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Electric Generation Reliability

**Remarks Before the
Pennsylvania Public Utility Commission
2011
Summer Reliability Assessment Meeting**

June 9, 2011

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PJM Supply Mix - 2010

	Installed Capacity	Generation
Coal	40.8%	49.3%
Nuclear	18.3%	34.6%
Gas	29.1%	11.7%
Oil	6.1%	0.4%
Hydro, Wind, Solar & Other	5.7%	4.0%

- **PJM capacity resources for summer 2011 – 180,400 MW, including 12,671 MW of FirstEnergy and Cleveland Public Power areas.**
- **640 MW added in rest of PJM since last summer.**
- **No significant generation is expected to be out of service over summer.**
- **6,830 MW retired as part of PJM generator deactivation process since 2003. 932 MW retired in 2010/2011. 3,582 MW requested for deactivation as of 5/2/11.**
- **We have more than adequate generating capacity to serve load for this summer.**

Fuel Supply & Delivery

- **Some problems reported with barge coal deliveries on Allegheny & Monongahela but overall coal inventories near normal.**
- **EIA: Natural gas inventories rising at end of May to 2,107 BCF, 42 BCF below the 5-yr average.**
- **Natural gas resource base grew by 611 TCF in 2010 due to shale gas; NERC monitors reliability implications of increased reliance on this fuel.**
- **Nuclear units expected to be at full capacity at time of peak.**
- **No generator deratings expected due to low water levels.**
- **Variable generation (wind, solar) amounts to nearly 5,000 MW nameplate and 670 MW on-peak.**

Challenges to Thermal Plants

- **Key factors affecting thermal plant economics: low natural gas prices, reduced demand growth (1.1% forecast), expanding RPS mandates, environmental regulations.**
- **PJM IMM estimates 14-19 GW will need additional revenues or may retire.**
- **EPA/DEP Air and Water proposals**
 - **1. Clean Air Transport Rule (SO₂ and NO_x); 2. Air Toxics (Hg and other “toxics”); 3. Clean Water Act 316(b) Rule (intake structures); 4. Coal Combustion Residuals Rule.**
 - **Others coming: GHG Regs., Transport 2, tighter ozone, SO₂ and particulate standards, High Electric Demand Days.**
- **Older, smaller plants may retire rather than install emission controls.**

PJM Reliability Pricing Model (RPM) Results

- **Fortunately, in RPM, PJM has a three year forward capacity commitment process to ensure reliability.**
- **To meet customer demand for 2014/15, PJM's recently concluded auction secured enough resources to achieve a 19.6% reserve margin (target is 15.3%).**
- **Andy Ott highlighted: "Investment in new generation and upgrades to existing generation are occurring, showing that generation owners are investing capacity revenues to maintain and enhance existing units."**
- **The RPM process enables PJM to know three years in advance which units are too expensive and not needed for reliability.**
- **9,074 MW did not clear the 2014/15 auction. According to a PJM analysis, there was a 16% reduction (6,900 MW) in committed coal capacity likely because cost of environmental retrofits were high relative to demand response (DR).**

PJM Has Tools to Address Retirements

- **PJM has initiated an extensive process to proactively identify and plan for “at risk” generation. Study expected in mid-June and analysis being conducted by Regional Planning Process Task Force.**
- **If a unit wants to retire or deactivate after providing the required 90 day notice, but is needed for a limited period to maintain reliability, PJM’s tariff provides a workable mechanism.**
- **PJM can execute a Reliability Must Run agreement with generators.**
- **Under the tariff, owner has option to make full cost of service filing or accept avoided cost compensation.**

Regulatory Uncertainty

- **Regulatory uncertainty can have chilling effect on investment in new and existing generating facilities – in long run threatens electric reliability.**
- **Current examples include states' recent efforts to subsidize new generation entry, RPS mandates in PJM (40,636 MW additional by 2025) that far exceed projected growth in electricity demand (28,000 MW), and FERC's Final Rule on DR which overcompensates that resource.**
- **EPGA commends the PA PUC for swiftly recognizing reliability issues inherent in the NJ and MD capacity subsidy proposals and submitting insightful comments to FERC.**
- **In closing, EPGA believes properly designed and well functioning wholesale competitive markets are the most effective means of ensuring a reliable supply of power to the PJM region.**