

2010 Summer Capacity Survey

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Summer Actions

- Historic/Forecasted Peaks
- Capacity Supply Assessment
- Generation Resources
- Demand Side Programs
- Efficiency Programs
- Supply Assessment
- Emergency Preparedness

WVPA Membership



- 28 Distribution Cooperatives in 4 states
- Operates in both MISO & PJM
- Load in seven Local Balancing Authorities
- Not segregated into separate state operating companies
- Reliability First and SERC Regional Entities

2009 Historic Peak Demand

Summer Peak 2009

Date: 6/28/2009

Time: HE 18:00 EDT

Peak Metered Demand System: 1,609 MW - 62 MW Int. = 1,547 MW

Peak Metered Demand Indiana: 1,171 MW - 62 MW Int. = 1,109 MW

WVPA's average annual peak growth has been 5.0% and energy growth has been 6.0% over the past five years. The portion of that growth is the result of the addition of three more distribution cooperatives to the membership of WVPA over that period. The Indiana portion of average annual peak growth has been 2.4% over the past five years.

2010 Peak Demand Projections

(MW)

	<u>June</u>	<u>July</u>	<u>August</u>
Indiana	1,142	1,328	1,244
Non-Indiana	513	586	578
Less Interruptible Load	<u>(140)</u>	<u>(140)</u>	<u>(140)</u>
Total Peak	1,515	1,774	1,682

This is WVPA's forecast of total coincident peak demand and not necessarily the same as the capacity requirements set forth in the MISO and PJM tariffs.

2010 Capacity Reserve Margin

	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>
Reserve Margin	13.4%	18.8%	17.2%	15.9%	17.8%

PJM - Secured and Supplied Capacity Requirements in RPM Market

MISO – Met Module E Requirement

2010 ICAP Reserve Margin: **13.5%**

2010 Power Supply Resources (MW)

	<u>June</u>	<u>July</u>	<u>Aug</u>	<u>Sept</u>
Owned	919	919	919	919
Purchase Unit Contingent	250	250	250	250
Purchase Schedule	702	735	723	701
Purchase Shaped	48	50	50	42
Purchase 7x24	150	150	150	150
Purchase 5x16	50	50	50	50
Purchase Wind Turbine	<u>29</u>	<u>29</u>	<u>29</u>	<u>29</u>
Total Energy Resources	2,148	2,183	2,171	2,141

2010 Power Supply Purchases (MW)

	<u>June</u>	<u>July</u>	<u>Aug</u>	<u>Sept</u>
Purchase Unit Contingent	250	250	250	250
Purchase Schedule	702	735	723	701
Purchase Shaped	48	50	50	42
Purchase 7x24	150	150	150	150
Purchase 5x16	50	50	50	50
Purchase Wind Turbine	<u>29</u>	<u>29</u>	<u>29</u>	<u>29</u>
Purchased Energy Resources	1,229	1,264	1,252	1,222

2010 Owned Resources

	<u>June</u>	<u>July</u>	<u>August</u>
<u>Coal</u>			
Gibson 5	156	156	156
<u>Pet Coke</u>			
Wabash River 1	196	196	196
<u>Landfill Gas</u>			
Deer Croft 1-2	6	6	6
Prairie View 1-2	6	6	6
Twin Bridges 1-3	9	9	9
Wheeler	1	1	1
Jay	2	2	2
Liberty 1-2	6	6	6
Oak Ridge	3	3	3
<u>Natural Gas</u>			
Holland Energy	300	300	300
Lawrence Gen	86	86	86
Vermillion Peaking	148	148	148
Total Owned	919	919	919

Current Demand Response (DR) Load Control

- Reduces peak demand resources
 - 60,000 Water Heater switches - 20 MW reduction
 - 6,500 AC or Heat Pump switches - 8 MW reduction
 - Misc. – Irrigation, Pool Pumps, Grain Drying, etc. - 10MW reduction
- SDI Participates in PJM Program
 - Interruptible Load for Reliability “ILR”
 - Reduces capacity requirements
 - Wabash Valley registers this on their behalf

Customer Payback Program

- Calls on members to voluntarily reduce their load
- Members get a \$/MWh payback based on the amount of load they reduced
- Current Market Conditions limits Participation

Future DR Programs

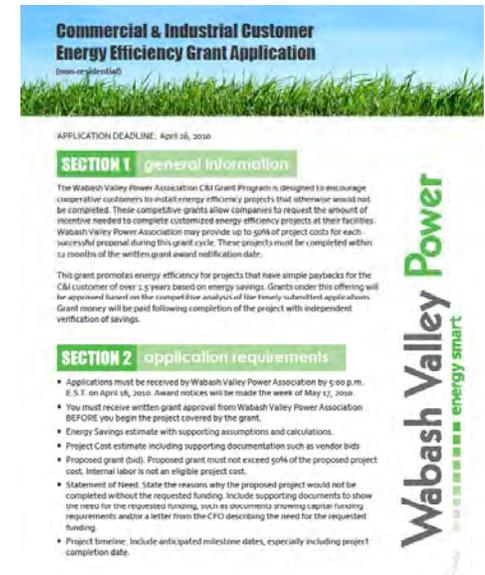
- Extended 2009 Pilot Program into 2010
 - New Direct Load Control Switches – 2 Way
 - Testing Aclara, Landis & Gyr, Tantalus, Cannon
 - Meter Data Management (MDM)
 - Siemens / e-Meter
 - 12 to 18 month Implementation
- Distributed Generation Program
 - Aggregating emergency & stand-by generation
 - Current market conditions drive participation

Energy Efficiency

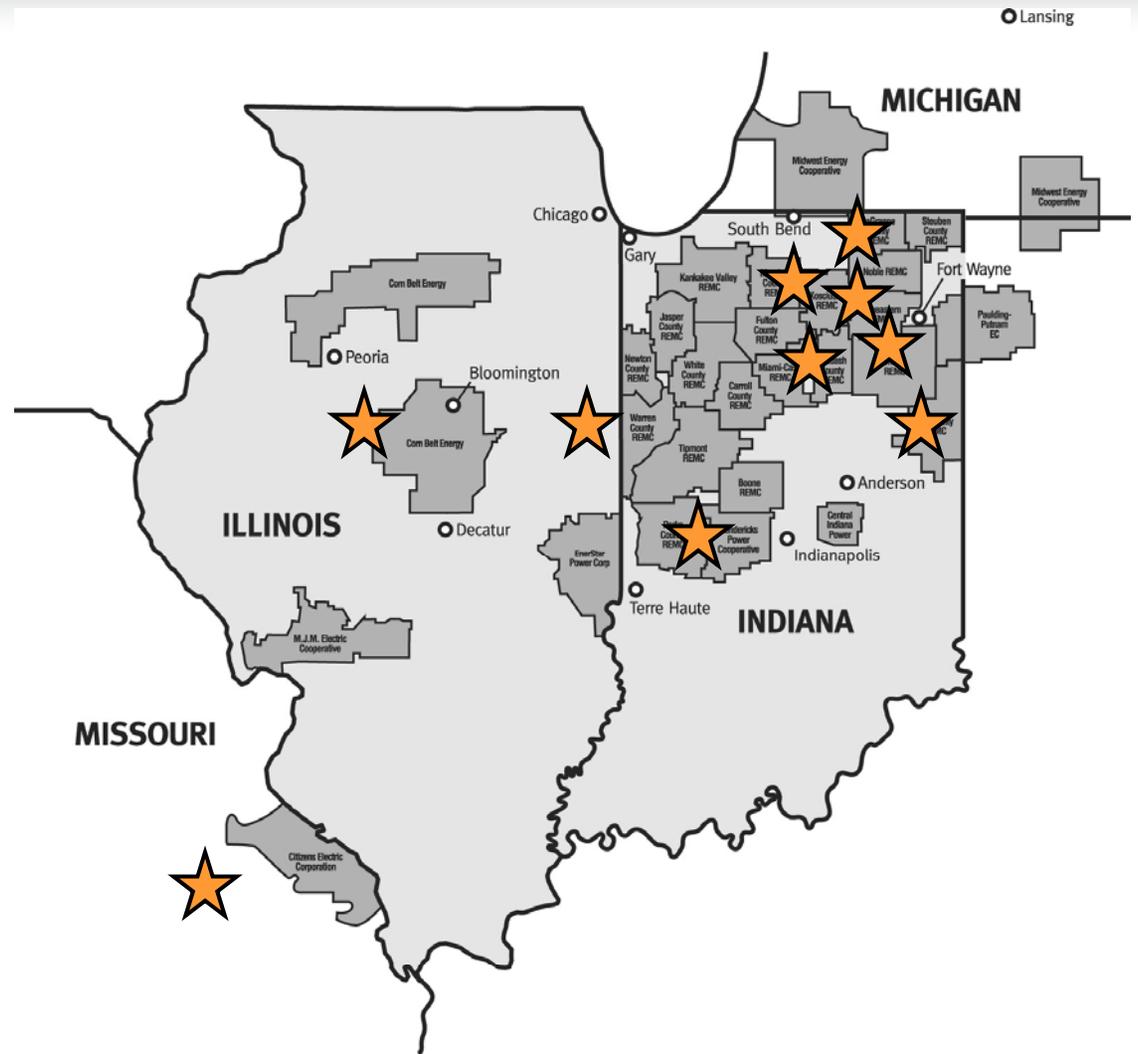
- 5 new programs in 2010
 - C&I
 - energy efficiency grant
 - Residential
 - Heat Pump Rebate
 - Energy Star Clothes Washer Rebate
 - 2nd Fridge Recycling Program
 - Energy Audits
- 2 existing programs
 - Energy Advisor Program
 - Touchstone Energy Home

C&I Grant

- 47 applications
- 31 grantees
- Annual savings of 4,536,299 kWhs
- Lifetime savings of 48,084,247 kWhs
- Lifetime average cost per kWh \$.015



**31 Grantees
from 10 co-ops
in two states**



Heat Pump Rebates

- Program started March 15, 2010
 - 28.5 tons - Heat pump
 - 53.5 tons - Geothermal
 - 5,045 kWh/yr savings assumed for each
 - 2010 Goal: 220 units
 - 1,109,900 kWhs in savings
- Electric to heat pump or geothermal



Energy Star Clothes Washer Rebates

- Program started April 15, 2010
 - 270 kWh/yr savings assumed for each
 - 2010 Goal: 500 Units
 - 135,000 kWhs saved



2nd Refrigerator Recycling Program

- Program started May 15, 2010
 - 6 pick ups scheduled as of 5/17/2010
 - 500 kWh/yr savings assumed for each
 - Projected through 12/31/10
 - 850 units
 - 425,000 kWh
 - Same program & same vendor as HEPN, AEP, IP&L, and Vectren



Energy Audits

- Encourage customers to “take action” toward making homes more efficient
- BPI certified auditors
- Direct install of measures
- Recommendations of most economical retrofits to capture greatest efficiencies
- Pilots start September 2010
 - Goal: 65 audits @ 3,350 kWh = 217,750 kWhs

Energy Advisor

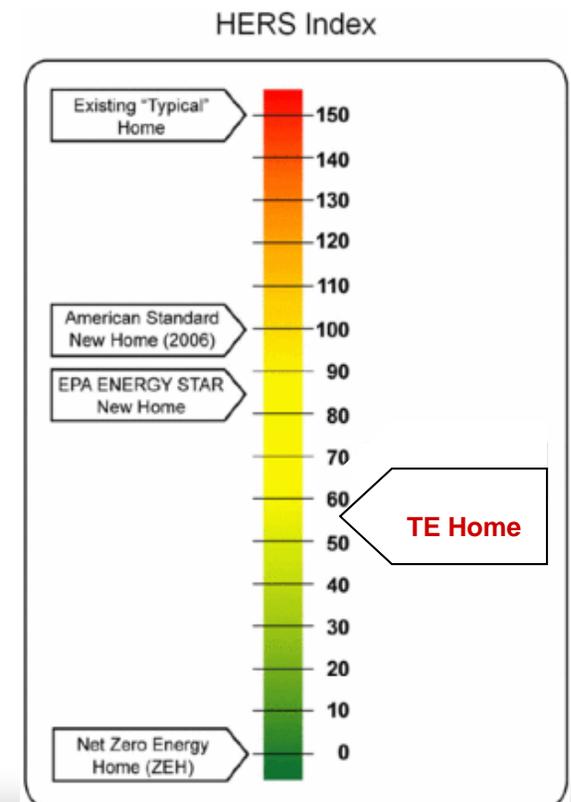
- Educate residential members on wise use of energy
- Each co-op has an EA on-site
 - 13 are BPI certified Building Analysts
- Applying sound building science principles can save up to 30% on energy – lowering bills and increasing comfort

Energy Advisor

- www.energyadvisor.coop
 - Building science information
 - Existing homes and new homes
 - Home Energy Calculator
 - Based on local rates and weather
 - General information and links

Touchstone Energy Home

- Energy efficient new home program
- 15 complete; 5 under construction
- Based on Energy Star requirements +
- Co-op provides one-year heating and cooling cost guarantee
- Average HERS: 53
 - LaGrange County REMC, 39 or lower



Touchstone Energy Home

- Average home size: 3,346 sq ft
- Average annual heating cost: \$407
- Average annual cooling cost: \$117
- Average CO₂ reduction: 30,496 lbs
- Average SO₂ reduction: 206 lbs
- Average NO_x reduction: 74 lbs

Energy Efficiency Wrap-up

	Projected kWh savings
C&I Grant	4,536,299
Heat Pump Rebate	1,109,900
Energy Star Clothes Washer Rebate	135,000
Refrigerator recycling	425,000
Energy Audits	217,750
TOTAL for 2010	6, 423,949

Emergency Preparedness

- WVPA operates in seven balance authorities:
 - AEP, Duke, IPL, NIPSCO, Ameren-IL, Ameren-MO, and Consumers
- WVPA operates in two RTO's, MISO and PJM
- WVPA does not directly operate transmission
- Initiated coordination with balance authorities to provide appropriate WVPA emergency response

Conclusion

WVPA believes it has adequate resources to meet our member's needs during the summer of 2010