



**HOOSIERENERGY**  
RURAL ELECTRIC COOPERATIVE, INC.

**Summer 2010**

Presentation to

**Indiana Utility  
Regulatory Commission**

**May 20, 2010**



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# System Peak

Summer 2009 – 1,284

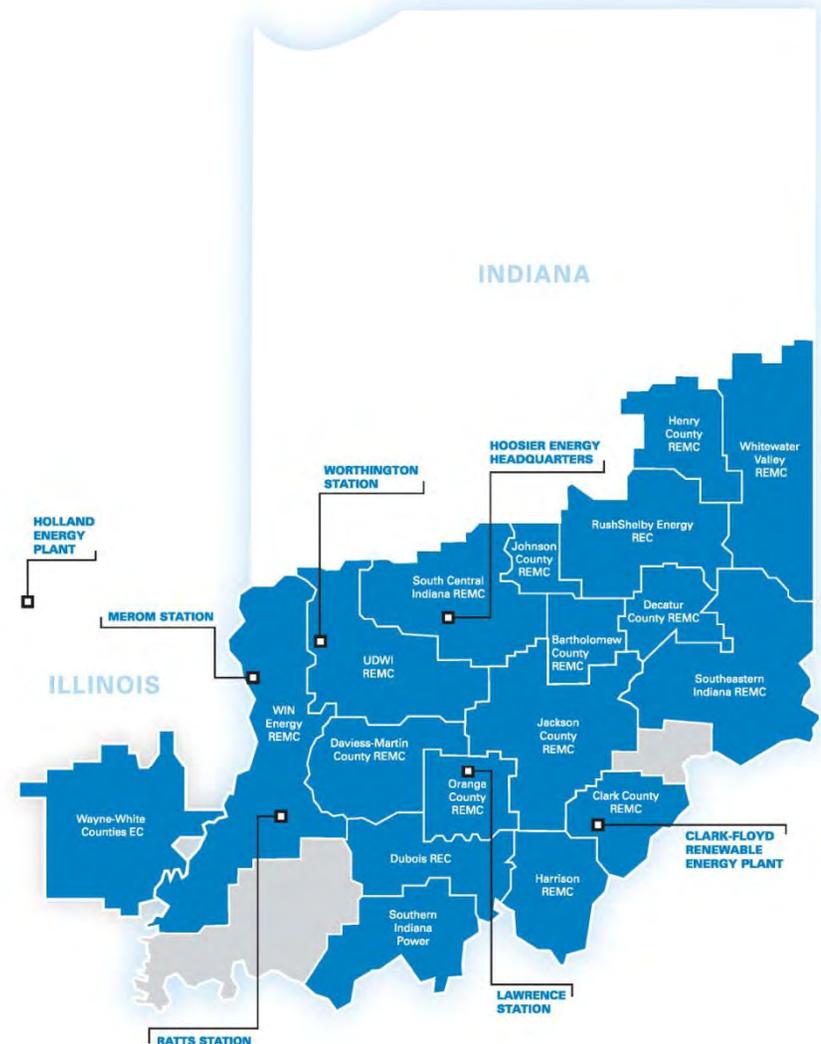
- HE 1,800 on June 24

Summer 2005 – 1,357

- 73 MW decrease or (1%) annually

Energy Consumption since 2005

- Decrease 0.1% annually



## 2010 Projected Peak (MW)

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| <b>Forecast Load</b> | <b>Jun</b> | <b>Jul</b> | <b>Aug</b> | <b>Sep</b> |
|----------------------|------------|------------|------------|------------|
| Minimum .....        |            | 1,295      |            |            |
| Mean .....           | 1,272      | 1,433      | 1,397      | 1,190      |
| Maximum .....        |            | 1,535      |            |            |

Minimum and Maximum are based upon historical monthly load factors.

## Projected Resources (MW)

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| <b>Resource</b>         | <b>Jun</b>   | <b>Jul</b>   | <b>Aug</b>   | <b>Sep</b>   |
|-------------------------|--------------|--------------|--------------|--------------|
| Merom* .....            | 700          | 700          | 700          | 700          |
| Ratts* .....            | 195          | 195          | 195          | 96           |
| Holland .....           | 314          | 314          | 314          | 314          |
| Worthington .....       | 176          | 176          | 176          | 176          |
| Lawrence .....          | 172          | 172          | 172          | 172          |
| Clark-Floyd .....       | 3            | 3            | 3            | 3            |
| Story County Wind ..... | 25           | 25           | 25           | 25           |
| LT Purchase 1 .....     | 100          | 100          | 100          | 100          |
| LT Purchase 2 .....     | 100          | 100          | 100          | 100          |
| <b>Total Resources</b>  | <b>1,785</b> | <b>1,785</b> | <b>1,785</b> | <b>1,686</b> |

\*Net of Unit Power Sales

# Fuel

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## Coal

- No supply difficulties
- Summer 2010 requirements are fully hedged



## Natural Gas

- Hedge 80% of member requirements
- Portion of transportation service is firm



# Risk Management Strategies

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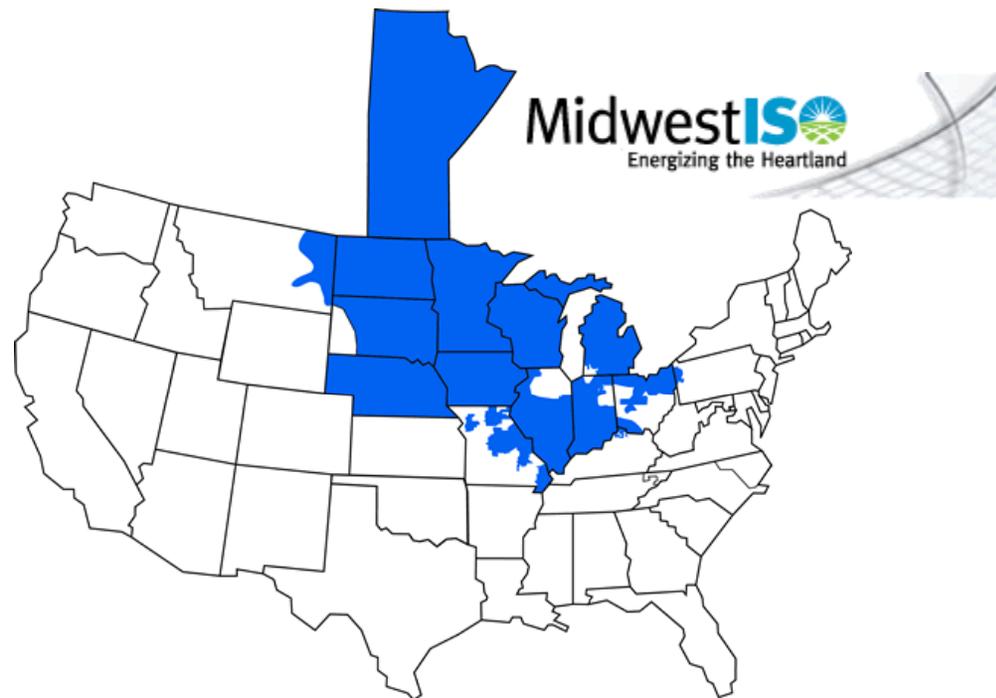
- Unit Contingent Insurance
- Summer Preparation Outages
- Commodity Risk Management

# Midwest ISO

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## Planning Reserve Requirements

- MISO LOLE study requires 4.5% based upon UCAP
- Roughly equal to 15.4% for 2010/2011 based upon ICAP



Midwest ISO Regional Reliability Area

# New Standard Wholesale Tariff

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**Became Effective April 1, 2010**

## **Reasons for Change:**

- Board approved goals for energy and demand reductions
- Continued cost increases (generation, fuels, future controls)
- Enhance benefits of demand response
- Marketing program changes converge with DSM
- Voluntary tools to help members and consumers manage costs
- Developed in conjunction with Member System Managers

# New Standard Wholesale Tariff

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## Production Demand

- Change from a 12-CP demand to a 6-CP summer and winter demands
- Summer demands are priced higher than winter demands
- Only **Load Control Periods** will be used for billing demands.

## Energy

- Change from flat energy charge to TOU structure

# Standard Wholesale Tariff

## Production Demand

Jun   Jul   Aug   Sep   Oct   Nov   Dec   Jan   Feb   Mar   Apr   May

Proposed (Control Periods, 7 am to 11 pm E.S.T.)

*Summer*

1-CP   1-CP   1-CP

Billing kW

Act   Act   Act   Avg   Avg   Avg

Summer Billing Demand

*Winter*

1-CP   1-CP   1-CP

Billing kW

Act   Act   Act   Avg   Avg   Avg

Winter Billing Demand

# New Standard Wholesale Tariff

## Time of Use Energy Periods

| Item            | Hour-Ending      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|-----------------|------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
|                 | 1                | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 |
| Time (AM/PM)    | 1                | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| Time (Military) | 1                | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| Summer Weekday  |                  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Summer Weekend  | ← All Off-Peak → |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Winter Weekday  |                  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Winter Weekend  | ← All Off-Peak → |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Valley Weekday  | ← All Off-Peak → |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Valley Weekend  | ← All Off-Peak → |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |

Summer -- June through August

Winter -- December through February

Valley -- March through May and September through November

"On-Peak periods" illustrated in blue shading

**Special Note:** Demand "on-peak" period remain as -- "On-peak" is between 7 a.m. and 11 p.m. year-round.

### Interpretation of above chart defined "on-peak" periods

Summer Weekday "on-peak" period is between 11 am and 9 pm.

Winter Weekday "on-peak" period is between 7 am and 10 am, and between 6 pm and 9 pm.

# Demand Side Management

# DSM Program Overview

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## Completed market potential study in 2008

- Commercial, industrial, residential
- On-site audit at 375 homes; 68 commercial and industrial facilities
  - Detailed end-use and program design information

## Integrate DSM, wholesale rates, IRP

- Send appropriate price signals to distribution cooperatives
- Support DSM efforts
- Treat DSM as supply side equivalent

# DSM Vision

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*“In partnership with members, Hoosier Energy will develop efficiency programs and services that empower consumers to better manage energy consumption”*

Programs and services will be designed with the consumer in mind and will enhance satisfaction with the electric cooperative. Products and services will be developed to meet the varied needs of distribution cooperatives while being true to the vision. We will be thorough in our analysis, diligent in our efforts and nimble in our pursuit of efficiency opportunities.



# DSM Program Overview

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## Board-approved long-term goals

- Reduce overall system demand by 5% by 2018
- Reduce overall system energy by 5% by 2018

## “Waste Less”

## It's the right thing to do

- Consumer tools to help manage bills in era of rising rates

# Programs – Residential

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## Residential Lighting Efficiency

- Compact Fluorescent Lights (CFLs)
  - 2009 goal: 250,000  
Actual distribution 505,000
  - 2010 performance: 105,000 distributed
  - Most members require trading incandescent bulb in order to receive free CFL
  - CFLs free to cooperatives
  - CFL program continues through 2011  
LED, security lighting product extension



# Programs – Residential

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## Energy Efficient Heating and Cooling

- **Electric Water Heaters**
  - Incentives for higher capacity and efficiency models
  - Heat pump water heater incentives
- **Heat Pumps and Air Conditioners**
  - One program provides incentives for consumer to replace electric resistance furnace with high efficiency heat pump
  - Another program provides incentives for high efficiency heat pump in conjunction with existing fossil fuel furnace
- **Electric Thermal Storage (ETS)**
  - Encourage off-peak system installation in lieu of existing electric resistance furnace

# Programs – Residential

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## Energy Efficient Heating and Cooling

- 1,772 incentives paid to date
- 74% increase in units compared to same time 2009
- Highlights (compared to 2009)
  - Geothermal +338%
  - Heat Pumps +226%
  - Furnace Replacements +300%
- Federal/state/utility incentives drive numbers

# Programs – Residential

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## Home Performance Improvement (Weatherization)

- Hoosier Pilot program in 2009 – 58 homes
  - Modeled 3,562 annual kWh savings
  - Updated estimate: 4,278 annual kWh savings
  - 2010 goal: Complete 400 homes
- ARRA Stimulus Weatherization
  - Grant: 819 homes  
75% REMC  
Estimated 20-30% energy savings per unit
  - Complete current grant in July  
Applied to Wave 2 grant to complete 1,004 homes

# Programs – Residential

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## Appliance Round Up Pilot – 2010

- Target consumers with more than 2 refrigerators or freezers
- 2010 goal: Remove and recycle 425 inefficient units
  - Four co-ops participating
  - Began March 4
  - 310 reservations to date
  - \$30 incentive
- Full rollout 2011
- Goal is 1,200 units

# Programs – Residential

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## Touchstone Energy Home Program

- Existing program
  - In place for 5 years
  - 179 homes built and certified
- Enhanced program
  - CFLs required for all lighting applications (except those on dimmer switches)
  - Requires all Energy Star appliances
  - Hoosier Energy pays for rating process (formerly paid for by consumer)



# Programs – Residential

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## Residential Load Management

- Electric water heaters and air conditioning
- Pilot in 2009  
Full system rollout in 2010
  - Master control technology interface with member system's AMI
  - 13 or 18 systems participating today
    - Approximately 1,300 end use devices under control
    - Data warehouse tracks types/number of devices controlled
    - Consumer offers vary

# Programs – Commercial and Industrial

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## Commercial and Industrial Efficiency

- Efficiency, demand response and special rates programs
- Cash incentives for lighting, motors, HVAC, building envelope performance
- Prescriptive and custom program elements
- Nearly \$400,000 committed through May

# DSM 2009 Results

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## All Programs

- 25,459 annual MWH savings  
226,026 lifetime MWH savings
- TRC benefit-to-cost ratio: 3.23:1
- Fourteen of 17 Indiana co-ops participated in at least four programs; Seven in all programs
- Experiencing greater 2010 participation

**Questions?**

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