

January 30, 2010

Allegheny Power/ Trans-Allegheny Interstate Line Company Response to PJM TEAC
Request for Sensitivity Analysis Recommendations
January 13, 2010 TEAC Meeting

Paul,

As requested at the January 13, 2010 TEAC Meeting, Allegheny Power and Trans-Allegheny Interstate Line Company offer the following suggestions related to possible sensitivity analysis to be conducted with the 2010 RTEP analysis. We believe sensitivity analysis is essential in the 2010 RTEP due to the many changes that are occurring with all aspects of the transmission system throughout the PJM footprint. In addition, the significant changes to the national economy and energy policy are critical components that could change the way energy is produced and delivered in the country for years to come.

1. It is imperative that sensitivities for varying levels of Demand Response (DR) and Energy Efficiency (EE) be conducted during the RTEP process. Since this is an unproven resource which will be utilized during critical system conditions, it is not known how much of the DR/EE bid will actually be available. It is recommended to run a sensitivity analysis utilizing 1/3 (33%), 2/3 (67%), and all (100%) of the DR/EE bid through the RPM auctions.
2. The load forecast should also be subject to a sensitivity analysis during the RTEP process. As demonstrated in Mr. Falin's graphical comparison of Moody's forecast to the Blue Chip forecast presented at the January 13, 2010 Planning Committee meeting, there is variation in the forecast GDP that should be considered during the RTEP analysis. Using Mr. Falin's graph as an example, the forecast range should include the Blue Chip Top 10 Average forecast as a high limit to the forecast and the Moody's Annual Average as the expected forecast.
3. The Capacity Emergency Transfer Objective (CETO) values should also be subject to sensitivities. Considering the impact on the CETO of the DR/EE sensitivity and the load forecast sensitivity described previously, other variables used in the CETO calculation should also be varied to determine extreme high and expected CETO values for each Load Delivery Area (LDA) to use in a sensitivity analysis.
4. The amount of wind generation dispatched in the case should also be included as a RTEP sensitivity analysis. The amount of wind generation being imported from outside of PJM and the amount of wind generation dispatched within the PJM region should be dispatched to meet states' targeted Renewable Portfolio Standards to determine how transmission line loadings could be impacted.
5. The impact of 'loop' flows (circulation flows) on line loadings and voltages within the PJM region should also be included as a RTEP sensitivity analysis. The weather pattern size and location that creates a critical system condition within PJM will likely affect load and generation patterns outside of PJM and consequently impact the magnitude of the loop flows through the PJM region.

A high loop flow condition with 1000 MW and a high loop flow condition of 1000 MVAR of loop flow should be included as a RTEP sensitivity analysis.

6. The possibility of generators over 40 years old within PJM retiring is a sensitivity analysis that should be conducted as well. A recommendation would be to remove 50% of the generators over 40 years from the power flow model with the deficiency being made up by newer generation as a sensitivity analysis to evaluate the ability of the transmission system to reliably deliver energy without the older generation resources.

John P. Syner
GM, Transmission Planning