

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

PJM Interconnection, L.L.C.

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Docket No. EL18-34-000

Motion for Leave to Reply and Reply of Joint Commenters

Pursuant to Rule 213¹ of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission (“Commission”), the American Council on Renewable Energy, American Municipal Power, Inc., the American Wind Energy Association, the Delaware Public Service Commission, the Division of the Public Advocate for the State of Delaware, the Natural Resources Defense Council, Sustainable FERC Project, NextEra Energy Resources, LLC, the People’s Counsel for the District of Columbia, and the PJM Industrial Customer Coalition (“Joint Commenters”) seek leave to reply to the Answer of PJM Interconnection, L.L.C. (“PJM”) filed on April 19, 2018, in the above-captioned docket.²

The Commission’s December Order³ initiating this proceeding provided for initial briefs, which PJM filed on February 13, 2018, and reply briefs, which the Joint Commenters and others filed on March 14, 2018.⁴ The Commission did not provide an opportunity for answers to the reply briefs, and the Commission’s Rule 213 prohibits answers to replies without leave of the Commission, which PJM did not request in its April 19 answer. To the extent the Commission

¹ 18 C.F.R. § 385.213.

² Answer of PJM Interconnection, L.L.C., Docket No. EL18-34-000, filed Apr. 19, 2018 (“PJM Answer”).

³ *PJM Interconnection, L.L.C.*, 161 FERC ¶ 61,295 (2017) (“December Order”).

⁴ Reply Brief of Joint Commenters, Docket No. EL18-34-000, filed March 14, 2018 (“Joint Commenters Reply Brief”).

nevertheless accepts PJM's Answer, good cause exists to accept this further reply to ensure a full and complete record.⁵

In our March 14 reply brief, the Joint Commenters demonstrated that the two-hour time horizon analyzed by PJM's real-time dispatch tool, the Intermediate Term Security Constrained Economic Dispatch application ("IT SCED"), actually undermines rather than supports PJM's proposal to expand the definition of fast-start resources to units with a start-up and minimum run time of two hours or less.⁶ In its Answer, PJM contends that the Joint Commenters' "argument is based on a misunderstanding of how the IT SCED application functions."⁷ PJM asserts that "[t]he IT SCED looks out at least four hours and fifteen minutes in total to capture the entire commitment period for a resource with a two hour time to start and a two hour minimum run time."⁸ PJM therefore argues that our comments to the contrary should be dismissed.

PJM has failed to acknowledge, much less explain, this departure from its own description of IT SCED in its February 13 brief. There, PJM stated:

Specifically, PJM's real-time dispatch tool known as the Intermediate Term Security Constrained Economic Dispatch ("IT SCED") application is an integral component of PJM real-time applications. As Mr. Pulong states: "The IT SCED application is a *two hour look-ahead* optimization engine with an objective function to provide the least cost solution to meet projected load, reserve requirements and interchange, while ensuring all transmission system constraints are maintained within limits." The IT SCED application provides resource commitment recommendations to system operators to maintain reliability and calculates the projected energy dispatch and reserve trajectory for multiple intervals over a *two-hour look-ahead* period. As Mr. Pulong explains, the *two-hour look ahead* is used because PJM "has determined that the most accurate

⁵ See, e.g., *PJM Interconnection, L.L.C.*, 104 FERC ¶ 61,154, at P 14 (2003), *on reh'g*, 109 FERC ¶ 61,236 (2004); *Williams Energy Mktg. & Trading Co. v. Southern Co. Servs., Inc.*, 104 FERC ¶ 61,141, at P 10 (2003); *Ameren Servs. Co.*, 100 FERC ¶ 61,135, at P 15 (2002), *on reh'g*, 103 FERC ¶ 61,178 (2003).

⁶ Joint Commenters Reply Brief at pgs. 6-9.

⁷ PJM Answer at pgs. 4-5.

⁸ *Id* at pg. 5.

reflection of what the system will look like, while providing some lead time, is two hours.”^{9]}

As noted in those statements, PJM’s dispatch Director described IT SCED as operating within a two-hour look-ahead horizon. Specifically, Mr. Pulong stated:

By design, IT SCED tool *only looks at system conditions two hours out* to arrive at a recommendation that is most likely to meet actual system conditions. That is, PJM has determined that *the most accurate reflection of what the system will look like, while providing some lead time, is two hours*.¹⁰

Mr. Pulong’s description of IT SCED is corroborated by affidavits submitted by other commenters, such as the PJM Power Providers Group (with Robert Stoddard attesting that “PJM has used a *two-hour scheduling window* in its real-time commitment software for many years and views its ability to respond to short-term unforeseen needs within that timeframe”¹¹⁾ and Exelon Company (with Michael Schnitzer attesting that “PJM’s real-time unit commitment software, IT-SCED, *looks at system conditions two hours out* to make real-time unit commitment decisions....”¹²⁾).

These various sworn statements are further corroborated by PJM’s own manuals and other materials. For example, Manual 11 states that IT SCED utilizes a “1-2 hour look-ahead period”:¹³

⁹ PJM Brief at pgs. 14-15 (emphasis added; internal citations omitted).

¹⁰ PJM Brief, Pulong Affidavit at P 7 (emphasis added).

¹¹ Reply Brief of the PJM Power Providers Group, Stoddard Affidavit at P 30, Docket No. EL18-34-000, filed March 14, 2018 (emphasis added).

¹² Reply Brief of Exelon Corporation, Schnitzer Testimony at pg. 7, Docket No. EL18-34-000, filed March 14, 2018 (emphasis added).

¹³ PJM Manual 11: Energy & Ancillary Services Market Operations, Rev. 94, at pg. 43 (*available at* <http://www.pjm.com/~media/documents/manuals/m11.ashx>). Consistent with the textual description of IT SCED, Manual 11 also provides a graphic clearly depicting the analysis window closing at 120 minutes. *Id.* And those textual and graphical description are consistent with the time horizons for which PJM posts price forecasts as part of its Coordinated Transaction Scheduling with the Midcontinent Independent System Operator. *See* <http://www.pjm.com/markets-and-operations/energy/real-time/it-sced-forecasted-lmps.aspx>.

- **Intermediate Term Security Constrained Economic Dispatch (IT SCED):** The Intermediate Term Security Constrained Economic Dispatch (IT SCED) application is used by PJM to perform various functions over a 1-2 hour look-ahead period. Historical and current system information is used to anticipate generator performance to various requests, and to provide accurate information regarding generator operating parameters under multiple scenarios. The IT SCED solves a multi-interval, time-coupled solution to perform the following functions:
 - o Calculate energy dispatch trajectory for use in real-time dispatch
 - o Resource commitment recommendations for energy and reserves
 - o Resource commitment decisions for economic demand resources
 - o Execution of the Three Pivotal Supplier Test for energy

This description is consistent with the summary of IT SCED that PJM has provided to market participants:¹⁴

The Intermediate Term Security Constrained Economic Dispatch (IT SCED) engine is an economic dispatch and resource commitment tool used by PJM to perform various functions over a two hour look-ahead period. The latest available data for the look-ahead period is used to produce an economic dispatch solution with commitment recommendations. The input data to IT SCED includes load forecast projections, EES transaction data, current resource output, resource schedule updates, monitored transmission constraints, resource offer and operating parameters.

And that summary is consistent with the training materials used by PJM to test stakeholders' knowledge of IT SCED, which state that the application's time range is two hours:¹⁵

What time range does the IT (Intermediate Term) SCED look at?	15-120 minutes
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Given these repeated statements by PJM and others that IT SCED provides a two-hour look-ahead to PJM dispatchers, it is somewhat curious for PJM to claim in its April 19 answer that there has been “an incorrect understanding of how the IT SCED application functions” and that, in actuality, “IT SCED looks out at least four hours and fifteen minutes.”¹⁶ PJM has failed to

¹⁴ Intermediate Term Security Constrained Economic Dispatch (IT SCED) Engine Overview, at pg. 1 (available at <http://www.pjm.com/~media/markets-ops/energy/real-time/it-sced-forecasted-lmps/it-sced-overview.ashx>).

¹⁵ Quizlet, PJM GEN101 How PJM Ops & Dispatches (available at <https://quizlet.com/9632724/pjm-gen101-how-pjm-ops-dispatches-flash-cards/>).

¹⁶ PJM Answer at pgs. 4-5.

reconcile these statements with its own prior filing and affidavit in this proceeding, much less the affidavits and other PJM materials noted above.

As the Joint Commenters explained in our March 14 reply, the December Order carefully – and intentionally – limited the set of resources eligible for fast-start pricing to ensure that locational marginal prices in PJM’s energy markets reflect the marginal cost of serving load. PJM has not justified departing from the one-hour definition of fast-start resources adopted in that order. The Joint Commenters therefore reaffirm our request that, should the Commission take final action on the December Order, PJM’s attempts to expand the scope of resources eligible for fast start pricing be rejected.

Respectfully submitted,

/s/ Greg Wetstone
American Council On Renewable Energy
Greg Wetstone
President and CEO
Todd Foley
Senior Vice President, Policy & Government
Relations
1600 K Street, NW, Suite 600
Washington, DC 20006
(202) 777-7585
wetstone@acore.org
foley@acore.org

*On Behalf of the American Council on
Renewable Energy*

/s/ Lisa G. McAlister
American Municipal Power, Inc.
Lisa G. McAlister
SVP & General Counsel for Regulatory Affairs
Kristin Rothery Assistant Deputy General Counsel
1111 Schrock Road, Suite 100
Columbus, Ohio 43229
(614) 540-6400
lmcalister@amppartners.org
krothey@amppartners.org

On Behalf of American Municipal Power, Inc.

/s/ Gene Grace
American Wind Energy Association
Gene Grace
Senior Counsel
1501 M Street NW, Suite 9000
Washington, DC 20005
(202) 383-2521
ggrace@awea.org

On Behalf of American Wind Energy Association

/s/ Regina A. Iorii
Division of Public Advocate
Regina A. Iorii
Deputy Attorney General
820 N. French Street, 4th Floor
Wilmington, DE 19801
(302) 577-5077
Regina.iorii@state.de.us

In the capacity of Counsel to the Division of the Public Advocate for the State of Delaware only

/s/ W. Mason Emmett
NextEra Energy Resources, LLC
W. Mason Emmett
Senior FERC Counsel
801 Pennsylvania Avenue, NW, #220
Washington, DC 20004
(202) 346-3349
mason.emmett@nexteraenergy.com

On Behalf of NextEra Energy Resources, LLC

/s/ Matthew Hartigan
Delaware Public Service Commission
Matthew Hartigan
Acting Executive Director
861 Silver Lake Boulevard
Dover, Delaware 19904
(302) 736-7500
Matthew.Hartigan@state.de.us

On Behalf of the Delaware Public Service Commission

/s/ Jennifer Chen
Natural Resources Defense Council,
Sustainable FERC Project
Jennifer Chen
Attorney
1152 15th Street NW, Suite 300
Washington, DC 20005
(202) 289-2399
jchen@nrdc.org

On Behalf of the Sustainable FERC Project

/s/ Sandra Mattavous-Frye
Office of the People's Counsel for the District of Columbia
Sandra Mattavous-Frye
People's Counsel
Karen R. Sistrunk
Deputy People's Counsel
Frederick (Erik) Heinle III
Assistant People's Counsel
1133 15th Street, N.W., Suite 500
Washington, DC 20005-2710
(202) 261-1182
fheinle@opc-dc.gov

On Behalf of the People's Counsel for the District of Columbia

/s/ Robert A. Weishaar
Robert A. Weishaar, Jr.
McNees Wallace & Nurick, LLC
1200 G Street, NW Suite 800
Washington, DC 20005
(202) 898-5700
bweishaar@mcneeslaw.com

Susan E. Bruce
Kenneth R. Stark
McNees Wallace & Nurick, LLC
100 Pine Street
Harrisburg, PA 17101
(717) 237-5254
sbruce@mcneeslaw.com
kstark@mcneeslaw.com

*On Behalf of the PJM Industrial Customer
Coalition*

May 8, 2018

CERTIFICATE OF SERVICE

Pursuant to Rule 2010 of the Commission's Rules of Practice and Procedure, I, W. Mason Emmett, certify that on this day, I emailed or mailed, postage prepaid, a copy of the foregoing document to all parties on the official service list.

Dated at Washington, D.C. this 8th day of May, 2018.

/s/ W. Mason Emmett
Senior FERC Counsel