



# The Clean Peak Standard in Massachusetts

UPDATE: October 2019

## 225 CMR 21.00 Clean Peak Energy Portfolio Standard

Status: Draft Regulations in Progress

### What is a Clean Peak Standard?

- A clean peak standard (CPS) is a new program to reduce the costs and environmental impact of periods when electricity demand is highest—and generation tends to be the most polluting.
- Like a renewable portfolio standard (RPS), a CPS requires a percentage of electricity delivered during peak hours to come from eligible clean peak resources.
- Even for areas with high percentages of renewable energy, those resources do not generally produce during peak demand periods, and therefore the grid may still require significant reliance on expensive and greenhouse gas-emitting generation resources.

### How Will the Clean Peak Standard Work in Massachusetts?

- The CPS would require electric retailers to procure a minimum percentage of their annual electricity sales (“Minimum Standard Obligation,” or MSO) from renewable generation or energy storage (“qualified Clean Peak Energy Resources”).
- Starting in 2020, the MSO will be 1.5% of retail electricity sales, reaching 16.5% by 2030.
- To meet the obligations, electric retailers will purchase Clean Peak Energy Certificates (CPECs).

### What’s Driving the Clean Peak Standard in Massachusetts?

- Massachusetts is the first state to move forward with a clean peak standard.
- **Cost savings** and **reduced emissions** are the key drivers behind the CPS.
  - A Massachusetts [report](#) found that 10% of hours on average accounted for 40% of annual electricity spend (over \$3 billion in costs to ratepayers/year).
  - The state [estimates](#) that the proposal will save ratepayers \$710 million net and reduce CO<sub>2</sub> emissions by 560 thousand metric tons over ten years.

## Regulatory Summary

Gov. Charlie Baker (R) first proposed a Clean Peak Standard program in March 2018, which became [An Act to Advance Clean Energy](#) that was signed into law in August 2018. The bill requires the Department of Energy Resources (DOER) to develop this standard, and the Department issued [draft regulations](#) in September 2019. Below is a summary of the key components of the draft regulations.

### Qualified Peak Energy Resources

Eligible resources fall into four categories.

*Category 1:* New renewable resources that come online after January 1, 2019

*Category 2:* Existing renewable resources that add new energy storage capacity of at least 25% of the renewable nameplate capacity

*Category 3:* New energy storage that charges primarily from renewables

- DOER offers three pathways for qualification:
  - Co-location of energy storage with a renewable energy resource; or
  - Operational or contractual pairing of energy storage with a non-co-located renewable energy resource; or
  - Charging an energy storage system from the grid during hours when renewables are at their highest percentage of the generation mix (overnight coincident with wind generation and during the morning and early afternoon when solar generation is high):

#### CPS Eligible Charging Hours

	Winter	Spring	Summer	Fall
Overnight (wind)	12 am to 6 am			
Morning/early afternoon (solar)	10 am to 3 pm	8 am to 4 pm	7 am to 2 pm	9 am to 3 pm

*Category 4:* Demand response resources

- May include energy storage, electric vehicle charging infrastructure, and all other responsive electric loads

### Point of Interconnection

Resources must be interconnected with the distribution or transmission system in Massachusetts (transmission-interconnected resources must deliver energy in state).

### Clean Peak Seasons and Daily Time Windows

DOER established the following seasons and daily time windows for each season, when electricity demand is the highest:

#### Clean Peak Seasons and Daily Time Windows

	Winter	Spring	Summer	Fall
<b>Seasonal Date Range</b>	Dec 1 - Feb 28	Mar 1 – May 14	May 15 – Sept 14	Sept 15 – Nov 30
<b>Daily Time Window</b>	4 – 8 pm	5 – 9 pm	3 – 7 pm	4 – 8 pm

### Calculation of Clean Peak Energy Certificates and Long Term Contracting

A qualified resource will generate Clean Peak Energy Certificates (CPECs) according to its performance over the duration of the four-hour peak period of a particular day. The multipliers discussed below would then be applied. Under the proposed regulations, 30% of the annual CPEC requirements will be met through long-term contracting with the distribution utilities, while the rest will be a spot market.

### Certificate Multipliers

DOER proposes using multipliers to increase the number of certificates awarded for each MWh of generation that provides certain additional benefits to the system.

- Summer and Winter peaks are worth 3x those in Spring and Fall, and the highest hourly peak in a month is worth a 15x multiplier.
- Resilient resources earn a 1.5x multiplier.
  - Resilient resources are defined as storage collocated with an RPS resource that provides back-up power during an outage. This includes most behind-the-meter systems.
- Existing generation would receive a multiplier of 0.1x to ensure the program is not saturating the market with existing resources (that are just operating as usual) and suppressing price signals to invest in storage.

### Alternative Compliance Payment

To keep ratepayer costs under \$0.005/kWh, DOER proposes:

- An annual CPS obligation increase of 1.5%, reaching 16.5% by 2030; and
- An Alternative Compliance Payment (ACP) rate (which is paid in lieu of acquiring a CPEC) set at \$30, declining after the first 10 years to \$0 in 2051

### Market Impact

As it is currently proposed, it is unclear if the Clean Peak Standard will drive the deployment of new energy storage resources.

- With the current proposed ACP of \$30/MWh, the compensation a resource will receive from participating in the Clean Peak Standard is not high enough to support the economics of the project from that market alone. Moreover, resources that participate in the program along with other retail or wholesale market services have greater economic incentive to commit the resource to other services rather than discharging during the designated clean peak windows.
- A Clean Peak Standard of 16.5% by 2030 is a good start, but the pipeline of energy storage and renewable resources (particularly offshore wind resources) coming online will likely create an oversupply even with that target amount. A reduced 0.1x multiplier for existing and state policy supported resources is intended to discourage their participation in the program to mitigate oversupply concerns.
- The lack of a price floor or sufficient long-term contract opportunity for participating resources is likely to be a significant hurdle for securing financing for a project that expects the CPS to be a significant revenue source in its value stack.

### Proposed Implementation Timeline

In October 2019, DOER released draft regulations implementing the program. DOER expects that the retail suppliers will have set obligations starting in 2020. However, it remains unclear when in 2020 the program will launch. Below is an implementation timeline from the DOER.

Q4 2019	Q1 2020	Post Q1 2020
<ul style="list-style-type: none"> <li>• Draft regulation filed</li> <li>• Public hearings on draft regulation; comments due</li> <li>• Technical Bulletin issued to set 2020 obligation</li> </ul>	<ul style="list-style-type: none"> <li>• Amended regulations to Joint Committee on Telecomm., Utilities, and Energy for comment</li> <li>• Final regulations filed</li> </ul>	<ul style="list-style-type: none"> <li>• DOER will craft long-term procurement rules at a later date</li> </ul>