

PJM Regional Planning Process Task Force Discussions on Market Efficiency Enhancements
AEP Recommendations Submitted to PJM on 12/07/12

- 1) PJM should actively simulate (hourly variation of demand and generation, including the use of a security constrained economic dispatch) its neighbors in its market efficiency studies to properly account for any impacts those neighboring systems may have on the PJM transmission system.
 - a. PJM should work with these neighboring areas to ensure that the demand, generation, and levels of interchange modeled are appropriate. For example, PJM should work with NYISO to not only model appropriate demand and generation for all study years, but to also determine the actual interchange levels between NYISO, ISO-NE and IESO, and then ensure that those levels are appropriately modeled in its market efficiency studies.
 - b. PJM should allow interchange with its neighbors to more realistically mimic the actual functioning of the market. This can be achieved by adjusting the hurdle rates in the market efficiency studies.

- 2) PJM should enable more stakeholder involvement in the determination of modeling parameters, such as the modeling of demand side response, future generation, operational limits for thermal and reactive interfaces, etc.
 - a. As an illustration, the operational limits for most reactive interfaces, such as AP South, are calculated at a simulated peak load. However, actual limits during off-peak hours can be much lower than the limits that were calculated for peak load conditions. This can reduce the projected congestion to unrealistic levels. Although determining hourly limits for such interfaces is not practical, scaling the calculated peak limit to an average value based on historic data would be an acceptable and more realistic compromise.
 - b. As another example, it's not very clear how demand side response is modeled in the market efficiency studies. It is assumed that demand side response at a given location responds to a pre-determined price signal. The location and magnitude of these price signals need to be vetted with stakeholders so there is a better understanding and appreciation of the modeling impact demand side response is having in the market efficiency studies.

- 3) In its reliability studies, PJM relies on its existing generation queues to meet any generation deficiency in future study years. Generators with Facility Studies Agreements are modeled before generators with Impact Studies Agreements, until the deficiency gap is bridged. In its market efficiency studies, PJM relies on its generation queues to determine the type and location of that future generation, but that future generation is then simulated by scaling existing generators. PJM should use in its market efficiency studies the same methodology it uses to address generation deficiencies in its reliability studies. Since any network upgrades needed for those higher queued generators are known once those generators reach the impact study stage, PJM can distinguish between market congestion and limitations triggered by those generators in its market efficiency studies. It should also be noted that the generation queues also reflect the actual trends in the market.

- 4) PJM should use Net Load Payments¹ by Benefiting Zones as the basis for computing the benefits of transmission proposals that relieve market congestion.

¹ Net Load Payments are computed by subtracting the Gross Demand Costs from the cleared ARR values.