



CRS

center for
resource
solutions

February 5, 2019

Michael Judge
Director, Renewable & Alternative Energy Division
Massachusetts Department of Energy Resources (DOER)
100 Cambridge St., Suite 1020
Boston, MA 02114

RE: Center for Resource Solutions' (CRS's) Responses to Clean Peak Energy Portfolio Standard (CPS) Stakeholder Questions

Mr. Judge:

CRS appreciates this opportunity to submit responses to the CPS Stakeholder Questions numbered 10(b) and 22.

Background on CRS and Green-e®

CRS is a 501(c)(3) nonprofit organization that creates policy and market solutions to advance sustainable energy. CRS has broad expertise in renewable energy program design and implementation, and provides technical guidance to policymakers and regulators at different levels on matters related to policy design, renewable energy accounting, tracking and verification, market interactions, and disclosures and consumer protection. CRS also administers the Green-e programs. Green-e is the leading independent certification for voluntary renewable electricity products in North America. For over 20 years, Green-e's verification procedures have ensured that voluntary purchasers of renewable electricity products receive clear and accurate information from their providers and the full environmental benefits and sole ownership of each megawatt-hour (MWh) purchased. CRS, with oversight by the independent Green-e Governance Board, maintains a stakeholder-driven standard development process. In 2017, Green-e certified retail sales of over 60 million MWh, serving over 1.1 million retail purchasers of Green-e certified renewable energy, including 63,400 businesses.¹

Responses to Stakeholder Questions

10. How should DOER interpret the requirement that a Qualified Energy Storage System operate "primarily to store and discharge renewable energy"? (b) If not directly physically or electrically connected to a renewable energy resource, how can the qualified energy storage system demonstrate that it operates primarily to store and discharge renewable energy? Purchase and retirement of RECs? Some other means?

Renewable Energy Certificates (RECs) (GIS Certificates) should be used to substantiate storage and discharge of renewable power by a storage facility. Otherwise, there can be double counting of renewable MWh in either state compliance (Renewable Portfolio Standard [RPS]) markets or the voluntary renewable energy market, since RECs are the instrument used to verify delivery and

¹ See the 2017 Green-e Verification Report here for more information: <https://resource-solutions.org/g2017/>.

consumption of renewable energy in both Massachusetts and neighboring states, and they exclusively convey the fuel type generation attribute.² Furthermore, storage facilities should not generate unique RECs since they are not generation resources. This would also double count renewable energy generation.

Compliance with the CPS using a Qualified Energy Storage System should require all of the following:

1. a locally sourced, RPS-eligible REC retired for each MWh stored;
2. verification that electricity was stored when RPS-eligible renewable resources are generating,³ OR that the storage facility is directly physically or electrically connected to a renewable energy resource; AND
3. verification that electricity was discharged during a qualifying peak period.

A Clean Peak Certificate (CPC) should only be issued for these storage facilities where all three of these requirements are met. This is because the intent of the CPS is not just to increase the consumption of renewable energy (in this case, all that would be needed to substantiate compliance would be REC retirement), but also to shift renewable energy generation to the peak periods. Energy storage systems can increase consumption (by charging batteries) at the times when there is an excess of renewable energy and increase production (by discharging batteries) at times of peak load. This requires information about the timing of storage *and* discharge, which is not typically information that is tracked using RECs, though RECs are needed to prevent double counting.

We do not recommend that RECs that were generated in different grid regions be eligible for Qualified Energy Storage Systems under the CPS. Whereas electricity customers may make renewable energy usage claims based on RECs that are sourced nationally in the voluntary market, in this case, the RECs are used to characterize bundled electricity that is being stored and discharged at the storage facility. Therefore, these RECs should be sourced from the same grid region where the storage facility is located.

RECs should also be required to verify consumption or delivery of renewable power from storage facilities that are directly physically or electrically connected to a renewable energy resource. In this case, a single REC should be issued once to the combined renewable storage facility for each MWh of power discharged and injected to the grid. Again, the storage equipment should not be treated as a separate generation resource.

Other scenarios that should be considered by DOER include:

- Storage facilities that do not charge exclusively when renewable resources are generating on the grid; and
- Where there are significant losses at storage facilities.

22. How should resources participating in other state programs (e.g. section 83 procurements, SMART, EE programs, etc.) interact with the CPS?

² See 225 MASS. CODE REGS. 14.02;

Also see *NEPOOL-GIS Operating Rules*, v. Effective 1/1/19. Available at: <https://www.nepoolgis.com/wp-content/uploads/sites/3/2019/01/GIS-Operating-Rules-Effective-1-1-19.doc>;

Also See Jones *et. al.* (2015) *The Legal Basis for Renewable Energy Certificates*. Center for Resource Solutions. Available at: <https://resource-solutions.org/wp-content/uploads/2015/07/The-Legal-Basis-for-RECs.pdf>.

³ The regulator should have some process to historically verify that the total amount of energy stored during a period of time does not exceed the total amount of RPS-eligible renewable energy generating at that time.

It is important that renewable generation not be double counted in either a) different programs within Massachusetts, b) in programs of other states, or c) in the voluntary market. Where a CPC are created as a new compliance instrument, there is potential for double counting with RECs. Double counting can occur where, for example, a REC is issued to a renewable generator and then used for compliance with a neighboring state's RPS program, and a CPC is also issued for the same MWh and used for CPS compliance in Massachusetts. In this case, the environmental attributes of the same MWh are being delivered to customers in different states.

To avoid double counting, it should be required that RECs be retired to substantiate the creation of CPCs. Compliance with the CPS should require:

1. Retirement of a REC for each MWh; AND
2. Verification that the timing of renewable generation was during a qualifying peak period.

A Clean Peak Certificate (CPC) should only be issued when both of these requirements are met. This is because the timing of generation is not currently identified on RECs/GIS certificates. If RECs can be "time-stamped" in the future, then it may be possible for RECs associated with generation from qualifying facilities during qualifying peak periods to be defined as CPCs, rather than creating a new and separate instrument. If this is possible under the law, it would be preferred and obviate potential double counting.

Please let me know if we can provide any further information or answer any other questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'Todd Jones', with a stylized, cursive script.

Todd Jones
Director, Policy and Climate Change Programs