

184 FERC ¶ 61,169
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Willie L. Phillips, Acting Chairman;
James P. Danly, Allison Clements,
and Mark C. Christie.

Brookfield Renewable Trading and Marketing LP

Docket No. EL23-89-000

v.

ISO New England Inc.

ORDER GRANTING COMPLAINT

(Issued September 21, 2023)

1. On August 2, 2023, pursuant to sections 206, 306, and 309 of the Federal Power Act (FPA)¹ and Rules 206 and 212 of the Commission’s Rules of Practice and Procedure,² Brookfield Renewable Trading and Marketing LP (Brookfield) filed a complaint (Complaint) against ISO New England Inc. (ISO-NE). Brookfield alleges that ISO-NE’s Transmission, Markets and Services Tariff (Tariff) is unjust, unreasonable, and unduly discriminatory because it prevents “pumped storage” Electric Storage Facilities³ from participating in ISO-NE’s Inventoried Energy Program, although other similarly situated Electric Storage Facilities are allowed to participate in the Inventoried Energy Program. Brookfield asks the Commission to order ISO-NE to revise the Tariff effective August 2, 2023, to allow pumped storage Electric Storage Facilities to participate in the Inventoried Energy Program in a comparable and non-preferential manner to all other Electric Storage Facilities.

2. In this order, we grant the Complaint and order ISO-NE to revise its Tariff, as discussed below.

¹ 16 U.S.C. §§ 824e, 825e, 825h.

² 18 C.F.R. §§ 385.206, 385.212 (2022).

³ Unless indicated otherwise, all capitalized terms not defined herein shall have the same meaning given to them in the Tariff.

I. Background

A. The Inventoried Energy Program

3. The Inventoried Energy Program is an ISO-NE program that was designed to provide incremental compensation to resources that maintain a certain amount of inventoried energy during cold periods when winter energy security is most stressed. ISO-NE defines inventoried energy as “fuel or potential energy that a resource can convert to electric energy at the ISO’s direction.”⁴ The Inventoried Energy Program “directly compensat[es] resources that maintain inventoried energy, *rather than convert it to electricity and reduce the inventory*, thereby ensuring its availability during cold weather periods,”⁵ i.e., ISO-NE makes payments to resources specifically for maintaining inventoried energy (e.g., fuel). ISO-NE stated that the program was intended to create an incentive for resources using a broad range of fuels, such as “incent[ivizing] a gas-only resource to sign a winter peaking supply contract for vaporized liquefied natural gas,”⁶ or motivating an oil-burning resource to maintain enough oil in its tank that it could burn oil for additional days than would have been the case otherwise.⁷

4. On March 25, 2019, ISO-NE filed Tariff provisions to implement the Inventoried Energy Program for the winters of 2023-2024 and 2024-2025. Although ISO-NE was developing a long-term market-based solution to the region’s energy security challenges, it also proposed the Inventoried Energy Program as a short-term solution. As ISO-NE explained, “a key contributor to the region’s winter energy security concerns is its reliance on electric energy from gas-fired resources that rely on the gas delivery from the interstate pipeline network, which can become constrained during winter cold spells.”⁸

5. On August 6, 2019, the Secretary of the Commission issued a Notice stating that the Commission did not act on ISO-NE’s filing because of a lack of quorum and that, in the absence of Commission action on or before August 5, 2019, ISO-NE’s proposal, as

⁴ *ISO New England Inc.*, Transmittal, Docket No. ER19-1428-000, at 8 (filed Mar. 25, 2019) (IEP Transmittal). Resources are allowed to maintain up to 72 hours of inventoried energy to receive incentive payments from the program. *Id.* at 14.

⁵ *Id.* at 15 (emphasis added).

⁶ *Id.* at 11.

⁷ *Id.* at 8, 11.

⁸ *Id.* at 8.

amended, became effective by operation of law.⁹ Rehearing was similarly denied by operation of law on October 7, 2019.¹⁰ Subsequently, after the Commission regained a quorum, the Commission issued an order on June 18, 2020, accepting the Inventoried Energy Program.¹¹

6. During the Commission proceedings that culminated in the June 18 Order accepting the Inventoried Energy Program, some parties argued that the program's structure would improperly permit resources such as coal plants, nuclear plants, and hydropower plants, which already maintain inventoried energy as part of their operating model, to receive Inventoried Energy Program payments. According to the protesters, such resources would not change their operating behavior in response to the economic incentives provided by the Inventoried Energy Program and therefore should not receive incentive payments.¹² The Commission rejected this argument, stating that it was just and reasonable to provide "similar compensation for similar service" to resources, and that the Inventoried Energy Program was aimed at "compensating resources for a specific reliability attribute for which they are not currently compensated."¹³

B. The Belmont Decision

7. On appeal of the June 18 Order, the U.S. Court of Appeals for the D.C. Circuit largely upheld the Commission's acceptance of the Inventoried Energy Program.¹⁴ The court found, however, that the Commission's decision was arbitrary and capricious in one respect; specifically, permitting certain types of generators to receive Inventoried Energy Program payments when those generators would not change their behavior in response to those payments.¹⁵

⁹ *ISO New England Inc.*, Notice of Filing Taking Effect by Operation of Law, Docket No. ER19-1428-001 (Aug. 6, 2019).

¹⁰ *ISO New England Inc.*, 169 FERC ¶ 61,013 (2019).

¹¹ *ISO New England Inc.*, 171 FERC ¶ 61,235 (2020) (June 18 Order).

¹² *See* Massachusetts Attorney General, Rehearing Request, Docket No. ER19-1428-002, at 22-23 (filed Aug. 30, 2019).

¹³ June 18 Order, 171 FERC ¶ 61,235 at P 62.

¹⁴ *Belmont Mun. Light Dept. v. FERC*, 38 F.4th 173 (D.C. Cir. 2022).

¹⁵ *See, e.g., id.* at 187.

8. With regard to whether the Inventoried Energy Program would operate as designed “without the inclusion of nuclear, coal, biomass, and hydroelectric generators, whose on-site energy storage practices are unlikely to be affected by the Inventoried Energy Program’s compensation incentives,” the court found that the Inventoried Energy Program would accomplish its goal without the inclusion of such resources. It stated that many categories of generators, including oil and gas-based resources, and wind and solar resources that are coupled with a battery storage system, could be incentivized to participate and contribute to the Inventoried Energy Program’s objective of enhancing winter energy security. However, the court stated, “if [the Inventoried Energy Program] were to include nuclear, coal, biomass, and hydroelectric generators, these entities would store up to three days’ worth of fuel anyway because it is their standard practice and thus, by default, they contribute to energy reliability in the winters.”¹⁶ The court found that record evidence demonstrated that the Inventoried Energy Program, even without the excluded resources, would improve the Northeast’s energy reliability in future winters. The court therefore severed and vacated this aspect of the Commission’s acceptance of the Inventoried Energy Program.

C. Proceedings on Remand

9. On remand, the Commission issued an order on September 23, 2022, requiring ISO-NE to revise the Tariff provisions governing the Inventoried Energy Program to make nuclear, coal, biomass, and hydroelectric generators ineligible to participate in the program.¹⁷ ISO-NE made its compliance filing on November 22, 2022. In that filing, ISO-NE removed nuclear, coal, biomass, and hydroelectric resources from the Inventoried Energy Program. ISO-NE also noted that stakeholders had filed and supported an amendment during the stakeholder process that would revise the relevant Tariff provisions to provide that “assets that run on coal, nuclear, biomass or hydropower (*excluding pumped hydro that participates in the New England Markets as an Electric Storage Facility*)” are ineligible to participate in the Inventoried Energy Program.¹⁸ The amendment thereby would have allowed pumped hydro resources participating in ISO-NE markets as Electric Storage Facilities to participate in the Inventoried Energy Program.

10. ISO-NE noted that the original proposal for the Inventoried Energy Program allowed for the participation of two discrete categories of hydropower resources; namely, pumped hydro and pondage. According to ISO-NE, some stakeholders contended that,

¹⁶ *Id.* at 189.

¹⁷ *ISO New England Inc.*, 180 FERC ¶ 61,181 (2022) (September 2022 Order).

¹⁸ *ISO New England Inc.*, Compliance Filing, Docket No. ER18-1428-006, at 5-6 (filed Nov. 22, 2022) (emphasis added) (IEP Compliance Filing).

because pumped hydro resources participate in the markets as Binary Storage Facilities, a subcategory of Electric Storage Facilities (which are permitted to participate in the Inventoried Energy Program), pumped hydro should also be allowed to participate regardless of the *Belmont* court's general ruling that hydroelectric resources are not allowed to participate in the Inventoried Energy Program.¹⁹ However, ISO-NE stated that it did not adopt the amendment, noting that *Belmont* did not provide an exception for pumped hydro resources to participate as Electric Storage Facilities, nor did it differentiate between pondage and pumped hydro resources but rather simply indicated that "hydroelectric" resources must be excluded from the program. ISO-NE stated that it is not opposed to pumped hydro resources participating as Electric Storage Facilities, provided that the Commission determines that the amendment meets the compliance mandate.²⁰

11. In ruling on the compliance filing, the Commission stated that the only question before it was whether ISO-NE's filing complied with the directives of the September 2022 Order, and that ISO-NE had done so. The Commission found that any other issue was beyond the scope of the compliance proceeding. The Commission therefore accepted the compliance filing on April 24, 2023, without directing further changes to the Inventoried Energy Program.²¹

II. Complaint

12. Brookfield states that it is the owner of the Bear Swamp pumped storage resource that satisfies the requirements applicable to an Electric Storage Facility and participates in the ISO-NE markets as an Electric Storage Facility.²² Brookfield argues that pumped storage Electric Storage Facilities should be allowed to participate in the Inventoried Energy Program, and that such participation is not prohibited by either *Belmont* or prior Commission orders. It asserts that all storage resources that are Electric Storage Facilities operate based on the same fundamental principles regarding when to consume and discharge electricity regardless of their storage technology or medium, so the fact that one Electric Storage Facility may use pumped storage and another Electric Storage Facility may use a battery is irrelevant.²³ It further states that all Electric Storage

¹⁹ *See id.* at 5.

²⁰ *Id.* at 2, 6.

²¹ *ISO New England Inc.*, 183 FERC ¶ 61,059, at P 18 (2023) (April 2023 Order).

²² Complaint at 3.

²³ Brookfield notes that Electric Storage Facilities include Binary Storage Facilities, which are pumped storage assets that meet the Electric Storage Facilities

Facilities are designed for the exact same purpose—to receive and store energy for later injection into the grid—and that, because all Electric Storage Facility technologies operate under the same economic principles, the same incentive exists for all Electric Storage Facilities to provide reliability service through the Inventoried Energy Program.²⁴ Thus, according to Brookfield, it is unduly discriminatory, in violation of the FPA, to permit some types of Electric Storage Facilities—specifically, battery storage Electric Storage Facilities—to receive incentive payments from the Inventoried Energy Program, but to deny that opportunity to pumped storage Electric Storage Facilities.

13. According to Brookfield, undue discrimination occurs when (1) there is a difference in rates or services between two classes of persons, and (2) the two classes are similarly situated, i.e., there are no differences between the two classes that are material to the inquiry at hand.²⁵ Brookfield states that there are no material factual differences between pumped storage Electric Storage Facilities and other Electric Storage Facilities with respect to their ability to provide winter reliability services that would justify their disparate treatment with regard to the Inventoried Energy Program. Brookfield states that all Electric Storage Facilities operate under the same economic principles no matter how they store energy; decisions to charge (i.e., purchase and store energy) or discharge (i.e., resell stored energy) are based on market prices and efficiency losses. Thus, Brookfield argues that the fact that pumped storage Electric Storage Facilities use water for storage and most other Electric Storage Facilities use chemicals in batteries for storage is a difference that is not material to the inquiry at hand.²⁶

14. Brookfield states that ISO-NE revised the Tariff in 2018 to promote the participation of Electric Storage Facilities in New England’s wholesale electricity market.²⁷ Brookfield further notes that in 2019, when ISO-NE filed its Inventoried Energy Program, ISO-NE included all Electric Storage Facilities as eligible to participate

requirements (i.e., pumped storage Electric Storage Facilities), and battery energy storage facilities (battery storage Electric Storage Facilities). Complaint at 4.

²⁴ *Id.* at 6-8.

²⁵ *Id.* at 8 (citing *N.Y. Indep. Sys. Operator, Inc.*, 162 FERC ¶ 61,124, at P 10 (2018)).

²⁶ *Id.* at 9.

²⁷ Brookfield states that ISO-NE previously sought to implement programs that enhance reliability in winter months, but the first winter reliability program adopted in 2015 did not include Electric Storage Facilities because the Tariff did not yet identify Electric Storage Facilities as a separate type of resource.

in the program;²⁸ however, when the court issued its *Belmont* decision, it did not define the terms “hydroelectric generators” or “hydroelectric resources,” and made no mention of pumped storage resources.²⁹

15. Brookfield cites to the testimony of its expert witness, Dr. Jeffrey McDonald, to support its view that prohibiting pumped storage Electric Storage Facilities from participating in the Inventoried Energy Program may unnecessarily reduce the eligible supply available to address ISO-NE’s winter reliability need, which would be counterproductive to the goal of the Inventoried Energy Program.³⁰ Brookfield additionally states that its request is not inconsistent with *Belmont*, in that the *Belmont* court was not presented with the question of whether the Inventoried Energy Program should distinguish among Electric Storage Facilities on the basis of their storage medium.³¹ Brookfield asks for the earliest refund effective date, i.e., August 2, 2023, the date the Complaint was filed.³²

III. Notice of Filings and Responsive Pleadings

16. Notice of the Complaint was published in the *Federal Register*, 88 Fed. Reg. 53,482 (Aug. 8, 2023), with interventions and protests due on or before August 22, 2023. ISO-NE filed a timely answer. Calpine Corporation, FirstLight Power (FirstLight), ISO-NE, Massachusetts Attorney General, Massachusetts Department of Public Utilities, National Grid, New England Consumer-Owned Systems (NECOS),³³ New England

²⁸ See also IEP Transmittal at 15 (“An Electric Storage Facility can generally be credited with inventoried energy for the electric charge that it holds that can be converted into electric energy at the ISO’s direction.”).

²⁹ Complaint at 5.

³⁰ *Id.* at 10 (citing Brookfield Renewable Trading & Marketing LP, Filing attach., Testimony of Dr. Jeffrey McDonald, at 7-9 (McDonald Test.)).

³¹ *Id.* at 12.

³² *Id.* at 2 n.4.

³³ NECOS consists of Belmont Municipal Light Department, Block Island Utility District, Braintree Electric Light Department, Chicopee Municipal Light Department, Energy New England, LLC, Georgetown Municipal Light Department, Hingham Municipal Lighting Plant, Littleton Electric Light & Water Department, Merrimac Municipal Light Department, Middleborough Gas & Electric Department, Middleton Electric Light Department, North Attleborough Electric Department, Norwood Municipal Light Department, Pascoag Utility District, Reading Municipal Light Department,

Power Generators Association (NEPGA), New England Power Pool Participants Committee, and New England States Committee on Electricity filed notices of intervention or timely motions to intervene. FirstLight and NEPGA filed timely comments in support of the Complaint, and NECOS filed a timely protest. On September 5, 2023, Brookfield filed an answer to ISO-NE's answer and NECOS' protest.

A. ISO-NE Answer

17. ISO-NE states that it is not opposed to pumped storage resources' participation in the Inventoried Energy Program;³⁴ however, ISO-NE states that the Commission would have to issue an order directing ISO-NE to allow pumped storage resources to participate in the program on or before September 22, 2023 in order to implement the directive for the upcoming 2023-2024 winter.³⁵ ISO-NE explains that it believes that the *Belmont* decision and the Commission's April 2023 Order accepting ISO-NE's compliance filing prohibit pumped storage resources from participating in the Inventoried Energy Program.³⁶ ISO-NE states that *Belmont* did not provide any exception for pumped storage resources to participate in the Inventoried Energy Program as Electric Storage Facilities.³⁷ ISO-NE states that the April 2023 Order refers to pumped hydro and pondage resources but does so in a manner that suggests both are to be treated collectively as hydroelectric resources.³⁸ ISO-NE also states that, in the April 2023 Order, the Commission found that ISO-NE's Tariff revisions excluding hydroelectric

Rowley Municipal Lighting Plant, Stowe Electric Department, Taunton Municipal Lighting Plant, Wallingford Electric Division, and Westfield Gas & Electric Light Department.

³⁴ ISO-NE Answer at 2.

³⁵ *Id.* at 8.

³⁶ *Id.* at 2.

³⁷ *Id.* at 7.

³⁸ *Id.* at 7 n.32. ISO-NE notes that the April 2023 Order, 183 FERC ¶ 61,059 at P 4, refers to the two classes of resources together as "certain hydro and pumped-storage generators (i.e., those with water stored in a pond or reservoir)" in the context of describing the categories of resources that are permitted to participate in the Inventoried Energy Program as filed.

generators from the Inventoried Energy Program complied with the Commission's prior compliance directive.³⁹

18. ISO-NE further states that the evidentiary record in the Winter Reliability Program proceeding, upon which the D.C. Circuit based its *Belmont* decision to preclude participation of hydroelectric resources in the Inventoried Energy Program, includes an affidavit that challenged the inclusion of hydroelectric resources in the Winter Reliability Program.⁴⁰ According to ISO-NE, that affidavit singled out pumped hydroelectric resources as unlikely to change behavior in response to incentive payments.⁴¹ Thus, according to ISO-NE, the logic of the *Belmont* decision supports the exclusion of pumped storage resources from the Inventoried Energy Program.⁴²

B. Other Comments and Protests

1. Comments Supporting Complaint

19. FirstLight asserts that, although the *Belmont* Decision may be considered to have eliminated "hydroelectric" resources' eligibility to participate in the Inventoried Energy Program, nevertheless, that decision did not exclude the participation of pumped storage resources in the Inventoried Energy Program as an Electric Storage Facility.⁴³ FirstLight states that Brookfield is correct that *Belmont* did not disturb the ability of any Electric Storage Facility to participate in the Inventoried Energy Program, and that Brookfield's requested relief would more accurately implement what the court directed and do so in a manner consistent with the FPA and Order No. 841.⁴⁴

³⁹ *Id.* at 8.

⁴⁰ *Id.*

⁴¹ *Id.* & n.34 (citing *ISO New England Inc.*, Filing, attach. N – 1e, at 21 (Affidavit of Brian E. Forshaw), Docket No. ER15-2208 (filed July 15, 2015) (Forshaw Aff.) ("For the hydro units, the particular units we understand that would be eligible to receive out-of-market payments under the ISO-NE Proposal would be pumped-storage units Given my knowledge and experiences, I fail to see how incremental out-of-market payments to these units at the end of each of the next three winters will impact in any way how or when these units operate during the winter.")).

⁴² *Id.*

⁴³ FirstLight Comments at 7-8.

⁴⁴ *Id.* at 9 (citing *Elec. Storage Participation in Mkts. Operated by Reg'l Transmission Orgs. & Indep. Sys. Operators*, Order No. 841, 162 FERC ¶ 61,127 (2018))

20. FirstLight contends that the facts supporting Brookfield’s case prove that eliminating the ability of a pumped storage resource to participate in the Inventoried Energy Program is unduly discriminatory. FirstLight states that the Commission has held that all electric storage resources should have comparable access to both organized market-based and non-organized market-based revenues, and other than preventing pumped storage Electric Storage Facilities from participating in the Inventoried Energy Program, the Tariff treats all storage equally, consistent with Order No. 841.⁴⁵ It also notes that the Tariff classifies all electric storage, regardless of the storage mediums (e.g., chemical, water, gravity), as Electric Storage Facilities. Order No. 841 defines “electric storage resources” as “resources capable of receiving electric energy from the grid and storing it for later injection of electric energy back to the grid,” which covers such resources “regardless of their storage medium (e.g., batteries, flywheels, compressed air, and pumped-hydro).”⁴⁶ FirstLight further notes that, unlike conventional hydroelectric generators (which were appropriately removed from participation in the Inventoried Energy Program under *Belmont*), pumped storage energy charge inventory levels are not dictated by natural river flow but instead by activation of the facility’s pumping mechanism to move water from a lower reservoir to a higher-elevation reservoir based on economic energy prices.⁴⁷ Thus, FirstLight argues that, unlike conventional hydroelectric generators, pumped storage operates as a battery where inventory levels rely on economic energy prices in the ISO-NE day-ahead and real-time energy markets to signal additional battery charging, which is the same driver of charge levels for all Electric Storage Facilities.⁴⁸

21. FirstLight states that, while those issues were deemed to be outside the scope of the compliance docket, the Complaint properly requires them to be addressed in this proceeding. FirstLight believes there is good reason to grant the relief requested in the

(Errata Notice), *order on reh’g*, Order No. 841-A, 167 FERC ¶ 61,154 (2019)).

⁴⁵ *Id.* at 4 n.10 (citing Order No. 841, 162 FERC ¶ 61,127 at P 80 (“[A]s part of the requirement that each RTO/ISO develop a participation model for electric storage resources that allows electric storage resources to be eligible to provide services in all of its capacity, energy, and ancillary service markets, we also require that such participation model allow electric storage resources to be eligible to provide services that the RTOs/ISOs do not procure through an organized market mechanism (such as blackstart service, primary frequency response service, and reactive power service) if they are technically capable of providing those services.”)).

⁴⁶ *Id.* at 3 n.8 (citing Order No. 841, 162 FERC ¶ 61,127 at P 29).

⁴⁷ *Id.* at 3.

⁴⁸ *Id.* at 5.

Complaint because it is possible to do so without contradicting *Belmont*.⁴⁹ FirstLight states that it agrees with Brookfield that the court did not exclude Electric Storage Facilities from participating in Inventoried Energy Program, and because pumped storage is designed, operated, and registered within ISO-NE as an Electric Storage Facility, the compliance change specifically excluding pumped storage is unjust and unreasonable and inconsistent with Order No. 841.

22. NEPGA supports the Complaint and states that Brookfield demonstrates that there is no material difference among Electric Storage Facilities justifying this “patently discriminatory” treatment—neither in how Electric Storage Facilities operate nor in their economic incentives to respond to the Inventoried Energy Program design.⁵⁰ NEPGA further states that the Tariff language expressly prohibiting pumped storage participation as an Electric Storage Facility in the Inventoried Energy Program should be modified to make it clear that all Electric Storage Facilities should be eligible to participate in the Inventoried Energy Program, including pumped storage, consistent with ISO-NE’s original Inventoried Energy Program filing and the *Belmont* decision, and that to find otherwise would be inconsistent with *Belmont* and Order No. 841.⁵¹

2. Protest Opposing Complaint

23. According to NECOS, Brookfield’s complaint seeks to achieve what Brookfield could not accomplish in its earlier protest of ISO-NE’s filing in compliance with the September 2022 Order. NECOS states that Brookfield is incorrect in asserting that the Commission, in that order, did not address the merits of whether pumped storage that meets the requirements to be an Electric Storage Facility is eligible to participate in the Inventoried Energy Program as an Electric Storage Facility, following *Belmont*. Rather, NECOS avers that Brookfield’s complaint seeks to relitigate established findings and thus the Complaint is a collateral attack on prior rulings, because Brookfield’s complaint has not identified any changed circumstances since the prior rulings.⁵²

24. NECOS refers to ISO-NE’s citation of the Forshaw Affidavit in its November 22, 2022 compliance filing in the Inventoried Energy Program docket, and states that the logic of the court’s decision, which was based on the record in a prior Winter Reliability Program proceeding, supports the exclusion of pumped hydro resources from the Inventoried Energy Program. NECOS asserts that based on the evidence in that Winter

⁴⁹ *Id.* at 9.

⁵⁰ NEPGA Comments at 1-2.

⁵¹ *Id.* at 6 (citing to Order No. 841, 162 FERC ¶ 61,127 at P 79).

⁵² NECOS Comments at 9-11.

Reliability Program proceeding, the Commission ruled that coal, nuclear, and hydro resources are not similarly situated to the resources included in the 2015-2018 Winter Reliability Program,⁵³ as the record reflects that including such resources in the Winter Reliability Program would not provide any additional winter reliability benefit to the region.⁵⁴

25. NECOS alleges that Brookfield's complaint fails to show that any system-wide incremental energy production would result from extending the Inventoried Energy Program's incentive compensation mechanism to pumped storage hydro facilities, and states that the Commission's observation with respect to the Winter Reliability Program incentive is equally applicable to Inventoried Energy Program incentive payments to pumped storage hydro facilities.⁶ Therefore, NECOS avers, providing Inventoried Energy Program incentive payments to pumped storage hydro facilities would contravene the Commission's policy that there must be a connection between the incentive and the conduct meant to be induced.⁵⁵

26. NECOS contends that pumped storage hydro facilities are unlike oil-fired generating units, which can store fuel for the purposes of resupply; therefore, according to NECOS, this feature makes pumped storage hydro facilities unresponsive to incentives directed at increasing storage capability. According to NECOS, pumped storage hydro facilities have two fundamental operational limitations that would make them unresponsive to the Inventoried Energy Program payments. First, NECOS asserts that pumped storage hydro facilities "cannot husband its stored energy for another period or resupply while generating to maintain or increase its stored energy beyond its operating requirement."⁵⁶ Second, NECOS argues that the Bear Swamp pumped storage hydro

⁵³ The 2015-2018 Winter Reliability Program was accepted in *ISO New England Inc.*, 152 FERC ¶ 61,190 (2015). The resources in this program included liquified natural gas (LNG) and fuel oil resources, but did not include nuclear, biomass, coal, or hydroelectric resources.

⁵⁴ NECOS Comments at 10.

⁵⁵ *Id.* at 11-12.

⁵⁶ *Id.* at 12.

facility is also constrained by minimum flow requirements.⁵⁷ Accordingly, NECOS states that “futility of incentive payments [to pumped storage generators] is doubly clear.”⁵⁸

3. Brookfield Answer

27. Brookfield reiterates that all Electric Storage Facilities, regardless of their storage technology, are similarly situated for the purpose of providing winter reliability service under the Inventoried Energy Program.⁵⁹ In Brookfield’s view, the evidentiary record and Commission precedent in ISO-NE’s Winter Reliability Program do not address the participation of Electric Storage Facilities in the Inventoried Energy Program, which is the narrow focus of this Complaint. Brookfield contends that the 2016 ruling by the Commission to exclude hydroelectric generators from ISO-NE’s predecessor Winter Reliability Program and the underlying 2015 evidentiary record pre-date the establishment of Electric Storage Facilities as a distinct category of resources under the Tariff by several years.⁶⁰ Thus, Brookfield states, neither ISO-NE nor NECOS have provided any evidence that the Commission or court has previously made findings regarding the specific issue raised here.

28. Further, Brookfield takes issue with ISO-NE’s claim that ISO-NE cannot implement necessary Tariff changes to accommodate pumped storage Electric Storage Facilities into the Inventoried Energy Program unless the Commission acts by September 22, 2023. Brookfield argues that even if an Inventoried Energy Day occurs before ISO-NE has implemented a necessary Tariff change ordered in this proceeding, some resettlement may be required but only with respect to the pumped storage Electric Storage Facilities added to the program.⁶¹

⁵⁷ Minimum flow requirements refer to the minimum rate of flow of water that must be released continuously to drive the turbine that generates electricity.

⁵⁸ NECOS Comments at 13.

⁵⁹ Brookfield Answer at 3.

⁶⁰ *Id.* at 3, 4.

⁶¹ *Id.* at 4.

IV. Discussion

A. Procedural Matters

29. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2022), the notice of intervention and timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding.

30. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 358.213(a)(2) (2022), prohibits an answer to an answer unless otherwise ordered by the decisional authority. We accept Brookfield's answer because it has provided information that assisted us in our decision-making process.

B. Substantive Matters

31. We grant the Complaint, effective August 2, 2023, and direct ISO-NE to allow pumped storage Electric Storage Facilities to be eligible to participate in ISO-NE's markets as Electric Storage Facilities in the Inventoried Energy Program, as discussed below. We find that pumped storage Electric Storage Facilities are similarly situated to battery storage Electric Storage Facilities for purposes of participation in the Inventoried Energy Program. Battery storage Electric Storage Facilities are eligible to participate in the Inventoried Energy Program provided they meet the applicable operational requirements. We therefore agree with Brookfield that the ISO-NE Tariff is unduly discriminatory because it prohibits pumped storage Electric Storage Facilities from similarly participating in the Inventoried Energy Program.

32. As Brookfield correctly notes, "a finding of undue discrimination requires a showing that (1) two classes of customers are treated differently, and (2) the two classes of customers are similarly situated."⁶² However, "[t]o say that entities are similarly situated does not mean that there are no differences between them; rather, it means that there are no differences that are material to the inquiry at hand."⁶³

33. Brookfield has shown that, for purposes of participation in the Inventoried Energy Program, pumped storage Electric Storage Facilities operate similarly to battery storage Electric Storage Facilities.⁶⁴

⁶² Complaint at 8 n.24 (citing *City of Alameda, Cal. v. Pacific Gas & Elec. Co.*, 176 FERC ¶ 61,013, at P 44 (2021)).

⁶³ *Id.* n.25 (citing *N.Y. Indep. Sys. Operator, Inc.*, 162 FERC ¶ 61,124, at P 10 (2018)).

⁶⁴ For a technical description of pumped storage hydroelectric and stand-alone

34. Brookfield has demonstrated that a pumped storage Electric Storage Facility operates in a similar fashion to a battery storage Electric Storage Facility in that each uses electricity as a fuel to charge its resource (for which it incurs a cost), can store energy and discharge it in a later period, and is paid for the electricity discharged from its system.⁶⁵ Furthermore, pumped storage Electric Storage Facilities and battery storage Electric Storage Facilities both profit from energy arbitrage in ISO-NE's energy market by attempting to maximize the difference between the costs incurred to store energy and the revenues earned from injecting that energy into the grid at a later point in time.⁶⁶ As such, we agree with FirstLight that both types of Electric Storage Facilities currently respond to incentives from ISO-NE's energy markets (e.g., price differences across different time periods).⁶⁷ Based on the foregoing, we expect that the economic incentives created by the Inventoried Energy Program will change the behavior of pumped storage and battery storage Electric Storage Facilities similarly. When ISO-NE proposed the Inventoried Energy Program, it made clear that Electric Storage Facilities are eligible to participate in the Inventoried Energy Program, stating that “[a]n Electric Storage Facility can generally be credited with inventoried energy for the electric charge that it holds that can be converted into electric energy at the ISO's direction.”⁶⁸ Thus, as the ISO-NE Tariff currently permits battery storage Electric Storage Facilities to be eligible to participate in the Inventoried Energy Program, it is unduly discriminatory to prohibit pumped storage Electric Storage Facilities, which similarly store energy to later inject the energy into the system, from being eligible to participate in the Inventoried Energy Program and receive those payments.

35. This view is consistent with the ruling in *Belmont* that “there must be a connection between the incentive and the conduct meant to be induced.”⁶⁹ As Brookfield notes, “[d]ecisions to charge (i.e., consume energy) and discharge (i.e., resell stored energy) are

battery storage facilities, see pages 4 and 5 of Dr. McDonald's testimony.

⁶⁵ McDonald Test. at 6-7.

⁶⁶ Both pumped storage and battery storage Electric Storage Facilities are also eligible to sell ancillary services in ISO-NE markets, which involve different operational requirements and incentives.

⁶⁷ FirstLight Comments at 5.

⁶⁸ IEP Transmittal at 15.

⁶⁹ *Belmont*, 38 F.4th at 186 (citing *San Diego Gas & Elec. Co. v. FERC*, 913 F.3d 127, 137 (D.C. Cir. 2019)).

based on market prices.”⁷⁰ Both pumped storage and battery storage Electric Storage Facilities are able to make the choice between charging and discharging or doing neither, at any given time, based on energy prices in the ISO-NE day-ahead and real-time energy markets. Such a resource, regardless of its storage medium, continuously chooses between, on one hand, selling energy at a particular moment and earning revenue, and on the other hand, not selling energy and instead maintaining its state of charge (i.e., storing the energy for later injection) and receiving no revenue at that moment (or purchasing energy to increase its state of charge at a cost) in anticipation of higher prices later. The Inventoried Energy Program payments will increase an Electric Storage Facility’s opportunity costs of selling energy at a particular moment rather than charging or maintaining its stored energy and thus provides an incremental incentive that increases the likelihood that energy will be available in a later time period. Allowing pumped storage Electric Storage Facilities to be eligible to participate in the Inventoried Energy Program, similar to other Electric Storage Facilities, can alter their incentives and thus their behavior by providing an incremental financial incentive to store energy (i.e., water pumped into the upper reservoir that constitutes the Electric Storage Facility’s storage capability) that can later support reliability should a winter event stress ISO-NE’s system.

36. We disagree that the Forshaw Affidavit supports preventing pumped storage Electric Storage Facilities from participating in the Inventoried Energy Program. Importantly, the earlier Winter Reliability Program proceeding in which Mr. Forshaw testified involved a different seasonal program in ISO-NE that sought to provide incentives for resources to plan and obtain fuel (and have on-site fuel available) *for the winter season*. Mr. Forshaw, therefore, considered the way in which a pumped storage resource would operate throughout the winter. He stated that “such a unit . . . [is] operated to cycle between its fill and draw times each day in order to maximize its net energy revenues on a daily basis and over the course of a weekly dispatch cycle,” and to do so, it “would generate energy during the peak hours of load each day, and would pump water to replenish the upper reservoir at night and during weekends when load and energy prices were down.”⁷¹ Thus, Mr. Forshaw stated, he failed to see “how incremental out-of-market payments to these units *at the end of each of the next three winters* will impact in any way how or when these units operate during the winter.”⁷²

37. Mr. Forshaw argued that payments at the end of each winter under the Winter Reliability Program, which is no longer in effect, would not change the seasonal operation of pumped hydroelectric resources, which do not make decisions as to the

⁷⁰ Complaint at 9.

⁷¹ Forshaw Aff. ¶ 21.

⁷² *Id.* (emphasis added).

amount of fuel to procure or maintain at the beginning of winter. However, this argument is not applicable to Electric Storage Facilities participating in the Inventoried Energy Program, since payments for participation in the Inventoried Energy Program, unlike the Winter Reliability Program, are not limited to payments based on unused fuel at the end of the winter. Rather, those participating resources' compensation (and thus operational choices) will likely be made on a day-to-day or hour-by-hour basis during Inventoried Energy Days,⁷³ as opposed to on a seasonal basis.⁷⁴ As noted above, such short-term operational decisions are driven by changing prices in the ISO-NE energy markets, and both battery storage and pumped storage Electric Storage Facilities are able to change their short-term behavior in response to those price changes. Furthermore, the Inventoried Energy Program includes a construct that gives certain participating resources additional incentives to perform (i.e., inject stored energy into the system) when needed that were not part of the Winter Reliability Program that Mr. Forshaw analyzed. Specifically, the Inventoried Energy Program includes a spot payment construct during Inventoried Energy Days, where program participants are paid the spot rate if they inject energy into the system and, if they have a forward obligation, charged the spot rate if they fail to do so in a manner consistent with their obligations under the program.⁷⁵ This feature of the Inventoried Energy Program further strengthens the incentives of all resources participating in the program to develop and maintain energy inventories and to supply that energy to the ISO-NE system when needed most. As such, Mr. Forshaw's testimony regarding pumped storage's operation under the Winter Reliability Program is not directly applicable to pumped storage's operation under the Inventoried Energy Program at issue here.

38. NECOS' arguments that pumped storage hydro facilities cannot maintain stored energy for another period or increase their stored energy beyond their operating requirements, or are constrained by minimum flow requirements, are not relevant,

⁷³ ISO-NE will declare an Inventoried Energy Day when the average of the high and low temperature is less than or equal to 17 degrees Fahrenheit as reported by the National Weather Service at Bradley International Airport. For more information, see <https://www.iso-ne.com/participate/support/participant-readiness-outlook/inventoried-energy-program-iep>.

⁷⁴ The Inventoried Energy Program has both a seasonal and a spot component. The seasonal component is designed to provide compensation for resources that might need to make advanced fuel arrangements, such as LNG contracts, firm gas contracts, and oil replenishment services, in order to participate. *See, e.g., ISO New England Inc.*, Filing, attach. (Testimony of Christopher Geissler at 18-24), Docket No. ER19-1428-000 (filed Mar. 25, 2019).

⁷⁵ *See, e.g., id.* at 18-22.

because those arguments fail to address the central question above: whether pumped storage hydroelectric facilities are similarly situated to other types of Electric Storage Facilities that are eligible to participate in the Inventoried Energy Program insofar as they have the ability to change their behavior in response to short-term economic incentives.

39. In addition, contrary to NECOS' assertion, the Complaint is not a collateral attack on any prior ruling. As the discussion of the Forshaw Affidavit above demonstrates,⁷⁶ the Winter Reliability Program proceeding addressed pumped storage resources in a different context⁷⁷ and therefore is distinguishable in that respect from the Inventoried Energy Program. As to NECOS' argument that the Complaint is a collateral attack on the September 2022 Order, we find that claim unfounded, as that order was limited in scope to direct ISO-NE to fulfill the D.C. Circuit Court's directive in *Belmont*, which did not opine on pumped storage resources.

The Commission orders:

(A) The Complaint is hereby granted, as discussed in the body of this order.

(B) ISO-NE is hereby directed to revise the Tariff, effective August 2, 2023, to allow pumped storage Electric Storage Facilities to be eligible to participate in the Inventoried Energy Program as Electric Storage Facilities.

By the Commission.

(S E A L)

Debbie-Anne A. Reese,
Deputy Secretary.

⁷⁶ See *supra* PP 36-37.

⁷⁷ See *supra* P 37 (explaining that Mr. Forshaw's testimony regarding pumped storage's operation under the Winter Reliability Program is not directly applicable because the compensation structure of the Inventoried Energy Program is not limited to payments based on unused fuel at the end of the winter).