



# Duke Energy Indiana Presentation to Indiana Utility Regulatory Commission

Doug Esamann, President, Duke Energy Indiana  
May 24, 2011

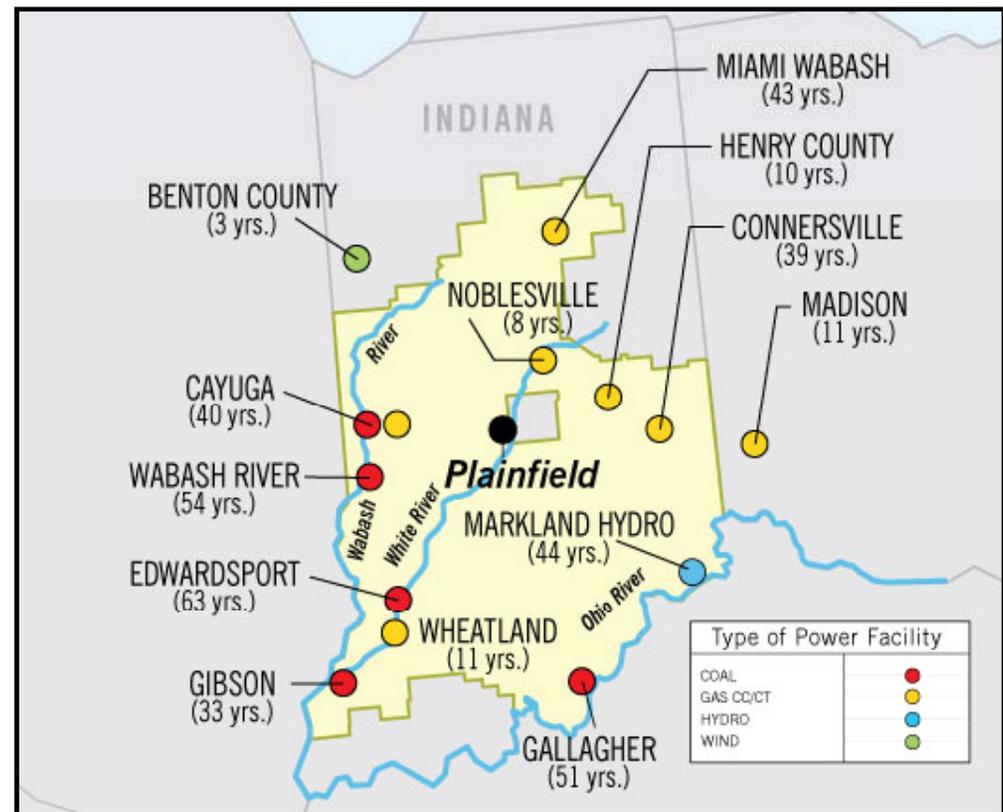


## OVERVIEW OF PRESENTATION

- Duke Energy Indiana at a glance
- Operational challenges / accomplishments since summer 2010
- Summer 2011 capacity and energy needs
- Steps taken to prepare for summer 2011
- Challenges for summer 2011 and beyond

# DUKE ENERGY INDIANA AT A GLANCE

- Coverage: 69 of 92 counties
- 790,000 Customers
- Capacity by fuel type
  - Coal 71.7%
  - Gas 24.1%
  - Oil 3.6%
  - Hydro 0.6%
- Average age of coal plants = 47 years
- 14 million tons of coal burned annually
- 5872 miles of transmission lines\*



\* Including IMPA's and WVPA's portions of Joint Transmission System

# OPERATIONAL CHALLENGES/ ACCOMPLISHMENTS SINCE SUMMER 2010

- Challenges
  - April 19 wind storm
  - January 31 ice storm
  - Gibson 1 forced outage
- Accomplishments
  - Storm restoration
  - Wabash River Units 2, 3, and 5 NSR order reversal
  - Continuous runs on units
  - Coal inventory levels trending toward normal levels

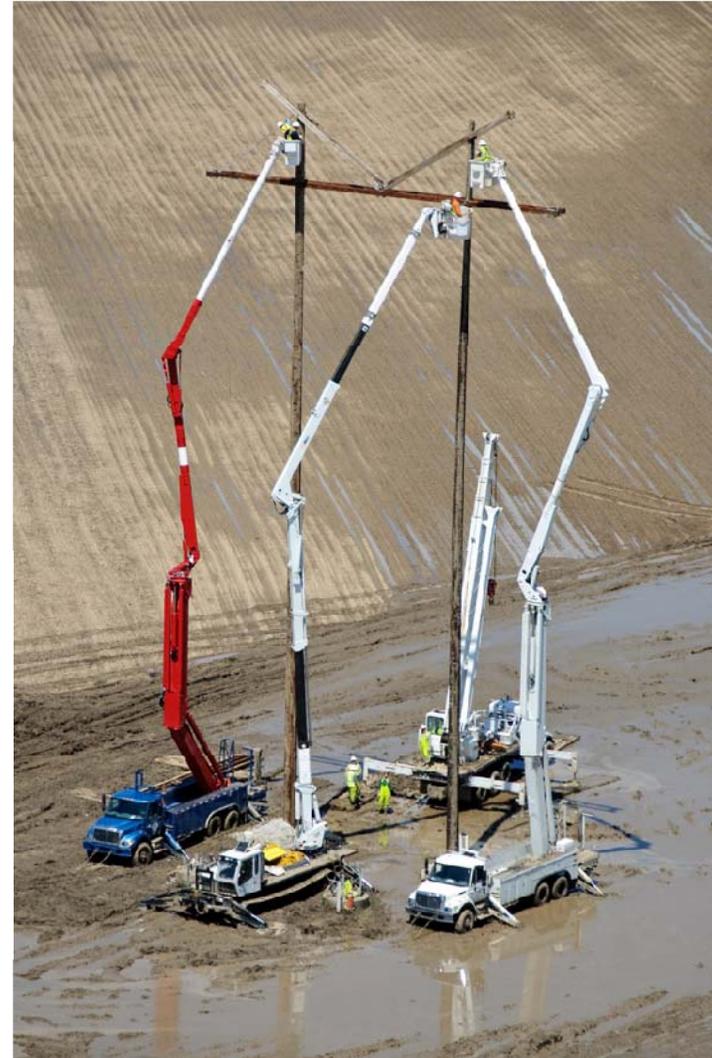


April 19 Storm Damage and Restoration Efforts



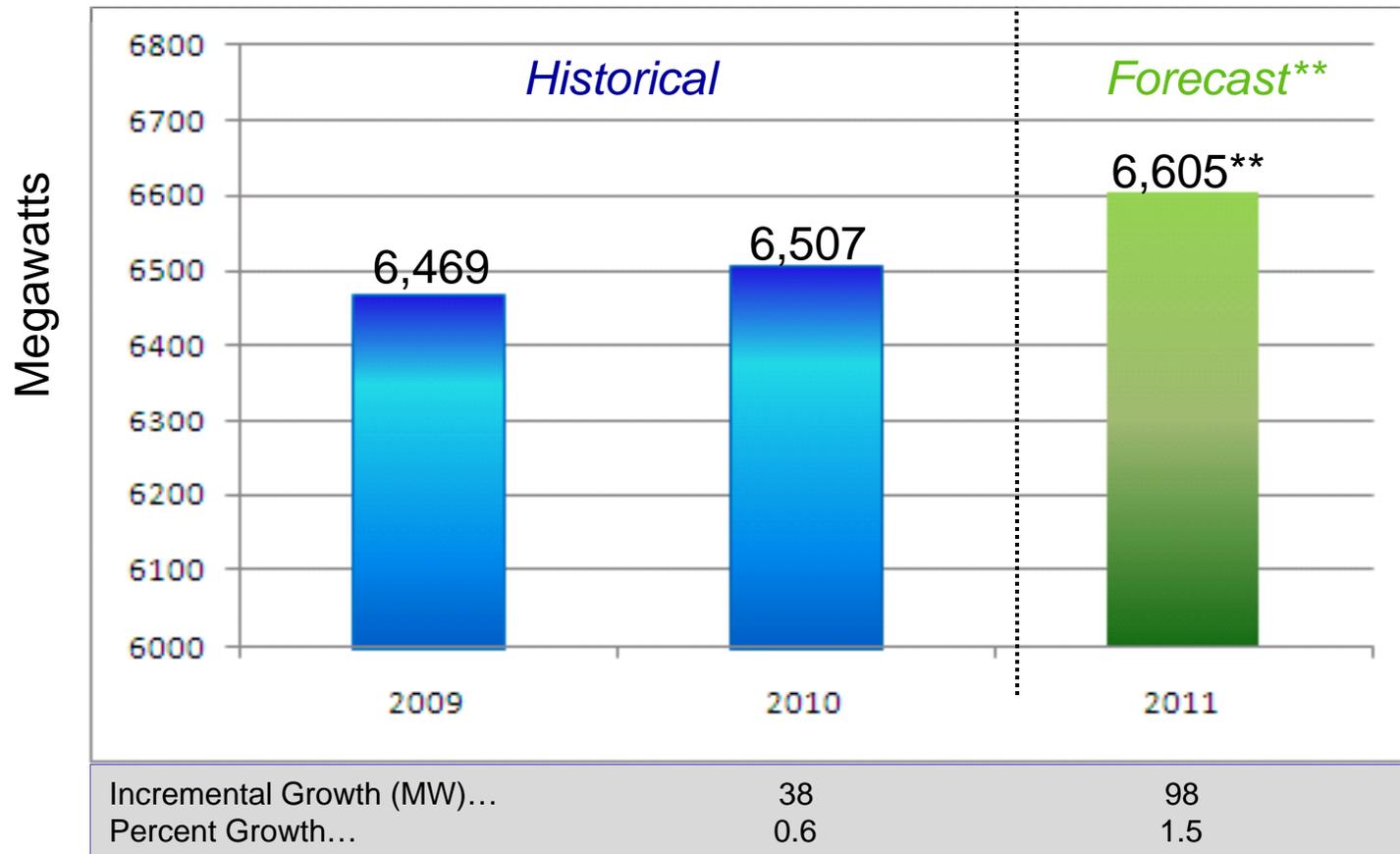






# PEAK DEMAND FORECAST

Weather Normalized Peak Load

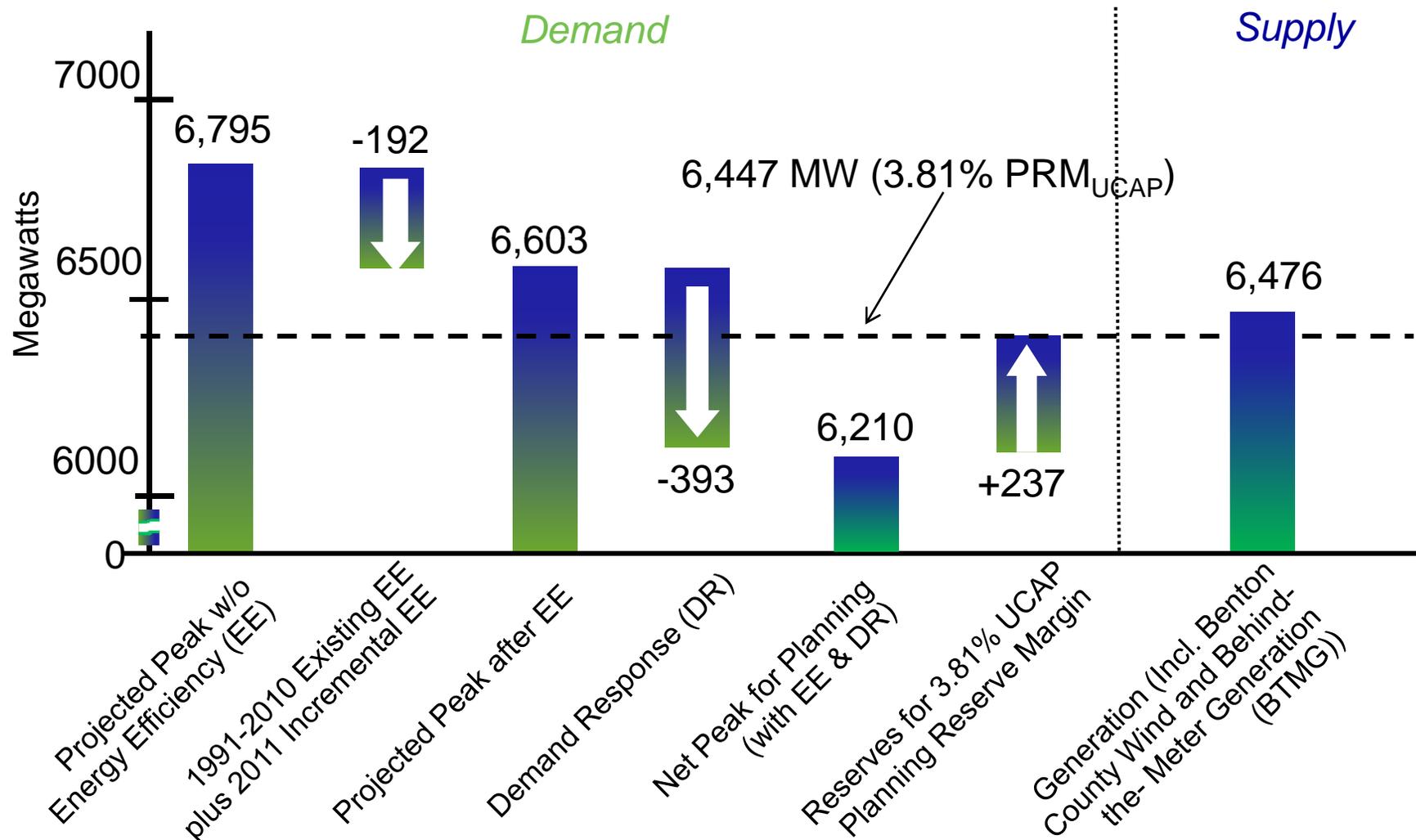


\* Using July, which is the peak load month

\*\* Peak load not reduced for 2 MW incremental EE for 2011

# Summer 2011 Capacity and Energy Needs

## SUPPLY / DEMAND BALANCE FOR SUMMER 2011\*



\* Using July, which is the peak resource requirement month; UCAP basis

## GENERATION SYSTEM



Cayuga Station

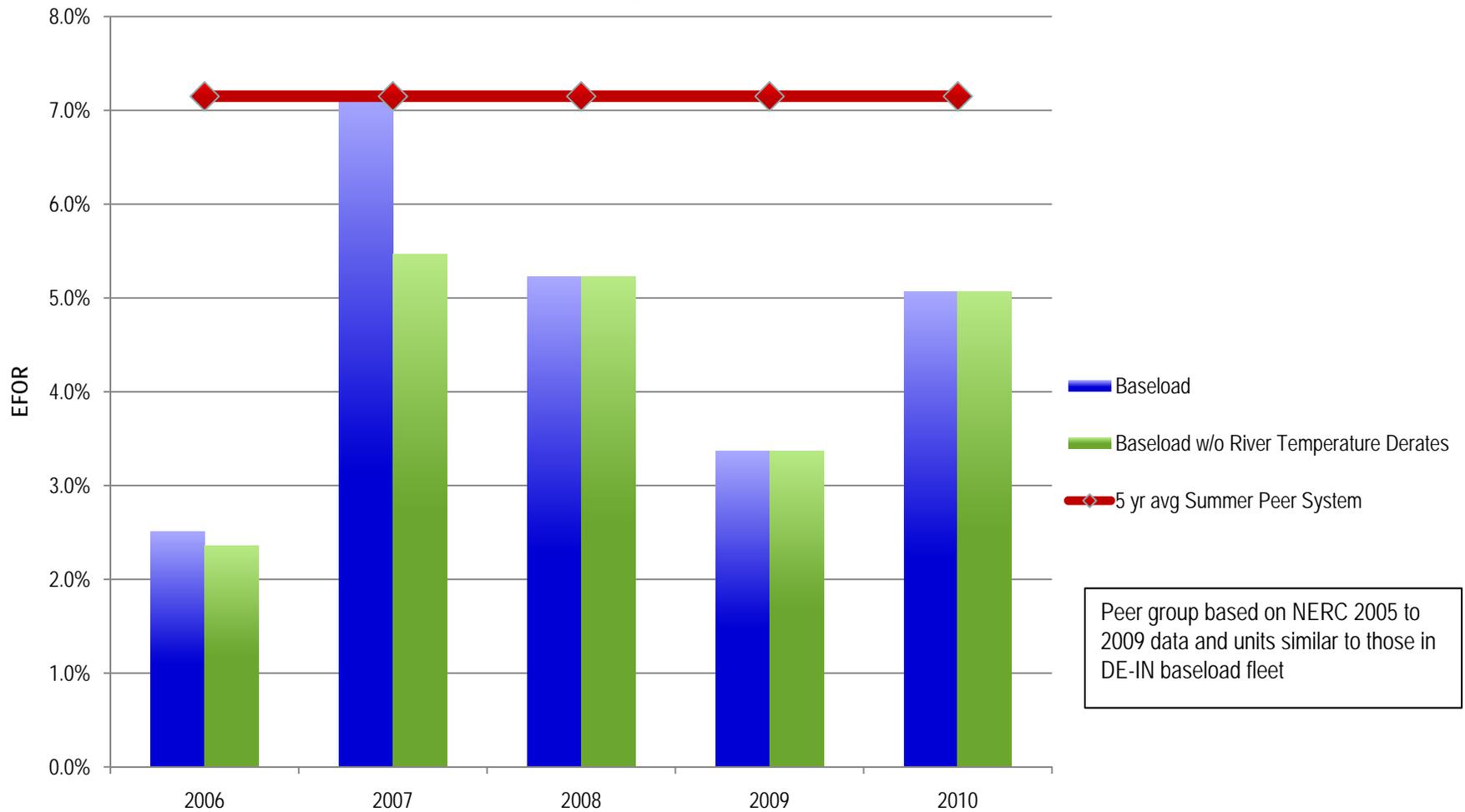
- Over 42 weeks of maintenance outages were performed this spring
- All units are available this summer except:
  - Wabash River 5 planned to restart mid-summer from NSR order reversal
  - Henry County 1 (43 MW CT) expected to be available mid-to-late June
  - Miami Wabash 4 (17 MW oil-fired peaker) will be retired 6/1/2011
  - Edwardsport 6-8 retired 3/1/2011
- Continued focus on:
  - Summer reliability
  - A program of "availability outages"
  - System-wide and plant-wide contingency planning

# Summer 2011 Preparation



## EQUIVALENT FORCED OUTAGE RATE (EFOR)

### Summer Baseload EFOR



## FORWARD PURCHASED CAPACITY AND ENERGY

- Current on-system reserve margin is above the Midwest ISO Resource Adequacy Requirement of 3.81% on a UCAP basis
  - No PRC purchases were necessary
- Financial swaps will be used to hedge against wholesale market price volatility
- 100 MW PPA with Benton County Wind Farm (20-year agreement)



Dispatch Center

## Summer 2011 Preparation

# ENERGY EFFICIENCY AND DEMAND RESPONSE PROGRAMS

- From 1991 through 2010, Energy Efficiency (*i.e.*, conservation) programs have achieved:
  - Approximately 190 MW of annual peak demand reductions
  - Over 774,303 MWh annual energy reductions



Power Manager Switch Installation

- 2011 projected Demand Response reductions in July (adjusted for losses where applicable):
  - Special contracts (*e.g.*, interruptible) 194 MW
  - PowerShare®
    - Call (customer contractual commitment)
    - Demand Resources (DR) 158 MW
    - Behind-the-Meter Gen. (BTMG) 20 MW (ICAP Value; not adjusted for losses)
    - Quote (voluntary, yet compensated)\* 25 MW
  - Power Manager – direct load control 42 MW

\* Due to its voluntary nature, Quote cannot be counted for Midwest ISO Resource Adequacy

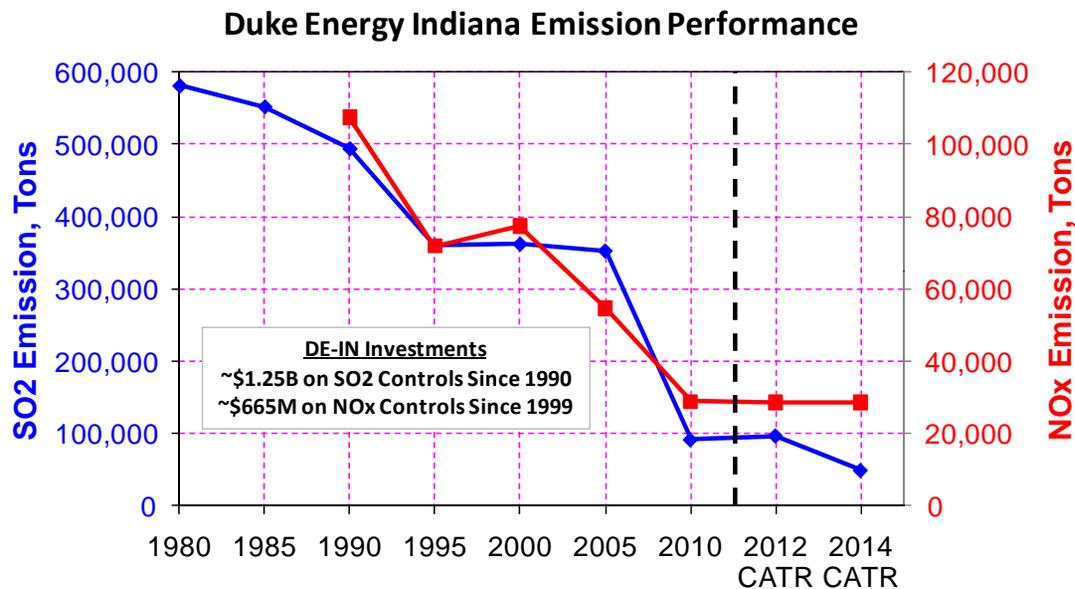
## TRANSMISSION & DISTRIBUTION SYSTEM



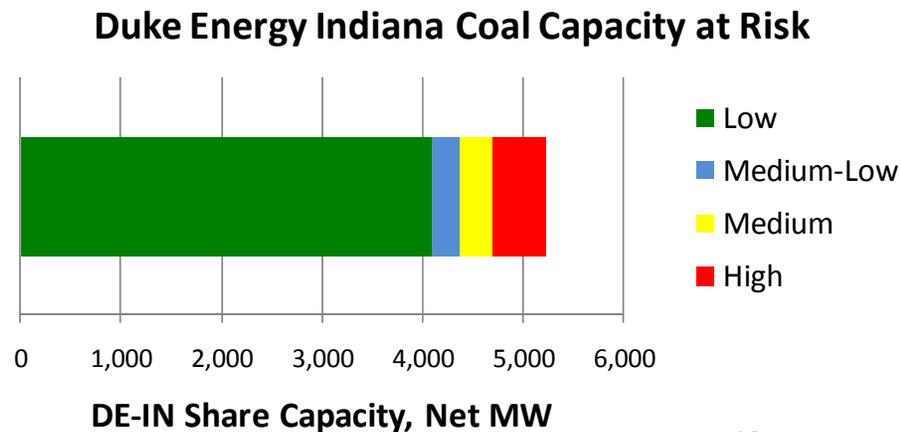
Prescott Substation

- \$178 M in long-term T&D investments for load growth and system enhancements
  - Gibson – Brown (Vectren) 345 kV
  - Greentown – Peru 230 kV
  - Cayuga – Inland 69 kV
  - Darlington – Whitesville 69
  - Metea 69 kV Capacitor Bank
  - Prescott 69 kV Capacitor Bank
  - Geist 69 kV Capacitor Bank
  - Geist 69/12 kV Transformer Addition
  - Whiteland 69/12 kV Upgrade
  - Martinsville 69/12 kV Upgrade

## TIGHTENING ENVIRONMENTAL REQUIREMENTS



- EPA has proposed unprecedented regulations covering air, water, and waste emissions that will be implemented in the next few years
- The potential for significant investments for air, water and waste controls bring near term retrofit-or-retire decisions for mid and smaller-sized units
- DE-IN continues to study a range of options on all units in preparation for upcoming compliance deadlines and regulatory filings



# ENHANCING CYBER SECURITY

- Duke Energy utilizes an aggressive defense-in-depth approach of protecting our cyber assets employing both
  - Electronic isolation (e.g., multiple firewalls, anti-virus, individual user accounts, etc.)
  - Physical isolation (i.e., accessible with approved badge access only)
- Access is granted only on need-to-know and least-privilege-possible basis
- Tools, processes, and procedures continually monitor, detect, and alert on all suspicious activity





Duke Energy Indiana is prepared with adequate resources and infrastructure to meet its customers' needs during summer 2011.

