

**UNITED STATES OF AMERICA  
BEFORE THE  
DEPARTMENT OF ENERGY**

**Notice of Intent and Request for  
Information Regarding Establishment of  
a Transmission Facilitation Program**

**DOE\_FRDOC\_0001-4401**

**SUPPLEMENTAL COMMENTS OF  
PJM INTERCONNECTION, L.L.C.**

PJM Interconnection, L.L.C. (“PJM”) submits these supplemental comments in response to the Department of Energy’s (“DOE” or “Department”) Notice of Intent and Request for Information (“NOI/RFI”) regarding the establishment of a Transmission Facilitation Program (“TFP”).<sup>1</sup> The DOE proposes to implement the TFP to help facilitate the construction of new and upgraded high-capacity transmission lines<sup>2</sup> that will best serve the goals stated in the IJJA, including improved resilience and reliability of the grid; facilitation of the interregional transfer of electricity; lowered electric sector greenhouse gas emissions; and use of technology that enhances the capacity, efficiency, resilience, or reliability of the transmission system.<sup>3</sup>

PJM is joining the comments of the Indicated RTOs<sup>4</sup> which will be submitted contemporaneously with this filing, and which: (i) identify specific proposals within the NOI/RFI that inadvertently would preclude certain transmission projects selected through regional

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<sup>1</sup> See Infrastructure Investment and Jobs Act (“IJJA” or the “Act”) directing the Secretary of Energy to establish a program, to be known as the “Transmission Facilitation Program” or “TFP.” See 42 U.S.C.A. § 18713, subsection (b) (Nov. 15, 2021).

<sup>2</sup> In order to qualify for TFP funds, a project must be (i) a new transmission line that is capable of transmission at least 1000 MW; (ii) an upgrade to an existing transmission line or a new transmission line within an existing right of way capable of transmitting at least 500 MW; or (iii) a replacement facility that meets the criteria in (i) or (ii). See NOI/RFI at 10-11.

<sup>3</sup> See IJJA at § 40106(j)(8); NOI/RFI at 3. As part of the IJJA, DOE may borrow up to \$2.5 billion to carry out the TFP. The TFP will assist with the construction of new and upgraded transmission lines through three financing tools for eligible projects: capacity contracts, loans from DOE, and participation by DOE in public-private partnerships. See NOI/RFI at 6-7. The DOE seeks to optimize the use of the available TFP funds to accelerate the deployment of transmission facilities that will best meet the IJJA’s stated goals. See NOI/RFI at 4.

<sup>4</sup> The Indicated RTOs include PJM, Midcontinent Independent System Operator, Inc. and Southwest Power Pool, Inc.

transmission planning processes that would otherwise effectuate the goals of the IJA from participating in the TFP due to narrowly-defined eligibility requirements; and (ii) propose solutions that would ensure that the TFP can operate in its intended open and non-discriminatory manner.

PJM submits this supplemental filing to provide a description of PJM, including a high-level summary of its current process for developing reliability and economic baseline projects, projects addressing state public policy goals and Supplemental Projects developed through the regional transmission expansion planning (“RTEP”) process, as well as the process by which merchant transmission facilities are submitted through PJM’s interconnection study queue process. PJM believes these comments will assist the Department as it drafts the rules for the TFP.

## **I. SUPPLEMENTAL COMMENTS**

### **A. Description of PJM**

Pursuant to the Federal Energy Regulatory Commission’s (“Commission” or “FERC”) Order Nos. 2000,<sup>5</sup> 890,<sup>6</sup> and 1000,<sup>7</sup> PJM is the regional transmission planner for the PJM Region. In that capacity, PJM is responsible for identifying transmission system enhancements and

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<sup>5</sup> *Regional Transmission Organizations*, Order No. 2000, 65 Fed. Reg. 809 (Jan. 6, 2000), FERC Stats. & Regs., Regulations Preambles July 1996-December 2000 ¶ 31,089 (1999), *order on reh’g*, Order No. 2000-A, 65 Fed. Reg. 12,088 (Mar. 8, 2000), FERC Stats. & Regs., Regulations Preambles July 1996-December 2000 ¶ 31,092 (2000), *affirmed sub nom. Public Utility District No. 1 Snohomish County Washington, et al., v. FERC*, 272 F.3d 607 (D.C. Cir. 2002) (Order No. 2000).

<sup>6</sup> *Preventing Undue Discrimination & Preference in Transmission Serv.*, Order No. 890, 72 FR 12266 (Mar. 15, 2007), 118 FERC ¶ 61,119, *order on reh’g*, Order No. 890-A, 73 FR 2984 (Jan. 16, 2008), 121 FERC ¶ 61,297 (2007), *order on reh’g*, Order No. 890-B, 123 FERC ¶ 61,299 (2008), *order on reh’g*, Order No. 890-C, 74 FR 12540 (Mar. 25, 2009), 126 FERC ¶ 61,228, *order on clarification*, Order No. 890-D, 129 FERC ¶ 61,126 (2009).

<sup>7</sup> *Transmission Planning & Cost Allocation by Transmission Owning & Operating Pub. Utils.*, Order No. 1000, 76 FR 49842 (Aug. 11, 2011), 136 FERC ¶ 61,051 (2011), *order on reh’g*, Order No. 1000-A, 77 FR 32184 (May 31, 2012), 139 FERC ¶ 61,132, *order on reh’g and clarification*, Order No. 1000 -B, 141 FERC ¶ 61,044 (2012), *aff’d sub nom. S.C. Pub. Serv. Auth. v. FERC*, 762 F.3d 41 (D.C. Cir. 2014).

expansions needed to keep electricity flowing to 65 million people throughout 13 states and the District of Columbia.<sup>8</sup> PJM directs the operation of more than 84,200 miles of transmission lines across 369,089 square miles of territory, interconnecting with more than 180,000 MW of power generation. Within the PJM Region, 325 transmission tie lines connect each Transmission Owner Zone to adjacent Zones within the PJM Region, thereby permitting the free flow of power between the 21 PJM Zones.<sup>9</sup> This essential aspect of the PJM grid gives rise to the benefits of shared capacity, power markets and mutual support under stressed system conditions – extreme weather, for example.

While PJM coordinates the flow of electricity on its transmission system, PJM also works cooperatively with the transmission-owning utilities that operate and maintain the equipment that makes up the Transmission System in their respective Zones.<sup>10</sup>

#### **B. Description of PJM’s RTEP and Merchant Transmission Planning Processes**

As indicated, PJM’s role as the regional transmission planner is to develop the RTEP and conduct the studies on which the RTEP is based, as well as to select the more efficient or cost effective solutions to address the system needs on a regional basis. Consistent with FERC Order Nos. 890 and 1000, such system needs include reliability needs, system conditions, economic constraints and state public policy considerations.

Baseline reliability and economic projects included in the RTEP are funded by PJM load consistent with PJM’s FERC-accepted regional cost allocation methodologies, as set forth in

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<sup>8</sup> The PJM Region encompasses all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia.

<sup>9</sup> See PJM Open Access Transmission Tariff, Attachment J.

<sup>10</sup> PJM’s relationship with the PJM Transmission Owners (“TOs”) is codified in the following PJM Governing Documents: the Consolidated Transmission Owners Agreement (“CTOA”), Amended and Restated Operating Agreement of PJM Interconnection, L.L.C. (“Operating Agreement”) and PJM Open Access Transmission Tariff (“OATT” or “Tariff”). These agreements can be found on the PJM website, <https://pjm.com/library>.

Schedule 12 of the PJM Tariff. Projects addressing a state or states' public policy through PJM's State Agreement Approach ("SAA") process are funded by the ratepayers of the state (or states) voluntarily agreeing to sponsor an SAA.<sup>11</sup> Project. The RTEP process also identifies enhancements or expansions classified as Supplemental Projects, the costs of which are allocated to the Transmission Owner Zone in which the facilities will be located.<sup>12</sup> Separately, the PJM Transmission System also includes merchant transmission facilities, which are transmission facilities developed by independent entities for which the developer assumes all risks associated with the project and, in return, the merchant developer can charge negotiated rates for transmission service, though the developer cannot pass its risk on to captive customers.

PJM discusses below the categories of RTEP facilities and the treatment of merchant transmission facilities in the PJM Region, each of which is relevant to the DOE's inquiry in the NOI/RFI.

### **1. RTEP Facilities<sup>13</sup>**

Reliability facilities: In identifying reliability needs, PJM's RTEP process applies NERC Planning Standards, PJM regional criteria, and individual Transmission Owner planning criteria included in a Transmission Owner's respective FERC Form 715 report. PJM conducts planning studies to help ensure the ability of the transmission system to meet minimum performance requirements under a variety of contingencies to provide reliable service to its customers. In recognition of the fact that the need for major new transmission capability must be identified in

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<sup>11</sup> Tariff, Schedule 12, section (b)(xii).

<sup>12</sup> OA, Schedule 6, section 1.5.6(h).

<sup>13</sup> The RTEP contains three types of transmission projects: (i) baseline projects (which include facilities to address reliability needs and economic constraints and state public policy considerations); (ii) supplemental projects (which are identified and developed by transmission owners to address local reliability needs); (iii) merchant transmission facilities within the PJM Region; and (iv) network upgrade projects (which are identified by PJM and required to be funded by new generation resources to connect reliably to the PJM Transmission System. For purposes of responding to the NOI/RFI, PJM focuses on baseline and Supplemental Projects when discussing its RTEP planning process.

time for construction to be completed before reliability criteria violations are encountered, PJM consolidates the region’s transmission needs over a 15-year planning horizon into a single RTEP that includes both near-term (five-year planning) and long-term (15-year planning) analyses.<sup>14</sup> In order to meet applicable reliability planning criteria, PJM’s planning process focuses on studying and producing a transmission system that is robust enough to withstand a range of probable contingencies (e.g., the sudden loss of a generator or higher-voltage transmission facilities) while reliably serving customer demand and preventing cascading outages.

Market efficiency/economic facilities: With respect to economic planning, PJM’s RTEP process includes market efficiency analysis to: (i) determine which reliability upgrades have economic benefits if accelerated or modified; (ii) identify new transmission enhancements that may realize economic benefits; and (iii) identify economic benefits associated with reliability-based enhancements already included in RTEP that, if modified, would relieve one or more congestion constraints, providing additional economic benefit(s). PJM identifies the economic benefit of proposed transmission projects by conducting production-cost simulations that show the extent to which congestion is mitigated by a project for specific study-year transmission and

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<sup>14</sup> See *PJM Interconnection, L.L.C.*, Docket No. OA08-32-000 (Dec. 7, 2007) (PJM’s Order No. 890 compliance filing). See also PJM, *Manual 14B: PJM Regional Transmission Planning Process*, § 2.1 and Attachment B.2 (rev. 50, July 1, 2021), <https://www.pjm.com/-/media/documents/manuals/m14b.ashx>. Five-year-out planning enables PJM to assess and recommend transmission upgrades to meet forecasted near-term load growth and to ensure the safe and reliable interconnection of new generation and merchant transmission projects seeking interconnection within the PJM Region. A 15-year planning horizon permits consideration of many long-lead-time transmission options, which often comprise larger magnitude transmission facilities that more efficiently and globally address reliability issues. A 15-year horizon also allows PJM to consider the aggregate effects of many system trends including long-term load growth, impacts of generation deactivation, and broader generation development patterns, including renewable resources and storage technologies that may be under development across the PJM Region. PJM notes that FERC is currently exploring whether to require transmission providers to conduct regional transmission planning on a long-term (at least 20 years), forward-looking basis, utilizing multiple factors to identify and plan for transmission needs driven by changes in resources and demand. See *Building for the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection*, Notice of Proposed Rulemaking, 179 FERC ¶ 61,028, 87 Fed. Reg. 26,504 (May 4, 2022) (“NOPR”).

generation dispatch scenarios. Projects are analyzed to determine whether they pass a 1.25 benefit to cost ratio.<sup>15</sup>

Facilities to address state public policy: In a multi-state RTO like PJM, each state has its own public policy goals, which are often documented through renewable portfolio standards. In order to address each state's public policy goals, PJM's Operating Agreement at Schedule 6, section 1.5.9 sets forth the SAA planning process.<sup>16</sup> The SAA process was proposed to provide a comprehensive means by which a state (or states) can include its public policy requirements in PJM's transmission planning parameters and voluntarily agree to develop the necessary transmission under PJM's RTEP development process to achieve these state public policy goals, regardless of whether the state-sponsored project is needed to address PJM's required planning criteria specific to reliability, operational performance or market efficiency. The SAA process allows states, individually or collectively, to achieve efficiencies by voluntarily agreeing to sponsor and commit its customers to fund an SAA project to be used by renewable generation resources to effectuate a state's public policy goals. Thus, through the SAA process, PJM works with individual states (or groups of states) who voluntarily request to pursue an identified public policy goal that will be funded by their respective ratepayers.

Supplemental Projects: Supplemental Projects are not required for compliance with PJM criteria set forth in Schedule 6 of the Operating Agreement, *e.g.*, system reliability, operational performance or market efficiency economic criteria. Rather, Supplemental Projects are transmission expansions or enhancements that enable the continued reliable operation of the transmission system by meeting customer service needs, enhancing grid resilience and security,

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<sup>15</sup> As noted herein, economic projects and projects that are initiated pursuant to PJM's State Agreement Approach may be appropriate for funding under the TFP.

<sup>16</sup> See Operating Agreement, Schedule 6, section 1.5.9.

promoting operational flexibility, addressing transmission asset health and ensuring public safety, among other drivers specific to the individual transmission owner's local planning criteria.<sup>17</sup> While not subject to PJM Board approval like RTEP projects, Supplemental Projects are included in PJM's RTEP models. Supplemental Projects are planned through the FERC-approved and Transmission Owner-owned Attachment M-3 of the Tariff. Attachment M-3 includes additional procedures that PJM and Transmission Owners must follow in developing and selecting Supplemental Projects. For example, PJM, as a facilitator in the Attachment M-3 process is responsible, among other things, to: (i) provide facilitation and logistical support specific to Supplemental Projects planning meetings; (ii) provide modeling information to the applicable Transmission Owner; and (iii) perform do no-harm analysis to ensure a proposed Supplemental Project does not adversely impact the Transmission System.

## **2. Merchant Transmission Facilities**

Merchant developers seeking to interconnect or add merchant transmission facilities to the PJM Transmission System must submit their project for study through PJM's interconnection queue process.<sup>18</sup> While such projects are not identified by the RTO as needed to address the reliability needs or reduce congestion in the region, merchant transmission facilities must be consistent with applicable reliability standards, operating criteria and the purposes and objectives of the regional planning protocol. In return for funding all costs related to the merchant transmission facility, a merchant developer may be awarded transmission rights that the developer

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<sup>17</sup> PJM evaluated approximately \$3.3 billion of Transmission Owner Supplemental Projects in 2021.

<sup>18</sup> Merchant transmission projects are AC or DC transmission facilities that are interconnected with, or added to, the transmission system in accordance with the Tariff. These facilities are not (i) existing facilities within the Transmission System, (ii) transmission facilities included in the rate base of a public utility on which a regulated return is earned or (iii) transmission facilities included in previous RTEPs or customer interconnection facilities.

may designate to a subset of customers for procuring up to the full amount of the line's transmission capacity.

## II. CONCLUSION

PJM appreciates the opportunity to comment on the NOI/RFI, and respectfully requests that the Department consider the comments set forth above when it issues any final rules related to the TFP.

Respectfully submitted,

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*On behalf of PJM Interconnection, L.L.C.*

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