



Adjusted Production Cost as Allocation Metric

Cross Border

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○ Background

- Costs are to be allocated based on the proportion of savings realized from the development of a Project.
- Savings can be determined by one or a combination of metrics that measure those savings:
 - Adjusted Production Cost
 - Load LMP
 - Gen LMP
- Focus on Adjusted Production Cost as the Metric for allocating cost between PJM and MISO for Projects in one RTO that demonstrate a benefit in the other RTO

○ Proposed Allocation Metric

- Adjusted Production Cost captures the impacts on each pool for the purchase and sales transactions outside of the pool (hourly)

**Adj PC= Production costs +
 Purchases @ Zone Load Weighted LMP -
 Sales @ Zone Generation Weighted LMP**

$$\text{Load Zonal LMP} = \frac{\sum_{n=1}^n (\text{Bus Load}_n * \text{Bus LMP}_n)}{\text{Total Zonal Load}}$$

$$\text{Generator Zonal LMP} = \frac{\sum_{m=1}^n (\text{Generation}_m * \text{Generator Bus LMP}_m)}{\text{Total Zonal Generation}}$$

○ Allocation Process

- Intent is to determine the operational savings associated with a transmission project.
- Operational savings are derived from a base case without the project compared to a change case with the project included.
- Operational savings are based on the difference in the adjusted production costs between the base and change cases
- Determine savings over multiple years
- Determine split the savings ratio

○ Issue – Common Generators

- Two concepts to consider for allocating the benefits of generators in one RTO that provide direct support to the other RTO
 - Capacity allocation is used; or
 - Generator ownership is used to distribute inter-RTO adjusted production costs

○ Approach 1 - Capacity Status Determines Where Savings are Allocated

- Operational savings for generation in one RTO providing capacity support in the other RTO and known to be non-recallable would be assigned to the RTO paying for capacity
- Require supplementing existing data gathering processes to specifically determine what MISO generation is assigned to PJM for capacity credit and the PJM generation assigned as designated Network Resources in MISO.
- Adjustments for resource designation
 - Can be made for current year, but time consuming
 - Changes year to year, not currently possible in MISO. PJM?
 - Provide marginal benefit?

Approach 2 - Generation Ownership

Determines where Savings are Allocated

- Unit ownership determines where the costs are allocated
 - Units or portions of units owned by MISO participants are allocated to MISO
 - Units or portions of units owned by PJM participants are allocated to PJM
 - Is easy to implement for multi-year analyses

Allocation Method for Cross Border Assignment

- Project cost allocation is made to each RTO based on each RTO's share of Production Cost Savings associated with each Project
 - Based on PROMOD and MAPS
 - Allocation Approach 1 or Approach 2
- Cost allocation within each RTO is based on the allocation process being defined within the RTO's.
 - RECB
 - Regional Planning Process Working Group (RPPWG)

Adjusted Production Cost as Metric

- Can be performed by each RTO using PROMOD and MAPS
 - Leverages off of the coordinated work performed for the JCM study
- Provides a good metric for where the gross level of savings are accruing
- Need to determine how to model generation in one RTO that is providing non-recallable capacity support to the other RTO
 - Capacity; or
 - Ownership