# STATE OF CONNECTICUT
## PUBLIC UTILITIES REGULATORY AUTHORITY

DOCKET NO. 17-12-03RE04
PURA INVESTIGATION INTO DISTRIBUTION SYSTEM PLANNING OF THE ELECTRIC DISTRIBUTION COMPANIES – ZERO EMISSION VEHICLES

NOTICE OF ISSUANCE OF STRAW ELECTRIC VEHICLE PROGRAM DESIGN AND REQUEST FOR WRITTEN COMMENTS
(January 29, 2021)

On May 6, 2020, the Public Utilities Regulatory Authority (Authority or PURA) issued a Request for Program Design (RFPD) proposals in the above-referenced docket in accordance with the Interim Decision dated October 2, 2019 in Docket No. 17-12-03, PURA Investigation into Distribution System Planning of the Electric Distribution Companies (Interim Decision). The objective of the zero emission vehicle (ZEV) proceeding is to enable Connecticut's commitment to the ten state Memorandum of Understanding (MOU) to collectively reach the deployment of 3.3 million ZEVs among the participating states by 2025.[1] Further, a self-sustaining ZEV market is a critical component of meeting the State's greenhouse gas (GHG) targets pursuant to the Global Warming Solutions Act.[2] Thus, a proactive approach to facilitate the seamless integration of new and emerging ZEV-related technologies is required to realize the potential electric system benefits of ZEVs, along with the economic, health, and environmental benefits they provide.

On July 31, 2020, the Authority received 12 submissions in response to its RFPD from the following docket participants and other stakeholders: ChargePoint, Inc.; The Connecticut EV Coalition (EVC); Connecticut Green Bank (CGB); The Connecticut Light and Power Company d/b/a Eversource Energy (Eversource); the Department of Energy and Environmental Protection (DEEP); Enel X North America, Inc. (Enel X); EVNoire; EVSE LLC, a subsidiary of Control Module Inc. (EVSE LLC); Greenlots; Power Advisory LLC; Rocky Mountain Institute; and The United Illuminating Company (UI). The Authority appreciates the thoughtful proposals and comments of the respondents.

Based on its review of the RFPD responses, the record in the above-referenced docket, and publicly available information, the Authority hereby issues the Straw EV Program Design (Straw Proposal); *see* Attachment 1. The Straw Proposal includes both:

---

[1] State Zero-Emission Vehicle Programs Memorandum of Understanding, States of California, Connecticut, Maryland, Massachusetts, New York, Oregon, Rhode Island, and Vermont, dated October 24, 2013 (https://www.ct.gov/deep/lib/deep/air/zeroemissionvehicle_mou.pdf), having since been joined by the States of Maine and New Jersey to date. Connecticut's share of the ZEV MOU target is approximately 125,000 - 150,000 electric vehicles by 2025.

[2] Public Act No. 08-98, *An Act Concerning Global Warming Solutions*, sets forth the requirement that Connecticut reduce GHG emissions by January 2050 to at least 80% below the 2001 level. Public Act No. 18-82, *An Act Concerning Climate Change Planning and Resiliency*, added the requirement that Connecticut reduce GHG emissions by January 2030 to at least 45% below the 2001 level.

(1) an initial program design to facilitate further discussion; and (2) potential orders that may be included in the Decision of this docket.[3]

The Authority invites all docket Participants and other interested parties to provide written comments on the Straw Proposal by 4:00 p.m. on **January 29, 2021**. Specifically, the Authority invites stakeholders to provide recommended modifications to the Straw Proposal. Responding stakeholders are required to structure their comments to reflect the headings and the order of those headings in the Straw Proposal (i.e., II. Program Objectives, III.A. Program Summary, III.B. Program Length, III.C. Program Eligibility, etc.).

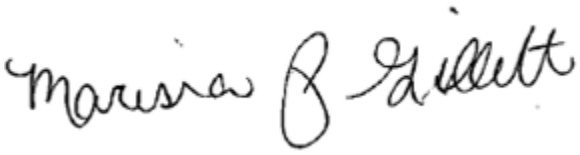
Further, the Authority announces the following subsequent procedural events outlined in Table 1 in the above-referenced docket following the issuance of this Notice and the Straw Proposal attached hereto.

**Table 1: Next Steps in Docket No. 17-12-03RE04**

| EVENT | TENTATIVE DATE / TIME | |
|---|---|---|
| Written Comments Due | Friday, January 29, 2021 | 4:00 p.m. |
| Technical Meeting on Stakeholder Proposals and Written Comments | Friday, February 5, 2021 | 10:00 a.m. |
| Rolling Interrogatory Period | February 8, 2021 – February 25, 2021 | - |
| Hearing | Friday, February 26, 2021 | 10:00 a.m. |
| Briefs Due | Friday, March 10, 2021 | 4:00 p.m. |
| Target Issuance of Draft Decision | Wednesday, March 24, 2021 | - |

Dated at New Britain, Connecticut, this 6th day of January, 2021.

PUBLIC UTILITIES REGULATORY AUTHORITY



Marissa P. Gillett
Chairman

Notice filed with the Secretary of the State on January 6, 2021.

[3] The Decision in this docket will include a final version of Attachment 1.

# STATE OF CONNECTICUT

## PUBLIC UTILITIES REGULATORY AUTHORITY

PURA INVESTIGATION INTO DISTRIBUTION SYSTEM PLANNING OF THE ELECTRIC DISTRIBUTION COMPANIES – ZERO EMISSION VEHICLES

STRAW ELECTRIC STORAGE PROGRAM DESIGN

## I. BACKGROUND

Pursuant to §§ 16-11 and 16-244i of the General Statutes of Connecticut (Conn. Gen. Stat.) and in accordance with the Interim Decision dated October 2, 2019 in Docket No. 17-12-03, PURA Investigation into Distribution System Planning of the Electric Distribution Companies (Interim Decision), the Authority establishes the zero emissions electric vehicles program (EV Program) defined herein, which shall be available to all customers and customer classes within the service territories of the Connecticut Light and Power Company d/b/a Eversource Energy (Eversource) and The United Illuminating Company (UI; collectively, electric distribution companies). The electric distribution companies (EDCs, or Program Administrators) shall develop the appropriate program documents and additional program rules as directed in the final Decision in Docket No. 17-12-03RE04, PURA Investigation into Distribution System Planning of the Electric Distribution Companies – Zero Emission Vehicles (ZEV proceeding), and all associated documents necessary to effectively implement the final version of this program design (Program Design Documents). The Program Administrators shall not deviate from or modify in any way the final Program Design Documents without first receiving express written approval by the Authority.

## II. PROGRAM OBJECTIVES

On May 6, 2020, the Authority issued a Request for Program Design (RFPD) proposals in Docket No. 17-12-03RE04. The objective of the ZEV proceeding is to enable Connecticut's commitment to the ten state Memorandum of Understanding (MOU) to collectively reach the deployment of 3.3 million ZEVs among the participating states by 2025.[1] To meet Connecticut's ZEV MOU target, approximately 125,000 – 150,000 EVs must be deployed by 2025.

Further, Public Act 18-82, *An Act Concerning Climate Change Planning and Resiliency*, establishes a mandatory economy-wide greenhouse gas (GHG) emissions

[1] State Zero-Emission Vehicle Programs Memorandum of Understanding, States of California, Connecticut, Maryland, Massachusetts, New York, Oregon, Rhode Island, and Vermont, dated October 24, 2013 (https://www.ct.gov/deep/lib/deep/air/zeroemissionvehicle_mou.pdf), having since been joined by the States of Maine and New Jersey to date.

reduction target of 45% below 2001 levels by 2030. The Governor's Council on Climate Change (GC3) conducted a GHG pathways reduction analysis, which identified wide-scale EV deployment as a primary GHG reduction strategy to meet the 2030 and 2050 targets. Specifically, the GC3 pathways reduction analysis projected that the deployment of 500,000 EVs, or 20 percent of light-duty vehicles statewide, will be required to meet Connecticut's 2030 and 2050 statutorily required GHG reduction targets.[2] Thus, a proactive approach to facilitate the seamless integration of new and emerging EV-related technologies is required to realize the potential electric system benefits of EVs, along with the economic, health, and environmental benefits they provide.

The RFPD requested proposals across six ZEV program areas to optimize the deployment of electric vehicle supply equipment (EVSE) and associated distribution system infrastructure necessary to meet Connecticut's transportation electrification goals:

(1) Level II charging at residential single-family units;
(2) Public Level II charging at multi-unit dwellings (MUDs);
(3) Public direct current fast charging (DCFC);
(4) Public Level II destination charging;
(5) Workplace Level II charging, including Light-Duty Fleets; and
(6) Development of a low- to moderate-income (LMI) customer electrified mobility study.

Taken together, these six program areas represent a comprehensive, portfolio approach to enabling ZEV deployment on the scale necessary to meet the State's ZEV MOU goals and GHG reduction targets. The objectives outlined above (Program Objectives) shall guide the Program Administrators in their administration of the Program.

## III. PROGRAM SUMMARY

The Authority developed the Program established herein based on the record in Docket No. 17-12-03RE04, including the responses provided to the Authority's RFPD, and publicly available information. The key program elements consist of incentives for networked Level 2 EVSEs and direct current fast chargers (DCFC), as well as accompanying rate designs. Eversource and UI will administer the Program in their respective service territories, though the same program offerings will be made available to all EDC customers, thus ensuring a streamlined, statewide approach to EV infrastructure investments. The program design for each of the program areas is detailed in Section IV., below.

### A. PROGRAM LENGTH & STATEWIDE DEPLOYMENT TARGETS

Connecticut's commitment to the ZEV MOU, and the State's mandatory 2030 and 2050 GHG emission reduction targets, necessitate a long-term, comprehensive approach

[2] See EV Roadmap, p. 12.

to building out EV charging infrastructure to support wide-scale EV deployment over the next decade.[3] Accordingly, the Authority establishes a nine-year program to support EV charging infrastructure in Connecticut, starting January 1, 2022, and continuing through at least December 31, 2030. The Program is structured around three-year program review cycles whereby the Authority will re-evaluate whether the Program is delivering on the expected value to Connecticut ratepayers and is meeting the stated Program Objectives.[4] The Program will also include an annual process to review key program metrics and to make adjustments as necessary, as detailed in Section V., Program Administration.

The Authority intends to create a flexible Program capable of adapting to the evolving EV charging landscape over the next decade. However, the final budgets allocated to each program area, as determined by specific deployment targets, will remain fixed for the duration of each three-year program cycle. In other words, funds from one program area shall not be applied to support investments in another program area without prior approval from the Authority. If the EDCs achieve charging infrastructure deployment targets in one or more program areas prior to the conclusion of the current three-year program cycle, the EDCs may request approval for additional funds to be allocated to meet deployment targets specified in future program cycles (See Table 3).

### 1. Statewide EVSE Deployment Targets

The Alternative Fuels Data Center, overseen by the U.S. Department of Energy's (DOE) Office of Energy Efficiency & Renewable Energy, tracks data on public and private DCFC and Level 2 charging station locations. As of January 2021, there are 242 ports across 55 DCFC stations and 845 ports across 354 Level 2 charging stations installed in Connecticut (see Table 1).[5]

The J1772 charge port is the standard for Level 1 (i.e. 120-volt AC plug) and Level 2 charging and is supported by all automobile original equipment manufacturers.[6] The CHAdeMO and Combined Charging System (CCS) charge ports are standard for DCFC, though the network of CCS charging stations is growing more rapidly in the U.S.[7] Tesla has its own proprietary charge port, which is used exclusively in its nationwide network of DCFC stations, or "Superchargers". As a result, charging at Tesla's network of DCFCs

[3] See EV Roadmap, p. 20; Eversource RFPD Response, Executive Summary, p. 2; EVC RFPD Response, p. 1; Greenlots RFPD Response, p. 3.

[4] See Greenlots RFPD Response, p. 10.

[5] See U.S. DOE Alternative Fuels Data Center, accessed January 5, 2021, https://afdc.energy.gov/stations#/analyze?region=US-CT&fuel=ELEC&ev_levels=dc_fast&ev_levels=3&ev_levels=2.

[6] See U.S. DOE Alternative Fuels Data Center, Infrastructure Development, https://afdc.energy.gov/fuels/electricity_infrastructure.html.

[7] Id.; See also, Nissan's Move to Fast-Charging Makes CHadeMO a Legacy Standard, Green Car Reports, https://www.greencarreports.com/news/1128891_nissan-s-move-to-ccs-fast-charging-makes-chademo-a-legacy-standard.

is not currently accessible to non-Tesla EV drivers.[8] Non-Tesla EV drivers can purchase an adapter to use at most of Tesla's Level 2 "Destination" charging stations.[9] However, all Tesla vehicles come with a J1772 adapter to enable drivers to use non-Tesla Level 2 chargers.[10] Tesla also sells a CHAdeMO adapter for vehicle owners to be able to use non-Tesla DCFCs.[11]

**Table 1**
**Current Deployment of EV Charging Stations in Connecticut**

| | DCFC | Level 2 |
|---|---|---|
| **CCS and CHAdeMO** | 56 ports; 32 stations | N/A |
| **J1772** | N/A | 723 ports; 325 stations |
| **Tesla** | 186 ports; 23 stations | 122 ports; 48 stations |
| **Total** | 242 ports; 55 stations | 845 ports; 354 stations |

U.S. DOE Alternative Fuels Data Center

The National Renewable Energy Laboratory (NREL) developed an Electric Vehicle Infrastructure Projection Tool (EVI-Pro Lite Tool) to assist states, cities, and other stakeholders in projecting consumer demand for EV charging infrastructure.[12] The EVI-Pro Lite Tool provides projections for the number of DCFC and Level 2 charging stations required to support a specified level of light duty EVs deployed within a jurisdiction. The EVI-Pro Lite Tool also estimates the impact of EV charging on the load profile in select urban areas in each state. Table 2 below provides the outputs from the EVI-Pro Lite Tool based on scenarios of 150,000 and 300,000 EV deployment levels in Connecticut.

**Table 2**
**EVI-Pro Lite Tool Results[13]**

| | NUMBER OF PORTS (STATEWIDE) | | |
|---|---|---|---|
| | Public DCFC | Public L2 | Workplace L2 |
| **2025 Estimate** (to reach 150,000 EVs by 2025) | 314 | 2,396 – 4,535 | 3,694 – 6,973 |
| **2030 Estimate** (to reach 300,000 EVs by 2030)[14] | 489 | 4,488 – 8,494 | 7,046 – 13,302 |

[8] See U.S. DOE Alternative Fuels Data Center, Infrastructure Development, https://afdc.energy.gov/fuels/electricity_infrastructure.html; See also, EV Roadmap, p. 2.

[9] See Forbes, Competing Electric Car Charging Standards Can Be Easily Fixed, https://www.forbes.com/sites/bradtempleton/2019/12/19/competing-electric-car-charging-standards-can-be-easily-fixed/?sh=3d71058e3f40.

[10] See Tesla, SAE J1772 Charging Adapter, https://shop.tesla.com/product/sae-j1772-charging-adapter.

[11] See Tesla, CHAdeMO Adapter, https://shop.tesla.com/product/chademo-adapter.

[12] See NREL EVI-Pro Lite Tool, https://afdc.energy.gov/evi-pro-lite.

[14] Note that the EVI-Pro Lite tool only projects for EV deployments up to 10% of total light duty vehicles in the state; as of 2016, Connecticut had approximately 3 million light duty vehicles, and therefore the Tool will not calculate EVSE needed for more than 300,000 EVs deployed. Because the GC3 analysis projects 500,000 light duty EVs are needed by 2030, this projection assumes the maximum EV input of 300,000 light duty EVs to calculate the 2030 projections.

This Program is designed to meet consumer demand for EVSE charging infrastructure as projected by the EVI-Pro Lite Tool using Connecticut-specific deployment targets. Beginning in 2013, DEEP awarded grants through its EVConnecticut program to install 277 public Level 2 charging stations in Eversource's service territory, which represent over 75% of the publicly accessible charging stations installed in the State to date.[15] Private market activity largely accounts for the remaining EVSE deployments.[16] The EVSE deployment targets established in this Program are not intended to displace or otherwise discourage private market participation in building out a robust EV charger network to meet current and future consumer demand.

Accordingly, the following programmatic statewide deployment targets for public Level 2 and DCFC ports included in Table 3 are designed to take into account current EVSE deployment levels, as well as the future role for private market participants. The statewide EVSE deployment targets will be apportioned 80%/20% between Eversource and UI, respectively. The Authority will re-evaluate the deployment targets for each program area during each three-year program review period.

**Table 3**
**EVSE Program Deployment Targets**

| | NUMBER OF PORTS (STATEWIDE) | | | |
|---|---|---|---|---|
| **PROGRAM AREA** | 2022-2024 | 2025-2027 | 2028-2030 | TOTAL |
| **Residential Single-Family (Level 2)** | 5,000 | 5,000 | 5,000 | 15,000 |
| **Public – Multi-Unit Dwellings (Level 2)** | 599 - 1,134 | 262 - 495 | 262 - 495 | 1,122 - 2,124 |
| **Public (DCFC)** | 101 | 44 | 44 | 245 |
| **Public – Destination (Level 2)[17]** | 0 - 411 | 262 - 495 | 262 - 495 | 1,122 - 2,124 |
| **Workplace (Level 2)** | 1,874 - 3,487 | 2,600 - 4,908 | 2,600 - 4,908 | 7,046 - 13,302 |

[14] Note that the EVI-Pro Lite tool only projects for EV deployments up to 10% of total light duty vehicles in the state; as of 2016, Connecticut had approximately 3 million light duty vehicles, and therefore the Tool will not calculate EVSE needed for more than 300,000 EVs deployed. Because the GC3 analysis projects 500,000 light duty EVs are needed by 2030, this projection assumes the maximum EV input of 300,000 light duty EVs to calculate the 2030 projections.

[15] EV Roadmap, p. 20; 24.

[16] Id.

[17] The EVI-Pro Lite Tool output for Public Level 2 EVSEs are allocated equally between the MUDs and Destination Charging program area deployment targets. Further, all public Level 2 EVSEs currently deployed are considered "Destination" chargers.

## IV. EV PORTFOLIO PROGRAM DESIGN

### A. RESIDENTIAL SINGLE-FAMILY LEVEL 2 CHARGING

#### 1. Objective

The residential single-family EV charging program is designed to promote off-peak and managed charging for EV drivers at single-family residences through a combination of an upfront incentive for networked Level 2 EVSE, and participation in a tiered managed charging program administered by the EDCs. Residential EV drivers may also opt-in to an EV-only TOU rate offering.

Given that over 80 percent of light duty EV charging occurs at home,[18] it is critical to establish a residential EV charging program that is mutually beneficial to EV drivers and the electric distribution system. At-home off-peak and managed charging for residents with EVs are central components to accelerating EV adoption statewide.[19]

#### 2. Program Design

##### a. Level 2 Charger Incentives

The EDCs shall offer an upfront incentive of up to $500,[20] via a rebate, to residential customers to install a networked Level 2 EVSE from a list of pre-qualified EVSE vendors at a single-family residence. The rebate is intended to offset the higher cost of a networked Level 2 charger compared to a non-networked charger without demand response capabilities.[21] The rebate will be calculated based on the net cost of the EVSE, after deducting any other applicable rebates, grants, or other incentives the customer may receive.

In addition to receiving a rebate of up to $500 for the purchase of eligible EVSE, participants may also be eligible for an incentive to cover up to 100% of a potential electrical upgrade cost to install the Level 2 EVSE, up to a $2,000 cap.[22]

Additionally, the CGB may consider whether any of its low-cost borrowing offerings could be utilized to finance any remaining costs associated with the initial purchase and installation of a networked Level 2 charger at a single-family residence.[23]

---

[18] See Eversource RFPD Response, Exhibit 1, p. 2. See also, U.S. Department of Energy, Office of Energy Efficiency & Renewable Energy, Charging at Home, https://www.energy.gov/eere/electricvehicles/charging-home.
[19] See EV Roadmap, p. 47.
[20] See UI RFPD Response, p. 15.
[21] See EV Roadmap, p. 48.
[22] See Eversource RFPD Response, Exhibit 1, p. 18.
[23] See CGB RFPD Response, p. 2.

### b. Managed Charging

A managed charging program for residential EV drivers can be designed to offer a range of passive to active charging behavior approaches. Table 4 below, developed by the Smart Electric Power Alliance (SEPA), illustrates managed charging examples.[24]

**Table 4**
**SEPA Examples of Active and Passive Managed Charging**

| PASSIVE | ACTIVE |
|---|---|
| EV time-varying rates, including time-of-use rates and hourly dynamic rates | Direct load control via the charging device |
| Communication to customer to voluntarily reduce charging load (e.g., behavioral demand response event) | Direct load control via automaker telematics |
| Incentive programs rewarding off-peak charging | Direct load control via a smart circuit breaker or panel |

Source: Smart Electric Power Alliance, 2019.

The EDCs will administer a three-tiered managed charging program that enables residential customers to choose their desired participation level.[25] The EDCs will be directed to launch the tiered managed charging program for residential single-family EV drivers no later than January 1, 2022. As a condition of receiving a networked Level 2 charger rebate, all program participants will be required to enroll in one of the managed charging program offerings, described below.[26] In addition, all program participants must allow their EDC to access charger data. The EDCs shall aggregate program participants' charger data to implement the program, analyze usage patterns, and track program metrics.

#### i. Managed Charging Tiers

The EDCs will develop programs that provide the following options to program participants to select based on their preferred level of engagement and charging behavior. The tiers are not intended to overlap. In other words, each offering stands on its own; however, all residential EV drivers in this program area will also separately be able to opt in to an EV-only TOU rate if not already specifically prescribed below.

[24] See Smart Electric Power Alliance, A Comprehensive Guide to Electric Vehicle Managed Charging, p. 11, https://sepapower.org/resource/a-comprehensive-guide-to-electric-vehicle-managed-charging/.
[25] See UI RFPD Response, pp. 13-14.
[26] See Eversource RFPD Response, Exhibit 1, p. 7.

- **Baseline (passive)** – Participants will enroll in an EV-only TOU rate offered by their EDC (see below for details) on an opt-out basis. In addition, participants will be automatically enrolled to receive notifications from their EDC, or a third-party aggregator, with periodic prompts to shift charging during demand response events to off-peak periods. Participation in demand response events is voluntary, and no additional incentive will be provided.

- **Intermediate (demand response)** – Participants are automatically enrolled in a demand response (DR) program, administered by their EDC, or by a third-party aggregator. The DR program administrator will provide advance notification of an upcoming DR event, through a phone application or web portal, enabling the participant to opt-out. Participants who do not opt out will receive a $20 performance incentive for each DR event they participate in (i.e., the participant's EV was otherwise scheduled to charge), up to a maximum incentive of $200 annually.[27] The incentives will be applied annually in the form of a credit on customer bills.

- **Advanced (direct load control)** – Participants elect to actively engage with their EDC to optimize at-home EV charging for the grid, while adhering to minimum EV charging parameters set by the participant. Participants will schedule charging sessions through a phone application or web portal, and the EDCs will have the ability to curtail the rate of charging scheduled to occur during a series of identified DR events. Residential EV drivers participating in this advanced managed charging offering for at least twelve months will receive a rebate for the full cost of their networked Level 2 charger, up to $1,000.[28]

The Authority will establish a working group to finalize managed charging program implementation details, including, establishing participation targets for each managed charging tier, program parameters for administering a DR and direct load control program, potential EDC participation in the wholesale market, and other key implementation matters. The EDCs will be directed to initiate the working group upon issuance of a Decision in this proceeding to inform the launch of a tiered managed charging program no later than January 1, 2022. The Program Administrators shall develop the appropriate program rules, in consultation with the working group, and submit such program rules and/or documents for the Authority's approval on or before August 2, 2021.

### c. EV-only TOU rate

The EDCs will be directed to establish an EV-only TOU rate for residential customers for at home charging for Authority approval.[29] The EDCs will propose modifications to their existing on-peak and off-peak periods based on an analysis of EV charging use patterns and load shapes to increase, or at least maintain, the grid utilization

[27] See UI RFPD Response, p. 13.
[28] See EV Roadmap, p. 64 (Green Mountain Power).
[29] Id., pp. 64-67.

rate. In addition, a multi-tiered rate structure (e.g., on-peak, off-peak, and "super off-peak" periods) may be included in the tariff design.

The EDCs shall not require residential customers who opt in to an EV-only TOU rate to install a second revenue grade meter to separately measure EVSE usage. To minimize upfront participation costs, the EDCs shall accept embedded meter data from approved revenue grade networked Level 2 chargers, or an alternative technology with demonstrated success, with approval from the Authority.[30] Any approved metering configuration shall comply with Conn. Gen. Stat. § 16-19ff and Regulations of Connecticut State Agencies § 16-11-236 *et seq*.

#### d. Residential EV Drivers with a Non-networked Level 2 Charger

Though robust data is not currently available, some portion of the more than 12,600[31] registered EV drivers in the State currently have a Level 2 charger at home that may not have networked capabilities. Therefore, the residential program is designed to encourage EV drivers with a non-networked Level 2 home charger to shift their usage patterns to charge during off-peak times, without needing to replace their existing infrastructure. Existing technologies offer programs to elicit the intended effect of an EV-only TOU rate by providing rewards or another incentive mechanism to program participants who shift their charging patterns.

Accordingly, the EDCs shall develop a program to provide a rebate for residential customers who purchase a device that connects directly to the EV's onboard diagnostic system to collect charging data without the need for a second meter or a networked Level 2 charger.[32] This rebate offer will be only available to EV drivers with an existing Level 2 charger (installed prior to January 1, 2022) that does not possess networked charging capabilities. The Authority will direct the EDCs to issue an open RFP to select a technology vendor(s) for PURA approval. The level of the rebate and other program implementation details will be finalized once the vendor has been selected.

### 3. Deployment Targets

The EVI-Pro Lite Tool does not provide estimates for residential EVSE deployment targets necessary to meet a specified statewide EV deployment. Accordingly, the deployment targets are derived from current and projected future EV sales in Connecticut necessary to meet the ZEV MOU target (Table 5).[33]

---

[30] See ChargePoint RFPD Response, p. 6 (Green Mountain Power); Greenlots RFPD Response, p. 7 (Baltimore Gas and Electric); EVC RFPD Response, p. 3 (Baltimore Gas and Electric; Xcel in Minnesota) EVSE RFPD Response, p. 10 (California to mandate revenue grade metrology embedded in EVSE beginning January 2021); EV Roadmap, p. 66.

[31] See Connecticut Department of Motor Vehicles, Number of Electric Vehicles Registered in Connecticut, https://portal.ct.gov/DMV/News-and-Publications/News-and-Publications/Electric-vehicle-stats.

[32] See EV Roadmap, p. 67.

[33] See, e.g. Eversource RFPD Response, Exhibit 1, p. 22; UI RFPD Response, pp. 7-8, 16.

**Table 5**
**Level 2 EVSE Deployment Targets: Residential Single-Family**

| | NUMBER OF PROGRAM PARTICIPANTS | | | |
|---|---|---|---|---|
| SERVICE TERRITORY | 2022-2024 | 2025-2027 | 2028-2030 | TOTAL |
| Eversource | 4,000 | 4,000 | 4,000 | 12,000 |
| UI | 1,000 | 1,000 | 1,000 | 3,000 |
| Total | 5,000 | 5,000 | 5,000 | 15,000 |

## B. MULTI-UNIT DWELLINGS

### 1. Objective

This program area directs the EDCs to adopt a make-ready utility investment model, combined with an upfront incentive for the purchase and installation of networked Level 2 EVSEs, to enable at-home charging for a broader range of EV drivers residing in MUDs.[34]

Approximately 10 percent of Connecticut residents live in MUDs, which includes multi-unit rental properties and condominiums, particularly concentrated in urban areas.[35] With more than 234,000 apartment units in 2019 (defined as a structure with five or more units), apartments represent approximately 16 percent of the housing stock statewide.[36] The MUD EV charging program will address sites where off-street parking is available for MUDs, as well as curbside parking in close proximity to a MUD where on-site charging opportunities do not exist.

If sited effectively, EVSEs installed at MUDs can encourage clustered EV adoption, thereby maximizing the value of ratepayer investments in EVSE by achieving higher charger utilization rates if charging infrastructure is shared among multiple EV drivers.[37] Expanding networked Level 2 charging infrastructure at MUDs also presents unique challenges as the landlord/tenant arrangement can complicate program implementation efforts.[38] To overcome this, the EDCs shall offer an EV-only tariff that incentivizes program participation from MUD property owners/operators and EV-driver tenants alike.

[34] See EVC RFPD Response, p. 3 (National Grid; AEP Ohio)
[35] See EV Roadmap, p. 49.
[36] See National Multifamily Housing Council, Geography of Apartment Stock, https://www.nmhc.org/research-insight/quick-facts-figures/quick-facts-apartment-stock/geography-of-apartment-stock/.
[37] See Eversource RFPD Response, Exhibit 2, p. 5.
[38] See UI RFPD Response, p. 16; EV Roadmap, p. 49.

## 2. Program Design

### a. Make-Ready Ownership Model

The EDCs shall administer a make-ready program for networked Level 2 EVSE installed at MUDs. Under the make-ready ownership model, the EDCs shall invest in the infrastructure required to enable Level 2 charging up to the charging station, from the distribution system up to the utility meter. Level 2 charging stations installed at MUDs will be owned, operated, and maintained by the site host.[39]

The EDCs' make-ready infrastructure investments may include a primary lateral service feed from the circuit, transformer and transformer pad, installation of a revenue grade utility meter and service panel, and the conduit and conductor needed to connect the enabling equipment to the charging station; see Figure 1 for Eversource's illustration of necessary make-ready infrastructure components.[40] Utility make-ready investments can represent as much as 40% of the total capital costs of an EVSE installation.[41]

**Figure 1**
**Eversource's Proposed Make-Ready Investment Model**


Eversource RFPD Response, Exhibit 2, p. 8.

### b. Level 2 Charger Incentives

In addition to the make-ready utility investment covering up to 100% of the cost of installing the conduit infrastructure at the EVSE site, the EDCs shall provide an upfront incentive to MUD site hosts to offset the costs of purchasing Level 2 EVSEs.[42] The incentive level will vary depending on site host eligibility (see Table 6), and will be calculated based on the net installed cost of the EVSE, after deducting any other applicable rebates, grants, or other incentives the site host may receive.

---

[39] Id.
[40] See Eversource RFPD Response, Exhibit 2, p. 11.
[41] See RMI Correspondence 1/21/20, Reducing EV Charging Infrastructure Costs, p. 23.
[42] See Eversource RFPD Response, Exhibit 2, p. 5; EVC RFPD Response, p. 3 (National Grid; AEP Ohio); Chargepoint RFPD Response, p. 8.

**Table 6**
**Level 2 EVSE Incentive Structure: MUDs (2022-2024)[43]**

| | Incentive Level | Max. Incentive per Site |
|---|---|---|
| **Baseline** | 50% of EVSE cost + 100% installation (3 or more ports, up to 10 ports per site) | $12,000 |
| **Underserved communities** | 100% of EVSE cost + 100% installation (3 or more ports, up to 10 ports per site) | $40,000 |
| **Underutilized circuits** | 50% of EVSE cost + 100% installation (3 or more ports, up to 10 ports per site) | $40,000 |

The CGB may consider whether any of its low-cost borrowing offerings could be utilized to finance any remaining costs associated with the initial purchase and installation of networked Level 2 chargers at MUDs.[44]

### c. Incentive Adders

#### i. Underserved Communities

A critical component of MUD EVSE program implementation will be to identify and partner with site owners and operators of MUDs in underserved communities to provide equitable access to charging for LMI residents. In accordance with the Program Objectives, the EDCs shall offer a higher upfront incentive to participating MUDs located in underserved communities. In its definition of an underserved community, the Program includes environmental justice communities pursuant to Conn. Gen. Stat. § 22a-20a, distressed municipalities pursuant to Conn. Gen. Stat. § 32-9p, and public housing. Conn. Gen. Stat. § 22a-20a defines an environmental justice community as "(A) a United States census block group, as determined in accordance with the most recent United States census, for which thirty per cent or more of the population consists of low income persons who are not institutionalized and have an income below two hundred per cent of the federal poverty level, or (B) a distressed municipality, as defined in subsection (b) of section 32-9p." Pursuant to Conn. Gen. Stat. § 32-9p, the Department of Economic and Community Development identifies municipalities based on its tax base, residents' personal income, and residents' need for public services, and publishes a list of distressed municipalities annually.[45] For the MUD EVSE program, public housing authorities, as defined by Conn. Gen. Stat. § 8-39, are included in the definition of an underserved community and are therefore eligible for additional EVSE incentives outlined in Table 6.

[43] See Eversource RFPD Response, Exhibit 2, p. 7; 19.
[44] See CGB RFPD Response, p. 2.
[45] See Department of Economic and Community Development, Distressed Municipalities, https://portal.ct.gov/DECD/Content/About_DECD/Research-and-Publications/02_Review_Publications/Distressed-Municipalities.

#### ii. Underutilized Circuits with Excess Demand Capacity

The Program Administrators shall also seek to encourage program participants to site EVSEs at MUDs located on circuits with excess peak demand capacity. Upon request, the EDCs will be required to provide demand capacity data for a specific location to enable a site owner/operator to determine whether the location would be eligible for an incentive adder. In addition, the EDCs will be directed to submit for Authority approval a proposed scope, budget and timeline to develop a publicly available hosting capacity map specific to installing Level 2 and DCFC stations.[46] The Program Administrators shall propose an appropriate incentive adder for the EVSE installation for the Authority's approval on or before August 2, 2021.

### d. EV-only Tariff for MUDs

The EVSE program for MUDs seeks to address the "split incentive" often present between landlords and tenants by developing an EV-only tariff that incentivizes program participation from MUD owners and operators and tenants alike. The Program Administrators will be required to submit a proposed "subscription model" tariff for separately metered Level 2 charging stations located at MUDs that apply a monthly fixed rate in lieu of a per kW demand charge.[47] The site host will receive an electric bill for the usage at the installed EVSE and will charge tenants a flat monthly fee for shared access to unlimited off-peak charging. Usage of EVSE outside of designated off-peak periods will be subject to the otherwise-applicable tariff for the site host and should be attributed to the specific user. Adopting a subscription model for off-peak charging will provide the site host a predictable and stable mechanism for recovering any investment in the EVSE infrastructure from users. In developing the tariff, the EDCs shall specify off-peak periods.

### e. Participant Eligibility Criteria

Site selection will ultimately be driven by site host participation, though the EDCs and EVSE vendors will have a role in outreach and education. In addition to the criteria outlined in Section V.B., site hosts must meet the following eligibility criteria to participate in the Level 2 EVSE MUD program:

- MUDs must include a minimum of 10 housing units; and
- Site hosts must provide dedicated parking spaces for the number of charging ports installed through the Program.

[46] See EV Roadmap, p. 41.
[47] See Enel X RFPD, pp. 5-6; 8-9.

### 3. Deployment Targets

A portion of the public Level 2 statewide deployment targets (Section III.A.1) are allocated to the MUD EV program (see Table 7).[48] In addition to providing a higher incentive level for MUD site hosts located in qualifying communities, the EDCs shall allocate a minimum of 10% of the targeted number of Level 2 ports to be installed at MUDs in LMI communities.[49]

**Table 7**
**Level 2 EVSE Deployment Targets: MUDs**

| | NUMBER OF PORTS | | | |
|---|---|---|---|---|
| SERVICE TERRITORY | 2022-2024 | 2025-2027 | 2028-2030 | TOTAL |
| **Eversource** | 479 - 907 | 209 - 396 | 209 - 396 | 898 – 1,699 |
| **UI** | 120 - 227 | 52 - 99 | 52 - 99 | 224 - 425 |
| Total | 599 - 1,134 | 262 - 495 | 262 - 495 | 1,122 – 2,124 |

If at the conclusion of the first three-year program the deployment targets are not met due to the level of participation from interested MUD site owners, the Authority will evaluate whether a program modification to enable the EDCs to own and operate a percentage of networked Level 2 EVSE installed at MUDs located in LMI and other underserved communities is necessary.[50] In addition, the Authority may consider a program modification to integrate a managed charging program at MUDs beginning in the 2025-2027 program cycle.

## C. PUBLIC DCFC

### 1. Objective

The DCFC program directs the EDCs to adopt a make-ready utility investment model, combined with an upfront incentive for the purchase and installation of DCFCs, to increase access to the statewide network of public fast chargers.[51] The EDCs shall also offer a tariff for separately metered public DCFCs designed to mitigate the impact of demand charges.

A robust DCFC network accessible to all EV models is a key component to achieving Connecticut's ZEV and GHG emissions reductions goals. As DCFC

[48] See Eversource RFPD Response, pp. 15-16; UI RFPD Response, p. 17; Greenlots RFPD Response, p. 9.
[49] See Eversource RFPD Response, Exhibit 2, p. 16.
[50] See EV Roadmap, pp. 45-46 (Pacific Gas & Electric); Chargepoint RFPD Response, p. 9 (National Grid); Greenlots RFPD Response, pp. 8-10.
[51] See Eversource RFPD Response, Exhibit 3, p. 2.

installations often require significant upfront investment, Program Administrators shall aim to minimize the overall cost associated with DCFC deployment while promoting high utilization and a positive EV driver experience. The EV Corridor Analysis Tool, developed by The Georgetown Climate Center and M.J. Bradley & Associates through the regional Transportation Climate Initiative, ranks potential fast charging infrastructure locations along highway exits based on vehicle travel data, commercial activity, population, and proximity to existing EV charging station infrastructure.[52] Program Administrators shall utilize the EV Corridor Analysis Tool in working with potential site hosts. Program Administrators shall also coordinate with stakeholders through the U.S. Department of Transportation Federal Highway Safety Administration's Alternative Fuel Corridor Designations program.[53] However, the scope of the DCFC program is not limited to potential infrastructure installations along corridors.

### 2. Program Design

#### a. Make-Ready Ownership Model

The EDCs shall administer a make-ready program for DCFCs installed along transportation corridors and other high-traffic publicly accessible locations. Under the make-ready ownership model, the EDCs shall invest in the infrastructure required to enable DCFC charging up to the charging station, from the distribution system up to the utility meter (See Section IV.B.2.a. for description of make-ready infrastructure investments). DCFC stations installed will be owned, operated, and maintained by the site host.

#### b. DCFC Charger Incentive

In addition to the make-ready utility investment covering up to 100% of the cost of installing the conduit infrastructure at the EVSE site, the EDCs shall provide an upfront incentive to participating site hosts to partially offset the costs of purchasing DCFCs. The incentive level will vary depending on site host eligibility (see Table 8), and will be calculated based on the net installed cost of the EVSE, after deducting any other applicable rebates, grants, or other incentives the site host may receive.

**Table 8**
**DCFC Incentive Structure (2022-2024)**

| | Incentive Level | Max. Incentive per Site |
|---|---|---|
| **Baseline** | Up to 50% of EVSE cost +<br>Up to 50% of make-ready installation cost | $150,000 |

[52] See M.J. Bradley & Associates, Electric Vehicle Infrastructure Planning Tools (v3.4), accessed December 22, 2020, https://www.mjbradley.com/content/electric-vehicle-infrastructure-planning-tools-1.

[53] See U.S. Department of Transportation's Federal Highway Administration, Alternative Fuel Corridors, https://www.fhwa.dot.gov/environment/alternative_fuel_corridors/; See also EVSE RFPD Response, p. 4.

| | | |
|---|---|---|
| | (2 or more ports, up to 4 ports per site) | |
| **Underserved communities** | Up to 50% of EVSE cost +<br>Up to 100% of make-ready installation cost<br>(2 or more ports, up to 4 ports per site) | $200,000 |
| **Underutilized circuits** | Up to 50% of EVSE cost +<br>Up to 75% of make-ready installation cost<br>(2 or more ports, up to 4 ports per site) | $250,000 |

The CGB may consider whether any of its low-cost borrowing offerings could be utilized to finance any remaining costs associated with the initial purchase and installation of public DCFCs.[54]

### c. Incentive Adders

#### i. Underserved Communities

In accordance with the Program Objectives, the EDCs shall offer a higher upfront incentive to participating site hosts located in underserved communities. The Program defines an underserved community as environmental justice communities pursuant to Conn. Gen. Stat. § 22a-20a and distressed municipalities pursuant to Conn. Gen. Stat. § 32-9p (See Section IV.B.2.c.i). In addition, DCFCs installed within Opportunity Zones designated by the U.S. Economic Development Association within the U.S. Department of Commerce[55] are also considered underserved communities and are therefore eligible for additional EVSE incentives outlined in Table 8.

#### ii. Underutilized Circuits with Excess Demand Capacity

Where feasible, the Program Administrators shall also seek to identify potential DCFC site hosts located on circuits with excess peak demand capacity. Upon request, the EDCs will be required to provide demand capacity data for a specific location to enable a site owner/operator to determine whether the location would be eligible for an incentive adder. In addition, the EDCs will be directed to submit for Authority approval a proposed scope, budget and timeline to develop a publicly available hosting capacity map specific to installing Level 2 and DCFC stations.[56] The Program Administrators shall propose an appropriate incentive adder for the EVSE installation for the Authority's approval on or before August 2, 2021.

[54] See CGB RFPD Response, p. 2.

[55] See DECD, An Overview on the Opportunity Zone Program, https://portal.ct.gov/DECD/Content/Community-Development/04_Incentives_LiabilityRelief/Location-Based-Incentives/Opportunity-Zones.

[56] See EV Roadmap, p. 41.

### d. Demand Charges

Separately metered charging stations under the EDCs' existing commercial tariffs include demand charges that can be cost prohibitive, particularly for DCFCs with low utilization rates overall but periods of high demand. The EDCs are directed to establish a tariff specifically for separately metered DCFCs and networked Level 2 EVSEs serving light-duty fleets[57] to enable increased access to outside-the-home charging and to eliminate range anxiety. Accordingly, the EDCs shall develop a tariff that includes a fixed monthly charge, on-peak and off-peak kWh distribution charges, and a kW distribution and transmission demand charge that are lower when a charging station's load factor is low (e.g., utilization of <5%) and increases over time at established increments as charging station utilization increases.[58] To minimize program costs, any revenues from billed sales that exceed the established revenue requirements used to design the tariff over the useful life of the EVSE shall be tracked by the EDCs and credited back to ratepayers through a rider or other rate reconciliation mechanism. The tariff shall be offered to all electric utility customers with separately metered DCFCs and installations of 10 or more networked Level 2 EVSEs.

### e. Participant Eligibility

Site selection will ultimately be driven by site host participation, though the EDCs and EVSE vendors will have a role in outreach, education, and site optimization. In addition to the criteria outlined in Section V.B., site hosts must meet the following eligibility criteria to participate in the DCFC program:

- Site hosts must provide public access to the installed DCFCs; and
- Site hosts must provide dedicated parking spaces for the number of charging ports installed.

## 3. Deployment Targets

The deployment targets in Table 9 are derived from the EVI-Pro Lite Tool DCFC infrastructure projections necessary to meet the 2025 ZEV MOU and 2030 GHG emissions reduction targets.

[57] Light-duty fleets defined as 10 or more networked Level 2 chargers installed at a site (see Section IV.E.2.d.).

[58] See RMI DCFC Rate Design Study, October 2019, pp. 10-12, http://www.dpuc.state.ct.us/dockcurr.nsf/8e6fc37a54110e3e852576190052b64d/bba44cab89190486852585d600625c41/$FILE/DCFC_Rate_Design_Study_final_revised.pdf.

**Table 9**
**Public DCFC Deployment Targets**

| | NUMBER OF PORTS | | | |
|---|---|---|---|---|
| SERVICE TERRITORY | 2022-2024 | 2025-2027 | 2028-2030 | TOTAL |
| Eversource | 81 | 34 | 34 | 196 |
| UI | 20 | 9 | 9 | 49 |
| Total | 101 | 44 | 44 | 245 |

If at the conclusion of the first three-year program the deployment targets are not yet fully realized, the Authority will evaluate whether a program modification to enable the EDCs to own and operate a percentage of DCFCs – especially if installed in LMI and other underserved communities – is necessary.[59]

## D. PUBLIC LEVEL 2 DESTINATION CHARGING

### 1. Objective

The Level 2 Destination charger program directs the EDCs to adopt a make-ready utility investment model, combined with an upfront incentive for the purchase and installation of networked Level 2 EVSEs, to build upon the State's publicly available charging infrastructure.[60] Program Administrators shall collaborate with site hosts to identify locations that support tourism and other economic development opportunities.

### 2. Program Design

#### a. Make-Ready Ownership Model

The EDCs shall administer a make-ready program for networked EVSEs installed in high-traffic, public locations appropriate for Level 2 charging. Under the make-ready ownership model, the EDCs shall invest in the infrastructure required to enable Level 2 charging up to the charging station, from the distribution system up to the utility meter (See Section IV.B.2.a. for description of make-ready infrastructure investments). The Level 2 charging stations installed will be owned, operated, and maintained by the site host.

#### b. Level 2 Charger Incentive

In addition to the make-ready utility investment covering up to 100% of the cost of installing the conduit infrastructure at the EVSE site, the EDCs shall provide an upfront

[59] See EV Roadmap, p. 47; Chargepoint RFPD Response, pp. 8-9 (National Grid); Greenlots RFPD Response, pp. 11-12.

[60] See Eversource RFPD Response, Exhibit 4, p. 2.

incentive to participating site hosts to partially offset the costs of purchasing Level 2 EVSEs. The incentive level will vary depending on site host eligibility (see Table 10), and will be calculated based on the net installed cost of the EVSE, after deducting any other applicable rebates, grants, or other incentives the site host may receive.

**Table 10**
**Level 2 EVSE Incentive Structure: Destination Charging (2022-2024)**

| | Incentive Level | Max. Incentive per Site |
|---|---|---|
| **Baseline** | 50% of EVSE cost + 100% installation (3 or more ports, up to 10 ports per site) | $12,000 |
| **Underserved communities** | 100% of EVSE cost + 100% installation (3 or more ports, up to 10 ports per site) | $40,000 |
| **Underutilized circuits** | 75% of EVSE cost + 100% installation (3 or more ports, up to 10 ports per site) | $40,000 |

The CGB may consider whether any of its low-cost borrowing offerings could be utilized to finance any remaining costs associated with the initial purchase and installation of networked Level 2 chargers for the Destination Charging program.[61]

### c. Incentive Adders

#### i. Underserved Communities

In accordance with the Program Objectives, the EDCs shall offer a higher upfront incentive to participating site hosts located in underserved communities. The Program defines an underserved community as environmental justice communities pursuant to Conn. Gen. Stat. § 22a-20a and distressed municipalities pursuant to Conn. Gen. Stat. § 32-9p (See Section IV.B.2.c.i). In addition, Level 2 charging stations installed within Opportunity Zones designated by the U.S. Economic Development Association within the U.S. Department of Commerce[62] are also considered underserved communities and are therefore eligible for additional EVSE incentives outlined in Table 10.

#### ii. Underutilized Circuits with Excess Demand Capacity

Where feasible, the Program Administrators shall also seek to identify potential site hosts located on circuits with excess peak demand capacity. Upon request, the EDCs will be required to provide demand capacity data for a specific location to enable a site owner/operator to determine whether the location would be eligible for an incentive adder.

[61] See CGB RFPD Response, p. 2.
[62] See DECD, An Overview on the Opportunity Zone Program, https://portal.ct.gov/DECD/Content/Community-Development/04_Incentives_LiabilityRelief/Location-Based-Incentives/Opportunity-Zones.

In addition, the EDCs will be directed to submit for Authority approval a proposed scope, budget and timeline to develop a publicly available hosting capacity map specific to installing Level 2 and DCFC stations.[63] The Program Administrators shall propose an appropriate incentive adder for the EVSE installation for the Authority's approval on or before August 2, 2021.

#### d. Participant Eligibility

Site selection will ultimately be driven by site host participation, though the EDCs and EVSE vendors will have a role in outreach, education, and site optimization. In addition to the criteria outlined in Section V.B., site hosts must meet the following eligibility criteria to participate in Level 2 Destination Charging program:

- Site hosts must provide public access to the installed EVSEs; and
- Site hosts must provide dedicated parking spaces for the number of charging ports installed.

### 3. Deployment Targets

A portion of the public Level 2 statewide deployment targets (Section III.A.1) are allocated to the Destination Charging program (see Table 11).[64]

**Table 11**
**Level 2 EVSE Incentive Structure: Destination Charging**

| | NUMBER OF PORTS | | | |
|---|---|---|---|---|
| SERVICE TERRITORY | 2022-2024 | 2025-2027 | 2028-2030 | TOTAL |
| Eversource | 0 - 329 | 209 - 685 | 209 - 685 | 898 - 1,699 |
| UI | 0 - 82 | 52 - 171 | 52 - 171 | 224 - 425 |
| Total | 0 - 411 | 262 - 495 | 262 - 495 | 1,122 - 2,124 |

## E. LEVEL 2 WORKPLACE CHARGING

### 1. Objective

This program area directs the EDCs to adopt a make-ready utility investment model, combined with an upfront incentive for the purchase and installation of networked Level 2 EVSEs, to increase the availability of light-duty fleet and employee workplace charging (together, Workplace Charging Program).[65] Under this Program, light-duty

[63] See EV Roadmap, p. 41.
[64] See Eversource RFPD Response, Exhibit 4, p. 18; UI RFPD Response, pp. 20-22; Greenlots RFPD Response, p. 12.
[65] EV Roadmap, p. 51; Eversource RFPD Response, Exhibit 5, p. 2.

fleets shall be defined as installations of 10 or more networked Level 2 chargers. The EDCs shall also offer a tariff for separately metered light-duty fleets designed to mitigate the impact of demand charges. In addition, the EDCs will be required to propose a managed charging program for light-duty fleets to be implemented during the 2025-2027 program cycle.

After at-home charging, workplace charging is considered the second most prevalent charging use case.[66] The Workplace Charging Program adopts similar program elements to the MUD and Destination Charger Programs; however, there are unique considerations for workplace charging installations, particularly for light-duty fleets. Accordingly, the Program Administrators will provide a Fleet Engagement Advisory Service to assist site hosts in assessing opportunities to embrace light-duty fleet electrification.[67]

### 2. Program Design

#### a. Make-Ready Ownership Model

The EDCs shall administer a make-ready program for networked Level 2 EVSEs installed at workplaces. Under the make-ready ownership model, the EDCs shall invest in the infrastructure required to enable Level 2 charging up to the charging station, from the distribution system up to the utility meter (See Section IV.B.2.a. for description of make-ready infrastructure investments). The installed Level 2 charging stations will be owned, operated, and maintained by the site host.

#### b. Level 2 Charger Incentive

In addition to the make-ready utility investment covering up to 100% of the cost of installing the conduit infrastructure at the EVSE site, the EDCs shall provide an upfront incentive to participating site hosts to partially offset the costs of purchasing networked Level 2 EVSEs. The incentive level will vary depending on site host eligibility (see Table 12), and will be calculated based on the net installed cost of the EVSE, after deducting any other applicable rebates, grants, or other incentives the site host may receive. Incentives shall not be used to install Level 1 chargers; site hosts installing Level 1 chargers will assume those costs. Site hosts installing DCFCs at workplace locations may participate in the DCFC program, as long as the charging infrastructure installed through the Program is made available to the public.

---

[66] See The International Council on Clean Transportation, Quantifying the Electric Vehicle Charging Infrastructure Gap Across U.S. Markets, January 2019, p. 10, https://theicct.org/sites/default/files/publications/US_charging_Gap_20190124.pdf.

[67] See Eversource RFPD Response, Exhibit 5, p. 9; EV Roadmap, pp. 52-53.

**Table 12**
**Level 2 EVSE Incentive Structure: Workplace Charging (2022-2024)[68]**

| | Incentive Level | Max. Incentive per Site |
|---|---|---|
| **Baseline** | 50% of EVSE cost + 100% installation (4 or more ports, up to 10 ports per site) | $12,000 |
| **Underserved communities** | 100% of EVSE cost + 100% installation (4 or more ports, up to 10 ports per site) | $40,000 |
| **Underutilized circuits** | 75% of EVSE cost + 100% installation (4 or more ports, up to 10 ports per site) | $40,000 |

The CGB may consider whether any of its low-cost borrowing offerings could be utilized to finance any remaining costs associated with the initial purchase and installation of networked Level 2 chargers for the Workplace Charging Program.[69]

### c. Incentive Adders

#### i. Underserved Communities

In accordance with the Program Objectives, the EDCs shall offer a higher upfront incentive to participating site hosts located in underserved communities. The Program defines an underserved community as environmental justice communities pursuant to Conn. Gen. Stat. § 22a-20a and distressed municipalities pursuant to Conn. Gen. Stat. § 32-9p (See Section IV.B.2c.i). In addition, Level 2 charging stations installed within Opportunity Zones designated by the U.S. Economic Development Association within the U.S. Department of Commerce[70] are also considered underserved communities and are therefore eligible for additional EVSE incentives outlined in Table 12.

#### ii. Underutilized Circuits with Excess Demand Capacity

Where feasible, the Program Administrators shall also seek to identify potential site hosts located on circuits with excess peak demand capacity. Upon request, the EDCs will be required to provide demand capacity data for a specific location to enable a site owner/operator to determine whether the location would be eligible for an incentive adder. In addition, the EDCs will be directed to submit for Authority approval a proposed scope, budget and timeline to develop a publicly available hosting capacity map specific to installing Level 2 and DCFC stations.[71] The Program Administrators shall propose an appropriate incentive adder for the EVSE installation for the Authority's approval on or before August 2, 2021.

---

[68] See Eversource RFPD Response, Exhibit 5, p. 21.

[69] See CGB RFPD Response, p. 2.

[70] See DECD, An Overview on the Opportunity Zone Program, https://portal.ct.gov/DECD/Content/Community-Development/04_Incentives_LiabilityRelief/Location-Based-Incentives/Opportunity-Zones.

[71] See EV Roadmap, p. 41.

### d. Demand Charges

Separately metered charging stations under the EDCs' existing commercial tariffs include demand charges that can be cost prohibitive, particularly for DCFCs with low utilization rates overall but periods of high demand. The EDCs are directed to establish a tariff specifically for separately metered DCFCs and networked Level 2 EVSEs serving light-duty fleets to enable increased access to outside-the-home charging and eliminate range anxiety. Accordingly, the EDCs shall develop a tariff that includes a fixed monthly charge, on-peak and off-peak kWh distribution charges, and a kW distribution and transmission demand charge that are lower when a charging station's load factor is low (e.g., utilization of <5%) and increases over time at established increments as charging station utilization increases.[72] To minimize program costs, any revenues from billed sales that exceed the established revenue requirements used to design the tariff over the useful life of the EVSE shall be tracked by the EDCs and credited back to ratepayers through a rider or other rate reconciliation mechanism. The tariff shall be offered to all electric utility customers with separately metered DCFCs and installations of 10 or more networked Level 2 EVSEs.

### e. Managed Charging

The EDCs shall collect and analyze data from participating Workplace Charging Program participants during the 2022-2024 program cycle to inform the development of a managed charging program for participating light-duty fleets. The EDCs will be required to submit for Authority approval a proposed managed charging program to be implemented beginning in the 2025-2027 program cycle for all light-duty fleet program participants. In its proposal, the EDCs shall quantify the types of benefits to the electric grid, including, but not limited to, participation in ISO New England's ancillary services market.

### f. Participant Eligibility

Site selection will ultimately be driven by site host participation, though the EDCs and EVSE vendors will have a key role in outreach, education, and site optimization. In addition to the criteria outlined in Section V.B., site hosts must meet the following eligibility criteria to participate in Level 2 Workplace Charging program:

- Site hosts must provide dedicated parking spaces for the number of charging ports installed;

[72] See RMI DCFC Rate Design Study, October 2019, pp. 10-12, http://www.dpuc.state.ct.us/dockcurr.nsf/8e6fc37a54110e3e852576190052b64d/bba44cab89190486852585d600625c41/$FILE/DCFC_Rate_Design_Study_final_revised.pdf.

- Site hosts must allow their EDC to access charger network data on each charging session, though the data shall not attributed to an individual driver;[73] and
- Site hosts of light-duty fleets (i.e., 10 or more ports) must participate in a managed charging program to be implemented by the EDCs in the 2025-2027 program cycle.[74]

### 3. Deployment Targets

The deployment targets outlined in Table 13 are calculated based on the EVI-Pro Lite Tool projections for workplace charging infrastructure necessary to meet the 2025 ZEV MOU and 2030 GHG emissions reduction targets. The EVI-Pro Lite Tool does not separately track the number of workplace charging station installations across the state, and there is no current utility or third party database of existing workplace charging locations.[75] As a result, the deployment targets are calculated based on assuming zero current deployments.

**Table 13**
**Level 2 EVSE Deployment Targets: Workplace Charging**

| | NUMBER OF PORTS | | | |
|---|---|---|---|---|
| SERVICE TERRITORY | 2022-2024 | 2025-2027 | 2028-2030 | TOTAL |
| Eversource | 1,478 – 2,789 | 2,080 - 3,926 | 2,080 - 3,926 | 5,637 - 10,642 |
| UI | 369 - 697 | 520 - 982 | 520 - 982 | 1,409 - 2,660 |
| Total | 1,847 - 3,486 | 2,600 - 4,908 | 2,600 - 4,908 | 7,046 - 13,302 |

## F. LMI CUSTOMER ELECTRIFIED MOBILITY STUDY

The Authority seeks to better understand the current mobility obstacles LMI residents face – as many EV drivers have limited to no access to charging solutions beyond public charging – and to determine which electrified transportation strategies apart from vehicle ownership or lease are best suited to meet current and future LMI needs.

To do so, the Authority has determined that it is necessary and appropriate to supplement existing staff expertise in the above-cited proceeding, pursuant to Conn. Gen. Stat. § 16-18a, to conduct an electrified mobility study focused on identifying and implementing ZEV transportation solutions for LMI residents in Connecticut. The Authority expects an electrified mobility study to develop action-oriented recommendations on how to ensure LMI communities have equitable access to ZEVs in Connecticut, and to inform future program designs or modifications thereto.

[73] UI RFPD Response, p. 33; Eversource RFPD Response, Exhibit 2, p. 14.
[74] See Greenlots RFPD Response, pp. 15-16.
[75] See UI RFPD Response, p. 20.

# V. PROGRAM ADMINISTRATION

## A. EVSE PROCUREMENT GUIDELINES

In an effort to better understand charging behavior and anticipate technology advancements in charging infrastructure, EVSEs installed through this Program shall require networked charging capabilities. Networked chargers allow for participation in a demand response or managed charging program. Networked chargers can also be programmed or updated remotely, as technology advances. Moreover, networked chargers will enable the EDCs, or third parties, to have advanced remote load management controls to facilitate off-peak charging and other managed charging strategies. Further, networked chargers enable interval data collection to inform usage patterns, and provide enhanced network communication capabilities between the EV driver and the utility, or third-party, systems.

Through the procurement process, the EDCs shall seek to establish a consistent charging experience for EV drivers. The EDCs shall jointly issue an open request for proposals (RFP) to develop a list of approved EVSE vendors, makes and models, which shall be updated on a periodic basis to account for technological advancements and to leverage the competitive market. The EDCs shall jointly submit to the Authority for approval the EVSE vendor RFP with a list of minimum requirements to satisfy the program design outlined in the EV Program portfolio. At a minimum, the EVSE procurement specifications must address the following criteria:

- Applicable standards for networked Level 2 EVSEs and DCFCs, including methods for collecting and providing charging network data to the EDCs;
- Minimum charging capacity for Level 2 chargers and DCFCs;
- Adherence to the Open Charge Point Protocol, Open Charge Point Interface Protocol and/or the Open Automated Demand Response;
- Demonstrated compliance with the Americans with Disabilities Act; and
- Multiple payment mechanisms in compliance with Conn. Gen. Stat. § 16-19ggg and any other applicable regulations; and
- Requirements and protocols to ensure consumer protection, pricing transparency, and customer service support.

In addition to the EVSE vendor RFP, the EDCs will be required to submit for Authority approval a comprehensive data privacy and security plan and demonstrate how the plan aligns with the EVSE vendor requirements and the EDCs' existing cybersecurity policies and plans.

## B. PARTICIPANT ELIGIBILITY

In addition to the participant eligibility requirements outlined for each program area, the following criteria must be met for all program participants:[76]

[76] See Eversource RFPD Response, Exhibit 7, pp. 2-6.

- Eligible customers must be a residential or commercial and industrial (C&I) electric customer of Eversource or UI.
- The service address for a residential or C&I customer electric account must be for a physical address located within the state of Connecticut.
- Site hosts must either:
    i. Own the land of the EVSE installation;
    ii. Have a lease for the site (10 years or longer); or
    iii. Obtain written consent from the landowner for the EVSE installation on site and participation in the Program.
- Site hosts must agree to operate and maintain EVSEs installed through this Program for a minimum of 10 years.
- Site hosts must grant permission for their EDC to receive all available data from the networked EVSE, though the data shall be aggregated and anonymized or otherwise encrypted if/when disclosed publicly.[77]

## C. PARTICIPANT ENROLLMENT AND REBATE DISBURSEMENT

The EDCs will manage participant enrollment in the Program and administer the incentive rebates. Program participants/site hosts shall only receive an incentive rebate to offset some or all of the cost of a Level 2 charger or DCFC (depending on the total charger cost and the incentive the participant is eligible for) only after all participant eligibility requirements have been met and the site host has provided proof of EVSE purchase. Utility electric bill payments for the usage of installed EVSEs are the sole responsibility of the site hosts; incentive payments received through this Program shall not be applied toward electric bills.

In addition, the EDCs will be required to submit a proposed process for Authority approval to determine on a site-by-site basis the level of make-ready infrastructure upgrades that would enable future charging infrastructure upgrades.[78] Any future-proofing actions taken by the EDCs must be driven by site host commitments and balanced against equitable allocation of limited program funds.

## D. EDUCATION AND OUTREACH PLAN

A coordinated and effective education and outreach plan is essential to achieving the EVSE deployment targets across the Program portfolio. The EDCs will play a key role in site host recruitment, as well as with respect to education on the benefits of EVSE charger installations. Tailored solutions for each program area will be required to engage with potential program participants. In addition, the EDCs will identify and leverage existing state, regional, and national EV driver awareness campaigns and establish partnerships to promote in-state initiatives. Expanding upon their RFPD responses, the EDCs shall jointly filed a proposed education and outreach plan, including a coordinated

[77] See UI RFPD Response, p. 33; Eversource RFPD Response, Exhibit 7, p. 7.
[78] See Eversource RFPD Response, Exhibit 7, p. 2; UI RFPD Response, p. 26.

messaging campaign, associated metrics, and an annual budget. The budget for each EDC's education and outreach plan shall not exceed 5 percent of the EDC's total program costs.

## E. EVALUATION, MEASUREMENT, AND VERIFICATION (EM&V)

The EDCs shall retain a third party to evaluate, measure, and verify results of the Program (EM&V Consultant). The EM&V Consultant shall develop Program metrics, associated calculation methodologies, and data requirements for verifying Program performance based on the established metrics. All metrics and calculation methodologies shall be subject to review and approval by the Authority.

Metrics to determine program success shall include, but are not limited to:[79]

- Number of site agreements signed and ports installed overall, and broken down by the number of site agreements signed and ports installed in underserved communities and underutilized circuits;
- A breakdown of distribution system costs, make-ready infrastructure costs and incentive payments;
- Networked charger data from the site hosts:
    - Charger utilization data by site;
    - Charging load profiles for each program area, and an aggregate;
    - Pricing plan options available at public charging stations;
- Program revenues (where applicable);
- Outreach and education metrics; and
- A methodology for calculating estimated avoided GHG emissions due to the Program.

The cost of the EM&V Consultant shall not exceed five percent of the total Program administrative costs for any three-year program cycle. The Program Administrators shall develop and submit for the Authority's review and approval a proposed process for retaining a third-party consultant to conduct Program EM&V. Such proposed process must be submitted for the Authority's review and approval on or before June 14, 2021. The Program Administrators shall notify the Authority, through the relevant docket, of the retention of an EM&V Consultant, including the consultant retained.

### 1. Reporting Requirements

The EDCs shall provide an annual report summarizing the Program results to date and recommendations for any Program modifications no later than August 1 through the relevant proceeding. The Authority will review the EDCs' annual report through the Annual Review or Program Review processes, depending on the year. At a minimum, such annual report shall detail the savings delivered and progress on the Authority-approved Program metrics.

[79] See Greenlots RFPD Response, p. 10.

The EM&V Consultant shall submit a full report on the established Program metrics into the relevant docket on or around June 15 of the last year of each three-year program cycle (e.g., on or around June 15, 2024). The Authority will review the EM&V Consultant's report through the Program Review process.

## F. PURA REVIEW PROCESS

During the first two years of every three-year program cycle (e.g., 2022 and 2023), the Authority will conduct an annual review process (Annual Review) beginning on or around August 1 of each year to review key metrics, as provided by the Program Administrators and/or the EM&V firm, and to make small, strategic adjustments, as necessary, to ensure: (1) continued alignment with the Program Objectives; and (2) that the Program is on track to meet its three-year program cycle deployment targets. The Authority will work to conclude the Annual Review within 90 days to provide the Program Administrators and the market time to implement and react to any changes, respectively.

During the last year of every three-year program cycle (e.g., 2024), the Authority will conduct a full program review (Program Review) beginning on or around June 15, including an evaluation of the existing program design to ensure that the Program is: (1) delivering on the expected value to Connecticut's ratepayers; and (2) is meeting the Program Objectives. The Authority will hold at least one public meeting during the course of the Program Review. The Authority will work to conclude the Program Review within 120 days.

## G. PROGRAM COSTS

Prior to the issuance of a Decision in this proceeding, the EDCs will be directed to submit modified program budgets based on the program design elements outlined above for Authority approval. The program budgets shall be specific to each EV program area and include a detailed breakdown of capital costs, operations and maintenance costs, including incentive budgets and allocations for outreach and education, as well as other administrative costs.

### 1. Cost-Benefit Analysis

M.J. Bradley & Associates conducted a cost-benefit analysis (Study) to model the impacts of increased deployment levels of plug-in EVs (PEVs) in Connecticut.[80] The Study compared a business as usual baseline of continued use of internal combustion engine vehicles to two scenarios of EV penetration levels achieved between 2030 and 2050. Scenario 1 modeled the deployment of 150,000 EVs by 2025 to meet Connecticut's

[80] See Lowell, Dana et al. Electric Vehicle Cost-Benefit Analysis, Plug-in Electric Vehicle Cost-Benefit Analysis: Connecticut, M. J. Bradley & Associates (Dec. 2016), https://mjbradley.com/sites/default/files/CT_PEV_CB_Analysis_FINAL.pdf.

ZEV MOU target, and assumed the same annual rate of deployment through 2050.[81] Scenario 2 of the Study modeled projected EV deployments that would be required to meet the State's GHG reduction target of 80 percent below 2001 levels by 2050.[82] Specifically, Scenario 2 assumed EV penetration levels of 25 percent of all registered vehicles in Connecticut by 2030, 52 percent by 2040, and 80 percent by 2050.[83]

The Study results concluded that cumulative net benefits under Scenario 1 would amount to more than $3.2 billion statewide by 2050, with $500 million in cumulative net benefits realized by utility customers, or ratepayers, with even greater net benefits calculated under Scenario 2.[84] The Study also calculated the cumulative net benefits to utility customers (through reduced electric bills), PEV owners, and societal benefits as measured by GHG reductions on a per-PEV deployment (See Table 14).[85]

**Table 14**
**Summary of Statewide Net Present Value Annual Benefits of PEV Deployment, M.J. Bradly & Associates**

| | Net Present Value Annual Benefits ($/PEV) | |
|---|---|---|
| | 2030 | 2050 |
| **Utility Customer** | $73 | $62 |
| **PEV Owner** | $45 | $310 |
| **GHG Reduction** | $90 | $132 |
| **Total** | $208 | $504 |

## H. COST RECOVERY PROPOSAL

The EDCs will recover the revenue requirement associated with their respective portfolios through electric distribution rates following a normal base rate case proceeding. The following description represents the approach:

- EVSE program costs, including rebates, program administration, education and outreach (but excluding capital, or fixed assets, and associated costs such as depreciation), will be deferred to a regulatory asset and amortized over a five-year period.
- The regulatory asset will earn a return after the balance is incorporated into rate base as part of a base rate case proceeding.
- Capital assets would be included in rate base and depreciated over their useful lives.

---

[81] Id., pp. 7-8.
[82] Id.
[83] Id.
[84] Id., p. 4.
[85] D. Lowell et al. MJB&A Analyzes State-Wide Costs and Benefits of Plug-in Vehicles in Five Northeast and Mid-Atlantic States (Feb. 14, 2017), http://www.mjbradley.com/reports/mjba-analyzes-state-wide-costs-and-benefitsplug-vehicles-five-northeast-and-mid-atlantic.

    - EV charging assets assume a 15-year estimated useful life.
- Revenue requirements would be computed consistent with the applicable utility's most recent base rate case. The allocation of the revenue requirement to customer classes would utilize the percentage of base distribution revenue from the most recently authorized base rate case.
- Allocated revenue requirements would be applied based on forecasted billing determinants to derive rates.