

Overview of the PJM Order 1000 Project Selection Process

Purpose

The purpose of this document is to outline the process by which submitted projects are evaluated and selected for inclusion into the Regional Transmission Expansion Plan (RTEP) under Order 1000.

Background

FERC requires entities like PJM to establish open, transparent planning processes in order to ensure a reliable transmission system while ensuring that needed transmission investments are just and reasonable. Through the issuance of Orders 890 and 1000, FERC is requiring that transmission planners develop and implement processes to accomplish the following main objectives:

- (1) Ensure that transmission planning processes at the regional level consider and evaluate, on a non-discriminatory basis, possible transmission alternatives and produce a transmission plan that can meet transmission needs more efficiently and cost-effectively; and
- (2) Ensure that the costs of transmission solutions chosen to meet regional transmission needs are allocated fairly to those who receive benefits from them.¹

PJM submitted filings in the Order 890 and 1000 dockets which describe how PJM will provide analysis to support the creation of project proposals by developers to address reliability violations identified by PJM. Those detailed requirements are contained in revised OATT language, section 1.5.8, that was submitted, and subsequently approved by FERC, in the Order 1000 docket.

Project Selection Process

The following aspects of the submitted proposals will be assessed against a variety of criteria (see Appendix 1), but the process will generally occur in the following sequence:

1. Technical Evaluation

PJM will assess submitted proposals to determine that the proposal, as submitted, will resolve the reliability violation(s) identified in the RTEP window documents and not create any additional reliability violations. Resolving the reliability violation(s) in this context means that the submitted project will result in all transmission facilities being within acceptable limits for all case scenarios provided in the RTEP window documents and all applicable criteria specified in the PJM manuals, without the need for operational procedures. Reliability

¹ FERC Order No. 1000, dated July 21, 2011, p. 10

criteria include the requirements of the NERC TPL- series standards as well as PJM required tests associated with the Reliability Assurance Agreement (RAA).

If none of the submitted proposals resolve the reliability violations, then PJM will not proceed further with the proposal evaluation. PJM will reopen the proposal solicitation process with revised documents that will be necessary for the developers to provide a proposal that will resolve the reliability violations. If the need for the project prevents an additional window due to the time delay associated with reopening the process, then PJM will implement changes to the submitted proposals to enable them to resolve the reliability violations and proceed with the evaluation process.

2. Conformance to Transmission Owner Construction Requirements

The submitted projects will be assessed for conformance to the transmission owner's construction requirements whether those standards are filed with FERC Form 715 or conform to TSS design guidelines that are developed by the PJM Transmission and Substation Subcommittee and posted on the PJM website. While the developer does not need to conform to the requirements of the incumbent transmission owner, the submitted proposal shall not create a conflict in construction, operations, or protection with the system of the connecting transmission owner(s) in the sole judgment of PJM and the connecting transmission owner.

In cases where the submitted project may create a conflict between the incumbent transmission owner's requirements and the developer's requirements, PJM will facilitate a process to reach resolution.

3. Cost and Schedule

The submitted cost and schedule will be reviewed by PJM as part of the effort to ensure that the proposed construction activities can be reasonably achieved in sufficient time to solve the identified reliability violation(s) and that the estimated cost is reasonable. In order to facilitate an appropriate comparison of competing projects, it may become necessary for PJM to develop an independent cost or to adjust the developer's submitted cost and schedule, based on PJM's RTEP experience with similar projects.

In cases where the developer has provided a cost commitment, PJM will factor in that into the evaluation by reviewing the scope of the commitment and assess the cost risk benefit, if any, to the project.

4. Constructability

PJM will assess submitted projects for constructability to understand the risks associated with the design, permitting, and construction of the proposed project. PJM may seek consultant assistance in performing the assessment, especially in cases where PJM does not possess experience or expertise with the technology or construction techniques.

5. Development of recommended solution by PJM

PJM will assess the proposals submitted and consider the overall effectiveness of the submitted proposals. In the course of its evaluation, PJM may determine that the proposals as submitted may be more effective or efficient with modifications to the proposal or in combination with elements of other proposals. Examples of modifications include but are not limited to:

- Adding (deleting) equipment, such as circuit breakers or other switching equipment to enhance reliability or resiliency
- Increasing (decreasing) conductor size in accordance with analytical results or to accommodate future needs

If PJM determines that none of the proposals submitted resolve the identified system condition, even with modifications, PJM will determine if there is sufficient time to solicit proposals. If there is sufficient time, PJM will open a new window for entities to submit new proposals. If there is insufficient time, PJM will develop a solution and present to the TEAC for input.

When there are multiple proposals that have been identified to resolve a system violation or condition, PJM will assess the competing proposals based a range of criteria, which are listed below. The specific violation or system condition that is being addressed along with the project that is proposed will influence when certain criteria are more significant than others in the evaluation.

Appendix 1 – Proposal Evaluation Criteria

- Conformance to Reliability Standards - NERC, RFC, SERC - thermal, voltage and stability
- PJM Reliability Requirements, from the PJM Reliability and Adequacy Agreements – Load Deliverability, Generator Deliverability, Light Load Reliability Criteria, 15 Year Analysis, Short Circuit analysis, Transmission Owner Criteria
- Market Efficiency – the extent to which the relative benefits of the project meets a Benefit/Cost Ratio Threshold of at least 1.25:1
- Project Longevity - How many years into the future is a solution alternative expected to be effective?
- What are the future risk factors? - Additional load, generation deactivation, additional transmission, future NERC standards, generation or merchant interconnection, impacts to the existing projects
- Transfer Capability – to what degree are the transfer capabilities to/from PJM increased or decreased?
- Coordination with other entities – does the proposal enhance or diminish reliability in another neighboring system?
- Operational Performance – Are there other impacts or benefits to operations performance?
- Route Diversity – does the proposal include an additional diverse route that provides enhanced operational flexibility?
- Grid Resiliency – does the proposal enhance grid resiliency through increased redundancy or operational flexibility?
- Estimated cost and any proposed cost commitment
- Schedule - Time to construct and feasibility of the schedule
- Siting and Permitting Risks
- Right-of-Way and land acquisition– Is new ROW/land required?
- Environmental impact risks
- Operations and Maintenance

- Physical constraints
- Project Complexity
- Impact to existing facilities
- Technology Considerations – Is technology proven?
- Outage Impacts – What outages are needed, how long, and what are impacts to system?
- Industry practices and generally acceptable methods

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