161 FERC ¶ 61,294 UNITED STATES OF AMERICA FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Kevin J. McIntyre, Chairman;

Cheryl A. LaFleur, Neil Chatterjee, Robert F. Powelson, and Richard Glick.

New York Independent System Operator, Inc.

Docket No. EL18-33-000

ORDER INSTITUTING SECTION 206 PROCEEDING AND COMMENCING PAPER HEARING PROCEDURES AND ESTABLISHING REFUND EFFECTIVE DATE

(Issued December 21, 2017)

1. In this order, we find that New York Independent System Operator, Inc.'s (NYISO) practices regarding the pricing of fast-start resources may be unjust and unreasonable because the practices do not allow prices to reflect the marginal cost of serving load. Accordingly, pursuant to section 206 of the Federal Power Act (FPA), we institute an investigation in Docket No. EL18-33-000 to examine NYISO's Market Administration and Control Area Services Tariff (Tariff) and practices to determine whether NYISO should be required to revise its Tariff to: (1) modify pricing logic to allow fast-start resources' start-up costs to be reflected in prices; and (2) allow the relaxation of all dispatchable fast-start resources' economic minimum operating limits² by up to 100 percent for the purpose of setting prices, as discussed more fully below.

I. Background

2. In June 2014, the Commission began evaluating issues related to price formation in the energy and ancillary services markets operated by regional transmission

¹ 16 U.S.C. § 824e (2012).

² For purposes of this order, the economic minimum operating limit refers to the minimum amount of electric power a resource must be allowed to produce while under economic dispatch.

organizations and independent system operators (RTOs/ISOs).³ As part of that effort, the Commission set forth a set of price formation goals, and directed each RTO/ISO to file a report on several price formation topics, including fast-start pricing.⁴ Fast-start pricing allows an RTO's/ISO's software algorithms to incorporate the offers of fast-start resources into the market prices for energy and ancillary services. Fast-start resources are resources that are able to start quickly and are often dispatched to their inflexible economic minimum or maximum operating limits, and are thus not eligible to set prices absent this special RTO/ISO fast-start pricing logic.

3. On December 15, 2016, the Commission issued a notice of proposed rulemaking (NOPR) that preliminarily found that some existing RTO/ISO fast-start pricing practices, or lack of fast-start pricing practices, may not result in rates that are just and reasonable.⁵ As a result, the Commission proposed establishing several requirements regarding the pricing of fast-start resources and sought comment on the need for reform discussed in the NOPR and the proposed requirements.⁶ Based on comments received, the Commission, in an order being issued concurrently with this order, is withdrawing the NOPR.⁷ In that order, the Commission states, among other things, that it continues to believe that improved fast-start pricing practices have the potential to achieve the goals outlined in the NOPR but has been persuaded to not require a uniform set of fast-start pricing requirements that would apply to all RTOs/ISOs. Instead, the Commission is

³ See Price Formation in Energy and Ancillary Services Markets Operated by Regional Transmission Organizations and Independent System Operators, Notice, Docket No. AD14-14-000 (June 19, 2014).

⁴ See Price Formation in Energy and Ancillary Services Markets Operated by Regional Transmission Organizations and Independent System Operators, 153 FERC ¶ 61,221, at P 1 (2015) (Order Directing Reports). NYISO submitted its price formation report on March 4, 2016, and amended its report on March 23, 2016. NYISO, Report on Price Formation Issues, Docket No. AD14-14-000 (NYISO Report).

⁵ Fast-Start Pricing in Markets Operated by Regional Transmission Organizations and Independent System Operators, 81 Fed. Reg. 96,391 (Dec. 30, 2016), FERC Stats. & Regs. ¶ 32,720, at PP 3, 36-37 (2016).

⁶ *Id.* PP 3, 44.

⁷ Fast-Start Pricing in Markets Operated by Regional Transmission Organizations and Independent System Operators, 161 FERC 61,293 (2017).

pursuing the goals of the NOPR through targeted section 206 actions focusing on specific concerns with each RTO's/ISO's implementation of fast-start pricing.⁸

4. NYISO currently applies fast-start pricing logic to online Fixed Block Units and offline Fixed Block Units that can start in ten minutes. In the first pass of the optimization process, NYISO establishes resources' physical base points (i.e., real-time energy schedules). In the second pass, also called the pricing run, NYISO relaxes the economic minimum operating limit of Fixed Block Units in order to allow them to be eligible to set prices. When pricing offline Fixed Block Units, the price can also include a unit's start-up costs. However, NYISO neither relaxes the economic minimum operating limits of dispatchable resources (i.e., resources that are not block loaded), nor does it include the start-up costs of these or any online resources for the purpose of setting prices.

II. Discussion

5. The Commission preliminarily finds that some of NYISO's practices related to the pricing of fast-start resources are unjust and unreasonable. These practices involve NYISO: (A) not allowing the start-up costs of fast-start resources to be reflected in prices; and (B) limiting the relaxation of the economic minimum operating limit to only block-loaded resources.

⁸ *Id.* P 4.

⁹ NYISO's Tariff defines a Fixed Block Unit as "[a] unit that, due to operational characteristics, can only be dispatched in one of two states: either turned completely off, or turned on and run at a fixed capacity level." NYISO, Market Administration and Control Area Services Tariff, § 2.6 (8.0.0). The Commission has referred to such resources as block-loaded resources in its price formation proceedings. *See, e.g., Price Formation in Energy and Ancillary Services Markets Operated by Regional Transmission Organizations and Independent System Operators*, 153 FERC ¶ 61,221, at P 9 n.9 (2015).

¹⁰ NYISO, Market Administration and Control Area Services Tariff, § 17.1.2.1.2.1 (21.0.0).

¹¹ *Id.* § 17.1.2.1.2.2.

¹² *Id.* § 17.1.

- 6. The Commission's preliminary finding that NYISO's fast-start pricing practices are unjust and unreasonable is consistent with the goals of price formation.¹³ As the Commission noted in the fast-start pricing NOPR,¹⁴ the accurate pricing of fast-start resources advances those goals by transparently reflecting the marginal cost of serving load and the value fast-start resources provide in meeting system needs, which will reduce uplift costs and improve price signals to support efficient investments in facilities and equipment.
- 7. A number of commenters expressed general support for the NOPR proposals. 15 Several commenters stated that, consistent with the goals of the NOPR, the inclusion of

¹³ The Commission has stated that the goals of price formation are to: (1) maximize market surplus for consumers and suppliers; (2) provide correct incentives for market participants to follow commitment and dispatch instructions, make efficient investments in facilities and equipment, and maintain reliability; (3) provide transparency so that market participants understand how prices reflect the actual marginal cost of serving load and the operational constraints of reliably operating the system; and (4) ensure that all suppliers have an opportunity to recover their costs. *See, e.g.*, Order Directing Reports, 153 FERC ¶ 61,221 at P 2; Price Formation in Energy and Ancillary Services Markets Operated by Regional Transmission Organizations and Independent System Operators, Notice Inviting Post-Technical Workshop Comments, Post-Technical Conference Questions for Comment, Docket No. AD14-14-000, at 1 (Jan. 16, 2015).

 $^{^{14}}$ NOPR, FERC Stats. & Regs. \P 32,720 at P 35.

¹⁵ American Petroleum Institute NOPR Comments at 2; Basin Electric Power Cooperative NOPR Comments at 2; Electric Power Supply Association, Independent Power Producers of New York, New England Power Generators Association, Inc., PJM Power Providers, and Western Power Trading Forum (Competitive Suppliers) NOPR Comments at 4-6; Environmental Defense Fund NOPR Comments at 4; Edison Electric Institute (EEI) NOPR Comments at 2; Exelon Corporation (Exelon) NOPR Comments at 3; IMG Midstream LLC (IMG Midstream) NOPR Comments at 1; Microgrid Resources Coalition NOPR Comments at 3; Nuclear Energy Institute (NEI) NOPR Comments at 2; PJM Interconnection, L.L.C. (PJM) NOPR Comments at 2; Potomac Economics, Ltd. (Potomac Economics) NOPR Comments at 1-2; Powerex Corp. NOPR Comments at 7-8; Sunflower Electric Power Corporation and Mid-Kansas Electric Company, LLC (Sunflower and Mid-Kansas) NOPR Comments at 2; Westar Energy, Inc. (Westar) NOPR Comments at 2-3. Other commenters, however, disagreed with the NOPR proposals. See Department of Market Monitoring for the California Independent System Operator (CAISO Market Monitor) NOPR Comments at 1, 3; Electricity

fast-start resources' costs in prices will produce more transparent prices, which would more accurately reflect the marginal cost of serving load. Multiple commenters suggested that the Commission allow for implementation flexibility due to regional differences and the different types of resources operating in the RTOs/ISOs. 17

8. After consideration of the record, the Commission has opted not to take generic action on fast-start pricing; however, we continue to believe that improved fast-start pricing practices have the potential to achieve the goals outlined in the NOPR. We remain concerned that NYISO may not meet these goals because its existing fast-start pricing practices may result in market prices that fail to accurately reflect the marginal cost of serving load and fail to reflect the value of fast-start resources.

A. NYISO Practice Regarding Start-Up Costs

9. NYISO's location based marginal pricing rules do not account for fast-start resources' start-up costs¹⁸ in its pricing logic, except in those limited instances where an offline Fixed Block Unit sets price.¹⁹ We preliminarily find that this practice may be unjust and unreasonable, as discussed below.

Consumers Resource Council (ELCON) NOPR Comments at 2-5; Monitoring Analytics, LLC (PJM Market Monitor) NOPR Comments at 2-3.

¹⁶ Competitive Suppliers NOPR Comments at 2; R Street Institute NOPR Comments at 2; Westar NOPR Comments at 3.

Association NOPR Comments at 5-7; California Independent System Operator Corporation (CAISO) NOPR Comments at 4; EEI NOPR Comments at 3; Exelon NOPR Comments at 4; ISO New England, Inc. (ISO-NE) NOPR Comments at 1; ISO/RTO Council NOPR Comments at 1-3; New England Power Pool Participants Committee NOPR Comments at 4-5; New York Independent System Operator, Inc. (NYISO) NOPR Comments at 19-20; Pacific Gas and Electric Company NOPR Comments at 2-3; Southern California Edison Company (SCE) NOPR Comments at 3-4.

¹⁸ In this order, we refer to a resource's start-up and no-load costs as its commitment costs. No-load costs are the theoretical costs in \$/hour for operating a resource at zero MW output. In NYISO, a resource's no-load cost is included in the first segment of its operating bid, at minimum load.

¹⁹ NYISO Report at 10.

- 10. The fast-start pricing NOPR proposed to require each RTO/ISO to incorporate a resource's commitment costs (i.e., start-up and no-load costs) in energy and operating reserve prices when the RTO/ISO commits a fast-start resource.²⁰ In response to the NOPR, many commenters supported the proposal to allow fast-start resources' commitment costs (i.e., start-up and no-load costs) to be reflected in energy market prices.²¹ Some commenters further stated that excluding these costs would result in inaccurate locational marginal prices, risks to system reliability, and improper valuation of the services that fast-start resources provide.²² Additionally, due to the differences in market design, some commenters supported giving RTOs/ISOs the flexibility to assess the need to include commitment costs and the appropriate method for doing so.²³ On the other hand, some of the RTOs/ISOs and market monitors expressed concern about the proposed requirement.²⁴
- 11. We remain concerned that not including commitment costs for fast-start resources does not accurately represent the marginal cost of serving load. Because of their operating characteristics, fast-start resources are uniquely situated to respond to unforeseen real-time system needs that are short-term in nature. When fast-start resources are committed in real-time, it is often at short notice to meet some system condition or market need over a short time period. The costs of these commitment decisions are incurred to serve system needs in a similar way that marginal costs are incurred to serve system needs for a specific time period. Specifically, incorporating commitment costs of fast-start resources in prices more accurately represents the marginal cost of serving load, which will help inform investment decisions and reduce

²⁰ NOPR, FERC Stats. & Regs. ¶ 32,720 at P 49.

²¹ AES Companies NOPR Comments at 6; American Wind Energy Association (AWEA) NOPR Comments at 1; Competitive Suppliers NOPR Comments at 8; Exelon NOPR Comments at 5; Golden Spread Electric Cooperative, Inc. (Golden Spread) NOPR Comments at 9; IMG Midstream NOPR Comments at 4; Midcontinent Independent System Operator, Inc. (MISO) NOPR Comments at 8; NEI NOPR Comments at 4; Potomac Economics NOPR Comments at 10.

²² Exelon NOPR Comments at 5; IMG Midstream NOPR Comments at 4; MISO NOPR Comments at 8-9; R Street Institute NOPR Comments at 4-5.

²³ NYISO NOPR Comments at 10, 14; SCE NOPR Comments at 3.

²⁴ CAISO NOPR Comments at 10; CAISO Market Monitor NOPR Comments at 1-2; NYISO NOPR Comments at 9; PJM NOPR Comments at 8; PJM Market Monitor NOPR Comments at 6.

reliance on uplift payments. For these reasons, the Commission preliminarily finds that commitment costs of fast-start resources in NYISO should be considered as marginal for purposes of setting prices in NYISO. Thus, NYISO's practice of not incorporating start-up costs in the price-setting logic for either online fast-start resources or for certain offline fast-start resources that are not Fixed Block Units, may result in prices that do not reflect the marginal cost of serving load. Therefore, we preliminarily find that NYISO's practice may produce rates that are unjust and unreasonable.

B. NYISO Practice of Limiting Fast-Start Pricing to Resources That Are Fixed Block Units and NYISO Practice Regarding Relaxation Economic Minimum Operating Limits

12. The fast-start pricing NOPR proposed to require each RTO/ISO to modify its fast-start pricing to relax the economic minimum operating limit of fast-start resources and treat them as dispatchable from zero to the economic maximum operating limit for the purpose of calculating prices.²⁵ In response to the NOPR, many commenters generally supported the proposal to relax the economic minimum operating limit of fast-start resources and treat them as dispatchable from zero to the economic maximum operating limit for the purpose of calculating prices.²⁶ Potomac Economics stated that this proposal is required in any feasible fast-start pricing approach because it is the minimum output constraint that prevents resources from being able to set prices.²⁷ Other commenters disagreed with the proposal and argued that, among other disadvantages, it would create a disconnect between dispatch signals and prices²⁸ and could create an energy imbalance by producing physically infeasible results.²⁹

²⁵ NOPR, FERC Stats. & Regs. ¶ 32,720 at P 54.

²⁶ AES Companies NOPR Comments at 7; Competitive Suppliers NOPR Comments at 9; EEI NOPR Comments at 4; Exelon NOPR Comments at 7; Golden Spread NOPR Comments at 4, 10-11; IMG Midstream NOPR Comments at 5; ISO-NE NOPR Comments at 8-9; MISO NOPR Comments at 1-2, 11; NEI NOPR Comments at 4; NYISO NOPR Comments at 10; New York Transmission Owners NOPR Comments at 7; Sunflower and Mid-Kansas NOPR Comments at 6; Westar NOPR Comments at 9.

²⁷ Potomac Economics NOPR Comments at 12.

²⁸ ELCON NOPR Comments at 3.

²⁹ CAISO NOPR Comments at 8.

- 13. Additionally, the fast-start pricing NOPR proposed to require each RTO/ISO to apply fast-start pricing logic to all fast-start resources, regardless of whether they are block-loaded.³⁰ In response to the NOPR, several commenters supported applying fast-start pricing logic to dispatchable fast-start resources.³¹ For example, some commenters stated that including dispatchable fast-start resources in fast-start pricing would allow resources that utilize different technologies and techniques beyond conventional generation to be eligible for fast-start pricing.³² NYISO, on the other hand, supported limiting fast-start pricing logic to only block-loaded resources.³³
- 14. NYISO's market rules relax the economic minimum operating limit of Fixed Block Units by up to 100 percent for the purpose of setting prices.³⁴ However, NYISO's relaxation of the economic minimum operating limit is limited to only Fixed Block Units.³⁵ In contrast, dispatchable fast-start resources are able to set prices only within their dispatchable range when they are committed.³⁶ If a dispatchable fast-start resource is committed such that the quantity needed from the resource to serve load falls in a range above zero but below the dispatchable resource's economic minimum operating limit, that resource may be unable to set price.³⁷ We preliminarily find that NYISO's practice of differentiating between dispatchable fast-start resources and Fixed-Block Units appears to be arbitrary and may result in prices that do not reflect the marginal cost of serving load. NYISO's practice of allowing only Fixed Block Units to participate in fast-start pricing may also create incentives favoring development of block-loaded resources over dispatchable resources. Furthermore, the practice may create incentives for dispatchable resources to withhold their flexibility from the market. Therefore, we

³⁰ NOPR, FERC Stats. & Regs. ¶ 32,720 at P 47.

³¹ Competitive Suppliers NOPR Comments at 7; Microgrid Resources Coalition NOPR Comments at 4; Sunflower and Mid-Kansas NOPR Comments at 4.

³² AWEA NOPR Comments at 2; Competitive Suppliers NOPR Comments at 7; Microgrid Resources Coalition NOPR Comments at 4.

³³ NYISO NOPR Comments at 5-6.

³⁴ NYISO Report at 7.

³⁵ *Id*.

³⁶ *Id.* at 9, 16.

³⁷ *Id*.

preliminarily find that such practices may be unjust and unreasonable. While some commenters raise concerns about the potential consequences of relaxing the economic minimum operating limit of fast-start resources by up to 100 percent, we note that there are methods to address these concerns that can and should be considered, as discussed later in this order.³⁸

C. Institution of Section 206 Proceeding

- 15. Accordingly, we institute a proceeding in Docket No. EL18-33-000, pursuant to FPA section 206, to examine NYISO's Tariff and practices. Upon initial review, we believe that implementing the following changes to NYISO's Tariff would result in rates that are just and reasonable:
 - A) Modify pricing logic to allow the start-up costs of fast-start resources³⁹ to be reflected in prices;⁴⁰ and
 - B) Relax the economic minimum operating limit of all dispatchable fast-start resources by up to 100 percent for the purpose of setting prices.⁴¹

We expect that the proposed modifications will remedy NYISO's current fast-start pricing practices that potentially lead to unjust and unreasonable rates. For instance, the identified modifications are intended to more accurately reflect the marginal cost of serving load in periods when dispatching a fast-start resource is the next action taken to meet load, and provide price signals that better inform investment decisions, including where and when fast-start resources should be built or maintained. The identified

³⁸ *See infra* P 16.

³⁹ NYISO has indicated that it limits its fast-start pricing to resources that are able to start up within 10 or 30 minutes. NYISO NOPR Comments at 2, 5. This proceeding does not propose to change NYISO's start-up time requirement for fast-start resources.

⁴⁰ See supra section II.A. While this change would primarily affect NYISO's online pricing logic which does not currently allow fast-start resources' commitment costs to be reflected in prices, we also propose that NYISO make certain conforming changes to its offline pricing. Specifically, we propose that NYISO also be required to extend its current offline pricing practices, including the use of commitment costs in setting prices, to any resources that are provided fast-start pricing treatment pursuant to section II.B, supra.

⁴¹ See supra section II.B.

modifications will also provide more accurate and transparent price signals that better reflect the cost of serving load, minimize production costs, and reduce uplift. We also expect that allowing the market software to fully relax all fast-start resources' economic minimum operating limits would allow these resources to set prices under a broader range of dispatch conditions and therefore result in prices that more accurately reflect the cost of serving load.

- 16. NYISO has stated that its generation fleet currently responds well to NYISOissued base points and instructions. NYISO explains that it has not identified its fast-start pricing logic as causing systemic over-generation, or providing incentives for resources to not follow NYISO's dispatch instructions and chase prices. 42 However, NYISO states that if start-up costs are included in location based marginal prices, it may be necessary for NYISO to develop and apply new incentives for resources to follow dispatch instructions. 43 To the extent that NYISO finds over-generation from price-chasing resources to be a potential problem after considering the identified modifications, we encourage NYISO to develop any necessary changes or additions to address this issue and include those changes in its compliance filing to ensure that its fast-start pricing logic does not cause over-generation nor lead to incentives for resources to not follow NYISO's dispatch instructions. NYISO may consider changes that include penalizing uninstructed deviations, settling over-generated MWh at only standard location based marginal price (not at the higher prices determined through fast-start pricing), or providing lost opportunity cost payments.⁴⁴ By implementing a mechanism to discourage over-generation, power imbalances can be avoided.
- 17. We find that a paper hearing, as ordered below, is the appropriate procedure to resolve this matter. As ordered below, any person desiring to participate in the paper hearing must file a notice of intervention or timely motion to intervene, as appropriate, in accordance with Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2017).
- 18. We will require NYISO and other interested parties to file initial briefs no later than 45 days after the publication of notice in the *Federal Register* of the Commission's initiation of this section 206 proceeding in Docket No. EL18-33-000. Parties also may file reply briefs in response to parties' initial briefs due within 30 days after the due date of initial briefs.

⁴² NYISO NOPR Comments at n.19.

⁴³ *Id.* at 11-12.

⁴⁴ See, e.g., MISO NOPR Comments at 11; ISO-NE NOPR Comments at 11.

- 19. If NYISO does not believe that its current tariff is unjust and unreasonable, it should provide evidence supporting that conclusion. NYISO may provide market data, simulation results, or other empirical analysis to support the position that its tariff and current practices adequately reflect the marginal cost of serving load in periods when dispatching a fast-start resource is the next action taken to serve load.
- 20. In cases where, as here, the Commission institutes a proceeding under FPA section 206, the Commission must establish a refund effective date that is no earlier than publication of notice of the Commission's initiation of the proceeding in the *Federal Register*, and no later than five months subsequent to that date.⁴⁵ Consistent with Commission precedent,⁴⁶ we will establish a refund effective date at the earliest date allowed, i.e., the date the notice of the initiation of the proceeding in Docket No. EL18-33-000 is published in the *Federal Register*. The Commission is also required by section 206 to indicate when it expects to issue a final order. We expect to issue a final order in this proceeding within six months of receiving reply briefs, or September 30, 2018.

The Commission orders:

- (A) Pursuant to the authority contained in and subject to the jurisdiction conferred upon the Commission by section 402(a) of the Department of Energy Organization Act and by the FPA, particularly section 206 thereof, and pursuant to the Commission's Rules of Practice and Procedure and the regulations under the FPA (18 C.F.R. Chapter I), the Commission hereby institutes a proceeding in Docket No. EL18-33-000, as discussed in the body of this order.
- (B) NYISO and other interested parties may file initial briefs no later than 45 days after the publication of notice in the *Federal Register* of the Commission's initiation of the section 206 proceeding in Docket No. EL18-33-000. Reply briefs may be filed no later than 30 days thereafter.
- (C) Any interested person desiring to be heard in Docket No. EL18-33-000 must file a notice of intervention or motion to intervene, as appropriate, with the Federal Energy Regulatory Commission, 888 First Street NE, Washington, DC 20426, in accordance with Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2017), within 21 days of the date of issuance of this order.

⁴⁵ 16 U.S.C. § 824e(b) (2012).

⁴⁶ See, e.g., PJM Interconnection, L.L.C., 90 FERC ¶ 61,137 (2000); Cambridge Elec. Light Co., 75 FERC ¶ 61,177, clarified, 76 FERC ¶ 61,020 (1996); Canal Elec. Co., 46 FERC ¶ 61,153, reh'g denied, 47 FERC ¶ 61,275 (1989).

- (D) The Secretary shall promptly publish in the *Federal Register* a notice of the Commission's initiation under FPA section 206 of the proceeding in Docket No. EL18-33-000.
- (E) The refund effective date in Docket No. EL18-33-000 established pursuant to section 206 of the FPA shall be the date of publication in the *Federal Register* of the notice discussed in Ordering Paragraph (D) above.

By the Commission.

(SEAL)

Nathaniel J. Davis, Sr., Deputy Secretary.