Via Electronic Mail

January 31, 2024

Tom Ferguson
Energy Storage Programs Manager
Massachusetts Department of Energy Resources
100 Cambridge Street, Suite 1020
Boston, MA 02114

Dear Mr. Ferguson,

ENGIE North America Inc. ("ENGIE") is pleased to submit these comments in response to the Department of Energy Resources' ("Department") request for public comment related to the Department's December 31, 2023, release of *Charging Forward: Energy Storage in a Net Zero Commonwealth* ("Report"). ENGIE was encouraged by the Report's evidence-based findings related to the importance of deploying battery energy storage systems ("BESS") in the Commonwealth and the need for further state support. BESS have a vital role in facilitating and ensuring the smooth transition to cleaner energy. However, the existing merchant and programmatic revenue sources are insufficient to support the deployment of BESS at scale.

ENGIE is a subsidiary of ENGIE SA, a global energy company and leader in low-carbon and renewable energy and energy services with a mission to accelerate the transition towards a carbon-neutral world. ENGIE has been engaged in multiple aspects of the Commonwealth's energy economy for decades. During this time ENGIE has transitioned from being primarily a developer, owner and operator of fossil powered generation resources to a developer, owner and operator of renewable energy, energy storage and high efficiency district energy resources.

ENGIE has also been active in the Commonwealth's energy policy, regulatory and legislative efforts. In the past five years, ENGIE has participated extensively in stakeholder discussions in the Commonwealth related to the development and implementation of the Solar Massachusetts Renewable

Target ("SMART") program, the Clean Peak Energy Standard ("CPS") and the associated Distribution Circuit Multiplier ("DCM") guideline. ENGIE is also a leading member of several coalitions and working groups which are attempting to overcome the many obstacles facing BESS development, developers and owner operators in the Commonwealth.

During this time ENGIE has also invested heavily in the Commonwealth. ENGIE is currently the owner and operator of several Solar+BESS projects participating in the SMART program. Further, ENGIE is co-developing a large pipeline of distributed front-of-the-meter standalone BESS it hopes to bring online in the next one to three years. Importantly, the CPS program is the inciting program that spurred ENGIE to invest considerable time and resources into this distributed BESS pipeline in the Commonwealth. ENGIE believes that this pipeline will assist the Commonwealth in meeting its near-term BESS targets.

Given ENGIE's experience here in the Commonwealth we offer the following considerations and recommendations for the Department's consideration:

1. The Department should prioritize updates to the CPS program to ensure that BESS under development comes online, including changes to the DCM;
2. The Department should amend the CPS program's DCM to unlock near-term deployment of BESS;
3. The Department should clarify and/or confirm that near-term BESS deployment funding proposals are available to short duration energy storage (SDES); and
4. The Department should focus on providing regulatory certainty to support further investment.

1. The Department should prioritize updates to the CPS program to ensure that BESS under development deploys in the near term.

ENGIE urges the Department to prioritize amendments to the CPS program as part of its next steps in supporting the growth of BESS in the Commonwealth. The program remains as relevant today as when it was first launched. It is also the most advanced and reliable policy and programmatic tool for the Department to ensure BESS deployment over the next two to three years.

However, while the CPS program is meant to encourage clean energy developers to install and operate clean energy resources that benefit both Massachusetts ratepayers and the electric grid, it has not provided the regulatory support for BESS development that clean energy developers were anticipating. Nor has it provided the financial certainty that is a precondition to financing BESS project pipelines.

There are several reasons for why BESS have struggled to deploy under the CPS program. Some of these reasons are beyond the control of both the Department and clean energy developers such as the COVID-19 pandemic which impacted component manufacturing, distribution and cost. Further, distributed BESS development has been slowed significantly by lengthy interconnection studies, new electric distribution company ("EDC") policy on BESS operational parameters, and lack of tariff structures and rates for distributed BESS participating in the wholesale electricity markets. The lengthy delays in the expected development process due to these and other factors have extended the development process beyond what was foreseeable several years ago. The delays have also significantly increased the cost of development to a point where a large number of BESS may no longer be economically viable to develop in the Commonwealth.

Other reasons for why BESS have struggled to deploy under the CPS program relate to how the program was initially structured, are solvable, and are ripe for Department review. First, the CPS program was meant to provide an incremental incentive to make BESS projects economically viable. Economic viability in the case of credit programs, such as the CPS program, rests heavily on the alternative compliance payment (ACP) rate. During the development process, ENGIE and other clean energy developers advised and requested that the ACP rate be set much higher than the $30 initially proposed in 2019. While ENGIE recognizes and appreciates the Department's willingness to increase the ACP rate to $45 in the final program, the rate at which it is currently, but temporarily set, this rate is not high enough.

An increase to the ACP is required because it is currently set at a level that assumes that projects can take advantage of or have access to other significant revenue sources to support their development.

Unfortunately, and the Department's report notes that, "(f)or the standalone cases, wholesale market revenues are not enough to incent deployment, making revenue from the Clean Peak Energy Credits ("CPECs") from the … [CPS] critical."[1] Since other revenue sources have been insufficient or have not transpired, there remains a gap between the cost to build, own and operate BESS and the revenues the BESS earn. As a result, it is becoming increasingly difficult to finance BESS projects under the CPS program with the $45 ACP rate. Therefore, ENGIE recommends that the Department increase the ACP rate to a level that will support project development.

Equally challenging is that the ACP drops over time. ENGIE understands that the Department designed the program with ratepayer cost burden front of mind and a hope that alternative sources of revenue would grow over time. However, the progressive decrease of the ACP when paired with inflation creates a sort of "double-whammy" for the economics of the projects. With inflation increasing BESS operational costs and the ACP dropping, even as CPS requirements increase, the value of the CPS program revenues become quite depressed in the long run.[2] With merchant revenues from wholesale market participation currently being the only viable alternative to CPS credit sales, CPS program-participating BESS are stuck with the CPS program as the main source of revenue - and the only source of non-merchant revenue (essential for distributed scale developers and financiers) - rapidly diminishing in real terms over time.

ENGIE also recommends that the Department implement a price floor in the CPS program below which the ACP rate cannot drop. While there are several ways to implement a price floor, including length of time and scale of rate, it will provide transparent and long-range certainty for a certain level of financial certainty for financing and investing.

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[1] Massachusetts Department of Energy Resources, *Charging Forward: Energy Storage in a Net Zero Commonwealth,* December 2023, at 8.
[2] In solar renewable energy credit ("SREC") markets where solar depends on initially high SREC prices as an added incentive (e.g. New Jersey), there are stronger power prices or other more supportive market structures to ensure longer term revenues can be secured even as SREC prices drop.

ENGIE further recommends that the Department consider increasing the amount of long-term contracting. CPS credits could be sold under long term contracts if there were more certainty and stability in price. Either the EDCs or the Department, with the appropriate authority and mandate, could run procurements for CPS credits under ten plus year fixed price competitive structures to create a market. Providing these types of "contracted" revenue streams will significantly reduce the cost of project development and significantly increase the interest of the investment and development community.

Finally, in comments submitted by ENGIE to the Department in May 2021, ENGIE noted that the Department may have been undervaluing peak reduction given the prices that Eversource and National Grid pay in their peak demand programs. Through these programs the EDCs pay $200k per MW per year based on total benefits for many fewer hours of peak shaving. Although the comparison may not be apples to apples, the EDCs have greater access to information (e.g. avoided distribution/transmission) and have developed very sophisticated models that track every dollar of benefits.

Department consideration of meaningful program reforms is necessary to ensure that the CPS program is a successful tool for deploying BESS in the Commonwealth. A failure to consider such reforms to the CPS program will serve to further stall BESS development to the detriment of both the Commonwealth and to the companies investing here.

2. **The Department should amend the CPS program's DCM to unlock near term BESS deployment.**

ENGIE does not find the current DCM to be an effective policy tool to deploy large amounts of BESS in the Commonwealth. At the launch of the stakeholder discussions on the DCM ENGIE understood that the DCM would be an effective signal to site BESS to maximize its benefits to the distribution system. However, because of the interconnection and tariff-related obstacles referred to above and given that the CPS program has not incentivized BESS deployment as desired, it is now the DCM, and not the CPS program, which has become the lead policy tool to sufficiently compensate BESS deployment. Reforming the DCM is the fastest and surest way that the Department can unlock BESS projects *right now*.

Unfortunately, the DCM Guideline finalized last month is insufficient to support the development of much of the BESS in the Commonwealth.[3] One primary reason is that the DCM Guideline requires that BESS be located on specific circuits to benefit from the multiplier.[4] However, BESS operating tariffs filed recently by the EDCs would largely preclude BESS from interconnecting on those very circuits.[5] The BESS operating tariffs prevent BESS from connecting if it would result in a substation transformer or distribution circuit from exceeding 75% of its rating at peak load. Currently, it is not clear how a BESS developer could target a DCM Guideline-eligible circuit with any certainty that it could successfully interconnect in a way that provides financial viability given several issues including not having circuit load data to inform when the peaks exist. This is a fundamental project qualification hurdle that may prevent a lot of development on its own, regardless of how many or few projects may eventually in fact be eligible.

ENGIE believes that the Department should reconsider the basis for DCM eligibility and include PV-saturated circuits as eligible to participate in the multiplier. ENGIE understands that this was the resource characteristic that the CPS was intending to incentivize at program launch and throughout most of the development of the DCM guidance. Also, for better or for worse, this was the signal that BESS developers like ENGIE followed in developing pipelines.

ENGIE acknowledges that there is some inherent early mover development risk in following draft regulatory guidance. But the significant, abrupt and surprising shift in methodology for identifying DCM-eligible circuits from the draft to the final guidance is unusual and has caused significant problems in our development that is putting our projects at risk.

ENGIE maintains that significant value exists in siting BESS on PV-saturated circuits. In its Report the Department recognizes the value of BESS paired with solar.[6] The DCM should encourage the

[3] Clean Peak Distribution Circuit Multiplier Guideline, revised December 5, 2023.
[4] *Ibid*.
[5] National Grid Energy Storage Systems Operational Parameters Tariff, D.P.U. 23-115; Unitil Operational Parameters for Energy Storage Systems Tariff, D.P.U. 23-117.
[6] *Supra* note 1, at 12.

interconnection of BESS to the same physical distribution circuit wires as solar resources by selecting solar saturated circuits to charge during hours of solar generation and discharge outside of those hours.

3. **The Department should confirm that short duration energy storage (SDES) systems are eligible for near-term funding opportunities.**

ENGIE requests that the Department clarify and confirm that SDES is eligible for near-term funding opportunities. We support the Department's interest in incentivizing medium duration energy storage (MDES) and long duration energy storage (LDES). Although these technologies are still in the development phase, they have the potential to provide significant benefits to the electric grid. In the meantime, it is essential that the Department support the immediate deployment of SDES which is necessary to bridge the time until the advancement of MDES and LDES technology becomes more financially and commercially viable. The Report is not clear on whether three of the four program funding areas, standalone bulk storage, resiliency and ESS siting, are eligible for funding. These three proposed categories should be eligible. The Department should make that clear in the programs it implements.

4. **The Department should focus on providing regulatory certainty to support further investment in BESS.**

ENGIE trusts that the Department understands the importance of providing regulatory clarity and certainty to all involved in the energy sector in the Commonwealth. It still bears emphasizing the criticality of a predictable and supportive regulatory environment for both investment decisions that ENGIE makes internally as well as those made by and with our financing partners. Unfortunately, questions surrounding the ability of the CPS program to finance near-term BESS investments, including the structure of the DCM Guideline, in the Commonwealth within the context of a severe lack of regulatory certainty relating to interconnection, tariff rates and constraints on how we operate the BESS is threatening our ability to move forward in the Commonwealth.

ENGIE is encouraged by the Report and the Department's commitment to deploying all durations of BESS. We are particularly impressed by the speed at which the Department intends to provide the needed certainty.

ENGIE appreciates the opportunity to support and engage with the Department and thanks the Department for the opportunity to provide comments on the Report.

Sincerely,

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