

2012 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

2011 Historic Peak Demand

Summer Peak 2011

Date: 7/20/2011

Time: HE 20:00 EDT

Peak Metered Demand System: 1,961 MW

Peak Metered Demand Indiana: 1,315 MW (20:00, 7/21/2011)

WVPA's average annual peak growth has been 2.4% and energy growth has been 1.6% over the past five years. The Indiana portion of average annual peak growth has been 2.0% and energy growth has been 0.8% over the past five years.

2012 Peak Demand Projections

(MW)

	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>
Indiana	1,192	1,247	1,239	1,108
Non-Indiana	452	464	458	414
Firm Sales	<u>95</u>	<u>107</u>	<u>104</u>	<u>91</u>
Total	1,739	1,818	1,801	1,613

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.

2012 Capacity Reserve Margin

	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
ICAP	17.2%	15.9%	17.8%	15.4%	16.9%
UCAP			8.4%	8.4%	9.3%

PJM - Secured and Supplied Capacity Requirements in RPM Market

MISO – Met Module E Requirement

2012 ICAP Reserve Margin: **14.7%**

2012 UCAP Reserve Margin: **7.5%**

2012 Power Supply Resources

(MW)

	<u>June</u>	<u>July</u>	<u>Aug</u>	<u>Sept</u>
Owned	1,004	1,004	1,004	1,004
Purchase Unit Contingent	250	250	250	250
Purchase Schedule	355	370	369	340
Purchase Shaped	48	50	50	39
Purchase 7x24	340	340	340	340
Purchase 5x16	60	60	60	60
Purchase Wind Turbine	<u>39</u>	<u>39</u>	<u>39</u>	<u>39</u>
Total Energy Resources	2,096	2,113	2,112	2,072

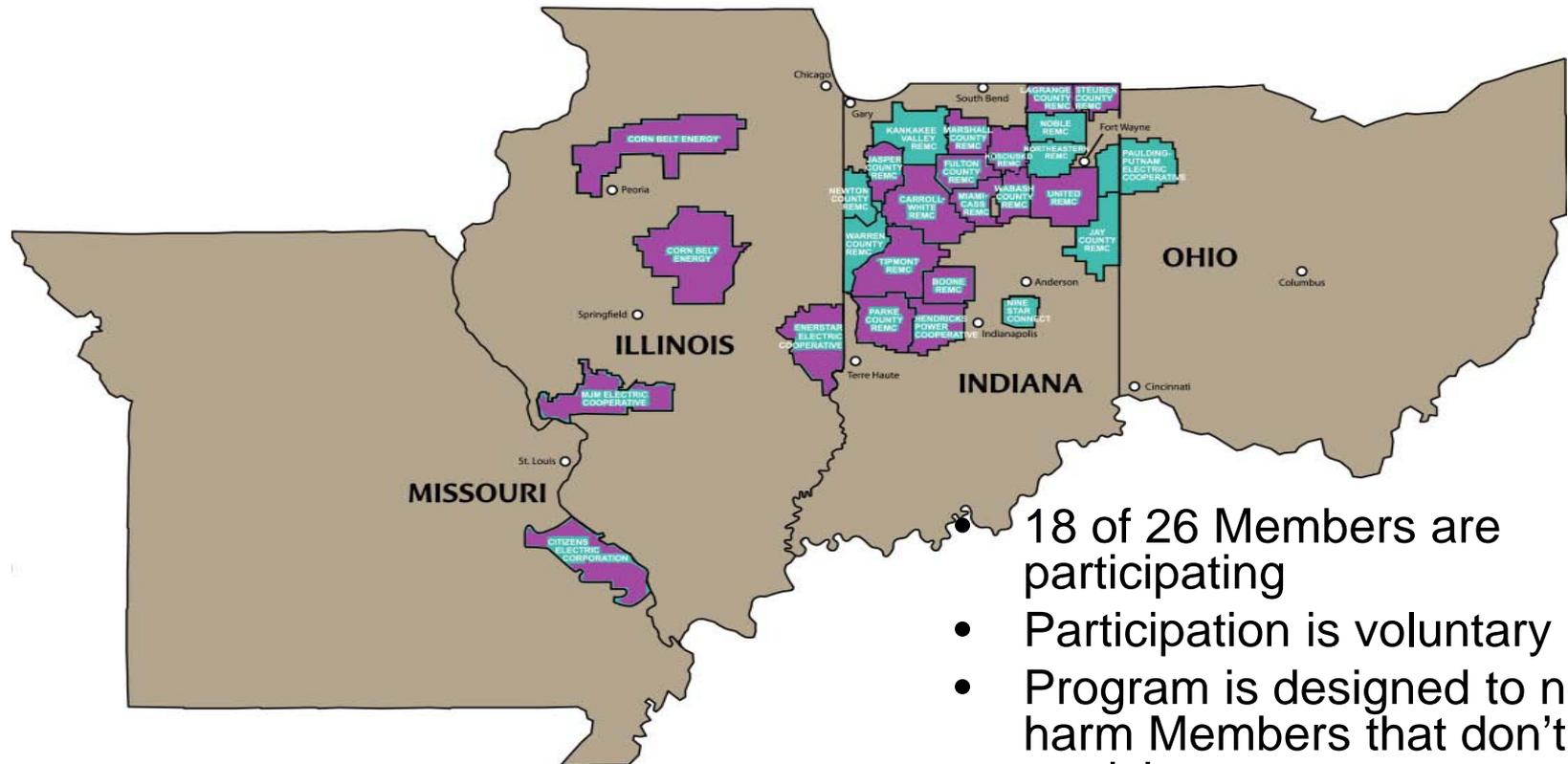
2012 Owned Resources

	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>
<u>Coal</u>				
Gibson 5	156	156	156	156
<u>Pet Coke</u>				
Wabash River 1	200	200	200	200
<u>Landfill Gas</u>				
Deer Croft 1-2	6	6	6	6
Prairie View 1-2	6	6	6	6
Twin Bridges 1-4	12	12	12	12
Wheeler	1	1	1	1
Jay	2	2	2	2
Liberty 1-2	6	6	6	6
Oak Ridge	3	3	3	3
Earth Movers	4	4	4	4
<u>Natural Gas</u>				
Holland Energy	300	300	300	300
Lawrence Gen	86	86	86	86
Vermillion Peaking	<u>222</u>	<u>222</u>	<u>222</u>	<u>222</u>
Total Owned	1,004	1,004	1,004	1,004

Legacy Demand Response

- Legacy Direct Load Control (DLC)
 - approximately 30 MW of load reduction
 - Legacy program will end 12-31-2012
- SDI
 - participates in PJM program as a Demand Resource
 - SDI reduces capacity requirements
 - WVPA registers this on their behalf

New DR Program Participation



- 18 of 26 Members are participating
- Participation is voluntary
- Program is designed to not harm Members that don't participate

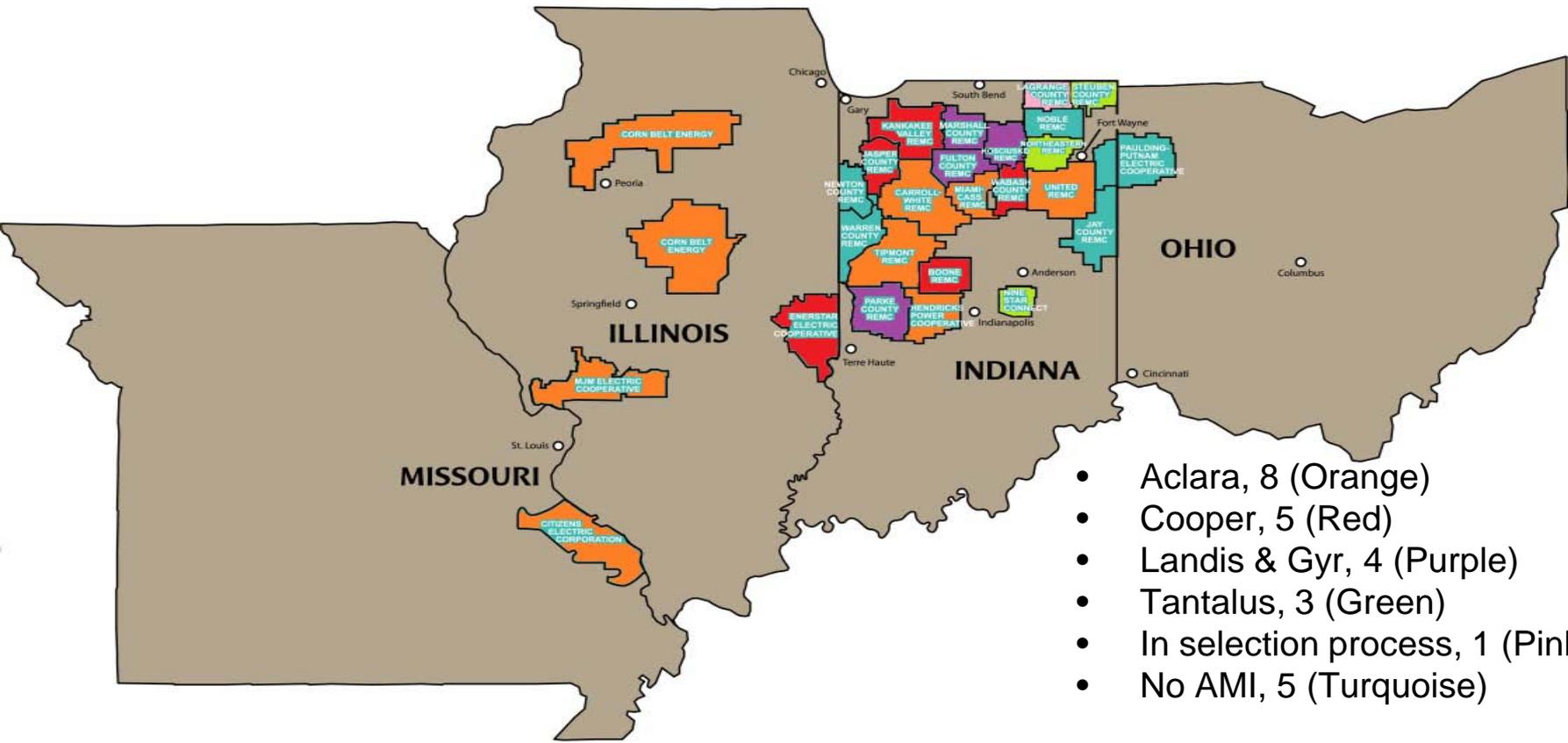
Future Demand Response

- DLC program
 - two-way AMI technology
 - goal of 50 MW load reduction by 2015
- New Meter Data Management System (MDMS)
- Demand Response Management System (DRMS)
- MDMS & DRMS will provide advanced functionality for future DR programs with C&I accounts and consumer pricing programs

MDMS & DRMS Interoperability

- The MDMS and DRMS
 - 5 different AMI systems
 - 3 different CIS systems
- The MDMS is available to all Members to utilize as if it were their own system
- The MDMS and DRMS provide a technical foundation for Smart Grid enabling programs

Member AMI Deployments



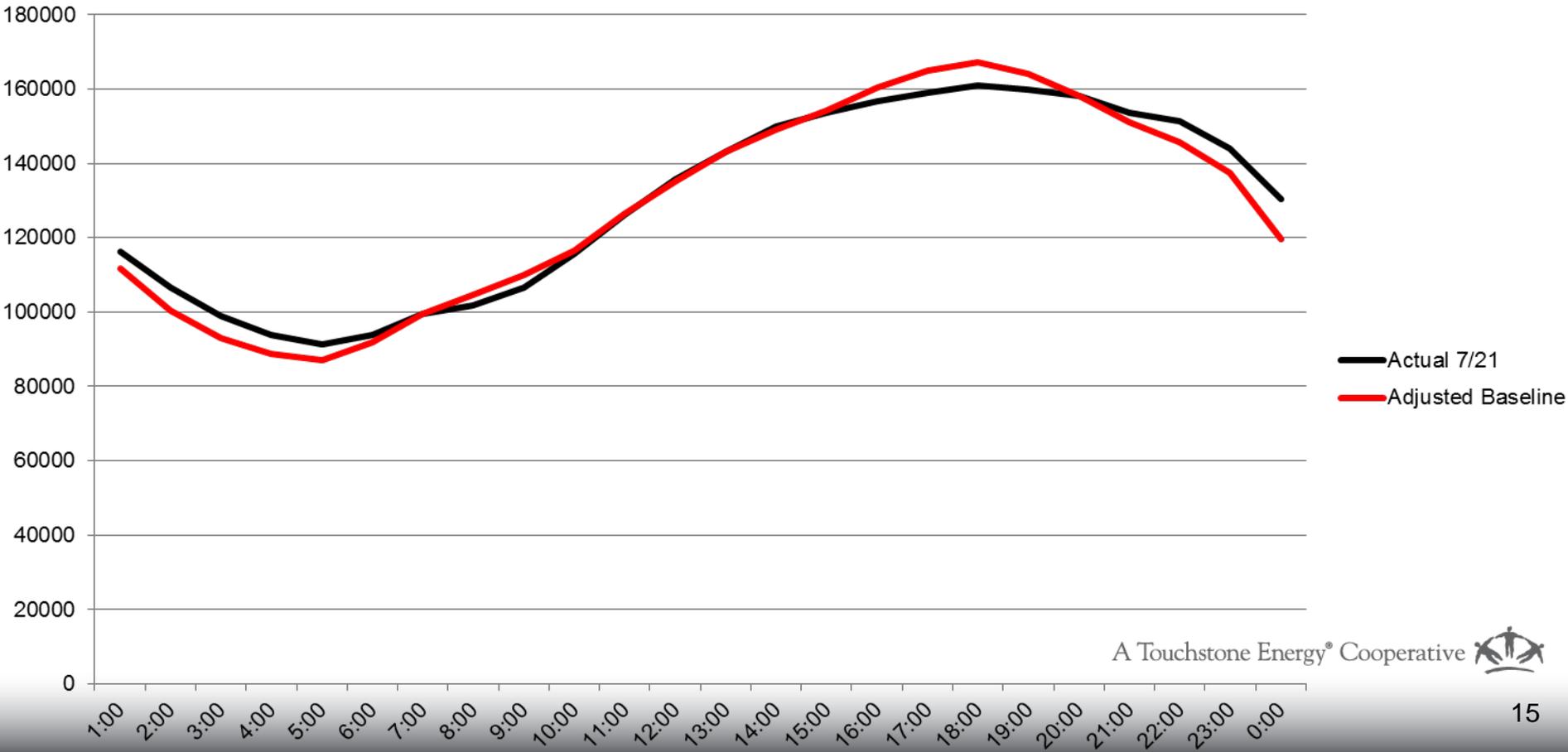
- Aclara, 8 (Orange)
- Cooper, 5 (Red)
- Landis & Gyr, 4 (Purple)
- Tantalus, 3 (Green)
- In selection process, 1 (Pink)
- No AMI, 5 (Turquoise)

DR Measurement

- MDMS
 - collects and stores all required meter data
- DRMS
 - calculates a baseline, using methodology from PJM, of what the load should have been without a control event
- Demand Response Value – (DR Delta)
 - The difference between the calculated baseline and actual readings is our load reduction amount

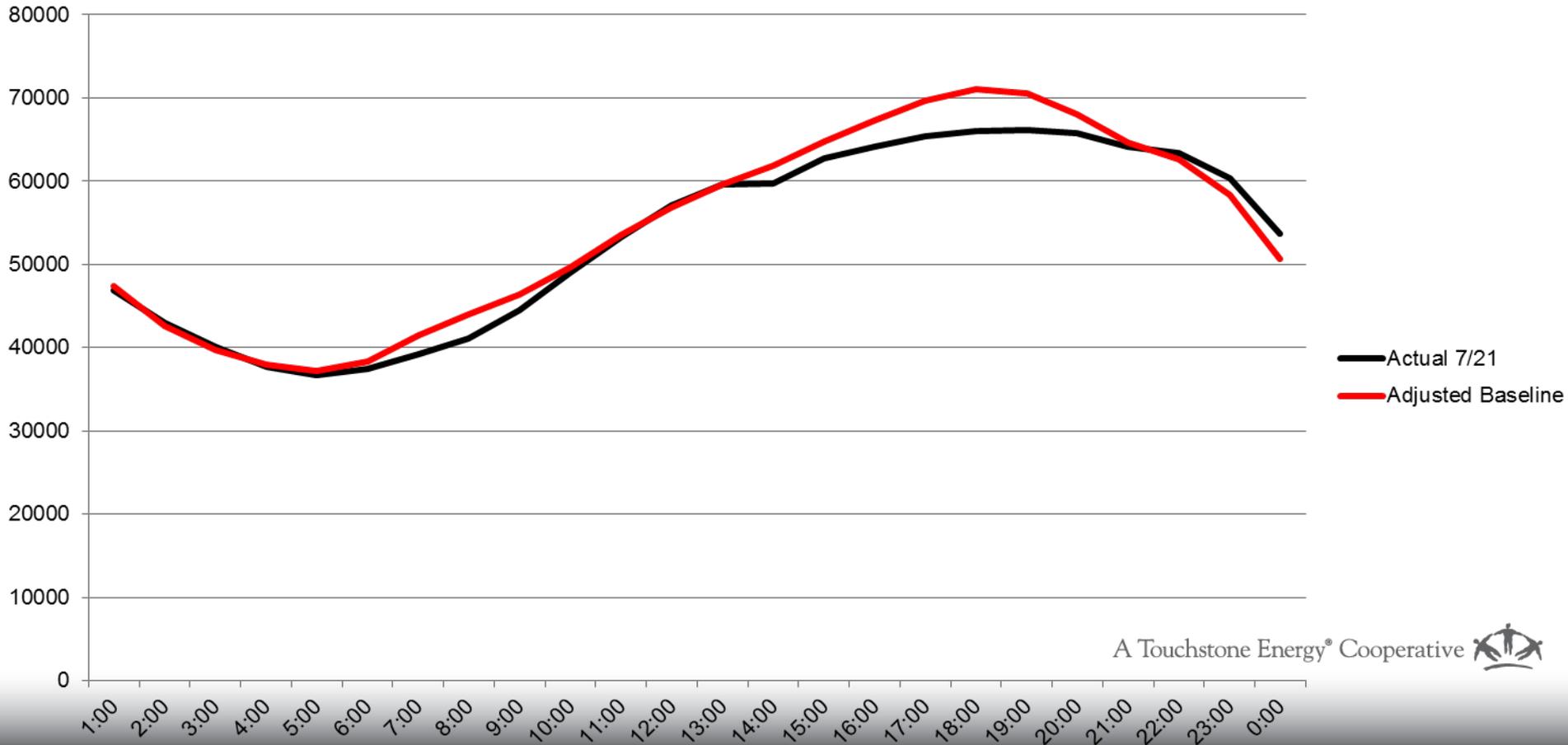
Hendricks Power

Hendricks Power



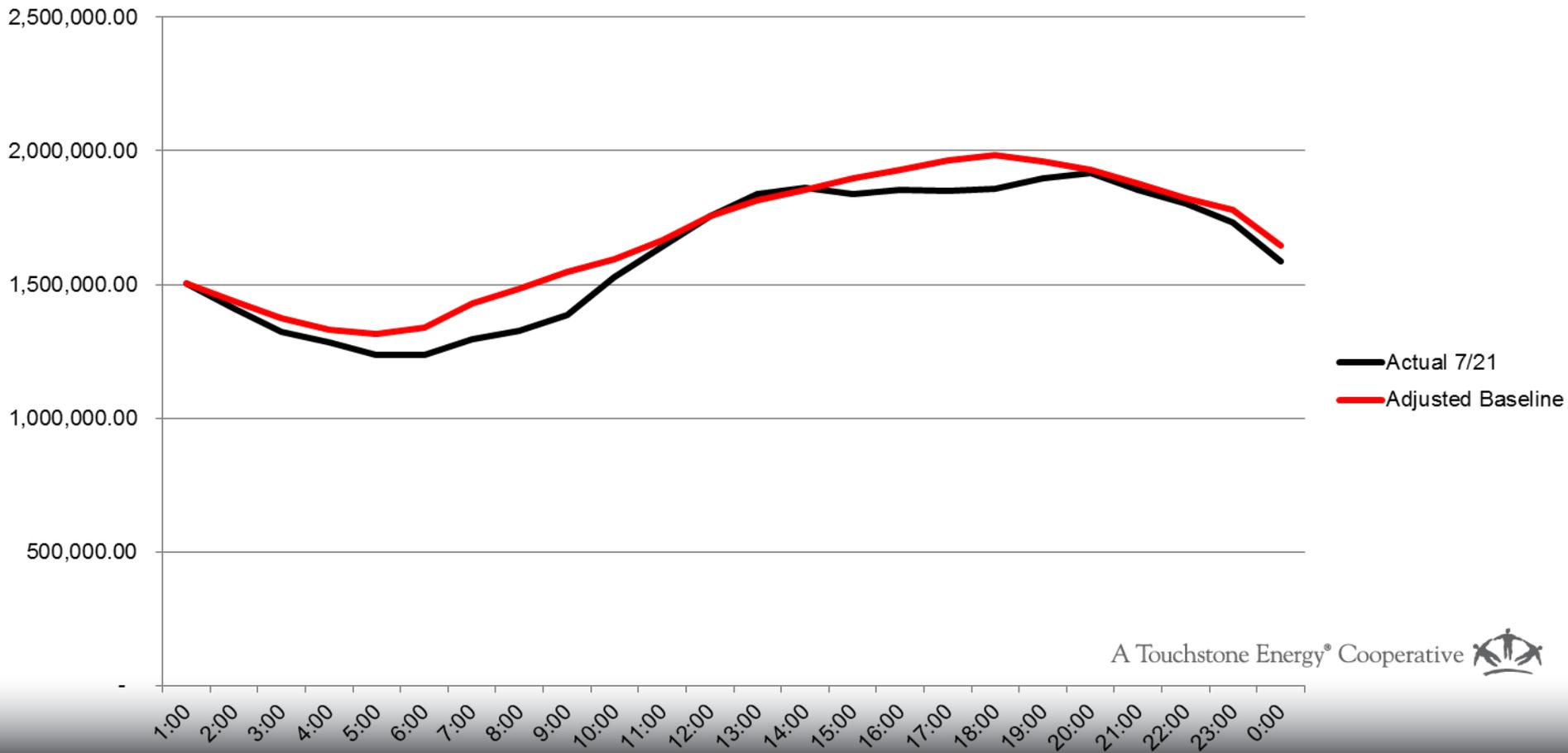
Boone REMC

Boone REMC



WVPA System Total

Wabash Valley Power



Energy Efficiency Programs

- 2011
 - Residential
 - Heat Pump Rebate
 - Energy Star Clothes Washer Rebate
 - 2nd Fridge/Freezer Recycling Program
 - Residential Energy Audits
 - Energy Advisor training
 - Touchstone Energy Home
 - C&I
 - Prescriptive Lighting
 - Prescriptive HVAC

2011 EE Program Wrap-up

Fridge Recycling	1506	2072	331.2
Freezer recycling	884	1100	176.9
Clothes Washers	920	198	21.2
GSHP replacing electric heat	41	635	13.2
GSHP replacing heat pump	160	609	20.1
ASHP replacing electric heat	48	365	17.3
ASHP replacing heat pump	86	86	16.9
TOTAL	3,645	5,065	597

2011 EE Program Wrap-up

Lighting Prescriptive	31	4453	664.4
HVAC Prescriptive	4	7	3.1
TOTAL	35	4,460	667.6

2011 EE Program Wrap-up

Residential	5,304	.70	.70*
C&I	4,670	.78	2.6
TOTAL	4,460	1.48	1.2

* TRC is attributed to GSHP replacing ASHP. This program was revised in 2012 to be electric resistance replacement only

Energy Efficiency Programs 2012

- Residential
 - GSHP replacing electric resistance
 - ASHP replacing electric resistance
 - ASHP replacing ASHP
 - Dual fuel replacing electric resistance
 - 2nd Fridge/Freezer Recycling Program
 - Residential Energy Audits
 - Energy Advisor training
 - Touchstone Energy Home
 - CFL discounts (to start summer 2012)
 - Whole House Performance Pilot (to start summer 2012)

Energy Efficiency Programs 2012

- C&I
 - Prescriptive Lighting
 - Prescriptive HVAC
 - Prescriptive Schools
 - Prescriptive Ag
 - Custom

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
- Coordinate with balance authorities to provide appropriate WVPA emergency response

Environmental Issues

- CSAPR
- MAT for hazardous air pollutants
- 316(b) Cooling Water Intake Regulation
- Coal Combustion Residual (CCR) Regulation

Conclusion

WVPA believes it has adequate resources to meet our member's needs during the summer of 2012