

July 15, 2025

Re: Solect Comments on Advancing Massachusetts Power Straw Proposal

Dear Mr. Ferguson,

The Solect team has reviewed the straw proposal “Advancing Massachusetts Power” and provides our comments herein. We appreciate the opportunity to have participated in a stakeholder session on May 29th that preceded the publishing of the straw proposal. We previously submitted stakeholder comments on the Charging Forward report in January 2024.

Solect Energy is one of the largest C&I solar developers and integrators in New England. With over 800 projects completed, Solect specializes in rooftop, ground-mounted and canopy solar projects, and energy storage systems. Solect develops, installs, finances and provides management services for projects with a wide range of commercial, industrial, public and non-profit customers. Solect is the provider to the PowerOptions Solar and Storage program, serving municipal, state and public schools throughout New England. To date, Solect has commissioned 12 behind the meter (BTM) non-residential ESS projects.

The Solect team understands that the Department of Energy Resources’ mission is to create a clean, affordable, resilient, and equitable energy future for all in the Commonwealth. We interpret “Energy Equity” to mean closing the gap between communities that benefit from clean, reliable power and those that shoulder disproportionately high energy costs and outage risks. More specifically, the problems that we are trying to solve are the following:

- (1) Greater exposure to grid outages: Deploying a C&I-scale energy-storage system can offer limited backup power. Ideally this is located in a community shelter or other place to maximize the number of people it can serve. Resiliency in this context is the site’s ability to ride through grid disturbances with minimal service interruption.
- (2) Excessive energy burden: Low-income (LI) and environmental-justice (EJ) households spend a higher percentage of income on energy. Offset higher energy costs (such as capacity costs with the ESS) by participating in grid services programs like Clean Peak.
- (3) Emissions from peaker plants: Reduce local peaker emissions by supplying energy capacity during high-demand (emission) hours.

We recommend that Community Resilience grants in the AMP program be chiefly used to address problem #1, while problems 2 and 3 are adequately addressed through a value stack of grid services program revenue and peak demand savings.

Please review our responses to DOER's questions below.

1. Are there any program areas currently not included that you feel should be included? If so, what are those areas and why should they be included?

Solect does not recommend additional program areas.

2. Are the rough maximum grant levels by subprogram and the estimated number of projects sufficient to motivate you to apply? If not, what would be? Community Resilience \$2.5 million, Safety & Education \$400-800 thousand, LDES Commercialization \$5 million.

This program will help fill a gap in the Commonwealth's strategy to meet its energy storage goals by incentivizing backup power. We believe the funding grant levels are sufficient to motivate applications. At these maximum award levels of up to 50% of total project cost, we are concerned that there will be considerably higher demand from municipalities than the 10 to 30 Community Resilience projects that DOER expects to award.

There is a high level of interest in battery backup power capability, but the state's current programs, mainly Clean Peak and ConnectedSolutions, do not incentivize two types of costs:

1. The cost of reserve capacity not utilized in grid services programs or for peak shaving.
2. The incremental costs of designing and building a system with islanding capability.

To address the cost of reserve capacity, Solect recommends a fixed \$/kWh incentive that covers up to 25% of the total capacity of a behind the meter (BTM) ESS. Batteries intended for commercial BTM applications currently cost around \$400 per kWh, though this will likely change with tariffs.

To address the costs of islanding capability, we recommend a flat amount of \$150,000 to cover costs including the following: relays, critical load panel upgrade, main breaker panel board, automatic transfer switch, service upgrade and related site work, islanding engineering, controller, and monitoring subscription. The aforementioned costs are relatively flat for ESS projects between 300 and 1500 kW.

Establishing pre-defined award levels would make AMP administratively simpler and potentially enable well more than 30 Community Resilience projects.

3. Based on the project milestones in the straw proposal, does the proposed timing of financial disbursements align with your project's needs? If not, how would you recommend the timeline be adjusted? In your response, please indicate the subprogram to which your comments refer.

The Solect team agrees with other commenters on the 7/1/25 Straw Proposal call that five milestones is too many. We recommend a simpler two payment approach for Community Resilience projects:

- 50% at Notice to Proceed with construction
- 50% at Mechanical Completion (with documentation from developer)".

Utility PTO documentation can stretch out for months or even years beyond this date, so we do not recommend tying final payment to that step.

4. Please provide comments on the following elements common to all subprograms. In your comments, please indicate the subprogram to which your comments refer: a. Project eligibility b. Project evaluation criteria c. Project requirements

The Solect team agrees with the general elements for project eligibility, the evaluation criteria, and requirements.

5. For Community Resilience and LDES Commercialization projects, what is reasonable to expect around interconnection status at the time of application? What are typical determinants of longer interconnection processes? (please indicate the subprogram to which your comments refer)

Interconnection of batteries is a growing challenge. In our recent experience, it has taken at least 18 months to receive interconnection approval for BTM commercial ESS projects. For this reason, we recommend that DOER enable applicants to apply for and reserve Community Resilience funding upon submitting an interconnection application, rather than upon signing an interconnection service agreement.

Key determinants of the length of the interconnection process are:

- Configuration of battery: hybrid ESS-PV vs. ESS-only
- Whether or not a project gets put into a Group Study

- Participation in a pilot flexible interconnection program

We would like to see interconnection turnaround times stay within the published periods for Expedited applications, and include any necessary supplemental or impact study. This should not exceed 12 months.

Solect is part of the MA Interconnection Implementation Review Group that has proposed revisions to the interconnection tariff that would speed up review of batteries under 1 MW.

6. For Community Resilience and LDES Commercialization projects specifically in EJ/LMI communities (please indicate the subprogram to which your comments refer):

- a. What existing funding sources have you pursued or secured for clean energy or resilience projects? What barriers have you encountered in pursuing or securing those funds?**
- b. What cost-sharing arrangements would be reasonable or feasible for your community or organization? Are there innovative or non-financial approaches to cost-sharing that you would recommend?**

The Solect team has seen strong interest in a “Shared Savings” ownership model for batteries paired with a solar array under a Power Purchase Agreement. The ESS project owner and the municipality share the combined revenue and savings from the battery to mutual benefit.

Projects that use a third party ownership model should not be scored lower in DOER’s evaluation criteria. There are multiple barriers to ownership for public entities:

- Challenge with funding ESS project cost, even with grant level covering up to 50% of project cost, especially in LMI communities.
- Challenge with monetizing federal tax credits
- Lengthy approval process and competing priorities for capital project funding
- Lack of O&M capabilities and operating costs to consistently fund system maintenance.

7. For Authorities Having Jurisdiction (permitting and safety review boards, fire departments): what is the minimum level of technical and project detail required to conduct an initial review of an energy storage project application? What are the key data points or documents that must be included in a complete submission? a. At what point should a revised project scope trigger a new review or resubmission? What types or magnitudes of changes (e.g. technology, size, location, use case) should be considered significant enough to warrant reevaluation?

A minimal submittal for an initial review would include a site plan that identifies known exposures as well as existing or planned safety and fire safety measures. In addition a single line diagram, equipment cutsheet, and project narrative (operational goals, and sequence of operation). It's critical for the AHJ (the Fire Department in the case of Energy Storage) to know the technology being used as well as the system capability (islanding for example).

A complete submission may vary by municipality but could include UL9540A test results, original IEEE and UL certifications, a MA Chapter 52 Compliance Checklist, NFPA 855 Compliance documents, manufacturers emergency response guide, relevant hydrant locations and flow test results, integrated alarm panel upgrades and alarm sequence.

Any change that alters the conditions the permit was issued (or being reviewed) under need to be conveyed to the AHJ. It will be at the discretion of the AHJ what level of reevaluation will be warranted. The changes mentioned above, technology, use case, location, size, should all at a minimum be brought to the attention of the AHJ. In cases of disagreement or a lack of resources the State Fire Marshall can assist.

8. Please provide any additional feedback that is not covered by these questions or any of the questions under the subprogram categories below.

More populous municipalities may have the need for multiple Community Resilience sites. The program should provide the flexibility for awarding an applicant funding for more than one ESS project.

Hybrid PV-ESS systems improve the economics of behind the meter batteries in a few ways:

- Earn SMART ESS Storage adder, a “bankable” revenue stream (note that MLPs cannot participate in SMART)
- Charges battery from PV, reducing cost of grid imports
- Reduces the amount of storage capacity required for grid outages, since the PV can power loads on an islanded circuit and charge the battery
- Ideally positioned to provide significant cost relief to the offtaker entity

17. Based on your experience, what scale or type of LDES project (e.g. system size, duration, customer class) can realistically be developed with \$5M in grant funding, assuming it covers up to 50% of costs? Please consider both capital and soft costs in your response

We would not recommend an early stage non-lithium battery for our clients, as customers face technology and business risks - if the battery does not perform, and if the OEM ceases to be a going concern. With 50% cost share, there is a big potential downside to the customer if the OEM is no longer around to support it or honor the warranty.

18. Do you currently have LDES (10+ hr.) projects in Massachusetts in your development pipeline? Please only share non-confidential information and remember that DOER makes all comments received publicly available. a. What is the scale and timeframe of those projects to achieve deployment? b. Please describe the purpose of the project. If it is a demonstration project, please describe the objectives and goals for the project and how it will further technology commercialization. If it is a commercial project, please describe the use case and sources of revenue.

No, Solect does not have a 10+ hour duration battery in development. When Solect develops an ESS project with islanding capability, it is always paired with a PV array. This configuration reduces the amount of storage capacity required for grid outages, since the PV can power loads on an islanded circuit and charge the battery.

Thank you for this opportunity to provide feedback.

-The Solect Team