Webinar Reminders and Requests

Please keep microphones muted until the Q&A portion of the webinar.

Please add any questions during or after the presentation to the meeting chat. During the Q&A portion of the webinar, you can also raise your hand to ask a question.

If your question is not answered, we encourage you to add your question and recommendation in written feedback to DOER.

Note that the webinar will be recorded and posted to DOER's website.

MASSACHUSETTS
DEPARTMENT OF
ENERGY RESOURCES

Advancing Massachusetts Power:

Energy Storage Grant Program Straw Proposal

July 1, 2025

DRAFT

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About DOER

Who We Are

As the State Energy Office, DOER is the primary energy policy agency for the Commonwealth. DOER supports the Commonwealth's clean energy goals as part of a comprehensive Administration-wide response to the threat of climate change. DOER focuses on transitioning our energy supply to lower emissions, reducing and shaping energy demand, and improving our energy system infrastructure.

We are an agency

of the Executive Office of Energy and Environmental Affairs (EEA).

We do not discriminate

on the basis of race, color, national origin, disability, age or sex.

Who We Serve

The Massachusetts Department of Energy Resources (DOER) develops and implements policies and programs aimed at ensuring the security, diversity, and cost-effectiveness of the Commonwealth's energy supply to create a clean, affordable, energy future for all residents, businesses, communities, and institutions.

As part of this energy mission, Massachusetts has joined with the other New England states to form **New England Energy Vision**, to reflect our regional coordination to develop a clean, affordable, and reliable 21st century electric grid.

Background Information

Background and Introduction

Program History

- The *2024 Charging Forward Report* proposed an energy storage grant program to help realize identified energy storage benefits.
- DOER brought on the MESA team to help stand up and administer the program, now called Advancing Massachusetts Power (AMP).

Process Overview

The process analysis had two main tasks:

- Landscape assessment
- Targeted stakeholder focus groups

Straw Proposal Webinar Purpose

- The purpose of this presentation is to give an overview of the proposed program design and components and solicit stakeholder feedback.
- The focus of this presentation is on the overall program design and targeted project types, and less on requirements for program participation (which might be discussed in another stakeholder webinar).

Next Steps

- Email written comments in PDF format to Thomas.Ferguson@mass.gov by July 15, 2025.
- See the DOER program webpage for questions and more information.
- There may be stakeholder follow-up and a second stakeholder webinar in the future.

Key Terms and Definitions

Resilience	The ability of ESS to provide backup power to a specific load during a grid outage.
Community Benefits	Benefits (financial or otherwise) realized by the broader community.
EJ/LMI Benefits	Benefits (financial or otherwise) that accrue to EJ/LMI populations.
Long Duration Energy Storage	ESS with a nameplate duration of 10+ hours.

Key Terms

AMP	Advancing Massachusetts Power
BTM	Behind the Meter
CPS	Clean Peak Energy Standard
DOER	Department of Energy Resources
EJ	Environmental Justice
ESS	Energy Storage System
FTM	Front of the Meter
kW	Kilowatt
kWh	Kilowatt-Hour
LDES	Long-Duration Energy Storage
Li-ion	Lithium-Ion Battery
LMI	Low/Moderate Income
MW	Megawatt
MWh	Megawatt-Hour
RTE	Round Trip Efficiency

General Information

Total Program Budget: **$47M**

MASSACHUSETTS DEPARTMENT OF ENERGY RESOURCES

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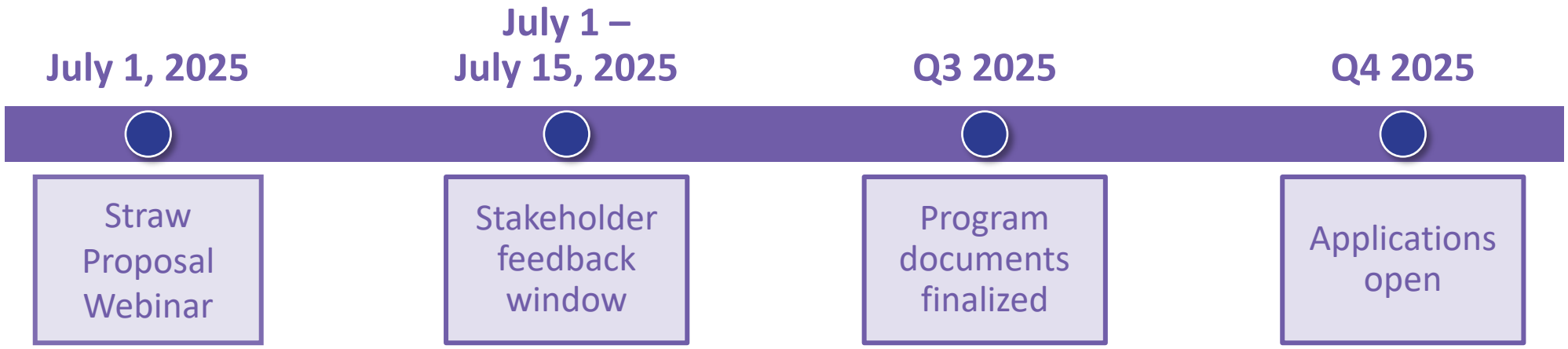
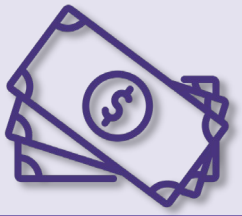


Important Things to Note

DOER acknowledges that several major barriers exist in the energy storage industry (such as supply chain issues, tariffs, federal tax credits, and interconnection challenges). This grant program cannot address all barriers.



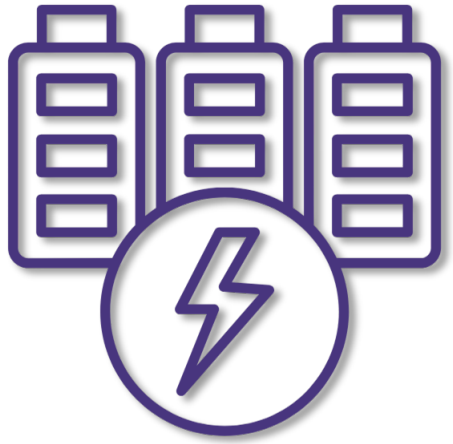
Funding for this grant program is limited. The final program areas and components may not address the specific barriers that you face.

The content of this presentation and information shared during the straw proposal webinar are initial ideas only. DOER does not commit to launching a program with any or all of the grant areas and components discussed. **DOER is also open to ideas for additional areas to consider**.

Program Information

Grant Program Objective

To **accelerate the equitable deployment of safe energy storage systems** across the Commonwealth by prioritizing investments that deliver **resilience**, **pollution reduction**, **economic opportunity**, and **health benefits** to the Commonwealth with a focus on frontline, low-income, and disadvantaged communities.



Proposed Program Concepts and Rationale

Community Resilience

Support the installation of small- and medium-sized BTM systems that can provide power during an outage to critical facilities that serve a community or region, with an emphasis on resilience and community benefits.

Safety & Education

Provide targeted training to emergency personnel and first responders, provide regional technical and educational support, and advance technology awareness to address storage safety concerns and move the industry forward.

LDES Commercialization

Promote the development of non-li-ion ESS with durations of 10+ hours with the goal of supporting and de-risking LDES technologies to expand reliable storage and safe operation of demonstrated use cases.

Expected Program Budget Breakdown

Program	Maximum Grant per Project	Estimated # of Projects
Community Resilience	~$2.5M	~10-30
Safety & Education	~$400-800K	~5-20
LDES Commercialization	~$5M	~3-5
Total	**$47M**	**~20-55**

DOER intends to target at least 40% of all grant funding to EJ communities or projects serving EJ populations.

Program Design Elements

Target Audience

- Who the program intends to serve by awarding a grant
- Who we envision applying

Offering

Details on what grantees receive through grant award (such as funding, technical assistance, in-kind support)

Project Eligibility

Minimum requirements that must be met to receive a grant

Application Evaluation Criteria

- What factors will differentiate applications and make them competitive
- What program admin team uses as a baseline to review proposals

Project Requirements

What project must adhere to (such as program participation and data reporting)

Stakeholder Focused Questions*

? 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	Grant Level: **$2.5M**	Safety & Education	Grant Level: **$400-800k**	LDES Commercialization	Grant Level: **$5M**

? Please provide feedback on the proposed elements within each subprogram.

- ✓ Target audience
- ✓ Offering
- ✓ Project eligibility
- ✓ Application evaluation criteria
- ✓ Project requirements

? Are there any program areas currently not included that you feel should be included? If so, why?

* DOER will follow up with an announcement seeking written feedback from stakeholders on these and additional questions.

Community Resilience & LDES Commercialization Subprograms

Objective: Promote storage deployment and operation by 2030

Note: these two subprograms have additional unique criteria

Project Eligibility

- Project/load served physically located in Massachusetts
- Non-single family residential*
- Grid-connected

Application Evaluation Criteria

- EJ/LMI benefits
- Community engagement and partnership structure
- Resilience capability
- Economic viability
- Technical viability
- Project viability
  - Host customer/developer relationship
  - Interconnection status
  - Site control status

Project Requirements

- Achieve operation by Dec. 31, 2030**
- Provide operational data to DOER for 3 years
- Community engagement plan
- Projects must obtain all required permits and authorizations
- Safety plan

* While this program is not intended to support single-family residential projects, it is open to other types of residential projects such as affordable multifamily buildings or community-based residences.

** This date does not apply to the pre-construction support option within the Community Resilience subprogram.

Community Resilience Subprogram

Community Resilience:
Subprogram Objectives

Option 1
Pre-Construction Support

Help EJ/LMI applicants identify and assess the feasibility of energy storage opportunities and better prepare to pursue follow-on implementation funding.

Option 2
Project Installation Support

Support the installation of small- and medium-sized BTM systems with an emphasis on resilience and community benefits.

Community Resilience:
Target Audience

Option 1
Pre-Construction Support

- Communities/municipalities
- Community-based organizations
- Local governments
- Public universities, community colleges, public schools
- Critical facilities (such as community centers, hospitals, wastewater facilities, assisted living facilities)

Option 2
Project Installation Support

- Communities/municipalities
- Community-based organizations
- Local governments
- Public universities, community colleges, public schools
- Critical facilities (such as community centers, hospitals, wastewater facilities, assisted living facilities)
- Developers in partnership with entities above*

* Developers are a distinct target audience for Option 2.

Community Resilience:
Offering

Option 1
Pre-Construction Support

- Grant for up to 75%* of feasibility study cost (not to exceed $100k)
- Technical assistance from DOER and program administration team

Option 2
Project Installation Support

- Grant for up to 50%* of project cost (not to exceed $2.5M)
- Technical assistance from program administration team

Items for Consideration

- 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 percentage allotted may be increased based on the application evaluation criteria scoring, assessed using specific application characteristics.

Community Resilience:
Project Eligibility

Option 1
Pre-Construction Support

- Study must examine all eligibility requirements in Option 2

Option 2
Project Installation Support

- BTM ESS sited at a publicly-owned or public-serving facility
- System size: 50+ kW
- Commercially available energy storage technology
- Resiliency/islanding capability (minimum 50% probability that critical systems required to serve public need remain functional throughout an outage)
- Identification of critical loads and benefactors of resilience

Community Resilience:
Application Evaluation Criteria

Option 1
Pre-Construction Support

- Identification of resiliency need and services to be provided

Option 2
Project Installation Support

- Resilience capability range and community impact
- System lifetime maintenance plan
- Dispatch operation plan including program and market revenue streams
- Evidence of working with interconnecting utility

Common evaluation criteria:

- Location in EJ/LMI community
- Letters of support from community/ city and site owner

Community Resilience: Project Requirements

Option 1 Pre-Construction Support

- Design for CPS program eligibility
- Payment upon feasibility study completion

Option 2 Project Installation Support

- Enrollment in programs
  The storage system can and should participate in markets and programs, such as CPS, so long as it has 90% charge in advance of a known weather or potential outage event

Milestones (with a portion of funding released at each milestone)

15%	Interconnection Service Agreement (fully executed document)
30%	Major Equipment Delivery (invoices from installer/developer)
30%	Mechanical Completion (certificate from owner, EPC contractor, or independent engineer)
15%	Successful Commissioning or Substantial Completion (documentation from installer/developer)
10%	Final Completion (Utility PTO documentation)

Items for Consideration

- What is reasonable to expect around interconnection status when you apply?
- How long does it take for Community Resilience projects to get interconnected?
- Is it reasonable to expect these projects to participate in programs and markets while maintaining a 90% charge in advance of a known weather or potential outage event?

Community Resilience:

Example of “Pre-Construction Support” Potential Project Type

Local Government / Municipal Buildings

Where: EJ community

What: ESS feasibility study

Why: Use municipal buildings as storm shelters in case of extended power outage

When: Before construction

Community Resilience:

Examples of “Project Installation Support” Project Types

School Board/ Middle School

Where: EJ community

What: 250 kW / 500 kWh lithium battery

Why: Participating in programs and markets and providing back-up power to replace existing fossil fuel generators

When: Operational by 12/31/2028

Non-Profit/ YMCA

Where: EJ community

What: 500 kW / 1 MWh lithium battery

Why: Participating in programs and markets and providing back-up power to heating and cooling systems during outages

When: Operational by 12/31/2028

Developer/ Hospital

Where: Non-EJ community

What: 750 kW / 3 MWh zinc battery

Why: Participating in programs and markets and providing back-up power to essential medical equipment

When: Operational by 12/31/2028

Safety & Education Subprogram

Safety & Education:
Subprogram Objectives

Support first responders, planning boards, and others to take advantage of currently available energy storage fire safety programs.

Support applicants to develop programs that fill in gaps in current energy storage safety, equipment, and education landscape across the Commonwealth.

Safety & Education:
Target Audiences

State entities	Planning commissions	Fire departments and first responders
Higher education/ training institutions	Regional emergency planning commissions	Professional organizations, nonprofits, and community-based organizations

Safety & Education:
Offering

Grant up to 80% of total project cost (not to exceed $800K)

Support from DOER (such as coordination and outreach)

Safety & Education:
Project Eligibility

Unrelated to specific energy storage project

Must demonstrate applicability to broader Commonwealth goals

Preference for projects that could have impacts beyond a specific town or specific energy storage installation

Examples

If applicant is developing a training or education program, how will program be broadly disseminated?

If town wants to train its first responders, could those first responders then train other surrounding town first responders or hold community workshops?

Safety & Education:

Application Review Criteria

Ability to advance energy storage safety	Level of initiative (Commonwealth, community, other)
Replicability across Commonwealth	Community/EJ/LMI benefits (engagement and services provided)

Safety & Education:

Project Requirements

Scheduled reporting to DOER on what grant is being used for and key performance indicators such as number of first responders trained, number of events hosted, number of attendees, and number of materials produced.

Safety & Education:

Examples of Potential Project Types

Municipal Fire Department

Where: EJ community

What: Massachusetts Fire Academy training on BESS and Li-ion battery fires

Why: Ensure staff have current training

When: Single use

Regional Planning Council

Where: Constituent communities

What: Coordinating quarterly trainings on fire safety requirements and best practices for ESS

Why: Develop common approaches and requirements for permitting and emergency response

When: Two-year duration

Community-Based Organization

Where: Surrounding communities

What: Develop and implement multimedia public education campaign- including workshops, online content, and community events

Why: Foster public trust and acceptance of energy storage technologies

When: Single use

LDES Commercialization Subprogram

LDES Commercialization:
Subprogram Objectives

Support near-term deployment and commercialization of 10+ hour LDES projects to de-risk non-commercialized technologies and expand reliable storage and safe operation of demonstrated use cases.

LDES Commercialization:
Target Audience

LDES technology developers

Critical facilities
(such as community centers, hospitals, wastewater facilities, assisted living facilities)

LDES Commercialization:
Offering

Grant up to 50% of total project cost (not to exceed $5M) to support deployment at a site.

Technical assistance from program administration team.

Items for Consideration

- Do you currently have LDES (10+ hour) projects in your development pipeline?
  - What is the scale and timeframe of those projects?
- What size project might be developed based on the implied estimated grant values?

LDES Commercialization:

Project Eligibility

BTM or FTM	50% minimum RTE
System size: 100 kW+	10+ hour duration at nameplate capacity
Non-lithium, non-pumped hydro ESS*	Site control (selected site with permission from owner)

* Novel closed-loop pumped hydro energy storage solutions may be considered.

LDES Commercialization:

Application Evaluation Criteria

Ability to advance the commercialization of LDES technology through a demonstration project

Benefits to ratepayers and local community/customers

Potential to integrate large renewables (such as offshore wind)

Ability to directly or indirectly displace fossil fuel peaker plants

Preference towards Massachusetts-based companies

LDES Commercialization:

Project Requirements

Agreement to be evaluated
(such as being willing to provide performance and cost data)

Milestones
(with a portion of funding released at each milestone)

15%: Interconnection Service Agreement (fully executed document)

15%: Successful Commissioning or Substantial Completion

30%: Major Equipment Delivery (invoices from installer/developer)

10%: Final Completion (Utility PTO documentation)

30%: Mechanical Completion (certificate from owner, EPC contractor, or independent engineer)

Items for Consideration

- Are these milestones appropriate?
- What is reasonable to expect around interconnection status when you apply?
- How long does it take for LDES projects to get interconnected?

LDES Commercialization:

Examples of Potential Project Types

Municipality

Where: EJ community

What: 1 MW / 12 MWh flow battery

Why: To provide Installed Capacity (ICAP) / Regional Network Service (RNS) cost reduction during peak demand

When: Operational by 12/31/2030

Developer/ Community Hospital

Where: EJ community

What: 200 kW / 2 MWh zinc battery

Why: To provide back-up power replacing existing fossil fuel generators

When: Operational by 12/31/2030

Next Steps

Next Steps & Reminders

Stakeholder Comment Period

- July 1 – July 15

Next Steps

- Please email written comments to Thomas.Ferguson@mass.gov by July 15, 2025

More Information

- Please visit https://www.mass.gov/info-details/advancing-massachusetts-power for more information about the program and design process

Q&A