The Clean Peak Standard in Massachusetts  
UPDATE: December 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 Commonwealth estimates that the proposal will save ratepayers $710 million net and reduce CO₂ 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. Resources must be interconnected with the distribution or transmission system in Massachusetts (transmission-interconnected resources must deliver energy in state).

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

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<thead>
<tr>
<th></th>
<th>Winter</th>
<th>Spring</th>
<th>Summer</th>
<th>Fall</th>
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</thead>
<tbody>
<tr>
<td>Overnight (wind)</td>
<td>12 am to 6 am</td>
<td>12 am to 6 am</td>
<td>12 am to 6 am</td>
<td>12 am to 6 am</td>
</tr>
<tr>
<td>Morning/early afternoon (solar)</td>
<td>10 am to 3 pm</td>
<td>8 am to 4 pm</td>
<td>7 am to 2 pm</td>
<td>9 am to 3 pm</td>
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Category 4: Demand response resources
- May include energy storage, electric vehicle charging infrastructure, and all other responsive electric loads

Calculation of Clean Peak Energy Certificates, Multipliers, 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.

### Clean Peak Seasons and Daily Time Windows

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<thead>
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<th>Summer</th>
<th>Fall</th>
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<tbody>
<tr>
<td><strong>Seasonal Date Range</strong></td>
<td>Dec 1 - Feb 28</td>
<td>Mar 1 – May 14</td>
<td>May 15 – Sept 14</td>
<td>Sept 15 – Nov 30</td>
</tr>
<tr>
<td><strong>Daily Time Window</strong></td>
<td>4 – 8 pm</td>
<td>5 – 9 pm</td>
<td>3 – 7 pm</td>
<td>4 – 8 pm</td>
</tr>
</tbody>
</table>

DOER proposes using multipliers to increase the number of certificates awarded for each MWh of generation that provides certain additional benefits to the system. Multipliers are applied as follows:
- Summer and Winter peaks are worth 3x
- Highest monthly hourly peak has a 15x multiplier
- Resilient resources, defined as storage collocated with an RPS resource that provides back-up power during an outage, earn a 1.5x multiplier
- Existing generation and contracted resources receive a multiplier of 0.1x to ensure these resources that would be operating regardless of program from saturating the program
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.

• An ACP of $30/MWh is too low to support the economics of new storage deployments.
• Price floor or sufficient long-term contract opportunity for participating resources is need to provide greater price certainty for a first-in-the-nation program.
• Existing pipeline of energy storage and renewable energy project (particularly offshore wind) coming online will likely result in an oversupplied market.

Proposed Implementation Timeline
In December 2019, the DOER set the 2020 standard for utilities at a 1.5% increase of clean peak eligible resources. In Q1 2020, the DOER is expected to send amended regulations to Joint Committee on Telecomm., Utilities, and Energy for comment, after which point the final regulations will be filed. Long-term procurement rules still need to be developed.