

DES

Washington State
DEPARTMENT OF
ENTERPRISE SERVICES



JULY 2023

Electric vehicle charging equipment installation for fiscal year 2023

ESSB 5693, Sec. 148(12)

JULY 2022 — JUNE 2023

Business Resources Division

Report to the Legislature

Agency Overview

The Department of Enterprise Services (DES) provides centralized services to state government agencies; to other public entities such as cities, counties, and tribes; and to Washington residents.

DES' mission is to strengthen the business of government.

We do this by creating overall operating efficiencies so our state's government entities can focus on their core missions. Our buying power, economies of scale and years of experience help government get the best value for the products and services they need to support their missions.

Key Services

- Capitol Campus management
- Construction & public works
- Contracts & procurement
- Employee Assistance Program
- Energy efficiency
- Engineering & architectural services
- Facilities management
- Fleet management & EVs
- Parking management
- Print & mail services
- Property management
- Real estate services
- Risk management
- Small agency support
- Surplus property
- Training & workforce development



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Executive Summary

DES was assigned \$2.952M in supplemental budget funds to install zero-emission vehicle supply equipment (EVSE) infrastructure at state-owned facilities in Fiscal Year (FY) 23. The equipment is needed to accommodate charging station installation. DES solicited projects in coordination with the State Efficiency and Environmental Performance (SEEP) Zero-Emission Vehicle (ZEV) Workgroup. Projects proposed by agencies needed to meet the following criteria:

- Be installed at state-owned facilities
- Be primarily for state fleet use
- Have networking capability

DES received 32 applications with an estimated cost of approximately \$6.833M. DES approved nine projects throughout the state for funding. Priority was given to projects in areas that have limited or no nearby public charging infrastructure available and to multi-tenant facilities. In total, the \$2.952M in funding provided was used to install:

- 45 Level 2 chargers
- 7 Level 3 chargers
- 1 Solar Canopy (with 2 Level 2 chargers not included above)

This new charging infrastructure will improve the state's readiness to meet the fleet electrification targets outlined in [Executive Order 21-04](#). These chargers contribute to the projected need of 301 new level 2 chargers and 52 level 3 chargers in 2023, as identified in the [Zero-Emissions Vehicle Implementation Strategy Report](#).

Through this effort, DES identified process improvements in the following areas:

- Planning and solicitation processes
- Building assessments
- Staffing to support the projects
- A focus on Level 2 chargers in the near term

Introduction

The 2022 supplemental budget provided DES with \$2,952,000 of the general fund state appropriation for fiscal year 2023 to install zero emission EVSE infrastructure at state-owned facilities. The equipment is needed to accommodate charging station installation. DES worked in collaboration with SEEP to develop an application template for agencies to use as well as a project selection process. DES received 32 applications from seven agencies with state owned facilities located throughout the state. Applications were processed in July of 2022 in collaboration with the SEEP ZEV Workgroup. Projects that were selected for funding met the following criteria:

- Project location was within a state-owned facility
- Proposed charger installation would have the ability to collect utilization data
- Project readiness & timeline for completion
- Anticipated project benefits:
 - Impact economically disadvantaged communities
 - Impact communities with poor air quality
 - Provide charging infrastructure for multiple agencies or any state employee utilizing an EV while on official state business
 - Allow for agencies with internal combustion engine vehicles due for replacement during FY23 to acquire EVs
 - Project location would help bridge EVSE coverage gaps within the state of Washington

As agencies received approval for projects, they began working to conduct electrical assessments of the selected facilities to establish whether the building had sufficient electrical capacity to support the EVSE or determine if building upgrades would be required.

With the electrical assessment completed, project managers began seeking bids for contractors to perform the installation and ordering chargers for the site. Doing these steps in parallel proved important due to lead times on the charging equipment itself.

Due to supply chain challenges following the COVID-19 pandemic, EVSE projects encountered delays associated with certain parts – particularly sub-panel equipment and transformers in buildings that required upgrades. This resulted in several projects having completion deadlines after the drafting of this report, despite starting in September 2022. Completion dates and usage data for these chargers will be included in the FY23 report.

Statutory Directive

Sec. 148(12) of the 2022 Supplemental Budget ([ESSB 5693](#)):

\$2,952,000 of the general fund—state appropriation for fiscal year 2023 is provided solely for zero emission electric vehicle supply equipment infrastructure at state-owned facilities to accommodate charging station installation. The electric vehicle charging equipment must allow for the collection of usage data and must be coordinated with the state efficiency and environmental performance program. The department must prioritize locations based on state efficiency and environmental performance location priorities, and at least where zero emission fleet vehicles are scheduled to be purchased in fiscal year 2023. The department must report when and where the equipment was installed, usage data at each charging station, and the state agencies and state facilities that benefit from the installation of the charging station to the fiscal committees of the legislature by June 30, 2023, for those installed in fiscal year 2023, and each fiscal year thereafter if further funding is provided. The department shall collaborate with the interagency electric vehicle coordinating council established in Engrossed Substitute Senate Bill No. 5974 (transportation resources) to implement this subsection and must work to meet benchmarks established in Engrossed Substitute Senate Bill No. 5974 30 (transportation resources).

Background

Governor Inslee signed [EO 21-04](#), which directs electrification goals for the Washington State Cabinet Fleet. To support the change in fleet composition, the Legislature provided funding for the installation of EVSE and chargers around the state in the 2022 supplemental budget. Installing charging infrastructure at state-owned and leased buildings is a priority to support state fleet electrification.

Scope

The projects for this round of funding were limited to state-owned buildings with an EVSE demand. The chargers installed with this funding are for state-agency fleet use only. Sites were chosen with a preference for multi-tenant facilities and in locations that have limited or no nearby public-use infrastructure available.

Methodology

In early June 2022, in coordination with the SEEP office, DES established EV project criteria and applications for agencies to submit project proposals for the \$2.952M in EV project funding. All project proposals were to meet the following criteria:

- Project location was within a state-owned facility
- Proposed charger installation would have the ability to collect utilization data
- Project readiness & timeline for completion was to be completed by June 30, 2023

DES received over 32 project proposals from seven state agencies for this funding. Projects were grouped into four different options for selection.

- 1) Projects ranked/scored by a panel of SEEP/DES staff based on project location, equipment, team qualifications, project implementation plans, benefits, with bonus points given to projects if stations were accessible to other state agencies/public and which showed high likelihood of vehicle conversion to Battery Electric Vehicles (BEV) once installed.
- 2) Applying agencies top two project proposals identified for selection.
- 3) Projects ranked by the number of anticipated vehicle conversions to battery electric vehicles if the projects were to be accepted
- 4) Projects ranked by the distance the proposed project locations were from a nearby publicly available Direct Current Fast Charger (DCFC) utilizing Plugshare.com

During the July 2022 SEEP/DES Zero Emission Vehicle Workgroup meeting, alongside state agency fleet leaders, these four options were presented. The meeting had over 30 attendees, representing 12 different state agencies. The results of the survey identified option 2 being the top choice for project selection.

Findings/Results

Agency	Location	Date Completed	L2 Chargers	L3 Chargers	KWh Charged
WSDOT	Bellevue	January 2023	2	0	N/A ⁽¹⁾
DES	Olympia - Capitol Court	August 2023 ⁽²⁾	0	2	N/A
DES	Olympia – NRB Parking Lot	November 2023 ⁽²⁾	7	0	N/A
DFW	Yakima	May 2023	1	0	N/A ⁽³⁾
DVA	Walla Walla	June 2023	0	1	N/A ⁽³⁾
DVA	Port Orchard	June 2023	2	1	N/A ⁽³⁾
L&I-DSHS	Kelso	February 2024 ⁽²⁾	11	2	N/A
DOC	Shelton	July 2023 ⁽²⁾	10	0	N/A ⁽³⁾
DOC	Airway Heights	June 2023 ⁽²⁾	12	1	N/A ⁽³⁾
Total:			45	7	

(1) As this is a solar charger, not a traditional charger, energy is not coming from the grid
 (2) These projects are still ongoing, pending parts with long lead times
 (3) Unable to collect usage data, as projects completed after report was drafted

Recommendations

The EVSE Implementation Team has captured lessons learned from all the projects included in this report to support future projects. Charging infrastructure installation at this scale was novel for DES and the demand for infrastructure is growing. The major recommendations for future projects are as follows:

- Start project planning and solicitation processes as soon as possible. Projects that didn't start immediately pushed past the initial deadline when they experienced part delays. This will be addressed in the next Interagency Agreement for funding, with more clear deadlines for action.
- Designate funding for building assessments. Some project managers were hesitant to move forward without a good idea of feasibility. Agencies didn't want to be responsible for paying for the building assessment if a project ended up not being feasible. The intent for the next round of funding is to have up to 5% of the funding available for building assessments.
- Add staffing to agencies required to electrify their fleet. Many project managers were managing numerous projects and their focus was not fully on EVSE. They understandably lacked experience with the nuances of charging infrastructure. This has been partially addressed with funding for staffing ([FY23-25 Operating Budget](#)), however, the funding is a one-time award. Ongoing funding for these positions will be an important next step.
- Focus more on Level 2 chargers in the short term and consider emphasizing Level 1 chargers long term. Level 3 chargers more frequently require infrastructure upgrades and a much higher cost. Level 3 chargers also don't usually match the typical duty cycle of fleet vehicles which often have a long idle period overnight. Level 2 chargers are more economical in terms of cost and meet the changing needs in most use cases. Level 3 chargers make the most sense in locations that are remote and where the vehicles have little-to-no idle periods between use.

Glossary

Level 1 Charger – 120V charger, around 10-12 Amps available, a typical wall outlet.

Level 2 Charger – 240V charger, up to 50 Amps available, similar to a dryer outlet

Level 3 Charger (DCFC) – High-Volt DC chargers, fast charging option

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