

186 FERC ¶ 61,076  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

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

ISO New England Inc.

Docket No. ER24-275-000

ORDER ACCEPTING TARIFF REVISIONS

(Issued January 29, 2024)

1. On October 31, 2023, pursuant to section 205 of the Federal Power Act (FPA),<sup>1</sup> ISO New England Inc. (ISO-NE) and the New England Power Pool Participants Committee (NEPOOL) (collectively, Filing Parties) filed revisions to section I.2.2 to Market Rule 1, and Appendix A to Market Rule 1 of its Transmission, Markets and Services Tariff to, *inter alia*, establish a jointly optimized Day-Ahead market for energy and ancillary services (DAM) and sunset the existing Forward Reserve Market (FRM) (jointly, Filing Parties' proposals are referred to as the Day-Ahead Ancillary Service Initiative (DASI)). As discussed below, we accept the filing, effective March 1, 2025, as requested.

**I. Background**

2. Filing Parties explain that ISO-NE has long administered a Day-Ahead Energy Market (DAEM), which establishes financially binding forward positions for the supply and demand of energy in the next operating day. Filing Parties state that supply in the DAEM includes transactions for physical supply from within the region, imports and exports, and virtual transactions. Resources that clear in the DAEM receive day-ahead energy awards.<sup>2</sup>

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<sup>1</sup> 16 U.S.C. § 824d.

<sup>2</sup> Transmittal at 7-9. Resources that clear in the DAEM that do not provide the amount of energy in real-time associated with their forward positions must pay the energy's replacement cost, which is the quantity of undelivered energy (i.e., the difference in MWh between its cleared position in the DAEM and the actual quantity of MWh delivered in real-time) multiplied by the applicable real-time locational marginal price (LMP) for energy. Filing Parties explain that this design ensures that resources that do not perform in real-time bear the financial cost of nonperformance while still ensuring

3. Filing Parties explain that the DAEM contributes in part to ISO-NE's next-day Operating Plan.<sup>3</sup> Filing Parties state, however, that the DAEM currently does not consider if sufficient capability exists to satisfy either the ISO-NE load forecast or to provide the ten- and thirty-minute operating reserves<sup>4</sup> expected to be needed in the Real-Time Energy Market (RTEM). Instead, Filing Parties explain, the DAEM only procures energy to meet bid-in demand,<sup>5</sup> and if the load forecast exceeds the amount of cleared energy from physical suppliers, there remains a day-ahead "energy gap."<sup>6</sup>

4. As a result, Filing Parties state that in developing the next-day Operating Plan, ISO-NE takes out-of-market actions to identify the resources with the energy and reserve capabilities necessary to satisfy both the load forecast, if a day-ahead energy gap exists, and anticipated operating reserve needs. Filing Parties state that any part of the load forecast not satisfied by physical energy cleared in the DAEM is currently addressed through an out-of-market reliability process known as the Reserve Adequacy Analysis (RAA). Filing Parties explain that, under the RAA, ISO-NE identifies any gap between the load forecast and the total energy from physical resources and net imports cleared in the DAEM, and identifies resources that will be able to fill that gap in the Operating Plan. Filing Parties state that, in rare circumstances, under the RAA, ISO-NE may commit additional units.

5. Filing Parties state that, although the unit commitment and RAA processes identify resources day-ahead to satisfy the next-day Operating Plan, there is no incentive

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that energy demand is met using the least-cost available resources.

<sup>3</sup> Filing Parties state that the North American Electric Reliability Corporation requires that each Balancing Authority have an Operating Plan for the next day that addresses: (1) expected generation resource commitment and dispatch; (2) interchange scheduling; (3) demand patterns; and (4) capacity and energy reserve requirements, including deliverability capability. *Id.* at n.12 (citing Reliability Standard TOP-002-4 (Operations Planning), at Requirement R.4).

<sup>4</sup> Filing Parties state that ISO-NE currently has three real-time operating reserve products: Ten-Minute Spinning Reserves, Ten-Minute Non-Spinning Reserves, and Thirty-Minute Operating Reserves. *Id.* at 24.

<sup>5</sup> A load-serving entity may bid only a portion of its expected load into the DAEM. Further, even if a load-serving entity bids its entire load into the DAEM, the amount of its load that clears may be less than that quantity if it submits price-sensitive bids.

<sup>6</sup> Under the Operating Plan, ISO-NE compares the quantity cleared in the DAEM to the forecasted demand and determines what additional resources, beyond those with day-ahead obligations, are necessary to meet the forecasted demand. Transmittal at 9.

for those resources to provide energy during the Operating Day or sufficient notice for those resources to make appropriate arrangements (e.g., procuring fuel, ensuring staff availability) to be able to perform in real-time when called upon.<sup>7</sup> Additionally, Filing Parties explain that the Forward Capacity Market (FCM) does not compensate for the fast-start and ramping capabilities necessary to meet reserve requirements.<sup>8</sup>

6. In addition to its energy and ancillary services markets and FCM, ISO-NE currently operates the FRM. However, Filing Parties explain, the FRM runs seasonally, does not explicitly tie to the reserves that ISO-NE determines will be needed for each hour of the Operating Day, applies only to a subset of hours on non-holiday weekdays, and provides compensation to resources unrelated to whether ISO-NE relies on those resources in the next day's Operating Plan.<sup>9</sup>

## II. Filing

### A. Day-Ahead Ancillary Services Market Products

7. Filing Parties state that the proposed DAM will combine the DAEM with a new Day-Ahead Ancillary Services Market (DAASM). Filing Parties explain that the DAASM includes four new ancillary service products: Day-Ahead Ten-Minute Spinning Reserves, Day-Ahead Ten-Minute Non-Spinning Reserves, Day-Ahead Thirty-Minute Operating Reserves, and Day-Ahead Energy Imbalance Reserves (DA EIR). Filing Parties add that the first three products (which it refers to collectively as the Day-Ahead Flexible Response Services) are intended to satisfy the next-day ten- and thirty-minute operating reserve requirements, while the fourth product (DA EIR) will contribute to satisfying the load forecast when cleared DAEM awards to physical resources are insufficient to do so. Filing Parties explain that each of the four products will have its own clearing price, and the DAM will result in awards to resources that clear for each product, with each product having a separate clearing price for each hour of the Operating Day.<sup>10</sup> Filing Parties argue that a market-based procurement of these products

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<sup>7</sup> *Id.*

<sup>8</sup> *Id.* at 10-11.

<sup>9</sup> Although the FRM procures Ten-Minute Non-Spinning Reserves and Thirty-Minute Operating Reserves, it does not procure Ten-Minute Spinning Reserves. *Id.* at 11, 43.

<sup>10</sup> As discussed below, the procurement of these products will be jointly optimized with energy procurement and higher quality products (i.e., Day-Ahead Ten-Minute Spinning Reserves) helping to meet the requirements (demand) for lower quality products (i.e., Day-Ahead Thirty Minute Operating Reserves). *See infra* P 12.

as proposed has the benefit of compensating resources in a targeted way for the service they provide through the efficient marginal-cost based pricing that results from a competitive market.<sup>11</sup>

8. Filing Parties state that, to be eligible to provide any of the four new products, the resources must be located within the New England Control Area, not be constrained by transmission, and have an open offer to provide energy (or, in the case of Dispatchable Asset Related Demand (DARD),<sup>12</sup> consume energy) for the hour associated with the DAASM Offer. In terms of resource types, Filing Parties indicate that Generator Assets, Demand Response Resources (DRR), and DARDs are eligible to provide the Day-Ahead Flexible Response Services and that Generator Assets and DRRs are eligible to provide DA EIR.<sup>13</sup> Filing Parties state that virtual transactions will not be permitted in the DAASM because, by definition, such transactions are not backed by physical capability. Similarly, Filing Parties state that imports will not be permitted to participate in the DAASM because it is currently not feasible to coordinate reserve transactions with neighboring control areas. In addition, Filing Parties clarify that although resources that clear in the FCM are required to offer in the DAEM, there is no must-offer requirement into the DAASM.<sup>14</sup>

### **B. Day-Ahead Market Clearing**

9. Filing Parties state that they propose to use a two-component call option structure for awards in the DAASM. First, Filing Parties state that the resource will receive a credit for its DAASM award. Filing Parties explain that the credit will be determined based on the day-ahead clearing price and day-ahead award for the given product and hour of the Operating Day. Second, Filing Parties state that the resource is assessed a “close-out” charge based on the quantity of the award multiplied by the greater of (i) zero and (ii) the difference between the real-time hub price and the strike price set by ISO-NE, described further below. Filing Parties assert that this call option structure ensures that

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<sup>11</sup> See White Aff. 35-38. Filing Parties explain that each of the four DAASM products will be procured on a region-wide, rather than zonal, basis. Therefore, the DAASM will rely on the real-time hub price, which is an average of certain nodal LMPs, rather than on LMPs directly. Transmittal at 12-18, 23-24.

<sup>12</sup> A DARD is a Dispatchable Asset Related Demand, such as the pump component of a pumped storage facility, that is capable of having its energy consumption modified in Real-Time in response to Dispatch Instructions. See ISO-NE, Transmission, Markets & Services Tariff, § I.2.2 (149.1.0).

<sup>13</sup> Transmittal at 26.

<sup>14</sup> *Id.* at 30-32.

resources are properly incentivized to perform when called upon and bear the cost of replacing their output in the event that they are unable to perform in real-time. Filing Parties also assert that this structure is more administratively efficient than other penalties for non-performance, such as firm fuel obligations, and also avoids potential market distortions associated with administratively determined penalty amounts.<sup>15</sup>

10. Filing Parties state that strike prices will be set before the DAASM offer period opens, and these prices will be based on ISO-NE's forecasted real-time hub prices plus a fixed adder of \$10/MWh. Filing Parties state that ISO-NE performed quantitative analyses using its Gaussian Mixture Model<sup>16</sup> to conduct market simulations that compared the incentives sellers have, based on changes in expected close-out charges, with and without various base strike adders. Filing Parties explain that, after evaluating fixed adders in \$5 increments between \$5/MWh and \$40/MWh as well as dynamic adders, ISO-NE determined that a fixed adder of \$10/MWh struck the best balance between incentivizing resource performance and minimizing consumer costs.<sup>17</sup> Filing Parties add that when a resource with a DAASM award is called on, ISO-NE will calculate that resource's close-out charge according to the difference between the strike price and real-time hub prices, if real-time hub prices exceed the strike price. Filing Parties state that, otherwise, the close-out charge is zero. Specifically, Filing Parties explain that, if the real-time hub price exceeds the strike price, for example when RTEM conditions are tighter than expected DAM operating conditions, the close-out charge is calculated as the difference between the real-time hub price and the strike price. Filing Parties state that this reflects the replacement cost of energy the system would incur if the

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<sup>15</sup> *Id.* at 14, 18-19.

<sup>16</sup> The Gaussian Mixture Model approximates data using dynamic combinations of multiple normal distributions, to better match the frequency of each possible Real-Time LMP. Alivand Aff. 7.

<sup>17</sup> Filing Parties state that, because the real-time hub price is an uncongested price, an adder above potential revenues from participation in the RTEM alone is necessary to incentivize resource performance readiness. Filing Parties state that, to conduct its impact assessment, ISO-NE employed a Gaussian Mixture Model trained on data from the DAEM and RTEM for the years 2012-2018 and then tested the model against market data from 2019-2021. Filing Parties add that ISO-NE has shared detailed model specifications and a description of the input data publicly and that the input data are either publicly available or available through subscription. ISO-NE commits to reviewing the performance of the model and sharing with stakeholders any model updates. Transmittal at 19-23, 61-62.

resource does not produce energy in the RTEM.<sup>18</sup> Filing Parties further explain that, in this case, a resource with a DAASM award is incentivized to produce energy in real-time, when economic (i.e., its marginal cost is less than the real-time energy price), to offset its potential substantial closeout charge.<sup>19</sup> Filing Parties add that, alternatively, if the real-time price is lower than the strike price, the close-out charge will be zero. Filing Parties note that, in this case, because RTEM conditions are less demanding than expected DAM conditions, the close-out charge of zero would reflect the fact the replacement cost associated with non-performance by a resource with a DAASM award is effectively zero.<sup>20</sup>

11. Filing Parties state that the demand quantities for each of the four DAASM products will be set by the operating reserve requirement for the product and the energy gap forecast. Filing Parties explain that, for example, the demand quantity for Day-Ahead Ten-Minute Spinning Reserves will be set by the forecasted Ten-Minute Spinning Reserve Requirement, and the demand quantity for DA EIR will be set by the energy gap (i.e., the load forecast minus cleared energy from physical suppliers). Filing Parties state that resources will submit offers by 10:30AM on the day before the Operating Day, the end of the DAEM bid and offer window. Filing Parties explain that each offer must specify the Operating Day hour to which it applies and have a non-negative offer price for each of the four DAASM products and a single offer quantity representing the total MWh offered across the four products.<sup>21</sup> Filing Parties state that under competitive conditions, suppliers are expected to make offers reflective of the incremental costs of taking on a Day-Ahead Ancillary Services award.<sup>22</sup> Filing Parties clarify that, although it currently maintains zonal clearing for the RTEM and FRM, the four new ancillary service products will clear on a region-wide basis. Filing Parties

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<sup>18</sup> *Id.* at 14-16.

<sup>19</sup> *Id.* at 17.

<sup>20</sup> *Id.* at 16-18.

<sup>21</sup> *Id.* at 24-25, 30-31.

<sup>22</sup> Filing Parties state that these incremental costs comprise three component costs: (1) the expected close-out charge for the product in the given hour; (2) the incremental cost of additional fuel procurement specifically associated with the DAASM award, which Filing Parties expect will be specific to natural gas-fired and storage resources; and (3) a risk premium for the uncertainty of close-out charges, fuel prices, and energy market prices. Filing Parties also state that some resources may choose to not include risk premiums in their offers. *Id.* at 32-35.

explain that, due to extensive investments in and upgrades to the transmission system, the internal interfaces between the zones no longer constrain the availability of reserves to the rest of the system.<sup>23</sup>

12. Filing Parties state that the DAM will clear by jointly optimizing energy and the four new products to determine the optimal set of day-ahead awards that procure sufficient quantities of energy and ancillary services while minimizing costs.<sup>24</sup> Filing Parties state that since the market clearing optimization process seeks the most economically efficient solution (lowest production costs), the proposed day-ahead market clearing process will incorporate opportunity costs into the clearing prices for the day-ahead energy and ancillary services products to ensure incentive-compatibility. Filing Parties contend that, if the optimization process did not consider opportunity costs, a resource might receive an award for one day-ahead product when it would be financially better off providing a different one.<sup>25</sup>

### **C. Retirement of the Forward Reserve Market**

13. Filing Parties state that, as part of DASI, they propose to terminate the FRM. Filing Parties explain that the proposed implementation date for the new DAASM is March 1, 2025, and that Filing Parties intend to shorten the final Forward Reserve Procurement Period such that it ends on February 28, 2025. Filing Parties state that they propose to retire the FRM because the FRM, as currently designed, is incompatible with the proposed DAASM. Filing Parties explain that there is the risk that resources will receive double compensation for providing the same reserve capabilities if the FRM is not retired. Filing Parties also contend that maintaining both the FRM and the proposed DAASM risks dividing resources' participation between the two markets. Filing Parties explain that both markets expose participants to financial risks associated with non-performance. Filing Parties explain that, rather than incur the financial risks associated with non-performance in both markets, a supplier might choose one market over another, reducing the supply in both markets. Filing Parties contend that such a supply reduction in both markets could reduce the competitiveness of each and increase the ability to exercise market power in either.<sup>26</sup> Filing Parties note that the External Market Monitor

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<sup>23</sup> Filing Parties also state ISO-NE will re-evaluate the system's reserve zones as part of an upcoming project, and anticipates that any new reserve zone definitions would be implemented in both the real-time and day-ahead energy and ancillary services markets. *Id.* at 24.

<sup>24</sup> *Id.* at 37-38.

<sup>25</sup> *Id.* at 38-39.

<sup>26</sup> *Id.* at 42-43.

(EMM) has raised other concerns with the FRM, including potential distortionary effects on the RTEM, and has advocated for its elimination.<sup>27</sup>

#### **D. Market Mitigation Protocols**

14. Filing Parties propose to use conduct and impact tests to address economic and physical withholding to address market power concerns. Filing Parties explain that the conduct test for economic withholding would flag a supplier's DAASM offer as presumptively uncompetitive if it is above an ISO-NE-estimated benchmark price, referred to as the Day-Ahead Ancillary Services Benchmark Level, indicating that the offer may not reflect the supplier's costs of taking on a DAASM award.<sup>28</sup> Filing Parties clarify that conduct test thresholds will be calculated using a formula that allows offer prices based on a resource's costs.<sup>29</sup> Filing Parties explain that, under the impact test for economic withholding, ISO-NE will run two auction scenarios: one with energy and ancillary services offers as submitted by resources and the other with offers mitigated to their benchmark levels. Filing Parties add that if the difference in clearing prices between the unmitigated and mitigated scenarios exceeds the impact test threshold,<sup>30</sup> offer prices that violated conduct test thresholds are then mitigated down to the Day-Ahead Ancillary Services Benchmark Levels. Filing Parties explain that the market is then cleared, and day-ahead awards are scheduled, using these mitigated offer prices.<sup>31</sup>

15. Filing Parties propose conduct and impact thresholds for physical withholding, which will function very similarly to the current physical withholding thresholds in ISO-NE's energy markets. Filing Parties explain that the proposed conduct threshold of

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<sup>27</sup> *Id.* at 44 (citing Ewing Aff. 78).

<sup>28</sup> *Id.* at 45.

<sup>29</sup> Filing Parties state that ISO-NE will determine a conduct test threshold for each resource for each offer-hour (i.e., hour associated with the DAASM offer) based on the greater of \$2/MWh and 200 percent of the resource's Expected Close-Out Component plus 150 percent of the resource's Avoidable Input Cost. *Id.* at 49.

<sup>30</sup> Filing Parties' proposed impact test threshold is 150 percent of the median difference between the two: the conduct test threshold prices for all Day-Ahead Ancillary Services Offers submitted for the offer-hour; and the Benchmark Levels for all Day-Ahead Ancillary Services Offers submitted for the offer-hour. *Id.* at 53.

<sup>31</sup> *Id.* at 45, 49-55. If a resource's offer violates the conduct test but has little or no effect on clearing prices, then it is not mitigated. This would occur when there is sufficient supply to ensure the resource (and resource owner) is unable affect prices above a threshold level under the impact test.



withholding will be based on the physical size of a market participant's portfolio of resources. Filing Parties state that the proposed impact test will be the same as that for economic withholding mitigation. Filing Parties explain that the proposed conduct and impact thresholds are intended to guide the Internal Market Monitor (IMM) in detecting suspected physical withholding, and that violation of the thresholds does not result in an automatic determination of physical withholding.<sup>32</sup>

### **E. Cost Impact Analysis**

16. Filing Parties state that, to assess the potential cost impact of the proposal, it ran simulations for the years 2019 through 2021 with and without DASI and found that there is an average annual increase in energy and ancillary services revenues of \$139.9 million, or a roughly 1.4% annual increase in total wholesale market costs. Filing Parties state that ISO-NE also ran the DASI scenario without the proposed \$10/MWh strike price adder and found that not including the adder would increase average annual costs by \$159.4 million, an increase of approximately 12% over the proposed DASI design that includes the adder. Filing Parties state that ISO-NE estimates that the elimination of the FRM will save \$35.5 million annually, resulting in a projected net increase of annual total wholesale market costs from DASI of \$104.4 million, or roughly 1.1%. Filing Parties also commit to reviewing DASI's performance after implementation and proposing further adjustments to the design as necessary.<sup>33</sup> In accordance with this commitment, Filing Parties propose a revision to Appendix A of Market Rule 1 to add a new ad hoc reporting requirement for the IMM regarding the overall competitiveness and performance of the New England markets, including major market designs.

### **III. Notice & Responsive Pleadings**

17. Notice of ISO-NE's filing was published in the *Federal Register*, 88 Fed. Reg. 76,748 (Nov. 7, 2023), with interventions and comments due on or before November 21, 2023. Massachusetts Department of Public Utilities filed a notice of intervention. Brookfield Renewable Trading and Marketing LP; Calpine Corporation; Constellation Energy Generation, LLC; Dominion Energy Services, Inc.; Eversource Energy Service Company, FirstLight Power Inc.; H.Q. Energy Services (U.S.) Inc.; Massachusetts Attorney General; National Grid; NRG Business Marketing LLC; Public Citizen, Inc.; Public Systems;<sup>34</sup> and Shell Energy North America (U.S.), L.P. each filed timely motions

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<sup>32</sup> *Id.* at 58-59.

<sup>33</sup> *Id.* at 59-63.

<sup>34</sup> Public Systems consists of Connecticut Municipal Electric Energy Cooperative, Massachusetts Municipal Wholesale Electric Company, New Hampshire Electric Cooperative, Inc., and Vermont Public Power Supply Authority.

to intervene. CPV Towantic, LLC; and Energy New England, LLC filed untimely motions to intervene.

18. Electric Power Supply Association (EPSA), LS Power Development, LLC (LS Power), National Hydropower Association (NHA), New England Power Generators Association, Inc. (NEPGA), and New England States Committee on Electricity (NESCOE) filed timely motions to intervene and comments. The IMM filed comments. The EMM filed an untimely motion to intervene and comments. ISO-NE filed an answer.

19. NESCOE, EPSA, NHA, and NEPGA support the filing and ask the Commission to accept the proposal. They argue that the DASI proposal is just and reasonable, adequately compensates resources for providing reserve products, and incentivizes investment in flexible resources that will be increasingly important for ensuring the reliable operation of the ISO-NE system during the energy transition.<sup>35</sup> NESCOE supports the inclusion of the \$10/MWh base strike adder, arguing that it will serve to balance consumer costs with the goal of adequately compensating ancillary service providers.<sup>36</sup> NHA states that, while it understands that the base strike adder price of \$10/MWh was necessary to achieve stakeholder consensus, it asks for clarification as to whether or not ISO-NE will be specifically required to evaluate whether this price is appropriate, as an inappropriate price could impair market signals for flexibility.<sup>37</sup> NEPGA also states that ISO-NE and the IMM should consider whether and to what extent the base strike adder of \$10/MWh reduces the incentives to provide the proposed ancillary services, and asks that ISO-NE and the IMM conduct an analysis in the future to determine if this price is appropriate in practice. NEPGA also argues that ISO-NE or the IMM should evaluate the impact of the DAM's physical withholding rules, as well as the efficiency of the DAM as a function of offer prices and risk premiums.<sup>38</sup>

20. EPSA contends that ISO-NE should provide for 90- and 240-minute reserves products to even better align incentives to make cost-effective reliability investments and also encourages ISO-NE to complete its work on the Resource Capacity Accreditation proposal to ensure that it is implemented before the nineteenth Forward Capacity Auction. NEPGA similarly argues that ISO-NE should develop additional longer

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<sup>35</sup> NESCOE Comments at 2-4; EPSA Comments at 2-4; NHA Comments at 2-4; NEPGA Comments at 2-5.

<sup>36</sup> NESCOE Comments at 4-6.

<sup>37</sup> NHA Comments at 4-5.

<sup>38</sup> NEPGA Comments at 8.

duration reserve products to replace other additional out-of-market actions that ISO-NE currently carries out.<sup>39</sup>

21. Both the EMM and the IMM state that they support Filing Parties' proposal. The EMM states it has long recommended that ISO-NE implement a day-ahead ancillary services market and that it generally supports ISO-NE's DASI proposal. The EMM states that, in particular, it supports the elimination of the FRM, the adoption of a \$10/MWh strike price adder, the adoption of the market power mitigation rules, and the omission of a must-offer requirement. The EMM supports the elimination of the FRM because it undermines market efficiency and because the implementation of the DAM will eliminate any potential value that the FRM may offer. The EMM states that it supports the proposed revisions related to market power mitigation, including the competitive benchmark levels, and the proposed conduct and impact test thresholds. Finally, the EMM states that it supports the proposal's reliance on a conduct-and-impact market power mitigation framework without requiring a specific must-offer requirement, as there are many legitimate reasons for a resource to not offer reserves. The EMM states that forcing a resource to offer reserves could drive up prices for consumers, schedule reserves for resources that are not actually available to provide reserves, and be administratively burdensome for units whose ability to provide reserves depend on gas system conditions.<sup>40</sup>

22. The IMM states that the proposed revisions may lead to the effective procurement of day-ahead ancillary services. The IMM commits to issuing a report on the DAM design within one year of the effective date of its operation as well as a report on the DAM's performance within three years, subject to the availability of sufficient data to do so.<sup>41</sup> The IMM contends that, under the DASI the DAM will compensate resources for filling the energy gap, which will be increasingly important due to the increased use of intermittent resources in the ISO-NE system. The IMM states that it supports the inclusion of the \$10/MWh base strike adder but argues that this price should be reviewed periodically to ensure that it is consistent with prevailing conditions, which ISO-NE has committed to doing. The IMM acknowledges that a dynamic adder may have been burdensome to administer without providing consumer savings. The IMM stresses the importance that the base strike adder is monitored in both tight and low stress market conditions.<sup>42</sup>

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<sup>39</sup> EPSA Comments at 4-5; NEPGA Comments at 9-12.

<sup>40</sup> EMM Comments at 5-11.

<sup>41</sup> IMM Comments at 1-3.

<sup>42</sup> *Id.* at 7-9.

23. The IMM contends that there is no conflict between voluntary participation in DASI and the prohibition on withholding, and states that the proposed withholding rules address potential market power concerns associated with a resource not offering DAASM products. The IMM argues that, while the proposed revisions' framework for market mitigation is sound, these measures should be monitored and changed if there is a need for adjustments. As such, the IMM recommends that ISO-NE devote sufficient resources to ensure that the methods for calculating benchmark levels are accurate.<sup>43</sup>

24. The IMM states that the FRM is not compatible with the DAM, which renders the FRM obsolete. Moreover, the IMM states that it strongly supports elimination of the FRM because it is not structurally competitive and there has been some evidence of the exercise of market power in the FRM. The IMM argues that, while there is merit in exploring a longer-term forward market for the proposed reserve products in the future, doing so would be difficult and would benefit from real experience with the use of the DAM. The IMM also supports Filing Parties' proposed tariff language that requires the analysis of market competitiveness issues for the DAM within one year of its effective date, as well as the DAM's performance within three years of its effective date subject to adequate data availability. The IMM commits to monitoring the competitiveness, mitigation rules, and core design features of the DAM, and states that it will also monitor the day-to-day conduct of market participants. The IMM also recognizes that there may be differences between supply offers and default benchmark levels and encourages market participants to utilize the consultation process with the IMM to ensure that market power mitigation rules are administered effectively.<sup>44</sup>

25. LS Power asserts that, while it does not protest Filing Parties' filing, it believes that Filing Parties' package of proposals does little to achieve DASI's long-term goals and raises concerns that ISO-NE could be making matters worse for the resources it purports to help. First, LS Power contends that Filing Parties' DASI proposal will cut reserve revenues for flexible, dispatchable generation by as much as 94% due to the simultaneous elimination of the FRM, which LS Power states is the only market specifically designed to spur the development and maintenance of highly flexible resources. LS Power argues that revenue increases from the DAM are more than offset by the proposed elimination of the FRM. LS Power explains that, over the past seven calendar years, the FRM provided Forward Ten-Minute Non-Spinning Reserves resources with revenues of at least \$851/MW-month and up to \$4,379/MW-month. LS Power argues that, in contrast, under the proposed DAM rules such resources would only earn an additional \$300/MW-month and, therefore, the elimination of FRM payments results in a dramatic reduction in total reserve revenues. LS Power contends that, on

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<sup>43</sup> *Id.* at 9-12.

<sup>44</sup> *Id.* at 18-22.

average, gas-only combustion turbines can expect to earn 87% less in reserve revenue under the DAM than under the FRM, and in some years the reduction will exceed 94%. LS Power argues that the roles of the DAM and the FRM are not identical, and yet Filing Parties propose to eliminate the FRM without addressing the resulting gap in its market design. LS Power contends that while the DAM might provide better day-ahead price signals to flexible generators than the day-ahead aspects of the FRM, it erodes incentives to build flexible generation over the longer-term because of the lack of revenue opportunity.<sup>45</sup>

26. LS Power also argues that ISO-NE's market power mitigation framework will impose a *de facto* must-offer requirement on many flexible generators and materially increase risk from participation. LS Power argues that two sets of provisions are of particular concern: the physical withholding conduct and impact thresholds and the economic thresholds within the conduct-and-impact test. LS Power contends that, in a truly competitive market, a supplier would have the option to (1) sell a product at a price commensurate with its view of risk, which could be very high; (2) sell a substitute product such as day-ahead energy instead of the DAASM call option; or (3) simply not sell anything at all. LS Power argues that none of these choices would be available in practice under the proposal because, while some may argue that the mitigation scheme establishes only a safe harbor and does not impose a mandate to offer into the market, the prospect of selling nothing but being threatened with a referral to the Commission for an alleged abuse of market power will give any company pause. LS Power argues that this threat takes the "sell nothing" option off the table. LS Power contends that, at the same time, the economic withholding thresholds within the conduct-and-impact test mean that a resource may not be able to reflect its view of the closeout risk within its DAASM offer, resulting in under compensation for the *de facto* forced sale of risky DAASM options. LS Power argues that the result would be a high chance that, in some periods, a resource would be forced to sell a product it does not wish to sell and be paid at a price that cannot compensate for the actual risk.<sup>46</sup>

27. In summary, LS Power recommends that ISO-NE take the following additional steps to improve the DASI proposal: (1) ISO-NE should implement additional reserve products aligned with evolving system needs; (2) ISO-NE should build a "long" forward market for the new DASI options, similar to the FRM; (3) ISO-NE, with the IMM, should carefully review revenue sufficiency for flexible generation as part of its broader commitment to review the overall performance of the DASI package after implementation; and (4) ISO-NE, with the IMM, should carefully assess the mitigation

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<sup>45</sup> LS Power Comments at 8-11.

<sup>46</sup> *Id.* at 12-14.

rules to ensure that the market is not over-mitigated and that resources can offer based on their good-faith view of risk and cost.<sup>47</sup>

28. In response to LS Power, ISO-NE answers that the issue before the Commission is whether the DASI proposal is just and reasonable, not a hypothetical alternative proposal to retain the FRM. ISO-NE contends that LS Power's analysis of potential overall revenue impacts on reserve-capable resources is unreliable. ISO-NE explains that LS Power employs a methodology that both (1) improperly compares historical FRM clearing prices for years not studied by the impact assessment to the net incremental DASI revenues for the impact assessment's study years and (2) conflates the purpose of Forecast Energy Requirement payments and DAASM payments. ISO-NE contends that its impact assessment, which compares simulated net Day Ahead Ancillary Services revenues for 2019 through 2021 to net FRM credits from 2019 through 2021, provides a much more reliable basis from which to understand the potential revenue impacts to reserve-capable resources. Specifically, ISO-NE explains that its impact assessment estimates annual Day-Ahead ancillary services revenues of \$21.5 million compared to annual FRM credits of \$26.4 million over the same study years, in contrast to the "yawning gap" in compensation described by LS Power.<sup>48</sup>

29. ISO-NE also disputes LS Power's contention that the DASI proposal imposes a *de facto* must-offer requirement. ISO-NE notes that, beyond positing an entirely speculative circumstance where the real-time LMP might reach or exceed \$2,500/MWh, LS Power does not explain why LS Power's market expectations will be so far from ISO-NE's modeling that the economic withholding conduct test threshold will be insufficient. ISO-NE further notes that LS Power similarly does not explain why it believes the IMM consultation process cannot accommodate its different market expectations. ISO-NE argues that, other than to suggest that disagreement is possible, LS Power does not cite any history of the current IMM consultation process being deficient. ISO-NE adds that, contrary to what LS Power suggests, the proposed mitigation framework contains built-in protections to prevent the possibility of unnecessary mitigation or needless Commission referral.<sup>49</sup>

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<sup>47</sup> *Id.* at 15-19.

<sup>48</sup> ISO-NE Answer at 5-9.

<sup>49</sup> *Id.* at 11-15.

#### **IV. Discussion**

##### **A. Procedural Matters**

30. 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.

31. Pursuant to Rule 214(d) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214(d) (2022), we grant CPV Towantic, LLC's; Energy New England, LLC's; and EMM' late-filed motions to intervene given the parties' interest in the proceeding, the early stage of the proceeding, and the absence of undue prejudice or delay.

32. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2022), prohibits an answer to a protest unless otherwise ordered by the decisional authority. We accept ISO-NE's answer because it has provided information that assisted us in our decision-making process.

##### **B. Substantive Matters**

33. As discussed below, we find that Filing Parties' DASI proposal is just and reasonable and not unduly discriminatory or preferential, and therefore accept the filing effective March 1, 2025, as requested.

34. First, we find that Filing Parties have demonstrated that the DASI proposal will procure and compensate the resources ISO-NE relies on in its next day Operating Plan in an efficient, transparent, and cost-effective manner based on the distinct set of services ISO-NE requires. We also find that the call option settlement design underlying the DASI market design will send appropriate price signals to the resources that provide these services, and thereby help ensure they perform in real-time if called upon.<sup>50</sup> In particular, Filing Parties' DASI market design will provide targeted incentives for flexible resources to take the day-ahead actions necessary to perform in real-time, which will become increasingly important as the resource mix changes and ISO-NE faces greater operational uncertainties. At the same time, the DASI market design reasonably assigns a financial liability consistent with the real-time cost of replacement energy to any resources that fail to meet their day-ahead ancillary services obligations in real-time.

35. Second, we find that Filing Parties have demonstrated that DASI's jointly optimized clearing structure will result in day-ahead awards that achieve a reliable next-day Operating Plan in a more cost-efficient manner than the status quo. As noted

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<sup>50</sup> Transmittal at 12-13.

above, under the status quo, forward reserves are procured through the FRM—a forward auction process held independently from the day-ahead market—and as such, ISO-NE’s current day-ahead market does not co-optimize the procurement of day-ahead energy and day-ahead reserves. Rather, ISO-NE relies on out-of-market processes to meet the needs identified in its next-day Operating Plan. Under the DASI proposal, ISO-NE will meet its expected real-time needs through a day-ahead market that co-optimizes the procurement and pricing of day-ahead energy and reserves, which we find will improve efficiency and price formation in the day-ahead market.

36. Moreover, we find that Filing Parties have demonstrated that the use of a fixed \$10/MWh strike price adder is appropriate. ISO-NE’s statistical modeling of the years 2019-2021 indicates that this \$10/MWh level strikes a reasonable balance between incentivizing resource performance and avoiding excessive costs to ratepayers. In addition, we find that the proposed DASI market power mitigation mechanisms are just and reasonable, because they include conduct-and-impact tests that will allow the IMM to identify potentially non-competitive bids and mitigate them to pre-determined benchmark levels, while still providing market participants the opportunity to submit supporting information to justify their bids through the consultation process. Finally, we agree with Filing Parties that retiring the FRM at the outset of the DAM is appropriate given the significant overlap in the purposes of the FRM and the DAASM proposed in DASI. In sum, we believe that the DASI proposal will materially improve operating reserve resource readiness, efficiency, and day-ahead price formation in ISO-NE without undue increases in wholesale market costs.

37. Regarding LS Power’s assertions that eliminating the FRM will result in significant retirements for certain resource types, we find that these arguments are unsupported in the record. For example, LS Power argues that gas-fired combustion turbines will see revenue reductions under DASI (compared to the FRM) of up to 94%<sup>51</sup> but does not explain in any detail why revenue levels received for operating reserves under DASI are not appropriate. Considering the EMM’s claim that the FRM undermines market efficiency and the IMM’s explanation that the FRM is not structurally competitive,<sup>52</sup> we find that LS Power’s simple comparison of revenues under DASI versus the FRM says little about the justness and reasonableness of the DASI market design. In other words, LS Power does not demonstrate that revenue levels under DASI, which result from market-determined clearing prices, will not be just and reasonable for the purpose of procuring and compensating operating reserves. Furthermore, we agree with ISO-NE that LS Power’s analysis inappropriately compares FRM revenues and

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<sup>51</sup> LS Power Comments at 9-10.

<sup>52</sup> See EMM Comments at 3-4, IMM Comments at 20.



DASI revenues across different study years, which inflates the claimed difference in revenues compared to ISO-NE's more balanced analysis over the same study years.<sup>53</sup>

38. Similarly, we do not find persuasive LS Power's assertion that DASI's market design imposes a *de facto* must-offer requirement. LS Power acknowledges that resources would not be formally required to offer the proposed ancillary service products but argues that the potential for disagreements with the IMM about risk level, coupled with the potential for market power mitigation, results in resources being forced to either offer below their risk-adjusted cost or potentially face a referral to the Commission for exercising market power by withholding.<sup>54</sup> We find these arguments unsupported in the record and unconvincing. First, LS Power does not attempt to demonstrate how the conduct-and-impact tests' general design or their specific threshold levels are unjust and unreasonable, but instead focuses on potential disagreements with the IMM about risk levels considered in the formation of a competitive day-ahead ancillary services offer. Second, the DASI proposal offers participants three opportunities covering various time horizons to consult with the IMM about risk levels and fuel costs: (1) a longer-term consultation process where participants can present alternative expected close-out cost calculations to the IMM; (2) a Fuel Price Adjustment process that adjusts fuel costs for the next and current operating day; and (3) the IMM's *ex post* consultation with a participant suspected of potential physical withholding.<sup>55</sup> While LS Power may dispute the benefit of these consultations, we find that there is nothing in the record indicating that the IMM consultation process has been deficient in ISO-NE's other markets or that the process will be deficient under DASI. Third, LS Power's concerns about potential referrals to the Commission for alleged abuses of market power are speculative and, as such, do not demonstrate that ISO-NE's filing is unjust and unreasonable.

39. Finally, regarding the requests from several parties for ISO-NE to continue to review its market design and consider additional ancillary service products, we find that these requests are beyond the scope of this proceeding. We note, however, that Filing Parties' proposal includes tariff language committing the IMM to report on the competitiveness of any new major market design change, including DASI, within one year of the effective date of its operation, and on the performance of any such market design change within three years.<sup>56</sup>

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<sup>53</sup> See ISO-NE Answer at 6-7.

<sup>54</sup> *Id.* at 13.

<sup>55</sup> Transmittal at 55–59.

<sup>56</sup> See Transmittal at 63; Filing Parties, Proposed Transmission, Markets & Services Tariff, § III.A.17.2.5 (Additional Ad Hoc Reporting on Performance and

The Commission orders:

Filing Parties' filing is hereby accepted effective March 1, 2025, as requested, as discussed in the body of this order.

By the Commission. Commissioner Clements is concurring with a separate statement attached.

( S E A L )

Debbie-Anne A. Reese,  
Acting Secretary.

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Competitiveness of Markets).

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

ISO New England Inc.

Docket No. ER24-275-000

(Issued January 29, 2024)

CLEMENTS, Commissioner, *concurring*:

1. I strongly support today's order and write separately only to commend ISO New England, the NEPOOL stakeholders, and NESCOE on reaching consensus on an important improvement to the region's ancillary services market. As ISO New England and NEPOOL (Filing Parties) explain in the filing, the Day-Ahead Ancillary Services Initiative (DASI) reforms establish formal obligations and compensation for critical ancillary services that today are relied upon but not reflected in the market.<sup>1</sup> Once the DASI reforms are implemented, ISO New England will procure and transparently price these services in the day-ahead market, thereby compensating sellers for their provision. In addition, sellers will be subject to financial consequences should they fail to deliver on their forward sale and thus have strong incentives to prepare their resources to deliver energy when called upon, particularly in times of system stress.

2. The DASI reforms appear to be an important step forward for ISO New England's ancillary services market and one reflecting the region's evolving operational needs as its resource mix changes. As NESCOE notes, "[a] move toward more weather-dependent resources and increasing electrification will require enhancing the system's ability to respond to operational uncertainties during the Operating Day," and "thus it will also become increasingly important for the region to compensate [ancillary services] adequately to ensure adequate participation and performance."<sup>2</sup>

3. I recognize that elements of the compensation scheme and market power mitigation in this proposal are novel and, as some commenters assert, warrant continued scrutiny once the new rules become effective.<sup>3</sup> I am therefore pleased that today's order accepts tariff language committing the Internal Market Monitor to assess and report on

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<sup>1</sup> Transmittal at 4.

<sup>2</sup> NESCOE Comments at 3-4.

<sup>3</sup> See, e.g., NESCOE Comments at 7; NEPGA Comments at 7-10; NHA Comments at 4-5; IMM Comments at 20-22; LS Power Comments at 15-19.

the competitiveness and performance of the DASI reforms once implemented.<sup>4</sup> This continued due diligence is wise. But for a proposal of this complexity to have near-universal support in the record and unanimity in the stakeholder process<sup>5</sup> is a testament to the hard work and productive collaboration of many in New England. It is worth taking a moment to give credit where credit is due.

For these reasons, I respectfully concur.

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Allison Clements  
Commissioner

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<sup>4</sup> *ISO New England Inc.*, 186 FERC ¶ 61,076, at P 39 (2024).

<sup>5</sup> See Transmittal at 70-71.