

New England Class I REC Market Update

November 12, 2019

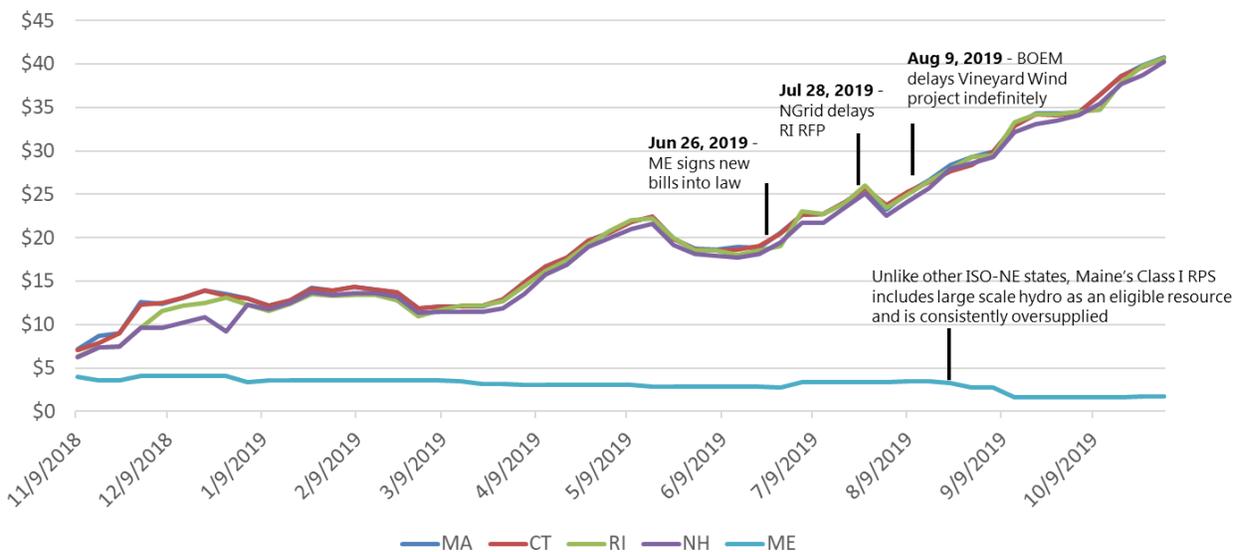
www.poweradvisoryllc.com

To: Clients and Colleagues

From: Andrew Kinross and Carson Robers, Power Advisory LLC

While most Class I REC markets across the country are generally oversupplied, the smaller New England Class I REC market stands apart as recent events have driven prices dramatically higher over the last year (Figure 1). In fact, 2019 vintage Class I RECs have climbed all the way from \$7/REC a year ago to about \$40/REC today, a stunning 5.7x increase. This suggests a shortage of RECs available in the marketplace to compliance entities who need to meet state Renewable Portfolio/Energy Standards.

Figure 1. 2019 Vintage ISO-NE Class I REC Prices, Last 12 Months (\$/REC)



Source: S&P Global, Power Advisory analysis

The main factor influencing the REC market is the anticipated timing of completion of a series of large offshore wind projects. There are currently 2,304 MW under contract in New England (including the 804 MW Mayflower Wind project which is negotiating PPAs with the Massachusetts electric distribution companies) and more expected in the future (namely an ongoing Connecticut procurement process for up to 2,000 MW). While the 800 MW Vineyard Wind project owned by Avangrid Renewables and Copenhagen Infrastructure Partners had appeared construction-ready, and almost at financial close, it suffered a setback when the Bureau of Ocean Energy Management (BOEM) delayed the project's federal permitting on August 9, 2019. BOEM has mandated that Vineyard Wind to go through a supplemental draft Environmental Impact Statement (EIS) process that takes account the cumulative impacts of offshore wind development in the region. The timing of this analysis is unclear and is subject to normal public comment and review. Vineyard Wind is

expected to be delayed at least six months, with potential knock-on effects for the rest of the offshore wind pipeline.

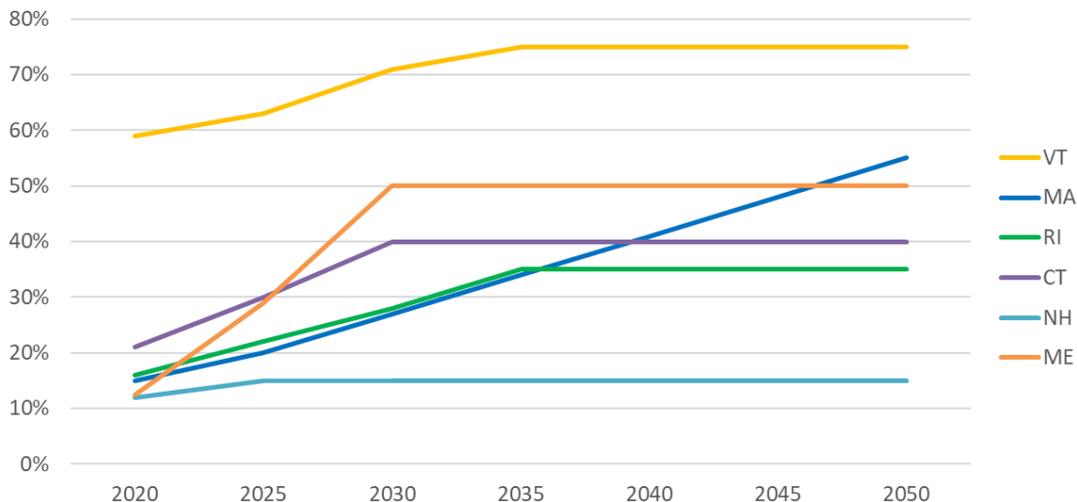
Other significant events that have driven prices higher by increasing REC demand or reducing supply include:

- Maine increasing its RPS in June 2019 following the election of a new clean energy-friendly governor last year, and
- National Grid selecting only one significantly smaller solar project for negotiation from its 400 MW renewable RFP in Rhode Island.

But it's the offshore wind that is the big driver. Assuming a 48% capacity factor, the three ISO-NE utility-scale offshore wind farms alone that are under contract, consisting of Vineyard Wind (800 MW), Revolution Wind (700 MW) (Orsted/Eversource) and Mayflower Wind (804 MW) (Shell/EDPR), would generate almost 10 million MWhs when they are connected to the grid. Should those projects be connected by 2030 as expected, the modest amount of onshore renewables recently contracted come online, and trends in behind-the-meter solar continue, a gap of about 11 million MWhs would remain to meet RPS requirements within New England as a whole. However, Connecticut's targeted 2,000 MW procurement and an additional 1,600 MW of offshore wind planned by the Massachusetts Department of Energy Resources will fill – and then exceed – the estimated gap.

When considering the balance of the REC market it is important to note that each state has its own renewables standards and procurement statutes, with respective definitions, eligibility requirements and targets (see Figure 2 for the current Class I equivalent standards). Furthermore, RECs are tradable within ISO-NE and from adjacent control areas.

Figure 2. Current New England Class I Standards Through 2050



Once the contracted offshore wind projects reach commercial operation, expected to be in the 2023-2026 time frame, Class I REC pricing will presumably stabilize and then begin eroding as the

much needed RECs hit the market. Until then, the pricing could remain high, as the market appears to be undersupplied. The additional 3,600 MW of offshore wind expected to be contracted by Connecticut and Massachusetts will result in an oversupplied market starting in the late 2020s.

Alternative Compliance Payment (ACP)

The alternative compliance payment (ACP) acts as ceiling to the market. The ACP is \$70.44/REC in Massachusetts for 2019 and \$55.00/REC in Connecticut. Thus, current bid-asks as lofty as \$46/REC according to the Intercontinental Exchange, or 84% of the CT ACP, signal that we are nearing or at an undersupplied market. That's because the alternative is to pay the ACP which is not that much higher.

New Build Capacity to Meet 2030 Targets

As noted above, Power Advisory estimates that the incremental 3,600 MW of offshore wind expected from Connecticut and Massachusetts in addition to the current renewables contracts and supply would entirely satisfy the 2030 New England RPS requirements. The aggressive offshore wind procurement targets combined with high capacity factors squeeze out opportunities for onshore wind and solar assets that have been used to comply with RPS to date. This is not to say that there are not onshore renewables development opportunities. For example, Maine will be issuing two near term Requests for Proposals for the equivalent of 14% of its 2018 retail electricity sales (discussed in [Power Advisory's July note](#) on recently enacted legislation in the state).

Expected Long Term REC Pricing

Following the current New England Class I REC price spike, we expect prices to stabilize and then erode as the project development process catches up with the mandates, driven mainly by offshore wind and to a lesser extent, the Massachusetts SMART program and other procurements. Longer term (post-2030), we expect an oversupply of RECs leading to a substantially lower REC prices. Projects will become less reliant on RECs over time. Future regulatory and policy announcements, load growth due to electrification, or substantial retirements could support higher prices.

Power Advisory welcomes the opportunity to assist clients' understanding of the New England REC market and assessment of renewables development in the region.