



August 20, 2021

Sent via electronic correspondence to doer.aps@mass.gov

Samantha Meserve
Deputy Director, Renewable and Alternative Energy Division
Massachusetts Department of Energy Resources
100 Cambridge Street, 10th Floor
Boston, MA 02114

**RE: Comments in Response to the Alternative Energy Portfolio Standard Program
Straw Proposal**

Dear Ms. Meserve,

The Medical Area Total Energy Plant (“MATEP”) appreciates the opportunity to provide comments relating to the Department of Energy Resources’ Alternative Energy Portfolio Standard Program Straw Proposal. Enclosed are MATEP’s comments and recommendations for your consideration.

Sincerely,

Sarah Bresolin Silver
Director, Government and Regulatory Affairs
Engie North America, Inc.



**COMMENTS OF MATEP, LLC ON THE
MASSACHUSETTS DEPARTMENT OF ENERGY RESOURCES'
ALTERNATIVE ENERGY PORTFOLIO STANDARD STRAW PROPOSAL**

I. INTRODUCTION

MATEP, LLC is pleased to submit these comments in response to the Department of Energy Resources' ("Department") July 20, 2021 request for public comment related to the Department's release of the Alternative Energy Portfolio Standard ("APS") Straw Proposal ("Straw Proposal").

The Medical Area Total Energy Plant ("MATEP") facility, is a combined heat and power ("CHP") plant, electricity microgrid and district heating and cooling network serving the needs of six Harvard-affiliated hospitals and related research facilities in Boston's Longwood Medical Area.¹ The facility is co-owned (with Axiom Infrastructure) and fully operated by ENGIE North America, Inc. ("ENGIE"), a global energy company and leader in low-carbon energy and energy services with a mission to accelerate the transition towards a carbon-neutral world. ENGIE is a principal player in sustainable heating networks fed from renewable sources or waste heat and in highly efficient cooling networks. Co-ownership and operation of MATEP is a testament to the work ENGIE is doing to accelerate the transition to carbon-neutrality in the Commonwealth.

The APS program was established in January 2009 pursuant to the *Green Communities Act of 2008* to provide businesses, institutions, and government entities in Massachusetts with an incentive for installing eligible alternative energy systems. These systems contribute significantly to the Commonwealth's clean energy goals by "increasing energy efficiency and reducing the need for conventional fossil fuel-based power generation."²

Over the past ten years the APS program has, and continues to, fulfill its purpose by successfully incentivizing the development, investment and adoption of technologies that lower carbon emissions from energy generation in Massachusetts. This is particularly true for CHP facilities. ENGIE's ownership and

¹ The six medical institutions are Beth Israel Deaconess Medical Center, Boston Children's Hospital, Brigham and Women's Hospital, Dana-Farber Cancer Institute, Harvard Medical School and School of Public Health and Joslin Diabetes Center.

² "Alternative Portfolio Standard" DOER Website see <https://www.mass.gov/service-details/program-summaries>.

operation of the MATEP facility provides us with the experience to speak to the APS program's successes as well as the significant and meaningful contribution the facility has had on decreasing carbon emissions. For the reasons discussed below, it is essential that the Department retain full CHP eligibility for participation in the APS program.

II. ABOUT MATEP

In 2018, ENGIE and Axium Infrastructure, operating jointly as Longwood Energy Partners ("LEP"), acquired MATEP. MATEP, a microgrid and district energy system is integral to the day-to-day operation of several world-renowned medical facilities, which are active in critical research initiatives and have approximately 2,000 hospital beds serving more than 100,000 inpatients and 2.4 million outpatients annually. District energy networks are ideal for the energy needs of critical institutions because they are among the most efficient, reliable, and cost-effective ways to provide energy security while improving sustainability.

ENGIE's 35-year service agreement provides central plant management for the six main facilities. The agreement includes the microgrid, with a capacity to produce 99 MW of electricity, 1,100,000 lbs./hr. of steam, and 42,0000 tons of chilled water, serving an 11.2-million-square-foot district heating and cooling network in 74 buildings.

MATEP is vastly more efficient than the electricity MATEP customers would otherwise draw from the electricity grid. For example, the efficiency of MATEP is approximately 65 percent³ compared with the overall Independent System Operator for New England's ("ISO-NE") system efficiency of approximately 40 percent.⁴ Further, on the portion of MATEP that qualifies for APS treatment, MATEP produces up to 110 percent⁵ of the energy that it consumes. MATEP remains vital to the customers it serves and continues to be both deserving of and reliant on support from the APS program to maximize results for its customers, investors and for Massachusetts ratepayers.

III. MATEP'S PARTICIPATION IN THE APS PROGRAM

³ Further information is available upon request.

⁴ Further information is available upon request.

⁵ Further information is available upon request.

MATEP has participated in the APS program since April 2017,⁶ following the installation of its new state-of-the-art natural gas fired combustion turbine (“CT”) generator. The APS program was instrumental in incentivizing the installation of the new turbine, and the Alternative Energy Credits (“AEC”) a crucial revenue stream to bring to fruition this project within an acceptable payback period. The APS program has also been instrumental to the investment decisions made regarding the acquisition and operation of the MATEP facility by ENGIE. Neither investment would have been made without reliance on the APS program. Further, MATEP hopes to continue to rely on and make investments based on the continued existence of the APS program and the ability to generate and sell profitably AECs.

The CT is highly efficient and has significantly reduced the need to run MATEP’s diesel engines. The steam byproduct has been put to productive use serving the thermal needs of the Longwood complex of hospitals and research facilities. MATEP’s decision to invest in newer, cleaner technology at that time was predicated, in part, by the sustained incentive support for the beneficial use of waste heat provided by the APS program. By allowing MATEP to continue moving away from reliance on diesel generators, the new CT was integral in providing cleaner and more fuel-efficient generation for the hospitals and research facilities that operate 24 hours per day 365 days per year in the Longwood Medical Area. Further, MATEP would also not have had the generation capacity needed to satisfy growing customer demand without installing the CT. Instead the Longwood Medical Area would have had to rely on the electric grid for its incremental energy needs. The CHP facility remains the most efficient and least expensive method of providing heat and power to the Longwood Medical Area.⁷

IV. COMMENTS ON THE STRAW PROPOSAL

MATEP is pleased that the Department is proposing to revise certain aspects of the APS regulations that may increase the demand for AECs. Specifically, MATEP strongly supports the Department’s proposal to increase the overall demand for AECs by two percent beginning in January of

⁶ Certified in October 2017, retroactive to April 1, 2017.

⁷ MATEP is willing to meet with the Department to discuss what it would take to replace MATEP with all-electric facility in the Longwood Medical Area.

2023. This would raise the demand from 5.5 percent of retail sales of electricity in 2022 to 7.5 percent in 2023, with continued 0.25 percent increases in the years that follow. Greater demand for the AECs should lead to an increase in the value of AECs needed by MATEP and other APS market participants.

MATEP also supports the proposal to increase the Alternative Compliance Payment (“ACP”) to \$40. This will increase market activity directed at compliance with the demand requirements and ensure Massachusetts residents receive the full benefit of the APS program.

MATEP opposes the Department’s proposal to reduce the number of AECs generated by eligible CHP facilities by 30 percent in 2023. MATEP further opposes the proposal to decrease annually the percentage of AECs that can be generated, to zero in 2030. Given that CHP facilities continue to decrease carbon emissions by very often generating less carbon intensive heat and power than replacement or alternative generation, the Department’s proposal to phase out CHP from the APS program is unsupported and unwarranted and runs counter to the Global Warming Solution Act.

MATEP strongly supports the CHP Coalition’s recommendation that CHP facilities should be eligible to earn the full number of AECs at the very least whenever MATEP contributes to decreasing carbon emissions on the electric grid. The CHP Coalition proposes that this estimation should be made in comparison to emissions that would have occurred from operation of alternative technologies needed to replace MATEP’s and other CHP’s heat and power.

MATEP also believes the proposed natural gas phase down ignores an opportunity to further incentivize CHP systems continually to reduce their carbon emissions. MATEP is already engaged in conversations with its customers to reduce their carbon footprint. The mission is to help MATEP customers and partners become carbon neutral. MATEP has been exploring alternative pathways that could be viable to support our district heating and cooling system on which the hospitals rely 24/7 for critical care while operating in a densely populated urban area. Retaining the ability to earn AECs at the current level will be essential to assisting MATEP further reduce its emissions profile.

MATEP supports the CHP Coalition’s recommendation that the Straw Proposal align the reduction of emissions with a corresponding increase in the number of AECs earned by CHP systems.

The benefits of MATEP's CHP system compared to diesel or other systems that could reliably provide comparable amounts of heat and power clearly demonstrate that MATEP should remain eligible to earn full AECs for as long as MATEP remains necessary and efficient. This would bring the Department's policy into alignment with the Commonwealth's carbon reduction goals.

Although MATEP strongly opposes any decrease in our ability to earn AECs, if the Department decides to proceed with a natural gas phase out MATEP believes that it must happen in a way that allows MATEP to capture and take advantage of the potential positive changes to the APS program currently being considered. Specifically, the percentage increase in demand for the AECs and the increase in the ACP value.

As the Department is aware, major market disruptions resulted from regulations promulgated in 2017 which expanded eligible technologies. The most significant impact came from 420,000 AECs from liquid biofuels sources being minted in one quarter (but came from 12 quarters of production) and that heat pumps receive 40 quarters of credit upon being placed in-service. The market was further disrupted in 2019 due to the bankruptcy of several large retail electricity suppliers. The residual effects of these bankruptcies continue to plague the market with many Banked AECs. MATEP would like a reasonable opportunity to capture these foregone revenues from the APS program.

As such, if the Department proceeds with a natural gas phase down, MATEP recommends that the phase down begin later and step down more gradually. MATEP recommends an approach that maximizes the facility's ability to earn AECs for as long as possible with a large step down at the end of phase-out period. This approach would accomplish the Department's goal of eliminating a revenue stream for CHP entirely by a date certain, while allowing CHP facilities to recoup more of their investment. This is consistent with the APS program's commitment to CHP owners at the outset of the program.

Regarding implementation of the potential natural gas phase out, MATEP understands through review of the Straw Proposal and communications with the DOER, that DOER's intention regarding the natural gas phase out is that the designated factor (0.7, 0.6, etc.) be applied to the AECs generated.

According to the Straw Proposal, this would result in reducing the AECs generated by CHP systems in 2023 by 30%.

MATEP further recommends that because MATEP and other CHP facilities have a baseline on top of which the AEC formula is calculated, that if a natural gas phase out is implemented, that a similar phase out of the baselines must be implemented. If not, AECs from MATEP and other CHP facilities will phase out inequitably well before the intended phase out date.

In order to protect existing commercial arrangements entered into with reasonable reliance on the APS program MATEP also recommends that the Department honor existing contracts and commercial arrangements by allowing such contracts and commercial arrangements to be legacied. CHP owners that have hedged several years forward may be left short if the number of AECs is decreased. The Department has included provisions in other regulations for LSEs, such as in the Clean Peak Energy Standard, SREC-I and II, Class II, Class II Waste-to-Energy and APS regulations, that allows existing contractual power arrangements to be legacied from new RPS mandates.

V. CONCLUSION

MATEP thanks the Department for the opportunity to provide comments and recommendations on the APS program Straw Proposal. MATEP supports the Department's proposed efforts to strengthen the market for AECs by proposing to increase the overall demand for AECs by two percent as well as increasing the ACP value.

However, MATEP does not support the natural gas phase down. The APS program's support of CHP facilities has been both a policy and an environmental triumph for ratepayers and facility owners alike and should be not only preserved but strengthened in the next phase of the program. As the Commonwealth works towards meeting its 2030 and 2050 climate goals it will become increasingly important that CHP facilities continue to operate and do so in an increasingly efficient and clean manner.

MATEP is available to discuss our comments further and looks forward to engaging with the Department as partners in reaching the Commonwealth's climate targets.