



memo

To: NEPOOL Participants Committee
From: Vamsi Chadalavada, EVP and Chief Operating Officer
Date: February 4, 2025
Subject: Inventoried Energy Program

The ISO does not plan to extend the Inventoried Energy Program (IEP) beyond the present (2024-25) winter,¹ and this memo is intended to provide NEPOOL with the ISO's perspective on the program.

The program was developed and filed with FERC in 2018 after the Mystic 8 and Mystic 9 fuel-security reliability retentions. It was designed to provide incremental compensation for the other resources contributing to energy adequacy by further bolstering incentives to carry greater energy inventories during cold periods when winter energy adequacy is most stressed. After being substantially modified by the D.C. Court of Appeals in 2022, it was ultimately approved for two winters, 2023-24 and 2024-25. While the program provided the region with a short-term mechanism to buffer against evolving concerns around winter fuel-security, it was not a market-based approach. Therefore, the ISO has been considering if there is a compelling need or benefit for extending this program beyond the intended timeframe.

With the retirement of the Mystic resources and as we near the conclusion of the two winters under the program, the ISO can review actual conditions and see eligible resources' fuel levels before and after the program started. It has not found that the program provided a notable incremental impact on the regions' fuel inventories. When the IEP was developed and filed with FERC in 2018, the ISO did not have tools to perform probabilistic assessments of energy adequacy risk. Since then, however, it developed the Probabilistic Energy Adequacy Tool (PEAT) to further inform the ISO and the region of energy adequacy risk, and the ISO's analyses have indicated the system's energy adequacy risk is low in the near term.

Considering these updated conditions, the ISO will not seek to continue the program, which had a cost of approximately \$80 million each winter, beyond its established time horizon. If energy shortfall risk begins to take a material turn for the worse approaching the 2030s or beyond, the ISO could consider the option of proposing a revised IEP after future discussion and deliberation with NEPOOL, but it does not see the value of doing so at this time.

¹ Under the present Tariff, this program is set to terminate after winter 2024-25.

Summary of Inventoried Energy Program

The IEP pays certain generators for maintaining (up to) three days of inventoried input energy. Participation is voluntary and each participant is paid a fixed rate (per MWh of inventoried energy) it pledges to maintain during the three winter months. After modification by the Court,² program eligibility was limited to certain technologies, primarily oil-storage and gas generators. Program-eligible inventories are measured for any day the average high and low temperature is 17°F or below, and the program specifies an ‘over/under’ credit and charge rate for differences between a participant’s pledged and actual energy inventory.

The first winter, 2023-24, was very mild and yielded only one measurement day (an Inventoried Energy Day or IED), which alone did not reveal much about the overall impact of the program. The second winter, the first without the Mystic units that had retired in June 2024, was colder and tested the program more with five IEDs to date in 2024-25.

Program Considerations

The ISO’s review of the two-year program finds that oil and LNG inventory at the beginning of winter under the program remained nearly the same as those in the years immediately preceding it. Total oil inventory for all generators system wide as of December 1 during the program years was approximately 117 million gallons (nearly the same each year) compared to an average 119 million gallons on the same date during the two winters prior to the IEP. Similarly, the St. John LNG facility held an estimated total start-of-winter inventory averaging 9.9 billion cubic feet (BCF) during the two program years, which is compared to the estimated 9.8 BCF it averaged at the start of the two years’ winters prior to the IEP. No LNG cargoes were observed arriving at the Northeast Gateway offshore marine buoy during the program or during the winter preceding it, and no gas generator participating in the IEP in 2024-25 reported a source of gas from Everett Marine Terminal.

For non-LNG-based gas availability, the IEP-eligible gas contracts were for firm gas delivered to points in New England across the interstate gas pipeline system without specified gas supply sources. Because the interstate pipelines serving New England (excluding the M&N from St. John) generally flow at full capacity on cold winter days, both prior to the IEP and since, there is not clear evidence whether there was spare capacity on these pipelines for incremental gas to arrive as a result of the IEP.

To further gauge the potential benefit of extending the IEP beyond the winter of 2024-25, we considered this winter’s PEAT-based energy analysis study [results](#). As stakeholders may recall, for winter 2024-25, the ISO studied extreme winter 21-day events to evaluate the region’s probabilistic worst-case energy shortfall risk and the projected energy shortfall MWhs (i.e., expected unserved energy) over the course of 21 days, which did not identify systemic concerns even under such extremes.³ The PEAT results for 2027

² The original IEP proposal’s eligibility included a wide range of system resources with on-site energy, including all nuclear units, most hydroelectric facilities, biomass generators, etc.

³ For completeness, the ISO revisited its winter 24/25 PEAT analysis from this fall, which had included IEP expectations, and observed that without the IEP assumptions there was a minimal change in expected unserved energy.

(results published via the [2023 PEAT study](#)) also had low expected unserved energy for both the long and short-duration winter events.

Beyond this timeframe, if energy shortfall risk, as measured by PEAT against the [REST criteria](#) still under development, shows worsening conditions, the region could revisit solutions such as a revised IEP or other REST solutions with stakeholders.

In summary, the ISO does not see a compelling benefit to extending this program, and we are planning for the IEP to terminate as scheduled after this winter (2024-25). We look forward to discussing this matter with the Committee at its February 2025 meeting.