

# The ISO-NE/EPRI Study's conclusions with respect to the impact of the retirement of EMT are not credible due to a fundamental analytic flaw (1)

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- One of the most critical inputs into the ISO-NE/EPRI study are the assumptions around LNG availability to the region, and the degree to which those inputs vary with or without the presence of EMT.
- ISO-NE/EPRI modeled three dimensions to LNG availability – 1) the aggregate rate at which all facilities can send out LNG to gas users (the “flow”), 2) the aggregate inventory of LNG in storage at the start of a 21-day cold weather event, and 3) the degree to which aggregate LNG inventory is replenished via arriving cargos over the course of the event (#2/3 together are the “stock”)
- ISO-NE/EPRI stochastically modeled three LNG scenarios – low/medium/high – based on history, along with other stochastic inputs (e.g. generation outages) to measure the risk of load shed/reserve shortage over a weather event. For the purposes of reliability risk, the “low” LNG scenario is of highest importance. In this scenario ISO-NE/EPRI assumed that the stock of LNG available to the region across all LNG facilities over a 21-day period is 10.6 Bcf (6.5 Bcf in storage at start plus 4.1 Bcf of replenishment). With all three facilities present, ISO-NE/EPRI assume that the maximum daily flow rate is 1.2 Bcf/day.
- ISO-NE/EPRI modeled the impact of EMT retirement by reducing the assumed aggregate flow rate from 1.2 Bcf/day to 0.8 Bcf/day. However, ISO-NE/EPRI assumed that EMT retirement has zero impact on the total stock available to the region in terms of stored inventory and replenishment. Effectively ISO-NE/EPRI assumed that the other two facilities – St. John and ExceleRate – would be able to make up for the loss of EMT in stock terms by storing more LNG on average and increasing the pace of their replenishment deliveries.
- This assumption drives the general conclusion of the study with respect to EMT that retirement of EMT has no material impact on regional electric reliability during extreme winter events (continued).

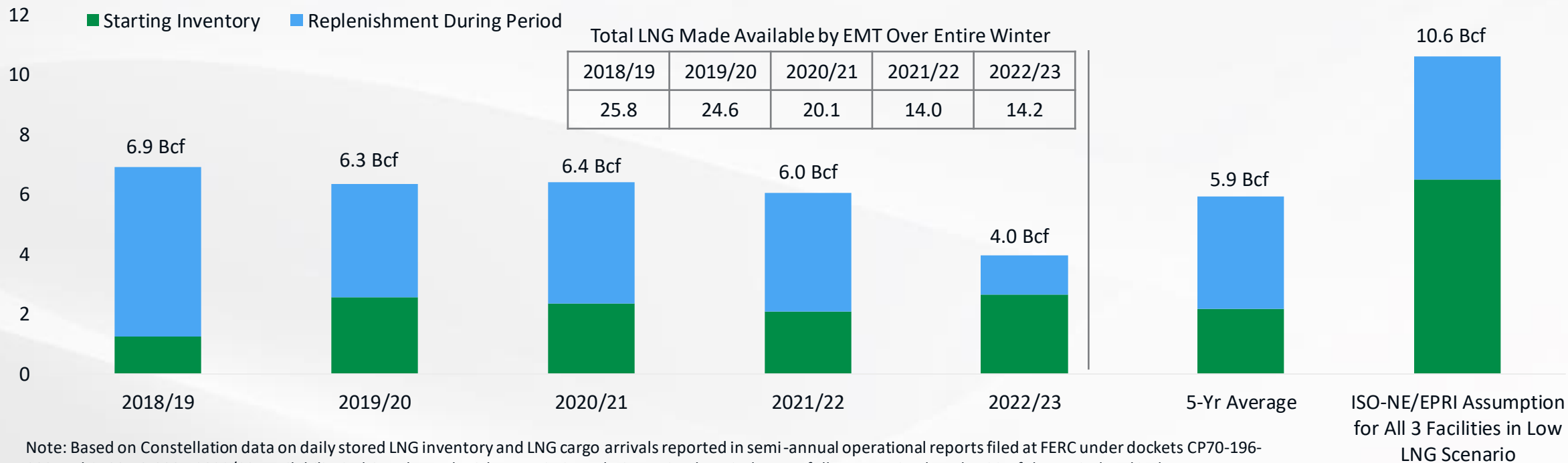
# The ISO-NE/EPRI Study's conclusions with respect to the impact of the retirement of EMT are not credible due to a fundamental analytic flaw (2)

- However, the assumption that the retirement of EMT would have no impact on regional LNG stocks over the course of a winter event is not supported by any data or analysis, and a review of history and the demonstrated capabilities of EMT compared to other facilities suggest that it is not accurate. Specifically:
  - EMT has historically made stocks of nearly 6 Bcf available to the region over the course of the coldest 21-day portion of the winter (see following slide). This is equal to almost 60% of the amount of LNG that ISO-NE/EPRI assumed is available to the region in the aggregate across all three facilities in the low LNG scenario. Given this outsize contribution from EMT, the unsupported assumption that the other two facilities would be able to effectively more than double their assumed contribution to LNG stocks without EMT is not credible.
  - Compared to the other two facilities, EMT is distinguished by a number of unique physical characteristics that allow it to reliably provide both stocks and flows of LNG to the region on winter conditions. These include: 1) 3.4 Bcf of permanent onshore tank storage, 2) physical location in the heart of the region, 3) ability to provide LNG to LDC peaker facilities by truck, 4) ability to provide pressure support to pipelines, 5) demonstrated ability to handle a very high tempo of deliveries over the course of the winter. ISO-NE/EPRI did not model external pipeline supply contingencies in their study such as loss of production and transport in the Appalachian basins similar to the events of Winter Storm Elliott and EMT's unique capabilities are of high value in maintaining reliability under such conditions.
  - Reducing the number of facilities from 3 to 2 increases the vulnerability of the region to an LNG-related operational contingency such as a facility outage, a lack of availability of floating storage units due to events elsewhere (such as occurred in 2022 due to events in Europe) or an outage on the Maritimes and Northeast pipeline. ISO-NE/EPRI did not model LNG contingencies in their study but they certainly occur in the real world (see for example the multi-month outage at the Freeport LNG export facility in 2022)
  - Reducing the number of LNG facility operators from 3 to 2 also raises concerns about the potential for the exercise of market power in natural gas markets during periods of tight winter gas supplies to the region, particularly given the small size and low utilization of the Excelerate facility relative to St. John.
- Given these flaws, the results of the ISO-NE/EPRI study with respect to the impact of EMT retirement are not credible. ISO-NE/EPRI should consider the impact of EMT on regionwide LNG stocks during cold-weather events and should revise these assumptions going forward to produce more credible results.

# ISO-NE/EPRI assume that EMT exit has no impact on LNG availability, despite EMT historically providing almost 60% of the amount of LNG that ISO-NE/EPRI assumes is available

- EMT has historically made about 5.9 Bcf of LNG available to market over the coldest 21-day period in the past 5 winters, including starting inventory in tank plus replenishment cargos. This represents nearly 60% of the total LNG that ISO-NE/EPRI assume is available from all 3 facilities across a 21-day event in its “low LNG” scenario. Despite this high contribution from EMT, ISO-NE/EPRI nonetheless assume that exit of EMT from the market would not have any impact on LNG availability.

LNG Inventory at EMT over Coldest 21-day Period in Last 5 Winters (Bcf)



Note: Based on Constellation data on daily stored LNG inventory and LNG cargo arrivals reported in semi-annual operational reports filed at FERC under dockets CP70-196-000 and CP08-49-000. 2022/23 availability is driven by replenishment timing relative to 21-day window – a full cargo arrived on day 22 of the period and is thus not reflected in the value shown. With this cargo included, 2022/23 inventory would have been 6.7 Bcf and 5-year average inventory would also have been 6.5 Bcf. ISO-NE/EPRI assumption on LNG availability based on ISO-NE Presentation to NEPOOL Reliability Committee on 5/16/2023, slide 23. [https://www.iso-ne.com/static-assets/documents/2023/05/a10\\_operational\\_impact\\_of\\_extreme\\_weather\\_events.pdf](https://www.iso-ne.com/static-assets/documents/2023/05/a10_operational_impact_of_extreme_weather_events.pdf)