

## Mass. Clean Peak Standard's Success Will Hinge On Details

By **Zachary Gerson** (August 26, 2020, 5:28 PM EDT)

The idea is straightforward: to use an approach based on successful renewable portfolio standard programs to incentivize the performance of clean energy resources during peak periods, when the costs and emissions associated with generating energy are high.

The potential benefits are significant. A Massachusetts report on energy storage found that 10% of annual hours, on average, account for 40% of annual spending on electricity.[1]

The Massachusetts Department of Energy Resources, or DOER, estimates that the state's new clean peak energy standard will provide hundreds of millions of dollars in ratepayer savings and reduce carbon dioxide emissions by hundreds of thousands of metric tons over 10 years.[2] But will the clean peak standard work?

To get this novel program right, the DOER engaged stakeholders in an extend process. The DOER's final regulations implementing the clean peak standard[3] went into effect on Aug. 7, two years after the program was enacted by the 2018 Act to Advance Clean Energy.[4]

There are many important details for a program intended to introduce a temporal component to a portfolio standard, such as setting resource eligibility requirements; defining peak periods; establishing how to value performance of different types of resources during different periods; crafting guardrails for certificate pricing; and deciding whether and how to implement utility procurements.

The DOER used the two-year development period to seek comment on specific questions;[5] retain a consultant to model the program;[6] present[7] and solicit comments[8] on a straw proposal; present a draft approach;[9] take additional comments;[10] and make some final regulatory tweaks.[11]

The program is rightly being touted as a first-of-its-kind policy,[12] an assessment that focuses on the regulatory strategy rather than the nitty-gritty of program details. That focus is warranted, because Massachusetts' clean peak standard is an exciting test of a new policy tool for dealing with an emerging second-order challenge associated with expanding renewable resource penetration.

Whereas a traditional renewable portfolio standard aims to increase the percentage of electricity demand met with generation from renewable resources without regard to when that generation occurs,



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the clean peak standard recognizes that timing matters, and rewards performance that can be delivered when it provides the most benefits.

The clean peak standard is a step toward integrating intermittent renewable resources more fully into the energy supply, and reducing reliance on traditional generation resources to fill gaps when intermittent resources would not otherwise contribute.

In large part, the clean peak standard is about energy storage. It is no coincidence that the standard is being rolled out as energy storage systems are being rapidly deployed in Massachusetts and elsewhere, creating new opportunities to store renewably generated electricity and deliver it to the grid when it has the most value. Indeed, the Massachusetts standard is undoubtedly intended to spur this growing market.

Beyond the excitement of a new policy approach, anyone watching to see whether Massachusetts' new standard works should pay attention to the details. Whether the program achieves its goals will depend not just on whether the policy framework proves effective, but also on whether the DOER got the details right, such that a stable market forms with prices at a level sufficient to incentivize a response from the development community. Along with first-in-the-nation status comes the reality that the first implementation may not be perfect; some fine tuning may be needed.

### **The Clean Peak Standard**

The basic design of the Massachusetts clean peak standard is familiar. Retail electricity suppliers in Massachusetts are required to procure a quantity of clean peak energy certificates equivalent to a minimum percentage of their sales.[13] That percentage starts at 1.5% in 2020, and is scheduled to increase by 1.5% each year, with provisions to increase more quickly if market supply exceeds demand.[14]

Retail electricity suppliers may obtain alternative compliance credits at a cost of \$45 per credit through compliance year 2024, with costs declining thereafter, and mechanisms to speed that decline if the market is oversupplied.[15] There are provisions for banking credits for three years.[16] Unless extended by new legislation, the program will expire after 2050.[17]

While the basic structure mirrors a renewable portfolio standard, or RPS, the clean peak standard establishes resource eligibility differently, in order to target resources that can contribute to meeting demand during peak periods.[18] Four categories of resources are eligible:

- Resources qualified as Class I renewable generation units under Massachusetts' RPS program with a commercial operation date on or after Jan. 1, 2019;
- Resources qualified as Class I or Class II renewable generation units under Massachusetts' RPS program with a commercial operation date prior to Jan.1, 2019, that are co-located with a qualified energy storage system that meets certain criteria and has a commercial operation date on or after Jan. 1, 2019;
- Qualified energy storage systems that commence commercial operation on or after Jan. 1, 2019, and are

- Co-located with certain RPS resources;
  - Contractually paired with certain RPS resources;
  - Charged during set periods intended to reflect periods of high renewable generation; or
  - Subject to operational schedules as part of their interconnection service agreements demonstrating that they "[serve] to resolve load flow or power quality concerns associated with intermittent renewable energy resources"; and
- Nongeneration demand response resources that meet requirements set out in a DOER guideline.[19]

The Massachusetts clean peak standard's most novel components are those meant to recognize the temporal value of meeting or reducing demand for electricity during certain periods. To reflect differing seasonal peaks, the DOER set separate seasonal peak periods, each four hours long, for spring, summer, fall and winter.[20]

Qualified clean peak resources generate clean peak energy certificates for performance during those periods, subject to certain multipliers, which can be combined and act to increase or decrease the quantity of certificates a resource generates.[21] For instance, performance in the summer or winter peak periods each have multipliers of 4,[22] meaning resources generate four times as many credits during those periods.

Performance in the spring and fall periods have a multiplier of 1, meaning no adjustment to the quantity of credits generated, and resilient facilities — sites where the resource can provide electricity in an external outage situation — have a multiplier of 1.5.[23]

Resources will also receive additional clean peak energy certificates for performance during the hour of actual monthly system peak demand, as opposed to the preset seasonal windows. Performance during that hour has a multiplier of 25.[24] Providing a relatively high incentive for resources to perform during actual peak periods is intended to encourage resources to "chase the peak" and perform at precisely the times most helpful for meeting peak demand.[25]

The DOER also uses multipliers to balance other interests, differentiating resources that predate the clean peak standard or that receive other forms of support. Accordingly, multipliers less than one reduce the number of credits generated by certain resources.

Resources with a commercial operation date before Jan. 1, 2019, have a multiplier of 0.1.[26] So-called contracted resources — those participating in the Solar Massachusetts Renewable Target, or SMART, program (a separate, tariff-based program for solar resources)[27] or holding long term contracts under certain other state laws (including certain contracts for offshore wind projects), have a multiplier of 0.01.[28] Energy storage systems colocated with solar resources participating in the SMART program have a multiplier of 0.3.[29]

The DOER left open the possibility of introducing a distribution circuit multiplier to reflect the distribution circuit-level locational value of resources.[30] Though no such multipliers are in place yet, the DOER issued a guidance document describing how it could implement such multipliers in the future.[31]

The final regulations for the clean peak standard also require each of the Massachusetts investor-owned electric distribution companies to procure clean peak energy certificates through a competitive

process.[32] Those procurements will initially be designed to achieve 30% of the certificates needed to meet the standard for a given compliance year, but may be adjusted up or down based on the market supply of certificates.[33] The Massachusetts Department of Public Utilities will separately review any contracts under this provision.[34]

### **What to Watch For**

Stakeholders are excited to see this new strategy in action. The idea behind the clean peak standard is compelling. The goal of incentivizing not just clean energy generation, but clean energy resources that can drive down reliance on other generation during peak periods is important to achieving the deep decarbonization goals many jurisdictions are adopting.

In the near term, whether Massachusetts' clean peak standard is perceived as achieving its goals may depend on whether the DOER got all of the details right. Commenters at the end of the regulatory process expressed concerns that the incentives provided by the program may not be sufficient to drive investment or even participation.[35]

In particular, some commenters expressed concerns that certificate prices would be too low, or too uncertain, because of the lack of a price floor and an expectation that the level set for alternative compliance payments would prove low. With the uncertainty surrounding an untested policy in a field of rapid technological advancement, and the challenges associated with predicting the market for certificates, some commenters believed a price floor was important to give confidence in the value stream and support investment.

It is also possible that, with a proliferation of policies and market opportunities for energy storage, participation in other programs or markets will provide better returns and preclude or frustrate participation in the Massachusetts clean peak standard program. The DOER took some steps at the end of the regulatory process to address these concerns.

It did not adopt a price floor, but it did raise the alternative compliance payment level from \$30 to \$45.[36] The DOER also stated that it believes the utility procurements will increase market stability.[37] With the utility procurements still in development, it remains to be seen whether that mechanism will succeed in reducing uncertainty and supporting project development.[38]

Regardless, even if the clean peak standard encounters initial challenges, the medium-term and long-term prospects for the standard could be bright. The details can be tweaked. A certificate price floor could be added. Alternative compliance costs could be raised. Multipliers could be adjusted. Peak periods could be realigned. Procurement procedures could be reevaluated.

The complexity and novelty of Massachusetts' clean peak standard may make it challenging to immediately finance and develop projects based on the standard alone. If the program encounters initial growing pains, the real test will be whether it can quickly adapt.

The DOER will be watching the program rollout closely, and is likely to step in if regulatory adjustments are necessary. If the program is ultimately successful, then other states, particularly those with high penetration of renewable resources, may adopt a similar approach — with the benefit of Massachusetts' experience to guide them.

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[1] See State of Charge: Massachusetts Energy Storage Initiative, at 28 (September 2016), available at <https://www.mass.gov/files/2017-07/state-of-charge-report.pdf>.

[2] Massachusetts Department of Energy Resources, The Clean Peak Energy Standard: Draft Regulation Summary, at 39 (Aug. 7, 2019 and Aug. 9, 2019), available at <https://www.mass.gov/doc/drafts-cps-reg-summary-presentation/download>.

[3] 225 C.M.R. §21.00, available at <https://www.mass.gov/doc/clean-peak-energy-standard-final-regulation/download>.

[4] 2018 Mass. Acts 227, available at <https://malegislature.gov/Laws/SessionLaws/Acts/2018/Chapter227>. The 2018 Act to Advance Clean Energy was motivated, at least in part, by a 2017-2018 cold snap that brought unusually low sustained temperatures to the region and resulted in heavy reliance on oil-based generation resources. See New England Power Generators Association Inc., Testimony on H.4318, An Act Promoting Climate Change Adaptation, Environmental and Natural Resource Protection, and Investment in Recreational Assets and Opportunity, before the Commonwealth of Massachusetts Joint Committee on Environment, Natural Resources and Agriculture (April 3, 2018), available at <https://nepga.org/wp-content/plugins/custom-post-type-attachment-pro/download.php?id=MTQxNQ==&file=MQ==>.

[5] The questions posed by the DOER are available at <https://www.mass.gov/files/documents/2019/01/17/Clean%20Peak%20Standard%20Stakeholder%20Questions%201.17.19.pdf>, and the responses submitted to the DOER are available at <https://www.mass.gov/files/documents/2019/02/19/Responses.zip>.

[6] The report was prepared for the DOER by Customized Energy Solutions and Sustainable Energy Advantage, and is available at <https://www.mass.gov/doc/clean-peak-standard-final-consultant-report/download>.

[7] Massachusetts Department of Energy Resources, Clean Peak Energy Standard: Straw Proposal, (April 2, 2019), available at <https://www.mass.gov/files/documents/2019/04/02/Clean%20Peak%20Straw%20Proposal%203.29.19%20.pdf>.

[8] The DOER compiled the comments it received at <https://www.mass.gov/files/documents/2019/04/24/Comments.zip>.

[9] Massachusetts Department of Energy Resources, The Clean Peak Energy Standard: Draft Regulation Summary, (Aug. 7, 2019, and Aug. 9, 2019), available at <https://www.mass.gov/doc/drafts-cps-reg-summary-presentation/download>.

[10] The DOER compiled the comments it received at <https://www.mass.gov/doc/clean-peak-standards->

comments.

[11] The DOER maintains a website describing the regulatory process for the clean peak standard that includes updates on the various revisions that it made to the regulations throughout the process. That website is available at <https://www.mass.gov/service-details/clean-peak-energy-standard-notice-and-updates>.

[12] Although Massachusetts is the first state to put the policy into action, the idea of a clean peak standard has been bouncing around for years, and several states have considered similar policies. Lon Huber, now with Duke Energy, previously with Strategen Consulting and Navigant, played a major role in developing and advancing the concept, including by coauthoring a white paper on the subject for Arizona's Residential Utility Consumer's Office in late 2016. See Iulia Gheorghiu, Innovator of the Year: Lon Huber, Navigant, Utility Dive, Dec. 3, 2018, <https://www.utilitydive.com/news/innovator-of-the-year-lon-huber-navigant/541304/>.

[13] 225 C.M.R. § 21.07.

[14] *Id.*

[15] *Id.* § 21.08(3).

[16] *Id.* § 21.08(2).

[17] *Id.* § 21.07(2).

[18] Detailed requirements for eligibility to generate clean peak energy certificates are set forth at 225 C.M.R. § 21.05(1), and are elaborated upon in several guideline documents: the Clean Peak Energy Resource Eligibility Guideline, available at <https://www.mass.gov/doc/clean-peak-resource-eligibility-guidelines/download>, the Clean Peak Demand Response Resource Guideline, available at <https://www.mass.gov/doc/clean-peak-demand-response-resource-guideline/download>, and the Energy Reserves Guideline, available at <https://www.mass.gov/doc/clean-peak-energy-reserves-guidelines/download> (all versions are currently dated Aug. 14, 2020).

[19] 225 C.M.R. § 21.05(1)(a). For more detail on eligibility requirements, see the guidelines cited *supra* note 18.

[20] 225 C.M.R. § 21.05(3)-(4). The seasonal peak periods are 5:00 pm to 9:00 pm March 1 through May 14, 3:00 pm to 7:00 pm May 15 through Sept. 14, 4:00 pm to 8:00 pm Sept. 15 through Nov. 30, and 4:00 pm to 8:00 pm Dec. 1 through Feb. 28. *Id.*

[21] *Id.* § 21.05(4)-(6).

[22] *Id.* § 21.05(6)(a)

[23] *Id.* § 21.05(6)(c).

[24] See *id.* § 21.05(5), (6)(b).

[25] Massachusetts Department of Energy Resources, The Clean Peak Energy Standard: Draft Regulation

Summary, at 27 (Aug. 7, 2019, and Aug. 9, 2019), available at <https://www.mass.gov/doc/drafts-cps-reg-summary-presentation/download>.

[26] 225 C.M.R. § 21.05(6)(d).

[27] DOER maintains a website on the SMART Program, which is available at <https://www.mass.gov/solar-massachusetts-renewable-target-smart>.

[28] 225 C.M.R. § 21.05(6)(e).

[29] *Id.* § 21.05(6)(f).

[30] *Id.* § 21.05(6)(g).

[31] See Clean Peak Distribution Circuit Multiplier Guideline, available at <https://www.mass.gov/doc/clean-peak-distribution-circuit-multiplier-guideline/download>.

[32] 225 C.M.R. § 21.05(8)(a).

[33] *Id.* § 21.05(8)(a)-(b).

[34] *Id.* § 21.05(8)(d).

[35] DOER compiled the comments it received, which are available at <https://www.mass.gov/doc/clean-peak-standards-comments>.

[36] See Commonwealth of Massachusetts Department of Energy Resources, Response to Comments on: 225 C.M.R. 21.00, Clean Peak Energy Portfolio Standard, at 7-8 (March 2020), available at <https://www.mass.gov/doc/clean-energy-peak-standard-filing-3-20-2020>.

[37] *Id.* at 8.

[38] See 225 C.M.R. § 21.05(8).