

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENERGY RESOURCES

Elizabeth Mahony, Commissioner

DEVOTE:
**DOER's Grid Resilience
Innovation Program (GRIP)
Proposal with Fermata Energy**
For listening sessions

March 2024

Agenda

- Introductions
- What is the value of electric car batteries?
- Current electric vehicle programs
- The funding opportunity from the federal government
- DOER's plan for the funding
- Public feedback needed
- Questions

Batteries – Save Energy for Later



From the battery in your remote control to the electric system, all batteries save energy for later. Now, vehicle batteries are big enough to do more than run your car – including making the electricity system more reliable.

Advantages of Having an Electric Car Battery

- **Reduce emissions** - Reduce pollution from the tailpipe of your car
- **Be blackout safe** - Provides backup power to your home during a blackout or emergency
- **Reduce cost** - Save money by using electricity to power your car instead of gas
- **Help make the electricity system more reliable** – The energy saved in your car can go into the electricity system when needed and YOU GET PAID!

Current Battery Programs

- [Connected Solutions](#) is a program for home or vehicle batteries to send energy to the grid when needed. Based on performance you can get a rebate when your battery provides its energy to the electrical system. Participants could make up to \$1300/year.
- There are no programs to help people with the up-front cost of a home or vehicle battery.

Massachusetts is trying to change this!

Current Electric Vehicle Programs

- National Grid customers can get [incentive for not charging during specified times](#) – roughly \$100 electricity bill credit.
- [MOR-EV](#) state incentives
 - \$3500 for EV purchase
 - \$1500 additional rebate for drivers with qualified income
 - \$1000 for trading in certain gas-engine vehicles
- Up to \$4000 in [federal tax credits](#) for a used vehicle

Federal Funding Opportunity

- Two major federal laws are funding improvements to electrical system
- Massachusetts is applying for funding to improve the electricity system using new technologies and methods
- Deadline for the application is May 22, 2024
- Deadline for public input on application is due on April 1, 2024

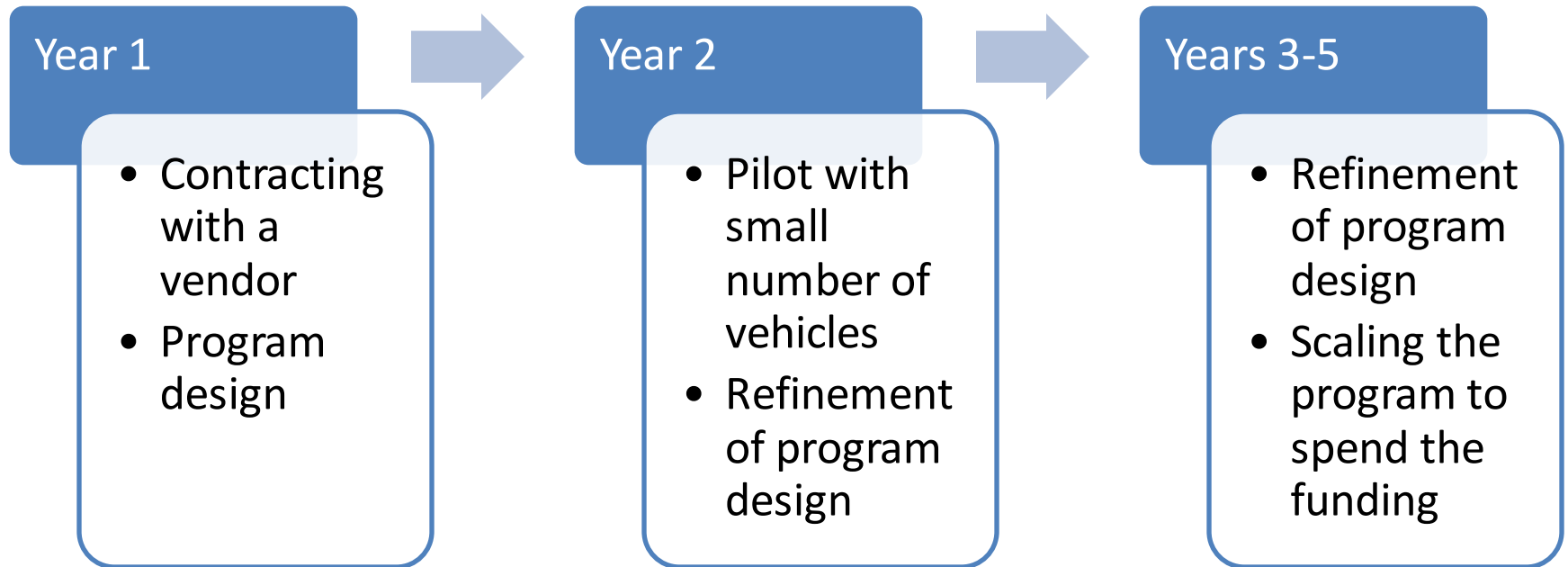
Project Goals

- Reduce the cost of transportation to people with low or moderate incomes
- Remove tailpipe pollution from communities where people with low or moderate incomes live
- Create a program to ensure drivers in these communities have access to battery performance incentives
- Use vehicle batteries to make the electric system more reliable

Schedule

- 1/12/24 – DOER submitted our concept to US Dept. of Energy.
- February 2024 – DOE encouraged DOER to apply
- 5/22/24 – Deadline for DOER to submit application if we are allowed
- Fall 2024 – DOE will announce grantees
- (If funded) First incentives likely available in 2026

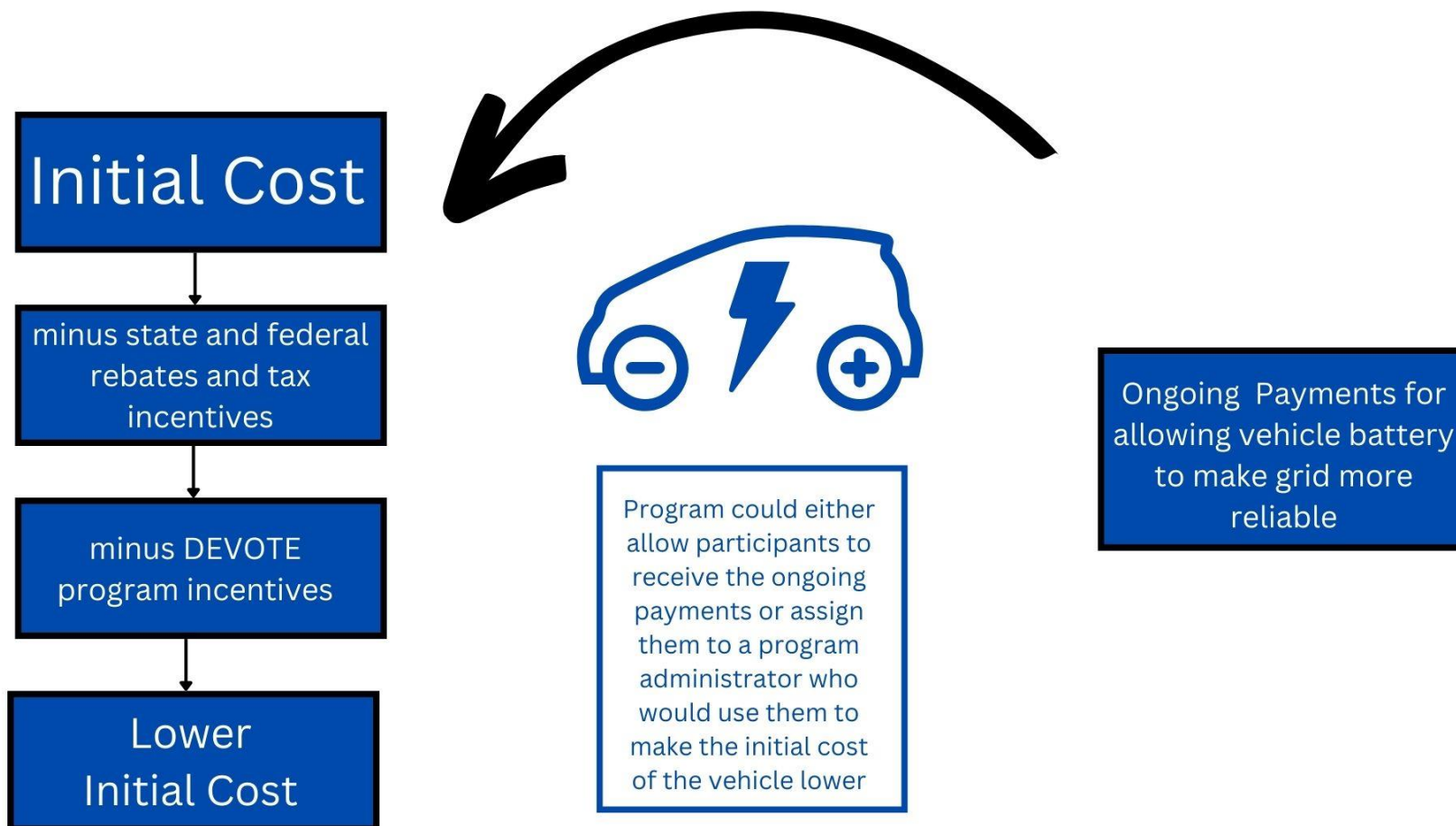
Likely Timeline After Award



Areas Where Public Input is Needed

DEVOTE:

Deployment of Equity-Driven Vehicle-to-Grid (V2G) Opportunities for Transportation Electrification



Locations

- Looking to pilot the program in communities with a Justice 40 designation
- Money will likely support a limited number of vehicles – under 1000 – geography may need to be limited
- Need to find communities where many people need access to reliable personal transportation and have place to charge vehicle

Questions for Stakeholders

Who promotes the
program to
drivers?

Where do the
drivers buy the
vehicles?

Where do the
drivers get their
auto financing?

How low would
the initial cost
need to be for
people to buy EVs

How to Provide Feedback

- Some time for questions now
- In writing to christina.moroney-ebarb@mass.gov – input received by April 1st will be prioritized
- [DOER Listening Session](#) to hear verbal feedback – March 28th at 3pm
- Brainstorm via [Jamboard](#) until April 1

Additional Public Feedback Needed

- Partnerships – what organizations would want to be included in the application and involved in program design and implementation
- Program language – how to communicate with target communities about complex technical topic of using vehicle batteries to improve the electric system?
- Program design – how to implement program
 - How to sign up?
 - How to apply savings?
 - Do customers need the performance incentive to adhere to control needs?
- Locations – where can program have the highest likelihood of success?
- Public engagement – how do we solicit public input during program design phase
- Labor – how do we ensure that the people doing the work under a program had high quality jobs and hired people in the communities served?

THANK YOU!

Appendix

The Funding Opportunity

- **Grid Resilience and Innovation Partnerships (GRIP) Program** – Competitive grants of \$3.9 billion to enhance grid flexibility and improve the resilience of the power system against growing threats of extreme weather and climate change.
 - **Smart Grid Program** ~\$1 billion to higher ed, businesses, non-profits, and governments innovative and ambitious uses of cutting-edge, market-ready technologies. These technologies can include new devices, materials, engineering designs, or software tools to improve:
 - (electric) system capacity and flexibility
 - grid operators' ability to use data to deliver benefits to ratepayers and support policy goals
 - de-risk broad adoption of innovative technologies and approaches by including participation of multiple eligible entities

GRIP Topic 2 Parameters: Smart Grid

- The 40107 Smart Grid Grants program is aimed at supporting projects that will achieve the goals and objectives set out in FOA Section I.A.ii through innovative and ambitious uses of **cutting-edge, market-ready technologies**. These technologies can include new devices, materials, engineering designs, or software tools. DOE particularly seeks projects that will progress the field in the following areas:
 - Projects that focus on the use of **innovative materials, tools, and engineering approaches to improve system capacity and flexibility**. Applications should clearly delineate the ways in which the proposed approach(es) are industry leading and/or represent a significant advance in capabilities for the applicant.
 - Projects that **meaningfully improve grid operators' ability** to use data to deliver benefits to ratepayers and support policy goals. Applications should describe the types and sources of data and provide a qualitative description of the extent of the corpus of data available. In addition, applications should specify how the project will improve one or more grid operators' ability to use **data for operational purposes**, planning purposes, or both, and the extent to which the project will enable usage of data across silos within and across organizations.
 - Projects that are **structured to de-risk broad adoption of innovative technologies and approaches by including participation of multiple eligible entities** (especially multiple grid operators) and a clear strategy for assessing the benefits of the proposed innovations. As described in Section I.A above, all applications submitted under this FOA should demonstrate that they will provide significant economic and justice benefits to communities, that they can leverage capital investment, and that they lead to repeatable solutions for other entities.

Presentation Glossary

- Connected Solutions – Mass Save program providing incentive to provide electricity to the grid using a battery
- DOER – Massachusetts Department of Energy Resources
- DOE – US Department of Energy
- EV – Electric Vehicle
- MOR-EV – Massachusetts' EV incentives