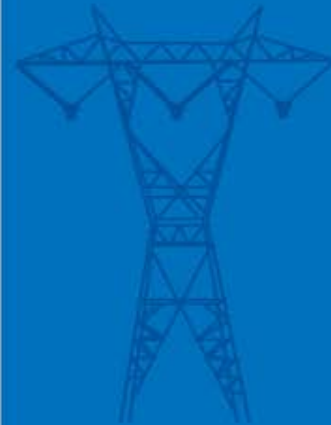


# 2015 Summer Reliability Outlook

*Carl Chapman*  
*Chairman, President and CEO*



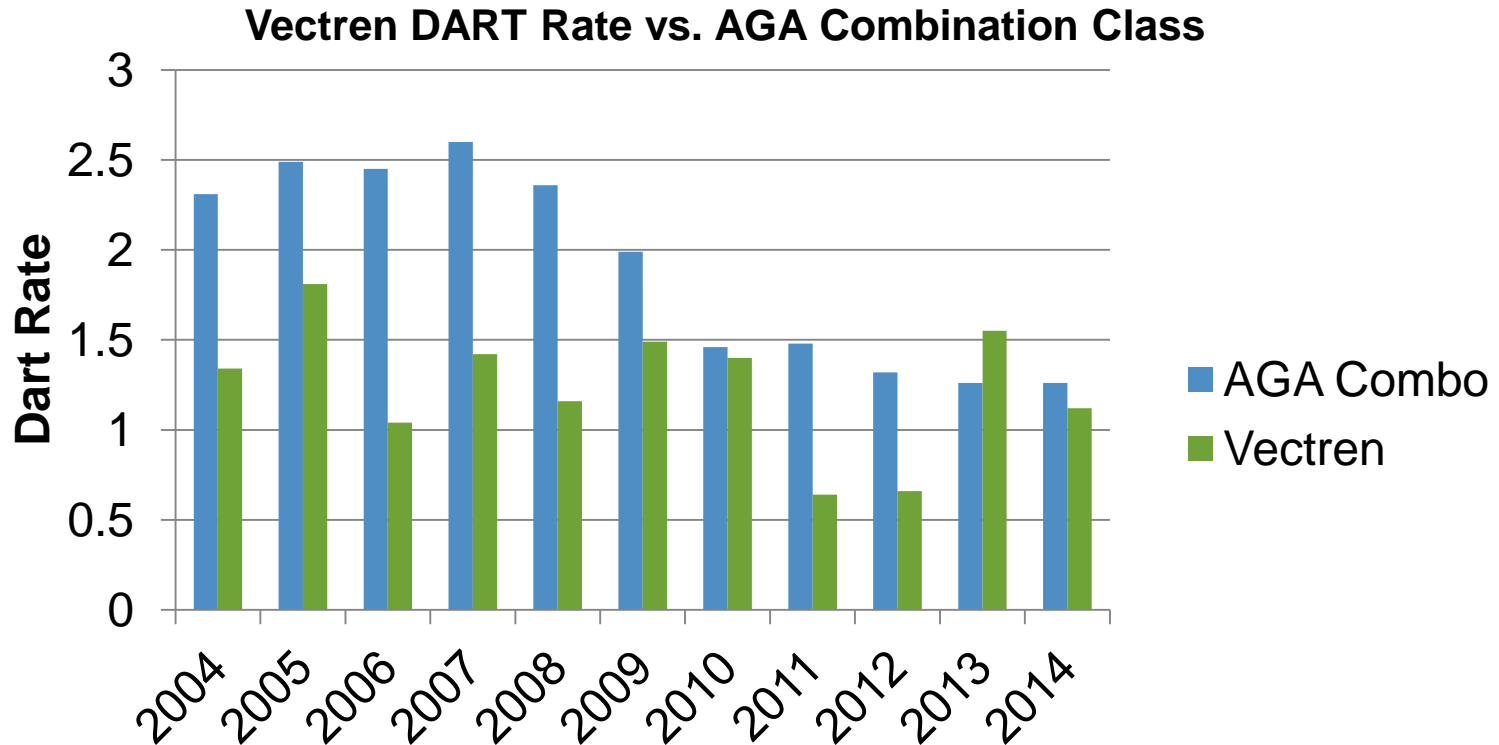
# Attendees

<b>Carl Chapman</b>	<i>Chairman, President and Chief Executive Officer</i>
<b>Ron Christian</b>	<i>Executive Vice President, Chief Legal &amp; Ext. Affairs Officer</i>
<b>Brad Ellsworth</b>	<i>President, Vectren South</i>
<b>Rick Schach</b>	<i>Senior Vice President, Utility Operations &amp; President VUHI</i>
<b>Scott Albertson</b>	<i>Vice President, Regulatory Affairs &amp; Gas Supply</i>
<b>Wayne Games</b>	<i>Vice President, Power Supply</i>
<b>Chase Kelley</b>	<i>Vice President, Corporate Communications</i>
<b>Angila Retherford</b>	<i>Vice President, Environmental Affairs &amp; Corporate Sustainability</i>
<b>Mike Roeder</b>	<i>Vice President, Government Affairs &amp; President Vectren North</i>
<b>Robbie Sears</b>	<i>Vice President, Customer Energy Solutions</i>
<b>Jason Stephenson</b>	<i>Vice President, General Counsel VUHI</i>

# Summer 2014 Reliability Outlook

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# Vectren – A Culture of Safety



- Senior leadership, management, union leadership and employees participating in Safety Culture Teams to drive improvements.
- Groups focused on growing employee awareness and engagement activities through training and education, continuous improvements and employee engagement activities.
- The positive stories and safety successes are being shared around the organization.

# Vectren's Electric Footprint

**Customers** **143,000**

**2014 Retail Sales (GWh)** **5,588**

- Residential 1,455
- Commercial 1,307
- Industrial 2,805
- Other 21

## Transmission System

- 1,003 miles of transmission lines
- 37 transmission substations

## Distribution System

- More than 4,200 circuit miles of distribution lines
- 29% of distribution underground
- 92 distribution substations

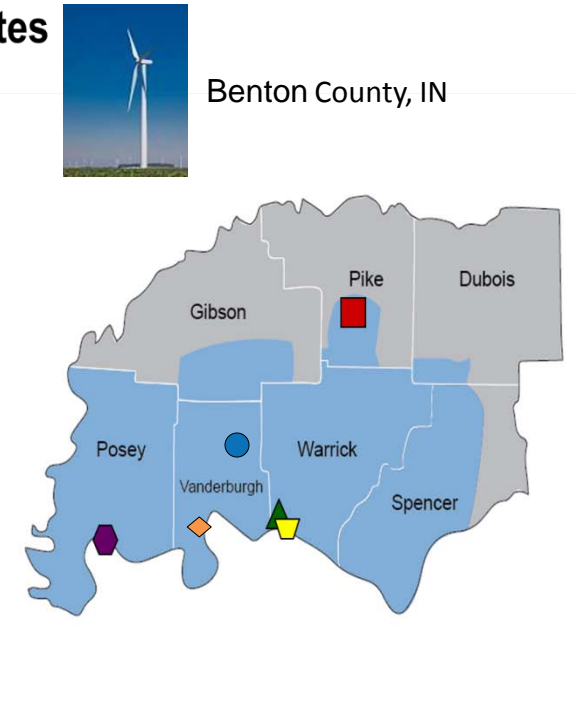
## Vectren's Plant Sites

Vectren Energy Delivery of  
Indiana – South

Power plants

-  AB Brown
-  FB Culley
-  Warrick Unit 4
-  Blackfoot Clean Energy Plant
-  Broadway Ave. Peaking Units
-  Northeast Peaking Units
-  Fowler Ridge & Benton County Wind Farms  
Third Party PPA

 Vectren's Electric Service Territory



# Vectren Generating Facilities

## **A.B. Brown Power Plant – Mt. Vernon, Ind., Posey County**

- 4 units (2 base load coal, 2 natural gas peaking units) – 640 MW

## **F.B. Culley Power Plant – Newburgh, Ind., Warrick County**

- 2 units (base load coal) – 360 MW

## **Warrick Unit 4 – Newburgh, Ind., Warrick County**

- 1 Unit shared with Alcoa (base load coal) – 150 MW of 300 MW

## **Natural Gas Peaking Units – Evansville, Ind., Vanderburgh County**

- 3 units – 85 MW



# Vectren Capacity

## Vectren Installed Capacity

Coal - 1,000 MW

Gas Peaking - 235 MW

Landfill Gas - 3 MW

Vectren Installed - 1,238 MW

## Other Capacity

Wind Purchase - 80 MW

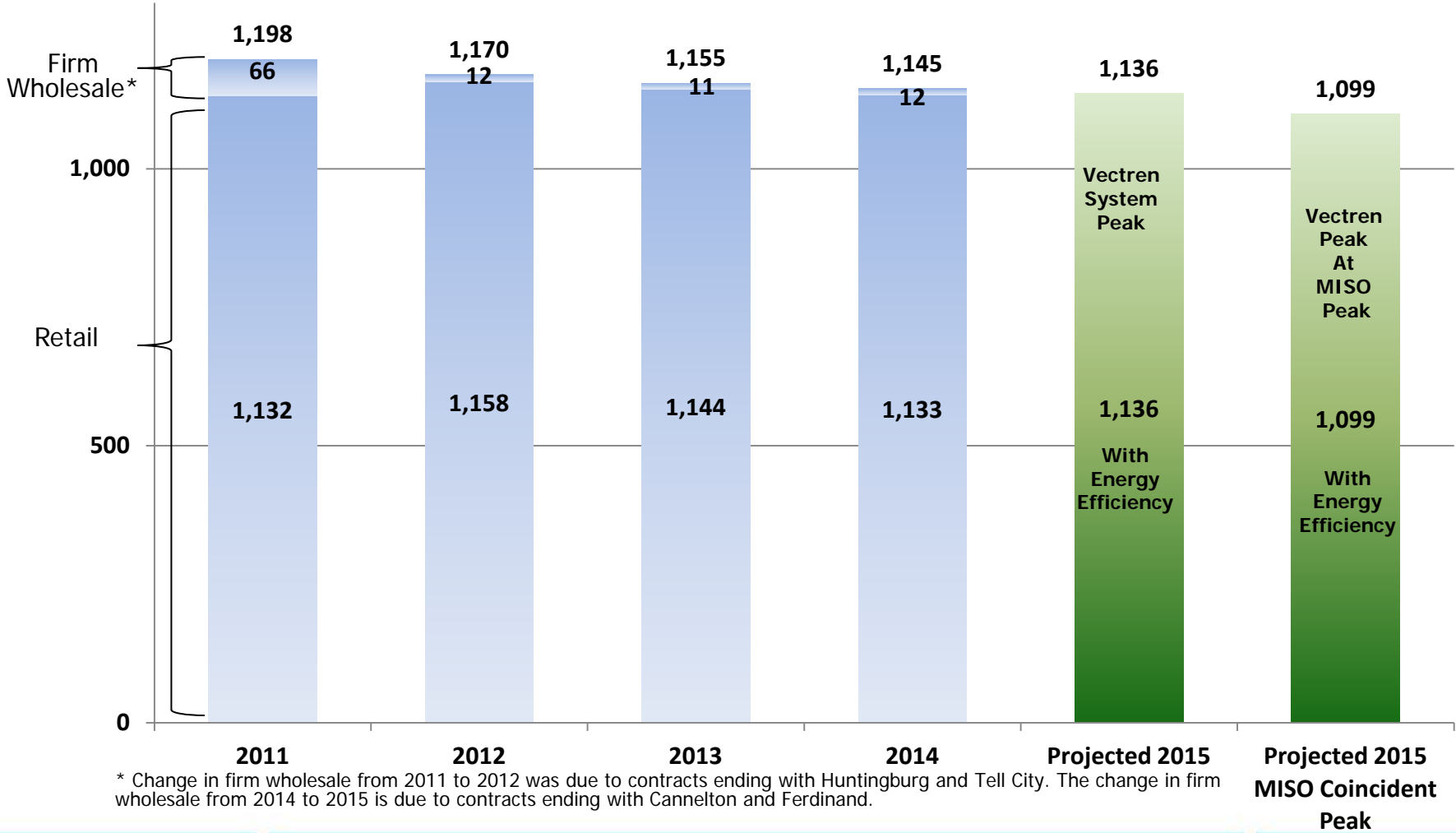
OVEC - 32 MW

Total Other - 112 MW

Total Installed Capacity 1,350 MW

# Vectren Peak Load

Weather Normalized Peak Load (MW)





# Vectren Resources at Peak & PRM Requirement

## MISO Coincident Peak Demand & Requirements

Peak Demand	MW
Vectren Retail	1,099
<hr/>	
<b>Firm Wholesale Obligations</b>	<b>0</b>
Demand Response	
Interruptible Load	-55
Direct Load Control	-18
<hr/>	
<b>Total Demand</b>	<b>1,026</b>
<hr/>	
<b>MISO PRM of 7.1%</b>	<b>73</b>
<hr/>	
<b>Total Requirements</b>	<b>1,099</b>

Supply exceeds MISO Coincident Peak Demand by 176 MW (17%)  
Supply exceeds Requirements by 103 MW (9%)

## Vectren Retail Peak Demand & Requirements

Peak Demand	MW
Vectren Retail	1,136
<hr/>	
<b>Firm Wholesale Obligations</b>	<b>0</b>
Demand Response	
Interruptible Load	-55
Direct Load Control	-18
<hr/>	
<b>Total Demand</b>	<b>1,063</b>
<hr/>	
<b>MISO PRM of 7.1%</b>	<b>75</b>
<hr/>	
<b>Total Requirements</b>	<b>1,138</b>

Supply exceeds Vectren Retail Peak Demand by 139 MW (13%)  
Supply exceeds Requirements by 64 MW (5%)

## Supply

	UCAP MW
<hr/>	
<b>Steam Generation</b>	
Brown 1	236.9
Brown 2	230.9
Culley 2	84.9
Culley 3	261.1
Warrick 4	129.8
Total Steam	943.6
<hr/>	
<b>Peaking Generation</b>	
Brown 3	72.4
Brown 4	67.8
Broadway 2	63.2
Northeast 1 & 2	17.7
Total Peaking	221.1
<hr/>	
<b>Purchases</b>	
Firm	28.5
Wind	8.8
<hr/>	
<b>Total Supply</b>	<b>1,202</b>

Note: Blackfoot is not included in this listing since it is behind-the-meter (from a MISO and control area perspective) and is effectively a reduction to the load forecast.

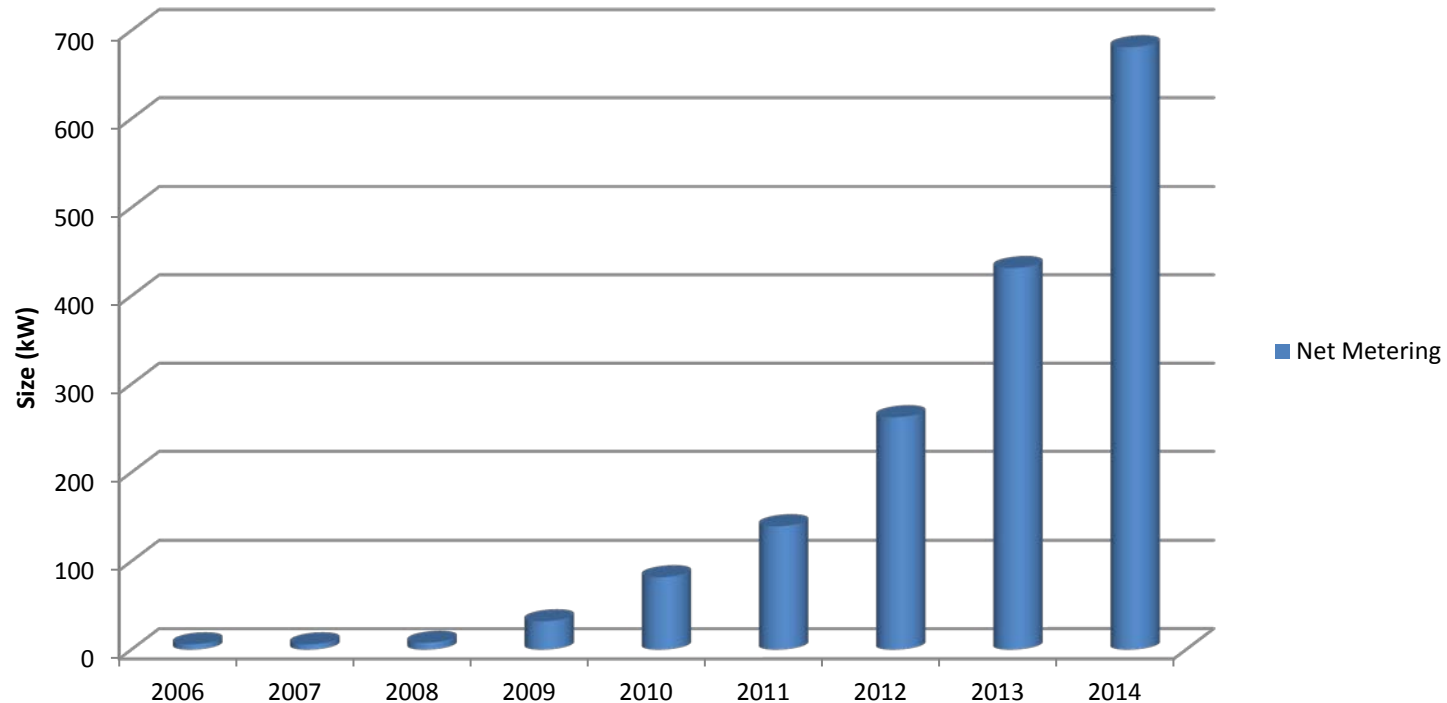
# Renewable Energy/Energy Efficiency

- In 2014, renewable energy sources and cumulative energy efficiency accounted for 7% of Vectren's retail sales adjusted to add back the cumulative energy efficiency
  - Wind PPA's
    - 204,174 MWh
  - Blackfoot Landfill gas project
    - 14,375 MWh
  - Cumulative energy efficiency since 2010 totals 190,105 MWh achieved of which 57,568 MWh were incremental in 2014.



# Net Metering

## Total Net Metering Generation Resources



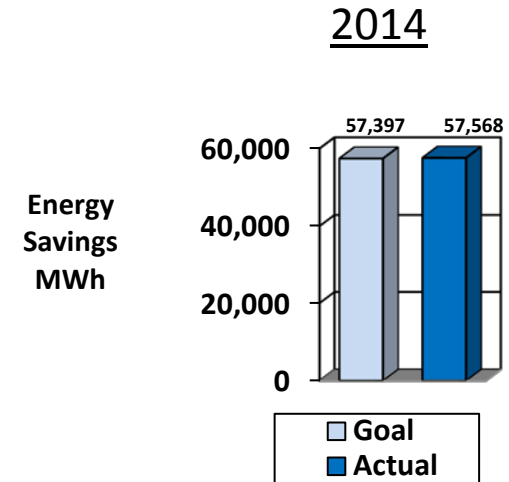
The 2014 Net Metering Annual Report for Vectren shows that the interconnected customer generator facilities consist of the following types:

- 677 kW of solar
- 4 kW of wind
- Net Metering customer count has grown from 25 in 2011 to 92 in 2014, 90 solar and 2 wind, respectively.

# Vectren 2014/2015 Energy Efficiency Programs

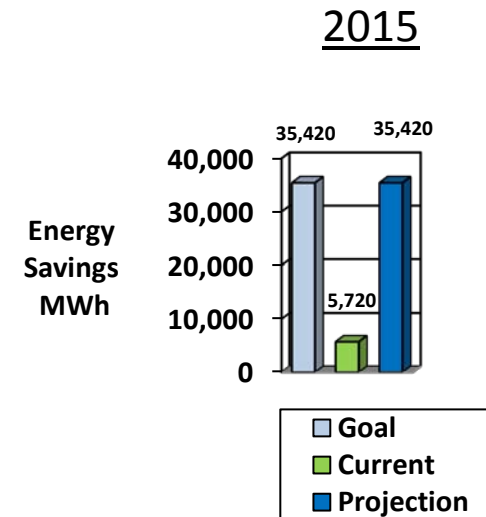
## 2014 Programs

- C&I Prescriptive, Residential Lighting, OPower Residential Behavior and C&I Custom were the top performing programs in 2014
- Achieved 100% of combined Core and Core Plus 2014 savings goal
  - Core Programs achieved 93%
  - Core Plus Program achieved 111%
- Savings represents 1% of participating customer sales



## 2015 Programs

- Residential Lighting, OPower Residential Behavior and Small Business Direct Install are projected to provide the bulk of 2015 savings
- Currently projected to meet 2015 savings target of 35,420 MWh (gross)
  - Savings goal represents 1% of participating customer sales.
  - Approximately 76% of Vectren's eligible C&I sales opted out of DSM Programs as of January 01, 2015



# Vectren 2015 Energy Efficiency Programs

## Residential Programs

- Residential Lighting
- \*Home Energy Assessment
- \*Low Income Weatherization
- \*School Energy Efficiency Kits
- Appliance Recycling
- \*Efficient Product Rebates
- \*Behavior Savings
- \*New Construction
- \*Multi-Family Direct Install

\*Integrated Vectren Gas/Electric Program

## Commercial & Industrial (C&I) Programs

- C&I Prescriptive
- C&I Custom
- C&I New Construction
- \*Small Business Direct Install
- \*Strategic Energy Management

## Vectren annual energy savings

- 2014 (actual gross) – 57,568 MWh
- 2015 (projected gross) – 35,420 MWh

Vectren Electric DSM Program Performance		
Program Year	Percent of Core Goals Achieved	Percent of Core Plus Goals Achieved
2010 (Evaluated)	NA	142%
2011 (Evaluated)	NA	146%
2012 (Evaluated)	71%	97%
2013 (Evaluated)	64%	130%
2014 (Evaluated)	93%	111%

Statewide Core programs ended on December 31, 2014

# Vectren DSM Planning

## Vectren DSM Assumptions in 2014 IRP Planning Process

- DSM savings levels in the load forecast include:
  - DSM energy efficiency programs available to all customer classes
  - Annual savings target of 1% of participating customer sales<sup>1</sup> for 2015 – 2019 and 0.5% annually thereafter

## Vectren DSM Planning Beyond 2015

- Vectren intends to file a 2016-2017 DSM Plan this spring
  - Consistent with the 2014 IRP, the plan will be designed to achieve approximately 1% of participating customer sales
  - The plan will include both energy efficiency and demand response elements
- Vectren future DSM planning would be consistent with approved legislation and become an integral part of the DSM planning process
- Vectren is committed to an ongoing base level of DSM savings while also allowing DSM to be evaluated as a resource option in the IRP process.

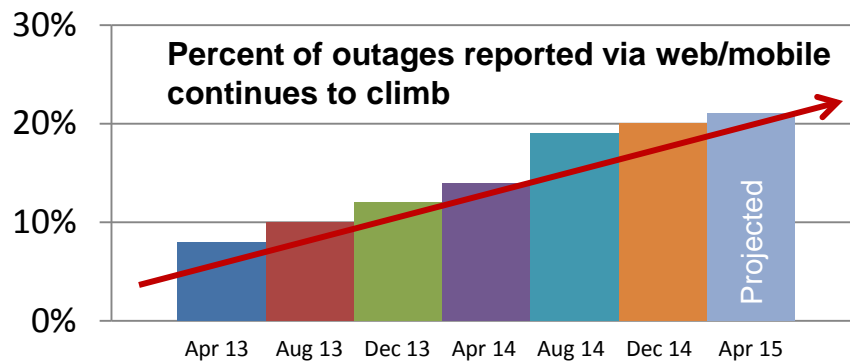
<sup>1</sup> Participating sales include all residential, all general service, and large customer sales that have not opted out of DSM Programs

# Vectren Concerns

- 1. Accuracy of MISO Resource Adequacy Projection**
- 2. Major weather event**
- 3. Subsidization of Distributed Generation**
- 4. Cybersecurity**
  - Regulatory changes
- 5. Environmental regulation**
  - Continued regulatory uncertainty and pressure
  - Rate and reliability impacts of Clean Power Plan (CPP)
- 6. Rate impact due to loss of large customer**
  - CHP due to low natural gas prices
  - Deregulation

# Continued improvements in and promotion of outage communications and reporting

- Continue to promote outage communications tools through spring campaign highlighting online tools (and the app) for reporting outages and using Twitter to get updates on restoration
  - Television, radio ads, social media, weather.com in-app messaging, customer/employee contests, strong focus on online reporting versus traditional phone call



@VectrenStorm




Vectren Storm @VectrenStorm · Mar 25


Severe weather moving into the Vectren territory now. Report any issues via smartphone at [vectren.com](http://vectren.com) or download our app.

7 4





# May 2014 storm; social media helps improve customer service, issue public safety reminders

Retweeted by Vectren Storm  
 **Samantha Buente** @LadyBents · May 11  
 @VectrenStorm I have been so impressed with the updates and diligence shown the last few days. Please give those linemen a vacation!  
 #Thanks

 **Vectren Storm** @VectrenStorm · 16h  
 Treat all downed power lines as live and dangerous. Stay as far away as possible.

 **Jodi Ferrell** @clinpharm11 · May 10  
 @VectrenStorm My power just came back on!! Thank you soooo much to the hard working Vectren crews!!! You are all awesome!!!  
 Expand      Reply   Retweeted   Favorite   More

 **Vectren Storm** @VectrenStorm · Apr 8  
 Outage tip: A fridge will keep food safely cold 4 hrs if unopened. A full freezer will hold temp approx. 48 hrs. When in doubt, throw it out

 **Vectren Storm** @VectrenStorm · May 11  
 Thank you! RT @treymcclain: Super impressed with the customer service of @VectrenStorm. Doing a great job of keeping customers updated.



Evansville  
**COURIER  
 & PRESS**

Vectren turns to Twitter for customer interaction

May 12, 2014

During the 4-day event we:

- Issued 400 Tweets
- Added 500 Twitter followers
- Responded directly to 200 customers

Real-time updates during storms:

- Engage media and followers on progress; allows us to set expectations for restoration and issue public safety alerts
- Disseminate pictures and videos of crews at work
- Support the contact center; reps use the feed for customer conversations
- Support field employees who follow updates to gauge restoration and communicate with customers

# Commitment to Customer Reliability

## System Reliability

- Reduced SAIDI 3-year rolling average by 23 minutes from 2013 to 2014 – 66 minutes
- 2014 reliability excluding major event days - SAIFI: 0.92, SAIDI: 67.2, CAIDI:73.0

## System Automation

- Expansion of distribution substation SCADA - 66% of customers served
  - All distribution substations planned to be completed in the next 4 -7 years
- Second distribution circuit automation project completed – 4,800 customers impacted
  - Additional 2,900 customers impacted in 2015
- Addition of breakers and auto-sectionalizing schemes to transmission substations

## System Hardening

- Rebuilt/upgraded/added 21 miles of transmission lines – focused on aging infrastructure and loop feeds
- Rebuilt/upgraded 7 miles of main distribution lines
- Continued four year cycle on distribution line clearance

# Nov. 2014 – Named Top Ranked Midsize Utility in the Nation for Electric Reliability

- Decrease in electric outages of 35%+ since 2011
- Average length of customer outages improved by 20% since 2011
- Places Vectren in the top 5% nationwide as compared to other utilities of like size (500,000 customers or less)
  - #1 in the Midwest, #3 in the nation



# Discussion Questions – All IOUs

## 2015 Summer Resource Adequacy

- Vectren has adequate supply side resources (UCAP basis) for the summer of 2015
  - Vectren Peak – 139 MW (13%) above Vectren retail peak and 61 MW (5%) above the MISO PRM requirement
  - MISO Coincident Peak - 176 MW (17%) above MISO coincident peak and 101 MW (9%) above PRM requirement
  - MISO has credited Vectren's base load units with >94% reliability (based on the previous three years performance).

# Discussion Questions – All IOUs Continued...

## Environmental Concerns

- Mercury and Air Toxics Standards (MATS)
  - Vectren's sorbent injection systems are installed and operational. Vectren is fully compliant with MATS requirements.
  
- Clean Power Plan (CPP) - The Administration has indicated that it will finalize the rule and release a model federal implementation plan (FIP) later this summer.
  - Vectren filed timely written comments which set out its concerns
    - Vectren has a previous record of energy efficiency and conservation commitments and renewables investments. These efforts will not be recognized under a proposal that sets emission rate reduction goals off of a 2012 baseline.
    - Minimal opportunity for additional heat rate improvements beyond those already completed.
    - Shift from economic to environmental dispatch will require fundamental changes to the way electricity is bid into the MISO market.
    - EPA's regional approach to setting renewable goals is flawed and does not account for differences in renewable potential within states.
    - EPA's target of 1.5% net year-over-year efficiency savings is unrealistic for Indiana. Low hanging fruit has already been captured and further energy efficiency measures will increase costs, rather than savings, to consumers.
    - States should be afforded a range of flexible compliance options including but not limited to industrial energy efficiency activities, installation of combined heat and power facilities, methane capture from landfills and agricultural facilities, and Direct Use of natural gas.
  - Vectren shares the concerns that Edison Electric Institute has raised with FERC with respect to the requirement to complete a majority of a state's goal by the short term interim date (2020), the potential reliability impacts of achieving both the interim and final goals, and the need to include a Reliability Assessment Mechanism and Reliability Safety Valve directly in the final rule.
  
- Vectren continues to monitor progress of regulation and explore the most economical options for compliance. IDEM has completed its preliminary analysis, and Vectren will continue to work with the state as it commences work on the state implementation plan.

# Discussion Questions – All IOUs Continued...

## Estimating Customers' Bills

- Bill Estimation
  - Vectren has a goal to read every customer bill each month
  - Vectren primarily uses contractors to perform manual meter reading
    - Meter reading performance target of 98% and 1% consecutive estimates
  - Vectren's contractors are currently not performing at this level but Vectren is working aggressively to improve the performance
    - Hiring additional meter readers where needed
    - Improving meter reading routing to enhance performance
    - Pursuing AMR technology to improve performance
  - Bills are estimated if an actual meter reading is not obtained and in some cases if the actual reading fails exception analysis
    - Inclement weather during the winter of 2014/2015 contributed to higher levels of estimations
  
- Estimation Methodology
  - Vectren's billing system estimation is based upon the average of 6 historical months of usage
    - (M – Current Month): M-1, M-11, M-12, M-13, M-23, M-24
    - The multi-month process is used to normalize bills based upon customer usage and weather variations

# Discussion Questions – Vectren

## EM & V

- Most Indiana electric utilities utilize the evaluated net savings as inputs to model DSM cost-effectiveness for planning electric programs
  - An EM&V framework was developed through the previous statewide EM&V committee that provides standard protocols and guidelines for EM&V work in Indiana.
  - Most utilities plan to continue to use the EM&V Framework as a guide for future EM&V work.
  - Utilities utilize independent third party evaluators that follow industry protocols for the basis of EM&V which would be the level of uniformity.
    - A comprehensive and uniform model with a one size fits all approach would be problematic because of the diversity of programs and how each utility implements the programs. The protocols and standards utilized by independent evaluators should be the common practice followed by utilities.

# Discussion Questions – Other IOUs

## DSM and Energy Efficiency

Methodology Vectren will use to set DSM goals:

- Senate Bill 412 requires Vectren to establish DSM goals through its IRP.
- Vectren's 2014 IRP modeled DSM using:
  - Market Potential Study ("MPS") to identify feasible level of DSM.
  - Modeling incremental blocks of DSM over a 1% commitment and allowing the model to pick DSM as a resource option.
- Effectiveness of Vectren's DSM goals:
  - Vectren will engage a consultant to conduct an independent evaluation, measurement and verification review of its DSM Programs.
  - Vectren has conducted a MPS to identify achievable level of DSM.
  - Vectren will propose incentives to encourage it to achieve the DSM Goals



# Discussion Questions – Other IOUs Continued...

## 2014 IRP Observations and IRP Improvement Opportunities

- Vectren's first public stakeholder process was a success
  - Three stakeholder meetings with good discussion
  - Stakeholder input incorporated into Vectren's 2014 IRP
- In response to concerns Vectren's risk analysis was too constrained, Vectren notes that its model developed 144 possible outcomes:
  - Evaluated three basic portfolio themes
  - Evaluated escalating carbon prices (beginning at \$10-\$15 and rising to \$23 -\$48) to model environmental compliance costs.
- Next IRP process will be enhanced to include:
  - Evaluation of the optimal retirement date of existing units considering the impact of investment, environmental regulations, and commodity fuel prices
  - More in depth consideration of potential for large customers to convert to Combined Heat and Power

# Discussion Questions – Other IOUs Continued...

## Maintenance Coordination

- Vectren Presidents proactively and frequently participate in meetings with city officials including Mayors, Engineers and Street Supervisors to discuss plans and schedules for gas and electric infrastructure replacement, relocation and upgrade activities
  - Color coded maps are distributed containing future years projected plans to allow coordination with street repairs and paving initiatives
  - Communicate with customers in a door to door process regarding tree trimming and gas infrastructure work that involves accessing customers property

# Questions