

# PJM Market Efficiency Re-evaluation Process

Nicolae Dumitriu  
Sr. Lead Engineer, Market Simulation

Market Efficiency Process Enhancement  
Task Force – Education Session  
August 17<sup>th</sup>, 2018

- PJM proposal was to limit the reevaluation based on a capital cost threshold and to stop reevaluating projects once the project completes 20% of its construction within the Engineering and Procurement status.
- Based on June poll results, the majority prefer to limit the number of market efficiency projects for which reevaluation is done.
- Major point of contention was the project reevaluation criteria - \$10M (Packages B,D), \$20M (Packages A',C,E) or \$50M (Package F) cap.

- Applies to market efficiency projects approved during previous RTEP Windows
- Using the current Market Efficiency Base Case
- Analysis performed individually, one project at a time
- Projects must meet the B/C criterion of 1.25

- Create a new base case by removing/reversing the topology related to the approved market efficiency project
- Measure the impact of adding back the approved market efficiency project
- Measure benefits for 15-year period starting with the in-service date
- For RPM projects also measure the capacity benefits
- Calculate the new B/C ratios

- Cumbersome process requiring the need to analyze all projects
  - Projects that are not costly
  - Projects that are still needed (congestion driver is still there)
- Results may not be accurate as removing the approved Market Efficiency project from the current base case may introduce reliability violations
- The project may have incurred significant development costs up to the re-evaluation date.
- The project may have less than one year to its in-service date.
- Regulatory challenges

Component	Status Quo	PJM Modification	PJM Reasoning
Reevaluation Criteria	<p>Costs and benefits of new economic-based enhancements or expansions shall be evaluated annually to ensure these projects continue to be economical.</p>	<p>PJM will only reevaluate projects with a capital cost of \$20M or higher. For projects with a cost less than \$20M, if project cost increases such that the B/C ratio (given the original benefits) falls below 1.25, then PJM will study the impacts of cancelling the project. PJM will stop reevaluating projects with cost greater than \$20M once the project has completed 20% of its construction within the Engineering and Procurement status as described on PJM transmission construction status page or once the CPCN certificate is received (approved), as applicable.</p>	<p>The reevaluation process is very complicated due to the large number of market efficiency projects in the RTEP, the undefined order in which the projects have to be reevaluated, and the uncertainty regarding other assumptions including transmission topology, generation, fuel costs and facility expected in-service dates. Utilizing a \$20M cost of capital cap reduces the number of projects to be reevaluated, and hence reduced the reevaluation complexities.</p>

# Appendix A – Operating Agreement & Manual References

- Scope, PJM requirements & Member requirements
- <http://www.pjm.com/about-pjm/member-services.aspx>
- PJM Manual 14B, Section 2.6:  
<http://www.pjm.com/~media/documents/manuals/m14b.ashx>
- PJM Operating Agreement, Schedule 6, Section 1.5.7:  
<http://www.pjm.com/media/documents/merged-tariffs/oa.pdf>
- PJM Market Efficiency Practices <http://www.pjm.com/~media/planning/rtep-dev/market-efficiency/pjm-market-efficiency-modeling-practices.ashx>