



August 20, 2021

Ms. Samantha Meserve

Via email-- DOER.APS@mass.gov

Deputy Director, Renewable and Alternative Energy Division

Massachusetts Department of Energy Resources

100 Cambridge Street, 10th Floor

Boston, MA

Subject: Renew Energy Partners, LLC Comments on APS

Dear Ms. Meserve,

Renew Energy Partners, LLC (Renew) is pleased to provide comments on the Alternative Energy Portfolio Standard (APS) review being conducted by the Massachusetts Department of Energy Resources (DOER). These comments pertain to the Straw Proposal put forth by the DOER.

To begin, we want to emphasize that Renew strongly supports the DOER's Greenhouse Gas (GHG) reduction goals. Our founders at Renew helped shape the first climate policy for the Commonwealth and our investment mandate as a firm is to invest only in projects that reduce carbon emissions as compared to the business-as-usual case. We report on project carbon emissions reductions each quarter to our investors. We believe that climate change is an existential crisis facing humanity. Our mission is to speed carbon reduction and help stop climate change by making it financially compelling and effortless to implement energy efficiency upgrades in commercial and industrial buildings now.

We believe however that the DOER's APS must be implemented to drive carbon reductions and nothing more nor less. We also believe that the DOER can meet this objective with an eye to the safety and resilience of critical infrastructure. The straw proposal fails to meet these criteria. The straw proposal phases out CHP regardless of the performance of CHP in reducing carbon emissions. The straw proposal would eliminate technologies that are the best option for resilience for healthcare, critical infrastructure and manufacturing in the Commonwealth. The straw proposal is silent on a road forward to meeting the carbon emissions goals for 2030 and 2050 that keeps hospitals and critical manufacturing safe in an increasingly unstable climate. We think the APS can be better designed to meet these crucial goals and our comments are submitted in that spirit.

Comment #1 – Combined Heat and Power Emission Reductions

As currently drafted, the APS straw proposal suffers from a critical flaw with respect to its approach to CHP: it proposes to phase out CHP with no reference to the impact of CHP on emissions reductions. In short, the straw proposal's approach to CHP has no connection to the policy objectives of the program.

We understand that currently CHP comprises the majority of the APS market, and that the program needs to make room for other technologies. In light of this and the fact that the price per AEC will likely increase based on the proposed modifications, some sort of factor would be acceptable, such as a CHP multiplier of 0.7. Such a factor would create space for some CHP for critical infrastructure and create significant opportunities to incentivize other technologies.

We also advocate, however, that CHP should remain eligible so long as the system continues to provide emission reductions. We also feel CHP should be incentivized to reduce emissions as against the grid in every possible way because CHP helps to ensure that critical infrastructure remains resilient.

We do not support the phasing out of CHP as currently drafted for the following reasons:

1. The current proposal for CHP has no connection to emissions reductions;
2. CHP provides emissions reductions which contributes to Massachusetts' reduction goals;
3. CHP provides resiliency benefits to critical facilities (those that have black start and islanding capability) that other existing infrastructure cannot provide;
4. These facilities have made large long-term capital infrastructure decisions based on APS regulations; and
5. CHP is vital to economic competitiveness for critical infrastructure.

Based on the Frontier Energy CHP CO₂ emissions study¹, efficient CHP currently provides, and is projected to continue to provide, emissions reductions for some time as compared to if the same site had used the electric grid for electricity, and a boiler as a separate heating source. We recognize that as the grid becomes cleaner with additional renewable resources, the CHP should be required to outperform the grid to receive credits. It is our belief that a CHP system should qualify for an APS payment when the system has a lower Carbon Intensity (CI) than the average marginal emissions of the grid. If the CHP system provides emissions benefits over a period of time (for example, per hour, per quarter, or per year), it should receive APS credits for generation over the relevant time period. If the CHP system is not providing emissions benefits during that period of time, it should not receive a credit.

This approach is preferable than the straw proposal in several ways:

1. It would connect the CHP provisions of the APS to the underlying policy goal;
2. It would accomplish the DOER's goal of reducing emissions while also creating a space in the program to support resilience for critical infrastructure.

¹ *Study of CO₂ Emissions from CHP Systems and Comparable Alternatives in MA*, Frontier Energy, 2021.

With respect to the comparison of CHP to grid emissions, marginal emissions are the appropriate method of emissions comparison to CHP, as recommended by the EPA². Marginal emissions should be used because if a CHP system trips off, which can happen on a regular basis in part due to grid instability, the incremental demand is naturally served by the marginal resource. So if a 7 MW CHP trips, the “grid” instantaneously needs to serve another 7 MW, which would come from the marginal resource (usually natural gas) providing an additional 7 MW. It would not come from a baseload resource because a baseload resource would already be running at full capacity, either because it must run (i.e., a nuclear plant) or because it is less expensive than the next resource (i.e., a gas plant with a lower heat rate).

Furthermore, in light of the goal of increasing the amount of AECs available to other technologies and limiting the use of CHP to only those facilities where it is absolutely necessary, Renew would support narrowing the eligibility for AECs to only those facilities that have invested in islanding and black start capacity. These investments are an excellent proxy for systems that provide crucial and irreplaceable resilience in sectors such as healthcare, critical infrastructure, multi-family and sensitive manufacturing. The current straw proposal would undermine the long-term feasibility of CHP for just these facilities without supporting an alternative that has anything like the same ability to provide resilience.

Comment # 2 – Role of RNG

Furthermore, we believe that the Commonwealth can meet its 2030 and 2050 carbon emissions reduction goals and help critical facilities with resilience by changing its approach to Renewable Natural Gas. There is a limited supply of biogas, particularly in New England. Current APS regulations require a dedicated pipeline in order to qualify for APS credits. We believe that this is unnecessarily narrow and that the goal of the regulations should be to incentivize the generation of renewable energy, regardless of location.

To this end, the regulations should be amended to no longer require physical delivery. This approach is consistent with how the California Low Carbon Fuel Standard and the federal RFS has treated biogas/Renewable Natural Gas (RNG). Both programs are related to transportation sector but the idea is the same; they allow injection of a pipeline quality RNG into a pipeline at one location and it can be counted in another location so long as producers can:

demonstrate that a verifiable contractual pathway exists and that such pathway ensures that (1) a specific volume of landfill gas was placed into a commercial pipeline that ultimately serves the transportation fueling facility and (2) that the drawn into this facility from that pipeline matches the volume of landfill gas placed into the pipeline system. Thus facilities using such a fuel pathway may then use an appropriate D code for generation of RINs.³

² EPA Fuel and Carbon Dioxide Emissions Savings Calculation Methodology for Combined Heat and Power Systems June 2021, see pages 26-28 “Load Duration Curves and Grid Dispatch Order” for discussion on marginal.

³ This comes from page 14712 of <https://www.govinfo.gov/content/pkg/FR-2010-03-26/pdf/2010-3851.pdf> - see pages 14711 to 14712 for more background.



With this approach in California, a project can qualify for a LCFS credit and a RIN without having physical delivery. We believe that something similar would help critical infrastructure decarbonize while also providing the resiliency benefits that are so critical.

We also feel that DEOR should allow biogas/RNG to qualify for the RPS and APS. That would allow for increased blend levels of the biogas/RNG and lead to further decarbonization.

For the reasons outlined above we therefore strongly urge the DOER to continue to support CHP's inclusion in the program as outlined. We appreciate and support as well the provisions in the Straw Proposal that strengthen the APS moving forward. We are available should you have any questions, and we appreciate your time and attention on this matter.

Sincerely,

Charles Lord, Principal