Proposed Friendly Amendment to PJM's Posted OA Language from 1/14/2021

Effective Date: 60 Days after Filing at FERC
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TARIFF

I. COMMON SERVICE PROVISIONS

References to section numbers in this Part I refer to sections of this Part I, unless otherwise specified.

1. Definitions

"Generating Facilities" shall mean Interconnection Customer's device for the production and/or storage for later injection of electricity identified in the Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities or Storage As Transmission Asset as defined in the Operating Agreement.

OPERATING AGREEMENT

Intra-PJM Tariffs --> OPERATING AGREEMENT --> OA 1. DEFINITIONS

1. DEFINITIONS

Unless the context otherwise specifies or requires, capitalized terms used in this Agreement shall have the respective meanings assigned herein or in the Schedules hereto, or in the PJM Tariff or RAA if not otherwise defined in this Agreement, for all purposes of this Agreement (such definitions to be equally applicable to both the singular and the plural forms of the terms defined). Unless otherwise specified, all references herein to Sections, Schedules, Exhibits or Appendices are to Sections, Schedules, Exhibits or Appendices of this Agreement. As used in this Agreement:

Immediate-need Reliability Project:
"Immediate-need Reliability Project" shall mean a reliability-based transmission enhancement or expansion that the Office of the Interconnection has identified to resolve a need that must be addressed within three years or less from the year the Office of the Interconnection identified the existing or projected limitations on the Transmission System that gave rise to the need for such enhancement or expansion pursuant to the study process described in Operating Agreement, Schedule 6, section 1.5.3. Energy storage equipment is ineligible to be an Immediate-need Reliability Project pursuant to Schedule 6, section 1.5.8(m)(1), but rather can be considered as a non-transmission alternative proposed by any Market Participant to avoid an immediate reliability need. Energy storage equipment can be an Immediate-need Reliability Project pursuant to Schedule 6, section 1.5.8(m)(2) only if selected pursuant to a competitive window.

Storage As Transmission Asset:

"Storage As Transmission Asset ("SATA")" shall mean energy storage equipment connected to or to be connected to the Transmission System and approved by the PJM Board for inclusion in the RTEP as a Transmission Facility that is capable of receiving energy from the Transmission System and storing energy for injection to the Transmission System and is operated only to support the Transmission System. SATA is not an Energy Storage Resource; and, therefore, shall not be permitted to participate in the PJM Markets except to the extent necessary to receive energy from the Transmission System and to inject energy into the Transmission System as a Transmission Facility. Such PJM Board-approved energy storage equipment shall have been selected pursuant to a Schedule 6 of the Operating -Agreement competitive window.

Intra-PJM Tariffs --> OPERATING AGREEMENT --> OA SCHEDULE 6

SCHEDULE 6 -REGIONAL TRANSMISSION EXPANSION PLANNING PROTOCOL

References to section numbers in this Schedule 6 refer to sections of this Schedule 6, unless otherwise specified.

Intra-PJM Tariffs --> OPERATING AGREEMENT --> OA SCHEDULE 6 --> OA SCHEDULE 6 SECTION 1 REGIONAL TRANSMISSION EXPANSION PLA Effective Date: 9/17/2010 - Docket #: ER10-2710-000 - Page 1

1. REGIONAL TRANSMISSION EXPANSION PLANNING PROTOCOL

1.5.6 Development of the Recommended Regional Transmission Expansion Plan

(g) The recommended plan shall separately identify enhancements and expansions for the three PJM subregions, the PJM Mid-Atlantic Region, the PJM West Region, and the PJM South Region, and shall incorporate recommendations from the Subregional RTEP Committees. Transmission enhancements or expansions may include any facilities that are eligible to be included in the Transmission System as provided for under this Agreement, including SATA. A SATA may only participate in the PJM Markets to the extent necessary to receive energy from the Transmission System and to inject energy into the Transmission System to provide the services for which the SATA was includ~~ed~~ing in the RTEP. Except to the extent necessary to receive energy from the Transmission System and to inject energy into the Transmission System as a Transmission Facility, SATA may not otherwise participate in the PJM Markets unless and until the Tariff or Operating Agreement includes provisions for storage facilities recovering cost-based revenues as transmission assets to also participate in these or other market activities.

1.5.11 Treatment of Storage as Transmission Asset (SATA)

1. A storage facility proposed as Storage as Transmission Asset ("SATA") may be considered for inclusion in the RTEP as a transmission enhancement or expansion.

   a. In addition to the criteria set forth in the Operating Agreement, Schedule 6, section 1.5.8(c)(1), any and all SATA proposals must be submitted ~~in the~~in the competitive proposal windows and also must contain the following information as part of the proposal:

      i. Direct capital cost;

      ii. Expected useful life;

      iii. Equipment replacement schedules and associated life-cycle costs and other ongoing costs to maintain the SATA at its required capability necessary to address the system needs identified, or otherwise comparable to a traditional wires solution; and

      iv. Other cost and performance information as the Office of the Interconnection may determine is necessary to compare cost and performance with other proposed solutions to the system needs identified.

   b. In evaluating the appropriateness of a SATA proposal as an expansion or enhancement to address the posted reliability violations, operational

performance, economic constraints, as well as Public Policy Requirements, the Office of the Interconnection will consider the following factors in evaluating the appropriateness of SATA as proposed to be a transmission solution:

i. The ability of the proposed SATA to address and solve the posted system reliability violation, operational performance or economic constraint in all hours that the system need is determined to exist with a life-cycle cost that is comparable to other proposed transmission solutions, or as otherwise required to address the potential system need after consideration of the comparability in system performance to other proposed solutions, including any non-transmission alternatives.

ii. The required charge and discharge capability of the proposed SATA to address the identified system need shall be treated as a Transmission Facility. Any excess charge or discharge above the required capability of the SATA shall not be treated as a Transmission Facility and shall not be eligible to participate in PJM Markets until rules for such participation are submitted and accepted by the Commission. Cost recovery under transmission rates is limited to the cost of the SATA's charge and discharge capability required to address system needs and will be pro-rated on that basis if a SATA of higher capability is proposed and selected for inclusion in the RTEP.

iii. Assurance of sufficient instantaneous energy and/or reactive capability (MWh/MVAr) to charge or discharge energy for any magnitude and duration identified as necessary in the planning study to address the identified system need.

iv. Life-cycle cost comparisons, including consideration of the duration required to address the system needs, which may be less than the life cycle cost of alternatives that would otherwise be required to address the system needs. Life cycle costs shall include all maintenance costs for the life of the SATA to ensure it continues to address the system needs for which SATA was planned throughout the projected life of the facility.

v. Demonstrate operating characteristics necessary to automatically respond to system needs, with the automatic response initiated through sensing of conditions requiring the SATA to be located local to the system need. Additionally, provisions for manual operability of the SATA shall be included in the PJM Manuals.

vi. The SATA must remain connected to the Transmission System while operating to address the system needs for which SATA was planned.

c. In order to consider potential impacts by the proposed SATA on New Service Requests in the New Services Queue, the Office of the Interconnection will test the models used to identify reliability criteria violations, operational performance or constraints with and without the SATA operating in the manner required for the SATA to address the system needs for which SATA was

planned. If such assessment demonstrates that the necessary operating mode of the proposed SATA would cause the need for additional system upgrades, the cost of such upgrades driven by the SATA will be included as part of the SATA proposal.

2. Operating Guides associated with SATA will be developed as needed to provide clear guidance with regard to the use of the SATA.

3. Any changes to the location or capability of the SATA included in the RTEP must be proposed through the RTEP planning process.

4. Credits for Real-Time Energy Market

a. A SATA's market activity will be limited to the charging and discharging necessary for the SATA to meet or be ready to mitigate the identified system needs for which the SATA was included in the RTEP.

b. A SATA receiving cost-based rate recovery shall monthly net its charge and discharge costs and receive or pay the difference between those costs such that it shall be revenue neutral in being dispatched to resolve transmission issues. ~~that also receives compensation for market-based rate services during asset charging/discharging will be subject to appropriate market revenue crediting for any potential double recovery of costs.~~

5. Any inclusion of a storage facility in the RTEP as a transmission enhancement or expansion and not approved by the PJM Board must be deemed to be transmission facilities in a ruling by FERC addressing such facilities prior to any inclusion in the RTEP[A1].

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1.5.8(n)

Reliability Violations on Transmission Facilities Below 200 kV. Pursuant to the expansion planning process set forth in the Operating Agreement, Schedule 6, sections 1.5.1 through 1.5.6, the Office of the Interconnection shall identify reliability violations on facilities below 200 kV. The Office of the Interconnection shall not post such a violation pursuant to the Operating Agreement, Schedule 6, section 1.5.8(b) for inclusion in a proposal window pursuant to the Operating Agreement, Schedule 6, section 1.5.8(c) unless the identified violation(s) satisfies one of the following exceptions: (i) the reliability violations are thermal overload violations identified on multiple transmission lines and/or transformers rated below 200 kV that are impacted by a common contingent element, such that multiple reliability violations could be addressed by one or more solutions, including but not limited to a higher voltage solution; ~~or~~ (ii) the reliability violations are thermal overload violations identified on multiple transmission lines and/or transformers rated below 200 kV and the Office of the Interconnection determines that given the location and electrical features of the violations one or more solutions could potentially address or reduce the flow on multiple lower voltage facilities, thereby eliminating the multiple reliability violations, or (iii) a SATA is possible or foreseeable to address the reliability violation. If the reliability violation is identified on multiple facilities rated below 200 kV that are determined by the Office of the Interconnection to meet one of the ~~two~~ three exceptions stated above, the Office of the Interconnection shall post on the PJM website the reliability violations to be included in a proposal window consistent with the Operating Agreement, Schedule 6, section 1.5.8(c). If the Office of the Interconnection determines that

the identified reliability violations do not satisfy either of the two exceptions stated above, the Office of the Interconnection shall develop a solution to address the reliability violation on below 200 kV Transmission Facilities that will not be included in a proposal window pursuant to the Operating Agreement, Schedule 6, section 1.5.8(c). The Office of Interconnection shall post on the PJM website for review and comment by the Transmission Expansion Advisory Committee and other stakeholders descriptions of the below 200 kV reliability violations that will not be included in a proposal window pursuant to the Operating Agreement, Schedule 6, section 1.5.8(c). The descriptions shall include an explanation of the decision to not include the below 200 kV reliability violation(s) in Operating Agreement, Schedule 6, section 1.5.8(c) proposal window, a description of the facility on which the violation(s) is found, the Zone in which the facility is located, and notice that such construction responsibility for and ownership of the project that resolves such below 200 kV reliability violation will be designated to the incumbent Transmission Owner. After the descriptions are posted on the PJM website, stakeholders shall have reasonable opportunity to provide comments for consideration by the Office of the Interconnection. With the exception of Immediate-need Reliability Projects under the Operating Agreement, Schedule 6, section 1.5.8(m), PJM will not select an above 200 kV solution for inclusion in the recommended plan that would address a reliability violation on a below 200 kV transmission facility without posting the violation for inclusion in a proposal window consistent with the Operating Agreement, Schedule 6, section 1.5.8(c). All written comments received by the Office of the Interconnection shall be publicly available on the PJM website.

(m) Immediate-need Reliability Projects:

(m)(1) Pursuant to the expansion planning process set forth in Operating Agreement, Schedule 6, sections 1.5.1 through 1.5.6, the Office of the Interconnection shall identify immediate reliability needs that must be addressed within three years or less. For those immediate reliability needs for which PJM determines a proposal window may not be feasible, PJM shall identify and post such immediate need reliability criteria violations and system conditions for review and comment by the Transmission Expansion Advisory Committee and other stakeholders. Following review and comment, the Office of the Interconnection shall develop Immediate-need Reliability Projects for which a proposal window pursuant to the Operating Agreement, Schedule 6, section 1.5.8(m)(2) is infeasible. If the Office of the Interconnection determines that energy storage equipment would address the immediate reliability need, then it may be proposed only as a non-transmission alternative and cannot qualify as a SATA under this Section 1.5.8(m)(1). The Office of the Interconnection shall consider the following factors in determining the infeasibility of such a proposal window: (i) nature of the reliability criteria violation; (ii) nature and type of potential solution required; and (iii) projected construction time for a potential solution to the type of reliability criteria violation to be addressed. The Office of the Interconnection shall post on the PJM website for review and comment by the Transmission Expansion Advisory Committee and other stakeholders descriptions of the Immediate-need Reliability Projects for which a proposal window pursuant to the Operating Agreement, Schedule 6, section 1.5.8(m)(2) is infeasible. The descriptions shall include an explanation of the decision to designate the Transmission Owner as the Designated Entity for the Immediate-need Reliability Project rather than conducting a proposal window pursuant to the Operating Agreement, Schedule 6, section 1.5.8(m)(2), including an explanation of the time-sensitive need for the Immediate-need Reliability Project, other transmission and non-transmission options that were considered but concluded would not sufficiently address the immediate reliability need, the circumstances that generated the immediate reliability need, and why the immediate reliability need was not identified earlier.

After the descriptions are posted on the PJM website, stakeholders shall have reasonable opportunity to provide comments to the Office of the Interconnection. All comments received by the Office of the Interconnection shall be publicly available on the PJM website. Based on the comments received from stakeholders and the review by Transmission Expansion Advisory Committee, the Office of the Interconnection shall, if necessary, conduct further study and evaluation and post a revised recommended plan for review and comment by the Transmission Expansion Advisory Committee. The PJM Board shall approve the Immediate-need Reliability Projects for inclusion in the recommended plan. In January of each year, the Office of the Interconnection shall post on the PJM website and file with the Commission for informational purposes a list of the Immediate-need Reliability Projects for which an existing Transmission Owner was designated in the prior year as the Designated Entity in accordance with this Operating Agreement, Schedule 6, section 1.5.8(m)(1). The list shall include the need-by date of Immediate-need Reliability Project and the date the Transmission Owner actually energized the Immediate-need Reliability Project.

(m)(2) If, in the judgment of the Office of the Interconnection, there is sufficient time for the Office of the Interconnection to accept proposals in a shortened proposal window for Immediate-need Reliability Projects, the Office of the Interconnection shall post on the PJM website the violations and system conditions that could be addressed by Immediate-need Reliability Project proposals, including an explanation of the time-sensitive need for an Immediate-need Reliability Project and provide notice to stakeholders of a shortened proposal window. Proposals must contain the information required in the Operating Agreement, Schedule 6, section 1.5.8(c) and, if the entity is seeking to be the Designated Entity, such entity must have pre-qualified to be a Designated Entity pursuant to the Operating Agreement, Schedule 6, section 1.5.8(a). Energy storage equipment that is determined to be SATA, is eligible for selection as an Immediate-need Reliability Project only if selected pursuant to a competitive window. In determining the more efficient or cost-effective proposed Immediate-need Reliability Project for inclusion in the recommended plan, the Office of the Interconnection shall consider the extent to which the proposed Immediate-need Reliability Project, individually or in combination with other Immediate-need Reliability Projects, would address and solve the posted violations or system conditions and other factors such as cost-effectiveness, the ability of the entity to timely complete the project, and project development feasibility in light of the required need. After PJM Board approval, the Office of the Interconnection, in accordance with the Operating Agreement, Schedule 6, section 1.5.8(i), shall notify the entities that have been designated as Designated Entities for Immediate-need Projects included in the Regional Transmission Expansion Plan of such designations. Designated Entities shall accept such designations in accordance with the Operating Agreement, Schedule 6, section 1.5.8(j). In the event that (i) the Office of the Interconnection determines that no proposal resolves a posted violation or system condition; (ii) the proposing entity is not selected to be the Designated Entity; (iii) an entity does not accept the designation as a Designated Entity; or (iv) the Designated Entity fails to meet milestones that would delay the in-service date of the Immediate-need Reliability Project, the Office of the Interconnection shall develop and recommend an Immediate-need Reliability Project to solve the violation or system needs in accordance with the Operating Agreement, Schedule 6, section 1.5.8(m)(1).