	-13.4%	7,416,679	-2.1%	7,168,523	1.3%						
2012	7,193,293	8,542,823	-15.8%	7,472,510	-3.7%	7,300,091	-1.5%						
2013	7,330,458	8,713,270	-15.9%	7,626,664	-3.9%	7,469,626	-1.9%	7,279,170	0.7%				
2014	7,638,510	8,816,771	-13.4%	7,709,242	-0.9%	7,598,639	0.5%	7,446,491	2.6%				
2015	7,481,266	8,966,319	-16.6%	7,789,016	-4.0%	7,772,992	-3.8%	7,627,087	-1.9%	7,717,083	-3.1%		
2016	7,556,477	9,253,858	-18.3%	7,884,418	-4.2%	7,917,602	-4.6%	7,779,249	-2.9%	7,877,956	-4.1%		
2017	7,477,588	9,249,938	-19.2%	7,985,798	-6.4%	7,994,602	-6.5%	7,938,784	-5.8%	8,011,749	-6.7%	7,866,175	-4.9%

Appendix C

Supply-Side Resource Modeling Assumptions

Redacted

Appendix D

Market, Fuel and Emission Price Assumptions

Redacted

Appendix E

Integrated Resource Plan Modeling Results

Redacted

Appendix F

2019 Demand Side Management Annual Report



DSM

HOOSIER ENERGY
Demand Side Management
2019 Annual Report



2019 Demand Side Management (DSM) OVERVIEW

Demand Side Management (DSM) has offered energy-efficiency and demand-response programs by member systems and Hoosier Energy since 2009. These programs equip consumers with tools to manage electric usage and bills, while facilitating distribution cooperatives to reduce wholesale power costs. Programs also provide Hoosier Energy with an economical long-term alternative to manage demand and avoid adding generating capacity.

Program incentives offset the cost of purchasing and installing high-efficiency equipment and encourage member-consumers to voluntarily pursue energy savings and efficiency. Several different programs are available: Residential Lighting, Commercial & Industrial (C&I), Energy Management Savings Switch, Energy Efficiency Kits, Residential HVAC, Appliance Recycling and LED Security Lighting.

A FEW OF THE HIGHLIGHTS FROM THE DSM PROGRAM IN 2019 INCLUDE:

The Residential Lighting Program accounted for nearly 90% of 2019 applications. Cooperatives secured more than 9,000 LEDs for distribution, and member-consumers purchased an additional 16,000 bulbs through the lighting store. Cooperatives also distributed almost 10,000 energy efficiency kits to member-consumers.

Through the C&I Program, Hoosier Energy assisted member systems in providing incentives for 90 projects. Power reductions resulted in energy savings over 16,000 MWh and a 15.23 MW reduction in winter peak demand.

High-efficiency heat pumps replacing electric resistance heat accounted for approximately 21% of rebated installations. Member cooperatives paid nearly \$1.4 million in incentives in 2019 to help member-consumers utilize more than 1,300 energy-efficient HVAC equipment in their homes.

Three cooperatives installed 173 switches for the Residential Energy Management Savings Switch Program. Seven load control sessions were conducted for 2018-2019 winter months and eight sessions during 2019 summer months. Each air conditioning unit switch is estimated to provide nearly 1kW in summer demand reduction. Each water heater switch is estimated to reduce demand by 0.6 kW in winter months and 0.8 kW in summer months.

As part of the Appliance Recycling Program, member-consumers recycled more than 1,200 freezers and refrigerators and received a \$50 incentive for each appliance recycled.

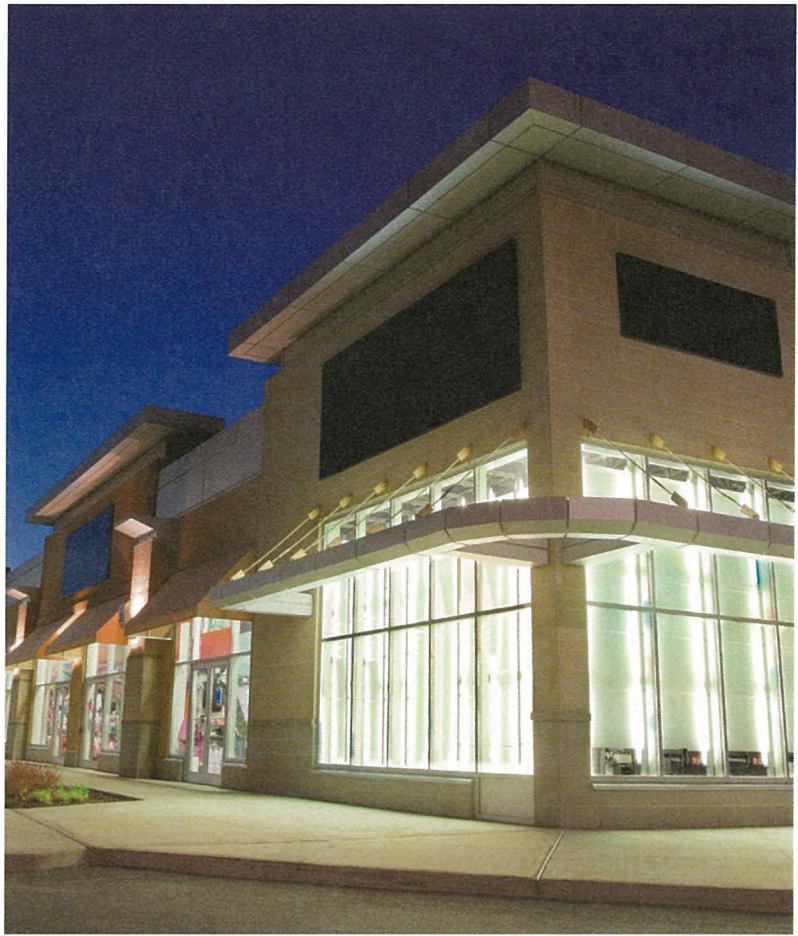
In an effort to consistently evaluate and ensure that services align with the needs of member systems and their member-consumers, an intensive analysis of the Marketing Department's services and programs will take place in 2020.

2019 DSM PROGRAM SUMMARY

Program	Total Units Collected	Annual MWh Savings	Winter Demand Savings	Summer Demand Savings
Appliance Recycling	1,206	1,234	0.13	0.18
Commercial & Industrial	90	6,046	3.20	3.22
LED Security Lighting	4,633	2,432	0.56	0.19
Residential HVAC	1,656	4,092	3.26	0.96
Residential Lighting	25,341	755	0.72	0.71
Energy Management Switch	173	0	0.06	0.08
Energy Efficiency Kits	9,850	1,615	0.19	0.18
TOTAL	42,949	26,307	20.22	17.62

Commercial and Industrial Program

Saving energy and reducing costs can make a big difference for businesses of all sizes, from large industrial consumers to small commercial operations. Commercial and Industrial (C&I) Program incentives are designed to assist businesses in reducing electric demand in their facilities by purchasing and installing energy-efficient equipment, including lighting, HVAC systems, motors and compressed air systems. The program offers an annual maximum incentive of \$50,000 per member-consumer to help pay for upgrades that enhance efficiency.



2019 COMMERCIAL AND INDUSTRIAL PROGRAMS

Cooperative	Total Applications Paid	Annual MWh Savings	Winter Demand MW	Summer Demand MW
Bartholomew County REMC	6	281	0.05	0.05
Clark County REMC	9	210	0.03	0.04
Daviess-Martin County REMC	3	22	0.01	0.01
Decatur County REMC	5	138	0.07	0.07
Dubois REC	8	396	0.11	0.11
Harrison REMC	11	48	0.01	0.01
Henry County REMC	1	21	0.01	0.01
Jackson County REMC	7	129	0.03	0.03
Johnson County REMC	7	732	0.24	0.24
Orange County REMC	1	151	0.12	0.12
RushShelby Energy REMC	3	328	0.06	0.06
South Central Indiana REMC	3	21	0.01	0.01
Southeastern Indiana REMC	3	50	0.02	0.02
Southern Indiana Power	8	2,089	2.06	2.06
Utilities District of Western Indiana REMC	2	-2	0.00	0.00
Wayne-White Counties Electric Cooperative	2	20	0.01	0.01
Whitewater Valley REMC	3	25	0.01	0.01
WIN Energy REMC	8	1,387	0.35	0.36
Total	90	16,179	15.31	15.33



Lighting Programs

The Residential Lighting Program encourages member-consumers to replace existing lighting with high-efficiency light-emitting diodes (LEDs). Hoosier Energy provides each member cooperative an annual allotment of 500 bulbs to distribute at no cost to member-consumers. The Residential Online Lighting Store includes educational resources to help consumers better understand their lighting needs and an expanded selection of LED bulbs was added to better meet homeowner preferences.

Farmers and small business owners can also benefit from a similar program to reduce demand. The Agricultural and Small Business Online Lighting Store offers discounts on energy-efficient agriculture-specific lighting, as well as other lamps, with additional bulk discounts. Eligible businesses must use less than 200,000 kWh annually and 100 kW demand. In addition, 30% to 50% of their electric cost must be for lighting.

2019 RESIDENTIAL LIGHTING PROGRAM

Cooperative	Total Units	Annual MWh Savings	Winter Demand Savings	Summer Demand Savings
Bartholomew County REMC	858	16	0.02	0.02
Clark County REMC	2,821	83	0.09	0.09
Daviess-Martin County REMC	953	25	0.03	0.03
Decatur County REMC	2,144	51	0.06	0.06
Dubois REC	3,738	103	0.11	0.11
Harrison REMC	1,907	52	0.06	0.06
Henry County REMC	480	13	0.01	0.01
Jackson County REMC	1,407	39	0.04	0.04
Johnson County REMC	1,685	138	0.05	0.03
Orange County REMC	1,295	19	0.02	0.02
RushShelby Energy REMC	812	22	0.02	0.02
South Central Indiana REMC	1,612	43	0.05	0.05
Southeastern Indiana REMC	1,387	38	0.04	0.04
Southern Indiana Power	1,254	33	0.04	0.04
Utilities District of Western Indiana REMC	489	13	0.01	0.01
Wayne-White Counties Electric Cooperative	1,482	41	0.04	0.04
Whitewater Valley REMC	560	13	0.01	0.01
WIN Energy REMC	457	12	0.01	0.01
Total	25,341	755	0.72	0.71

LED Security Lighting Program

Outdoor security lights offer enhanced lighting to improve visibility and safety at member-consumer homes and properties, as well as on public streets and neighborhoods. Traditional mercury vapor and high-pressure sodium lighting consume high amounts of energy and have an expected life of about six to 10 years. By installing high-efficiency, long-lasting LED security lighting with dusk-to-dawn sensors, cooperatives can improve lighting output, reduce maintenance costs, and reduce energy use by as much as 70% per fixture. The LED Security Lighting Program offers member co-ops an incentive of \$50 per light to offset replacement costs.

2019 SECURITY LIGHTING PROGRAM

Cooperative	Total Measures Installed	Annual MWh Savings	Winter Demand Savings	Summer Demand Savings
Bartholomew County REMC	122	64	0.01	0.00
Clark County REMC	421	221	0.05	0.02
Daviess-Martin County REMC	15	8	0.00	0.00
Decatur County REMC	112	59	0.01	0.00
Dubois REC	404	212	0.05	0.02
Harrison REMC	290	152	0.03	0.01
Henry County REMC	47	25	0.01	0.00
Jackson County REMC	500	263	0.06	0.02
Johnson County REMC	241	127	0.03	0.01
Orange County REMC	153	80	0.02	0.01
RushShelby Energy REMC	136	71	0.02	0.01
South Central Indiana REMC	308	162	0.04	0.01
Southeastern Indiana REMC	501	263	0.06	0.02
Southern Indiana Power	-	0	-	-
Utilities District of Western Indiana REMC	182	96	0.02	0.01
Wayne-White Counties Electric Cooperative	356	187	0.04	0.01
Whitewater Valley REMC	375	197	0.05	0.02
WIN Energy REMC	470	247	0.06	0.02
Total	4,633	2,432	0.56	0.19

Energy Efficiency Kits Program

Hoosier Energy provides each member cooperative with an annual allotment of up to 1,000 energy efficiency kits to distribute at no cost to member-consumers. Kits contain LED bulbs, foam outlet and wall plate gaskets, an LED nightlight and other self-install energy saving items. Printed materials are included in the kit to help member-consumers navigate the online lighting store to order additional items.

2019 ENERGY EFFICIENCY KITS

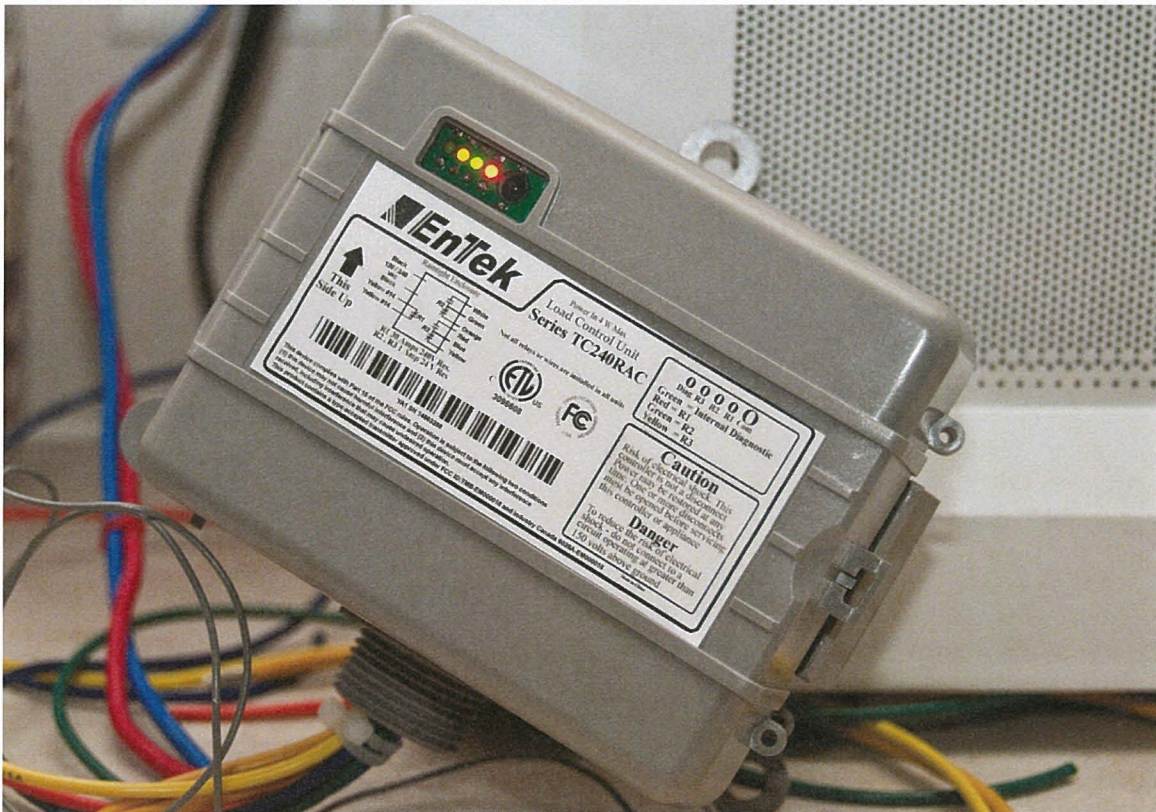
Cooperative	Total Kits	Annual MWh Savings	Winter Demand Savings	Summer Demand Savings
Bartholomew County REMC	500	82	0.01	0.01
Clark County REMC	1,000	164	0.02	0.02
Daviess-Martin County REMC	500	82	0.01	0.01
Decatur County REMC	500	82	0.01	0.01
Dubois REC	0	0	0.00	0.00
Harrison REMC	1,000	164	0.02	0.02
Henry County REMC	500	82	0.01	0.01
Jackson County REMC	1,000	164	0.02	0.02
Johnson County REMC	1,000	164	0.02	0.02
Orange County REMC	500	82	0.01	0.01
RushShelby Energy REMC	500	82	0.01	0.01
South Central Indiana REMC	1,000	164	0.02	0.02
Southeastern Indiana REMC	1,000	164	0.02	0.02
Southern Indiana Power	0	0	0.00	0.00
Utilities District of Western Indiana REMC	50	8	0.00	0.00
Wayne-White Counties Electric Cooperative	500	82	0.01	0.01
Whitewater Valley REMC	300	49	0.01	0.01
WIN Energy REMC	0	0	0.00	0.00
Total	9,850	1,615	0.19	0.18

Energy Management Savings Switch Program

The Energy Management Savings Switch Program provides an opportunity for residential member-consumers to contribute to stable rates through voluntary energy conservation. Reducing consumption during high-use times helps manage short-term costs by reducing power purchases in wholesale markets and long-term costs by reducing the need for new generating capacity. Participants receive incentives or bill credits for installing energy management switches on heating, cooling and water heating units. As part of this program, member-consumers allow the cooperative to control units during periods of high system-wide demand in response to load control signals from Hoosier Energy. Control sessions are conducted during peak hours in three summer months (June through August) and three winter months (December through February).

2019 ENERGY MANAGEMENT SAVINGS SWITCH PROGRAM

Cooperative	Total Devices Controlled	Annual MWh Savings	Winter Demand Savings	Summer Demand Savings
Bartholomew County REMC	-	-	0.00	0.00
Clark County REMC	-	-	0.00	0.00
Daviess-Martin County REMC	-	-	0.00	0.00
Decatur County REMC	-	-	0.00	0.00
Dubois REC	36	0	0.02	0.04
Harrison REMC	-	-	0.00	0.00
Henry County REMC	-	-	0.00	0.00
Jackson County REMC	-	-	0.00	0.00
Johnson County REMC	-	-	0.00	0.00
Orange County REMC	-	-	0.00	0.00
RushShelby Energy REMC	-	-	0.00	0.00
South Central Indiana REMC	-	-	0.00	0.00
Southeastern Indiana REMC	112	0	0.04	0.02
Southern Indiana Power	25	0	0.00	0.02
Utilities District of Western Indiana REMC	-	-	0.00	0.00
Wayne-White Counties Electric Cooperative	-	-	0.00	0.00
Whitewater Valley REMC	-	-	0.00	0.00
WIN Energy REMC	-	-	0.00	0.00
Total	173	0.00	0.06	0.08



Residential HVAC Rebates

Residential heating and cooling expenses account for 55 to 60 percent of member-consumer energy costs. To address these costs, the Residential Heating, Ventilation and Air Conditioning (HVAC) program offers incentives for homeowners to upgrade to more efficient electric systems. This program encourages selection of units that increase the efficiency of electric heating, cooling and water heating, such as heat-pump systems. Heat pumps work by transferring heat, rather than creating heat, and are highly efficient replacements for standard central air conditioners and whole-house HVAC systems. Member cooperatives pay incentives to homeowners once equipment is installed.

2019 RESIDENTIAL HVAC PROGRAM

Cooperative	Total Measures Installed	Annual MWh Savings	Winter Demand Savings	Summer Demand Savings
Bartholomew County REMC	77	195	0.13	0.03
Clark County REMC	193	306	0.13	0.31
Daviess-Martin County REMC	37	142	0.11	0.02
Decatur County REMC	67	209	0.24	0.03
Dubois REC	54	134	0.16	0.03
Harrison REMC	199	242	0.19	0.08
Henry County REMC	37	117	0.09	0.02
Jackson County REMC	191	522	0.39	0.07
Johnson County REMC	55	113	0.09	0.02
Orange County REMC	31	90	0.06	0.01
RushShelby Energy REMC	59	151	0.15	0.03
South Central Indiana REMC	223	616	0.55	0.11
Southeastern Indiana REMC	157	402	0.39	0.07
Southern Indiana Power	40	98	0.07	0.02
Utilities District of Western Indiana REMC	71	192	0.15	0.03
Wayne-White Counties Electric Cooperative	66	74	0.09	0.02
Whitewater Valley REMC	32	56	0.04	0.01
WIN Energy REMC	67	432	0.23	0.05
Total	1,656	4,092	3.26	0.96

Appliance Recycling Program

When member-consumers replace or retire old inefficient refrigerators and freezers, they end up with big savings on their energy bills and substantial reductions in energy consumption. As part of the Appliance Recycling Program, member-consumers receive a \$50 incentive for each appliance they recycle. Habitat for Humanity chapters providing collection services receive a stipend for each appliance collected, which is then funneled into home building programs for local families. Appliances are then salvaged and recyclable materials, such as glass, plastic and bulk iron are kept out of landfills.

2019 APPLIANCE RECYCLING PROGRAM

Cooperative	Total Units Collected	Annual MWh Savings	Winter Demand Savings	Summer Demand Savings
Bartholomew County REMC	38	40	0.00	0.01
Clark County REMC	146	149	0.02	0.02
Daviess-Martin County REMC	43	43	0.00	0.01
Decatur County REMC	21	21	0.00	0.00
Dubois REC	143	145	0.02	0.02
Harrison REMC	167	171	0.02	0.02
Henry County REMC	57	58	0.01	0.01
Jackson County REMC	95	97	0.01	0.01
Johnson County REMC	-	0	-	-
Orange County REMC	8	8	0.00	0.00
RushShelby Energy REMC	53	54	0.01	0.01
South Central Indiana REMC	105	106	0.01	0.02
Southeastern Indiana REMC	135	138	0.01	0.02
Southern Indiana Power	70	72	0.01	0.01
Utilities District of Western Indiana REMC	56	57	0.01	0.01
Wayne-White Counties Electric Cooperative	-	0	-	-
Whitewater Valley REMC	45	49	0.01	0.01
WIN Energy REMC	24	25	0.00	0.00
Total	1,206	1,234	0.13	0.18

Analysis of Measures Installed: 2009-2019

The average lifetime cost of energy conserved to date through DSM measures is just over \$0.02 per kWh, well below the cost to provide power from traditional resources.*

DSM programs are evaluated using a Total Resource Cost (TRC) test that compares avoided energy and capacity savings to the costs of the efficiency measure or program including cost borne by consumers.

Benefits detailed in the TRC test include avoided supply costs such as reductions in capital and O&M costs for generation, transmission and distribution facilities and operations.

A TRC ratio higher than 1.0 indicates program benefits exceed program costs. For all programs to date, lifetime economic benefits outweighed costs by a ratio of 1.94 to 1.**

This ratio suggests that \$1.94 in long-term benefits were obtained for each \$1 invested in efficiency programs.

* Formula for cost per kWh is (Hoosier Energy Cost + Participant Cost) / (Estimated Lifetime MWh Savings * 1000)
Example: (\$40,601,319 + \$49,936,909) / (4,238,895 x 1000) = \$0.0214

** Formula for TRC is Lifetime Economic Benefit / Hoosier Energy Cost + Participant Cost
Example: \$190,763,021 / (\$40,601,319 + \$49,936,909) = \$2.11 or TRC ratio 2.11 to 1

ESTIMATED BENEFITS AND COSTS FOR ALL MEASURES INSTALLED: 2009–2019¹

Program	Total Measures Installed to Date	Cumulative MWh Savings	Estimated Lifetime MWh Savings	Cumulative Winter Peak MW Savings	Cumulative Summer Peak MW Savings
Appliance Recycling	11,797	11,818	90,708	4.07	4.80
Commercial & Industrial	1,143	132,878	1,882,586	22.48	21.68
LED Security Lighting	30,601	19,401	350,335	1.50	0.44
Residential HVAC	36,234	57,434	843,259	47.72	14.02
Residential Lighting	1,897,314	57,378	593,783	14.65	6.41
Energy Management Switch	16,858	0	0	7.65	12.17
Other Savings ²	65,058	17,998	174,153	4.21	2.19
Weatherization ³	4,061	19,285	479,329	3.28	4.81
Touchstone Energy Home*	576	2,824	65,472	0.57	0.55
Total	2,063,642	329,149	4,631,621.19	118.24	73.81

*Homes registered prior to program close, completed in 2018

Program	Hoosier Energy Costs	Participant Costs	Lifetime Economic Benefits	Cost/kWh	Total Resource Cost (TRC)
Appliance Recycling	\$1,310,926.00	\$0.00	\$2,600,443.00	0.01	1.98
Commercial & Industrial	\$5,326,664.04	\$27,101,822.00	\$98,609,248.00	0.02	3.04
LED Security Lighting	\$2,355,853.00	\$3,489,974.00	\$15,358,601.00	0.02	2.63
Residential HVAC	\$11,936,559.00	\$22,590,888.00	\$30,885,666.00	0.04	0.89
Residential Lighting	\$6,817,239.13	\$7,139,156.50	\$28,381,569.00	0.02	2.03
Energy Management Switch	\$2,960,790.00	\$0.00	\$5,961,239.00	0.00	2.01
Other Savings (Energy Efficiency Kits)	\$2,809,370.91	\$315,183.00	\$4,021,414.00	0.02	1.29
Weatherization	\$9,078,275.00	\$0.00	\$15,084,780.00	0.02	1.66
Touchstone Energy Home	\$599,356.00	\$940,782.00	\$1,972,585.00	0.02	1.28
Total	\$43,195,033.08	\$61,577,805.50	\$202,875,545.00	0.17	1.94

¹Appendix B measures are shown at generation levels. A 9% transmission and distribution loss is factored into estimates.

²Other Savings include Deferred Weatherization Program benefits and Energy Efficiency Kits.

³Weatherization program includes 1,393 homes on member systems weatherized through the American Recovery and Reinvestment Act Program 2009-2011.

COMMERCIAL & INDUSTRIAL ENERGY EFFICIENCY PROGRAM: 2009–2019

Cooperative	Total Applications Paid	Cumulative MWh Savings	Estimated Lifetime MWh Savings	Cumulative Winter Peak MW Savings	Cumulative Summer Peak MW Savings
Bartholomew County REMC	79	18,419	324,568	3.36	3.28
Clark County REMC	75	5,373	78,565	1.03	0.96
Daviess–Martin County REMC	45	3,293	35,726	0.66	0.66
Decatur County REMC	49	4,514	61,971	0.75	0.73
Dubois REC	103	7,644	83,270	1.10	1.01
Harrison REMC	69	6,224	90,561	0.99	0.95
Henry County REMC	28	1,470	19,867	0.35	0.30
Jackson County REMC	119	2,653	37,120	0.51	0.56
Johnson County REMC	88	9,541	132,892	1.74	1.64
Orange County REMC	20	1,306	18,642	0.31	0.32
RushShelby Energy REMC	40	9,585	134,556	1.12	1.08
South Central Indiana REMC	86	3,599	50,338	0.54	0.50
Southeastern Indiana REMC	45	5,756	54,679	0.87	0.83
Southern Indiana Power	76	13,130	189,162	3.48	3.44
Utilities District of Western Indiana REMC	70	22,585	333,489	2.96	2.74
Wayne–White Counties Electric Cooperative	25	2,510	24,012	0.56	0.54
Whitewater Valley REMC	35	2,062	31,285	0.29	0.29
WIN Energy REMC	92	13,214	181,884	1.86	1.85
Total	1,144	143,011	2,034,582	34.59	33.79

Measures for the C&I Energy Efficiency Program are listed in terms of rebate applications paid.

RESIDENTIAL LIGHTING PROGRAM: 2009–2019

Cooperative	Total Units	Cumulative MWh Savings	Estimated Lifetime MWh Savings	Cumulative Winter Peak MW Savings	Cumulative Summer Peak MW Savings
Bartholomew County REMC	118,578	3,904	35,591	0.93	0.42
Clark County REMC	342,909	10,154	105,051	2.69	1.11
Daviess–Martin County REMC	110,346	1,813	33,588	0.52	0.22
Decatur County REMC	47,715	1,116	14,154	0.34	0.17
Dubois REC	139,884	4,349	47,295	1.13	0.55
Harrison REMC	135,371	5,262	44,498	1.15	0.50
Henry County REMC	64,898	1,729	19,140	0.43	0.18
Jackson County REMC	113,657	3,514	34,934	0.97	0.39
Johnson County REMC	95,233	3,096	30,152	0.75	0.33
Orange County REMC	72,217	2,360	21,941	0.62	0.26
RushShelby Energy REMC	64,482	1,660	20,455	0.46	0.04
South Central Indiana REMC	66,864	1,899	22,089	0.09	0.07
Southeastern Indiana REMC	110,243	3,170	33,881	0.85	0.35
Southern Indiana Power	13,083	3,446	37,289	0.84	0.40
Utilities District of Western Indiana REMC	14,812	4,012	34,841	0.99	0.42
Wayne–White Counties Electric Cooperative	75,189	2,670	25,575	0.67	0.28
Whitewater Valley REMC	77,578	2,103	23,120	0.51	0.22
WIN Energy REMC	31,602	1,120	10,463	0.25	0.13
Total	1,694,661	57,378	594,056	14.21	6.05

LED SECURITY LIGHTING PROGRAM: 2009–2019

Cooperative	Total Measures Installed	Cumulative MWh Savings	Estimated Lifetime MWh Savings	Cumulative Winter Peak MW Savings	Cumulative Summer Peak MW Savings
Bartholomew County REMC	629	395	8,513	0.03	0.01
Clark County REMC	1,204	782	18,644	0.08	0.03
Daviess–Martin County REMC	55	29	899	0.00	0.00
Decatur County REMC	997	696	10,767	0.04	0.01
Dubois REC	1,425	931	17,335	0.09	0.03
Harrison REMC	2,495	1,573	27,623	0.12	0.03
Henry County REMC	2,087	1,360	24,771	0.08	0.02
Jackson County REMC	2,935	1,805	32,377	0.15	0.04
Johnson County REMC	2,473	1,562	28,992	0.11	0.03
Orange County REMC	779	470	8,783	0.04	0.01
RushShelby Energy REMC	875	553	9,936	0.05	0.02
South Central Indiana REMC	1,356	766	15,405	0.06	0.02
Southeastern Indiana REMC	3,569	2,188	36,508	0.16	0.04
Southern Indiana Power	1,464	1,031	15,715	0.07	0.02
Utilities District of Western Indiana REMC	1,429	905	15,225	0.06	0.02
Wayne–White Counties Electric Cooperative	2,190	1,399	24,015	0.10	0.03
Whitewater Valley REMC	2,116	1,374	22,404	0.11	0.04
WIN Energy REMC	2,523	1,584	32,423	0.15	0.04
Total	30,601	19,401	350,335	1.50	0.44

OTHER SAVINGS: 2009–2019

Cooperative	Total Kits	Cumulative MWh Savings	Estimated Lifetime MWh Savings	Cumulative Winter Peak MW Savings	Cumulative Summer Peak MW Savings
Bartholomew County REMC	2,921	939	8,670	0.19	0.09
Clark County REMC	4,986	1,131	12,115	0.21	0.09
Daviess–Martin County REMC	2,637	620	6,939	0.11	0.05
Decatur County REMC	1,939	539	4,627	0.11	0.05
Dubois REC	1,447	462	4,010	0.10	0.04
Harrison REMC	5,511	1,821	14,452	0.47	0.26
Henry County REMC	3,011	1,003	9,115	0.21	0.09
Jackson County REMC	4,800	1,133	13,363	0.19	0.08
Johnson County REMC	5,800	1,731	16,315	0.35	0.16
Orange County REMC	2,931	952	8,759	0.19	0.09
RushShelby Energy REMC	2,718	755	7,253	0.15	0.07
South Central Indiana REMC	7,563	1,625	15,573	0.90	0.69
Southeastern Indiana REMC	6,242	1,948	17,834	0.40	0.18
Southern Indiana Power	1,510	436	3,827	0.10	0.04
Utilities District of Western Indiana REMC	4,505	1,095	12,474	0.20	0.08
Wayne–White Counties Electric Cooperative	1,537	286	4,098	0.03	0.01
Whitewater Valley REMC	2,900	962	8,799	0.20	0.09
WIN Energy REMC	2,100	560	5,931	0.11	0.05
Total	65,058	17,998	174,153	4.21	2.19

ENERGY MANAGEMENT SAVINGS SWITCH PROGRAM: 2009-2019

Cooperative	Total Devices Controlled	Cumulative MWh Savings	Estimated Lifetime MWh Savings	Cumulative Winter Peak MW Savings	Cumulative Summer Peak MW Savings
Bartholomew County REMC	195	0.00	0.00	0.10	0.15
Clark County REMC	0	0.00	0.00	0.00	0.00
Daviess-Martin County REMC	1,191	0.00	0.00	0.44	0.99
Decatur County REMC	200	0.00	0.00	0.18	0.09
Dubois REC	850	0.00	0.00	0.16	0.40
Harrison REMC	1,885	0.00	0.00	0.80	1.50
Henry County REMC	958	0.00	0.00	0.38	0.78
Jackson County REMC	1,205	0.00	0.00	0.39	0.89
Johnson County REMC	0	0.00	0.00	0.00	0.00
Orange County REMC	1,870	0.00	0.00	0.98	1.14
RushShelby Energy REMC	1,182	0.00	0.00	0.47	0.95
South Central Indiana REMC	2,018	0.00	0.00	1.43	1.17
Southeastern Indiana REMC	2,376	0.00	0.00	1.04	1.70
Southern Indiana Power	1,908	0.00	0.00	0.74	1.48
Utilities District of Western Indiana REMC	1,321	0.00	0.00	0.66	0.94
Wayne-White Counties Electric Cooperative	0	0.00	0.00	0.00	0.00
Whitewater Valley REMC	8	0.00	0.00	0.01	0.00
WIN Energy REMC	1	0.00	0.00	0.00	0.00
Total	17,168	0.00	0.00	7.78	12.18

RESIDENTIAL HVAC PROGRAM: 2009-2019

Cooperative	Total Measures Installed	Cumulative MWh Savings	Estimated Lifetime MWh Savings	Cumulative Winter Peak MW Savings	Cumulative Summer Peak MW Savings
Bartholomew County REMC	1,663	2,389	36,495	1.42	0.60
Clark County REMC	4,426	5,548	70,773	3.43	2.37
Daviess-Martin County REMC	997	1,516	22,393	1.66	0.36
Decatur County REMC	640	1,748	29,083	2.18	0.27
Dubois REC	2,105	2,887	41,767	3.73	0.78
Harrison REMC	4,099	6,564	83,649	3.64	2.36
Henry County REMC	645	1,297	19,847	1.52	0.28
Jackson County REMC	2,735	5,701	84,123	3.17	1.17
Johnson County REMC	1,704	2,732	37,057	1.76	0.62
Orange County REMC	1,009	1,546	22,426	0.66	0.30
RushShelby Energy REMC	943	1,594	25,426	1.89	0.32
South Central Indiana REMC	4,645	7,167	118,816	5.04	1.11
Southeastern Indiana REMC	3,107	4,771	75,392	5.26	0.84
Southern Indiana Power	1,364	2,878	33,347	2.27	0.73
Utilities District of Western Indiana REMC	2,104	3,638	57,246	3.13	0.73
Wayne-White Counties Electric Cooperative	1,124	1,182	16,327	2.23	0.39
Whitewater Valley REMC	892	1,354	21,549	2.23	0.28
WIN Energy REMC	2,025	2,921	47,541	2.50	0.51
Total	36,227	57,434	843,259	47.72	14.02

APPLIANCE RECYCLING PROGRAM: 2009-2019

Cooperative	Total Units Collected	Cumulative MWh Savings	Estimated Lifetime MWh Savings	Cumulative Winter Peak MW Savings	Cumulative Summer Peak MW Savings
Bartholomew County REMC	346	365	2,433	0.20	0.25
Clark County REMC	1,265	1,239	10,253	0.27	0.31
Daviess-Martin County REMC	278	299	1,801	0.20	0.24
Decatur County REMC	282	301	2,048	0.20	0.24
Dubois REC	1,273	1,265	9,378	0.27	0.32
Harrison REMC	1,160	1,396	10,361	0.27	0.31
Henry County REMC	531	492	4,193	0.22	0.26
Jackson County REMC	928	988	7,213	0.25	0.29
Johnson County REMC	174	180	899	0.20	0.23
Orange County REMC	23	43	333	0.19	0.22
RushShelby Energy REMC	634	608	4,339	0.23	0.27
South Central Indiana REMC	1,074	996	7,985	0.25	0.30
Southeastern Indiana REMC	1,655	1,548	13,714	0.27	0.33
Southern Indiana Power	564	449	4,099	0.21	0.25
Utilities District of Western Indiana REMC	623	621	4,856	0.23	0.26
Wayne-White Counties Electric Cooperative	247	254	1,271	0.20	0.24
Whitewater Valley REMC	448	462	3,461	0.22	0.25
WIN Energy REMC	292	311	2,072	0.20	0.23
Total	11,797	11,818	90,708	4.07	4.80

TOUCHSTONE ENERGY® HOMESM PROGRAM: 2009-2019

Cooperative	Homes Registered	Cumulative MWh Savings	Estimated Lifetime MWh Savings	Cumulative Winter Peak MW Savings	Cumulative Summer Peak MW Savings
Bartholomew County REMC	6	28	568	0.00	0.01
Clark County REMC	52	251	5,606	0.05	0.05
Daviess-Martin County REMC	6	34	738	0.01	0.01
Decatur County REMC	24	112	2,786	0.02	0.02
Dubois REC	96	466	9,935	0.08	0.10
Harrison REMC	161	825	19,510	0.18	0.16
Henry County REMC	4	19	379	0.00	0.00
Jackson County REMC	72	360	8,359	0.07	0.07
Johnson County REMC	2	16	360	0.00	0.00
Orange County REMC	2	9	189	0.00	0.00
RushShelby Energy REMC	48	234	5,748	0.05	0.05
South Central Indiana REMC	32	166	3,708	0.03	0.03
Southeastern Indiana REMC	15	43	1,420	0.01	0.01
Southern Indiana Power	35	163	3,658	0.03	0.04
Utilities District of Western Indiana REMC	19	88	2,318	0.02	0.02
Wayne-White Counties Electric Cooperative	-	-	0	0.00	0.00
Whitewater Valley REMC	1	5	95	0.00	0.00
WIN Energy REMC	1	5	95	0.00	0.00
Total	576	2,824	65,472	0.55	0.57

Program was retired in 2017 and remaining registered homes completed in 2018.

BASIC PROGRAM ASSUMPTIONS

Measure Name	Annual kWh Savings	Winter kW Demand Savings	Summer kW Demand Savings	Installation Rate	Effective Useful Life (Years)
RESIDENTIAL LIGHTING PROGRAM					
LED Lighting (Standard)	26.5	0.029	0.029	70%	13
LED Lighting (Specialty)	34.1	0.037	0.037	70%	13
LED Security Lights	525.6	0.120	0.120	100%	18

APPLIANCE RECYCLING PROGRAM					
Refrigerator Recycling	1,002.0	0.140	0.140	100%	8
Freezer Recycling	932.5	0.134	0.134	100%	8

RESIDENTIAL HVAC PROGRAM					
Heat Pump Water Heaters	1,702.5	0.672	0.672	100%	13
Heat Pump (14 SEER) [Manufactured Home = MH]	436.0	0.170	0.160	100%	18
Heat Pump (15 SEER) [MH]	533.0	0.070	-0.020	100%	18
Heat Pump (16 SEER)	1,103.0	0.350	0.100	100%	18
Heat Pump (17 SEER)	1,281.0	0.820	0.170	100%	18
Heat Pump (18 SEER)	1,286.0	0.830	0.310	100%	18
Heat Pump (14 SEER) Dual Fuel [MH]	-2,769.0	0.000	0.160	100%	18
Heat Pump (15 SEER) Dual Fuel [MH]	-4,150.0	0.000	0.260	100%	18
Heat Pump (16 SEER) Dual Fuel	-6,263.0	0.000	0.300	100%	18
Heat Pump (17 SEER) Dual Fuel	-7,163.0	0.000	0.360	100%	18
Heat Pump (18 SEER) Dual Fuel	-6,768.0	0.000	0.380	100%	18
Heat Pump (14 SEER) Electric Resistance Replacement [MH]	4,765.0	3.700	0.160	100%	18
Heat Pump (15 SEER) Electric Resistance Replacement [MH]	23,692.0	4.120	0.200	100%	18
Heat Pump (16 SEER) Electric Resistance Replacement	23,964.0	4.400	0.320	100%	18
Heat Pump (17 SEER) Electric Resistance Replacement	23,551.0	4.870	0.390	100%	18
Heat Pump (18 SEER) Electric Resistance Replacement	23,839.0	4.880	0.530	100%	18
Geothermal Heat Pumps	4,480.0	3.240	0.680	100%	18
Mini Split Heat Pump (16 SEER)	825.3	3.110	0.830	100%	18
Mini Split Heat Pump (17 SEER)	1,408.0	3.240	0.880	100%	18
Mini Split Heat Pump (18 SEER)	2,015.6	3.390	0.920	100%	18
Mini Split Heat Pump (19 SEER)	2,397.7	3.470	0.950	100%	18
Mini Split Heat Pump (20 SEER)	2,749.2	3.550	0.970	100%	18

ENERGY EFFICIENCY KIT					
Energy Efficiency Kit A	118.5	0.028	0.012	50%	14
Energy Efficiency Kit B	164.0	0.019	0.018	50%	8

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APPENDIX B

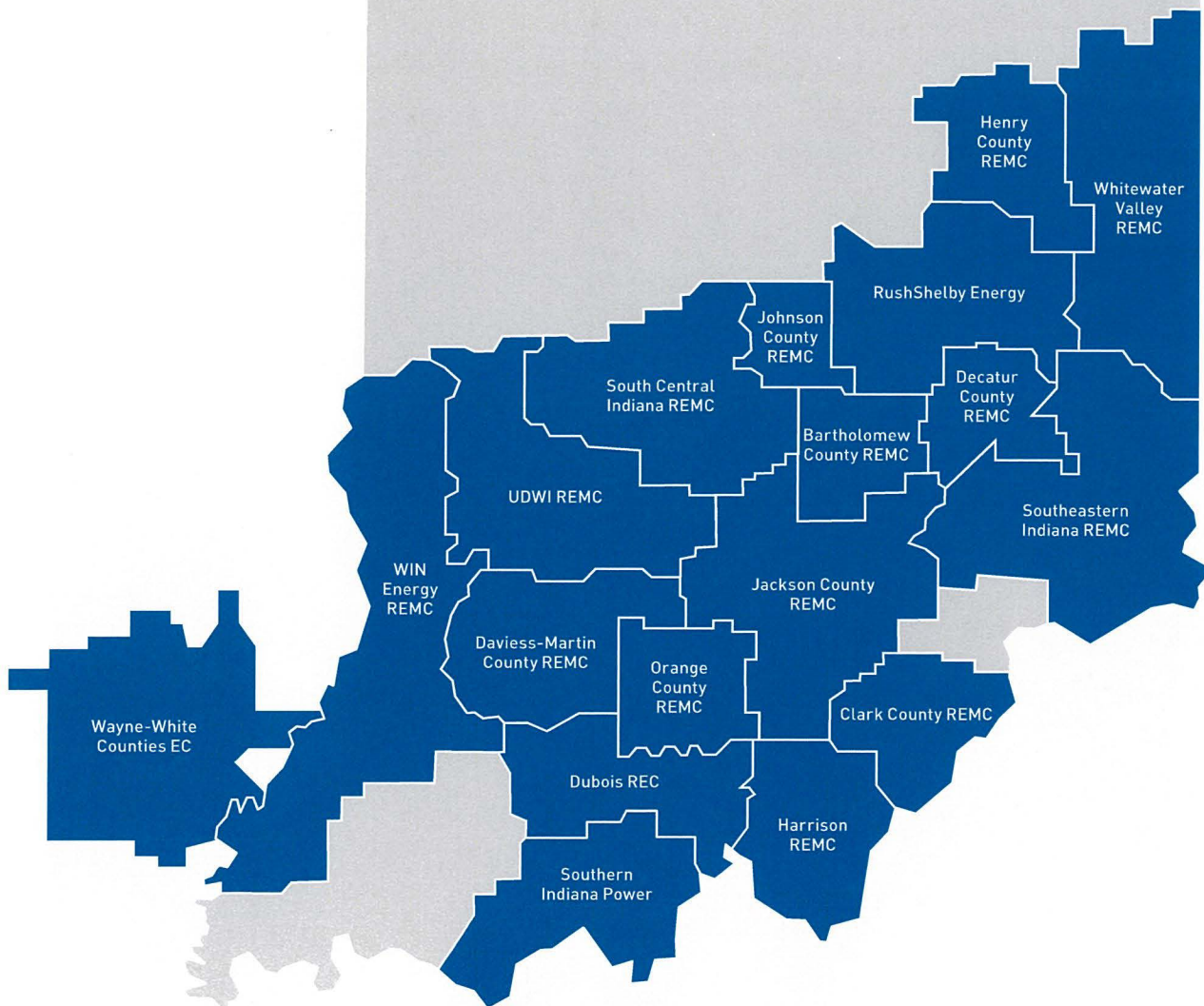
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Measure Name	Annual kWh Savings	Winter kW Demand Savings	Summer kW Demand Savings	Installation Rate	Effective Useful Life (Years)
C&I ENERGY EFFICIENCY PROGRAM					
All commercial & industrial savings are calculated for each individual rebate claim based on the estimated existing and replacement wattages and time used.					
Agricultural Lighting	179.9	0.000	0.019	100%	2
Occupancy Sensors	393.1	0.122	0.087	100%	8
NEMA Premium Eff. Motor >10 HP	35.0	0.010	0.010	100%	15
NEMA Premium Eff. Motor < 10 HP	75.0	0.020	0.020	100%	15
VSD on Motors	679.7	0.000	0.105	100%	15
Programmable Thermostat	61.0	0.000	0.000	100%	9
Heat Pump (11.3 EER, COP 3.4)	54.1	0.020	0.015	100%	15
Air Conditioner (12 EER)	67.3	0.094	0.073	100%	15
DEMAND RESPONSE					
<80 gallon water heater control	0.0	0.800	0.450	100%	13
>80 gallon water heater control	0.0	0.800	0.450	100%	13
AC control	0.0	0.000	0.990	100%	13
ASHP control	0.0	0.000	0.880	100%	13
Geothermal HP control	0.0	0.000	0.930	100%	13
RETIRED MEASURES					
Measures that were incentivized in previous program years continue to contribute to overall program savings for the duration of the measure life., on a per unit basis. The measures below are for historical reference when reviewing cumulative savings totals."					
Touchstone Energy Homes	5,397.0	4.520	0.740	100%	25
Weatherized Homes (HE & ARRA) ¹	4,274.0	0.720	1.060	100%	13
Deferred Homes	795.0	0.720	0.720	100%	13
LED Holiday Lights 2009-13	17.1	0.048	0.048	90%	20
80 Gal Water Heater	115.0	0.050	0.050	100%	13
50 Gal Water Heater	162.0	0.060	0.060	100%	13
Compact Fluorescent Lighting (CFL)	28.6	0.031	0.031	70%	5
Attic Insulation	1,049.0	0.152	0.727	100%	20
Duct Sealing	718.0	0.491	0.357	100%	20
Central AC (14 SEER)	142.0	0.220	0.000	100%	18
Central AC (15 SEER)	147.0	0.200	0.000	100%	18
Central AC (16 SEER)	221.0	0.320	0.000	100%	18
Central AC (17 SEER)	257.0	0.390	0.000	100%	18
Central AC (17 SEER)	325.0	0.530	0.000	100%	18

Basic program assumptions were updated in 2016.
Hoosier Energy and American Recovery and Reinvestment Act

The Hoosier Energy Power Network

Hoosier Energy is a generation and transmission cooperative (G&T) with headquarters in Bloomington, Indiana. The G&T provides electric power and services to 18 electric distribution cooperatives in central and southern Indiana and southeastern Illinois. Collectively, those 18 co-ops serve more than 650,000 member-consumers. For more information, visit www.hoosierenergy.com.





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Appendix G

Demand Side Management Assumptions

HOOSIER ENERGY

2016 Update of Avoided Costs & DSM Modeling Assumptions

Prepared for:

Hoosier Energy

Draft Report

August 2016

2016 UPDATE OF AVOIDED COSTS AND DSM MODELING ASSUMPTIONS

Prepared for:



August 2016

Prepared by:



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1 INTRODUCTION

This document compiles a listing and description of the 2013-vintage and 2016 DSM measure/program avoided cost and general modeling assumptions. The document also includes the updated Hoosier Energy (“HE”) DSM measure/program assumptions for conducting a cost-effectiveness screen. Hoosier Energy originally conducted a DSM potential study as part of its 2009 IRP. In 2013, HE updated the DSM potential analysis to reflect revised benefits, costs, and other major assumptions. HE has again retained GDS Associates, Inc. (“GDS”) to assist in a 2016 update effort.

In the first phase of the project, GDS has identified the major global assumptions and avoided cost assumptions and has worked closely with HE staff to evaluate the methodologies employed to develop the assumptions and to update the assumptions to reflect current conditions in the HE and MISO territories. This document provides a listing of the 2013 vintage assumptions, the updated assumptions, and discussion of how those assumptions were developed. Furthermore, a brief indication to how sensitive benefit cost ratios will be to the changes in the assumptions, and whether the changes will have positive or negative impacts on the ratios is provided. Last, this document provides updated assumptions regarding energy and peak demand savings, measure lifetimes, and measure costs associated with each of HE’s DSM measures and/or programs, as well as their updated cost-effectiveness. The Total Resource Cost Test (“TRC”) is the primary test used to determine cost effectiveness of a given program or measure.

2 AVOIDED COST UPDATE

2.1 INFLATION RATE AND DISCOUNT RATE

The inflation and discount rates are general economic assumptions. The inflation rate is used to escalate certain costs or benefits when other growth rate assumptions are not identifiable or available. The discount rate is used to discount future cash flows into present dollars for purposes of calculating the TRC benefit-cost ratio across the entire planning horizon of benefits accrued and costs incurred during the life of a program or measure. The inflation and discount rate assumptions are shown in Table 2-1

Table 2-1: Inflation and Discount Rate Assumption

Assumption	2013 Vintage	2016 Vintage
Inflation Rate	2.0%	2.1%
Discount Rate	5.0%	6%

2013 Assumption

The 2013 vintage inflation and discount rates were provided by HE's planning staff to be consistent with assumptions used in other HE planning studies. HE's Corporate Planning department had inflation projections that average about 1.75% per year. They suggested a rate of 2.00% per year to be conservative. HE's Finance department suggested use of 5% for the discount rate. This rate reflects the likely rate at which HE could borrow money for a 30-year note from a source other than RUS.

2016 Assumption

The 2016 vintage inflation rate is derived from the Energy Information Administration's (EIA) Annual Energy Outlook, and the nominal discount rate was provided by HE's planning staff. Both assumptions are consistent with the portfolio optimization analysis performed by GDS for long range planning. The inflation rate was derived from the 2016 Annual Energy Outlook (Reference Case) GDP Price Index. The nominal discount rate reflect HE's weighted average cost of capital.

Projected Impact

Energy Efficiency – LOW IMPACT, MIXED EFFECT ON TRC

Demand Response – LOW IMPACT, MIXED EFFECT ON TRC

The 2016 vintage inflation assumption will increase both benefits and costs that are escalated based on inflation relative to the 2013 vintage assumptions. The higher discount factor in the 2016 vintage assumptions will result in dollars that are further out in the study horizon have a lesser impact on the net present value TRC ratio. For most cost-beneficial programs, this will likely result in a slightly lower TRC ratio in 2016 relative to 2013 based solely on the change in the discount rate. However, the relatively minor change makes it highly unlikely that a result would "flip" (e.g., change a program from cost effective to not cost effective based on this change in assumption only).

2.2 RESERVE MARGIN REQUIREMENT

Planning reserve margins are used to add avoided planning reserve benefits to those DSM programs that provide firm reductions in system peak demand. If a program is able to reduce the peak demand requirements, and HE has firm control of that demand reduction, then HE can reduce its planning reserve requirements as well.

Table 2-2: Planning Reserve Margin Assumption

Assumption	2013 Vintage	2016 Vintage
Reserve Margin Requirement	13.9%	14.8%

2013 Assumption

For the 2013 vintage assumption, HE used MISO's 2013 Loss of Load Expectation Study. In that study, MISO estimated future planning reserve requirements which are reasonable for HE to use as planning reserves as well. MISO began using new modeling methodologies in 2012 that have caused the declining reserve margins in the future: "The model responds to the advantage of load diversity in the external systems relative to MISO, and responds to the forced outage rates of resources in the external world, while monitoring use of the transmission system within known safe historical limits. That new method drives the PRM down".¹

2016 Assumption

Similar to the 2013 analysis, the 2016-vintage Reserve Margin requirement relies on MISO's 2026-2017 Planning Year Loss of Load Expectation Study. The MISO analysis estimates future planning reserve margin requirements that are reasonable for HE to use when quantifying the benefits of DSM capacity savings.

Projected Impact

Energy Efficiency – LOW IMPACT, POSITIVE EFFECT ON TRC

Demand Response – LOW IMPACT, POSITIVE EFFECT ON TRC

Since reserve margins are slightly higher in the 2016 vintage, the impact on DSM programs for which reserve benefits are accrued will be an increase in TRC ratios. However, the new reserve margins are only slightly higher than the 2013 vintage assumptions and the reserve margin benefits are only a fraction of the total avoided cost benefits. The update in reserve margin assumptions will have a minor impact on the TRC ratios.

2.3 TRANSMISSION & DISTRIBUTION LINE LOSSES

Because of resistance line losses throughout the transmission and distribution systems, a generation facility must generate greater than 1 kW in order for an end-use customer to receive 1 kW at the retail meter. Therefore, a DSM program implemented within a home or commercial building that reduces 1 kW of demand will reduce greater than 1 kW of demand at the generation facility. The line loss assumptions are used to gross up at-the-retail meter load reduction assumptions to at generation in order to calculate the avoided costs benefits.

Table 2-3: Planning Reserve Margin Assumption

Assumption	2013 Vintage	2016 Vintage
Transmission & Distribution Line Loss	9.49%	8.27%

2013 Assumption

The transmission and distribution line losses assumptions in the 2013 vintage study were based on the most recent five years of history available (2007-2011) and were consistent with the 2011 PRS. For distribution losses, 1.5% losses for industrial customers were excluded. HE's load forecasting staff felt that 1.5% losses for industrials was more appropriate than 3.0%.

¹ MISO. *Planning Year 2013 LOLE Study Report*. November 1, 2012. Page 11.

2016 Assumption

The 2016 assumption for transmission and distribution line losses were provided by Hoosier staff for the Production Cost modeling being performed by GDS in preparation for Hoosier's Integrated Resource Plan.

Projected Impact

Energy Efficiency – LOW IMPACT, NEGATIVE EFFECT ON TRC

Demand Response – LOW IMPACT, NEGATIVE EFFECT ON TRC

The losses in the 2016 vintage are lower than the 2013 vintage. In general, this will reduce the energy and demand reduction values at generation which will reduce avoided cost savings for all programs thus reducing TRC ratios. However, the impact will be minimal compared to other assumption changes.

2.4 AVOIDED COST OF GENERATION ENERGY

2.4.1 EE Programs

EE avoided energy costs are driven by energy reductions throughout many or all hours of the year. The primary avoided cost benefit for EE programs is avoided energy cost. In order to capture the savings, on- and off-peak periods for summer and winter seasons are defined and load shapes for various EE measures will then be defined to match those on- and off-peak periods. In the 2016 vintage study, the summer has been defined as April through September and the winter is October through March. This definition is consistent with HE's seasonal definitions from the PRS. On-peak is defined as weekdays, 7:00 AM to 11:00 PM (consistent with a 5x16 market product) and off-peak is all remaining weekday hours and all weekend hours². The avoided energy costs for EE programs for each vintage year are shown below.

Table 2-4: 2013 Avoided EE Energy Costs

2013 Vintage Year	Summer (¢/kWh)		Winter (¢/kWh)	
	On-Peak	Off-Peak	On-Peak	Off-Peak
2016	4.784	3.049	4.416	3.168
2017	4.912	3.062	4.572	3.238
2018	5.004	3.154	4.658	3.337
2019	5.165	3.580	4.816	3.705
2020	5.327	3.729	4.971	3.859
2021	5.460	3.822	5.095	3.956
2022	5.597	3.918	5.223	4.055
2023	5.737	4.016	5.353	4.156
2024	5.815	4.121	5.464	4.299
2025	5.943	4.207	5.601	4.404
2026	6.076	4.325	5.711	4.491
2027	6.156	4.342	5.793	4.536
2028	6.310	4.484	6.006	4.715
2029	6.655	4.912	6.285	5.150

² These definitions of on- and off-peak are consistent with the products available on the market and are not reflective of the HE wholesale tariff definitions of on- and off-peak. However, for purposes of projecting growth in avoided costs, the on- and off-peak periods as defined in the market forward products are the best source. The HE tariff is a mechanism for transferring costs from HE to the member cooperatives and is not considered in the TRC test. The tariff would be considered in a Utility Cost Test taken either from HE's perspective or a member cooperative's perspective. Consideration of such factors is given in the rate design process.

2013 Vintage	Summer (¢/kWh)		Winter (¢/kWh)	
	On-Peak	Off-Peak	On-Peak	Off-Peak
2030	6.801	5.050	6.434	5.327
2031	6.900	5.093	6.559	5.378

Table 2-5: 2016 Avoided EE Energy Costs

2016 Vintage	Summer (¢/kWh)		Winter (¢/kWh)	
	On-Peak	Off-Peak	On-Peak	Off-Peak
2016	3.384	2.477	3.102	2.535
2017	3.695	2.750	3.412	2.834
2018	4.034	2.921	3.573	2.934
2019	4.226	3.148	3.784	3.126
2020	4.456	3.317	3.978	3.340
2021	4.728	3.497	4.115	3.492
2022	5.111	3.630	4.251	3.654
2023	5.242	3.773	4.382	3.804
2024	4.930	3.865	4.480	3.839
2025	5.032	4.006	4.650	4.049
2026	5.192	4.150	4.793	4.190
2027	5.352	4.236	4.925	4.311
2028	5.557	4.394	4.987	4.410
2029	5.798	4.553	5.217	4.588
2030	5.943	4.676	5.394	4.774
2031	6.196	4.897	5.579	4.972

2013 Assumption

In 2013 vintage study, the avoided energy costs for the 2013 base year were based on the average Cin Hub LMPs for each defined season and set of hours. The average was based on real time LMPs for 2010-2012. For the summer on-peak growth, the 5x16 forward price curves were utilized, average forward prices for April through September of each year and applying the growth from the forward curves. The winter on-peak growth used the 5x16 forward curves for October through March. The off-peak curves used the same seasonal split, but the growth rates are based on forward prices for a wrap product, representing prices for the off-peak weekday 5x8 product coupled with a 2x24 product for weekends. Growth rates of 2.5% per year were applied in 2021-2023 to adjust the forward price projections between two data sources (broker forward prices through 2020 and Woods Mackenzie projections beyond 2023).

2016 Assumption

In the 2016 update, the price projections are provided by ABB Enterprise, Inc. They represent reference case market clearing price projections for MISO's Indiana hub. These projections are the energy cost projections being used by GDS in performing production cost modeling in support of Hoosier's 2016 Integrated Resource Plan. Therefore, the 2016 updated assumptions are consistent with the assumptions being made for Supply-Side analysis. As a proprietary output of ABB's Advisors Service Product, GDS has permission to share this information with Hoosier staff only. Please be aware of the following:

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Projected Impact

Energy Efficiency – LOW IMPACT, NEGATIVE EFFECT ON TRC

Demand Response – N/A

Avoided energy costs are the primary driver of benefits for evaluation of EE programs, so changes to these assumptions will have large impacts on TRC tests. The 2016 vintage prices are lower than the 2013 prices, due in part to decreasing wholesale natural gas prices. The result is that many programs will likely see a declining TRC ratio because of lower prices, but the prices are not significantly lower, so TRC impacts should not be severe.

2.4.2 DR Programs

For direct control demand response programs, energy is saved during control hours but typically the energy is recovered at the conclusion of the control period. For instance, a water heater element is shut off during control and once it is released it will run to reheat the water in the tank as necessary. Therefore, the avoided energy cost of a demand response program is the net value of avoided energy costs during control hours less the cost to serve the recovery load during recovery hours. The tables below show the avoided cost assumptions for summer and winter.

Table 2-6: 2013 Avoided DR Energy Costs

2013 Vintage		Summer (¢/kWh)			Winter (¢/kWh)	
Year	Control Hours	Recovery Hours	Net Savings	Control Hours	Recovery Hours	Net Savings
2016	8.276	6.017	2.259	5.384	4.464	0.920
2017	8.497	6.044	2.453	5.574	4.563	1.011
2018	8.656	6.224	2.432	5.679	4.702	0.977
2019	8.936	7.065	1.871	5.871	5.221	0.650
2020	9.216	7.360	1.856	6.060	5.439	0.621
2021	9.446	7.544	1.902	6.212	5.575	0.637
2022	9.682	7.733	1.949	6.367	5.714	0.653
2023	9.924	7.926	1.998	6.526	5.857	0.669

2013 Vintage		Summer (¢/kWh)			Winter (¢/kWh)		
Year	Control Hours	Recovery Hours	Net Savings	Control Hours	Recovery Hours	Net Savings	
2024	10.172	8.124	2.048	6.689	6.003	0.686	
2025	10.426	8.328	2.099	6.857	6.153	0.703	
2026	10.687	8.536	2.151	7.028	6.307	0.721	
2027	10.954	8.749	2.205	7.204	6.465	0.739	
2028	11.228	8.968	2.260	7.384	6.626	0.757	
2029	11.509	9.192	2.317	7.568	6.792	0.776	
2030	11.797	9.422	2.375	7.758	6.962	0.796	
2031	12.091	9.657	2.434	7.952	7.136	0.816	

Table 2-7: 2016 Avoided DR Energy Costs

2016 Vintage		Summer (¢/kWh)			Winter (¢/kWh)		
Year	Control Hours	Recovery Hours	Net Savings	Control Hours	Recovery Hours	Net Savings	
2016	5.343	4.026	1.317	4.179	3.802	0.378	
2017	5.833	4.395	1.438	4.597	4.182	0.415	
2018	6.369	4.799	1.570	4.815	4.380	0.435	
2019	6.672	5.027	1.645	5.098	4.637	0.460	
2020	7.035	5.301	1.734	5.359	4.875	0.484	
2021	7.464	5.624	1.840	5.544	5.043	0.501	
2022	8.069	6.080	1.989	5.727	5.210	0.517	
2023	8.277	6.237	2.041	5.904	5.371	0.533	
2024	7.784	5.865	1.919	6.036	5.490	0.545	
2025	7.944	5.986	1.958	6.265	5.699	0.566	
2026	8.197	6.176	2.021	6.458	5.875	0.583	
2027	8.451	6.367	2.083	6.636	6.037	0.599	
2028	8.773	6.610	2.163	6.720	6.113	0.607	
2029	9.154	6.897	2.257	7.030	6.395	0.635	
2030	9.383	7.070	2.313	7.268	6.612	0.657	
2031	9.783	7.371	2.412	7.517	6.838	0.679	

2013 Assumption

In the 2013 vintage, actual DR control periods were known, so GDS first estimated average Cin Hub³ real time LMPs during control and recovery periods for 2010, 2011, and 2012. That value became the base avoided cost values.

Escalation of control avoided costs was based on forward price curves for a 5x16 on-peak product. The forward prices for April 2013 through December 2020 are broker forward prices at the Indiana Hub⁴ as quoted on April 2, 2013. Beyond 2020, projections are provided by Wood Mackenzie. However, the Wood

³ HE conducted market transactions at the Cin Hub prior to 2013. The Indiana Hub was established in 2012.

⁴ The historical data is based on data for the Cin Hub since the Indiana Hub is new. However, forward prices for the Indiana Hub are now available, reflecting the hub at which HE will settle market transactions in the future.

Mackenzie models showed overall prices that were higher than the current market forward prices, so a blending procedure in 2021-2023 created extremely high growth rates in HE's project forward price curves. HE staff investigated to ensure that the growth was not attributable to expected tightening of capacity or carbon tax costs, but was rather just a function of blending two forecast sources. For the DSM study, we have grown the prices in those years by 2.5% and then used the Woods Mackenzie projected growth rates beyond 2023.

Escalation of recovery avoided costs was based on forward price curves for a 7x8 off-peak product. The forward prices for April 2013 through December 2020 are broker forward prices at the Indiana Hub as quoted on April 2, 2013. As with the on-peak product, the price growth is 2.5% per year for 2021-2023 and then escalated at Woods Mackenzie projected growth rates.

2016 Assumption

For the 2016 assumption, GDS used six years of historical real time locational marginal prices ("LMP") for Cincinnati hub and Indiana hub during Hoosier load control hours. We computed the average price during load management hours and then computed a multiplier of that load management price to the average on-peak price for the last six years. However, we did exclude events in 2014 related to the polar vortexes, as those were atypical winter weather patterns and associated market prices. The multiplier was then applied to the on-peak energy price projections presented in Tables 2-4 and 2-5. For recovery, we computed the historical average price over the last six years for the two hours after load management periods and computed the recovery price as a percentage of the control price. We then applied that percentage to the projected control prices to project recovery prices.

Projected Impact

Energy Efficiency – N/A

Demand Response – LOW IMPACT, POSITIVE EFFECT ON TRC

Avoided energy cost benefits are a secondary benefit of demand response and have much less impact on benefit-cost ratios than avoided capacity benefits. However, they do have a moderate effect on TRC ratios relative to many other assumptions. The summer net savings has not changed much between the 2013 and 2016 vintages, but the winter savings has increased. This is due to the fact that 2014 and 2015 had some extreme cold weather, driving critical peak hour prices significantly upward. Therefore, demand response programs with any winter control capability will see higher TRC ratios due to the 2016 update.

2.5 AVOIDED COST OF CAPACITY

2.5.1 Generation Capacity

The avoided cost of generation capacity provides a benefit to DSM programs when those programs reduce HE's system peak demand. Avoided generation capacity benefits are the primary benefits assigned to DR programs and are usually a secondary benefit for EE programs

Table 2-8: 2013 Avoided EE Energy Costs

Year	2013 Vintage (\$/kW-Year)		2016 Vintage (\$/kW-Year)	
	Summer	Winter	Summer	Winter
2016	\$39.96	\$0.00	\$0.49	\$0.00
2017	\$51.05	\$0.00	\$22.23	\$0.00

Year	2013 Vintage (\$/kW-Year)		2016 Vintage (\$/kW-Year)	
	Summer	Winter	Summer	Winter
2018	\$62.15	\$0.00	\$51.91	\$0.00
2019	\$63.39	\$0.00	\$59.69	\$0.00
2020	\$64.66	\$0.00	\$70.13	\$0.00
2021	\$65.95	\$0.00	\$79.70	\$0.00
2022	\$67.27	\$0.00	\$88.05	\$0.00
2023	\$68.62	\$0.00	\$91.02	\$0.00
2024	\$69.99	\$0.00	\$100.71	\$0.00
2025	\$71.39	\$0.00	\$103.46	\$0.00
2026	\$72.82	\$0.00	\$105.17	\$0.00
2027	\$74.27	\$0.00	\$111.07	\$0.00
2028	\$75.76	\$0.00	\$115.19	\$0.00
2029	\$77.27	\$0.00	\$116.70	\$0.00
2030	\$78.82	\$0.00	\$121.60	\$0.00
2031	\$80.39	\$0.00	\$125.51	\$0.00

2013 Assumption

In the 2013 study, the same methodology as was used in the 2009 study was adopted in which market prices are used as the value of avoided capacity. As in the 2009 vintage, a key assumption is when the market prices would escalate. Capacity is currently long in MISO, but economic theory posits that the market price of capacity should approach the cost of a newly constructed CT as capacity tightens to more “normal” levels in the region. NERC’s *2012 Long-Term Reliability Assessment*, published in November 2012, indicates that MISO should have sufficient reserves until 2020. However, NERC also points out that retirement of several coal units in the region may reduce reserves more rapidly. Several MISO market analysts expect capacity prices to rise in the 2016/2017 timeframe as old plants are retired in response to the EPA’s Air Toxic Standards rule, which requires coal units to meet certain emissions standards by April 2015.⁵ Therefore, in the 2013 vintage study, the market is estimated to reach the cost of new CT construction by 2018, a compromise position between 2016 impacts and expected reserve levels being sufficient until 2020.

To establish the avoided CT cost, GDS used a first year construction cost based on 5% cost of debt (consistent with the discount factor assumption) and an overnight construction cost of \$666 per kW. The overnight construction cost is consistent with EIA’s *2012 Annual Energy Outlook* assumptions for construction of a new CT. GDS and HE also reviewed data on the construction costs for several recent CT projects and expansion to verify the basic cost assumption by EIA as a reasonable estimate.

2016 Assumption

In the 2016 update, GDS used capacity price projections for MISO Indiana from ABB. These assumptions are consistent with the Portfolio Optimization modeling assumptions. As a proprietary output of ABB’s Advisors Service Product, GDS has permission to share this information with Hoosier staff only. Please be aware of the following:

The information in the Advisors Service Product, including, but not limited to, the energy price forecast and the methodologies used in its development and

⁵ “Experts weigh coal retirements, MISO market.” *Electric Power Daily*, February 12, 2013. Platts.

derivatives thereof, is provided on an as-is basis without warranty, and constitute and contain valuable trade secret information of ABB Enterprise Software Inc. (“ABB”). Disclosure of any information contained in this product and related materials by the Company named above (“Third Party”) to anyone other than employees of the Third Party (“Unauthorized Persons”) is prohibited unless authorized in writing by ABB. Third Party will take all necessary precautions to prevent this report from being available to Unauthorized Persons, as defined above, and will instruct and make arrangements with its employees to prevent any unauthorized access or unauthorized use of this report. Third Party will not lend, sell or otherwise transfer this report (or parts thereof) to any Unauthorized Persons, as defined above, without ABB’s written approval.

GDS performed some secondary research to evaluate the price projections from ABB. Our research indicated that the long-term general level of the avoided capacity costs are consistent with the Cost of New Entry (“CONE”) estimates for MISO. The larger question that is difficult to answer is when capacity will begin to tighten enough in MISO Indiana that prices would approach CONE. Several sources indicate it could occur as early as 2017 or 2018 or as late as 2020.

Projected Impact

Energy Efficiency – MODERATE IMPACT, POSITIVE EFFECT ON TRC

Demand Response – MODERATE IMPACT, POSITIVE EFFECT ON TRC

The 2016 vintage avoided capacity cost assumptions are higher than the 2013 vintage assumptions for 2020-2040. The first 4 years of projections are lower than the 2013 vintage, though. For DR programs, this is the single greatest source of benefits. For EE programs, avoided energy costs tend to drive TRC results more than avoided capacity costs, but avoided capacity costs do have a moderate impact on results. With the higher long-term 2016 avoided costs, TRC ratios for all programs and measures evaluated will be positively impacted.

2.5.2 Transmission and Distribution (T&D) Capacity

Avoided T&D capacity costs provide additional benefits to DSM programs. For the transmission system, reductions in transmission coincident peak demands can reduce the need for investment in growth-related transmission plant. Likewise, it is possible that demand reductions can delay distribution system improvements.

Table 2-9: 2013 Avoided DR Energy Costs

Year	2013 Vintage (\$/kW-Year)			2016 Vintage (\$/kW-Year)		
	Summer Transmission Capacity	Winter Transmission Capacity	Distribution Capacity	Summer Transmission Capacity	Winter Transmission Capacity	Distribution Capacity
2016	\$16.68	\$4.12	\$0.00	\$17.30	\$6.79	\$0.00
2017	\$17.04	\$4.20	\$0.00	\$17.66	\$6.93	\$0.00
2018	\$17.40	\$4.28	\$0.00	\$18.04	\$7.07	\$0.00
2019	\$17.76	\$4.36	\$0.00	\$18.41	\$7.22	\$0.00
2020	\$18.12	\$4.46	\$0.00	\$18.80	\$7.37	\$0.00

Year	2013 Vintage (\$/kW-Year)			2016 Vintage (\$/kW-Year)		
	Summer Transmission Capacity	Winter Transmission Capacity	Distribution Capacity	Summer Transmission Capacity	Winter Transmission Capacity	Distribution Capacity
2021	\$18.48	\$4.54	\$0.00	\$19.20	\$7.53	\$0.00
2022	\$18.84	\$4.64	\$0.00	\$19.60	\$7.69	\$0.00
2023	\$19.22	\$4.73	\$0.00	\$20.01	\$7.85	\$0.00
2024	\$19.60	\$4.83	\$0.00	\$20.43	\$8.01	\$0.00
2025	\$19.99	\$4.92	\$0.00	\$20.86	\$8.18	\$0.00
2026	\$20.39	\$5.02	\$0.00	\$21.30	\$8.35	\$0.00
2027	\$20.80	\$5.12	\$0.00	\$21.74	\$8.53	\$0.00
2028	\$21.22	\$5.23	\$0.00	\$22.20	\$8.71	\$0.00
2029	\$21.64	\$5.33	\$0.00	\$22.67	\$8.89	\$0.00
2030	\$22.07	\$5.44	\$0.00	\$23.14	\$9.08	\$0.00
2031	\$22.52	\$5.55	\$0.00	\$23.63	\$9.27	\$0.00

2013 Assumption

The methodology employed to develop avoided transmission costs in the 2013 vintage DSM study were consistent with those methodologies employed in the 2009 vintage study. Updated HE transmission work plans were used to revise that portion of the cost and recent Duke network service charges were used to update that portion of the avoided cost. Escalation was set at 2% per year, consistent with the assumed rate of inflation in the 2013 study.

One major change in the 2013 study methodology was that avoided purchased transmission services was changed from one winter month to two winter months. GDS evaluated the timing of HE's actual hours of control from 2010-2012 and compared those times to the times for the Duke CP. HE's control periods in the winter overlapped with Duke peaks enough to warrant adjusting the assumption up by one month.

It was still reasonable to assume negligible cost savings on the distribution system from DSM demand reductions. Therefore, in the 2013 study, no avoided distribution cost is still the assumption.

2016 Assumption

The methodology remained the same as was used in 2013. Projected Duke network service charges were provided by Hoosier and used to update the 60% portion of the cost. Updated HE transmission work plans were used to revise a 40% share of the avoided cost. A levelized rate was computed for 2016 and escalated at 2.1% per year, the same as the 2016 inflation assumption.

It is still reasonable to assume negligible cost savings on the distribution system from DSM demand reductions. Therefore, no avoided distribution cost is still assumed for the 2016 update.

Projected Impact

Energy Efficiency – LOW IMPACT, POSITIVE EFFECT ON TRC

Demand Response – LOW IMPACT, POSITIVE EFFECT ON TRC

The 2016 avoided T&D costs are slightly higher than the 2013 vintage avoided T&D costs. Therefore, TRC ratios will be higher due to this update, although only marginally so. Avoided T&D costs have a greater

impact on DR programs than on EE programs. However, even for DR programs, avoided generation capacity costs are a more significant driver.

2.6 FORECAST OF ELECTRIC RETAIL RATES

In the TRC test, electric retail rates are used when fuel switching occurs. In a measure in which the participant changes fuel types for an end-use, the net cost or savings to the customer due to the fuel switch is considered in the TRC calculation. Since the change in energy consumption occurs incrementally, the upper-block retail rate is appropriate to use if the participant is subject to a block energy charge.

Table 2-10: Retail Electric Rate Assumptions

Year	2013 Vintage (¢ per kWh)	2016 Vintage (¢ per kWh)
2016	11.45	10.55
2017	11.68	10.77
2018	11.92	11.00
2019	12.15	11.23
2020	12.40	11.47
2021	12.65	11.71
2022	12.90	11.95
2023	13.16	12.20
2024	13.42	12.46
2025	13.69	12.72
2026	13.96	12.99
2027	14.24	13.26
2028	14.53	13.54
2029	14.82	13.82
2030	15.11	14.11
2031	15.42	14.41

2013 Assumption

To establish the base year assumption, GDS collected the upper-end block rate and tracker values for as many HE member cooperatives as were available. The total avoided cost represents the upper block rate plus the tracker. This value was averaged across the members to produce a value to represent the average retail rate for an HE member cooperative. The average included rate information for 12 of HE's members. Escalation was then applied using the assumed inflation rate of 2% per year. The assumption is that, on average, the real retail price of electricity will remain stable in the future.

2016 Assumption

To establish the base year assumption, GDS collected the upper-end block rate and tracker values for as many HE member cooperatives as were available. The total avoided cost represents the upper block rate plus the tracker. This value was averaged across the members to produce a value to represent the average retail rate for an HE member cooperative. The average included rate information for 16 of HE's members. Escalation was then applied using the assumed inflation rate of 2.1% per year. The assumption is that, on average, the real retail price of electricity will remain stable in the future.

Projected Impact

Energy Efficiency – LOW IMPACT, MIXED EFFECT ON TRC

Demand Response – N/A

The avoided retail rate assumption would have a minor impact on TRC benefit-cost ratios for energy efficiency programs. No DR programs under analysis involve fuel switching, so the retail rate has no impact on DR TRC tests. The effects on the TRC are hard to determine since the impact depends on whether fuel is being switched from gas to electric or vice versa and depends on the direction and magnitude of the change in gas assumptions.

2.7 FORECAST OF NATURAL GAS AND PROPANE

The avoided cost of natural gas and propane are used to understand the benefits of fuel switching and of secondary savings in natural gas that may result from an EE measure.

Table 2-11: Natural Gas Avoided Cost Forecast

Year	2013 Vintage (\$/MMBtu)		2016 Vintage (\$/MMBtu)	
	Commodity	Retail	Commodity	Retail
2016	\$5.45	\$9.78	\$2.18	\$8.27
2017	\$5.57	\$10.30	\$2.82	\$8.69
2018	\$5.71	\$10.91	\$3.06	\$9.32
2019	\$5.94	\$11.31	\$3.67	\$9.92
2020	\$6.17	\$11.65	\$4.34	\$10.61
2021	\$6.55	\$12.04	\$4.78	\$10.99
2022	\$7.00	\$12.52	\$5.13	\$11.29
2023	\$7.36	\$13.02	\$5.38	\$11.70
2024	\$7.66	\$13.42	\$5.54	\$12.02
2025	\$8.01	\$13.77	\$5.75	\$12.38
2026	\$8.34	\$14.20	\$5.97	\$12.60
2027	\$8.71	\$14.57	\$6.22	\$12.76
2028	\$9.00	\$15.03	\$6.44	\$12.95
2029	\$9.35	\$15.49	\$6.76	\$13.19
2030	\$9.73	\$15.93	\$7.02	\$13.50

Table 2-12: Propane Avoided Cost Forecast

Year	2013 Vintage (\$/MMBtu)		2016 Vintage (\$/MMBtu)	
	Commodity	Retail	Commodity	Retail
2016	\$10.58	\$20.79	\$5.54	\$14.39
2017	\$11.09	\$21.80	\$6.13	\$15.90
2018	\$11.50	\$22.60	\$6.64	\$17.22
2019	\$11.90	\$23.38	\$7.30	\$18.96
2020	\$12.31	\$24.18	\$7.68	\$19.94
2021	\$12.67	\$24.90	\$8.00	\$20.76
2022	\$13.07	\$25.69	\$8.30	\$21.54

Year	2013 Vintage (\$/MMBtu)		2016 Vintage (\$/MMBtu)	
	Commodity	Retail	Commodity	Retail
2023	\$13.46	\$26.45	\$8.53	\$22.15
2024	\$13.84	\$27.19	\$8.74	\$22.69
2025	\$14.22	\$27.94	\$8.98	\$23.31
2026	\$14.61	\$28.72	\$9.24	\$23.98
2027	\$14.99	\$29.47	\$9.48	\$24.61
2028	\$15.38	\$30.23	\$9.76	\$25.32
2029	\$15.77	\$30.99	\$10.06	\$26.12
2030	\$16.17	\$31.78	\$10.35	\$26.87

2013 Assumption

For the 2013-vintage fossil fuel avoided costs, GDS included both the forecast retail price and avoided commodity price of natural gas and propane. Although HE is an electric cooperative and does not sell either propane or natural gas directly to its members, the forecasted retail rate should be reserved for the Participant Test or the RIM Test while the avoided commodity price of natural gas and propane should be utilized in the TRC or Societal Tests.

The forecast retail rates of propane and natural gas were based on EIA's 2013 *Annual Energy Outlook* reference case for the "East North Central" region. EIA's forecast was stated in nominal dollars and extended from 2013-2040. The avoided commodity price of natural gas was supplied by Vectren Gas for an analysis of a proposed HE/Vectren supported Weatherization program for gas-heated homes in the HE service territory. The Vectren forecast extends through 2034. Finally, the propane commodity price was determined using the historical average 2012 price of wholesale propane in Indiana. This price was then escalated at the same rate as the EIA forecast for retail propane.

2016 Assumption

Projections of fossil fuel projections are again included for cost-effectiveness testing for fuel-switching measures, or measures that have both electric and non-electric benefits.

The forecast retail rates of propane and natural gas are based on EIA's 2016 *Annual Energy Outlook* reference case for the "East North Central" region. EIA's forecast is stated in nominal dollars and extends from 2016-2040. The avoided commodity price of natural gas was supplied by ABB (in \$2016) and represents the price of natural gas at the Henry Hub. The forecast was converted to nominal dollars using the 2016 inflation rate discussed in Section 2.1. Finally, the propane commodity price was determined using the historical average 2015 price of wholesale propane in Indiana. This price was then escalated at the same rate as the EIA forecast for retail propane.

Projected Impact

Energy Efficiency – LOW IMPACT, NEGATIVE EFFECT ON TRC

Demand Response – N/A

Although the forecast of natural gas prices and propane prices is lower in the 2016 vintage avoided costs, the overall projected impact of these changes on the original DSM program offerings of HE is anticipated to be minor. Overall, the \$ benefits of measures that include gas and/or propane savings will decrease. However, few measures include fossil fuel savings.

2.8 AVOIDED COST OF WATER

Avoided costs of water represent a benefit to EE programs that reduce water consumption in the home or place of business.

Table 2-13: Retail Electric Rate Assumptions

Year	2013 Vintage (\$/gallon)	2016 Vintage (\$/gallon)
2016	\$0.0056	0.0070
2017	\$0.0057	0.0071
2018	\$0.0059	0.0073
2019	\$0.0060	0.0074
2020	\$0.0061	0.0076
2021	\$0.0062	0.0077
2022	\$0.0063	0.0079
2023	\$0.0065	0.0081
2024	\$0.0066	0.0082
2025	\$0.0067	0.0084
2026	\$0.0069	0.0086
2027	\$0.0070	0.0088
2028	\$0.0071	0.0090
2029	\$0.0073	0.0091
2030	\$0.0074	0.0093

2013 Assumption

The 2013-vintage avoided cost of water savings was based on the average residential retail schedules available for the City of Bloomington, City of Columbus, and the City of Indianapolis, and has been weighted to account for an estimated 62% of homes using municipal water services versus well-water systems. After 2013, the avoided cost of water was escalated at 2% a year, the assumed rate of inflation in the 2013 study.

2016 Assumption

Similar to 2013, the 2016-vintage avoided cost water savings was based on the average residential retail schedules of water and waste-water available for the City of Bloomington, City of Columbus, and the City of Indianapolis, and has been weighted to account for an estimated 62% of homes using municipal water services versus well-water systems. After 2016, the avoided cost of water is escalated at 2.1% a year, the assumed rate of inflation in 2016.

Projected Impact

Energy Efficiency – NO IMPACT, POSITIVE EFFECT ON TRC

Demand Response – N/A

The 2016-vintage assumptions are higher than the 2013-vintage assumptions based on the latest available water and water residential retail schedules. However, because no current DSM measures include water savings, there are no projected impact of these changes on the DSM program offerings of HE.

3 2016 HOOSIER DSM MEASURE ASSUMPTION UPDATE

As part of the 2016 update, GDS reviewed the existing DSM measure detail and determined whether any of the existing assumptions related to measure savings, costs, or useful lives should be updated to reflect the 2016 market. GDS updated measure assumptions based on any changes to existing federal standards, more recent measure cost data, or refined engineering algorithms and/or building energy simulation modeling. These changes are summarized below

Residential Lighting: Updated measure assumptions for retail lighting reflect the current baseline equivalent wattages, efficient technology wattages, and bulb costs as indicated on HE member's "Team Up Lighting Rebates" on-line order page. The update developed assumptions for CFL bulbs, standard LED bulbs, and specialty CFLs. No measure-specific updates were determined to be necessary for LED security lighting.

Appliance Recycling: New measure savings are the average of the three Indiana utilities specified in the 2013 Indiana TRM and the latest measure savings provided in the 2016 Illinois TRM.

HVAC Program: Developed single-family (SF) and manufactured housing measure savings assumptions for the following HVAC products:

- 14-18 SEER central air conditioners
- 15-18 SEER air-source heat pumps
- 15-18 SEER dual fuel heat pumps
- 16-20 SEER ductless mini-split systems (SF Only)

Savings for this update were determined by developing Manual J heat loss/heat gain coefficients for typical HE households and using HVAC equipment product specification data to estimate the required heating and cooling load requirements and equipment BTU outputs at varying annual temperatures. These detailed models provide annual energy consumption and peak demand estimates for each equipment type and efficiency level. GDS continued to rely on HVAC supplier costs gathered by Hoosier Energy in 2013 for equipment cost assumptions.

Finally, heat pump water heater and attic insulation updates were developed using the latest deemed savings algorithms and inputs from the 2016 Illinois TRM. Savings for duct sealing remained consistent with the findings of the billing analysis conducted by GDS Associates for the HE Weatherization program.

Energy Kits: Measure assumptions associated with energy kits were updated to reflect the energy efficiency measures included in the two primary kits delivered to HE members. The kits include some combination of LED bulbs, LED nightlights, smart power strips, and gasket covers. LED bulb savings are consistent with the savings developed for the residential lighting program. LED nightlight, smart power strip, and gasket cover savings are consistent with the 2016 Illinois TRM algorithms and input variables, with appropriate adjustments to reflect the HE service area. Measure costs reflect the cost of the kits as specified by Hoosier Energy.

Touchstone Energy Homes: Touchstone Energy Homes savings were originally estimated based on the REM/Rate building energy simulation modeling. Although the residential building energy code remains consistent with the 2009 IECC code, revisions to algorithms in the modeling software required an

update to the measure savings assumptions. GDS developed the latest savings assumptions using BEopt™ modeling software, which provides increased modeling flexibility and hourly consumption output.

C&I Program: Traditional and direct install C&I measure assumptions reflect the average savings and costs per rebate application received and tracked by Hoosier Energy from 2009-2015. Both programs receive predominately lighting equipment applications, and the per application savings and costs reflect these incented measures. In addition, GDS updated the 2009-vintage assumptions for the eight C&I measures that are referenced in the 2015 HE DSM Annual Report. Measure assumptions were updated, where appropriate, due to revised equipment codes and standards (i.e. HVAC equipment measures, agricultural lighting), more recent savings evaluation reports (i.e. programmable thermostats), or revised TRM savings algorithms were available (i.e. occupancy sensors, VSD on motors).

Direct Load Control: No updates were necessary for the direct load control measure assumptions. Measures were re-screened based on the 2016-vintage avoided cost assumptions only.

Retired Measures: No updates were made the retired measure assumptions as HE does not expect future participation for these measures. SEER 14 ASHP measures are now considered the federal baseline in Indiana and retired for this update. Measures were rescreened based on the 2016-vintage avoided costs assumptions only.

Total Resource Cost (TRC) Cost-Effectiveness Screening

Following the measure assumption update, GDS then performed a cost-effectiveness screen of each DSM measure to reflect the revised measure assumptions as well as the updated 2016-vintage avoided costs. The results of this cost effectiveness screen, including the updated DSM measure assumptions can be found in the table below.

Hoosier DSM Measure Update - 2016

End Use	Measure Name	Home Types (SF/MH)	ROB vs. Retrofit vs. NC	Annual kWh Savings	NCP Summer kW	NCP Winter kW	EUL	Measure Cost	Incentive	Gas Savings (MMBTu)	Water Savings (gallons)	O&M Benefits	Tax Credits	TRC Ratio
Residential Lighting Program														
Lighting	CFLs	SF/MH	ROB	28.6	0.031	0.031	5	\$2.50	\$2.00	-0.05	0	\$2.31	\$0.00	2.58
Lighting	LED Lighting (Standard)	SF/MH	ROB	26.5	0.029	0.029	13	\$7.03	\$5.00	-0.05	0	\$4.00	\$0.00	2.05
Lighting	LED Lighting (Specialty)	SF/MH	ROB	34.1	0.037	0.037	13	\$6.41	\$7.86	-0.07	0	\$6.54	\$0.00	2.79
Lighting	LED Security Lights	SF/MH	ROB	525.6	0.120	0.120	18	\$195.00	\$50.00	0.00	0	\$20.00	\$0.00	2.51
Appliance Recycling Program														
Appliances	Refrigerator Recycling	SF/MH	Retrofit	1,002.2	0.140	0.140	8	\$145.50	\$50.00	0.00	0	\$0.00	\$0.00	2.36
Appliances	Freezer Recycling	SF/MH	Retrofit	932.5	0.134	0.134	8	\$145.50	\$50.00	0.00	0	\$0.00	\$0.00	2.21
HVAC Program (SF)														
Water Heating	Heat Pump Water Heaters	SF/MH	ROB	1,702.5	0.672	0.672	13	\$1,064.00	\$400.00	-0.89	0	\$0.00	\$300.00	1.53
HVAC (Equipment)	Central AC (14 SEER)	SF	ROB	142.0	0.220	0.000	18	\$145.00	\$150.00	0.00	0	\$0.00	\$0.00	2.41
HVAC (Equipment)	Central AC (15 SEER)	SF	ROB	147.0	0.200	0.000	18	\$290.00	\$150.00	0.00	0	\$0.00	\$0.00	1.13
HVAC (Equipment)	Central AC (16 SEER)	SF	ROB	221.0	0.320	0.000	18	\$658.00	\$150.00	0.00	0	\$0.00	\$0.00	0.78
HVAC (Equipment)	Central AC (17 SEER)	SF	ROB	257.0	0.390	0.000	18	\$1,111.00	\$750.00	0.00	0	\$0.00	\$0.00	0.56
HVAC (Equipment)	Central AC (18 SEER)	SF	ROB	325.0	0.530	0.000	18	\$1,564.00	\$750.00	0.00	0	\$0.00	\$300.00	0.72
HVAC (Equipment)	Heat Pump (15 SEER)	SF	ROB	533.0	-0.020	0.070	18	\$407.00	\$150.00	0.00	0	\$0.00	\$0.00	0.62
HVAC (Equipment)	Heat Pump (16 SEER)	SF	ROB	1,103.0	0.100	0.350	18	\$961.00	\$150.00	0.00	0	\$0.00	\$0.00	0.77
HVAC (Equipment)	Heat Pump (17 SEER)	SF	ROB	1,281.0	0.170	0.820	18	\$1,286.00	\$750.00	0.00	0	\$0.00	\$0.00	0.76
HVAC (Equipment)	Heat Pump (18 SEER)	SF	ROB	1,286.0	0.310	0.830	18	\$1,767.00	\$750.00	0.00	0	\$0.00	\$300.00	0.83
HVAC (Equipment)	Heat Pump (15 SEER) Dual Fuel (Replacing Gas/Central AC)	SF	ROB	-4,150.0	0.260	0.000	18	\$407.00	\$150.00	72.87	0	\$0.00	\$0.00	1.77
HVAC (Equipment)	Heat Pump (16 SEER) Dual Fuel (Replacing Gas/Central AC)	SF	ROB	-6,263.0	0.300	0.000	18	\$961.00	\$150.00	72.87	0	\$0.00	\$0.00	1.09
HVAC (Equipment)	Heat Pump (17 SEER) Dual Fuel (Replacing Gas/Central AC)	SF	ROB	-7,163.0	0.360	0.000	18	\$1,286.00	\$750.00	72.87	0	\$0.00	\$0.00	0.93
HVAC (Equipment)	Heat Pump (18 SEER) Dual Fuel (Replacing Gas/Central AC)	SF	ROB	-6,768.0	0.380	0.000	18	\$1,767.00	\$750.00	72.87	0	\$0.00	\$300.00	0.95
HVAC (Equipment)	Heat Pump (15 SEER) E. Furnace Replacement	SF	ROB	23,692.0	0.200	4.120	18	\$407.00	\$800.00	0.00	0	\$0.00	\$0.00	31.70
HVAC (Equipment)	Heat Pump (16 SEER) E. Furnace Replacement	SF	ROB	23,964.0	0.320	4.400	18	\$961.00	\$800.00	0.00	0	\$0.00	\$0.00	13.77
HVAC (Equipment)	Heat Pump (17 SEER) E. Furnace Replacement	SF	ROB	23,551.0	0.390	4.870	18	\$1,286.00	\$1,500.00	0.00	0	\$0.00	\$0.00	10.24
HVAC (Equipment)	Heat Pump (18 SEER) E. Furnace Replacement	SF	ROB	23,839.0	0.530	4.880	18	\$1,767.00	\$1,500.00	0.00	0	\$0.00	\$300.00	7.82
HVAC (Equipment)	Geothermal Heat Pumps	SF	ROB	4,480.0	0.680	3.240	18	\$5,825.00	\$1,500.00	0.00	0	\$0.00	\$2,448.90	1.03
HVAC (Equipment)	Mini Split Heat Pump (16 SEER)	SF	ROB	825.3	0.830	3.110	18	\$2,814.50	\$500.00	0.00	0	\$0.00	\$0.00	0.67
HVAC (Equipment)	Mini Split Heat Pump (17 SEER)	SF	ROB	1,408.0	0.880	3.240	18	\$2,994.50	\$750.00	0.00	0	\$0.00	\$0.00	0.76
HVAC (Equipment)	Mini Split Heat Pump (18 SEER)	SF	ROB	2,015.6	0.920	3.390	18	\$3,174.50	\$750.00	0.00	0	\$0.00	\$300.00	0.93
HVAC (Equipment)	Mini Split Heat Pump (19 SEER)	SF	ROB	2,397.7	0.950	3.470	18	\$3,315.50	\$750.00	0.00	0	\$0.00	\$300.00	0.96
HVAC (Equipment)	Mini Split Heat Pump (20 SEER)	SF	ROB	2,749.2	0.970	3.550	18	\$3,456.50	\$750.00	0.00	0	\$0.00	\$300.00	0.99
HVAC (Shell)	Attic Insulation 2015	SF	Retrofit	1,049.0	0.152	0.727	25	\$1,320.00	\$500.00	0.00	0	\$0.00	\$79.20	0.87
HVAC (Shell)	Duct Sealing	SF	Retrofit	718.0	0.491	0.357	20	\$370.00	\$370.00	0.00	0	\$0.00	\$0.00	3.22

Hoosier DSM Measure Update - 2016

End Use	Measure Name	Home Types (SF/MH)	ROB vs. Retrofit vs. NC	Annual kWh Savings	NCP Summer kW	NCP Winter kW	EUL	Measure Cost	Incentive	Gas Savings (MMBTu)	Water Savings (gallons)	O&M Benefits	Tax Credits	TRC Ratio
HVAC Program (MH)														
HVAC (Equipment)	Central AC (14 SEER)	MH	ROB	153.0	0.240	0.000	18	\$145.00	\$150.00	0.00	0	\$0.00	\$0.00	2.84
HVAC (Equipment)	Central AC (15 SEER)	MH	ROB	157.0	0.220	0.000	18	\$658.00	\$150.00	0.00	0	\$0.00	\$0.00	0.59
HVAC (Equipment)	Central AC (16 SEER)	MH	ROB	237.0	0.350	0.000	18	\$658.00	\$150.00	0.00	0	\$0.00	\$0.00	0.92
HVAC (Equipment)	Central AC (17 SEER)	MH	ROB	277.0	0.420	0.000	18	\$1,111.00	\$750.00	0.00	0	\$0.00	\$0.00	0.65
HVAC (Equipment)	Central AC (18 SEER)	MH	ROB	351.0	0.580	0.000	18	\$1,564.00	\$750.00	0.00	0	\$0.00	\$300.00	0.82
HVAC (Equipment)	Heat Pump (15 SEER)	MH	ROB	531.0	-0.020	0.070	18	\$407.00	\$150.00	0.00	0	\$0.00	\$0.00	0.62
HVAC (Equipment)	Heat Pump (16 SEER)	MH	ROB	1,107.0	0.110	0.350	18	\$961.00	\$150.00	0.00	0	\$0.00	\$0.00	0.79
HVAC (Equipment)	Heat Pump (17 SEER)	MH	ROB	1,290.0	0.180	0.810	18	\$1,286.00	\$750.00	0.00	0	\$0.00	\$0.00	0.77
HVAC (Equipment)	Heat Pump (18 SEER)	MH	ROB	1,302.0	0.340	0.830	18	\$1,767.00	\$750.00	0.00	0	\$0.00	\$300.00	0.86
HVAC (Equipment)	Heat Pump (15 SEER) Dual Fuel	MH	ROB	-3,669.0	0.290	0.000	18	\$407.00	\$150.00	72.76	0	\$0.00	\$0.00	1.98
HVAC (Equipment)	Heat Pump (16 SEER) Dual Fuel	MH	ROB	-3,430.0	0.330	0.000	18	\$961.00	\$150.00	72.76	0	\$0.00	\$0.00	1.69
HVAC (Equipment)	Heat Pump (17 SEER) Dual Fuel	MH	ROB	-3,883.0	0.390	0.000	18	\$1,286.00	\$750.00	72.76	0	\$0.00	\$0.00	1.42
HVAC (Equipment)	Heat Pump (18 SEER) Dual Fuel	MH	ROB	-3,636.0	0.420	0.000	18	\$1,767.00	\$750.00	72.76	0	\$0.00	\$300.00	1.38
HVAC (Equipment)	Heat Pump (15 SEER) E. Furnace Replacement	MH	ROB	18,714.0	0.220	4.120	18	\$407.00	\$800.00	0.00	0	\$0.00	\$0.00	25.46
HVAC (Equipment)	Heat Pump (16 SEER) E. Furnace Replacement	MH	ROB	19,290.0	0.350	4.400	18	\$961.00	\$800.00	0.00	0	\$0.00	\$0.00	11.31
HVAC (Equipment)	Heat Pump (17 SEER) E. Furnace Replacement	MH	ROB	19,473.0	0.420	4.860	18	\$1,286.00	\$1,500.00	0.00	0	\$0.00	\$0.00	8.63
HVAC (Equipment)	Heat Pump (18 SEER) E. Furnace Replacement	MH	ROB	19,485.0	0.580	4.880	18	\$1,767.00	\$1,500.00	0.00	0	\$0.00	\$300.00	6.58
Energy Kits														
Cross-Cutting	Energy Kits A	SF/MH	Retrofit	118.5	0.012	0.028	14	\$25.00	\$25.00	-0.15	0	\$0.00	\$0.00	2.12
Cross-Cutting	Energy Kits B	SF/MH	Retrofit	164.0	0.018	0.019	8	\$28.00	\$28.00	-0.07	0	\$0.00	\$0.00	1.87
Touchstone Energy Homes														
New Construction	Touchstone Energy Homes	SF	NC	5,397.0	0.740	4.520	25	\$3,745.00	\$1,000.00	0.00	0	\$0.00	\$0.00	1.47
New Construction	Dual Fuel Touchstone Energy Homes	SF	NC	-1,678.8	0.800	0.000	25	\$3,745.00	\$1,000.00	64.90	0	\$0.00	\$0.00	1.33
New Construction	Energy Star Mfg Home	MH	NC	6,512.0	0.310	1.550	25	\$2,734.00	\$1,500.00	0.00	0	\$0.00	\$0.00	1.87
C&I Energy Efficiency Program														
Lighting	Traditional C&I Projects Average Savings	C&I	ROB	128,811.6	14.269	15.177	15	\$16,711.68	\$3,973.93	0.00	0	\$0.00	\$0.00	4.58
Lighting	Direct Install Project Average Savings	C&I	ROB	128,811.6	14.269	15.177	15	\$16,711.68	\$3,973.93	0.00	0	\$0.00	\$0.00	4.58
Lighting	Agricultural Lighting	C&I	ROB	179.9	0.019	0.000	2	\$1.70	\$0.43	0.00	0	\$0.00	\$0.00	7.73
Lighting	Occupancy Sensors	C&I	Retrofit	393.1	0.087	0.122	8	\$51.00	\$12.75	0.00	0	\$0.00	\$0.00	2.38
Motors	NEMA Premium Eff. Motor > 10 HP	C&I	ROB	35.0	0.010	0.010	15	\$50.00	\$12.50	0.00	0	\$0.00	\$0.00	0.56
Motors	NEMA Premium Eff. Motor < 10 HP	C&I	ROB	75.0	0.020	0.020	15	\$30.00	\$7.50	0.00	0	\$0.00	\$0.00	1.94
Motors	VSD on Motors	C&I	Retrofit	679.7	0.105	0.000	15	\$199.50	\$49.88	0.00	0	\$0.00	\$0.00	2.13
HVAC	Programmable Thermostat	C&I	ROB	61.0	0.000	0.000	9	\$49.71	\$12.43	0.00	0	\$0.00	\$0.00	0.35
HVAC	Heat Pump (11.3 EER, COP 3.4)	C&I	ROB	54.1	0.015	0.020	15	\$767.26	\$191.82	0.00	0	\$0.00	\$0.00	0.06
HVAC	Air Conditioner (12 EER)	C&I	ROB	67.3	0.073	0.094	15	\$277.47	\$69.37	0.00	0	\$0.00	\$0.00	0.44

Hoosier DSM Measure Update - 2016

End Use	Measure Name	Home Types (SF/MH)	ROB vs. Retrofit vs. NC	Annual kWh Savings	NCP Summer kW	NCP Winter kW	EUL	Measure Cost	Incentive	Gas Savings (MMBTu)	Water Savings (gallons)	O&M Benefits	Tax Credits	TRC Ratio
Demand Response														
Water Heating	<80 gallon water heater control	SF/MH	Retrofit	0.0	0.450	0.800	13	\$280.00	\$65.00	0.00	0	\$0.00	\$0.00	0.83
Water Heating	>80 gallon water heater control	SF/MH	Retrofit	0.0	0.450	0.800	13	\$280.00	\$65.00	0.00	0	\$0.00	\$0.00	0.83
HVAC	AC Control	SF/MH	Retrofit	0.0	0.990	0.000	13	\$250.00	\$65.00	0.00	0	\$0.00	\$0.00	1.58
HVAC	ASHP Control	SF/MH	Retrofit	0.0	0.880	0.000	13	\$250.00	\$65.00	0.00	0	\$0.00	\$0.00	1.40
HVAC	Geothermal HP Control	SF/MH	Retrofit	0.0	0.930	0.000	13	\$250.00	\$65.00	0.00	0	\$0.00	\$0.00	1.48
Retired Measures														
Cross-Cutting	Weatherized Homes	SF/MH	Retrofit	4,274.0	1.060	0.720	13	\$2,200.00	\$2,200.00	0.00	0	\$0.00	\$0.00	1.28
Cross-Cutting	Deferred Homes	SF/MH	Retrofit	795.0	0.720	0.720	13	\$600.00	\$600.00	0.00	0	\$0.00	\$0.00	1.83
Lighting	LED Holiday Lights 2009-13	SF/MH	ROB	17.1	0.048	0.048	20	\$10.00	\$3.00	0.00	0	\$0.00	\$0.00	8.79
Water Heating	80 Gal Water Heater	SF/MH	ROB	115.0	0.050	0.050	13	\$83.00	\$150.00	0.00	0	\$0.00	\$0.00	1.20
Water Heating	50 Gal Water Heater	SF/MH	ROB	162.0	0.060	0.060	13	\$169.00	\$50.00	0.00	0	\$0.00	\$0.00	0.76
HVAC (Equipment)	Heat Pump Mfg Home (14 SEER)	MH	ROB	436.0	0.160	0.170	18	\$408.00	\$150.00	0.00	0	\$0.00	\$0.00	1.14
HVAC (Equipment)	Heat Pump Mfg Home (14 SEER) Dual Fuel	MH	ROB	-2,769.0	0.160	0.000	18	\$870.00	\$800.00	41.40	0	\$0.00	\$0.00	1.12
HVAC (Equipment)	Heat Pump Mfg Home(14 SEER) E. Furnace Replacement	MH	ROB	4,765.0	0.160	3.700	18	\$885.00	\$800.00	0.00	0	\$0.00	\$0.00	3.44

2016 Update of Avoided Costs & DSM Modeling Assumptions

Prepared for:

Hoosier Energy

Prepared By:



Total - DSM Participation Forecast

CUMULATIVE PARTICIPANTS

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Residential Lighting Programs															
CFLs	519,558	789,687	1,170,330	1,375,905	1,485,290	1,585,674	1,627,905	1,108,347	838,218	457,575	252,000	142,615	42,231	0	0
LED Holiday Lights 2009-13	5,910	14,815	20,367	20,367	20,367	20,367	20,367	20,367	20,367	20,367	20,367	20,367	20,367	20,367	20,367
LED Lighting	0	0	0	0	0	3,678	28,496	118,797	196,676	230,931	265,871	301,510	319,329	328,239	332,694
LED Security Lights	0	0	0	0	0	2,545	9,793	15,525	21,840	27,017	32,298	37,684	43,178	48,781	54,497
Appliance Recycling Program															
Refrigerators	0	654	2,087	3,098	3,871	4,597	4,849	3,962	4,123	4,288	4,559	4,669	5,160	6,218	7,297
Freezers	0	226	735	1,038	1,363	1,589	1,619	1,266	1,263	1,156	1,162	1,143	1,229	1,476	1,727
Residential HVAC Program															
80 Gal Water Heater	320	576	814	940	1,068	1,068	1,068	1,068	1,068	1,068	1,068	1,068	1,068	748	492
50 Gal Water Heater	2,565	4,925	6,861	8,486	10,018	10,018	10,018	10,018	10,018	10,018	10,018	10,018	10,018	7,453	5,093
Heat Pump Water Heaters	0	150	403	633	893	1,088	1,385	1,809	2,078	2,368	2,664	2,816	2,870	2,954	3,014
Central AC Mfg Home (14 SEER)	0	0	0	0	0	0	5	21	21	21	21	21	21	21	21
Central AC (15 SEER)	86	320	484	713	950	1,104	1,130	1,135	1,135	1,135	1,135	1,135	1,135	1,135	1,135
Central AC (16 SEER)	47	289	430	570	798	959	1,153	1,476	1,476	1,476	1,476	1,476	1,476	1,476	1,476
Central AC (17 SEER)	0	0	0	29	53	81	133	212	212	212	212	212	212	212	212
Central AC (18+ SEER)	17	76	107	113	122	134	134	192	192	192	192	192	192	192	192
Heat Pump Mfg Home (14 SEER)	0	0	0	0	0	0	24	72	83	91	99	107	116	125	133
Heat Pump (15 SEER)	670	1,655	2,336	2,836	3,393	3,857	3,977	3,977	3,978	3,980	3,982	3,984	3,986	3,988	3,991
Heat Pump (16 SEER)	181	413	565	669	781	963	1,288	1,595	1,799	2,025	2,256	2,491	2,730	2,975	3,225
Heat Pump (17 SEER)	0	2	3	109	175	254	548	685	816	944	1,075	1,208	1,344	1,482	1,623
Heat Pump (18+ SEER)	119	296	435	439	474	515	518	619	721	830	941	1,055	1,170	1,288	1,409
Heat Pump Mfg Home (14 SEER) Dual Fuel	0	0	0	0	0	0	0	9	10	11	12	13	14	15	15
Heat Pump (15 SEER) Dual Fuel	122	269	351	447	511	555	579	580	580	582	584	586	588	590	593
Heat Pump (16 SEER) Dual Fuel	39	70	86	94	115	127	178	238	309	378	448	520	593	668	744
Heat Pump (17 SEER) Dual Fuel	1	2	6	7	7	7	17	42	87	133	180	228	277	326	377
Heat Pump (18+ SEER) Dual Fuel	29	65	82	89	97	99	99	109	126	151	177	203	229	256	284
Pump Mfg Home(14 SEER) E. Furnace Replacement	0	0	0	0	0	0	76	120	194	270	348	427	507	590	673
Heat Pump (15 SEER) E. Furnace Replacement	158	453	633	794	958	1,339	1,425	1,442	1,455	1,464	1,473	1,483	1,492	1,502	1,512
Heat Pump (16 SEER) E. Furnace Replacement	57	124	147	174	212	285	474	590	691	797	905	1,015	1,128	1,243	1,360
Heat Pump (17 SEER) E. Furnace Replacement	0	0	0	48	108	152	214	273	320	369	419	470	522	575	629
Heat Pump (18+ SEER) E. Furnace Replacement	42	85	110	110	110	124	132	187	242	310	379	450	522	596	671
Geothermal Heat Pumps	481	1,231	1,844	2,336	2,851	3,254	3,739	4,313	4,567	4,829	5,096	5,369	5,647	5,930	6,220
Mini Split Heat Pump (16 SEER)	0	0	0	0	0	0	0	3	18	22	26	30	34	39	43
Mini Split Heat Pump (17 SEER)	0	0	0	0	0	0	0	5	19	33	48	63	78	93	93
Mini Split Heat Pump (18 SEER)	0	0	0	0	0	0	0	2	10	22	34	47	59	72	86
Mini Split Heat Pump (19 SEER)	0	0	0	0	0	0	0	3	7	9	11	13	15	17	20
Mini Split Heat Pump (20 SEER)	0	0	0	0	0	0	0	6	25	41	57	74	91	108	126
Duct Sealing	0	0	0	0	0	0	1,554	2,887	2,887	2,887	2,887	2,887	2,887	2,887	2,887
Attic Insulation 2015	0	0	0	0	0	0	271	868	868	868	868	868	868	868	868
Hoosier Weatherization Program															
CFLs (High Use)	43	227	1,045	1,874	2,630	2,446	1,628	799	0	0	0	0	0	0	0
CFLs (Medium Use)	43	227	1,045	1,874	2,673	2,673	2,673	2,630	2,446	1,628	799	0	0	0	0
CFLs (Low Use)	43	227	1,045	1,874	2,673	2,673	2,673	2,673	2,673	2,673	2,673	2,673	2,673	2,673	2,673
Air Sealing/Duct Sealing	43	227	1,045	1,874	2,673	4,013	4,013	4,013	4,013	4,013	4,013	4,013	4,013	4,013	4,013
Attic Insulation	9	45	209	375	535	535	535	535	535	535	535	535	535	535	535
Low Flow Showerheads	22	114	523	937	1,337	1,337	1,337	1,337	1,337	1,316	1,224	815	400	0	0
Low Flow Faucets	22	114	523	937	1,337	1,337	1,337	1,337	1,337	1,337	1,337	1,337	1,337	1,337	1,337
ARRA Weatherization Program															
CFLs (High Use)	0	555	1,393	1,393	1,393	838	0	0	0	0	0	0	0	0	0
CFLs (Medium Use)	0	555	1,393	1,393	1,393	1,393	1,393	1,393	838	0	0	0	0	0	0
CFLs (Low Use)	0	555	1,393	1,393	1,393	1,393	1,393	1,393	1,393	1,393	1,393	1,393	1,393	1,393	1,393
Air Sealing/Duct Sealing	0	555	1,393	1,393	1,393	1,396	1,396	1,396	1,396	1,396	1,396	1,396	1,396	1,396	1,396
Attic Insulation	0	111	279	279	279	279	279	279	279	279	279	279	279	279	279
Low Flow Showerheads	0	278	697	697	697	697	697	697	697	697	419	0	0	0	0
Low Flow Faucets	0	278	697	697	697	697	697	697	697	697	697	697	697	697	697
Energy Audit & Education															
Deferred Homes	18	199	877	1,766	3,716	3,716	3,716	3,698	3,517	2,839	1,950	0	0	0	0
Energy Kits	0	0	0	0	0	12,850	21,464	32,964	45,964	56,614	67,264	77,914	75,714	77,750	76,900
Touchstone Energy Home Program															
Touchstone Energy Homes	109	135	171	237	313	366	434	477	529	545	545	545	545	545	545
Dual Fuel T E H	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Energy Star Mfg Home	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C&I Energy Efficiency Program															
Projects	17	59	121	204	301	431	562	784	973	1,059	1,146	1,236	1,327	1,420	1,515
Direct Install Projects	0	0	0	0	0	0	33	53	53	53	53	53	53	53	53
Demand Response															
Controlled Water Heaters	451	3,121	5,350	6,753	7,533	8,082	8,485	8,879	9,167	9,314	6,372	4,312	2,829	1,822	1,364
Controlled AC, HP, & Geo	297	2,222	4,269	5,559	6,180	6,850	7,698	8,145	8,472	8,610	4,857	3,561	2,371	1,530	1,229
Additional Savings															
C&I Demand Response - Includes Switches	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C&I EE & Demand Response - Includes Timers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential Demand Response	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential Energy Efficiency	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Total - DSM Participation Forecast

CUMULATIVE PARTICIPANTS

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Residential Lighting Programs															
CFLs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LED Holiday Lights 2009-13	20,367	20,367	20,367	20,367	20,367	14,457	5,552	0	0	0	0	0	0	0	0
LED Lighting	334,921	336,035	336,035	336,035	336,035	336,035	258,156	223,901	188,961	153,322	135,503	126,593	122,138	119,911	118,797
LED Security Lights	60,327	66,274	72,340	78,527	84,837	91,274	97,840	104,537	111,368	118,336	122,897	116,584	113,069	115,330	117,637
Appliance Recycling Program															
Refrigerators	8,374	8,299	8,477	8,615	8,753	8,890	9,028	9,165	9,326	9,489	9,656	9,826	10,000	10,178	10,360
Freezers	1,983	1,943	1,989	2,025	2,060	2,096	2,132	2,167	2,203	2,240	2,278	2,317	2,357	2,398	2,439
Residential HVAC Program															
80 Gal Water Heater	254	128	0	0	0	0	0	0	0	0	0	0	0	0	0
50 Gal Water Heater	3,157	1,532	0	0	0	0	0	0	0	0	0	0	0	0	0
Heat Pump Water Heaters	3,146	3,182	3,098	3,444	3,798	4,159	4,257	4,342	4,429	4,518	4,608	4,700	4,794	4,890	4,988
Central AC Mfg Home (14 SEER)	21	21	21	21	21	21	21	21	21	16	0	0	0	0	0
Central AC (15 SEER)	1,135	1,135	1,135	1,049	815	651	422	185	31	5	0	0	0	0	0
Central AC (16 SEER)	1,476	1,476	1,476	1,429	1,187	1,046	906	678	517	323	0	0	0	0	0
Central AC (17 SEER)	212	212	212	212	212	212	183	159	131	79	0	0	0	0	0
Central AC (18+ SEER)	192	192	192	175	116	85	79	70	58	58	0	0	0	0	0
Heat Pump Mfg Home (14 SEER)	150	168	185	203	220	238	256	275	293	288	259	267	279	290	302
Heat Pump (15 SEER)	3,993	3,995	3,998	3,330	2,347	1,669	1,171	617	156	48	41	43	44	45	45
Heat Pump (16 SEER)	3,479	3,739	4,004	4,093	4,136	4,265	4,448	4,628	4,744	4,723	4,727	4,839	4,936	5,035	5,135
Heat Pump (17 SEER)	1,768	1,915	2,065	2,218	2,372	2,530	2,586	2,686	2,776	2,654	2,693	2,741	2,796	2,852	2,909
Heat Pump (18+ SEER)	1,531	1,657	1,784	1,796	1,751	1,748	1,882	1,988	2,091	2,235	2,283	2,334	2,381	2,428	2,477
Heat Pump Mfg Home (14 SEER) Dual Fuel	16	18	19	20	21	22	24	25	26	28	29	21	22	22	23
Heat Pump (15 SEER) Dual Fuel	595	597	600	480	335	256	162	101	60	38	40	43	44	45	45
Heat Pump (16 SEER) Dual Fuel	822	901	982	1,026	1,079	1,148	1,228	1,296	1,375	1,417	1,452	1,477	1,507	1,537	1,568
Heat Pump (17 SEER) Dual Fuel	429	482	536	590	645	698	755	815	875	927	966	985	1,005	1,025	1,045
Heat Pump (18+ SEER) Dual Fuel	312	341	370	371	365	379	404	428	459	493	517	535	546	557	568
Pump Mfg Home (14 SEER) E. Furnace Replacement	759	846	935	1,026	1,119	1,213	1,310	1,408	1,508	1,535	1,595	1,627	1,660	1,693	1,727
Heat Pump (15 SEER) E. Furnace Replacement	1,522	1,532	1,543	1,396	1,112	943	793	641	272	198	193	193	197	200	205
Heat Pump (16 SEER) E. Furnace Replacement	1,482	1,609	1,738	1,813	1,879	1,993	2,104	2,207	2,277	2,234	2,267	2,317	2,364	2,413	2,461
Heat Pump (17 SEER) E. Furnace Replacement	684	741	798	857	916	977	991	995	1,015	1,019	1,028	1,049	1,070	1,092	1,113
Heat Pump (18+ SEER) E. Furnace Replacement	742	821	900	938	976	1,033	1,115	1,199	1,269	1,347	1,378	1,411	1,431	1,451	1,471
Geothermal Heat Pumps	6,527	6,841	7,162	7,007	6,588	6,313	6,165	6,001	5,954	5,832	5,628	5,750	5,872	5,995	6,120
Mini Split Heat Pump (16 SEER)	48	52	57	62	67	72	77	82	87	93	95	86	87	89	91
Mini Split Heat Pump (17 SEER)	109	125	142	158	175	193	211	229	247	266	285	300	306	312	318
Mini Split Heat Pump (18 SEER)	99	113	127	141	156	171	186	202	218	234	248	257	262	267	273
Mini Split Heat Pump (19 SEER)	22	24	27	29	31	34	36	39	42	44	44	43	44	45	45
Mini Split Heat Pump (20 SEER)	144	162	181	200	220	240	260	281	302	323	339	343	349	356	364
Duct Sealing	2,887	2,887	2,887	2,887	2,887	2,887	2,887	2,887	1,333	0	0	0	0	0	0
Attic Insulation 2015	868	868	868	868	868	868	868	868	868	868	868	868	868	868	868
Hoosier Weatherization Program															
CFLs (High Use)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CFLs (Medium Use)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CFLs (Low Use)	2,673	2,673	2,673	2,673	2,673	2,630	2,446	1,628	799	0	0	0	0	0	0
Air Sealing/Duct Sealing	4,013	3,970	3,786	2,968	2,139	1,340	0	0	0	0	0	0	0	0	0
Attic Insulation	535	535	535	535	535	535	535	535	535	535	535	535	535	535	535
Low Flow Showerheads	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Low Flow Faucets	1,316	1,224	815	400	0	0	0	0	0	0	0	0	0	0	0
ARRA Weatherization Program															
CFLs (High Use)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CFLs (Medium Use)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CFLs (Low Use)	1,393	1,393	1,393	1,393	1,393	1,393	838	0	0	0	0	0	0	0	0
Air Sealing/Duct Sealing	1,396	1,396	841	3	3	3	0	0	0	0	0	0	0	0	0
Attic Insulation	279	279	279	279	279	279	279	279	279	279	279	279	279	279	279
Low Flow Showerheads	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Low Flow Faucets	697	419	0	0	0	0	0	0	0	0	0	0	0	0	0
Energy Audit & Education															
Deferred Homes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Energy Kits	87,550	99,050	110,550	122,050	133,550	145,050	156,550	155,050	155,900	156,750	157,600	158,450	159,300	160,150	161,000
Touchstone Energy Home Program															
Touchstone Energy Homes	545	545	545	545	545	436	410	374	308	233	179	111	68	68	68
Dual Fuel T E H	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Energy Star Mfg Home	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C&I Energy Efficiency Program															
Projects	1,595	1,652	1,691	1,708	1,712	1,712	1,712	1,712	1,712	1,712	1,712	1,712	1,712	1,712	1,712
Direct Install Projects	53	53	53	53	53	53	53	53	53	53	53	20	0	0	0
Demand Response															
Controlled Water Heaters	1,132	1,038	944	1,043	1,144	1,247	1,218	1,243	1,268	1,293	1,319	1,345	1,372	1,400	1,428
Controlled AC, HP, & Geo	1,001	738	661	731	803	876	866	883	901	919	938	956	975	995	1,015
Additional Savings															
C&I Demand Response - Includes Switches	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C&I EE & Demand Response - Includes Timers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential Demand Response	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential Energy Efficiency	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Total - End-Use Level Energy and Demand Savings

ENERGY PROGRAM SAVINGS (in MWh)

Program Savings Totals in MWh	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Residential EE Programs	23057	42078	69017	85292	100049	110097	114570	119577	126944	128690	135192	142516	144970	151841	158218
Commercial/Industrial EE Programs	1362	6206	9297	13641	19190	28308	43417	66263	83619	89374	94431	99590	104851	110218	115692
Subtotal MWh Savings	24418	48284	78314	98932	119238	138404	157986	185839	210563	218064	229624	242105	249821	262059	273911

SUMMER DEMAND PROGRAM SAVINGS (in MW)

Program Savings Total in MW	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Residential EE Programs	2.849	5.681	9.460	11.856	14.076	17.006	19.971	21.565	20.991	20.486	20.563	20.874	20.231	20.129	19.935
Commercial/Industrial EE Programs	0.203	1.080	1.692	2.399	2.904	3.565	5.682	10.144	13.029	14.237	15.289	16.362	17.457	18.574	19.713
Residential DR Programs	0.477	3.470	6.409	8.260	9.193	10.083	11.092	11.697	12.131	12.326	7.407	5.287	3.505	2.261	1.777
Commercial/Industrial DR Programs	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Subtotal Summer MW Savings	3.530	10.232	17.561	22.515	26.173	30.654	36.745	43.405	46.152	47.049	43.259	42.523	41.193	40.964	41.425

WINTER DEMAND PROGRAM SAVINGS (in MW)

Program Savings Total in MW	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Residential EE Programs	8.025	16.217	25.021	30.709	35.747	40.079	48.882	52.677	55.150	55.568	57.291	59.533	60.935	63.179	65.484
Commercial/Industrial EE Programs	0.170	0.971	1.577	2.435	2.817	3.469	5.598	10.215	13.121	14.326	15.416	16.527	17.661	18.817	19.996
Residential DR Programs	0.361	2.497	4.280	5.402	6.026	6.466	6.788	7.103	7.334	7.451	5.097	3.450	2.263	1.458	1.091
Commercial/Industrial DR Programs	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Subtotal Winter MW Savings	8.555	19.685	30.878	38.547	44.591	50.013	61.268	69.995	75.605	77.346	77.804	79.510	80.859	83.453	86.571

EE = Energy Efficiency
DR = Demand Response

Total - End-Use Level Energy and Demand Savings

ENERGY PROGRAM SAVINGS (in MWh)

Program Savings Totals in MWh	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Residential EE Programs	172102	184932	197599	207509	216240	226259	234076	241350	248301	256231	264095	263961	265241	269819	274492
Commercial/Industrial EE Programs	119914	120765	123484	125065	125560	122486	113421	96619	85306	85595	86582	87467	88249	88927	89496
Subtotal MWh Savings	292016	305698	321083	332574	341800	348745	347497	337969	333607	341826	350677	351428	353490	358745	363988

SUMMER DEMAND PROGRAM SAVINGS (in MW)

Program Savings Total in MW	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Residential EE Programs	20.689	21.275	21.475	20.500	19.528	18.885	17.838	16.580	15.526	15.134	14.760	14.922	15.112	15.343	15.583
Commercial/Industrial EE Programs	20.671	20.979	21.577	22.103	22.855	23.452	22.592	19.388	17.760	17.810	18.016	18.200	18.363	18.503	18.622
Residential DR Programs	1.456	1.157	1.041	1.152	1.264	1.379	1.357	1.384	1.412	1.440	1.469	1.498	1.528	1.558	1.590
Commercial/Industrial DR Programs	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Subtotal Summer MW Savings	42.816	43.411	44.093	43.755	43.648	43.716	41.786	37.352	34.698	34.384	34.244	34.619	35.002	35.405	35.794

WINTER DEMAND PROGRAM SAVINGS (in MW)

Program Savings Total in MW	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Residential EE Programs	69.008	72.491	75.822	75.738	74.107	73.196	72.224	71.194	70.188	69.458	68.969	69.584	70.390	71.633	72.903
Commercial/Industrial EE Programs	21.029	21.455	22.101	22.519	23.439	24.090	23.262	19.947	18.343	18.440	18.652	18.843	19.011	19.157	19.279
Residential DR Programs	0.906	0.831	0.755	0.834	0.915	0.998	0.975	0.994	1.014	1.034	1.055	1.076	1.098	1.120	1.142
Commercial/Industrial DR Programs	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Subtotal Winter MW Savings	90.942	94.777	98.678	99.091	98.461	98.283	96.461	92.135	89.545	88.932	88.676	89.503	90.499	91.910	93.324

EE = Energy Efficiency
DR = Demand Response

Appendix H

Integrated Resource Plan – Calculation Documentation

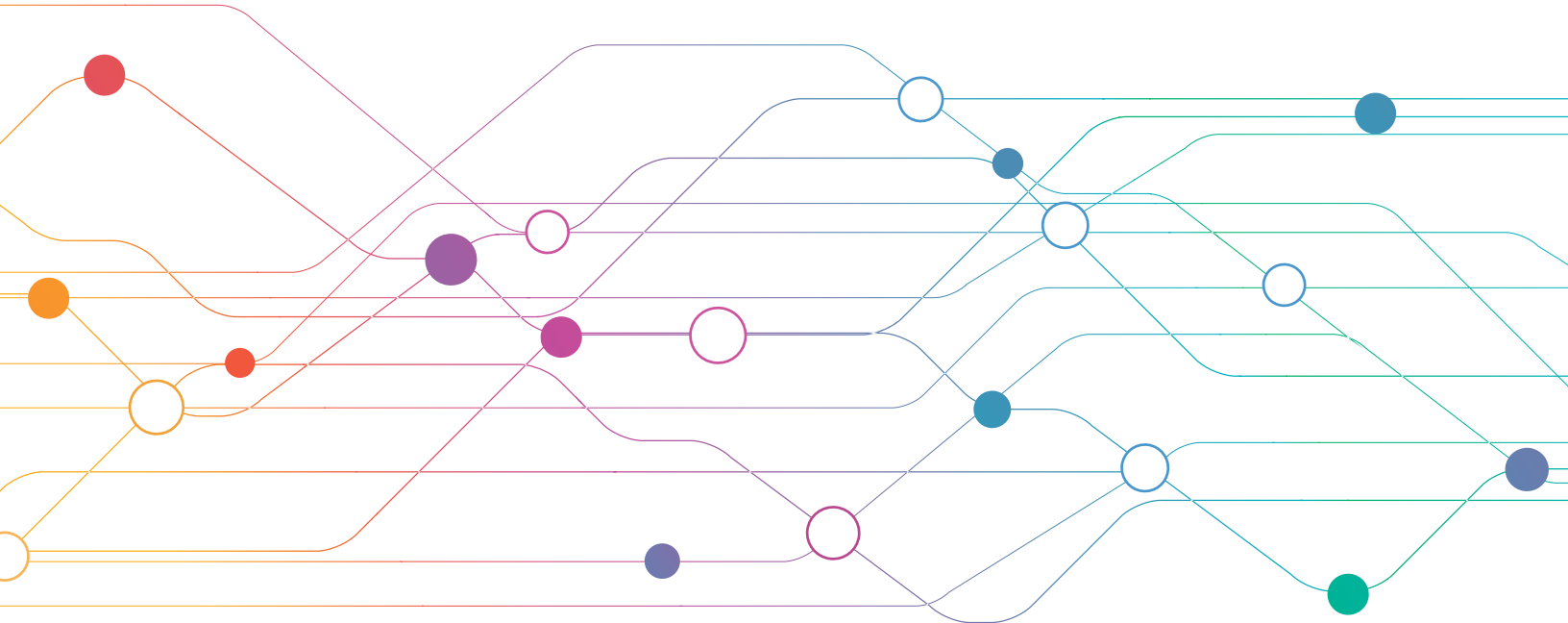
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Appendix I

Integrated Resource Plan Summary

2020 EXECUTIVE SUMMARY

INTEGRATED RESOURCE PLAN

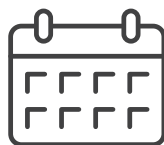


HOOSIER
ENERGY

THE INTEGRATED RESOURCE PLANNING PROCESS



Requirements
considered



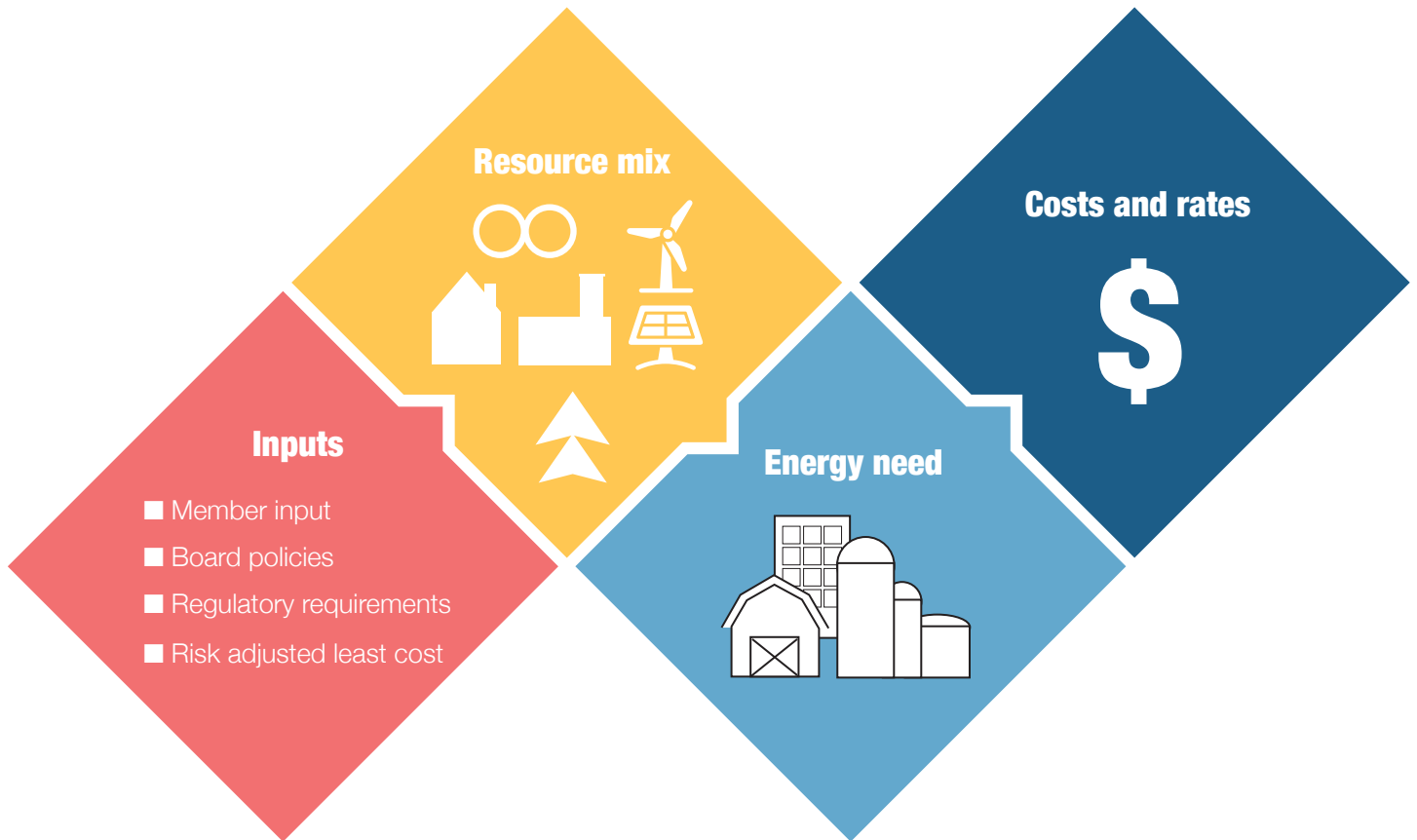
Timeline
established



Resources
evaluated

WHAT IS RESOURCE PLANNING?

Key features



The resource planning process projects future consumer needs and comprehensively evaluates options for meeting those needs.

Resource plan inputs include:

- Energy, peak demand and customer forecasts
- Resource strategies, regulatory policies and member input
- Cost estimates for current and future resources including capital, fixed and variable operating and maintenance costs

- Market projections for commodities

Risk analysis

Inputs for the resource planning process are not absolute. Variables are stressed to understand the implications and interaction of inputs and impacts on costs and rates.

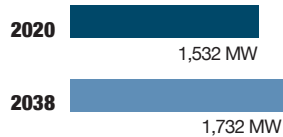
Uncertain future

Resource plans will change over time. Course adjustments will reflect input from members and regulators, changes in growth patterns and financial considerations.

THE HOOSIER ENERGY POWER NETWORK

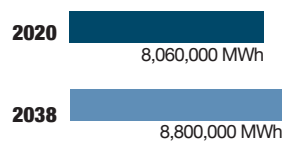
Peak demand

Member peak demand is projected to increase 13 percent by 2038.



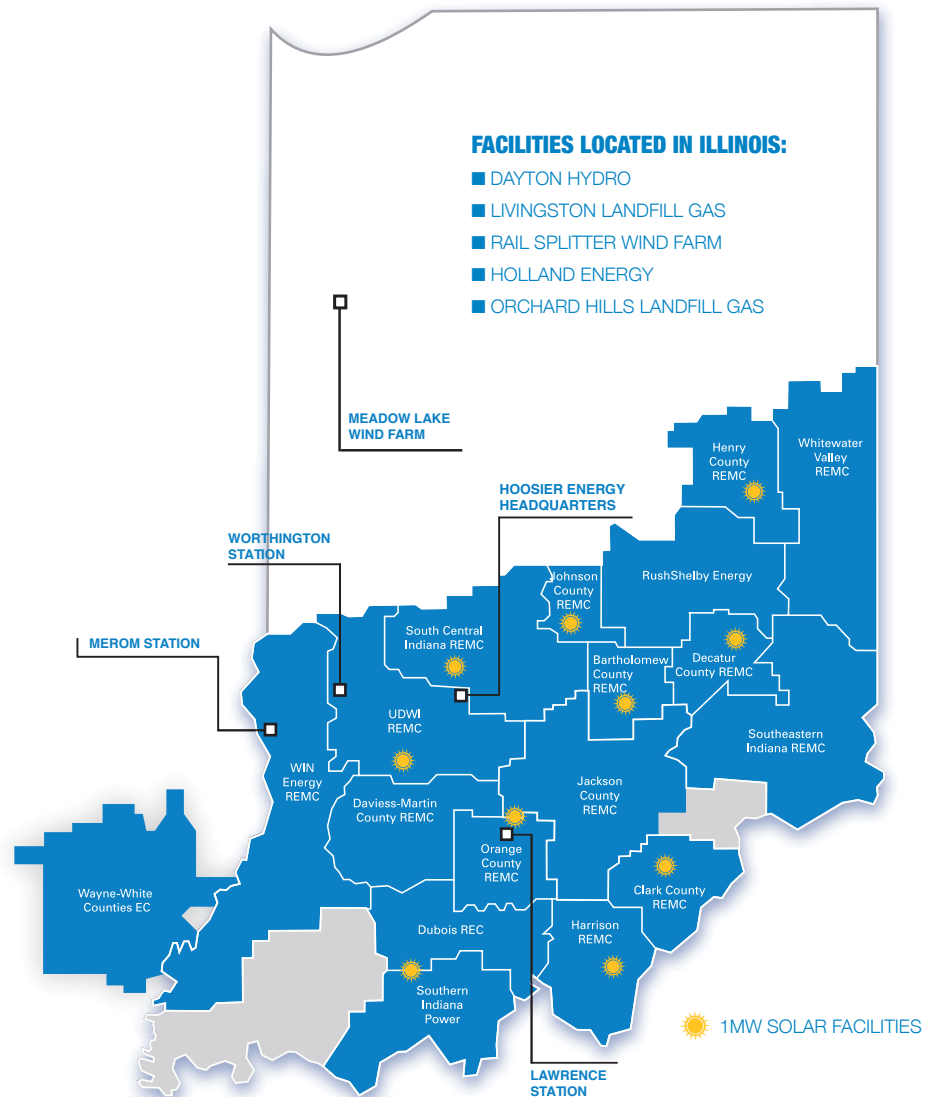
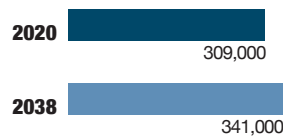
Energy requirements

Member energy needs are projected to increase 9 percent by 2038.



Number of meters

The number of meters are expected to increase 10 percent by 2038.



ELECTRIC CONSUMER FACTS

73%

Consumers who use LED light bulbs.

46%

Consumers who use programmable thermostats.

1,400

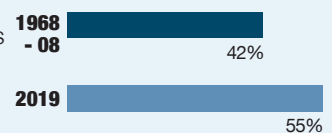
Estimated number of homes with plug-in electric or plug-in hybrid vehicles.

1,227 kWh

Since 2007, average household monthly electricity use has remained steady.

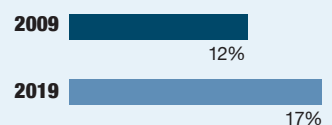
Growing market share for electric heat

From 1968 to 2008, 42 percent of new homes use electric heat. Since 2008, 55 percent of new homes use electric heat.



Growing market share for heat pumps

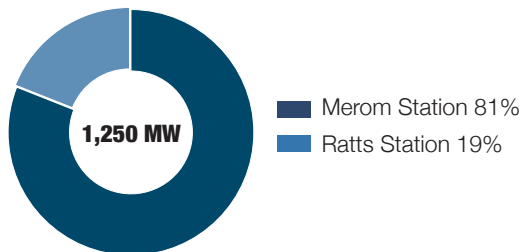
Use of heat pumps for air conditioning has continued to increase.



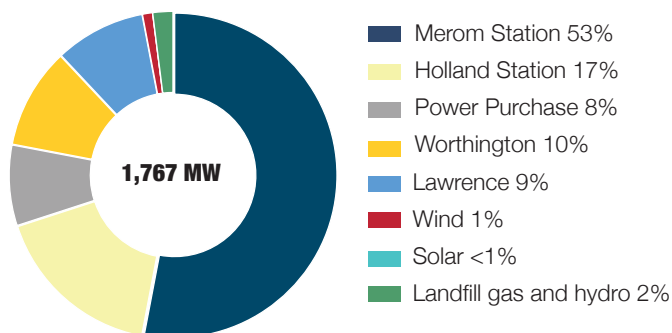
MEETING MEMBER NEEDS

The Hoosier Energy portfolio has grown and diversified to meet member needs and manage risk.

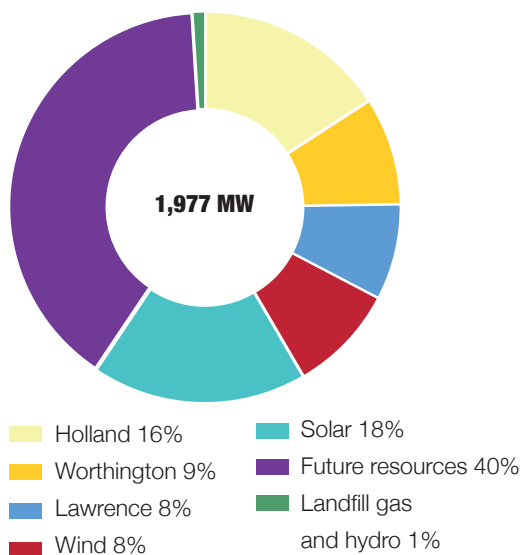
2000 CAPACITY



2020 CAPACITY



2030 CAPACITY



Changes from 2000 to 2020

- Increased portfolio size (in MW) about 41 percent between 2000 and 2020.
- Established target of 10% renewables by 2025 resulted in the addition of wind, solar, landfill gas and hydro resources.
- Added natural gas resources to lessen coal dependency
- Added purchased power agreements to shift operating risk
- Established MISO market, which provides price transparency, reserve sharing, and facilities financial hedging.

Expected changes from 2020 to 2030

- Board adopted long range resource plan that contemplates Merom retirement in 2023
- This decision was made after year-long stakeholder process with the Board to fully explore all options and based upon the following Board-established criteria:
 - Wholesale rates
 - Rate stability
 - Resource Diversity
 - Sustainability
 - Employee impacts
- Replacement resources are expected to include a combination of wind, solar, natural gas and purchased power.
- Increase market reliance in recognition of low price environment

RESOURCE MIX 2020



Baseload

Baseload resources refer to units with higher capacity factors that are available to operate throughout the year. Other resources could provide baseload energy but far less economically.

The coal-fired Merom Station has a production capacity of nearly 1,000 MW and complies with all emission requirements. Other resources include the 150 MW Purchased Power Agreements.



Peaking

Peaking resources provide energy on very short notice to meet customer energy needs during very few hours of the year. Natural gas combustion turbines are ideal for this application and demand response can help meet this need.

Lawrence and Worthington generating stations efficiently provide electricity from natural gas turbines to meet short term needs. Fast start capability adds power supply flexibility and the units help meet MISO reserve requirements.



Intermediate

Intermediate resources provide energy for extended periods of the day. These resources are used to meet increasing demand in weekday hours. A combined cycle natural gas power plant is this type of resource.

Holland Energy, the 613 MW natural gas combined cycle plant jointly owned with Wabash Valley, is an important component of the portfolio that typically provides needed energy during peak months.



Energy Efficiency

Consumers can help manage system demand through energy efficiency. When consumers use new strategies, products and technologies to reduce consumption, the effect can be equivalent to adding generation.

In 2019, annual savings from demand-side management programs totaled 26,300 MWh. Summer demand was reduced by 17 MW and winter demand reduced by 20 MW.

RESOURCE MIX 2020



Wind

Federal production tax and investment tax credits have helped make wind resources an attractive economic option for adding energy to the generation portfolio. Wind resources operate intermittently and provide less capacity value during the peak summer and winter periods. For example, MISO currently assigns an initial capacity value of 15% of nameplate capacity for wind. Therefore, portfolios that contain a high level of wind resources may require supplemental resources to meet planning reserve requirements.

Hoosier Energy currently purchases 100 MW of wind through two separate PPAs. In addition, current portfolio modeling performed for the IRP suggests the addition of a significant amount of wind resources in future years.



Solar

Tax incentives, public policy requirements and increasing consumer support have led to widespread construction of solar projects across the nation.

During recent years, solar costs have fallen to levels that are more economic than new coal and competitive with new gas-fired generation, leading to rapid development of these resources. In addition, under the current MISO capacity construct, solar resources provide a higher capacity value than wind resources.

Hoosier Energy will add 200 MW of solar generation to the resource mix when the Riverstart solar PPA begins in 2022. Future additions of solar generation to the resource portfolio are expected to economically serve member load.



Other renewables

Other renewable generation resources includes hydro and biomass facilities, which can be cost-effective due to low fuel costs. These resources are generally small (less than 20MW) and there are limited opportunities for development. The current portfolio includes both a hydro PPA and ownership of two landfill gas-fired resources.



Market purchases

The forward power market remains a viable alternative to satisfy a portion of member needs. Recently, the impact of low natural gas and renewables prices has been depressed market power prices, thereby placing increasing pressure on coal-fired generation. Improvements in gas-extraction technology have increased sources of supply beyond those traditionally counted upon to supply markets and driven natural gas prices lower. Renewables prices have declined as lower capital costs and favorable policies have led to increased market penetration.

In the intermediate-to-longer-term, it is anticipated that downward price pressures will continue from gas-fired generation and renewables, particularly solar, as well as from limited load growth. Long-term market exposure can be hedged through assets or purchased power agreements.

KEY RISKS



Environmental rules and regulations

The Trump administration's EPA proposed the Affordable Clean Energy Rule (ACE) to effectively repeal and replace the Obama administration's Clean Power Plan (CPP), which would have required a 32 percent reduction in power plant CO₂ emissions. The ACE rule was initially released in August 2018 with the final rule issued by the EPA in June 2019. The ACE rule establishes emission guidelines for states to limit CO₂ emissions of coal-fired electric generating units and empowers states to develop plans to reduce greenhouse gases. The ACE rule directs States to establish performance standards for power plants based solely on heat rate improvements and includes a list of "candidate technologies"

for improving heat-rate efficiency. IDEM is currently developing a plan to comply with ACE for the State of Indiana.

The EPA's repeal of the CPP and replacement with the ACE rule has been challenged by more than two dozen States and numerous interest groups. It's currently unclear how the Courts will rule. The ongoing legal battles are expected to continue for some time perpetuating uncertainty around potential CO₂ emissions limitations for coal-fired power plants. Regardless of the ultimate outcome of all this litigation, most industry observers project that some type of regulation limiting carbon emissions will be effective later in the 2020s.

Market price risk

The resource planning process includes market price forecasts for power, natural gas, capacity and other commodities. These forecasts change over time and dramatic changes, such as price spikes or an economic recession, will have material impact on expected outcomes.

While several market price scenarios are incor-

porated into the portfolio modeling to attempt to recognize a variety of market futures, it's impossible to capture all variability. Therefore, the Integrated Resource Plan should be viewed as a snapshot in time based upon current market forecasts and economic assumptions. The resources selected as part of the IRP process are highly dependent upon market price and will change over time.

KEY RISKS



Transmission price constraints

Congestion is a significant cost risk. Congestion is a result of the locational marginal pricing (LMP) methodology, which reflects the value of energy at specified locations throughout the MISO footprint. If the same priced electricity can reach all locations throughout the grid, then LMPs are the same. When there is transmission congestion generally caused by heavy use of the transmission system, energy cannot flow either from or to other locations. This forces more expensive and/or more advantageously located electricity to flow in order to meet the demand. As a result, the LMP is higher in the constrained locations.

Hoosier Energy has worked with both ACES and outside consultants to analyze congestion between the generation stations and the Hoosier load zones. The analysis, which includes the MISO-approved transmission expansion plans, generally shows some

improvement to congestion impacts even though construction of those lines is currently impacting dispatch of generating units. Therefore, long-term congestion impacts appears to be a low risk at this time.

Hoosier Energy's success in preserving grandfathered agreements (GFAs) provides congestion and transmission cost benefits to members. GFAs act as a hedge against congestion costs and GFAs are exempt from charges for the largest and most expensive MISO transmission projects.

MISO is in the process of developing another portfolio of projects. This is a multi-year study to position the grid in support of changing resource mix. Therefore, Hoosier Energy continues to face transmission cost risk from new transmission projects authorized by MISO.

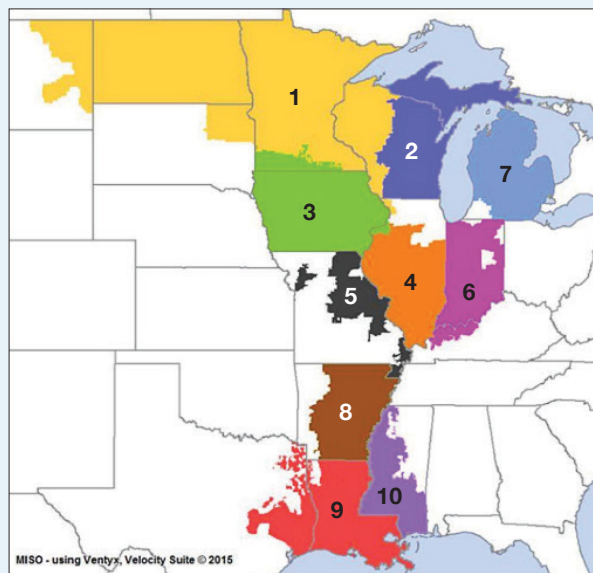
KEY RISKS

Midcontinent Independent System Operator

The MISO footprint is divided into 10 zones for resource adequacy purposes. The purpose of the zones is to reflect transmission capability between the zones and ensure reliability during peak conditions. Hoosier Energy has generation and load in two zones: Zone 6 (Indiana) and Zone 4 (Illinois). Hoosier Energy has a capacity deficit in Zone 6 of roughly 200 MW that is offset by excess resources of the same amount in Zone 4. Overall, Hoosier Energy's capacity resource portfolio is balanced.

The results of a recent MISO Survey indicate that, based on current assumptions, there are sufficient resources to serve expected load through the 2025-26 Planning Year. This means that short-term capacity should be available and relatively inexpensive versus the long-term cost of dispatchable generation assets. In addition, ACES recently concluded in its annual Capacity Outlook that separation between Zones 4 and 6 is unlikely over the next few years. Therefore, given limited load growth and ongoing transmission investment, the price differential between the two zones should remain manageable. However, these are projections that may change, especially if load growth is different than expected and/or due to unanticipated resource retirements. MISO continues to propose changes to this construct with the stated goal of further enhancing long-term resource adequacy.

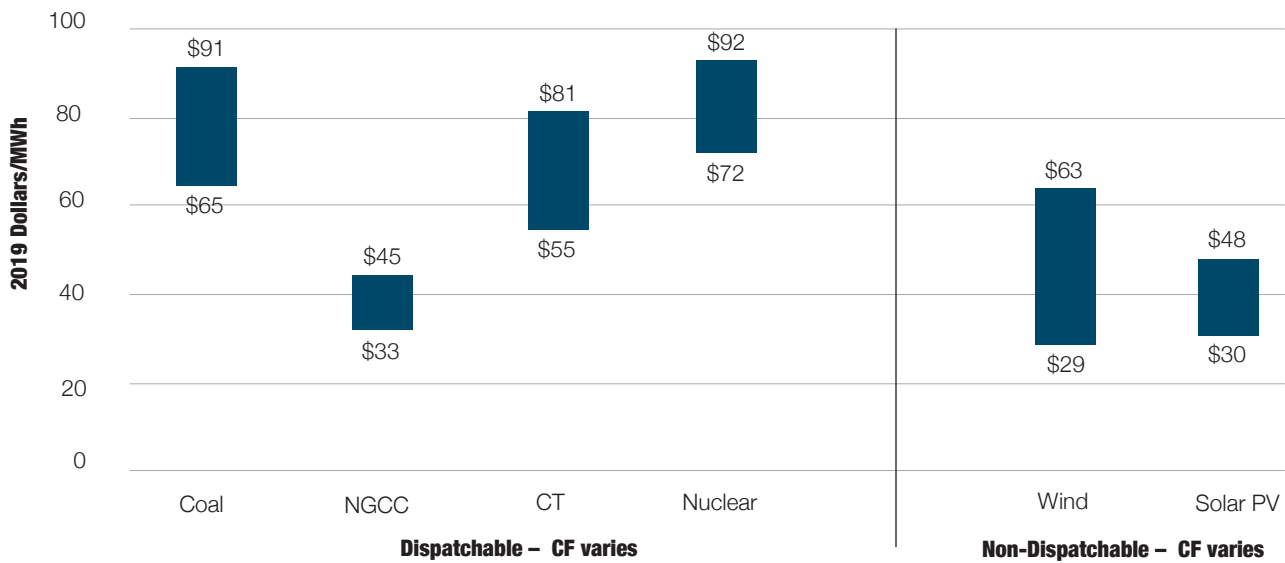
In 2018, MISO introduced its Resource Availabil-



ity and Need (RAN) initiative, with the goal of assuring the conversion of committed capacity resources into sufficient energy every hour of the Planning Year. MISO has divided implementation into phases, with those proposals that could be more easily accomplished addressed earlier in the process. Phase 1 was implemented in 2019 and included changes to Load Modifying Resource and Outage Scheduling requirements. Phases 2 and 3 are currently in the stakeholder discussion phase and include a focus on resource accreditation and the potential move to a sub-annual Resource Adequacy construct. Tariff revisions are expected to be filed at FERC in mid-2021, with implementation proposed for the Planning Year 2022 – 23 Planning Resource Auction.

ENERGY COST OF NEW GENERATION

The chart below reflects the U.S. Energy Information Administration's forecasted ranges of levelized cost of electricity for new generation resources entering service in 2025, based on current dollars. The referenced coal facility includes carbon capture and storage and is assumed to remove 90 percent of the plant's CO2 emissions. This chart indicates that gas-fired, wind and solar generation will be the most economic alternatives as generation portfolio additions. While wind and solar generation may be less expensive on a levelized cost basis than some alternatives, they are intermittent energy sources. The future development of economic utility-scale storage is expected to increase the value of intermittent resources.



Source: Energy Information Administration

Counterparties

Hoosier Energy members are well served by maintaining a mix of owned and purchased resources. In addition to the purchased power agreements, Hoosier Energy uses PPAs to acquire wind, solar and hydro renewable resources. Hoosier Energy-owned generation includes a mix of sole and jointly-owned facilities.

Future resource options will likely include additional partnerships with existing or new Counterparties to meet capacity and energy requirements. In addition to traditional PPAs, options may include shared ownership or Hoosier Energy taking a partial interest in generation resources owned by other companies.

RESOURCE CHANGES

2020-2023

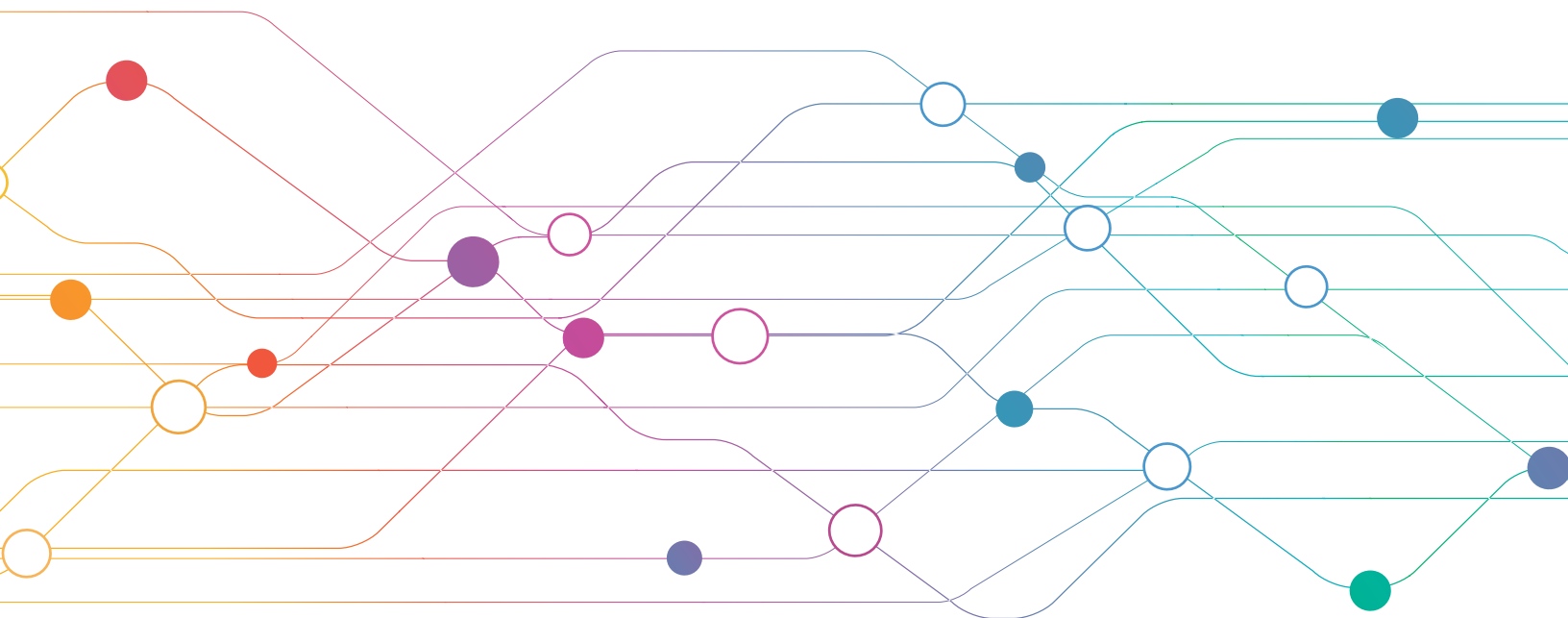
RESOURCE CHANGES:

- 200 MW Riverstart solar PPA begins in 2022.
- Expected retirement of 1,000 MW Merom Station in 2023.
- 100 MW PPA expires after Dec. 31, 2023.
- Portfolio modeling suggests the addition of 800 MW of wind PPAs, 500 MW of solar PPAs and 300 MW of natural gas-fired resources.

RESOURCE CHANGES:

- Portfolio modeling suggests the addition of 200 MW natural gas-fired resources in 2024.
- 50 MW PPA expires after Dec. 31, 2025.
- The capacity expansion plan projects a need for capacity in 2026, which allows for resource flexibility.

2023 and beyond



ACTION PLAN

MARKET INTERACTIONS

In the near-term, Hoosier Energy will use market purchases/sales to meet short-term needs. Longer-term, market interactions will be used to balance the resource portfolio, as necessary. Hoosier Energy will also employ hedging strategies to reduce market price risk, monitor markets for opportunities and explore opportunities to hedge capacity differential between MISO zones.

WIND AND SOLAR RESOURCES

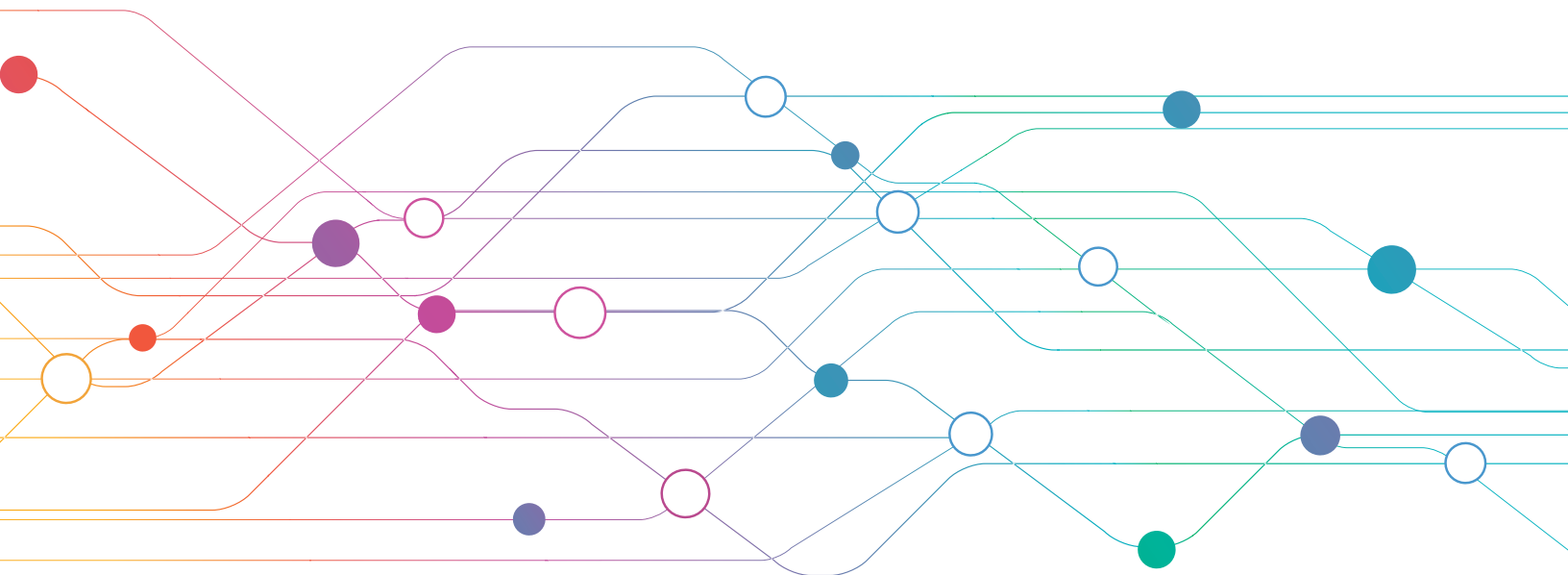
Expected future changes to the portfolio mix will highlight the benefit of adding wind and solar resources to economically serve member load. Hoosier Energy will add 200 MW from the Riverstart PPA in 2022 and will pursue additional wind and solar resources in subsequent years. Future resources are expected to be added through PPAs.

CARBON EMISSIONS

Many utility industry forecasters anticipate some form of carbon regulation to become effective by the late-2020s. Several scenarios incorporating that assumption were included in the portfolio modeling, which led to increased additions of wind, solar and storage resources.

LONG -TERM NEEDS

Hoosier Energy worked with Charles River Associates to perform a resource screening and portfolio analysis, including a comprehensive analysis of portfolio performance under differing economic and regulatory scenarios. The analysis consisted of a 20-year forward assessment of the member load forecast and resources required on a low cost and reliable basis. The preferred strategy is to retire Merom in 2023 and replace with a portfolio of wind, solar, natural gas and market resources.



ACRONYMS USED

ACES

Alliance for Cooperative Energy Services

CF

Capacity Factor

CO₂

Carbon Dioxide

CPP

Clean Power Plan

CT

Combustion Turbine

EPA

Environmental Protection Agency

FERC

Federal Energy Regulatory Commission

FIP

Federal Implementation Plan

GFA

Grandfathered Agreements

IDEM

Indiana Department of Environmental Management

kWh

Kilowatt-hour

LED

Light-emitting diode

LMP

Locational Marginal Price

MISO

Midcontinent Independent System Operator

MW

Megawatt

MWh

Megawatt-hour (equivalent to 1,000 kWh)

NG

Natural Gas

NGCC

Natural Gas Combined Cycle

PPA

Purchased Power Agreement

HOOSIER
ENERGY

A Touchstone Energy® Cooperative 

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Appendix J

Cross-Reference to Proposed Rule