The Role of ISOs and RTOs in Planning Transmission and Renewable Resources

July 16, 2009

Transmission Planning

- ▶ ISO/RTO planning has been effective
- Transparent, inclusive processes in place
- Efforts underway to enhance collaboration



Long-term Planning is Challenging, but Essential

- Uncertainty about energy and environmental policies make planning difficult
 - Economic growth
 - Demand response
 - Energy efficiency
 - Aging infrastructure
 - Carbon constraints
- Resource planning with (and without) state mandates
- Cost Allocations / Seams Agreements
- Siting issues for major projects across several jurisdictions require very long lead times

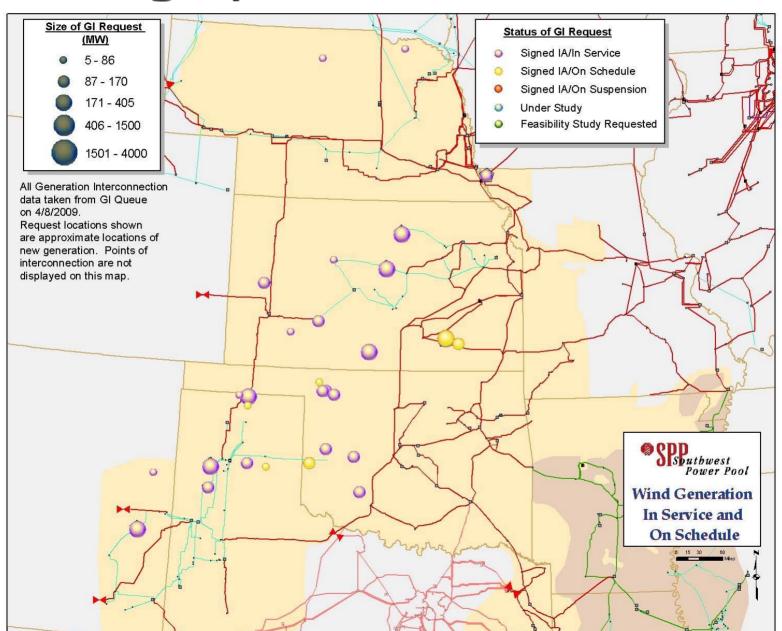
ISO/RTO Markets Support Renewables and Demand Response

American Wind Energy Association stated in a letter to FERC Chairman Kelliher:

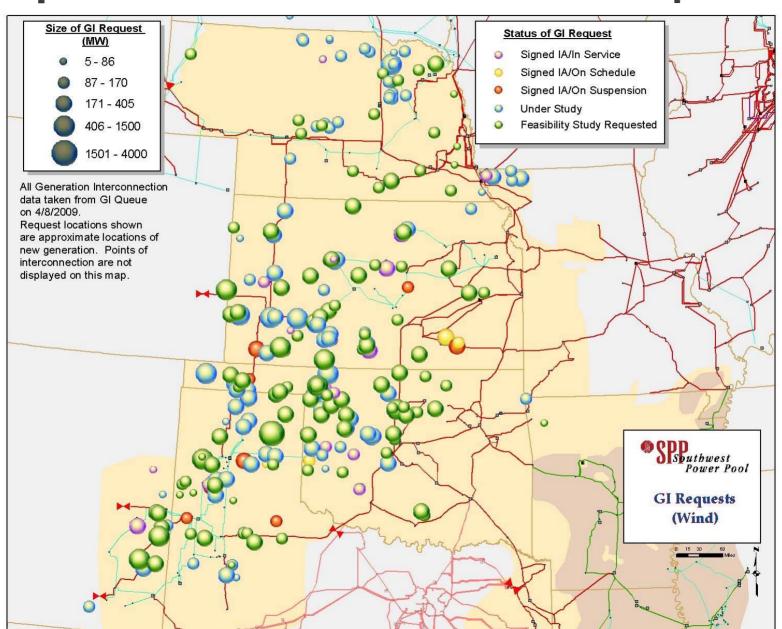
"Well-structured regional wholesale electricity markets operated independently allow far greater amounts of renewable energy and demand response resources to be integrated into the nation's electric grid. In fact, approximately 73 percent of installed wind capacity is now located in regions with such markets, while only 44 percent of wind energy potential is found in these areas.

Large, regional energy markets provide for cost-effective balancing of generation and load with significant penetrations of variable, nondispatchable power sources, and they facilitate delivery of resources remote from load centers."

Existing System is Saturated



Exponential Growth in Requests



Renewable Integration Expertise



Need for Eastern Interconnection Planning Collaborative (EIPC)

- New energy policies are driving the need to create a framework to analyze transmission scenarios on a broad multi-regional scale considering the entire interconnection
- Transmission expansion plans in the Eastern Interconnection are developed today and coordinated on a regional and super-regional basis, but could be better coordinated on an interconnection basis
- Any new expanded process must build upon, not restrict, existing regional planning processes

Challenge to the Industry

- Existing generation connection queues and transmission development plans must be respected
- Expanding existing regional processes to cover the entire Eastern Interconnection and reach consensus will require:
 - "Grassroots" approach
 - Broad stakeholder involvement
 - Significant role for state and provincial representatives
 - Federal acceptance of the process
- U.S. DOE announced funding opportunity to facilitate development and strengthen study efforts in the three U.S. interconnections
 - Proposals due Aug. 14, 2009

Eastern Interconnection Planning Collaborative

- Rolls-up regional plans
- Coordinates with Canada, Western Interconnect, ERCOT
- Receives stakeholder input and holds public meetings
 - Identifies gaps for further study
- Performs studies of various transmission alternatives against national, regional and state energy/economic/environmental objectives

Publishes Annual Interconnection Analysis



Annual interconnection analysis



States

- State energy policies
 - Rate policies

Provides policy direction, assumptions, and criteria

DOE/FERC

Regional/state compliant plans provided as input

Study gaps relative to national, regional and state policy



FERC

- Review/direction
- Order adjustments

Regional Plans and **Projects**

States

- Policy recommendations
 - State energy plans

ISOs/RTOs & Order 890 Entities Produce Regional Plan through regional stakeholder process, including state regulatory authorities

EIPC Next Steps

- 40 states/District of Columbia are working together on funding request to DOE to enable their active support of EIPC
 - States lead development regarding modeling assumptions and scenarios/futures
- ► EIPC will submit detailed proposal to DOE on August 14th with milestones outlined



Questions?

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