

## **Vehicle-to-Everything General**

### **What is the MassCEC Vehicle-to-Everything (V2X) Program?**

This Program seeks to identify and implement a set of electric vehicle (EV) charging demonstration projects across the state of Massachusetts that will allow for vehicle-to-home (V2H) and/or vehicle-to-grid (V2G) capabilities and the development of guidance for V2X deployment for different use cases.

### **What is V2X?**

For this Program, V2X describes the bi-directional power flow between an EV and an external load, such as the utility grid, a building, or a home. There are three typical specific variations of V2X: V2H (Vehicle to Home), V2G (Vehicle to Grid) and V2L (Vehicle to Load). Note that vehicles that are solely capable of V2L are not eligible for this program.

### **What is a bi-directional EV or EV charging station (EVSE) system?**

Until recently, EVs have only been capable of uni-directional power flow from the electric grid to their batteries to charge. New technology in both EV and EVSEs has introduced bi-directional power flow to unlock additional functionality. Bi-directional means that EVs and EVSEs now allow power to flow both from the grid or home to charge an EV, and to discharge from the EV to the grid or home. This technology can be used to power buildings during power outages, offset electrical bills by powering buildings during times of high electricity prices, and send energy back to the grid for compensation.

### **Who is implementing this Program and who can I reach out to for questions?**

The MassCEC V2X Program is being implemented by Resource Innovations, MassCEC's approved Implementation Contractor. All questions about the Program can be emailed to [MassCECV2X@resource-innovations.com](mailto:MassCECV2X@resource-innovations.com)

Resource Innovations is working with The Mobility House, B2Q, and Voltrek on project identification and deployment, and Converge Strategies and the Vehicle Grid Integration Council on identification of V2X Guidance.

## **Program Eligibility**

### **Is the Program open for applications now?**

Yes.

- School district applications will be open through May 30, 2025.

- Residential and Commercial applications will be open through July 31, 2025.

Note that not all who express interest or apply will be able to participate.

### Who is eligible to apply for the Program?

The Program will support residential, commercial, and school district participants with V2X deployments. Not-for-profits and municipalities with fleets will be eligible under the program's commercial track.

- Applicants must have, or be planning to purchase or lease, an EV capable of bi-directional power flow and be based in Massachusetts.
- The vehicle must be delivered by October 31, 2025.
- Leased vehicles must have a lease end date later than December 31, 2026.
- If you do not own the site where the chargers will be installed, the site owner must agree to the installation of bidirectional chargers on their property

Participants will be selected to ensure the Program is able to provide guidance on a wide variety of use cases.

### Which vehicles are currently eligible for the Program?

#### Residential

<b><u>Vehicle Maker</u></b>	<b><u>Model Name</u></b>	<b><u>Model Years</u></b>
Ford	F-150 Lightning	2022-2025
Nissan	Leaf	2013-2025

#### Commercial

<b><u>Vehicle Maker</u></b>	<b><u>Model Name</u></b>	<b><u>Model Years</u></b>
Ford	F-150 Lightning	2022-2025
Nissan	Leaf	2013-2025

#### School District

<b><u>Vehicle Maker</u></b>	<b><u>Model Name</u></b>	<b><u>Model Years</u></b>
Thomas Built	Electric School Bus	2021-2025
BYD	Electric School Bus	2021-2025

Blue Bird	Electric School Bus	2021-2025
IC Bus	Electric School Bus	2021-2025
Micro Bird	Electric School Bus	2021-2025

### **What about other bi-directional capable vehicles?**

The Program team will continue to work with vehicle and charger manufacturers to add as many additional vehicles to the list of eligible vehicles as possible. Please note that while the Program is aiming to include a variety of vehicles, restrictions put in place by some automotive and/or charging station equipment manufacturers may limit the final eligibility of some vehicles.

### **What if I already have an EV charger installed which does not allow for bi-directional charging. Can I still apply?**

Yes, you can still apply. We will work with you during the application process to better understand the equipment already installed and electrical infrastructure on-site to determine eligibility.

### **What if I have already installed equipment for bi-directional charging? Could I still apply?**

Potentially. If you are looking to add new equipment to allow for additional capacity (for example, for a school district or a fleet), your site may be eligible. Please submit an Application, and our team will work with you to better understand your situation.

### **Can I apply to this program to retroactively pay for work done to install a bidirectional charger, if I agree to provide data?**

No retroactive payments are possible under this program.

### **I have or want to install related equipment, such as a solar system, a battery, or a generator. Will this preclude me from being part of the program?**

There are no barriers to applying if you have or wish to add related systems. Depending on the design, there may be technical limitations to what can be installed on a property. The Program will review the sites as they are and their present ability to install the V2X systems only: should you wish to install other systems, please work with your electrician to understand feasibility.

## **Program Timeline**

### **How long will the Program operate?**

The program will take place between January 2025 and December 2026. Within that time:

- The Program will accept Expressions of Interest until the full list of Application Requirements is published in April, 2025.
- The Program will accept Applications from April, 2025 through July 2025.
- On-site assessments will be carried out for eligible applicants by December 2025.
- All installations must be complete by September 2026.
- Data collection will end by December 2026.

### **What data will I need to share as part of the Program, and for what duration?**

During the Program period, data from any charging equipment installed as part of the Program, as well as applicant experiences, maintenance, and operation logs, will be collected and analyzed to inform a V2X Guidebook. This data will be collected through December 31, 2026. For a full list of fields, see the [Terms and Conditions](#) posted on this website.

### **Will I get to keep my equipment after the Program ends?**

Yes. You will retain full ownership of any equipment installed during the Program.

## **Program Technology**

### **What technologies will be installed as part of the Program?**

The exact technology will depend on your site and vehicle but will include turn-key installation of bi-directional charger(s) and any related infrastructure required for successful installation. These items will be purchased, installed, and verified at no cost to the participant.

### **Can I have bi-directional chargers installed along with other electrical upgrades, such as for a solar system, a battery, or a generator?**

The MassCEC V2X Demonstration Project Program will only cover the costs directly related to the purchase of and installation of a bi-directional charger. Should you have additional electrical requirements, they will need to be done completely separately from this program.

### **Can I use the payment for the program requirements towards additional work: for example, could I use the amount that would have been paid for a 200-amp panel towards the purchase of a 400-amp panel?**

No. The program will pay the installers directly for only the materials and work directly related to the installation of the V2X chargers.

### **Can I contract with the installers for additional electrical work?**

There are no restrictions in the program on working with the installers outside of the program, however this must be done under an entirely separate contract and scheduled for an entirely separate day. Installers are not permitted to schedule work not directly related to the program on the same day as program-related work.

## **Other Available Programs**

### **How does this Program interact with other EV programs?**

This Program is not related to other EV programs. Below is a table provided for guidance on some common EV programs in Massachusetts. While all due care has been taken to provide the information below, applicants should consult directly any documents related to any other programs or rebates they have participated in to ensure continued compliance.

#### **Demand Response Programs**

<b>Program Name</b>	<b>Administered By</b>	<b>Description</b>	<b>Can this be used together with the MassCEC Program?</b>
<a href="#"><u>Connected Solutions Program</u></a>	Eversource, National Grid, and Unitil	Customers can receive an incentive for dispatching their EV batteries during ISO NE peak demand events. Commercial Customers can choose to dispatch on a targeted basis (up to 8 times per Summer season) or on a more regular basis (30 to 60 times per Summer season.) Residential	Yes.

		customers would need to respond the 30-60 times per summer	
Connected Homes Program	Massachusetts Municipal Wholesale Electric Company	Expected in July/August 2025	Yes

ENE does not have a DR program at this time. There is potential for ENE to have one by the end of 2025, but there are no expected conflicts. Customers would likely be use the DR program with the MassCEC program.

#### Time of Use (V1G) Programs

<b>Program Name</b>	<b>Administered By</b>	<b>Description</b>	<b>Can this be used together with the MassCEC Program?</b>
<a href="#">Eversource Managed Charging Program</a>	Eversource	Encourages charging at non-peak times	Yes, for eligible vehicles if program is available. May not be used together with the Connected Solutions Demand Response Program
<a href="#">National Grid Off-Peak Charging Program</a> (Charge Smart MA)	National Grid	Encourages charging at non-peak times	Yes, for eligible vehicles. May not be used together with the Connected Solutions Demand Response Program
<a href="#">Unitil EV Time of Use Rate</a> for Residential Customers	Unitil	Encourages charging at off-peak times. Being a participant in the Unitil Ready2Charge Residential	Yes, for eligible vehicles. May not be used together with the Connected Solutions Demand Response Program.

Unitil Demand Charge Alternative rate for Commercial and Municipal Customers <a href="https://unitil.com/faqs/there-rate-ma-commercial-customers-have-ev-charging-stations">https://unitil.com/faqs/there-rate-ma-commercial-customers-have-ev-charging-stations</a>	Unitil	Customers can receive reduced rates for demand costs based on their monthly utilization factor, calculated yearly. Being a participant in the Unitil Ready2Charge Public Rebate Program is not required.	Yes, for eligible vehicles. May be able to be used together with the Connected Solutions Demand Response Program. Please contact Unitil for potential exceptions if this applies to you.
Off peak charging programs, 'Bring your own charger' programs	Some MLPs	Residential customers receive a monthly bill credit for participating in off-peak charging	Likely yes, but verify with your program.

#### EVSE Readiness Programs

<b>Program Name</b>	<b>Administered By</b>	<b>Description</b>	<b>Can this be used together with the MassCEC Program?</b>
<a href="#">Eversource Charging Rebates</a>	Eversource	Rebates against the cost of wiring or panel upgrades needed to install Level 2 Smart Chargers	Not able to use in parallel.
<a href="#">National Grid EV Charging Upgrade Program</a>	National Grid	Upgrade home wiring for EV chargers	Not able to use in parallel If previously used: must be enrolled in off-peak for 12 months after receiving a make-ready rebate. If not, there is a clawback clause. Please contact National Grid for potential program exceptions if this applies to you.

<a href="#">National Grid Turnkey EV Charging Installation Program</a>	National Grid	Upgrade home wiring for EV chargers	Not able to use in parallel If previously used: must be enrolled in off-peak for 12 months after receiving a make-ready rebate. If not, there is a clawback clause. Please contact National Grid for potential program exceptions if this applies to you.
<a href="#">Unitil Ready2Charge Residential Rebate Program</a>	Unitil	Set up a Level 2 EV Charger at your home. The EV Time of Use Rate is required.	Yes, for wiring/panel upgrades only AND if installing a system that can only operate in islanded mode (because this requires enrollment in the TOU rate)
MLP Rebate Programs	Multiple MLPs	<p>Programs vary by MLP Programs may include Level 2 EV Charger installation rebates, upgrade to home wiring, upgrades to electrical panel or service, load management devices.</p> <p>Some programs have pre-requisites or requirements to participate in off-peak programs prior to receiving an EV charging rebate.</p>	Likely yes, but verify with each program.