Outline

• Demand and Capability
• Delivery and Customer Response
• Energy Efficiency
• Gas / Electric Challenges
• Conclusions
Peak Demand

2014

- Net peak demand forecast
  - 4,575 MW for normal weather
  - 4,881 MW for worst-case, extreme-weather forecast

2013

- Actual net peak demand
  - 4,659 MW on August 28, 2013 (no load reductions due to direct load control and interruptible programs occurred at the time of the peak)

2011

- All-time net peak demand
  - 4,752 MW on July 19, 2011
Reserve Capability

2014

• Normal weather demand: 4,575 MW
  – Reserve capability is 830 MW or 18.14%

• Extreme weather demand: 4,881 MW
  – Reserve capability is 524 MW or 10.74%

2012

• Actual net peak demand: 4,659 MW
  – Reserve capability was 753 MW or 16.16%
Available Resources

• Net capability: 5,405 MW
  – Owned generation: 5,395 MW
    • Coal, gas, nuclear, oil, wind, hydro
    • Large coal-fired units are jointly-owned with municipals and cooperatives
  – Purchases: 69 MW
  – Less sales to other utilities: 144 MW

• Demand-side management: 330 MW
  – Direct load control: 61 MW
  – Interruptible demand: 270 MW
    • Includes 85 MW with backup generation designated as capacity resources in MISO
Historic Peak Demand Forecasts

- 2005 Actual: 4,000 MW
- 2006 Actual: 4,000 MW
- 2007 Actual: 4,100 MW
- 2008 Actual: 4,150 MW
- 2009 Actual: 4,200 MW
- 2010 Actual: 4,250 MW
- 2011 Actual: 4,300 MW
- 2012 Actual: 4,350 MW
- 2013 Actual: 4,400 MW
- 2014 Actual: 4,450 MW

- Forecasted: 4,500 MW
- Normal: 4,575 MW
- High: 4,881 MW
Transmission Loading

• MidAmerican expects its system to perform well
  – No facilities expected to load above normal ratings for system normal conditions at both expected system peak and worst case summer peak
  – No transmission or sub-transmission facilities expected to load above normal ratings for single contingency events
  – Operating procedures would be utilized to prepare for potential issues from certain double contingency events
• MISO would use congestion management tools including re-dispatching generation and/or calling for transmission loading relief
Adequate Transmission Capability

- MidAmerican does not expect any limitations on its ability to serve its customers or any ARES and RES customers for the summer of 2014
- MidAmerican continues to experience occasions of significant west to east flows across the transmission system
  - MISO flowgates in the Quad Cities and Galesburg areas limit transmission service reservations between Illinois and Iowa to reduce the possibility of overloading transmission facilities
Storm Preparedness/Response

- Daily and extended forecasts monitored for severe weather threats (ice, wind, thunderstorms)
- Pre-storm calls held to discuss system risks based on forecast and appropriate measures
  - Additional on-call crews, standby crews and remote contract resources contacted
- Radar monitored 24x7 by electric system operators for approaching weather threats
- Additional positions added based on post storm reviews & lessons learned
  - Emergency Preparedness Manager
  - Distribution Control Training Coordinator
  - 6 additional Distribution Operators
Storm Preparedness/Response

• Pending magnitude and scope of impacts, initiate one or more of the following:
  – Local and remote storm centers opened to dispatch field resources
  – Remote company field resources and contract resources dispatched to impacted areas
  – Wire watchers and wire clearing crews (based on volume of wire down calls)
  – Request Mutual Assistance, Berkshire Hathaway Energy resources for major events

• Status calls throughout event to assess progress, resource needs and to communicate estimated time of restoration

• Post storm reviews/lessons learned – updates to policies and procedures
Outage Communications

- MidAmerican delivers outage communication through a variety of sources:
  - Radio and television advertising
  - Social media: safety tips and real-time outage tips
  - Earned media: safety news releases and live interviews
  - Web communications: safety tips and information
  - Outage Watch web page being updated, includes availability of individual outage information after login

- **Who to Call** information is provided during outages:
  - Front page of [www.midamericanenergy.com](http://www.midamericanenergy.com)
  - Listed in all news releases and key messages during interviews

- During significant outages and storms, MidAmerican buys real-time advertising to warn of the down-line dangers and who to call if someone encounters a downed line
Vegetation Management

• Three year trim cycle for distribution system clearances
• Annual electric transmission inspection and remediation program
• Spring and fall bill insert safety messages
• 17.7% of all Illinois customer outage minutes in 2013 were tree related (excludes major storm events)
  – Customer outage minutes due to trees were down 10.9% in 2013 compared to 2012
In June 2008, per ICC order, MidAmerican initiated a 4-year inspection program of all circuits to identify issues with the National Electrical Safety Code guidelines.

All NESC inspections were completed in December 2011, and all issues on company-owned equipment were corrected by the end of 2012.

During the inspections, MidAmerican also discovered 7,030 instances where the attachment point for customer-owned electrical equipment would have to be changed to meet NESC guidelines.

Currently 6,756 customer issues have been resolved.

MidAmerican’s goal is to have all of the customer-owned issues resolved by the end of 2014.

MidAmerican is inspecting all distribution circuits on a 4-year cycle.
Energy Efficiency
Energy Efficiency

• New Five-year energy efficiency plan for Illinois approved - Jan 1, 2014 – December 31, 2018
• Most costs are recovered via an energy efficiency adjustment clause – now shown separately on customers’ bill
• In 2013, 4,705 unique bill accounts received rebates totaling $2,344,018
• Total Illinois spending in 2013 was ~ $3.5 million
• Gross Illinois savings in 2013 were:
  – 5,876 MWh and 18 MW for electric demand
  – 316,611 therms and 2,665 peak therms for gas
Gas / Electric Challenges
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- This winter managed with coal and wind resources, future years will be more dependent on gas; infrastructure reliance
- MidAmerican will continue to maintain firm pipeline capacity contracts for its combined cycle generation
- Increased storage injections required for the coming winter
- New gas fired generation may require substantial interstate pipeline investments
Conclusions

- **Load and Capability**
  - 2014 reserves nearly 11% for extreme weather conditions

- **Delivery and Customer Response**
  - Transmission ratings, operating procedures and contingency planning in place; vegetation management program working

- **Energy Efficiency**
  - Five year plan in place; separate item noted on customers bills

- **Gas / Electric Challenges**
  - This winter managed with coal and wind resources, future years will be more dependent on gas; infrastructure reliance
  - Firm pipeline contracts will continue
  - Increased storage injections required for the coming winter