# Corporate Shared Services Project Authorization Form

| | |
|---|---|
| Date Prepared: 11/15/2021 | Project Title: CT EV Program |
| Company/Companies: Eversource: CL&P | Project ID Number: N/A |
| Organization: Energy Efficiency | Plant Class/(F.P.Type): Energy Efficiency |
| Project Initiator: [redacted] | Project Type: Specific |
| Project Manager(s): [redacted] | Capital Investment Part of Original Operating Plan? Y |
| Project Sponsors: [redacted] | O&M Part of the Original Operating Plan? N |
| Estimated in service date(s): 1/1/2022 | Transfer of Funds Request: N |
| Total Request: The total program costs are anticipated to reach approximately $279M (Capital-$31M and Expense-$248M) over the period 2022 to 2030 with cost recovery through base rates. | Emergency Related Request: N |
| Accounting: FERC Account (186EV0); Line of Business (11100-Non Tracked Distribution); Amortization | Expenses (excluding capital, or fixed assets, and associated costs such as depreciation), will be deferred to a regulatory asset on the balance sheet. Once incorporated into base rates, the regulatory asset will be amortized over a five-year period |

## Project Authorization

*Project Authorization Forms must be completed for Corporate Shared Services projects totaling $500K or greater in accordance with the Project Authorization Policy and approval levels in the Delegation of Authority Policy (DOA).*

*If Subsidiary Board approval is required (Corporate Shared Services capital projects > $15M), document the review by Enterprise Risk Management (ERM) and Financial Planning and Analysis (FP&A) (attach email approval).*

ERM: _____

FP&A: _____

If this is a Transfer of Funds Request Vice President of Financial Planning and Analysis approval is required. If the Vice President of Financial Planning and Analysis deems appropriate, additional approvals may also be required (see page 7 of the Project Authorization Policy – Project Approval is not Transferable for further detail):

Date of Approval
CFO:_N/A_____

Other:_____

Documentation /
Explanation:_____

## Executive Summary

In accordance with Docket No. 17-12-03, PURA Investigation into Distribution System Planning of the Electric Distribution Companies, the Authority established a statewide zero emission electric vehicle program (EV Charging Program, or Program), which is available to all customers and customer classes within the service territories of Eversource and United Illuminating (UI).

The objective of the decision is to deploy zero-emission EVs in Connecticut as a critical component of meeting the State's greenhouse gas (GHG) targets, realize the potential electric system benefits of EVs, along with the economic, health, and environmental benefits they provide. In order to meet Connecticut's EV target, approximately 125,000 – 150,000 EVs must be deployed by 2025. Further, to meet the economy-wide GHG emissions reduction target of 45% below 2001 levels by 2030, wide-scale EV deployment is a key strategy.

On July 14, 2021, the Authority established the EV Charging Program. The key program elements consist of a combination of incentives to customers for networked Level 2 electric vehicle supply equipment (EVSE) and direct current fast chargers (DCFC), as well as required participation in some managed charging programs. 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 to ensure a streamlined, statewide approach to EV infrastructure investments and coordinated outreach. Program areas include:

- Single Family Residential Program
- Multi-Family Dwelling (MUD) L2 Program
- DC Fast Charging (DCFC) Stations Program
- Public Destination L2 Program
- Workplace/Light Duty Fleet Program

Over the first three years (2022-2024), Eversource expects to enable the installation of approximately 3,400 public and fleet level 2 charging ports, 12,000 Single family residential charging ports and 110 DCFC stations.

The EDCs will recover the program costs plus a return calculated using the weighted average cost of capital associated with their respective EVSE portfolios through electric distribution rates following a normal base rate case proceeding, as EV-related expenditures shall be a core business function of the EDCs now and into the future. As such, distribution rates, through which the ratepayers will realize the benefits of lower rates as increased kWh sales are realized due to increased EV deployment, should reflect all EV-related costs.

The Authority has ordered that the Program will launch on January 1, 2022 and the Authority expects the program will run until at least 2030.

## Project Costs Summary

The tables below show total budgets, capital-only and expense-only budgets for 2022 and for the total 9-year program.

***Total Budgets (Capital & Expense)***

| Cost Element | 2022 ($) | 2022-2030 ($) |
|---|---|---|
| Multi-Family Dwelling (MUD) L2 Program | 1,940,000 | 29,100,000 |
| DC Fast Charging (DCFC) Stations Program | 1,980,000 | 34,740,000 |
| Public Destination L2 Program | 1,262,000 | 32,790,000 |
| Workplace/Light Duty Fleet Program | 2,406,300 | 38,252,500 |
| **Total Public Program Costs** | **7,588,300** | **134,882,500** |
| | | |
| Upfront Rebates & Incentives | 2,310,000 | 24,830,000 |
| Managed Charging program participation** | 3,108,917 | 78,039,309 |
| **Total Residential Program Costs** | **5,418,917** | **102,869,309** |
| | | |
| Education & Outreach | 2,333,333 | 21,000,000 |
| Evaluation, Measurement & Verification | 500,000 | 4,500,000 |
| Other Administration | 76,396 | 715,765 |
| Fleet Engagement Advisory Consulting | 333,333 | 3,000,000 |
| IT (Site Host Capacity Map & Other) | 581,500 | 1,717,500 |
| Labor (6 FTEs's) | 1,200,000 | 10,800,000 |
| **Total Other Program Costs** | **5,024,563** | **41,733,265** |
| | | |
| **Total Program Costs** | **18,031,780** | **279,485,074** |

Key components of the costs include:

- Public Program Costs include rebates for EVSEs and infrastructure improvements offered to eligible customers, varying by program area. Higher rebates are offered to underserved customers. Workplace/fleet also includes managed charging program incentives.
- Residential Program Costs include upfront rebates for EVSEs and infrastructure improvements and managed charging program incentives.
- Program Administration Costs include education and outreach, EM&V, IT, and an assumed level of 6 FTEs., plus an additional (1) FTE supporting the Managing Charging Program.

***Capital Budget***

| Cost Element | 2022 ($) | 2022-2030 ($) |
|---|---|---|
| Multi-Family Dwelling (MUD) L2 Program | 123,675 | 1,855,125 |
| DC Fast Charging (DCFC) Stations Program | 1,320,000 | 23,160,000 |
| Public Destination L2 Program | 80,453 | 2,090,363 |
| Workplace/Light Duty Fleet Program | 138,825 | 2,206,875 |
| **Total Public Program Costs** | **1,662,953** | **29,312,363** |
| | | |
| Upfront Rebates & Incentives | | |
| Managed Charging program participation** | | |
| **Total Residential Program Costs** | **0** | **0** |
| | | |
| Education & Outreach | | |
| Evaluation, Measurement & Verification | | |
| Other Administration | | |
| Fleet Engagement Advisory Consulting | | |
| IT (Site Host Capacity Map & Other) | 171,000 | 171,000 |
| Labor (6 FTEs's) | 192,000 | 1,728,000 |
| **Total Other Program Costs** | **363,000** | **1,899,000** |
| | | |
| **Total Program Costs** | **2,025,953** | **31,211,363** |

***Expense Budget***

| Cost Element | 2022 ($) | 2022-2030 ($) |
|---|---|---|
| Multi-Family Dwelling (MUD) L2 Program | 1,816,325 | 27,244,875 |
| DC Fast Charging (DCFC) Stations Program | 660,000 | 11,580,000 |
| Public Destination L2 Program | 1,181,547 | 30,699,637 |
| Workplace/Light Duty Fleet Program | 2,267,475 | 36,045,625 |
| **Total Public Program Costs** | **5,925,347** | **105,570,137** |
| | | |
| Upfront Rebates & Incentives | 2,310,000 | 24,830,000 |
| Managed Charging program participation** | 3,108,917 | 78,039,309 |
| **Total Residential Program Costs** | **5,418,917** | **102,869,309** |
| | | |
| Education & Outreach | 2,333,333 | 21,000,000 |
| Evaluation, Measurement & Verification | 500,000 | 4,500,000 |
| Other Administration | 76,396 | 715,765 |
| Fleet Engagement Advisory Consulting | 333,333 | 3,000,000 |
| IT (Site Host Capacity Map & Other) | 410,500 | 1,546,500 |
| Labor (6 FTEs's) | 1,008,000 | 9,072,000 |
| **Total Other Program Costs** | **4,661,563** | **39,834,265** |
| | | |
| **Total Program Costs** | **16,005,828** | **248,273,711** |

The following description details the directed approach:

- EVSE program costs, including rebates, program administration, education and outreach (excluding capital, or fixed assets, and associated costs such as depreciation), will be deferred to a regulatory asset on the balance sheet. Once incorporated into base rates, the regulatory asset will be amortized over a five-year period;
- The carrying charges assessed to the regulatory asset shall be no more than the Company's last approved weighted average cost of capital;
- Any capital assets related to the EV Charging Program (i.e., new service) authorized herein shall be treated as any other capital asset, i.e., included in rate base and depreciated over their useful lives. EV charging assets shall 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.

## Overall Justification:

### Project Need Statement

To comply with Docket No. 21-08-06 (formerly 17-12-03RE04)), *CL&P is requesting authorization for funding to staff and operate this program* with cost recovery through base rates. Eversource is mandated to implement this program and has received specific regulatory orders related to its implementation that will drive the overall cost of the initiative.

### Project Scope

The EV Charging Program identifies five program areas, or market segments, to optimize EVSE deployment and associated distribution system infrastructure:

(1) **Residential Single-Family Level 2 Charging**: designed to promote off-peak and managed charging for EV drivers living in single-family residences through an upfront incentive for networked Level 2 EVSE and participation in a two-tier managed charging program administered by the EDCs.
(2) **Residential Multi-Unit Dwellings (MUDs) Level 2 Charging**: includes 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 EV drivers residing in MUDs.
(3) **Direct Current Fast Charging (DCFC):** includes a make-ready utility investment model, combined with an upfront incentive for the purchase and installation of DCFCs, to increase access to the statewide DCFC network. Eversource will also offer a tariff for separately metered DCFCs designed to mitigate the impact of demand charges
(4) **Destination Level 2 Charging**: includes a make-ready utility investment model, combined with an upfront incentive for the purchase and installation of networked Level 2 EVSEs, to supplement the State's existing publicly available charging infrastructure.
(5) **Workplace & Light-Duty Fleet Level 2 Charging:** includes a managed charging program, a make-ready utility investment model and an upfront incentive for the purchase and installation of networked Level 2 EVSEs, to increase the deployment of light-duty fleets, which may include municipal and state government fleets, and employee workplace charging

Incentives by program area defined by the Authority are shown in the tables below[1]:

[1] 17-12-03RE04 FD (ct.gov)

**EV Charging Program EVSE and Make-Ready Incentives**

| | Residential Single-Family (Level 2) | Multi-Unit Dwellings (Level 2) | Public Destination (Level 2) | Workplace (Level 2) | DCFC |
|---|---|---|---|---|---|
| Incentive Structure | | | | | |
| **EVSE and Make-Ready Incentives** | Up to $500 EVSE rebate + a portion of necessary electrical upgrades[14] | Up to 50% of EVSE cost + Up to 100% make-ready installation (≥ 2 ports) | | Up to 50% of EVSE cost + Up to 100% make-ready installation (≥ 4 ports) | Up to 50% of EVSE cost + Up to 100% make-ready installation (≥ 2 ports) |
| Max. Incentive per Site (including make-ready costs covered by the Program) | | | | | |
| **Baseline** | - | $20,000 | | | $150,000 |
| **Underserved Communities** | - | $40,000 | | | $250,000 |

In order to implement the project the following services/areas at Eversource will be impacted:

| Eversource Departments | Services Provided |
|---|---|
| Energy Efficiency | Manage subscriber enrollment and project procurement, and contractor coordination |
| Legal | Create site host agreements and other legal forms |
| IT / Billing System | Creation of Demand Capacity Map<br>Create data privacy plan |
| Regulatory / Strategy | Cost Recovery and compliance filings |
| Rates | Creation of EV specific rates in compliance with orders |
| Procurement | Manage RFP for EVSE hardware, EM&V vendor, etc. |
| Operations / Engineering | Project development and execution (interconnection) |

## Project Objectives

The EV Charging Program supports the Authority's Framework for an Equitable Modern Grid, namely: (1) support (or remove barriers) to the growth of Connecticut's green economy; (2) enable a cost-effective, economy-wide transition to a decarbonized future; (3) enhance customer access to a more resilient, reliable, and secure commodity; and (4) advance the ongoing energy affordability dialogue in the State, particularly in underserved communities.

Eversource will manage the EV Charging program to meet the Authority-defined objectives as well as support the development and management of EV growth on the grid in a sustainable and efficient manner. Eversource will design its programs to meet its 80% share of the statewide deployment targets and incentives defined by the Authority, as shown below[2].

**EVSE Program Deployment Targets[5]**

| | NUMBER OF PORTS (STATEWIDE) | | | | |
|---|---|---|---|---|---|
| **PROGRAM AREA** | Current Deployment | 2022-2024 | 2025-2027 | 2028-2030 | TOTAL |
| **Residential Single-Family (Level 2)** | - | 15,000 | 17,500 | 17,500 | 50,000 |
| **Residential Multi-Unit Dwellings (Level 2)[6]** | - | 1,213 | To be revisited | To be revisited | To be revisited |
| **DCFC** | 69 | 137 | 172 | 172 | 550 |
| **Destination (Level 2)** | 771 | 789 | 1,654 | 1,654 | 4,868 |
| **Workplace (Level 2)** | - | 2,314 | 2,521 | 2,521 | 7,356 |

## Background / Justification

The Authority's Docket No. 21-08-06 (formerly, 17-12-03RE04) is the primary reason for the EV Charging Program. Additionally, there are substantial potential benefits to Eversource and its customers through this program. If implemented and managed properly, transportation sector electrification offers direct benefits to the electric grid and spreads fixed infrastructure costs over a greater volume of electricity sales, thereby reducing electric rates. Additionally, there is a benefit to supporting customers in their transition to transportation electrification and helping them to effectively manage the timing of the load is a benefit to them and the grid. Finally, this program supports Eversource corporate sustainability and gas emission reduction goals and therefore may be viewed positively by customers and investors.

## Business Process and / or Technical Improvements:

The following are business process and/or technical improvements expected for Eversource:

- Eversource will manage the EV Charging Program to support its customers in effective, safe installation of EVSEs and optimized management of load. Similar pilots are offered in CT and MA and this program will expand and improve upon those pilots.
- Improved ability to manage the EV load for grid benefits and long-term load shaping.
- Incorporating existing interconnection processes and structures that are being used in the MA EV program.
- Integration with Managing Charging Platforms for the Demand Response and Battery Storage Programs.
- Incorporating program tracking through the EE Tracking and Reporting System (TrackSys).

[2] 17-12-03RE04 FD (ct.gov)

## Future Financial Impacts:

No additional costs.

What functional area(s) will these future costs be funded in? Energy Efficiency

These programs are required by Authority decision; benefits to the system have not yet been calculated and are not the driver of this program and the related projects. Yet, benefits are expected in the form of increased revenues from electric vehicles, improved efficiency of charging equipment and ability for Eversource to manage charging and promote off-peak charging by customers with EVs.

| | |
|---|---|
| What is the project's IRR? | N/A |
| What is the project's NPV? | N/A |
| What is the project's payback period? | N/A |

## Asset Retirement Obligation (ARO) and/or Environmental Cleanup Costs (Environmental Liabilities):

N/A

## Alternatives Considered with Cost Estimates

## N/A

## Governance:

The following summarizes the Governance that has been established.

- [redacted], Manager of Clean Energy Strategy, has served as the development lead on the program. [redacted], EV Program Implementation lead serves as day-to-day program manager along with Program Management Support from [redacted]. The Program Implementation will be managed under the Energy Efficiency team under [redacted].

## Project Schedule

| Key Milestones | Deliverables |
|---|---|
| 12/15/2021 | • Program metrics submitted for PURA approval<br>• Data Privacy plan submitted for PURA approval |
| 1/1/2022 | • Program launch including marketing and outreach, incentive and rebate offerings<br>• Demand capacity map published |
| 3/30/2022 (ongoing quarterly) | • First quarterly compliance filing due |
| 5/1/2022 | • EVSE MUD Lease program details submitted for PURA approval |
| 8/1/2022 | • Annual compliance filing due (ongoing annual)<br>• Proposed EV only tarrif solutions for MUD and separately metered public chargers submitted for PURA approval |

## Regulatory Approvals

This project has been approved by the Connecticut Public Utilities Regulatory Authority (PURA) under Docket #21-08-06 (formerly 17-12-03 RE04).

## Risks and Risk Mitigation Plans

| Risk | Mitigation Plan |
|---|---|
| **Cost Recovery** | Cost recovery is a risk as ES will make expenditures in advance of cost recovery. Risk of cost recovery will be mitigated by standard contract requirements with projects funded by ES that will mitigate issues of non-performance. Costs will be tracked under FWOs established and in accordance with standard regulatory rate recovery under PURA Dockets. |
| **Achievement of Deployment Targets** | The Authority has set forth very aggressive statewide deployment targets. During the Managed Charging Workgroup, several stakeholders noted that this was very optimistic and may not be feasible due to market changes and preferences. Eversource's program team will work to design programs, marketing/outreach and incentives with the goal of achieving these deployment targets. Eversource will also document its efforts and conduct evaluations and research to understand the market to identify relevant barriers if deployment is running slower than expected. |

| | |
|---|---|
| **Staff Requirements** | The EV Charging Program will be supported by six new FTEs plus an additional FTE supporting the Managing Charging program. Additional funds have been allocated in the budget for external support to reduce internal staff requirements. Additional support will be needed |
| **Program Timing and Complexity** | The Authority-defined program is broad and scope and requested on a short timeline and being implemented in a fast-changing market. Additionally, the program offerings require procuring multiple vendors and likely development of coordinated program platforms. This leads to risks in timing of deployment, difficulty finding vendors and complexity of effective implementation. Eversource is mitigating this risk by leveraging experience expertise from the MA program and existing EE Rebate processing vendors. |
| **Interoperability** | Statewide deployment of EV charging poses numerous interoperability considerations that require further examination (e.g., multiple charging plug types, wireless charging technologies, onboard telematics). These risks are being managed by participation in the Authority EVSE interoperability workshops. |

## References

- **Final Decision, 07/14/2021**
- Link to EDC Managed Charging Presentation (TBD)

## Diagrams, Attachments, and Images

The following figures from the Final Decision provide details on incentives.

**EV Charging Program EVSE and Make-Ready Incentives**

| | Residential Single-Family (Level 2) | Multi-Unit Dwellings (Level 2) | Public Destination (Level 2) | Workplace (Level 2) | DCFC |
|---|---|---|---|---|---|
| Incentive Structure | | | | | |
| **EVSE and Make-Ready Incentives** | Up to $500 EVSE rebate + a portion of necessary electrical upgrades[14] | Up to 50% of EVSE cost + Up to 100% make-ready installation (≥ 2 ports) | | Up to 50% of EVSE cost + Up to 100% make-ready installation (≥ 4 ports) | Up to 50% of EVSE cost + Up to 100% make-ready installation (≥ 2 ports) |
| Max. Incentive per Site (including make-ready costs covered by the Program) | | | | | |
| **Baseline** | - | $20,000 | | | $150,000 |
| **Underserved Communities** | - | $40,000 | | | $250,000 |

The following table provides details on EDC-proposed incentives for residential managed charging.

| Customer Scenario | | Networked Level 2 Charger Rebate (up to) | Wiring Upgrade to 240v Rebate (up to) | Device Issuance | Enrollment Incentive | Baseline Managed Charging Program | Maximum First-Year Benefit |
|---|---|---|---|---|---|---|---|
| **Networked Level 2 Charger** | Needs 240v | $500 | $500 | None | $0 | $200/year | $1,200 |
| | Has 240v | $500 | 0 | None | $0 | $200/year | $700 |
| **Telematics** | Needs 240v | $0 | $500 | None | $200 | $200/year | $900 |
| | Has 240v | $0 | $0 | None | $200 | $200/year | $400 |
| **Non-Networked Level 2 Charger** | Has 240v | $0 | $0 | EDCs send device to enable participation | $150 | $200/year | $350 + device cost |

## Authorization Criteria Specific to IT Projects

NA

**Analysis of Vendor Software Payments for Cloud-Based Software Applications**

**Hosting Fees ONLY**

NA