2012 Long-Term Reliability Assessment

May 30, 2012

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Assessment Staff

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Long Term Reliability Assessment

• Projected 10-year Long Term outlook
  – 2013-2022
  – First LTRA that does not include current year

• Primary objectives:
  – Identify areas of concern
  – Make recommendations for mitigations/actions as needed

• Provides high-level overview for SPP RTO Region
  – Demand growth
  – Capacity adequacy
  – Operational reliability
Assessment Area

- SPP RE assessments now include Nebraska
  - Nebraska still registered with MRO
  - RTO operational and planning area include Nebraska
Assessment Process

• Created with data/information submitted by SPP Reporting Entities
• SPP staff validate and cross-check data to verify consistency
• SPP staff aggregate information into one dataset for entire SPP RTO area
• SPP staff and Transmission Working Group review/validate data and develop assessment
• Assessment undergoes peer review process at NERC prior to finalization
Demand

- 53,628 MW projected 2013 Total Internal Demand
- 60,088 MW projected 2022 Total Internal Demand
- 1.2% annual Demand growth projected over next ten years
Demand Response 2013-2022

- Demand Response consists of Interruptible, Non-Controllable, and Direct Control Load Management
- 1,375 MW projected 2013
- 1,986 MW projected 2022
Energy Efficiency 2013-2022

- 307 MW projected 2013
- 809 MW projected 2022
Member Demand Response Programs

- **Westar program started 2009**
  - Initial demand reduction of ~27 MW and ~90 MW with full enrollment
  - 32,000 enrolled; expected enrollment of 90,000 by 2016

- **OG&E program started 2010**
  - Expect ~80 MW demand reduction
  - Projected enrollment of 40,000 customers by end 2012

- **BPU program released January 2012**
  - Expect ~10 MW demand reduction
  - Projected enrollment of up to 6,000 customers-March 2013
Capacity

• 86,448 MWs Total Internal Capacity in 2013

• 89,189 MWs Total Internal Capacity in 2022
  – Includes Existing Certain, Future Planned, Conceptual Capacity Additions; Expected On-Peak and Derated resources
  – Reserve margin based on expected Existing and Future Capacity Additions
  – Includes 3,410 MWs Future Capacity Additions

• 23,633 MWs generation (mostly wind) in Generation Interconnection queue
Reserve Margin 2013-2022

Anticipated Capacity Reserve Margin (Summer)
Operational Issues

• EPA’s MATS and CSAPR regulations could result in generator retirements of 1,000-2,000 MWs

• Outage coordination needed for as much as 13,000 MWs of generation
  – Currently being studied
  – At this time, no expected long-term outages resulting in reliability concerns

• Generation fleet is diverse in terms of location, fuel type, and capability
Reliability Assessment

• Reliability issues not expected
• Reserve margins are adequate
  – SPP members required to maintain 12% capacity margin, which translates to a 13.6% reserve margin
  – Forecasted reserve margin is 25% in 2013, decreasing to 15.6% in 2022
Transmission

• 2,965 miles expected over 10-year assessment period
• Particular emphasis on western part of grid due to influx of renewable generation
Standing and Emerging Issues

• U. S. EPA Regulations
  – SPP now including impacts in 10-year planning studies
  – SPP not projected to have significant impacts to planning reserve margins during next 10 years

• Variable resource integration
  – May cause operating challenges and need for new transmission in western SPP region
  – SPP RTO is participating in various forums to understand implications and necessary actions to provide appropriate requirements
Standing and Emerging Issues, Continued

- HVDC line proposals under consideration
  - Two Clean Line Energy projects could each add 700 miles of HVDC in different areas of SPP
  - Tres Amigas Project – planned to connect SPP, WECC, and ERCOT
    - Phase I (750 MW) expected to be in service March 2015
Summary

- SPP reporting area shows modest load growth, sufficient resources and adequate reserve margins for 2013-2022 assessment period
- Long-term challenges include federal environmental regulations and integration of variable generation
Please give us your feedback

Take our short survey

Thank you!