

APPENDIX D-4
BENEFICIARY ELIGIBLE MITIGATION ACTION CERTIFICATION

Beneficiary: Washington State

Lead Agency Authorized to Act on Behalf of the Beneficiary: Washington State Department of Ecology

(Any authorized person with delegation of such authority to direct the Trustee delivered to the Trustee pursuant to a Delegation of Authority and Certificate of Incumbency)

Action Title:	Scrap & replace or repower pre-2007 diesel transit buses with all-electric transit buses
Beneficiary's Project ID:	EMA2-Transit-C1
Funding Request No.	1 (Updated)
Request Type: (select one or more)	<input checked="" type="checkbox"/> Reimbursement <input type="checkbox"/> Advance <input type="checkbox"/> Other (specify):
Payment to be made to: (select one or more)	<input checked="" type="checkbox"/> Beneficiary <input type="checkbox"/> Other (specify):
Funding Request & Direction (Attachment A)	<input type="checkbox"/> Attached to this Certification <input checked="" type="checkbox"/> To be Provided Separately

SUMMARY

Eligible Mitigation Action Type	<input checked="" type="checkbox"/> Appendix D-2 item (specify): 2. Class 4-8 School Bus, Shuttle Bus, or Transit Bus <input type="checkbox"/> Item 10 - DERA Option (5.2.12) (specify and attach DERA Proposal):
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Explanation of how funding request fits into Beneficiary's Mitigation Plan (5.2.1):

The State of Washington Volkswagen Beneficiary Mitigation Plan guides the state's selection and prioritization of projects to achieve Washington's goal to:

- Reduce emissions from diesel engines in the state where the 2.0 and 3.0 liter VW vehicles were, are, or will operate; and
- Fully mitigate the total, lifetime excess NOx emissions of the subject vehicles.

Washington's mitigation plan principles and priorities, as outlined in the state Beneficiary Mitigation Plan, are to:

- Improve air quality for communities that have historically borne a disproportionate share of the air pollution burden in Washington.
- Maximize air quality co-benefits beyond nitrogen oxide reductions.
- Maximize public health benefits.
- Accelerate adoption of electric vehicles, equipment, and vessels.
- Promote electrification technologies in public transportation fleets.

- Accelerate fleet turnover to the cleanest engines.
- Achieve substantial additional emissions reductions beyond what would occur absent trust funding.
- Ensure cost-effectiveness.
- Leverage additional matching funds.

Washington's Beneficiary Mitigation Plan highlights electric buses as a key opportunity for investment in Washington's transportation sector. Electrification of public fleets, especially transit buses is identified as a priority in the plan's preliminary funding allocation.

Detailed Description of Mitigation Action Item Including Community and Air Quality Benefits (5.2.2):

Ecology offered transit authorities based in Washington the opportunity to compete for funding to scrap and replace or repower pre-2007 diesel transit buses with all-electric buses. Ecology used the Washington Tracking Network's (WTN) "Diesel and Disproportionately Impacted Communities" Index to identify and locate communities that have historically borne a disproportionate share of the air pollution burden in Washington. Ecology identified 14 priority counties: Benton, Clallam, Clark, Cowlitz, Franklin, King, Lewis, Pierce, Skagit, Snohomish, Spokane, Thurston, Whatcom and Yakima. These counties contain about 85% of the state's population, 83% of the violating vehicles, and 100% of Washington's disproportionately impacted population.

The "Disproportionately Impacted Communities" include those census tracts in the top 20th percentile for exposure to diesel emissions and the following five socioeconomic factors: limited English, unaffordable housing, no high school diploma, population living in poverty, and unemployment. Within these priority counties, high-traffic transportation corridors and urban population centers, especially those with and near ports and industrial facilities provide the greatest opportunity for Washington to achieve its mitigation plan goal, principles and priorities.

In this first phase of funding, Ecology awarded funds to six transit authorities, operating in seven counties with disproportionately impacted communities, to replace 50 diesel transit buses. The seven included the Counties of Benton, Clark, Franklin, King, Pierce, Snohomish, and Spokane. Five transit authorities replaced 42 buses. Ecology estimates the program will mitigate 68 tons of lifetime NOx emissions, 12,963 tons of lifetime CO2 emissions, plus a reduction in toxic diesel particulates. This mitigation action will reduce toxic emissions in the most densely populated areas providing great public health benefits to local communities.

Estimate of Anticipated NOx Reductions (5.2.3):

This action will reduce 68 tons of lifetime NOx emissions.

Identification of Governmental Entity Responsible for Reviewing and Auditing Expenditures of Eligible Mitigation Action Funds to Ensure Compliance with Applicable Law (5.2.7.1):

Washington Department of Ecology

Describe how the Beneficiary will make documentation publicly available (5.2.7.2).

As stated in response to paragraph #7 in Attachment A of Washington's Appendix D-3 filing, Ecology makes documents and records submitted in support of funding requests and documents and records supporting expenditures of trust funds available to the public through an online application, system, on the agency's website at ecology.wa.gov. The application provides easy-to-use access to all grant application and reporting materials for funded projects.

Describe any cost share requirement to be placed on each NOx source proposed to be mitigated (5.2.8).

Mitigation Funds will provide up to \$300,000 to repower or scrap and replace each pre-2007 diesel transit bus or engine with an all-electric transit bus or engine. Up to \$100,000 of the \$300,000 may be used to purchase charging infrastructure. Grant recipients will provide the balance of the purchase cost. Ecology estimates the average cost to scrap and replace to be between \$950,000 - \$1,500,000 with an average of approximately \$1.1 million and the cost to repower to be approximately \$400,000. Based on the assumed project costs, cost-shares are likely to be between \$650,000 and \$1,200,000 with an average of \$1,100,000 for replacements (68% - 80%) and approximately \$100,000 (25% cost share) for repowers, due to an 18-month anticipated timeframe for delivery of electric transit buses. The majority of replacements and a small number of repowers are anticipated in 2021 and 2022.

Describe how the Beneficiary complied with subparagraph 4.2.8, related to notice to U.S. Government Agencies (5.2.9).

On February 27, 2018, Washington Department of Ecology contacted the U.S. Department of Interior, U.S. Department of Agriculture, U.S. Forest Service, U.S. Fish and Wildlife Service, and National Park Service, via email to notify them of the availability of Washington State Volkswagen Mitigation Action Funds. The notice included a link to the State Trust agreement and attachments; a link to Ecology's procedures for review, consideration, and written determination for each request of funds; and instructions to subscribe to the Washington Department of Ecology's listserv to receive up-to-date information, if desired.

If applicable, describe how the mitigation action will mitigate the impacts of NOx emissions on communities that have historically borne a disproportionate share of the adverse impacts of such emissions (5.2.10).

Ecology used Washington Tracking Network's (WTN) "Diesel and Disproportionately Impacted Communities" Index to identify and locate communities that have historically borne a disproportionate share of the air pollution burden in Washington. The "Disproportionately Impacted Communities" include those census tracts in the top 20th percentile for exposure to NOx and other diesel emissions and five socioeconomic factors: limited English, income spent on housing, no high school diploma, population living in poverty, and unemployment.

Ecology will prioritize investing settlement funds in areas that improve air quality for disproportionately impacted communities. High-traffic transportation corridors and urban population centers, especially those with and near ports and industrial facilities will provide the greatest opportunity for Washington to achieve its mitigation plan goal, principles and priorities. Strategic deployment of electric transit buses could improve air quality and public health in communities that have historically borne an undue share of the air pollution burden.

ATTACHMENTS
(CHECK BOX IF ATTACHED)

- Attachment A Funding Request and Direction.
- Attachment B Eligible Mitigation Action Management Plan Including Detailed Budget and Implementation and Expenditures Timeline (5.2.4).
- Attachment C Detailed Plan for Reporting on Eligible Mitigation Action Implementation (5.2.11).
- Attachment D Detailed cost estimates from selected or potential vendors for each proposed expenditure exceeding \$25,000 (5.2.6). [Attach only if project involves vendor expenditures exceeding \$25,000.]
- Attachment E DERA Option (5.2.12). [Attach only if using DERA option.]
- Attachment F Attachment specifying amount of requested funding to be debited against each beneficiary's allocation (5.2.13). [Attach only if this is a joint application involving multiple beneficiaries.]

CERTIFICATIONS

By submitting this application, the Lead Agency makes the following certifications:

1. This application is submitted on behalf of Beneficiary State of Washington, and the person executing this certification has authority to make this certification on behalf of the Lead Agency and Beneficiary, pursuant to the Certification for Beneficiary Status filed with the Court.
2. Beneficiary requests and directs that the Trustee make the payments described in this application and Attachment A to this Form.
3. This application contains all information and certifications required by Paragraph 5.2 of the Trust Agreement, and the Trustee may rely on this application, Attachment A, and related certifications in making disbursements of trust funds for the aforementioned Project ID.
4. Any vendors were or will be selected in accordance with a jurisdiction's public contracting law as applicable. (5.2.5)
5. Beneficiary will maintain and make publicly available all documentation submitted in support of this funding request and all records supporting all expenditures of eligible mitigation action funds subject to applicable laws governing the publication of confidential business information and personally identifiable information. (5.2.7.2)

DATED: 10/30/2025

Heather R. Bartlett, Deputy Director

Department of Ecology

[LEAD AGENCY]

for

Washington State

[BENEFICIARY]

ATTACHMENT B

PROJECT MANAGEMENT PLAN, PROJECT SCHEDULE, AND MILESTONES

Milestone	Date
Ecology develops grant application forms for Ecology's Administration of Grants and Loans (EAGL) online application database	12/2018 - 3/2019
Ecology announces funding opportunity and kickoff via EAGL, Ecology's VW webpage, and Ecology's VW listserv	3/2019
Ecology notifies grant recipients of award	6/2019
Ecology and grant awardees finalize contract	7/2019
Grant awardee notifies Ecology of cost-share funding secured	7/2019 - 6/2021
Grant awardee notifies Ecology of completion of bus order	7/2019- 7/2021
Ecology submits funding direction (Appendix D-4 Attachment A) to trustee for reimbursement of administration funds	7/2019
Trustee reimburses Ecology for administration funds	8/2019
Ecology reports on project progress	11/2019; Jan and July thereafter
Grant awardee notifies Ecology of bus delivery	5/2020-6/2023
Ecology reviews reimbursement requests from grant awardee and provides payment for projects as completed	6/2020- 6/2023
Ecology submits funding direction (Appendix D-4 Attachment A) to the Trustee for reimbursement of project funding	7/2020- 6/2023
Trustee reimburses Ecology for project funding	7/2020- 7/2022
Ecology completes transit bus replacement projects	6/2023
Ecology submits final project report to trustee	9/2023

PROJECT BUDGET

Period of Performance: December 2018 - September 2023

Budget Category	Total Approved Budget	Share of Total Budget to be Funded by the Trust	Cost-Share, if applicable (Entity #1)
1. Equipment Expenditure	\$42,066,560.46	\$11,834,000	\$30,232,560.46
2. Contractor Support <i>(Provide List of Approved Contractors as Attachment with approved funding ceilings)</i>	\$0.00	\$0.00	\$0.00
3. Subrecipient Support <i>(Provide List of Approved Subrecipients or Grant Awardees as Attachment with approved funding ceilings)</i>	\$0.00	\$0.00	\$0.00
4. Administrative ¹	\$1,008,672.75	\$1,008,672.75	\$0.00
Project Totals	\$43,075,233.21	\$12,842,672.75	\$30,232,560.46
Percentage	100 %	29.81%	70.19%

¹ Subject to Appendix D-2 15% administrative cap.

PROJECTED TRUST ALLOCATIONS

	Project Period Jul 2023 – Jan 2026
1. Total Beneficiary Funds	\$112,745,650.15
2. Anticipated Total Project Funding Requested to be paid through Trust	\$12,842,672.75
3. Anticipated Total Cost Share	\$30,232,560.46
4. Anticipated Total Project Funding (line 2 plus line 3)	\$43,075,233.21
5. Total Funding Allocated to Beneficiary (total of approved D-4s)	\$86,500,000
6. Total Funding Allocated to Beneficiary, inclusive of Current Action (line 2 plus line 5)	\$99,342,672.75
7. Beneficiary Funds Remaining (line 1 minus line 5)	\$26,245,650.15
8. Net Beneficiary Funds Remaining, including current funding action (line 7 minus line 2)	\$13,402,977.40

ATTACHMENT C

DETAILED PLAN FOR REPORTING ON ELIGIBLE MITIGATION ACTION IMPLEMENTATION (5.2.11)

The Washington Department of Ecology, as the lead agency for the state of Washington implementing the Environmental Mitigation plan, will provide detailed reporting on this funding request in two ways: (1) timely updates to the Department of Ecology's Volkswagen Federal Enforcement Action website; and (2) semi-annual reports to the Trustee as required by subparagraph 5.3 of the Environmental Mitigation Trust Agreement for State Beneficiaries.

The Department has established a public VW website that will host detailed implementation reporting information. The public website, <https://ecology.wa.gov/Air-Climate/Reducing-Greenhouse-Gas-Emissions/Investing-in-cleaner-transportation/Washington-s-investment-plan>, was created to provide information related to the Trust, the VW partial Consent Trust Decrees, Washington's plans, and implementation information. To provide transparency and accountability, the Department of Ecology will make publicly available all the required documentation under Paragraph 7 of the Appendix D-3 Certification for Beneficiary Status form.

The Department will comply with the reporting obligations listed in the Environmental Mitigation Trust Agreement for State Beneficiaries in subparagraph 5.3, reporting to Trustee on the status of and expenditures associated with the Mitigation Actions completed and underway within six months of the first disbursement and then January 30th and July 30th thereafter.

The Department of Ecology will periodically evaluate implementation of the Beneficiary Mitigation Plan and will determine whether any revisions to the Beneficiary Mitigation Plan and funding levels are appropriate or necessary.

**ATTACHMENT D – DETAILED COST ESTIMATES FROM SELECTED OR
POTENTIAL VENDORS FOR EACH PROPOSED EXPENDITURE EXCEEDING
\$25,000 (5.2.3).**

Table 1 lists the standard electric bus models and purchase price from the Washington State Master Contract, in 2019. The bus costs included in this table are the minimum, or base price. Transit authorities typically purchase additional items to meet contract specifications or other requirements.

To estimate the cost of options added to the base model, Attachment D-1 shows a detailed cost breakdown of a 40 foot battery electric bus manufactured by Proterra and purchased in 2016 by King County Metro. The options list and pricing are included in the Washington State Master Contract. (The current 2017 base costs of buses have increased approximately 1% compared to the 2016 base price. This is reflected in the cost difference of the Proterra 40 foot Plug In Electric Bus in Table 1 versus Attachment D-1). The costs in both tables do not include sales taxes.

Ecology estimates the average total cost to scrap and replace a fossil fueled transit bus with an electric transit bus to be between \$950,000 - \$1,500,000, including all necessary, additional items and taxes. The large cost range is due to the range in bus sizes from 30 feet - 60 feet and the range of additional necessary items added to the standard cost on the state contract.

The costs associated with installing electric vehicle supply equipment (EVSE) can vary widely, depending on site location, available electrical capacity, labor costs, and charger type. The California Air Resources Board estimates electric transit bus charging infrastructure could cost \$1,000 for a basic charger to \$350,000 for a specialized fast charger.¹ Based on a current Ecology grant program for repowering and replacing diesel transit buses with electric, EVSE can range from \$19,030 per charger up to \$95,000+ per charger. In 2018, Pierce Transit purchased and installed three depot chargers at a cost of \$49,000 each plus installation². Attachment D-2 includes examples of Light Duty EVSE costs on the 2019 Washington State Master Contract. We expect school bus charging infrastructure and installation costs to be similar.

Ecology determined that transit authorities operating in the following 14 counties are a priority for funding under this mitigation action: Benton, Clark, Clallum, Cowlitz, Franklin, King, Lewis, Pierce, Skagit, Snohomish, Spokane, Thurston, Whatcom, and Yakima.

Table 1. Standard electric bus models from the Washington State purchasing contract

Manufacturer	Model	Price for a "standard" bus that meets all the specifications and terms on the WA State
Green Power	30 Ft Plug In Electric	628,353.44
BYD	30 Ft Plug In Electric	454,590.00
Green Power	35 Ft Plug In Electric	568,340.54
BYD	35 Ft Plug In Electric	616,095.73
Green Power	40 Ft Plug In Electric	816,650.93
BYD	40 Ft Plug In Electric	806,619.45
Proterra	40 Ft Plug In Electric	785,910.35
Green Power	45 Ft Plug In Electric	937,666.63
Green Power	60 Ft Plug In Electric	1,075,423.56
BYD	60 Ft Plug In Electric	1,241,510.55

¹ https://www.arb.ca.gov/msprog/tech/techreport/bev_tech_report.pdf

² <https://www.piercetransit.org/documents/>

Item #	Sub	Description	PRICE: Standard	\$ 779,000.00	Price	Chng Order #
1	0	Air				
1	1	Shop Air Connection (Milton S790)	Standard		Included	
1	3	Bendix Adip, Heated	Standard		Included	
3	0	BODY - PASSENGER SEATS				
3	1	37 Passenger Seating per KCM Layout	Standard		Included	
4	0	Body - Bike Rack				
4	1	None	Standard		Included	
4	11	Bike Rack Deployed Lamp on Dash	Standard		Included	
4	14	Mounting Brackets only	Option	\$ 481.18		\$481
5	0	Body - Driver's Barrier				
5	4	Plexiglass Drivers Security Enclosure	Option			\$616
6	0	Body - Operator Seat				40
6	17	USSC Q910-80050401180106-00				\$0
7	0	Body - Exit Door				
7	1	Standard Melamine Panels on Lower Section	Standard		Included	
8	0	Body - Floor Covering				
8	2	Altro Transflor TFFG2703F Laser (new Figura series)	Standard		Included	\$0
8	5	Composite Sub Floor	Standard		Included	\$0
9	0	Body - Mirror, Exterior				
9	10	Hadley 8" x 15", 2 Piece (Flat Upper/Convex Lower), Heated, Remote Upper Mirror Driver Side	Standard		Included	\$0
9	11	Hadley 8" x 15", 2 Piece (Flat Upper/Convex Lower), Heated, Remote Upper Mirror Driver Side	Standard		Included	\$0
9	17	ADD: LED Turn Signal to Side Mirror - Within Glass	Option		Included	\$0
10	0	Body - Mirror, Interior				
10	1	Mirror - 8 1/2 " X 16"	Standard		Included	\$0
10	3	Mirror - Front Door 6" Round on Header Door	Option	\$ 50.00		52
10	4	Mirror - Rear Exit Door/Step Well 12" Convex	Standard		Included	21
10	5	Mirror- rectangular convex mirror 7" X 10" inches above the front door				\$0
10	6	Mirror - 6" convex mirror mounted in the area of the curbside destination sign				\$0
11	0	Body - Paint & Decal				20
11	1	One Color w/Roof Numbers	Standard		Included	
11	3	(3) Colors, with and without Black Mask At Windows	Option		quote	\$5,602
11	4	Basic Decal Package (Up to Three Strips and Equivalent Design)	Standard		Included	59
12	0	Body - Passenger Signal				
12	1	Pullcords - Above Windows (Neutral Or Yellow) w/Touch Pad At W/C Positions	Standard		Included	
13	0	Body - Rear Door				
13	3	Electric Operated Front/Rear Door Motor and Control	Option	\$ 2,488.37		\$2,488
13	14	Driver Push Button Door Controls	Option		included	\$0
14	0	Body - Roof Hatch				
14	1	Manual Hatch At Front and Rear Positions	Standard		Included	
15	0	Body - Schedule Rack				
15	6	Provision for KCM supplied timetable holder				
16	0	Body - Stanchions/Grab Rails				46
16	1	Stainless Steel Stanchions and Grab Rails and Modesty Panel Tubes	Standard		Included	
16	10	Driver's area, front coach area, 'Rilsan Corp.' baked, electrostatically deposited black epoxy powder coating. Other areas, natural stainless steel, AISI No. 2B finish				\$0

Item #	Sub	Description	PRICE: Standard	\$ 779,000.00	Price	Chng Order #
17	0	Cooling System				
17	4	Electric Fan Cooling System (Non EMP - Specify OEM)	Standard		Included	
17	11	Double Breeze Constant Tension Clamps	Standard		Included	
18	0	Electrical				
18	2	24 Volt to 13.6 Volt DC - DC Converter, 30 Ampere Output, Model 1645 - 24 - 12 - 30, Manufactured By Wilmore Electronics Co., Inc. or Equivalent	Standard		Included	
18	3	Battery Voltage Equalizer	Standard		Included	
19	0	Electrical - Accessories				
19	1	12 V Cigarette Light Adaptor for PC Auxiliary Power - Drivers Area	Standard		Included	
19	2	12 V Cigarette Light Adaptor for PC Auxiliary Power - Rear Air Return Grille Area	Standard		Included	
21	0	Electrical - Auxiliary Lights				
21	2	Two (2) 4" Diameter LED Auxiliary Brake Lights	Standard		Included	
21	6	Exterior Curb Lamps, Front & Rear - Dialight	Standard		Included	
21	10	Overhead Farebox Light W/Night - Day Switch (on Drivers Side Panel) - Light Illuminates W/Frt. Door Open and Switch in the Night Position	Standard		Included	
21	11	Rear Electrical Compartment Lights	Standard		Included	
21	13	KCM Rear Lights				
21	14	KCM Marker Lights above rear axle				
22	0	Electrical - Battery & Battery Chargers				
22	1	(2) Odyssey Group 31	Standard		Included	
22	2	Anderson 350 Jump Start Connector (Each)	Standard		Included	
22	4	En-route Battery Charging system (please specify) - <i>Electric buses only</i>	Standard		Included	\$0
23	0	Electrical - Communication/Radio				
23	1	Pre - Wire:12V/40A Direct Battery & 12V/10A Ignition (Route to RH Dash & Ele. Equip. Box) and Install Roof Mount RF/GPS/Cellular Antenna	Standard		Included	
23	7	DC Power Filter for Radio Wiring	Standard		Included	
23	9	Public Address System with Boom Mic	Standard		Included	\$0
23	15	KCM Antennae Spec		\$ -		\$0
24	0	Electrical - Destination Sign				
24	7	Luminator SMT Horizon 100% Amber LED Front, Curbside, Rear	Standard		Included	
24	8	Luminator Streetside Destination Side				
27	0	Electrical - Equipment Storage Box				
27	7	KCM approved EEC				\$1,021
28	0	Electrical - Lights, Exterior				
28	1	All Exterior Lights LED - Type Lamps	Standard		Included	\$0
29	0	Electrical - Lights, Interior				
29	1	Interior LED Sign	Option		Included	\$0
30	0	Electrical - Intelligent Vehicle Network				
30	4	INIT Voice Enunciator/AVL/GPS/APC/WLAN	Option	\$ 30,001.60		\$15,951
31	0	Electrical - Multiplexing				
31	5	VDO	Standard		Included	
33	0	Electrical - Public Announcement				
33	1	Drivers Speaker W/Separate Volume Control	Standard		Included	
33	10	Interior LED Sign Wiring Only				\$598
34	0	Electrical - Video Surveillance				
34	3	Apollo RoadRunner DVR 2TB 8 Camera System w/Audio	Option	\$ 8,138.38		\$8,138
35	0	Fare Box				
35	1	No Farebox, Power Circuit and Groundstrap only	Standard		Included	\$0

Item #	Sub	Description	PRICE: Standard	\$ 779,000.00	Price	Chng Order #
36	0	HVAC				
36	15	Eberspacher All Electric Air Conditioning - Roof Mount	Standard	Included	\$0	
38	0	Manuals				
38	1	Drivers Handbook (1 Manual/1 CD per Bus Order)	Standard	Included		
38	2	Service Manual (1 Manual/1 CD per Bus Order)	Standard	Included		
38	3	Parts Manual (1 Manual/1CD per Bus Order)	Standard	Included		
38	4	Electrical Schematics (1 Manual/1CD per Bus Order)	Standard	Included		
38	5	Vender Manuals (1 Manual/1 CD per Bus Order)	Standard	Included		
39	0	Passenger Seat Options				
39	3	AMSECO - Insight; 37 seats; Docket 90A Foam; SEAT BACKS: Black; SEAT FRAMES: Powdercoat Black; SEAT HANDRAILS: E-469 Claret, R-61 Royalite; FABRIC: (Vinyl) Morbern AC-501 Dragonfly (navy) w/ KCM velco onserts; stainless steel backs	Option	\$ 7,546.28	\$764	14
40	0	Safety				
40	2	Amerex V-25lb ABC System	Standard	Included	\$0	
40	10	Fire Extinguisher and Safety Triangle Kit	Standard	Included	\$0	
40	16	(3) 20 - Minute Road Flares	Option	\$ 25.87	\$26	
40	17	Wheel Chocks (Per Set)	Standard	Included	\$0	
40	18	Fire Detection upon delivery retrofitted with suppresson TBD	Option	quote	\$2,875	28
41	0	Steering				
41	5	Douglas Standard Steering Column			\$1,104	37
41	6	20"VIP Wheel			\$49	44
42	0	Towing & Hoisting				
42	7	Provide caps and covers with tethers for all air lines and electrical connector.			\$184	23
42	8	Towing safety chain tie down locations needed for front towing.			\$271	29
43	0	Training				
43	2	Operator Orientation - 8 Hours, (Procuring Agency) Price Proposal Form	Standard	Included		
43	3	Maintenance Orientation - 4 Hours, (Procuring Agency) Price Proposal Form	Standard	Included		
43	4	Technical Training - 24 Hours, (Procuring Agency) Price Proposal Form	Standard	Included		
43	5	OEM Training - Two Slots for "Train the Trainers" Technical Instruction	Standard	Included		
45	0	W/C Restraints				
45	8	Q- Pod W/C Restraint System Thin Style 2 units	Option	\$ 5,765.02	\$97	15
46	0	Warranty				
46	2	Complete Bus - 1 Year/50,000 Miles -	Standard	Included		
46	3	Chassis Structure - 12 Year/500,000 Miles	Standard	Included		
46	5	Electric Motor - 5 Year/300,000 Miles	Standard	Included		
46	7	EVTransmission - 5 Year/Unlimited Miles	Standard	Included		
46	8	Batteries & Inverters - 5 Years	Standard	Included		
46	9	Differential - 2 Year/100,000 Miles	Standard	Included		
46	10	HVAC - 3 Year Unlimited Miles	Standard	Included		
46	13	Basic Body Structure - 3 Years/Unlimited Miles	Standard	Included		
46	14	Wheelchair Ramp - (Lift- U) 3 Year/Unlimited (Parts only)	Standard	Included		
46	17	Exterior Paint - 3 Year/Unlimited Miles	Standard	Included		
46	18	Structure/Body Integrity Against Corrosion - 7year/Unlimited Miles	Standard	Included		
46	20	Sub Floor - 12 Years/Unlimited Miles	Standard	Included		
46	21	Rubber Floor Material - 12 Year/Unlimited Miles	Standard	Included		

Item #	Sub	Description	PRICE: Standard	\$ 779,000.00	Price	Chng Order #
46	22	Body and Window Frames Against Leakage - 7Year Unlimited Miles	Standard	Included		
47	0	Wheel Chair Ramp				
47	1	LIFT- U Model LU11, 1:6 Ratio, Front Door only	Option	\$ 518.85	\$0	
48	0	Wheel – Brakes				
48	2	All Wheel Disc Brakes	Option	Included		
49	0	Wheel Hubometer				
49	1	None	Standard	Included		
50	0	Wheel Hubs				
50	1	Hub Piloted Wheels and Axles W/Grease Seals	Standard	Included		
51	0	Wheel – Tires				
51	2	Michelin XZU2 (305/70R/22.5)	Option	\$ 4,116.71	\$4,117	
52	0	Wheels				
52	3	(7) Aluminum Alcoa - Machine Finish	Standard	Included		
52	4	(7) Aluminum Alcoa - Machine Finish W/Dura Bright Finish	Option	\$ 478.85	\$479	
53	0	Windows				
53	4	Hidden Framed Bonded - Fixed w/ Serviceable Option and 3 add'l emergency passenger egress windows	Standard	Included	\$3,719	16
55	0	Other Items				
55	4	Cup Holder	Option	\$ -	\$0	
55	5	Auxiliary Drivers Fan	Option	\$ 45.66	\$91	22
55	20	Off-site service center			\$1,448	2
55	21	Provide low voltage battery disconnect device from Intellitec.			\$655	3
55	22	Add a local deflector/extension near the end of the curbside rear gutter at the top.			\$227	4
55	23	Provide exterior door switch on curbside headlight bezel.			\$455	5
55	24	Driver's station revisions			\$12,715	8
55	25	Configure buses to charge from either side			\$1,465	10
55	26	Increase size of driver's storage box			\$573	18
55	27	Haldey Exterior Mirror lower position			\$358	19
55	28	Oil-less air compressor: provide PowerEx as specified in contract.			\$3,141	24
55	29	Ventura front door defogging			\$3,409	26
55	30	Provide closeouts over front and rear doors to prevent passenger access.			\$281	30
55	31	Add dipstick for power steering fluid level.			\$194	31
55	32	Provide struts and tethers on all access doors as requested at BPT review.			\$649	32
55	33	Revise driver's control and switch layout as determined at buck review.			\$130	33
55	34	Driver's door controls: provide lighted mushroom buttons and comply with door operation timing spec.			\$583	42
55	35	Relocate parking brake control to the new position as displayed on buck. Closer in-line with operator's shoulder. Add cushioned grip (below)			\$150	47
55	36	Closeouts on rear of light panels			\$194	48
55	37	Reinforce Rear streetside panel retrofit			\$271	55
55	38	Provide hardware to enable KCM to access vehicle and charge station data download and monitoring.			\$947	57
55	39	Driver's Window reconfiguration per buck review			\$529	63
55	40	Tether to wiper fluid cap			\$92	64
55	41	OBTF/EEC - Load Dump Module; Time Delay Switch; Ethernet Switch. Provide & Install.			\$378	66
55	42	Radio Sys. - LL-1443-20 radio power filter; CG-X radio charge guard timer. Provide & Install.			\$600	67

Item #	Sub	Description	PRICE: Standard	\$ 779,000.00	Price	Chng Order #
55	43	Radio Mounting - A-Pillar			\$281	68
55	44	Orange loom for HV wire			\$97	69
55	45	Sure Power 21020C10 DC-DC converter for radio power dropout concerns. Provide & Install.			\$365	72
55	46	Wiring for Add'l Smart Card Reader at rear door			\$280	74

Item #	Sub	Description	PRICE: Standard	\$ 779,000.00	Price	Chng Order #
Proposal 5-19-17						
8	Number of Buses					
			TOTAL of Item #55		\$30,560	
			Total of WA Items		\$50,483	
			Base Price		\$ 779,000	
			Grand Total		\$860,043	

Greenlots is a leading global provider of open standards based technology solutions for electric vehicle charging, local load control, and grid management. We provide TurnKey Solutions by offering a full suite of EV-related services from site assessment through installation, hardware sales and charge management, to maintenance to our customers. Greenlots is committed to future-proofing EV charging investments by employing the leading open standard for communications between charging stations and network management. Our OCPP-based network supports a robust set of payment, pricing, reporting, and access authorization methods while offering the largest number of equipment brands and models for maximum flexibility.

EVSE Charging Rates and Times

Type	Output Factors	Power	Charge Rate ¹		Charge Time ²	
			LEAF ³	Bolt ⁴	LEAF ³	Bolt ⁴
LV II	208/240VAC @ 16A	3.84kW	14.67 mc/h	13.31 mc/h	7.29 hrs	15.63 hrs
LV II	208/240VAC @ 30A	7.2kW	25.22 mc/h	24.96 mc/h	4.24 hrs	8.33 hrs
DCFC	400VDC @ 62.5A	25kW	95.54 mc/h	86.67 mc/h	1.12 hrs	2.4 hrs
DCFC	400VDC @ 120A	50kW	191.07 mc/h	173.33 mc/h	0.56 hrs	1.2 hrs

¹ Charge Rate is measured in miles of charge per hour (mc/h) and based on EPA estimated ranges.

² Times based on an empty battery.

³ Nissan LEAF with 30kWh battery and EPA estimated 107 miles of range.

⁴ Chevrolet Bolt with 60kWh battery and EPA estimated 208 miles of range.

Hardware Catalog

Description	Make	RFID	Cell 3G	Credit Card	Gateway	Price	Installation ⁵
LV II, 30A, Wall-Mount, Single-Port	Siemens	●	●	●	●	\$535	\$1,414
LV II, 30A, Pedestal-Mount, Single-Port	Siemens	●	●	●	●	\$1,015	\$1,525
LV II, 30A, Wall-Mount, Single-Port, Networked ⁶	Siemens	●	●	●	●	\$1,075	\$1,414
LV II, 30A, Pedestal-Mount, Single-Port, Networked ⁶	Siemens	●	●	●	●	\$1,555	\$1,525
LV II, 30A, Wall-Mount, Single-Port	EV Box	●	●	●	●	\$1,655	\$1,414
LV II, 30A, Pedestal-Mount, Single-Port	EV Box	●	●	●	●	\$1,825	\$1,525
LV II, 30A, Pedestal-Mount, Dual-Port	EV Box	●	●	●	●	\$3,354	\$1,879
LV II, 30A, Wall-Mount, Single-Port	EVSE, Inc	●	●	●	● ⁷	\$2,275	\$1,414
LV II, 30A, Pedestal-Mount, Single-Port	EVSE, Inc	●	●	●	● ⁷	\$2,685	\$1,525
LV II, 30A, Wall-Mount, Single-Port, Auto-Retract. Cable	EVSE, Inc	●	●	●	● ⁷	\$3,095	\$1,414
LV II, 30A, Pedestal-Mount, Single-Port, Auto-Retract. Cable	EVSE, Inc	●	●	●	● ⁷	\$3,505	\$1,525
LV II, 30A, Ceiling-Mount, Single-Port, Auto-Retract. Cable	EVSE, Inc	● ⁸	●	● ⁸	● ⁷	\$3,746	\$1,525
LV II, 30A, Wall-Mount, Dual-Port	Efacec	●	●	●	●	\$5,502	\$1,414
LV II, 30A, Wall-Mount, Dual-Port	Efacec	●	●	●	●	\$6,020	\$1,414
LV II, 30A, Pedestal-Mount, Dual-Port	Efacec	●	●	●	●	\$5,771	\$1,879
LV II, 30A, Pedestal-Mount, Dual-Port	Efacec	●	●	●	● ⁹	\$6,289	\$1,879
DCFC, 25kW, Ground-Mount, Dual Port	Efacec	●	●	●	● ⁹	\$26,473	\$2,247
DCFC, 50kW, Ground-Mount, Dual Port	Efacec	●	●	●	● ⁹	\$29,232	\$2,247
DCFC, 50kW, Ground-Mount, Dual Port	Schneider	●	●	●	●	\$30,361	\$2,247
DCFC, 50kW, Ground-Mount, Dual Port	Signet	●	●	●	●	\$31,304	\$2,247
Network Communication Box ⁸	Siemens	●	●	●	●	\$3,200	
Access Gateway and Payment Kiosk ^{8,9}	EVSE, Inc	●	●	●	●	\$2,258	\$1,414

⁵ Estimated installation cost for landing, mounting, connecting, and commissioning. Site development costs not included.

⁶ EVSE requires purchase of communication box (\$3,200) for networking. One communication box can support up to 25 EVSE ports.

⁷ If credit card terminal or gateway is desired, EVSE requires Gateway and Payment Kiosk (\$2,258). One kiosk can support up to 15 EVSE ports.

⁸ Access gateway and Payment Kiosk required.

⁹ EVSE uses an Ethernet router for gateway that can support up to three hardwired EVSE followers.



Siemens Pedestal



EV Box Pedestal



EVSE, Inc. Auto-Retract



EVSE Inc. Standard



Efasec Level II



Efasec QC20 DCFC



Efasec QC50 DCFC



Schneider DCFC



Signet DCFC

Installation Estimates¹⁰

Item	Description	Unit	Cost
Site Assessment	Evaluate electrical/construction needs	Site	\$150
Electrical Load Study	Review Utility Bills, Amperage Load Calc., etc ...	Ea.	\$200
Locate On-Site Utilities	800 Dig Alert or Hand Dig to Expose	Ea.	\$125
Permit Package Preparation	Fill Out/File Forms and Documents	Ea.	\$150
Stamped Engineering Drawings	Single Line and Plot Plan	Ea.	\$500
Service to Property Upgrade - Trenching	Trench for U/G Service	ft.	\$33
New Panel	Install New Panel Within 5' of Existing	Ea.	\$1,000
Breaker(s)		Ea.	\$135
Transformer	100kVA Transformer	Ea.	\$10,095
Transformer	25kVA Transformer	Ea.	\$6,095
Transformer	15kVA Transformer	Ea.	\$4,095
ERT Meter and Set		Ea.	\$835
Wire - Electrical Upgrade	#250 MCM Cable	ft.	\$18
Wire - Panel to Disconnect		ft.	\$8.50
Disconnect	Up to 50A	Ea.	\$370
Wire - Disconnect to EVSE	#8 THHN Wire	ft.	\$2.50
Conduit - Directional Bore	Minimum 30'	ft.	\$55
Conduit - Trenching and Backfill		ft.	\$30.00
Conduit - Surface Mount		ft.	\$13.50
Procurement and Installation of Bollard	3" GRC (36" Above Ground/24" Below Ground)	Ea.	\$700
Procurement and Installation of Wheel Stops		Ea.	\$400
EV Parking Only Signage	Sign, Pole, and Footing	Ea.	\$200
Re-Stripe Parking Space	Minimum Charge	Ea.	\$600
EV Logo - Parking Space	Minimum Charge	Ea.	\$300

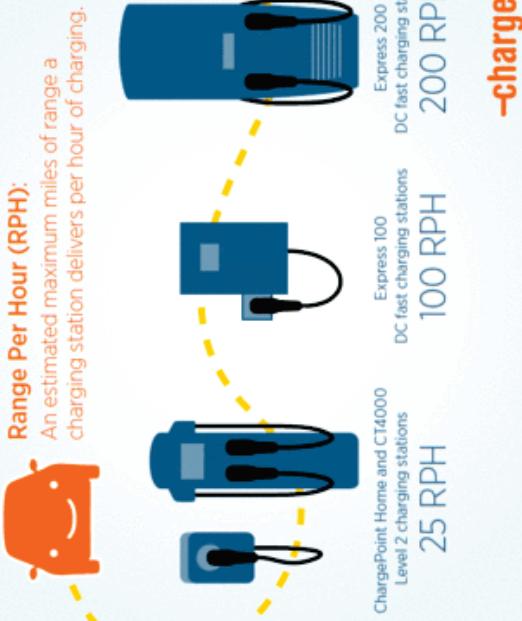
¹⁰ List is not inclusive. Prices are estimates and can change based on market cost of materials and services. Customer will be provided with a line item estimate after a site visit.

We make it easy for you to get plugged in.

Why choose Puget Sound Solar and Chargepoint?

- Expert siting and installation services - over 600 since 2010
- Proven robust hardware and support - over 30,000 installed
- Largest and best network - serving 77% of networked EVSE in U.S.
- Flexible access & revenue control; future-proof software updates

Some Things Are Better Than Others





**PUGET
SOUND
SOLAR**

A DIV. OF

EV SUPPORT

EV Support is a division of Puget Sound Solar LLC, which was founded in 2001, and has included battery-electric vehicles in its fleet since 2006. We installed our first Level 2 EVSE then for company use, and formed the EV Support division in 2009 to specialize in electric vehicle charging installations. Since then we have installed over 600 EVSE in Western Washington, we have five EVs in our fleet, and five charging station ports at our shop. In addition to installation, we also provide repair services for residential and commercial clients. More info at <http://www.evssupport.com>

Chargepoint, the hardware provider, has the largest EVSE network nationwide. Both wall mounted and bollard models are available in single and dual port units, and are distinguished by the clean cord management system. Level 2 Charging uses the universal J1772 plug, charging most cars in 2-4 hours. Charging with a DC Fast Charger takes about 30 minutes. Stations are networked via cloud-based software that allows access control, ability to set pricing (hourly, per session, and per kWh). Billing, 24/7 customer support, utilization reporting and management are handled through one ChargePoint log-in.

LEVEL	PRICE \$	Basic Installation of EVSE- add'l site prep on Table 2	PRODUCT DESCRIPTION
Level 2 (208-240V) 32V per Port	Days to delivery		http://www.chargepoint.com/products/commercial/
CT4000 series- with RFID			The CT4000 family is the latest generation of ChargePoint commercial charging stations. Refined yet rugged, these stations set the industry standard for functionality and aesthetics. http://www.chargepoint.com/products/commercial/ct4000/
Model-CT4011-GW1	14	\$3,757.00	\$875.00 Gateway model, CT4011, 6' Bollard Single Port, 18' Cord
Model-CT4011	14	\$3,386.00	\$850.00 CT4011, 6' Bollard Single Port, 18' Cord
Model-CT4013-GW1	14	\$3,383.00	\$775.00 Gateway model, CT4013, 6' Bollard Single Port, 18' Cord
Model-CT4013	14	\$3,012.00	\$750.00 CT4013, 6' Wall Mount Single Port, 18' Cord
Model-CT4021-GW1	14	\$5,341.00	\$932.00 Gateway model, CT4021, 6' Bollard Dual Port, 18' Cord
Model-CT4021	14	\$4,970.00	\$903.00 CT4021, 6' Bollard Dual Port, 18' Cord
Model-CT4023-GW1	14	\$4,967.00	\$832.00 Gateway model, CT4023, 6' Wall Mount Dual Port, 18' Cord
Model-CT4023	14	\$4,596.00	\$803.00 CT4023, 6' Wall Mount Dual Port, 18' Cord
Model-CT4025-GW1	14	\$6,091.00	\$932.00 Gateway model, CT4025, 8' Bollard Dual Port, 23' Cord

Model-CT4025	14	\$5,720.00	\$903.00	CT4025, 8' Bollard Dual Port, 23' Cord
Model-CT4027-GW1	14	\$5,717.00	\$832.00	Gateway Model, CT4027, 8' Wall Mount Dual Port, 23' Cord
Model-CT4027	14	\$5,346.00	\$803.00	CT4027, 8' Wall Mount Dual Port, 23' Cord
Model- CPF25-L18 (FLEET use Only)	30	\$1,370.00	\$360.00	The CPF25 family of charging stations is designed for fleet applications. For fleets, CPF25 stations are ideally suited for depot charging, Single Port, Wall Mount, 5.4 m (18') Cord choose 18' or 23' Cord. http://www.chargepoint.com/products/commercial/cpf25
Model- CPF25-L18-PD	30	\$1,989.00	\$485.00	Single Port, Pedestal Mount
Model- CPF25-L18-PD-Dual (FLEET use Only)	30	\$3,421.00	\$560.00	Dual Port, Pedestal Mount
Model- CPF25-L18-CMK6 (FLEET use Only)	30	\$2,481.00	\$402.00	Single Port, Wall mount 5.4m Mount with Cord Management Kit
Model- CPF25-L18-CMK6-PD (FLEET use Only)	30	\$2,936.00	\$510.00	Single Port, Pedestal Mount, with Cord Management Kit
Model- CPF25-L18-CMK6-PD-Dual (FLEET use Only)	30	\$4,293.00	\$580.00	Dual Port, Pedestal Mount , with Cord Management Kit
Level 3- DC Fast Charger (400-480V) with RFID				
DC Fast Charger- Model- CPE100 I-CMB Wall-mount	60	\$11,913.00	\$1,024.00	Fast charging for short dwell time parking and freeway corridor locations. http://www.chargepoint.com/products/commercial/cpe100/ http://www.chargepoint.com/products/commercial/cpe200/
DC Fast Charger Model- CPE100 I-CMB Bollard-mount	60	\$13,532.00	\$1,124.00	Single port, single connector, 25kW, Combo 1 connector, wall mount,
DC Fast Charger Model- CPE200T-S-CHD-CMB Bollard-mount (63A)	60	\$33,340.00	\$2,345.00	Single port, single connector, 25kW, Combo 1 connector, Bollard mount

Other Related Items			
Extended Warranty Options/Pricing	n/a	n/a	n/a
ChargePoint Card in Mailing Folders (RFID) - CT1000- CPCMF-CPI00K		\$5.00	Key Fob Size - Order in multiples of 50 CT1000-SIGN1
EV Parking -Green		\$65	CT1000-SIGN2
No Parking except EV- Red		\$52	

Site Preparation prices posted in Table 2

Table 2
Site Preparation- Add'l costs

	Level 2- CT4000, CPF25- Bollard, Single Port	Level 2- CT4000, CPF25- Wall Mount, Single Port	Level 2- CT4000, CPF25- Wall Mount, Dual Port	Level 2- CT4000, CPF25-Wall mount, Dual Port	DC Fast Charger CPE100 Bollard	DC Fast Charger CPE100 Bollard	DC Fast Charger CPE200 - Bollard
Basic Site Preparation with 30 L.F. EMT -wall & ceiling, each	\$664.00	\$664.00	\$854.00	\$854.00	\$1,244.00	\$1,244.00	\$2,566.00
Additional L.F. EMT - 1 Circuit per lineal foot	\$18.00	\$18.00	\$18.00	\$18.00	\$24.00	\$24.00	\$48.00
Additional L.F. EMT - 2 Circuit per lineal foot	\$28.00	\$28.00	\$28.00	\$28.00	\$32.00	\$32.00	\$64.00
Additional L.F. EMT - 3 Circuit per lineal foot	\$34.00	\$34.00	\$34.00	\$34.00	\$40.00	\$40.00	\$80.00
Additional L.F. EMT - 4 Circuit per lineal foot	\$56.30	\$56.30	\$56.30	\$56.30	\$60.00	\$60.00	\$120.00
Basic Site Prep with pad, 40 L.F. PVC -trench under landscape-6	\$965.00	n/a	\$1,055.00	\$1,055.00	\$1,534.00	\$1,534.00	\$2,151.00
Basic Site Prep with pad, 40 L.F. PVC -trench under landscape-8	\$1,365.00	n/a	\$1,455.00	\$1,455.00	\$1,845.00	\$1,845.00	\$2,465.00
Additional L.F. PVC in trench - landscape - 1 circuit lineal foot	\$96.00	\$96.00	\$96.00	\$96.00	\$102.00	\$102.00	\$150.00
Additional L.F. PVC in trench - landscape - 2 circuit lineal foot	\$106.00	\$106.00	\$106.00	\$106.00			
Additional L.F. PVC in trench - landscape - 3 circuit lineal foot	\$110.00	\$110.00	\$110.00	\$110.00			
Additional L.F. PVC in trench - landscape - 4 circuit lineal foot	\$115.00	\$115.00	\$115.00	\$115.00			
Additional L.F. PVC in trench - landscape - 1 circuit lineal foot	\$76.00	\$76.00	\$76.00	\$76.00	\$82.00	\$82.00	\$130.00
Additional L.F. PVC in trench - landscape - 2 circuit lineal foot	\$86.00	\$86.00	\$86.00	\$86.00			
Additional L.F. PVC in trench - landscape - 3 circuit lineal foot	\$90.00	\$90.00	\$90.00	\$90.00			
Additional L.F. PVC in trench - landscape - 4 circuit lineal foot	\$95.00	\$95.00	\$95.00	\$95.00			
Additional pull box EMT each	n/a	\$45.00	n/a	n/a	\$45.00	n/a	n/a
Additional pull box PVC each	\$35.00	n/a	\$35.00	\$35.00	n/a	\$35.00	\$95.00
Sub panel + feeder - single phase each	\$894.00	\$894.00	\$894.00	\$894.00	\$894.00	\$894.00	\$894.00
Sub panel + feeder - three phase each	\$1,044.00	\$1,044.00	\$1,044.00	\$1,044.00	\$1,044.00	\$1,044.00	\$1,044.00
Add for high ceiling conduit run lineal foot	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00
Add for concrete core drill each	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00
CB: 3P 60A - 100A each	\$123.00	\$123.00	\$123.00	\$123.00	\$123.00	\$123.00	\$123.00
Disconnect switch each	\$225.00	\$225.00	\$450.00	\$450.00	\$450.00	\$450.00	\$550.00
Wheel stop each	\$85.00	\$85.00	\$85.00	\$85.00	\$85.00	\$85.00	\$85.00
Bollard each	\$425.00	\$425.00	\$425.00	\$425.00	\$425.00	\$425.00	\$425.00
Wayfinder sign and post each	\$155.00	\$155.00	\$155.00	\$155.00	\$155.00	\$155.00	\$155.00
Wayfinder sign on wall each	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00
Parking space painting each	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00