



Whitepaper

In With a Bang, Out with a Whimper

New England Clean Energy RFP

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Shareables

- The tristate RFP had the potential to significantly impact the ISO-NE market, but the selection committee's choices will have minimal impact on energy and capacity prices.
- The choice of winning bids shows a clear preference for project-only developments, reinforcing the challenges for transmission developers in ISO-NE.
- The Massachusetts Clean Energy RFP in 2017 represents the next opportunity for one or more of the major renewables transmission projects to be built.

Wind and Solar Projects are Winners

Announced in February 2015, the New England Clean Energy RFP collectively solicited offers for new renewable energy supply for Connecticut, Massachusetts, and Rhode Island. The RFP drew a great deal of interest and twenty-four separate responses, with bids that varied greatly in scope and ambition. Some were simply bids for wind, solar PV, and fuel cell projects (both portfolios and stand-alone developments), while others combined new renewable projects with transmission lines, substation upgrades, and even battery storage.

However, when the winning bids were announced on October 25, the project-only bids came out on top. Evaluators chose eleven wind and solar PV projects, totaling around 460 MW of capacity and an estimated 1,000 GWh of new generation (Figure 1) – a fraction of the authorized procurement level of over 5,000 GWh of annual generation, not including a specified procurement for Rhode Island.¹

FIGURE 1. WINNING CLEAN ENERGY RFP PROJECTS

Project Name	Capacity Type	Estimated Capacity (MW)	Project Location	Developer
Antrim	Wind	28.8	Antrim, NH	Eolian Energy
Cassadaga	Wind	126	Cherry Creek, NY	EverPower
Chinook	Solar PV	50	Fitzwilliam, NH	
Enfield	Solar PV	20	Enfield, CT	
Farmington	Solar PV	50	Farmington, ME	Ranger Solar
Quinebaug	Solar PV	50	Brooklyn, CT	
Sanford	Solar PV	50	Sanford, ME	
Hope Farm	Solar PV	20	Cranston, RI	RES Americas
Woods Hill	Solar PV	20	Pomfret, CT	
Simsbury	Solar PV	26.4	Simsbury, CT	Deepwater Wind
Candlewood	Solar PV	20	New Milford, CT	Ameresco

Source: ICF review of bids

There are several notable trends when comparing the winning bids to the non-winning bids:

- Maine wind was shut out from the list of winners, despite there being no shortage of offers in the bidding process. Maine wind was offered in stand-alone projects, but mostly as part of larger bids involving new transmission lines.

¹ <https://cleanenergyrfpdotcom.files.wordpress.com/2015/11/clean-energy-rfp-final-111215.pdf>

- Nine of the eleven selected projects (and two-thirds of the capacity) are solar PV, not wind, in a region where wind has dominated recent Tier/Class 1 capacity additions. It should be noted that final proposals were due January 28, 2016, after a multi-year extension of the federal tax credits had been signed into law. The results indicate that solar PV will be a larger part of the New England Class/Tier 1 renewable market moving forward.
- The majority of the winning solar PV projects are located in southern New England, closer to major load centers.

No New Transmission Projects

The RFP results appear to indicate that the evaluation committee, which consisted of utility representatives, state representatives, and an independent consultant, may have struggled to evaluate such a diverse set of bids. The final announcement was originally expected between April and July 2016, but the committee posted “Given the complexity of the analysis and the volume of bids, additional time is needed for evaluation” in late July.² However, the additional time did not result in the selection of any of the more complex bids. Figure 2 provides detail on the six transmission portfolios submitted for the New England Clean Energy RFP.

FIGURE 2. PROPOSED TRANSMISSION LINES IN THE NEW ENGLAND CLEAN ENERGY RFP

Transmission Project Name	Length (Miles)	Capacity (MW)	Location	Transmission Upgrades	Generating Capacity Included in Bid
Maine Clean Power Connection	66	550	Central Maine	New 345 kV Substation	547 MW Wind
Maine Renewable Energy Interconnect	150	1,200	Central Maine	New 345 kV Substation	1,248 MW Wind
Clean Energy Connect	25	600	New York to Western Mass.	N/A	600 MW Wind
Northern Pass	192	1,090	Quebec to New Hampshire	Minor Substation Upgrades	N/A
Vermont Green Line	60	300	New York to Vermont	Minor Substation Upgrades	400 MW Wind, Firmed with Hydro
Evergreen Express	114	850	Canadian Border to Southern Maine	Two New 345 kV Switching Stations	461 MW Wind, 50 MW Battery Storage, 150 MW Solar

Source: ICF review of bids/project websites

² <https://cleanenergyrpf.com/2016/07/25/evaluation-ongoing/>

Illustrative Impact on Wholesale Power Prices

As the amount of capacity procured through the Clean Energy RFP was not significant, ICF expects the impact on energy and capacity prices to be minimal. Based on an off-the-shelf analysis, ICF estimates a downward energy price impact of up to \$0.3/MWh annually in some of the ISO-NE load zones due to the 460 MW of new renewable capacity. This will amplify the expected downward impact on New England spark spreads resulting from new capacity additions such as the Towantic and Bridgeport Harbor combined cycle projects.

In terms of participation in the capacity market and forward capacity auctions (FCA), the reserve margin contribution of the 460 MW will be approximately 127 MW³. If this capacity had been added in the previous auction, the overall impact of this 127 MW of derated capacity would have been negligible, assuming no other change. The impact would have ranged from \$0/kW-month to a maximum of -\$0.50/kW-month, depending upon the shape of the supply curve.

As part of the demand curve negotiations, beginning with the 2018/2019 auction, ISO-NE market participants agreed on an exemption that allows up to 200 MW of new reserve margin capacity from renewable resources (renewables exemption) to participate in each auction without being constrained by buyer-side mitigation rules. This capacity can accumulate and carry over up to a limit of 600 MW. Approximately 50 MW and 55 MW of new renewable capacity were exempted from the buy-side mitigation rule in the 2018/2019 and 2019/2020 capacity auctions, respectively. Therefore, as of 2019/2020, out of 400 MW of total exemption, 105 MW has been utilized, and the remaining 295 MW of exemption will carry over to the next auction. This means that about 495 MW of renewable capacity could be exempted in the upcoming 2020/2021 auction.

The 127 MW of RM capacity procured through the Clean Energy RFP is significantly lower than 495 MW of total renewable exemption available for the next auction. This gap implies that, similar to the previous two auctions, it is not likely that the full renewable exemption will be utilized in the next auction. This expectation is contrary to our original expectation of states utilizing the full exemption to mitigate any potential increase in load and its impact on the capacity prices. Additionally, the negative results of the Clean Energy RFP for the transmission projects also decreases the likelihood that such projects would clear as part of the renewable exemption in the 2020/2021 capacity auction. This relieves some of the downward impact that ICF was originally expecting on the capacity prices in the upcoming auction.

³ Assumes RM contribution of 5% for Wind and 40% for Solar, consistent with ISO-NE assumptions.

About the Authors



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