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March 29, 2019

Public Utility Commission of Oregon  
Attn: Filing Center  
201 High Street, SE, Suite 100  
P.O. Box 1088  
Salem, OR 97308-1088

**RE: UM 1826: PGE 2019 Clean Fuels Program Plan**

Portland General Electric Company (PGE) submits this filing pursuant to Public Utility Commission of Oregon (Commission) Order No. 18-376 in Docket No. UM 1826.

In October 2018, the Commission issued Order No. 18-376 providing broad guidance on how utilities should spend Clean Fuel Program funds and requesting utilities to file their first program year plans by March 31, 2019, in accordance with Commission approved principles.

For the 2019 program year, following consultation with stakeholders, PGE plans a portfolio of four programs (the Portfolio):

- **An EV grant fund:** PGE will launch a competitive grant fund to support non-residential customers in a variety of project types to advance transportation electrification to the benefit of residential customers;
- **A school bus electrification project:** PGE will work with up to 5 school districts to help them acquire an electric school bus and install charging infrastructure;
- **Subsidized Electric Avenue access:** PGE will offer free two-year subscriptions to its Electric Avenue network of charging stations to any Oregonian who receives the state's income-qualified rebate for the purchase or lease of a new or used EV; and
- **Public outreach activities for transportation electrification:** PGE will educate residential customers and raise awareness about the benefits of EVs; these activities include a total cost of ownership tool on PGE's website; engagement with dealers and at public events; and a ride and drive event with a national vendor.

Included in this filing, as Exhibit A, is PGE's 2019 Clean Fuels Program Plan which provides more details on the planned programs. Appendix A, of Exhibit A, provides PGE's Portfolio budget.

Should you have any questions or comments regarding this filing, please contact Stefan Cristea at (503) 464-8033.

Please direct your communications related to this filing to the following email address:  
[pge.opuc.filings@pgn.com](mailto:pge.opuc.filings@pgn.com)

Sincerely,

A handwritten signature in black ink, appearing to read "Karla Wenzel". The signature is fluid and cursive, with the first name "Karla" being more prominent than the last name "Wenzel".

Karla Wenzel  
Manager, Pricing & Tariffs

Enclosures  
cc: Service List – UM 1826

**UM 1826**

**Exhibit A**

**PGE's 2019 Clean Fuels Program Plan**

# PGE Clean Fuels Program Plan

Program Year 2019 | UM 1826 | March 2019



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## Executive Summary

Portland General Electric (PGE) is pleased to file this Clean Fuels Program (CFP or Program) plan, as directed by the Public Utility Commission of Oregon (OPUC or Commission).

In October 2018, the OPUC issued Order No. 18-376 providing broad guidance on how utilities should spend CFP funds. The Order also included a directive to investor-owned utilities to file their first program year plans by March 31, 2019, and thereafter to propose plans in the fall of each year for the following year's programs.

For the 2019 program year, following consultation with stakeholders, PGE plans a portfolio of four programs (the Portfolio):

- An EV grant fund: PGE will launch a competitive grant fund to support non-residential customers in a variety of project types to advance transportation electrification to the benefit of residential customers;
- A school bus electrification project: PGE will work with up to 5 school districts to help them acquire an electric school bus and install charging infrastructure;
- Subsidized Electric Avenue access: PGE will offer free two-year subscriptions to its Electric Avenue network of charging stations to any Oregonian who receives the state's income-qualified rebate for the purchase or lease of a new or used EV; and
- Public outreach activities for transportation electrification: PGE will educate residential customers and raise awareness about the benefits of EVs; these activities include a total cost of ownership tool on PGE's website; engagement with dealers and at public events; and a ride and drive event with a national vendor.

Details on each of the four programs are provided in Section 3, Planned Portfolio. As detailed in Table 1 below, the net cost for the Portfolio is \$4,198,000.

Table 1 Planned Portfolio Overview

Planned Portfolio Overview	Net Costs
EV Grant Fund	\$ 2,031,000
School Bus Electrification	\$ 1,112,000
Subsidized Electric Avenue Access	\$ 585,000
Public Outreach Activities	\$ 386,000
Portfolio Administration	\$ 84,000
<b>Total Net Costs</b>	<b>\$ 4,198,000</b>

PGE is pleased to present this Portfolio of programs that meets the Program Design Principles outlined by the Commission, and that was well-received by stakeholders. With this Portfolio, PGE aims to advance transportation electrification by tackling multiple barriers to adoption across a broad spectrum of vehicle types and customer classes.

## Section 1 Background

In 2009, the Oregon Legislature passed House Bill (HB) 2186, authorizing the Oregon Environmental Quality Commission to adopt rules to reduce the average carbon intensity of Oregon's transportation fuels by 10 percent over a 10-year period.<sup>1</sup> In 2015, the Oregon Legislature passed Senate Bill (SB) 324 allowing the DEQ to fully implement the Clean Fuels Program beginning in 2016.<sup>2</sup>

The CFP established clean fuel standards, an annual average carbon intensity that a regulated party must comply with. There is a standard for gasoline and gasoline substitutes and one for diesel and diesel substitutes. The baseline year for the program is 2015, and the rule requires a 10 percent reduction in average carbon intensity from 2015 levels by 2025.<sup>3</sup>

Deficits are generated when the carbon intensity of a specific fuel exceeds the clean fuel standard in a given year (such as gasoline or diesel), and regulated parties must obtain credits to satisfy their deficits. Credits are generated when the carbon intensity of a specific fuel is lower than the clean fuel standard in a given year (such as electricity).

The DEQ<sup>4</sup> rules implementing the Program identified electric utilities as the first-choice aggregator for all residentially-charged EVs registered in the utility's service territory. In July 2017, the Public Utility Commission of Oregon (OPUC or Commission) deemed that it is in the public interest that electric utilities aggregate and generate CFP credits on behalf of residential customers who drive EVs, and required PGE and PacifiCorp to register with the DEQ as generators and aggregators of CFP credits under the Program.<sup>5</sup>

In October 2018, the OPUC issued Order No. 18-376 providing broad guidance on how utilities should spend CFP funds, including establishing an expedited filing schedule for the first program year (2019).<sup>6</sup>

The Program Design Principles established by the OPUC are:<sup>7</sup>

1. Support the goal of electrifying Oregon's transportation sectors;
2. Provide majority of benefits to residential customers;
3. Provide benefits to traditionally underserved communities;
4. Programs are designed to be independent from ratepayer support;
5. Programs are developed collaboratively and transparently; and
6. Maximize use of funds for implementation of programs.

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<sup>1</sup> 75<sup>th</sup> Oregon Legislative Assembly, 2009 Regular Session. Chapter 724, 2009 *Oregon Laws*. Retrieved from [https://www.oregonlegislature.gov/bills\\_laws/lawsstatutes/2009orLaw0754.html](https://www.oregonlegislature.gov/bills_laws/lawsstatutes/2009orLaw0754.html)

<sup>2</sup> 78<sup>th</sup> Oregon Legislative Assembly, 2015 Regular Session. Chapter 4, 2015 *Oregon Laws*. Retrieved from [https://www.oregonlegislature.gov/bills\\_laws/lawsstatutes/2015orLaw0004.pdf](https://www.oregonlegislature.gov/bills_laws/lawsstatutes/2015orLaw0004.pdf)

<sup>3</sup> Oregon Department of Environmental Quality. *Overview of the Clean Fuels Program*. Retrieved from <https://www.oregon.gov/deq/FilterDocs/cfpoverview.pdf>

<sup>4</sup> Oregon Administrative Rules. Ch. 340 Div. 253. Retrieved from <https://secure.sos.state.or.us/oard/view.action?ruleNumber=340-253-0330>

<sup>5</sup> OPUC (2017). *Order No. 17-250 Public Utility Commission of Oregon Investigation into Utility Participation in Oregon Clean Fuel Programs*. Retrieved from <https://apps.puc.state.or.us/orders/2017ords/17-250.pdf>

<sup>6</sup> OPUC (2018). *Order No. 18-376 Public Utility Commission of Oregon Revised Principals and Process for Utility Use of Revenue from Clean Fuels Program*. Retrieved from <https://apps.puc.state.or.us/orders/2018ords/18-376.pdf>

<sup>7</sup> Importantly, these residential credits are distinct from credits PGE generates when an EV driver charges at a charging station owned by PGE. Credits generated at PGE's owned charging stations are not regulated under Order Nos. 17-250 and 18-376.



In the Staff memo adopted by the Commission in Order No. 18-376, Staff suggested that administrative costs should be targeted at or below 10 percent of total program costs in a program year, with reasonable variation by program.

Lastly, through Order No. 18-376, the Commission established a cadence of stakeholder engagement for program design beginning in the fall of 2019. In response to stakeholder requests to promptly allow utilities to begin using CFP credit funds, the OPUC established an expedited schedule in the first program year, without a formal stakeholder engagement component.

In early 2018, PGE received approximately 50,000 credits for EVs registered by residential customers in its service territory for electricity used in 2016 and 2017. PGE shared draft program concepts with stakeholders in early February of 2019 and has integrated the feedback received into this plan and its program designs. This filing represents PGE’s plan for the first program year.

## Section 2 Activity to Date

As detailed in Table 2 below, PGE received 49,667 residential EV charging credits for 2016 and 2017. As of March 5, 2019, the company has sold these credits, resulting in funds of \$5,473,374.

Table 2 Credit Activity

Date	Action	Credits	Funds
2018	Credits Adjusted (for 2016-2017)	49,677	
2018	Credits Transferred	(31,320)	\$ 3,286,611
2019	Credits Transferred	(18,347)	\$ 2,186,763
<b>As of 3/5/19</b>	<b>Credit Activity Total</b>	<b>0</b>	<b>\$ 5,473,374</b>

Per Order No. 17-250, PGE will separately file an annual report that includes more details about individual credit sales.

As detailed in Table 3 below, the company has also incurred costs of \$65,483 in 2018 and the first part of 2019 for credit monetization, portfolio planning, and regulatory process; these expenditures are integrated into Appendix A, Portfolio Budget.

Table 3 Expenditures to Date

Date	Action	Funds
2018-2019	Funds from Credit Sales	\$ 5,473,374
2018	Expenditures	\$ (12,187)
2019 (to 3/5/19)	Expenditures	\$ (53,296)
<b>As of 3/5/19</b>	<b>Balance</b>	<b>\$ 5,407,891</b>

## Section 3 Planned Portfolio

For the 2019 program year, following consultation with stakeholders, PGE plans a portfolio of four programs:

- An EV grant fund: PGE will launch a competitive grant fund to support non-residential customers in a variety of project types to advance transportation electrification to the benefit of residential customers;

- A school bus electrification project: PGE will work with up to 5 school districts to help them acquire an electric school bus and install charging infrastructure;
- Subsidized Electric Avenue access: PGE will offer free two-year subscriptions to its Electric Avenue network of charging stations to any Oregonian who receives the state’s income-qualified rebate for the purchase or lease of a new or used EV; and
- Public outreach activities for transportation electrification: PGE will engage in a variety of activities to educate residential customers and raise awareness about the benefits of EVs.

As detailed in Table 4 below, the net cost for the Portfolio is \$4,198,000. This includes an upfront budget of \$5,178,000, with expected reimbursement of \$980,000. Any reimbursements or credits created as a result of the Portfolio will be applied back to the CFP budget.

Table 4 Net Planned Portfolio Budget

Net Portfolio Budget	Program Costs	Admin Costs	Total
EV Grant Fund	\$ 1,896,000	\$ 135,000	\$ 2,031,000
School Bus Electrification	\$ 1,040,000	\$ 72,000	\$ 1,112,000
Subsidized Electric Avenue Access	\$ 495,000	\$ 90,000	\$ 585,000
Public Outreach Activities	\$ 350,000	\$ 36,000	\$ 386,000
Portfolio Administration	\$ -	\$ 84,000	\$ 84,000
<b>Total Costs</b>	<b>\$ 3,781,000</b>	<b>\$ 417,000</b>	<b>\$ 4,198,000</b>
<i>Administrative %</i>			<i>10%</i>

The Portfolio is designed to meet the Program Design Principles outlined by the OPUC and address barriers to transportation electrification in multiple sectors, and at multiple points in the value chain. Feedback from stakeholders has been integrated into the design of the Portfolio.

### 3.1 EV Grant Fund

#### 3.1.1 Background

Despite significant advancements in transportation electrification in recent years, individual ownership of an electric vehicle remains logistically and/or financially out of reach for many residential utility customers.<sup>8</sup> Meanwhile, other mobility and planning trends – car- and ride-sharing, autonomous vehicles, multi-modal solutions, micromobility<sup>9</sup>, and car-free cities or streets – are important platforms for electric mobility, and offer ways to increase equity in the transportation electrification space by reaching beyond private vehicle ownership. PGE plans to launch a grant fund that will expand multi-modal electric mobility options for residential customers.

#### 3.1.2 Program Description

PGE will offer grant funding to non-residential customers to:

- Purchase electric vehicles, such as school buses, transit vehicles, or shared community service vehicles (i.e., not to include business fleet vehicles or personal vehicles);

<sup>8</sup> Market Strategies International (2018). *Portland General Electric 2018 Electric Vehicle Study Among Residential Customers*.

<sup>9</sup> Micromobility represents emerging technologies for solving unique transportation needs, including but not limited to: shared scooters, shared bikes, and other shared vehicles that enhance mobility.

- Launch brand-neutral education and outreach campaigns to advance transportation electrification;
- Install EV charging infrastructure (in limited circumstances, such as to support any of the projects above, or for installations that do not meet the requirements of programs funded under Docket No. UM 1811);<sup>10</sup> or
- Launch other projects that advance transportation electrification, including but not limited to technical assistance and capacity-building around transportation electrification within underserved communities, or micromobility, electric car- or ride-share, or autonomous electric vehicle demonstration projects.

The fund will prioritize projects proposed or supported by non-profits or public agencies and will place additional weight on projects that address the needs of underserved communities. Per-application and per-applicant caps will be established. A third-party evaluator will be hired to help establish eligibility, develop a scoring rubric, interview applicants, and evaluate applications and provide recommendations to PGE.

Given that projects that meet the needs of underserved communities are a priority for this fund, yet many community-based organizations that work with such communities are resource-limited, PGE is including a technical assistance budget in its plan. These funds are designed to support community-based organizations in preparing applications, including hiring a technical assistance vendor and supporting other capacity-building work.

CFP credits from any charging infrastructure installed with grant funds will be claimed by PGE, and the resultant funds will be directed back to support additional programs under Docket No. UM 1826.

### 3.1.3 Reporting

As awarded projects are deployed, PGE will collect data to understand efficacy and impact. Data to be collected may include, but is not limited to: actual project costs, number of residential customers benefitted, underserved communities impacted, percentage of funded projects and percentage of funds primarily benefitting underserved communities, electric miles travelled, energy dispensed through EV charging infrastructure, and other impacts as appropriate per project. Data will help PGE refine the grant fund in future years and will inform the development of future program proposals under SB 1547.

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<sup>10</sup> UM 1811 is a docket created as a result of SB 1547, which requires utilities to accelerate Transportation Electrification. Under UM 1811, the OPUC has approved PGE to make limited investments in EV charging and programs to accelerate EV adoption.

### 3.1.4 Principle Alignment

Table 5 below demonstrates how the EV Grant Fund program aligns with the Program Design Principles:

Table 5 EV Grant Fund Principle Alignment

Principle	Program Considerations
1. Support the goal of electrifying Oregon’s transportation sectors	The EV Grant Fund will advance transportation electrification by offering grants to customers for all types of transportation electrification activity. It is PGE’s goal that the fund support electrification in diverse ways, in diverse sectors, and at different points along the value chain. PGE also intends to use learnings from funded projects to inform future program design and selection. Lastly, since CFP credits from all funded EV charging infrastructure will be claimed by PGE and directed back into programming under Docket No. UM 1826, these projects will advance transportation electrification in a long-term way.
2. Provide majority of benefits to residential customers	The fund will provide benefits to residential customers, as funded projects will be required to be designed to benefit residential customers. Additionally, activities that would clearly primarily benefit private companies (such as fleet vehicles or charging) are explicitly ineligible for funding. The prioritization of projects proposed by non-profits and public agencies helps ensure that these groups are the primary beneficiary of any incidental benefits.
3. Provide benefits to traditionally underserved communities	The fund will provide benefits to traditionally underserved communities directly through technical assistance and capacity-building in the fund application process; and indirectly through funded projects. Addressing the needs of underserved communities will carry weight in the application evaluation process, and PGE will report on the impacts on underserved communities through funded projects.
4. Programs are designed to be independent from ratepayer support 5. Programs are developed collaboratively and transparently 6. Maximize use of funds for implementation of programs	Portfolio-level considerations of these Principles are discussed in Section 4, Program Design Principle Alignment.

### 3.1.5 Stakeholder Feedback

Generally, stakeholders are supportive of the grant fund. Some stakeholders have expressed the preference that grants should not duplicate investments that can and should be prioritized by SB 1547 programs. On the other hand, other stakeholders recommended narrowing the scope of the fund to focus solely on charging infrastructure for underserved communities. PGE appreciates the balance required between the CFP and SB 1547 programs and does not intend to undermine SB 1547 programs by offering a grant fund. To that end, the fund will not consider standalone projects that are eligible for incentives under other PGE programs, and data from this program will be used to inform the development of future program proposals under SB 1547.

### 3.1.6 Budget

The overall budget for the EV Grant Fund program is as follows in Table 6 (for more detail, see Appendix A, Portfolio Budget):

Table 6 EV Grant Fund Budget

EV Grant Fund Budget	
Funds Available	\$ 1,750,000
Program Design	\$ 21,000
Technical Assistance	\$ 50,000
Outreach	\$ 75,000
Third-Party Evaluator	\$ 44,000
Program Evaluation	\$ 10,000
Program Management	\$ 81,000
<b>EV Grant Fund Total</b>	<b>\$ 2,031,000</b>

### 3.1.7 Estimated Timeline

- April-May 2019 – Development of program documents and applications; outreach and technical assistance;
- June-August 2019 – Applications made available; outreach and technical assistance;
- August 31, 2019 – Applications due;
- September-December 2019 – Evaluation of applications and notification of awards; and
- December 2020 – Evaluation of funded projects.

## 3.2 School Bus Electrification

### 3.2.1 Background

Today, there are no electric school buses on Oregon roads. Despite some interest from school districts, the upfront costs and long-term uncertainties of electric school buses remain barriers to adoption.<sup>11</sup> Further, research from electric school bus projects around the nation suggest that school districts – for which pupil transportation is a secondary, not primary, mission – require a significant amount of technical assistance, in addition to financial support, to overcome these barriers.<sup>12</sup> Lastly, public policy barriers exist. Current Oregon Department of Education administrative rules exclude electric school buses, which cannot meet the state’s student safety specifications. Meanwhile, school buses are neighborhood vehicles, meaning their air quality impacts affect communities directly, particularly school children.<sup>13</sup> PGE plans to launch a project to help school districts overcome barriers to adoption of electric school buses.

### 3.2.2 Program Description

PGE will assist 2-5 school districts and/or school bus fleet operators in its service territory with the acquisition of approximately 4 electric buses and with the installation of demand response-enabled

<sup>11</sup> Vermont Energy Investment Corporation. *Electric School Buses: Cleaner Air, Healthier Children*. 2017. Retrieved from <https://www.veic.org/media-room/insights/insights/2017/07/10/electric-school-buses-cleaner-air-healthier-children>

<sup>12</sup> Vermont Energy Investment Corporation. *Electric School Bus Pilot Project Evaluation*. 2018. Retrieved from <https://www.mass.gov/files/documents/2018/04/30/Mass%20DOER%20EV%20school%20bus%20pilot%20final%20Report.pdf>

<sup>13</sup> Environment & Human Health, Inc. *Children’s Exposure to Diesel Exhaust on School Buses*. 2002. Retrieved from <http://www.ehhi.org/reports/diesel/diesel.pdf>

charging infrastructure.<sup>14</sup> The school districts will be selected through a competitive process that will prioritize a variety of factors including, but not limited to, income levels, geography, cost-sharing ability and demographics. PGE will provide technical assistance to the schools which may include site assessments, cost-benefit analysis, vehicle and charger selection support, assistance participating in demand response programs and events, and utility rate optimization. PGE will also support schools through the bus procurement process, including necessary discussions with the Department of Education to ensure that the electric school buses meet all Oregon specifications for pupil transportation.

Where feasible, PGE will explore with participants and technology vendors the prospect of managed charging, demand response program participation, or V2X (vehicle-to-building or vehicle-to-grid) applications; however, the primary purpose of this pilot is to deploy electric school buses on Oregon roads.

CFP credits from charging infrastructure installed through this program will be claimed by PGE, and the resultant funds will be directed back to support additional programs under Docket No. UM 1826. Additionally, the investment in this program includes assisting school districts with the up-front costs of school buses. PGE aims to cover the incremental cost of electric school buses as compared to diesel models. PGE will work with school districts to understand their unique financing needs and will leverage other financial assistance mechanisms as applicable (for example, Volkswagen mitigation funds<sup>15</sup> or Oregon Department of Education's pupil transportation reimbursement program).<sup>16</sup> The budget for this program is conservatively structured to accommodate significant up-front costs with reimbursement over time; however, other financing models will be considered and may be used. Regardless of how the financing is structured, any reimbursement from bus financing will be directed back to support additional programs under Docket No. UM 1826.

### 3.2.3 Reporting

PGE will collect data to support the development of a white paper exploring the costs, benefits, opportunities and challenges in deploying electric school buses in Oregon. Data to be collected may include, but is not limited to: actual project costs, number of students benefitted, bus uptime, electric miles travelled, energy dispensed through charging infrastructure, load profiles of electric buses, information about school bus economics and financing, and CFP credits generated.

The white paper will analyze barriers related to the procurement, financing, economics, operations, and logistics of electric school buses. The paper will discuss opportunities to overcome these barriers, such as financing and incentives, best practice in stakeholder engagement and operations, public policy engagement requirements, and the potential for participation in utility programs such as demand response. The paper will model the total cost of ownership of electric school buses, including upfront costs, fuel and maintenance savings, and ancillary value streams such as CFP credits and utility program incentives. The white paper will help inform future PGE program design under SB 1547, including whether an electric school bus program might be viable.

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<sup>14</sup> Actual number of districts and school buses may vary based on customer willingness and customer-specific project costs.

<sup>15</sup> Oregon Department of Environmental Quality. *Volkswagen Diesel Settlement*. Retrieved from <https://www.oregon.gov/deq/eq/programs/pages/vw-diesel-settlement.aspx>

<sup>16</sup> Oregon Department of Education. *Transportation Reimbursement*. Retrieved from [https://www.oregon.gov/ode/schools-and-districts/grants/Documents/Transportation%20Reimbursement%20Information%20as%20of%204\\_29\\_09.pdf](https://www.oregon.gov/ode/schools-and-districts/grants/Documents/Transportation%20Reimbursement%20Information%20as%20of%204_29_09.pdf)



### 3.2.4 Principle Alignment

Table 7 below demonstrates how the School Bus Electrification program aligns with the Program Design Principles:

Table 7 School Bus Electrification Principle Alignment

Principle	Program Considerations
1. Support the goal of electrifying Oregon’s transportation sectors	The School Bus Electrification program will advance transportation electrification in two ways: directly, by helping several school districts overcome the barriers to adopting an electric school bus; and indirectly, through the development of a white paper that will help other school districts, inform future program design under SB 1547, and potentially influence public policymakers. Since CFP credits from bus charging infrastructure will be claimed by PGE and directed back into programming under Docket No. UM 1826, this program will advance transportation electrification in a long-term way.
2. Provide majority of benefits to residential customers	This program will provide benefits to residential customers, both the students who ride the school buses and the residents of neighborhoods through which school buses travel. Learnings and results from the white paper will ensure that the program will benefit students from other school districts, as well. It is expected that incidental benefits will flow to schools and districts, consistent with the Program Design Principles. In the event that one of the selected school districts contracts its bus operations to a for-profit fleet operator, PGE will work to ensure that the incidental benefits flow to the school district, not to the fleet operator.
3. Provide benefits to traditionally underserved communities	This program will strive to provide benefits to traditionally underserved communities by considering the percentage of students at each school receiving free or reduced-price meals in assessing which school districts to partner with.
4. Programs are designed to be independent from ratepayer support 5. Programs are developed collaboratively and transparently 6. Maximize use of funds for implementation of programs	Portfolio-level considerations of these Principles are discussed in Section 4, Program Design Principle Alignment.

### 3.2.5 Stakeholder Feedback

Generally, stakeholders are supportive of the school bus electrification project. Some stakeholders expressed interest in seeing this program as a demand response and/or V2X demonstration. PGE explored the idea of integrating V2X research into this program and compared costs of similar programs across the country. Ultimately, the company determined that customer interests would be better served by placing more buses in service than by spending funds on V2X research. PGE will explore demand response as an option in this program and will use bus charging load profiles to better understand demand response and managed charging as ways to manage grid load and reduce costs for school districts. All chargers deployed under this program will be demand response-enabled.

### 3.2.6 Budget

The overall budget for the School Bus Electrification program is as follows in Table 8 (for more detail, see Appendix A, Portfolio Budget):

Table 8 School Bus Electrification Budget

School Bus Electrification Budget	
Buses	\$ 1,400,000
Charging Infrastructure	\$ 308,000
Outreach and Technical Assistance	\$ 162,000
Operations and Maintenance	\$ 120,000
White Paper	\$ 30,000
Program Evaluation	\$ 30,000
Program Management	\$ 42,000
ODE Reimbursement	\$ (980,000)
<b>School Bus Electrification Total</b>	<b>\$ 1,112,000</b>

### 3.2.7 Estimated Timeline

- April-December 2019 – public policy engagement; technical assistance and outreach to school districts; dealer engagement;
- January-June 2020 – Complete bus purchases and install charging infrastructure;
- July 2020 – Buses in service; testing; and
- September 2021 – Program evaluation and white paper development.

## 3.3 Subsidized Electric Avenue Access

### 3.3.1 Background

Although electric vehicle battery ranges have continued to grow, residential customers remain concerned about range and access to charging when considering an electric vehicle.<sup>17</sup> Especially for drivers who cannot charge at home (such as those who live in multi-family dwellings or do not have access to off-street parking), access to public charging may be integral to the decision-making process. PGE aims to address these concerns for income-qualified customers by offering subsidized access to its Electric Avenue network of EV charging.

PGE's Electric Avenue network is a set of public-access sites offering dual-head DC fast chargers as well as Level 2 chargers, ensuring accessibility for all types of electric vehicles. Like a gas station, the Electric Avenue model co-locates several chargers, increasing the chance that drivers in need will be able to find a functional and available charger. PGE currently has one Electric Avenue in operation in downtown Portland and is in the process of building six more (in Milwaukie, Hillsboro, East Portland, Wilsonville, and two other locations to be determined). The terms and conditions of charging at Electric Avenue are established in PGE's Retail Electric Vehicle Charging Tariff.<sup>18</sup>

<sup>17</sup> Market Strategies International (2018). *Portland General Electric 2018 Electric Vehicle Study Among Residential Customers*.

<sup>18</sup> Schedule 50 – Retail Electric Vehicle Charging Rates. Available at [https://www.portlandgeneral.com/-/media/public/documents/rate-schedules/sched\\_050.pdf](https://www.portlandgeneral.com/-/media/public/documents/rate-schedules/sched_050.pdf)

### 3.3.2 Program Description

PGE plans to subsidize access to the Electric Avenue network for two years each for up to 800 Oregon customers who receive the state's Charge Ahead Rebate.<sup>19</sup> Depending on enrollments and future CFP funds, PGE may explore expanding this cap in the future.

Linking this program to the state's Charge Ahead Rebate program enables PGE to reduce overhead costs by leveraging the state's income verification process and targeting its outreach activities. It also allows PGE to reach beyond its residential customer base and offer subsidized access to drivers who may not be PGE customers at home, but who travel and charge in PGE's service territory. The program also stacks incentives to enhance the value proposition of going electric, and leverages existing infrastructure investments. Lastly, since Charge Ahead Rebates are only available for the lease or purchase of full battery electric vehicles, this is a population that cannot rely on a gasoline backup engine and will require access to charging.

This program will be offered to drivers on an opt-in basis. The program will be designed so that the EV driver has a seamless "subscription" experience, but on the back end the CFP funds will cover the Single Purchase Flat Fee rate and the On-Peak Charging Price (if applicable) established in Schedule 50.<sup>20</sup> If no charging sessions are initiated, no funds will be transferred.

PGE plans to coordinate outreach activities with the state's rebate administrator and car dealerships, and will operationalize the program with PGE's EV charging service provider.

### 3.3.3 Reporting

PGE will conduct comprehensive evaluation of this program, and will consider extensions, expansions or adjustments to the program in future years to best meet the needs of home charging challenged customers. Data to be collected may include but is not limited to: number of qualified individuals, enrollment rate, number of charging sessions per driver, number of on-peak charging sessions per driver, number of charging sessions at each Electric Avenue location, energy consumed, home address distribution, housing types, and program cost per driver. Data on EV drivers' perspectives may be collected by survey or by focus group. Program pricing methodologies, key metrics and evaluation summaries will be made available to stakeholders.

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<sup>19</sup> The Oregon Charge Ahead Rebate of \$2,500 is available to income-qualified customers for the purchase or lease of a new or used battery electric vehicle.

<sup>20</sup> Currently, the Single Purchase Flat Fee is \$5 per DC fast charger session and \$3 per Level 2 charger session; the On-Peak Charging Price is \$0.19 per kWh.

### 3.3.4 Principle Alignment

Table 9 below demonstrates how the Subsidized Electric Avenue Access program aligns with the Program Design Principles:

Table 9 Subsidized Electric Avenue Access Principle Alignment

Principle	Program Considerations
1. Support the goal of electrifying Oregon’s transportation sectors	The Subsidized Electric Avenue Access program will advance transportation electrification by stacking incentives and increasing access to EV charging. It will leverage existing investments under SB 1547 to maximize effectiveness and will evaluate whether the program is sufficient to overcome barriers to adoption – and if not, what additional efforts might be.
2. Provide majority of benefits to residential customers	The program will provide benefits to residential customers, as this is a program that residential customers will participate in directly. The fund transfer process is structured such that incidental benefits to PGE will be minimal.
3. Provide benefits to traditionally underserved communities	This program is designed to provide benefits to underserved communities by offering subsidized EV charging to income-qualified customers. Beyond low-income customers, this program will be of particular benefit to other communities underserved by transportation electrification; namely, multi-family housing and areas with a low density of public charging stations. PGE recognizes that the income thresholds for Charge Ahead Rebate eligibility are higher than those targeted by the CFP; for that reason, PGE will prioritize evaluation and iteration on this program to continue to lower barriers to adoption for underserved communities.
4. Programs are designed to be independent from ratepayer support 5. Programs are developed collaboratively and transparently 6. Maximize use of funds for implementation of programs	Portfolio-level considerations of these Principles are discussed in Section 4, Program Design Principle Alignment.

### 3.3.5 Stakeholder Feedback

Generally, stakeholders are supportive of the program. Some stakeholders are interested in understanding whether this program offers a viable solution to EV charging to those who are home charging challenged. In response to stakeholder feedback, PGE will make evaluation summaries available to stakeholders, and will continue to work with stakeholders to explore innovative ways to increase access to public charging for customers in need.

### 3.3.6 Budget

The overall budget for the Subsidized Electric Avenue Access program is as follows in Table 10 (for more detail, see Appendix A, Portfolio Budget):

Table 10 Subsidized Electric Avenue Access Budget

Subsidized Electric Avenue Access Budget	
Charging Transactions	\$ 480,000
Outreach	\$ 15,000
IT Systems	\$ 15,000
Program Evaluation	\$ 40,000
Program Management	\$ 35,000
<b>Subsidized Electric Avenue Access Total</b>	<b>\$ 585,000</b>

### 3.3.7 Estimated Timeline

- April-May 2019 – Partner engagement; outreach planning; secure application process established;
- June 2019 – Launch program (timing dependent on state rebate administrator timeline); and
- January-June 2020 – Program evaluation.

## 3.4 Public Outreach Activities

### 3.4.1 Background

In 2018, PGE conducted research among its residential customers about attitudes toward ownership of electric vehicles.<sup>21</sup> The research established a customer journey: from EV Non-Considerer, to EV Considerer, to EV Intender, to EV Owner. The research suggested that moving an EV Non-Considerer to an EV Considerer will require substantial market evolution that is largely beyond PGE’s control. However, broad opportunities exist to move EV Considerers to EV Intenders, and EV Intenders to EV Owners. Taken together, these two groups comprise 25% of PGE’s more than 750,000 residential customers – offering a considerable opportunity to move the market. PGE’s research further suggests that both broad and specific education about EVs – including cost-benefit analysis, vehicle range, charging options, and incentives – will help move both groups toward EV ownership. To that end, PGE plans to engage in a variety of public outreach activities to raise awareness and educate customers about the benefits of EVs.

### 3.4.2 Program Description

PGE’s public outreach efforts will begin with community engagement and research into the needs of underserved communities with respect to transportation electrification. This work is envisioned to include focus groups and engagement with community-based organizations to explore opportunities and barriers relating to EV awareness and adoption. Learnings will be broadly applied: they will inform design of future programs (such as programs under SB 1547); they will impact outreach messaging and tactics for such programs; and they will inform the execution of the public outreach activities outlined below. For this reason, some of the activities discussed below may evolve based on the outcomes of the community engagement work.

<sup>21</sup> Market Strategies International (2018). *Portland General Electric 2018 Electric Vehicle Study Among Residential Customers*.

Beyond community engagement, PGE plans the following public outreach activities:

- **Total Cost of Ownership Tool** – 2,000 people visit PGE’s website each month, and the website currently contains static information about the benefits of electric vehicles. PGE will develop an interactive web tool which will allow residential customers to enter their driving habits and vehicle feature needs, compare EV models to gasoline vehicles, and estimate cost and emissions savings using PGE-specific carbon intensity and electric rate figures. The web tool will be updated as appropriate with information about PGE programs, rebates and incentives relating to electric vehicles. The budget for this project includes development of the web tool, as well as funds to maintain it through the end of 2021. The budget also includes funds for web ads and other advertising to drive traffic to the web tool. The goal for this activity is 10,000 visits to the web tool in its first year.
- **EV Promotional Display** – Through its community investments program, PGE sponsors dozens of community events throughout the year, many of which come with an opportunity to set up a display booth. However, these opportunities are underutilized. PGE will design and produce a standalone booth and collateral materials that focus on transportation electrification, and train employees to staff it. The booth will include interactive elements and educational information, and will encourage learning and dialogue in a casual, one-on-one manner. The booth will also allow PGE to leverage existing opportunities (no CFP funds will be used for event sponsorships) and engage in community events with a consistent, cohesive transportation electrification message. The goal for this activity is 20,000 impressions in 2019.
- **Dealer Engagement** – Through PGE’s activity under SB 1547, the company is deploying a limited number of Chargeway touchscreen kiosks to enable dealers to better talk to their customers about electricity as a transportation fuel. Through this activity, PGE will add enhanced functionality to the existing kiosks, and will add two more kiosks to the deployment plan, with at least one kiosk sited at a used EV dealership. The kiosk enhancements will integrate information about used EVs in addition to new EVs and will capture customer information for follow-up and targeted communications about future programs, rebates and incentives. This will expand accessibility of the kiosks to those in the used car market and will leverage SB 1547 investments to enable targeted marketing to EV Intenders and those who have recently made purchases. The goal for this activity is 750 customers submitting their information; and 500 used EVs sold at dealerships with a kiosk by March 31<sup>st</sup>, 2020.
- **Electric Car Guest Drive** – Through PGE’s activity under SB 1547, the company is planning several ride-and-drive events throughout its service territory in 2019. PGE will use CFP funds to add an incremental ride-and-drive to the schedule, executed by a national EV ride and drive vendor, to learn about different approaches to customer engagement. The Electric Car Guest Drive will feature a range of vehicle types, including several Teslas (which are not typically available for ride-and-drives). The event will be targeted – drivers will need to pre-register – but PGE plans to gather customer feedback and lessons learned that will help inform future ride-and-drives. The goal for this activity is 250 participants.
- **Electric Avenue Landmark Displays** – As previously discussed, PGE is in the process of building six new Electric Avenue sites throughout its service territory. PGE will use CFP funds to design, construct, and install display panels at each of these locations, which are in visible public areas with high car, bus, foot, and bike traffic. Displays will educate the public on the features and benefits of transportation electrification and will leverage infrastructure investments under



SB 1547 to create an educational opportunity for members of the public regardless of their mode of transportation. The goal for this activity is 500,000 impressions among all the Electric Avenues.

### 3.4.3 Reporting

PGE will track various metrics for its public outreach activities, including those driving the top-level goal referred to in each activity’s description. Results will be made available to stakeholders.

### 3.4.4 Principle Alignment

Table 11 below demonstrates how these Public Outreach Activities align with the Program Design Principles:

Table 11 Public Outreach Activities Principle Alignment

Principle	Program Considerations
1. Support the goal of electrifying Oregon’s transportation sectors	PGE’s public outreach activities will advance transportation electrification by raising awareness and educating customers on the benefits of EVs. In several activities, PGE will leverage existing investments and programs to achieve this goal.
2. Provide majority of benefits to residential customers	These activities will provide benefits to residential customers, as in all cases residential customers are the targets of the outreach activities.
3. Provide benefits to traditionally underserved communities	These activities will provide benefits to traditionally underserved communities first and foremost through the community engagement research, which will have wide-ranging impact across the Portfolio of transportation electrification activities. Other activities – such as adding used EV information to Chargeway kiosks – also provide benefits to traditionally underserved communities, members of whom may not be in the market for a new vehicle.
4. Programs are designed to be independent from ratepayer support	Portfolio-level considerations of these Principles are discussed in Section 4, Program Design Principle Alignment.
5. Programs are developed collaboratively and transparently	
6. Maximize use of funds for implementation of programs	

### 3.4.5 Stakeholder Feedback

Generally, stakeholders are supportive of using CFP funds for public outreach activities. Some stakeholders were interested in seeing the budget and specificity for the public outreach activities increase above the \$200,000 initially earmarked. Stakeholders were also interested in seeing PGE engage with traditionally underserved communities on the front end. PGE has integrated this feedback into its plan.

### 3.4.6 Budget

The overall budget for these Public Outreach Activities is as follows in Table 12 (for more detail, see Appendix A, Portfolio Budget):

Table 12 Public Outreach Activities Budget

Public Outreach Activities Budget	
Community Engagement	\$ 40,000
Total Cost of Ownership Tool	\$ 185,000
EV Promotional Display	\$ 25,000
Dealer Engagement	\$ 40,000
Electric Ave Landmark Displays	\$ 60,000
Program Management	\$ 36,000
<b>Public Outreach Activities Total</b>	<b>\$ 386,000</b>

### 3.4.7 Estimated Timeline

PGE anticipates completing – or being well on the way to completing – all these activities by the end of 2019. Some budget items (such as the ongoing maintenance of the Total Cost of Ownership Tool) will extend beyond 2019.

### 3.5 Portfolio Administration

PGE forecasts a portfolio administration budget of \$84,000 for the funds from 2016 and 2017 CFP credits, some of which has already been spent. This budget area is entirely administrative, and includes portfolio planning and design, portfolio launch, compliance obligations, stakeholder engagement, and credit transaction costs.

The overall budget for Portfolio Administration is as follows in Table 13 (for more detail, see Appendix A, Portfolio Budget):

Table 13 Portfolio Administration Budget

Portfolio Administration Budget	
Credit Monetization	\$ 49,000
Program Management	\$ 35,000
<b>Portfolio Administration Total</b>	<b>\$ 84,000</b>

## Section 4 Program Design Principle Alignment

In addition to program-specific alignment with Principles 1-3, Table 14 shows how PGE’s planned portfolio aligns with Principles 4-6.

Table 14 Portfolio Principle Alignment

Principle	Portfolio Considerations
4. Programs are designed to be independent from ratepayer support	The Portfolio is designed to be independent from ratepayer support. PGE has intentionally planned a portfolio of programs that do not exhaust the budget on hand, making it unlikely that additional support will be necessary. In future years, PGE plans to re-propose the EV Grant Fund, which offers flexibility to ramp up and down depending on the amount of funding available. Additionally, by using the School Bus Electrification program to finance electric school buses, and other programs to invest in EV charging, PGE is establishing potential long-term reimbursement streams from its 2019 programs, which will add to the amount of funding available under the CFP in the future.
5. Programs are developed collaboratively and transparently	As discussed in the Stakeholder Engagement section below, PGE shared a draft of this plan with stakeholders on the Docket No. UM 1826 service list in February of 2019. PGE appreciates the feedback from stakeholders and looks forward to engaging in the formal stakeholder workshop process in the fall of 2019. For more detail on the stakeholder engagement process, see Section 5, Stakeholder Engagement.
6. Maximize use of funds for implementation of programs	PGE has also strived to maximize use of funds for implementation of programs, including planning to claim CFP credits from installed charging infrastructure to deliver ongoing benefits. Administrative costs vary by program, but the administrative overhead of the Portfolio is forecasted to be 10%. PGE anticipates that this may decrease in future program years as recurring programs mature and economies of scale are reached.

## Section 5 Stakeholder Engagement

PGE distributed a draft program plan to stakeholders on the Docket No. UM 1826 service list in February of 2019 and collected feedback throughout the month. The company received feedback from the following stakeholders:

- eMotorWerks;
- Greenlots;
- Envoy;
- Climate Solutions;
- Forth;
- NW Energy Coalition;
- Oregon Environmental Council;
- Union of Concerned Scientists;
- OPUC Staff; and
- PacifiCorp.

Generally, stakeholders were supportive of the program plans that PGE shared, and agree that they align with the Program Design Principles outlined by the Commission. Feedback and recommendations for specific programs are summarized below.

#### EV Grant Fund:

- Recommend prioritizing funding categories;
- Recommend focusing solely on charging infrastructure for underserved communities;
- Recommend cutting brand-neutral marketing and focusing on PGE marketing instead;
- Recommend determining the types of equipment costs the grant fund will support;
- Recommend setting caps on the amounts that can be awarded per port or per site host;
- Recommend not restricting the grant fund such that organizations like Uber and Lyft are prohibited;
- Recommend eligibility for new and used vehicles;
- Recommend car-share models;
- Supports diverse funding tracks;
- Recommend engaging in e-mobility data gathering;
- Recommend that 50% of funding be designated for traditionally underserved communities;
- Recommend program evaluation for funded projects; and
- Request that grants not duplicate investments under SB 1547; recommend that the grant fund not prioritize funding for EV charging infrastructure.

#### School Bus Electrification:

- Request more budget specificity; and
- Recommend that demand response and/or V2X features be integrated.

#### Subsidized Electric Avenue Access:

- Request that the program be opt-in;
- Request that costs be adjusted monthly based on actual usage, and report on adjusted pricing methodology and other metrics;
- Request that program be evaluated to determine whether this is a viable solution for home charging challenged customers; and
- Request that the program be scaled to offer a free regional fast charging network subscription inclusive of all regional fast charging providers.

#### Public Outreach Activities:

- Concern that there is overlap between this program and the Grant Fund;
- Recommend expanding budget; and
- Request that community be engaged in the design process to ensure that outreach is culturally relevant.

#### Overall:

- Recommend streamlining to focus on a smaller number of high-impact initiatives;
- Long-term, recommend transitioning CFP funds to focus on non-infrastructure costs;
- Recommend the requirement of open standards for any infrastructure;
- Encourage PGE management of funded infrastructure (including that owned by customers) ;
- Request more information on program reporting and evaluation; and
- Strongly recommend a point of sale rebate in the next round, looking to California's Clean Fuel Reward program currently in development.

## Section 6 Conclusion

PGE is pleased to present this Portfolio of programs that meets the Program Design Principles outlined by the Commission, and that was well-received by stakeholders. PGE particularly appreciates the detailed responses, feedback and recommendations provided by stakeholders, and has integrated many stakeholder ideas into the Portfolio. With this Portfolio, PGE looks forward to delivering value to residential customers, engaging underserved communities, and advancing transportation electrification by tackling multiple barriers to adoption across a broad spectrum of vehicle types and customer classes.

# Appendices



# Appendix A Portfolio Budget

Table 15 Portfolio Budget

	Q4 2018 <sup>i</sup>	Q1 2019 <sup>ii</sup>	Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	After 2021	Total
<b>EV Grant Fund</b>															
Grant Funds	\$ -	\$ -	\$ -	\$ -	\$ 1,750,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,750,000
Program Design	\$ -	\$ -	\$ 21,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 21,000
Technical Assistance	\$ -	\$ -	\$ 25,000	\$ 25,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 50,000
Outreach	\$ -	\$ -	\$ 25,000	\$ 25,000	\$ 25,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 75,000
Third-Party Evaluator	\$ -	\$ -	\$ -	\$ 4,000	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 44,000
Program Evaluation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,000
Program Management	\$ -	\$ -	\$ 27,000	\$ 27,000	\$ 27,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 81,000
<b>EV Grant Fund Total</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 98,000</b>	<b>\$ 81,000</b>	<b>\$ 1,842,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 10,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 2,031,000</b>
<b>School Bus Electrification</b>															
Buses	\$ -	\$ -	\$ -	\$ -	\$ 700,000	\$ 350,000	\$ 350,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,400,000
Charging Infrastructure	\$ -	\$ -	\$ -	\$ -	\$ 77,000	\$ 154,000	\$ 77,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 308,000
Outreach and Technical Assistance	\$ -	\$ -	\$ 27,000	\$ 27,000	\$ 27,000	\$ 27,000	\$ 27,000	\$ 27,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 162,000
Operations and Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 12,000	\$ -	\$ -	\$ -	\$ 12,000	\$ 96,000	\$ 120,000
White Paper	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,000	\$ 30,000
Program Evaluation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,000	\$ 15,000	\$ -	\$ 30,000
Program Management	\$ -	\$ -	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 42,000
Reimbursement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (49,000)	\$ (24,500)	\$ (24,500)	\$ -	\$ (882,000)	\$ (980,000)
<b>School Bus Electrification Total</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 34,000</b>	<b>\$ 34,000</b>	<b>\$ 811,000</b>	<b>\$ 538,000</b>	<b>\$ 461,000</b>	<b>\$ 34,000</b>	<b>\$ 12,000</b>	<b>\$ (49,000)</b>	<b>\$ (24,500)</b>	<b>\$ (9,500)</b>	<b>\$ 27,000</b>	<b>\$ (756,000)</b>	<b>\$ 1,112,000</b>
<b>Subsidized Electric Avenue Access</b>															
Charging Transactions	\$ -	\$ -	\$ -	\$ 7,500	\$ 22,500	\$ 45,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 52,500	\$ 37,500	\$ 15,000	\$ 480,000
Outreach	\$ -	\$ -	\$ 5,000	\$ 5,000	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,000
IT Systems	\$ -	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,000
Program Evaluation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 20,000	\$ 20,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 40,000
Program Management	\$ -	\$ -	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 35,000
<b>Subsidized Electric Avenue Access Total</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 27,000</b>	<b>\$ 19,500</b>	<b>\$ 34,500</b>	<b>\$ 72,000</b>	<b>\$ 87,000</b>	<b>\$ 60,000</b>	<b>\$ 60,000</b>	<b>\$ 60,000</b>	<b>\$ 60,000</b>	<b>\$ 52,500</b>	<b>\$ 37,500</b>	<b>\$ 15,000</b>	<b>\$ 585,000</b>

	Q4 2018 <sup>i</sup>	Q1 2019 <sup>ii</sup>	Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	After 2021	Total
<b>Public Outreach Activities</b>															
Community Engagement	\$ -	\$ -	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 40,000
Total Cost of Ownership Tool	\$ -	\$ -	\$ -	\$ 50,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ -	\$ 185,000
EV Promotional Display	\$ -	\$ -	\$ 25,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 25,000
Dealer Engagement	\$ -	\$ -	\$ 20,000	\$ 10,000	\$ 10,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 40,000
Electric Ave Landmark Displays	\$ -	\$ -	\$ 10,000	\$ 10,000	\$ 20,000	\$ 20,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 60,000
Program Management	\$ -	\$ -	\$ 9,000	\$ 9,000	\$ 9,000	\$ 9,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 36,000
<b>Public Outreach Activities Total</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 74,000</b>	<b>\$ 89,000</b>	<b>\$ 64,000</b>	<b>\$ 54,000</b>	<b>\$ 15,000</b>	<b>\$ 15,000</b>	<b>\$ 15,000</b>	<b>\$ 15,000</b>	<b>\$ 15,000</b>	<b>\$ 15,000</b>	<b>\$ 15,000</b>	<b>\$ -</b>	<b>\$ 386,000</b>
<b>Portfolio Administration</b>															
Credit Monetization	\$ 5,000	\$ 44,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 49,000
Program Management	\$ 7,000	\$ 21,000	\$ 3,000	\$ 2,000	\$ 2,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 35,000
<b>Portfolio Administration Total</b>	<b>\$ 12,000</b>	<b>\$ 65,000</b>	<b>\$ 3,000</b>	<b>\$ 2,000</b>	<b>\$ 2,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 84,000</b>
<b>Total</b>															
Program Costs	\$ -	\$ -	\$ 168,000	\$ 169,500	\$ 2,661,500	\$ 621,000	\$ 529,000	\$ 102,000	\$ 87,000	\$ 26,000	\$ 50,500	\$ 43,000	\$ 64,500	\$ (741,000)	\$ 3,781,000
Administrative Costs	\$ 12,000	\$ 65,000	\$ 68,000	\$ 56,000	\$ 92,000	\$ 43,000	\$ 34,000	\$ 7,000	\$ 10,000	\$ -	\$ -	\$ 15,000	\$ 15,000	\$ -	\$ 417,000
<b>Total Costs</b>	<b>\$ 12,000</b>	<b>\$ 65,000</b>	<b>\$ 236,000</b>	<b>\$ 225,500</b>	<b>\$ 2,753,500</b>	<b>\$ 664,000</b>	<b>\$ 563,000</b>	<b>\$ 109,000</b>	<b>\$ 97,000</b>	<b>\$ 26,000</b>	<b>\$ 50,500</b>	<b>\$ 58,000</b>	<b>\$ 79,500</b>	<b>\$ (741,000)</b>	<b>\$ 4,198,000</b>
Administrative %															9.93%

<sup>i</sup> Q4 2018 figures are rounded actuals

<sup>ii</sup> Q1 2019 figures are a rounded blend of actuals and forecasts