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Blog Post

Massachusetts Pushes Its Renewable Energy Program into New Territory by Issuing Final Regulations for Its Clean Peak Energy Portfolio Standard

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On March 20, 2020, the Massachusetts Department of Energy Resources ("DOER") finalized its regulations to implement a new Clean Peak Energy Portfolio Standard ("Clean Peak Standard"). The Clean Peak Standard is a first-of-its-kind state policy designed to provide incentives to clean energy technologies that can either supply electricity or reduce demand during peak demand periods.

The Basics

The Clean Peak Standard, which was enacted through the Advance Clean Energy Act of 2018 (the "Act"), will require retail electric suppliers in Massachusetts to procure a minimum percentage of their total annual electricity sales to Massachusetts end-use customers from eligible resources ("Clean Peak Resources") by purchasing Clean Peak Energy Certificates ("CPECs"). The Act provides for qualification requirements for Clean Peak Resources, valuation of CPECs and purchasing requirements for CPECS by retail electric suppliers. It is anticipated to become effective in June 2020, after the Massachusetts legislature completes its review and DOER submits the final regulations to the Secretary of State.

Clean Peak Resources and CPECs

The Clean Peak Standard requires a percentage of electricity delivered during peak hours to come from Clean Peak Resources. The DOER created four categories of Clean Peak Resources: (1) new renewable energy generation resources that come online after January 1, 2019; (2) existing renewable energy generation resources that add new energy storage capacity of at least 25% of the renewable energy generation resources nameplate capacity, with a nominal useful energy capacity of at least four hours at the nominal rated power; (3) new energy storage that charges from renewables; and (4) demand response resources (e.g., behind-the-meter energy storage that reduces energy consumption). All Clean Peak Resources "must demonstrate that they generate, dispatch, or discharge electricity to the electric distribution system in Massachusetts." (225 CMR § 21.05(a)).

To boost the number of CPECs awarded for each megawatt hour ("MWh") of generation that provides certain additional benefits to the system, DOER will use CPEC multipliers for renewable resources with certain characteristics. For example, resources delivering during Summer and Winter peaks are worth 4x those of Spring and Fall, and a resource delivering during the highest hourly peak in a month will earn a 25x multiplier during that monthly peak hour, while resilient resources (i.e., qualified renewable resources, possibly paired with energy storage and/or demand response resources, that serve on-site load during a power grid outage) will earn a 1.5x multiplier. In order to ensure that the program is not saturated with existing renewable resources, existing renewable resources will receive a low multiplier of 0.1x and SMART ES Resources (i.e., those energy storage systems paired with a Solar Tariff Generation Unit in Massachusetts' SMART Program) will have a multiplier of 0.2x. At a future time, the DOER may introduce a distribution circuit multiplier that could incentivize resources that help reduce stress on the distribution system and at the same time provide compensation to developers for distribution system upgrades.

Clean Peak Resource Demand Periods and Charging Periods

Resources participating in the program will earn CPECs for every MWh of electricity they produce, or reduce, coincident with Seasonal Peak Periods. Energy storage systems that are not co-located with renewable energy system may generally be required to charge during specific hours, depending on whether they are charged from solar resources or wind resources. The timing of the Seasonal Peak Periods and charging windows is designed to send a price signal to pair renewables and energy storage and shift the use of renewable production to peak demand periods.

Seasonal Peak Periods are based on the dates and times of day in which electricity demand has historically been the highest:

Spring	March 1–May 14	5:00 p.m.–9:00 p.m.
Summer	May 15–September 14	3:00 p.m.–7:00 p.m.
Fall	September 15–November 30	4:00 p.m.–8:00 p.m.
Winter	December 1–end of February	4:00 p.m.–8:00 p.m.

The charging windows are as follows and are correlated generally to the highest hours of supply of solar and with respect to wind, reportedly correlate to the output of offshore wind projects:

Energy Storage Charging Windows		
Clean Peak Season	Wind-Based Charging Hours	Solar-Based Charging Hours
Spring	12:00 a.m.–6:00 a.m.	8:00 a.m.–4:00 p.m.
Summer	12:00 a.m.–6:00 a.m.	7:00 a.m.–2:00 p.m.
Fall	12:00 a.m.–6:00 a.m.	9:00 a.m.–3:00 p.m.
Winter	12:00 a.m.–6:00 a.m.	10:00 a.m.–3:00 p.m.

Retail Electric Supplier Requirements

Under the program, all retail electric suppliers in Massachusetts will be required to procure a minimum percentage of their total annual electricity sales to Massachusetts end-use customers from Clean Peak Resources by either purchasing CPECs or retiring earned CPECs. The minimum requirement increases over time, with the minimum Clean Peak Standard starting at 1.5% of retail electricity sales in 2020. The minimum will then increase at least 1.5% each year thereafter, to at least 16.5% by 2030 and 46.5% by 2050. The program will expire in 2050, unless extended by law.

Each distribution company must competitively procure 30% of the total market obligation of retail electric suppliers in a given compliance year through long-term contracting, subject to adjustment upward or downward depending on the market response — i.e., if market supply is below 50% of the Clean Peak Standard's minimum requirement, DOER may increase the next year's long-term contract procurement requirement by up to 5%, and where market supply is greater than 70% Clean Peak Standard's minimum requirement, DOER may decrease the following year's long-term contract procurement by up to 15%. To keep consumer costs down, each retail electric supplier may satisfy the remainder of the Clean Peak Standard's minimum requirement via an alternative compliance payment ("ACP") by the retail electric supplier.

The initial ACP rate will be $45.00 per MWh through the 2024 compliance year, and it will decline by $1.54 per MWh each compliance year thereafter through 2050, or until the ACP rate reaches $4.96 per MWh. The rate will then remain at $4.96 per MWh for the duration of the Clean Peak Standard program. Like the long-term contract requirement, this automatic reduction may be adjusted based on market supply. For example, if the market supply of CPECs is greater than 100% in any compliance year, the ACP rate will decline by $3.08 per MWh the following compliance year, and if the market supply is greater than 120%, the ACP rate will decline by $4.62 per MWh the following compliance year.

Looking Ahead

The legislature has 30 days from the date it referred the DOER regulations to the Joint Committee on Telecommunications, Utilities and Energy, which occurred on April 16, 2020, to review the regulations and send a report back to the DOER with any changes necessary for the regulations to coincide with the statute. Following the legislature's review, the DOER will have 30 days to submit the finalized regulations, as revised pursuant to the legislative report, to the Secretary of State, at which time the regulations will become effective.

The program is expected to increase revenues, and improve the investment environment for both existing and new renewable resources and energy storage systems in and near Massachusetts. DOER has indicated that the program is structured to avoid the need for substantial upgrades to power delivery infrastructure by procuring resources that can shift their output away from time periods (e.g., during peak solar intensity) when renewable resources are more likely to cause congestion on the delivery system. However, it is also possible that focusing such resources' output

in the hours when demand is highest, and the power system may be more stressed in general, could have grid impacts that necessitate additional infrastructure investment.

Read more insights at Kirkland's Energy & Infrastructure blog.

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