

**JEFFERSON COUNTY
BOARD OF COUNTY COMMISSIONERS**

AGENDA REQUEST

TO: Board of Commissioners

FROM: Shawn Frederick

DATE: November 4, 2024

RE: EV Charger Grant Workshop

STATEMENT OF ISSUE: Jefferson County has been selected for two grants under the Washington Electric Vehicle Charger Program (WAEVCP 2023). Combined the two worksite grants provide up to 40 ports and 6 stub-outs for future expansion. The contract between the lead applicant and Department of Commerce was signed on August 9, 2024 and the project completion deadline is May 6, 2025.

ANALYSIS: Based on the initial fiscal investment to accept the grant award, cost variance in electric versus internal combustion vehicles, fuel and expected decreases in maintenance costs it would be beneficial to sign a letter of intent to contract with a service provider to install and maintain the ports to be located at multiple worksites for fleet vehicle use. We recommend contracting with EVCS with whom we already have a contract for EV charging stations elsewhere in the county (Port Townsend Community Center and the Olympic Gateway Visitor Center).

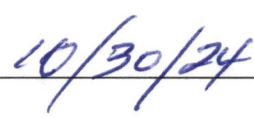
Contracting with EVCS would free the county from a \$102,000 grant match requirement but would also increase the cost of each kwh from the PUD rate of 11 cents up to 29 cents.

FISCAL IMPACT: The amount of the grant is \$306,000 with a 25% match of \$102,000.00. Should the Commissioners agree with our recommendation we would incur a per kwh increase of 18 cents. So the fiscal impact would be determined by kwh usage. The county will save in the long run on maintenance and fuel costs.

RECOMMENDATION: Central Services recommends amending the existing agreement with EVCS to include the additional 40 ports and 6 stubs, pending successful contract negotiation.

REVIEWED BY:


Mark McCauley, County Administrator


Date

Washington Electric Vehicle Charger Program Workshop

Washington Clean Vehicle Program

Updated in 2022, the Department of Ecology updated the Washington Clean Vehicle program by adopting the Zero Emission Standards of California. Essentially, it mandates, with some exemptions, that the sale of all light and medium duty vehicles involve zero emission vehicles (ZEV) by 2035. ZEVs are defined as battery powered electric, plug-in hybrid vehicles with > 50 miles of electric-only range, and hydrogen fuel cell vehicles. For the County, vehicles purchased by the Sheriff's office fall under the exemption.

Washington Electric Vehicle Charger Program grant

The County has been conditionally awarded a grant that would provide for 40 L2 ports at 5 locations for workplace chargers. The value of the grant is \$306,000, there is a 25% match of \$102,000 required as part of the project. Currently, this is an unscheduled and unbudgeted capital project. The project deadline is May 6, 2025 and requires that all ports are operational by that date.

Alternatively, the County could expand an existing agreement with EVCS. In this scenario, it would become EVCS's responsibility to meet the May 6th project deadline along with 25% match required as part of the grant award. As a site host we would be primarily responsible for providing access to install and maintain the devices. EVCS recoups its costs at a per kWh rate based on the type of devices to be installed. For L2 ports, the rate is 29 cents per kWh. This is considerably higher than the current PUD rate of 11 cents per kWh.

Lastly, the County could simply decline the award and move forward with a future grant application or simply install the devices directly. In 2020, the County installed a dual port charger similar to the devices provided as part of the grant. The L2 charger that was installed was purchased from the Washington Department of Enterprise Services for \$15,135, with a total project cost of over \$18,000. Additional costs included internal labor, material, excavation and electrical work. It did not require additional transformers or extensive excavation or electrical work to be completed.

The County has already begun the shift towards electrifying the fleet with authorizations to purchase multiple electric vehicles in 2024. These vehicles will be used to project potential costs for the following options:

- 1) Accept the award and move forward with installing all or some of the allotted 40 L2 ports and 6 stubs. This would require a 25% match of total costs regardless of number of ports installed.
- 2) Amend the existing contract with EVCS, allowing them to take on the burden of installing the L2 ports with the County acting as the site host in a signed LOI.
- 3) Decline the award, this would mean that the County would pay full price for the installation of L2 chargers along with all associated costs (Construction, equipment, material, etc.).

The Fleet

There are approximately 100 light and medium duty vehicles, according to the ERR Capital Asset Inquiry dated October 08, 2024. The average estimated useful life of those vehicles is seven years. Additionally, 53 vehicles have a scheduled replacement date that has already expired or expires by December 31, 2024. While there is no plan to replace all of these vehicles at once, the increased cost of electric vehicles compared to their ICE counterpart is an important consideration in considering the total cost of electrifying and maintaining an adequate fleet of vehicles to serve the public. The following vehicles have been authorized for purchase in 2024:

Mustang Mach E

98KW battery

7KW Charger = 14HRs from 0 % battery life

14HRs x \$.29 per KW/HR = \$ 4.06 to Charge
from 0% Battery

Ford Lightning Pickup

131KW Battery

7KW Charger = 18.7HRs from 0% Battery life

18.7Hrs x \$.29 per KW/HR = \$ 5.43 to charge
from 0% Battery

Electric versus Internal Combustion Vehicle Cost Comparison

Typically, a consideration in electrifying a fleet of vehicles is the variance in cost. To evaluate this a quote was generated for comparable pickup trucks. One electric and the other a conventional internal combustion engine (ICE).

The Base price for a 2025 Ford F-150 Lightning was \$47,451 while the ICE F-150 was \$42,550, a variance of \$4,901. Outfitting each of the vehicles similar to recent purchases increased the purchase prices to \$62,007 and \$51,156, respectively. It is worth noting that the increased variance (\$10,851) can be traced to upgrading the EV battery to 131 kWh from the standard 98kWh.

The County has purchased Two Mustang Mach-Es, for which there is no direct ICE counterpart. Instead the Ford Edge was used as a similarly sized 5-person vehicle. The listed base price for a 2023 Mustang Mach-E was listed at \$46,532 while the 2024 Ford Edge was listed at a base price of \$36,523. A variance of \$10,009.

The average variance in electric vehicle costs versus internal combustion costs based on this limited comparison is approximately \$10,400. All pricing information was collected from the Washington Department of Enterprise Services State contract for vehicle purchases.

Breakeven Analysis Assumptions

- \$.11 per KW/HR is the current charging fee from PUD
- \$.29 per KW/HR is the listed charging fee from EVCS
- All Calculations based on Ford Lightning Pickup (18.7 hrs to charge from 0% Battery Life).
- Price/Charge of EV Fleet is equal to a single charge of all electric vehicles in the fleet.
- Board of County Commissioners will approve the addition of 4 vehicles to the fleet each year.

- Assumes contract terms similar to EVCS contract signed on 5/13/24 for Olympic Peninsula Gateway Visitor Center.
- Breakeven point calculated based on \$102,000 match requirement for full utilization of the grant, compared to chagrining fees paid to third party contractor if County elects to utilize EVCS to procure and implement chargers.
- CPY equals charges per year. Assumes each vehicle will be charged 100 times per year.

Estimated Charging Costs Analysis based on current PUD rate.

Year	Price/kWh	# Vehicles	Price/Charge of EV Fleet	CPY	Total	Breakeven
Year 1	\$0.11	4	\$8.23	100	\$822.80	\$101,064.86
Year 2	\$0.11	8	\$16.46	100	\$1,645.60	\$99,531.60
Year 3	\$0.11	12	\$24.68	100	\$2,468.40	\$97,063.20
Year 4	\$0.11	16	\$32.91	100	\$3,291.20	\$93,772.00
Year 5	\$0.11	20	\$41.14	100	\$4,114.00	\$89,658.00
Year 6	\$0.11	24	\$49.37	100	\$4,936.80	\$84,721.20
Year 7	\$0.11	28	\$57.60	100	\$5,759.60	\$78,961.60
Year 8	\$0.11	32	\$65.82	100	\$6,582.40	\$72,379.20
Year 9	\$0.11	36	\$74.05	100	\$7,405.20	\$64,974.00
Year 10	\$0.11	40	\$82.28	100	\$8,228.00	\$56,746.00
Year 11	\$0.11	44	\$90.51	100	\$9,050.80	\$48,518.00
Year 12	\$0.11	48	\$98.74	100	\$9,873.60	\$40,290.00
Year 13	\$0.11	52	\$106.96	100	\$10,696.40	\$32,062.00
Year 14	\$0.11	56	\$115.19	100	\$11,519.20	\$23,834.00
Year 15	\$0.11	60	\$123.42	100	\$12,342.00	\$15,606.00
Year 16	\$0.11	60	\$123.42	100	\$12,342.00	\$8,200.80
Year 17	\$0.11	60	\$123.42	100	\$12,342.00	\$1,618.40
Year 18	\$0.11	60	\$123.42	100	\$12,342.00	(\$4,141.20)

Estimated Charging Costs based on current EVCS rate.

Year	Price/kWh	# Vehicles	Price/Charge of EV Fleet	CPY	Total	Breakeven
Year 1	\$0.29	4	\$21.69	100	\$2,169.20	\$99,704.82
Year 2	\$0.29	8	\$43.38	100	\$4,338.40	\$95,492.40
Year 3	\$0.29	12	\$65.08	100	\$6,507.60	\$88,984.80
Year 4	\$0.29	16	\$86.77	100	\$8,676.80	\$80,308.00
Year 5	\$0.29	20	\$108.46	100	\$10,846.00	\$69,462.00
Year 6	\$0.29	24	\$130.15	100	\$13,015.20	\$56,446.80
Year 7	\$0.29	28	\$151.84	100	\$15,184.40	\$41,262.40
Year 8	\$0.29	32	\$173.54	100	\$17,353.60	\$23,908.80

Year 9	\$0.29	36	\$195.23	100	\$19,522.80	\$4,386.00
Year 10	\$0.29	40	\$216.92	100	\$21,692.00	(\$17,306.00)

Estimated Variance in Charging Costs between EVCS and PUD rates.

Year	# Vehicles	Price/Charge of the EV Fleet at .29	Price/Charge of the EV Fleet at .11	Variance per charge	Total at \$0.29 per kWh	Total at \$0.11 per kWh2	Annual Variance
Year 1	4	\$21.69	\$8.23	\$13.46	\$2,169.20	\$822.80	\$1,346.40
Year 2	8	\$43.38	\$16.46	\$26.93	\$4,338.40	\$1,645.60	\$2,692.80
Year 3	12	\$65.08	\$24.68	\$40.39	\$6,507.60	\$2,468.40	\$4,039.20
Year 4	16	\$86.77	\$32.91	\$53.86	\$8,676.80	\$3,291.20	\$5,385.60
Year 5	20	\$108.46	\$41.14	\$67.32	\$10,846.00	\$4,114.00	\$6,732.00
Year 6	24	\$130.15	\$49.37	\$80.78	\$13,015.20	\$4,936.80	\$8,078.40
Year 7	28	\$151.84	\$57.60	\$94.25	\$15,184.40	\$5,759.60	\$9,424.80
Year 8	32	\$173.54	\$65.82	\$107.71	\$17,353.60	\$6,582.40	\$10,771.20
Year 9	36	\$195.23	\$74.05	\$121.18	\$19,522.80	\$7,405.20	\$12,117.60
Year 10	40	\$216.92	\$82.28	\$134.64	\$21,692.00	\$8,228.00	\$13,464.00

EV Charger Options

- 1) **Accept the award and move forward with installing all or some of the allotted 40 L2 ports and 6 stubs.** The maximum award for this grant is \$306, 000, with a 25% match of \$102,000. There are several ways this match could be covered, including: Paying the 25% match, Operating and maintenance contract with a service provider, network contract with provider to run the software, gather data, and report regularly per the grant requirements. Additionally, some construction costs that exceed the grant amount could also count towards the match. This would require a 25% match of total costs regardless of number of ports installed.

It is expected that up to 4 of the 5 locations already explored as locations for would require the installation of power transformers which range in the \$20,000-\$25,000 range. Additional costs would be incurred to have PUD establish new service, site preparations costs, material and labor. One estimate places a dual port L2 charger at approximately \$5000. This represents a significant reduction in cost when compared to the 2020 installation. In that project the charger cost over \$15,000.

Even with this reduction in costs for the charger station, the project would come with considerable expense. For example, if a site needed a transformer to support 4 dual port charger stations the costs would be \$45,000 for the major electrical components. Using this model across the five anticipated sites equals \$225,000 for the major electrical components before the additional costs for construction, additional material, and labor are included.

Equally challenging is the timeline. The lead applicant signed the contract with the state on August 9th and has a project completion deadline of 270 days (May 6th). Lead times can vary for

necessary components, several months for transformers increasing the likelihood that the project would not be completed in time.

- 2) **Amend the existing contract with EVCS, allowing them to take on the burden of installing the L2 ports with the County acting as the site host in a signed LOI.** In this scenario, the burden of complying with the grant requirements (e.g. completion deadline, reporting requirements) would become the responsibility of EVCS. They have a 29 cent per kWh rate compared to the 11 cents general rate of Jefferson PUD. In evaluating the variance between the two rates and what it means for Jefferson County vehicles it was determined that charging the four sample vehicles cost \$13.46 more per cycle or an estimated \$1,346,40 in year 1 assuming each vehicle was charged 100 times. Assuming 4 additional vehicles would be purchased each year over 10 years resulted in a fleet of 40 vehicles that cost \$13,464 a year more to charge using EVCS chargers versus Jefferson PUD rates. In total over the 10 years, Jefferson county will have paid \$74,052 more to leverage having the 40 ports installed by EVCS.
- 3) **Decline the award, this would mean that the County would pay full price for the installation of L2 chargers along with all associated costs (Construction, equipment, material, etc.).** In this scenario, the County would seek other grant award opportunities, or budget for future capital projects involving the installations of charger ports in support of a growing fleet of electric vehicles. It eliminates the immediate financial burden of the potential grant match, and allows for organic growth of a network of charging stations. This could result in long term savings if charging stations decrease in cost in the future. This also eliminates the County from a 10-year contractual agreement. It would require addressing the immediate charging needs of electrical vehicles already purchased. Currently there is a temporary plan to support charging existing electric vehicles.

Summary

The Washington Electric Vehicle Program is an opportunity to leverage a conditional award that would provide up to 40 L2 ports and 6 stub-outs for future expansion. The program has significant upfront costs for the County as a subcontractor of the lead applicant. The grant has a match of 25%, or \$102,000 for the total grant award of \$306,000. The grant project completion timeline also presents significant challenges for County staff as this project has a stipulated completion date of May 6, 2025. As of today, there are several potential unknown costs to be evaluated along with the potential for delays in delivery of key equipment for project completion. This is an unbudgeted and unplanned project that requires significant resources for successful completion. The County has already contracted with EVCS for other EV charger projects. They have the necessary staff and resources to complete the project. The County could ultimately decline this award and move forward independently to develop its own unique EV charger strategy. In doing so it would remit access to a significant funding opportunity.

Recommendation

Staff ask that the Board of Commissioners consider amending the existing EVCS to include the additional L2 ports.