



To: ISO New England Planning Advisory Committee
From: Sarah Jackson, Policy Manager Eastern Region, Form Energy
Date: November 22, 2024

Re: Potential Transmission Needs for a Longer-term Transmission Planning RFP

Thank you for the opportunity to provide feedback on NESCOE's letter regarding Potential Transmission Needs for a Longer-term Transmission Planning RFP. Form Energy offers these brief comments in support of including long duration energy storage (LDES) technologies as an eligible option for consideration in the scope of the first RFP.

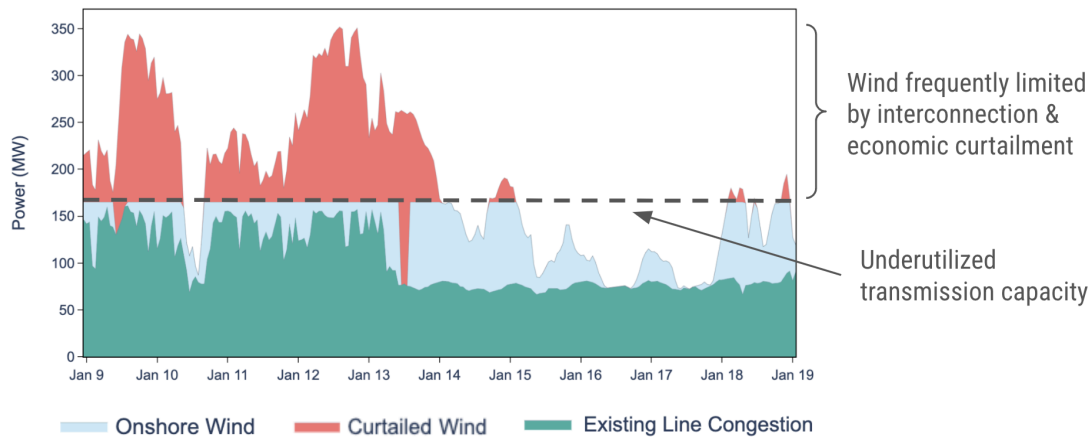
We note that NESCOE is interested in focusing the first LTTP solicitation on increasing transfer capability within the system to allow more power to flow from Maine to New Hampshire and into southern New England. LDES technologies, like Form Energy's 100-hour duration iron-air battery system, strategically placed behind a constrained interface can absorb energy during times of transmission constraint and shift it to other periods of energy need, resulting in improved utilization of an existing transmission asset. In doing so, LDES can allow more renewable energy resources to be connected, either without new transmission infrastructure, or, through an upgraded system that remains constrained.

As an example, we provide this cursory analysis based on publicly-available data. We examined how the deployment of a 100 MW multi-day storage system (MDS) at an interconnection bottleneck between wind generation and the rest of the ISO-NE grid could support 200 MW of incremental wind behind the constraint.

Despite the Export Interface being heavily congested (within 25 MW of its limit) for >10% of hours in 2022, on average there was ~75 MW of capacity available on the line. The proposed 100 MW MDS project would take advantage of this capacity by shifting energy from times of low line capacity to times of lower congestion. In this way, the proposed project would transform the incremental 200 MW wind asset by reducing curtailment by more than 50% and increasing the capacity factor from ~19% to ~26%. This is highlighted in the figures below.

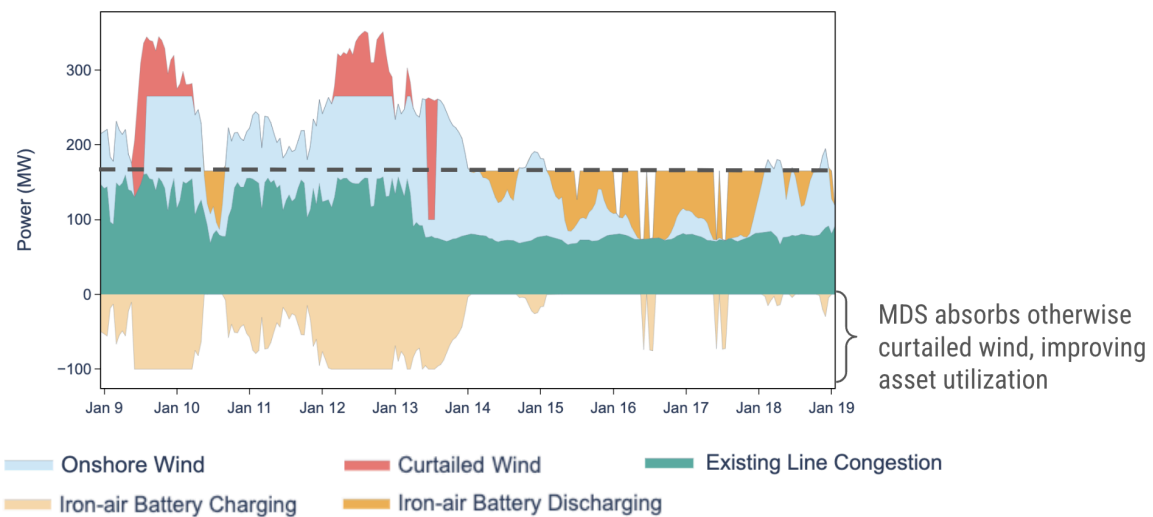
Figure 1 shows that in the absence of multi-day storage, the new wind asset is curtailed heavily during periods of high wind output. Meanwhile, the transmission line is significantly underutilized during low wind periods.

Figure 1



In contrast, *Figure 2* shows that multi-day storage can absorb excess wind generation continuously for several days, and then discharge this energy during wind lulls when line capacity is available.

Figure 2



With at least 3,000 MW of potential additional generation capacity in Northern Maine waiting for the right opportunity, all viable options should be on the table for unlocking that clean energy for New England as part of the Longer-Term Transmission Planning process.