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UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Cheryl A. LaFleur, Acting Chairman;
Philip D. Moeller, John R. Norris,
and Tony Clark.

PJM Interconnection, L.L.C.

Docket No. ER14-623-000

ORDER CONDITIONALLY ACCEPTING TARIFF REVISIONS

(Issued February 20, 2014)

1. On December 13, 2013, PJM Interconnection, L.L.C. (PJM) filed proposed tariff amendments to Attachment K-Appendix of its Open Access Transmission Tariff (OATT) and Schedule 1 of its Amended and Restated Operating Agreement (Operating Agreement) to add new real-time External Transaction bidding and scheduling rules.¹ These new real-time market rules, together known as Coordinated Transaction Scheduling (CTS), are proposed for use at specifically designated Proxy Generator Buses (CTS Enabled Proxy Generator Buses) between New York Independent System Operator, Inc. (NYISO) and PJM. For the reasons discussed below, the Commission accepts the proposed tariff revisions and grants the requested waiver to allow the tariff records to be effective the later of November 2014 or the date that CTS becomes operational, subject to further information and compliance filings with the Commission as discussed below.

I. Background

2. PJM explains that CTS is an optional interchange optimization scheduling product that allows for coordinated buy-sell transactions across the NYISO-PJM interface. PJM indicates that CTS is part of an overall effort to better optimize the scheduling efficiency of interregional energy transactions between NYISO and

¹ The proposed tariff provisions are listed in the appendix. On December 6, 2013, NYISO submitted its own separate filing regarding the implementation of CTS, which proposed revisions to the Joint Operating Agreement Among and Between the New York Independent System Operator, Inc., and PJM Interconnection, L.L.C. (Joint Operating Agreement) in Docket No. ER14-552-000. That filing is addressed in a contemporaneous order in that docket.

PJM that will allow market participants to take advantage of real-time price differences between the markets.

3. Under PJM's proposal, once a proxy generator bus at the NYISO/PJM border is CTS enabled, importing and exporting transmission customers will gain the option to submit CTS interface bids at that bus. PJM explains that transmission customers would submit a single CTS interface bid to indicate their desire to buy simultaneously in one control area and sell into the other based on the forecasted price difference between the NYISO and PJM markets at the relevant locations.² PJM indicates that a CTS bid will clear if the projected price difference is greater than the submitted value; however, CTS transactions will use actual real-time prices for the market settlement process.

4. PJM states that CTS bids will be submitted to NYISO which will then coordinate with PJM to determine the net interchange schedule for each 15 minute interval. Specifically, PJM explains that every 15 minutes it will use its intra-hourly schedules, NYISO's Real-Time Commitment (RTC) optimization, and submitted CTS interface bids to form a feedback loop to ensure coordination of interchange schedules.³ PJM explains that its Intermediate Term Security-Constrained Economic Dispatch (IT SCED) will use the most recently available information on prices from NYISO's RTC to schedule imports and exports, and to produce forward-looking advisory schedules. PJM contends that, as a result, RTC and IT SCED will be more closely aligned and produce a more efficient scheduling solution at the NYISO-PJM border.⁴

5. According to PJM, CTS coordinated optimization for both regions improves scheduling efficiency by: (i) introducing a new scheduling option for transmission customers that transact across the NYISO/PJM border; (ii) allowing transmission customers to bid different MW quantities at different prices for each

² See PJM's December 13, 2013 Filing at 4. PJM notes that NYISO has agreed to submit proposed revisions to Section 35.21, Schedule A, of the Joint Operating Agreement to specify the interfaces at which PJM and NYISO are authorized to evaluate and schedule CTS bids no later than July 31, 2014. See PJM's December 13, 2013 Filing at 12-13.

³ To implement CTS, PJM will provide NYISO the forecasted locational marginal prices from its Intermediate Term Security Constrained Economic Dispatch (IT SCED) application as an input to be used in NYISO's multi-period optimization. See PJM's December 13, 2013 Filing at 5.

⁴ See PJM's December 13, 2013 Filing at 3, 5.

15 minute interval within an hour; (iii) reducing counter-intuitive regional schedules by explicitly incorporating projected price differences between the NYISO and PJM markets into scheduling decisions; and (iv) establishing intra-hour schedules 15 minutes closer to actual, real-time operations.⁵

6. PJM states that when economic transactions are proposed to move power from the low-cost to the high-cost region, the CTS-enabled interfaces will more fully utilize the available capacity. PJM also asserts that establishing intra-hour schedules 15 minutes closer to real-time operations will improve the accuracy of cross-border scheduling decisions because those decisions will reflect updated system conditions.⁶ Further, PJM states that moving the evaluation of bids 15 minutes closer to real-time operation will increase the likelihood that projected NYISO and PJM prices used to schedule external transactions will closely align with actual real-time prices.

7. PJM's proposed tariff amendments will allow transmission customers to submit up to an 11-point bid curve (up to eleven different prices and eleven different MW quantities), for each 15-minute interval of an upcoming hour. PJM explains that CTS will accommodate both purchases and sales of energy and the scheduling of transmission service in real-time at CTS Enabled Proxy Generator Buses.

8. PJM notes that all CTS transactions will be subject to a credit screen. PJM proposes that all PJM market participants that submit CTS bids establish a credit limit for their export activity. PJM indicates that, in the event a transaction causes a market participant's total exposure to exceed the credit limit, then the transaction would be curtailed and excluded from the clearing processes. PJM notes that it does not propose revisions to the calculation of the credit requirements for CTS transactions at this time because stakeholders requested that any changes be

⁵ PJM notes that, as part of CTS, NYISO proposes to move its evaluation of import offers and export bids 15 minutes closer to real time operations. Currently NYISO begins its economic evaluation 45 minutes prior to each quarter hour and establishes the binding schedules 30 minutes prior to real-time operations. Under CTS, NYISO proposes to begin its evaluation of import offers and export bids 30 minutes before each quarter-hour and to establish the binding schedules 15 minutes prior to real-time operations.

⁶ PJM explains that CTS Interface Bids, like traditional LMP bid/offers, must be submitted 75 minutes before each real-time market operating hour. *See* PJM's December 13, 2013 Filing at 4.

coordinated with a review of credit requirements for all export transactions. PJM states that the stakeholder discussions are currently underway and that any proposed revisions will be submitted in a later filing after the stakeholder process has concluded.

9. Further, PJM notes that its stakeholders have added a process whereby they can evaluate and approve the accuracy of IT SCED price forecasting prior to CTS implementation, and endorse proceeding with CTS implementation. PJM indicates that, before stakeholders endorse CTS implementation, PJM must (1) post historical monthly IT SCED price information from November 2013 through April 2014; (2) develop accuracy standards for IT SCED price forecasting in consultation with stakeholders no later than April 2014; and (3) conduct and present to its stakeholders, a historical analysis of IT SCED accuracy no later than June 2014. PJM notes that, at least two full calendar months prior to CTS implementation, stakeholders will vote on whether IT SCED price forecasting is sufficiently accurate for PJM to move forward with CTS implementation.

10. PJM proposes to submit an informational filing to the Commission after this stakeholder vote to inform the Commission of whether stakeholders have approved the IT SCED forecasting accuracy and endorsed CTS implementation in November 2014. In the event PJM is unable to obtain endorsement at that time, it commits to submitting an additional informational filing when the endorsement is received, informing the Commission of the revised CTS implementation date.

11. Finally, PJM submits that it will submit an informational or compliance filing, as deemed necessary, at least two weeks prior to the proposed effective date and implementation of CTS in order to provide adequate notice to the Commission and PJM's Market Participants of PJM's proposed implementation date for CTS.⁷

II. Notice of Filing and Responsive Pleadings

12. Notice of PJM's December 13, 2013 filing was published in the *Federal Register*, 78 Fed. Reg. 77116 (2013), with interventions and protests due on or before January 3, 2014.

13. The Independent Market Monitor of PJM, DC Energy, LLC, NRG Companies, and Exelon Corporation filed timely motions to intervene. The New

⁷ See PJM's December 13, 2013 Filing at 15.

York Transmission Owners (NYTO)⁸ and Rockland Electric Company filed motions to intervene and comments in support of PJM's proposal.

III. Discussion

A. Procedural Issues

14. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2013), the timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding.

B. Commission Determination

15. The Commission finds that CTS will enhance market efficiency of interregional transactions and provide substantial benefits to consumers in both PJM and NYISO. As previously noted, joint studies performed by PJM and NYISO estimate potential production cost savings ranging from \$9 million/year to \$26 million/year. CTS should also minimize counter intuitive flows, such as flows going from a high priced control area to a low price control area, by incorporating projected price differences between the NYISO and PJM markets into scheduling decisions. Further, CTS should improve scheduling efficiency for both regions by introducing a new scheduling option for transmission customers at the NYISO/PJM border that will allow bidding of different MW quantities at different prices for each 15 minute interval within an hour. In addition, CTS should significantly reduce latency risk by establishing intra-hour schedules 15 minutes closer to actual, real-time operations.

16. Accordingly, we accept the proposed tariff revisions to be effective the later of November 2014, or the date that CTS becomes operational, subject to PJM making an informational filing⁹ notifying the Commission of the acceptance of IT SCED forecasting accuracy standards, and a separate e-Tariff compliance filing with revised tariff records no later than 14 days prior to the date on which CTS will become operational reflecting the effective date of the tariff provisions.

⁸ The NYTOs collectively consist of: Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., Long Island Power Authority, New York Power Authority, New York State Electric & Gas Corporation, Niagara Mohawk Power Corporation d/b/a National Grid, Orange and Rockland Utilities, Inc., and Rochester Gas & Electric Corporation.

⁹ When submitting this filing, PJM should use e-Tariff Type of Filing Code 150.

The Commission orders:

PJM's December 13, 2013 filing is hereby accepted to be effective as discussed in the body of this order, subject to the filing conditions discussed above.

By the Commission.

(S E A L)

Kimberly D. Bose,
Secretary.

Appendix

PJM Interconnection, L.L.C.
FERC FPA Electric Tariff
Intra-PJM Tariffs

[OATT ATT K APPX Sec 1.3, OATT Attachment K Appendix Sec 1.3 Definitions, 15.0.0](#)

[OATT ATT K APPX Sec 1.6, OATT Attachment K Appendix Sec 1.6 Office of the Interc, 3.0.0](#)

[OATT ATT K APPX Sec 1.6A, OATT Attachment K Appendix Sec 1.6A PJMSettlement, 2.0.0](#)

[OATT ATT K APPX Sec 1.7, OATT Attachment K Appendix Sec 1.7 General, 11.0.0](#)

[OATT ATT K APPX Sec 1.10, OATT Attachment K Appendix Sec 1.10 - Scheduling, 15.0.0](#)

[OATT ATT K APPX Sec 1.13, OATT Attachment K Appendix Sec 1.13 - Coordinated Transactio, 0.0.0](#)

[OA Schedule 1 Sec 1.3, OA Schedule 1 Sec 1.3 Definitions, 15.0.0](#)

[OA Schedule 1 Sec 1.6, OA Schedule 1 Sec 1.6 Office of the Interconnection, 3.0.0](#)

[OA Schedule 1 Sec 1.6A, OA Schedule 1 Sec 1.6A PJMSettlement, 1.0.0](#)

[OA Schedule 1 Sec 1.7, OA Schedule 1 Sec 1.7 General., 10.0.0](#)

[OA Schedule 1 Sec 1.10, OA Schedule 1 Sec 1.10 - Scheduling, 15.0.0](#)

[OA Schedule 1 Sec 1.13, OA Schedule 1 Sec 1.13 - Coordinated Transaction Scheduling, 0.0.0](#)