

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

In the Matter of the Application of Pacific Gas  
and Electric Company for Approval of its  
Electric Vehicle Infrastructure and Education  
Program.

A.15-02-009  
(Filed February 9, 2015)

U 39 E

**PACIFIC GAS AND ELECTRIC COMPANY'S (U 39 E)  
ELECTRIC VEHICLE CHARGE NETWORK  
QUARTERLY REPORT, FIRST QUARTER, 2017**

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Dated: May 1, 2017

Attorneys for  
PACIFIC GAS AND ELECTRIC COMPANY

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QUARTERLY REPORT, FIRST QUARTER, 2017**

Pursuant to Ordering Paragraph 20 of D.16-12-065, Pacific Gas and Electric Company (PG&E) hereby submits the attached EV Charge Network Pilot Program Quarterly Report for First Quarter, 2017. Per D.16-12-065, the Report is being served on the service list for A.15-02-009 as well as the members of the Program Advisory Council.

Respectfully Submitted,

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By:     /s/ Christopher J. Warner    

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Pacific Gas and Electric

# PG&E Electric Vehicle Charge Network Quarterly Report

Report Period: January 1, 2017 – March 31, 2017



Together, Building  
a Better California

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# 1. Executive Summary

## 1.1 Charge Network Program Overview

PG&E's EV Charge Network Program (Program) was approved on December 15, 2016 through a unanimous vote of the California Public Utilities Commission (Commission).<sup>1</sup> The purpose of the program is to increase access to charging for electric vehicles within PG&E's service territory. The Program intends to install 7,500 charging ports over a three-year period focusing on two key market segments, workplaces and multi-unit dwellings. The program includes deployment targets of 15% in Disadvantaged Communities (DACs), as well as in 20-50% in Multi-Unit Dwellings (MUDs).<sup>2</sup> These targets aid in facilitating market entry for previously underserved communities and market segments. For participating site hosts, the program is organized into two main ownership options: "EV Charge Owner" and "EV Charge Sponsor."

**EV Charge Owner:** The majority of the electric vehicle service equipment (EVSE) (a minimum of 65%) will be owned by site hosts who are PG&E non-residential customers that have EV charging stations installed on their property. All site hosts may choose to participate under this program option. For these installations, PG&E will install and maintain the EV service connection (make ready infrastructure) to support their use. The site host will be responsible for buying and installing the EV charging station. At these locations, rebates will be offered to site hosts for the EV charging station. The rebates will be paid after the charging stations are installed and operational.

**EV Charge Sponsor:** At the discretion of the individual site host, PG&E may be requested to install, own, and maintain up to 35% (2,625) of the EV charging stations deployed. These EV charging stations will be installed in a turnkey operation to maximize site host convenience. EV Charge Sponsor site hosts must be multi-unit dwellings (MUDs) or workplaces located in disadvantaged communities (DACs).



## 1.2 Summary for Quarter

The following section provides a brief summary of the milestones and actions performed throughout the quarter. This includes site host interest, a summary of the Program Advisory Council (PAC) meeting, and a description of all relevant Advice Letters filed. Once the EV Charge Network launches to customers, this section will also provide standard metrics including the number of customers that applied to the EV Charge Network, number of customers in the design and construction phase of the project, and the number of operational charging stations. In addition, the section will include a breakdown of budget activities and a list of issues encountered in implementing the EV Charge Network and a resolution or lesson learned for each issue.

### Site Host Interest

In January of 2017, PG&E launched the first of the EV Charge Network webpages. This webpage was designed to provide basic programmatic information while stakeholder feedback is gathered to refine the larger marketing, education and outreach plan. In addition to the webpage, PG&E launched an interest form which allows customers to indicate their interest in participating in the program. In the first quarter of 2017 (January 1, 2017-March 31, 2017), 162 organizations indicated their interest in participating in the EV Charge Network Program. Of these organizations, 67% were workplaces and 33% were MUDs.

FIGURE 1.1: SITE HOST INTEREST BY MARKET SEGMENT

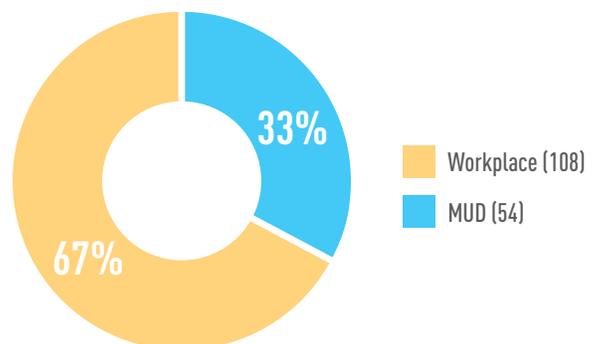
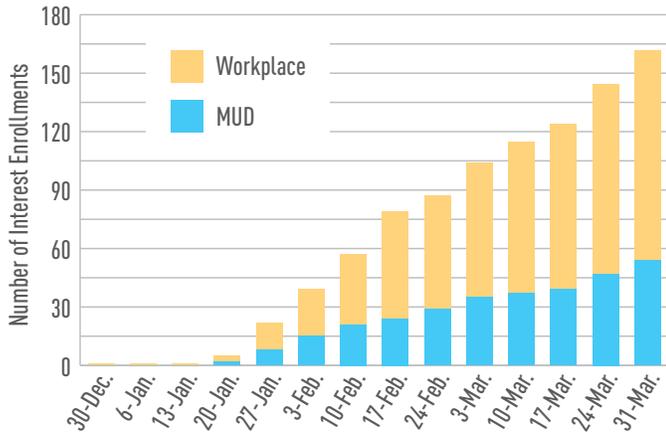


FIGURE 1.2: NUMBER OF INTEREST ENROLLMENTS BY WEEK



**Program Advisory Council (PAC)**

On March 15, 2017, PG&E held its first PAC meeting. Approximately 30 organizations, representing stakeholders from industry, government, and NGOs, attended in-person with several additional stakeholders participating online. The meeting provided stakeholders an opportunity to comment on the program and specifically focused on three key areas: finalizing siting criteria, the revised marketing education and outreach program, and an overview of the EV charging station procurement process. PG&E received overall support during the first PAC meeting. Questions and feedback from external stakeholders are captured in section 6 of this report.

**Advice Letters**

PG&E is required to file three Advice Letters as part of the Commission’s Decision approving the EV Charge Network.<sup>3</sup> These letters focus on three areas, the first establishes the balancing account tracking program costs, the second summarizes the program and rate options, and the third provides the revised marketing, education and outreach plan. PG&E successfully filed the first letter on January 31, 2017 with 5008-E the “Establishment of the Electric Vehicle Infrastructure and Education Balancing Account.” The second Advice Letter was filed on February 13, 2017 with 5020-E the “Summary

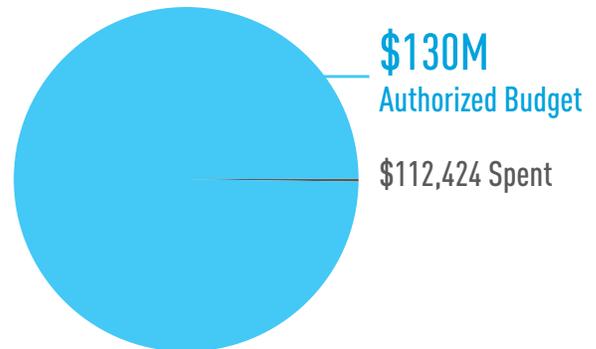
of the Approved Electric Vehicle Infrastructure and Education Program and Details of the Rate Options to Site Hosts.” PG&E will file the third Advice Letter related to the revised marketing, education and outreach plan in the second quarter of 2017, which is described in more detail in Section 2 of this report.

**Budget**

In Q1, PG&E spent \$112,424 of the \$130M authorized for the EV Charge Program. All of these funds were focused on program implementation and administration. Subsequent reports will be segmented into the following areas:

- Marketing, Education and Outreach
- Design and Engineering
- Construction
- Rebates
- Administration and Implementation

FIGURE 1.3 – QUARTERLY BUDGET SPEND



**Key Barriers**

PG&E has not yet encountered any key barriers to program implementation. However, this section will outline key issues/barriers to the program as well as any resolutions to these barriers in subsequent quarterly reports.

1. The Commission approved the EV Charge Network in D 16-12-065.
2. Disadvantaged Communities are defined as the top 25% most impacted census tracts within PG&E’s service territory per the CalEnviroScreen3.0, or the latest version.
3. See ordering paragraph 18 and 19 of D 16-12-065.



## 2. Customer Outreach and Enrollment

### 2.1 Charge Network Education and Outreach

The majority of PG&E's marketing, education and outreach efforts will not occur until the revised plan is submitted to the Commission in the second quarter of 2017. However, throughout the first quarter of 2017, PG&E initiated a variety of initial customer outreach and enrollment strategies. These efforts included stakeholder engagement, webpage and interest form launch, and the development of the Marketing, Education, and Outreach Advice Letter.

Throughout the first quarter of 2017, PG&E collected feedback on our marketing, education and outreach plan from external stakeholders, including presenting the plan at the PAC meeting in March 2017. Prior to the PAC, PG&E met with representatives from the Energy Division, The Utility Reform Network, the Office of Ratepayer Advocates, non-profits, and representatives from the EV charging station industry. PG&E collected feedback from these stakeholders and incorporated this input into our Marketing, Education and Outreach (ME&O) Advice Letter which will be filed in Q2. The Advice Letter will provide more information on the implementation strategy; however, continued involvement from stakeholders is a key component of the plan. An overview of the Advice Letter is provided below.

#### Advice Letter Overview:

In the ME&O Advice Letter, PG&E provides a look at the current EV market and challenges faced by the target audiences—workplaces, multi-unit dwellings, disadvantaged communities, and EV drivers. PG&E proposes conducting customer research to help develop the most effective messaging to gain participation in the program. In addition to research, the development of an implementation plan will help set the tactics, timing for customer acquisition, and establish our test and learn approach.

PG&E's proposed ME&O plan includes two key tactics to promote the EV Charge Network—targeted and broad-based outreach. The targeted outreach to site hosts is focused on direct participation in the program. While the broad-based outreach to EV drivers is for general awareness and education related to EV charging—building a groundswell of advocacy for the program. In addition to this outreach, PG&E will build out its web content and online web portal for customers to become educated on the program and to access the online application. Development of web content uniquely geared toward each target audience will drive quality customer engagement.

#### Metrics and Tracking

PG&E plans to evaluate the effectiveness of this plan throughout the entirety of the program by utilizing several key metrics. Tracking metrics will help with efforts to test and optimize the program over time. PG&E plans to track and evaluate the success of the campaign based on the following types of metrics described in Figure 2.1.

TABLE 2.1:  
OVERVIEW OF MARKETING, EDUCATION AND OUTREACH METRICS

EFFORT	METRICS
PG&E Outreach: Marketing and Business Energy Solutions	Open Rates, Click Thru Rates, Sales Outreach, Conversions
Web Traffic	Visits, Engagement, Enrollments, Emails Collected
Stakeholder Relationships	Total Relationships, Co-marketing Pieces Developed
Events	Attendees Reached, Conversions
Earned Media	Story Count, Impressions
Paid Media	Impressions, Click Thru Rates, Conversions
Retention	Total Retargets
Referrals	Number of Referrals, Conversions



### EV Charge Network Webpage and Interest Form

In Q1, PG&E launched its EV Charge Network webpage and interest form, which has seen steady customer activity and interest enrollment of potential site hosts. A summary of site host interest is included in the figures and tables below.

#### EV CHARGE LANDING PAGE:

The newly launched EV Charge webpage received 2,480 views in Q1.

#### EV CHARGE INTEREST REGISTRATIONS:

From January 1, 2017 to March 31, 2017, 162 organizations have indicated their interest in participating in the EV Charge Network. Of this group, 20% are located in disadvantaged community eligible census tracts. Approximately two-thirds (66%) of these sites are workplaces while one-third (33%) are multi-unit dwellings. The sites span the service territory geographically, but the majority are located in the “Central Coast” Region which spans South San Francisco to San Luis Obispo (see figure 2.2).

FIGURE 2.1: SITE HOST INTEREST COMPOSITION

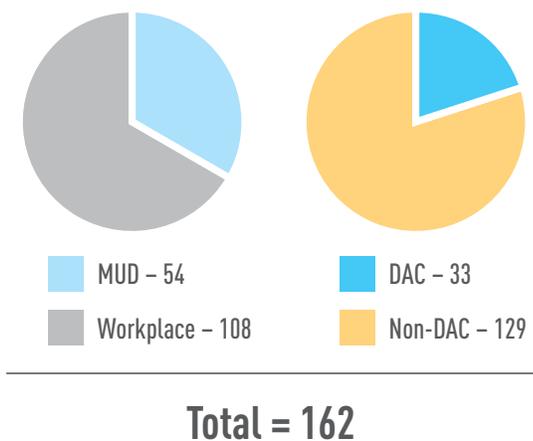


FIGURE 2.2: SITE HOST INTEREST GEOGRAPHY

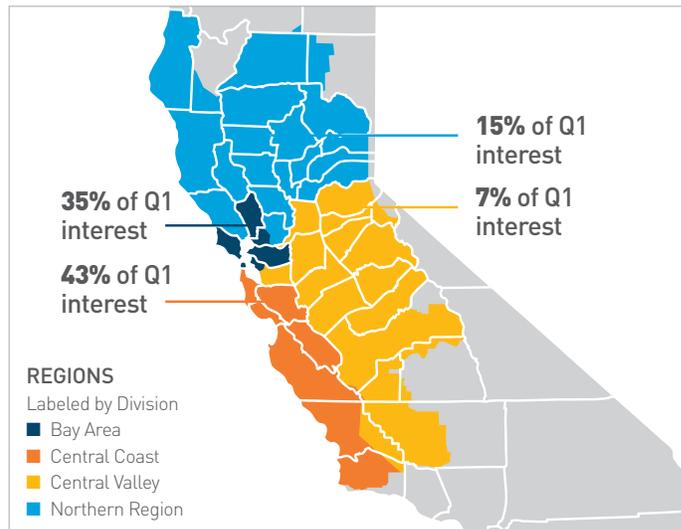
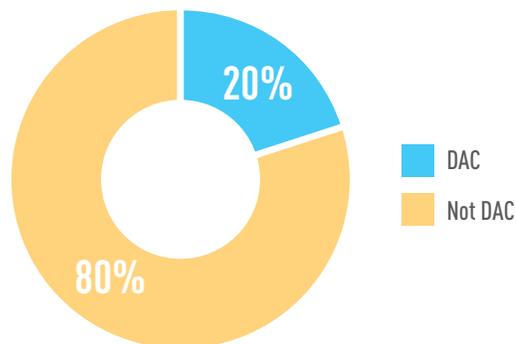


FIGURE 2.3: SITE HOST INTEREST IN DACS AND NON-DACS



Though we have not yet launched marketing efforts, potential sites have expressed their interest. Of those interested, they heard about the program through:

TABLE 2.2: Q1 INTEREST REGISTRATION REFERRAL SOURCE

Other	39%
External Group	19%
PG&E Website	17%
PG&E Rep	13%
PG&E General	12%

### 2.2 Outreach Events

PG&E has not yet engaged in any outreach events or DAC-targeted events but we will track their occurrence in this report.

## 3. Electric Vehicle Supply Equipment Procurement

### 3.1 Procurement Process

PG&E is conducting both a Request for Qualification (RFQ) and Request for Proposal (RFP) process to determine eligible electric vehicle service equipment (EVSE) packages that will be available to customers through the EV Charge Owner program. EVSE packages are inclusive of EVSE hardware, software, and network services. The RFQ will identify vendors that offer EVSE packages that meet PG&E's minimum hardware, software, and network requirements. PG&E will not limit the list of suppliers; all supplier EVSE Packages that meet the minimum requirements will be qualified. In addition, suppliers will have the option to qualify EVSE packages every 3 months with quarterly RFQs.

Vendors qualified through the RFQ process will also be eligible for the RFP process, held at a future date, which will select vendor(s) for the EV Charge Sponsor portion of the program. This process is intended to receive competitive price proposals for supplier EVSE packages that meet PG&E's minimum requirements for the RFQ process and additional evaluation criteria to participate in the EV Charge Sponsor option of the program. These criteria will include, but are not limited to, an evaluation of price, quality of bid, supplier diversity, environmental commitment, and financial stability. PG&E intends to award a contract to a more limited number of suppliers than those identified in the RFQ.

### 3.2 EVSE Technical Review

PG&E leveraged the first PAC meeting to provide an overview of the technical requirements outlined in the RFQ and to solicit feedback from participants. This topic was of great interest to participants who requested an additional meeting to receive more detailed information on the technical requirements and another opportunity to provide feedback. As a result, PG&E conducted a webinar on March 23, 2017 focused on reviewing the hardware, software, and network requirements included in the RFQ. The webinar was primarily attended by representatives from the EV charging station industry.

The webinar was useful at gathering industry feedback following the release of the RFQ. Four topics from the discussion yielded follow up and clarification by PG&E, which included NIST Handbook 44, requiring Open Charge Point Protocol (OCPP) version 1.5 or 1.6, EVSE American with Disabilities Act (ADA) requirements, and data collection procedures. A description of the topic and PG&E's action items are discussed below.

#### NIST Handbook 44

- NIST Handbook 44 is currently tentative and applies to EVSE in the areas of accuracy of measurement, verification procedure, displays, receipt printers, and response to power interruption. The tentative code requires a digital display in real time that includes information on receipts, operating temperature, accuracy, etc. This only applies to publicly accessible stations.
- As a follow up, PG&E has clarified in the RFQ/RFP which NIST Handbook 44 requirements will be mandatory, specifically in the area of the digital displays, and determining if the display must be on the EVSE itself or on another application.

## OCPP 1.5 vs 1.6

- OCPP is an open standard, independent of any charging station vendor or back-office system. The main difference between OCPP 1.5 vs OCPP 1.6 is version 1.6 includes smart charging functionality. OpenADR2.0b may provide more smart charging functionality than OCPP 1.6. PG&E is requiring OpenADR2.0b, which handles smart charging functionality, thus requiring OCPP 1.5 may be sufficient.
- PG&E conducted additional research on OCPP, and required OCPP 1.5 instead of OCPP 1.6 in the RFQ/RFP.

## ADA Requirements

- Most ADA requirements for EVSE focus on the installation of the EVSE rather than the EVSE itself.
- However, general ADA requirements for the EVSE itself include the following:
  - › Cables need to be kept off the ground, a locking J-1772 coupler that is not more than 48 inches above the surface of the EVSE area.
  - › The EVSE handle should not require undue strength to pull, lift, or operate the handle. Relying on similar federal guidelines, the required pulling or lifting strength should be less than 5-pound force.
  - › The EVSE shall comply with ADA Accessibility Guidelines, Section 309 Operable Parts (note these guidelines apply to EVSE that have been approved for public use by UL, and approved by NEC, Section 625).
- PG&E clarified that the ADA requirements must meet the standards listed above in the RFQ/RFP.

## Data Collection

- An automated data collection upload is preferred over a manual data collection method. Participants identified the challenges with uploading data via SCE's data portal.
- PG&E will incorporate this feedback into the data collection process currently being developed. It should be noted that an automatic upload is preferred.

## 3.3 Contract Opportunity Announcement

On March 27, 2017, PG&E sent a Contract Opportunity Announcement (COA) outlining the EV charging station procurement process to over 100 representatives at over 30 EVSE hardware and software companies. As a result of the COA, PG&E received over 40 suppliers who indicated their interest in participating in the RFQ. PG&E will launch its first RFQ in Q2 and will conduct reoccurring RFQs quarterly to enable additional vendors to qualify for the program.

Future quarterly reports will include a list of successful suppliers that meet the requirements under the RFQ and those that are selected under the RFP.

## 4. Electric Vehicle Charging Utilization and Load Management

### 4.1 Overview of Utilization and Load Management

Once the first charging stations in the EV Charge Network are operational, PG&E will summarize utilization data, including items such as utilization rate by site and charger type, and charger uptime. PG&E will also summarize load management data and observations, including data on pricing, load management, and charging load profiles. Additional data and metrics will be reported in the Appendix.

PG&E is currently working to develop the guidelines for the load management plans that site hosts will need to design. These guidelines will provide information for site hosts on acceptable load management plans and will be consistent with the program Guiding Principles as described in the Settlement Agreement and approved

by Decision 16-12-065. PG&E will also consult with the Program Advisory Council on the load management guidelines. For participation in the Rate-to-Host option, which allows site hosts to determine the price drivers will pay for charging, site hosts will need to develop a load management plan subject to PG&E approval and in accordance with provided guidelines developed in conjunction with the PAC. For site hosts selecting the Rate-to-Driver option, PG&E's Time-of-use (TOU) rates will serve as a pre-approved load management plan.

At this time, PG&E does not have any installed EV charging stations, and therefore, does not have any utilization or load management data to report.

## 5. Operations

### 5.1 Charge Network Program Operations

Interested site hosts will be guided through six steps to participate in the EV Charge Program:

1. **Info & Application:** Site hosts express their interest and apply online at [www.pge.com/evcharge](http://www.pge.com/evcharge)
2. **Approval:** PG&E reviews the site and determines eligibility for the program
3. **Design and Contracting:** If selected, PG&E will create a preliminary design which is shared with the site host who then selects their equipment for the project and the ownership model (Charge Owner or Charge Sponsor).
4. **Final approvals:** If the site host approves the designs, they will sign their approval, easement for PG&E to access their property, and participation agreement.
5. **Construction:** With approvals signed, PG&E will manage construction in coordination with the site host.
6. **Activation:** Once construction is complete, the charger receives electricity, and an inspection has occurred, PG&E will issue rebates or collect participation payments depending on the ownership model selected by the site host.

### 5.2 Status Update

In Q1 2017, PG&E actively reviewed the 162 interest statements received from prospective site hosts and determines their eligibility in the program on a rolling basis. As PG&E approves sites, performs design and contracting, and completes additional Operations steps, we will track and report on the number of sites at each stage. As data is made available, PG&E will report on:



- Average installation costs (per plug)
- Actual and projected installation costs
- Actual and projected infrastructure costs
- Explanation of any significant differences between projections and actuals
- Review of cost drivers and remedy actions as needed
- Total estimated pilot costs and remaining budget

### 5.3 Operational Metrics for Quarter

As data is made available, we intend to provide the following metrics:

- Total number of applications received
- Number of approved and confirmed sites
- Number of applicants rejected
- Number of applicants withdrawn

### 5.4 Costs

As data is made available, we intend to provide the following metrics:

- Total estimated pilot costs
- Average cost per site (EV Charge Owner)
- Average cost per port (EV Charge Owner)
- Average cost per site (EV Charge Sponsor)
- Average cost per port (EV Charge Sponsor)

### 5.5 Installation Process Time

As data is made available, we intend to provide the following metrics:

- Average time for each installation step
- Average total installation time

### 5.6 Charging station request

As data is made available, we intend to provide the following metrics:

- Number of charge ports requested
- Number of total charge ports approved
- Average number of charge ports approved per site

### 5.7 Supplier Diversity

PG&E is committed to diversity in the workplace and with the companies with which we do business. Our Supplier Diversity program provides vital opportunities for businesses owned by women, minorities, service-disabled veterans and lesbian, gay, bisexual and transgender (LGBT) individuals. Supplier diversity will be scored as part of the RFQ and RFP process for the EV Charge Program and will be incorporated in any contracts for services as part of this program.

### 5.8 Collaboration Efforts with Complementary EV Programs

PG&E will track any events or collaboration with external organizations or government entities in connection to the EV Charge Network as those partnerships arise.

### 5.9 Disadvantaged Communities Outreach Events

PG&E has not yet engaged in any outreach events or DAC-targeted events but we will track their occurrence in this report.



## 6. Program Advisory Council Feedback

The first PAC meeting was held on March 15th and included a diverse group of stakeholders. Approximately thirty organizations attended including representatives from the EV charging station industry, non-profits, government entities, utilities, community choice aggregators, and homeowners associations. The table below describes the distribution of the stakeholders present at the meeting.

TABLE 6.1 – DISTRIBUTION OF PG&E PAC MEMBERS

ORGANIZATION TYPE	NUMBER OF CONTACTS
Electric Vehicle Service Providers	9
Non Profit	4
Government	6
Utility	2
CCA	2
Industry Group	2
Homeowners Association	1
Installer	2
<b>TOTAL</b>	<b>28</b>

PAC members were active in discussions and comments throughout the meeting. Overall most questions and comments sought clarification of information presented. Conversation focused on the value of partnerships, customer outreach and education, the vendors' role during charger installation, and ongoing operations and maintenance once chargers are installed.

PG&E captured stakeholder comments during the meeting and also collected feedback by email submission after the meeting. Feedback was organized into the four categories discussed during the meeting: General Program Comments, Program Siting Criteria, Education and Outreach Plan, and Procurement. PG&E has provided responses to the questions and comments in the Appendix.

## 7. Conclusion

In the inaugural quarter of the EV Charge Program, PG&E held its first PAC meeting, collected stakeholder comments, established a public website to share program information and receive interest statements from prospective site hosts, and initiated the first quarterly RFQ with a Contract Opportunity Announcement (COA). In Q2, PG&E plans to coordinate vendor submissions, evaluate bids, and select qualified EVSPs from the first RFQ process.

PG&E has not yet encountered any key barriers to program implementation.

PG&E continues to believe that it has a central role to play in California's EV adoption and in helping the state meet its goal of 1.5 million zero emission vehicles on its roads by 2025. PG&E is also mindful of potential grid benefits that EV charger deployment may drive, such as load shaping through demand response communications and the establishment of load management guidelines.



## 8. Appendix

### 8.1 Summary of Program Advisory Council Comments and PG&E Response

The following PAC members provided comments during or after the meeting:

PAC MEMBER NAME	PAC MEMBER ORGANIZATION
Eric Borden	The Utility Reform Network
Max Baumhefner	Natural Resources Defense Council
Enid Joffe	Clean Fuel Connection
Dave Packard	Charge Point
Noel Crisostomo	California Energy Commission
Carolyn (Carrie) Sisto	CPUC Energy Division
Stacey Reineccius	Powertree
Brant Arthur	Sonoma County Transportation Authority
Lauren Casey	Sonoma County Transportation Authority
Bret Sisson	EVSE LLC
Steve Bloch	EV Connect
Rick Tse	CPUC Office of Ratepayer Advocates
Marc Joseph	Coalition of CA utility employees
Phil Villagomez	Shell Energy
Angie Boakes	Shell Energy
Torben Spitzer	Siemens
Scott Saffian	Driivz, inc.
Katherine Stainken	Plug In America
Joel Espino	The Greenlining Institute
Arcady Sosinov	FreeWire Technologies

The table below describes the comments received from PAC members and PG&E's response.

## 1. General Program Comments

COMMENT	RESPONSE
Will PG&E gather input from site hosts who halt program participation before charger installation?	Yes, PG&E will seek site host feedback and input if/when they decide not to participate in installation.
How are "charger costs" defined for the site hosts?	EV Charge Owner site hosts pay for EVSE Package cost, installation to the make ready and software costs associated with the EVSE Package. EV Charge Sponsor site hosts do not pay for these costs but are subject to a participation payment.
Multiple groups recommend working with local organizations to produce a variety of benefits.	PG&E intends to collaborate with a variety of partners including local community development organizations.
Can EV Service Providers (EVSPs) keep a percentage of the profit from chargers?	EVSPs and the customer of record (the site host) determine how to set billing and revenue for end customers. Site hosts are able to profit from chargers if they seek profits and EVSPs could receive a profit as well depending on site host pricing mechanisms and agreements.
How will the program accommodate new technology coming to market?	RFQs will be held quarterly and will work to incorporate new technology as it comes to market. Rebates and participation payments will remain fixed to "charger base costs."
How can EVSPs interface with customers during the design / site-walk portion of construction?	PG&E will work to enable communication between the customer and EVSPs once the customer has expressed their preferred ownership model and their chosen EVSP.

## COMMENT

## RESPONSE

How are demand charges spread out over the customers (drivers)?

The site host is always the customer of record and thus responsible for the energy bill related to the EVSE packages installed. If the installation is under 75 kilowatts (kW), the site host will be enrolled in A6 which does not include demand charges. If the installation is over 75 kW the site host will be enrolled in A10 which does have demand charges. Pricing to the driver is determined by the site host. If the site host elects the Rate-to-Driver option, the site host will pass along the cost of electricity directly to the driver. Under this rate option in order to recover any additional charges associated with the rate schedule, the site host will have the option to include a Rate Adder with the energy price per kilowatt-hour (kWh) passed on to EV drivers. The Adder should represent the non-energy additional charges associated with the applicable rate (i.e. the customer charge for Schedule A-6, or the customer charge and the demand charge for Schedule A-10) converted into a volumetric price per kWh by distributing the charges among all EV charging projected for the given billing period. If a site host decides to use an Adder to recover the additional charges on their rate schedule, then EV drivers will pay the applicable TOU price per kWh for their energy use, plus the Adder (an additional price per kWh) to cover their contribution to the site host rate schedule's nonenergy charges. PG&E will provide a tool that site hosts can use as a guideline for estimating the appropriate Adder as a price per kWh based on the projected utilization of the chargers at that site. If a site host does not select the Rate-to-Driver option, the site host will develop alternative pricing for its charging stations using other load management strategies in the Rate-to-Host option.

How long will chargers be maintained / warrantied?

EVSE packages will be warrantied for a period of three years from the date of acceptance, or upon delivery of the EVSE to the participating Site Host by the EVSP. Either PG&E or the site host will maintain the infrastructure for 10 years depending on the ownership model selected.



COMMENT	RESPONSE
Will signage or sensors associated with EVSE be included in the charger cost?	PG&E is qualifying EVSE packages which include the hardware, software, and network services. Under the EV Charge Owner program, the site hosts will be responsible for purchasing the EVSE package, the installation onto make-ready, as well as the ongoing network and operations services fees. However, they will receive a rebate which is fixed to the "charger base costs." Under the EV Charge Sponsor option, PG&E will cover these costs however the site host will be responsible for a participation payment.
Do sites have a minimum charge port requirement?	There is not a minimum charge port requirement for a site host. However, the program aims to install a minimum of 10 EVSE at each site and sites will be evaluated and selected on a variety of factors including unit costs.
Who pays network service fees?	Under the Charge Sponsor: PG&E pays the service fees. Under the Charge Owner: site hosts pays service fees.
Who receives the financial review when companies bundle together?	Financial review will be conducted for hardware and software vendors when bundled for the RFQ and RFP. However, the final price of the EVSE package will be negotiated between the site host under the EV Charge Owner option and PG&E under the EV Charge Sponsor.
What is EVSP bundling during RFQ?	Bundling is the paring of EV hardware and software to create one "EVSE Package" which is bid into the RFQ/RFP.
Why is the customer participation payment 4 times larger than SDG&E's; has PG&E considered a statewide standard?	The CPUC established the participation payment calculation in the final decision. PG&E has not yet considered a statewide standard but could consider one for phase two if and when that application is adopted.
Has PG&E gained any lessons learned from SCE or SDG&E as they implement their programs?	PG&E is a silent member of SCE and SDG&E's PACs and we conduct monthly IOU coordination meetings to review customer engagement, deployment processes, and cost updates, as well as challenges and key issues. These meetings have been a critical component to understand how to streamline the program.

## 2. Program Siting Criteria

COMMENT	RESPONSE
Ensure large companies are screened from DAC workplaces—want to ensure “spirit of DAC” is retained.	PG&E will propose methods to promote the “spirit of DACs,” such as screening for companies over a certain size based on their annual revenues.
Are there impacts of using different CalEnviroScreen versions?	PG&E will continue to use the latest version as they are made available and will also work to honor the “spirit of DACs” when considering site hosts to the degree possible.
Recommend working with local government agencies to provide a screen for sites with high utilization potential based on agency data and planning.	PG&E aims to collaborate with a variety of partners to increase community awareness, customer satisfaction, and site utilization potential.
Recommend highlighting the top 25% of CalEnviroScreen in PG&E’s service territory—currently only provides data for the whole state.	PG&E intends to provide a tool online for site hosts to enter their address and receive information on available rebates and ownership options based on DAC determinations from CalEnviroScreen. PG&E will base DAC locations as the top 25% of the most impacted census tracts within PG&E’s service territory.

## 3. Education and Outreach Plan

COMMENT	RESPONSE
Multiple stakeholders expressed the importance of customer relationship management, partnerships, and thorough education.	PG&E intends to partner with community-based organizations and EVSE vendors throughout the program to achieve effective outreach.
Recommend providing links to EVSP websites to ensure customers can locate providers.	PG&E intends to link to qualifying vendors’ webpages.
Recommend the program connects site hosts with information to guide EVSE siting decisions.	PG&E intends to host educational tools and resources on the website to enhance customer education.
Do workplace fleets qualify for rebates?	If a workplace qualifies to be a participating site host, then fleet vehicles for that site may be charged. The rebate for the EVSE will vary based on DAC qualification status.



## 4. Procurement

COMMENT	RESPONSE
Some stakeholders expressed concern about technical requirements for Open Charge Point Protocol (OCPP) 1.5 vs OCPP 1.6, which may be a hindrance or cut out participation.	PG&E currently intends to qualify EVSE using OCPP 1.5 or later to communicate with a network.
Concern that technical requirement may be outdated for OpenADR 2.0a vs 2.0b, should ensure that the charging stations will be viable with changing technology and industry standards.	PG&E currently intends to qualify EVSE with network communications, controls and back office support service with the ability to respond to utility provided demand response signals via the OpenADR 2.0b protocol.
Clarify if site hosts could pay more for EVSE than the price listed in the RFQ.	Site host charger costs will be in line with RFQ prices but is ultimately a price determined between the vendor and site host.
Will EVSE be tested during the procurement process?	PG&E retains the right to test EVSE for technical requirements established in the RFQ/RFP.
Can site hosts request additional features beyond the “charger base cost.”	Yes, any additional features or costs beyond the “charger base cost,” which is used to determine rebate levels, will be borne by the site hosts.
Is the maximum power draw of 10W while not in use per cord?	No, the 10W power draw is per EVSE unit, regardless of single-port or dual-port.
Who receives a financial screening—all companies in RFQ?	All companies in the RFQ.
Does the bundling make/limit the number of providers?	Bundling is intended to provide a complete package to site hosts.
Who will cover any energy or revenue losses of up to 2%, EVSP, site host, or the driver?	Pricing is ultimately set between the vendor and site host.
Is there any EVSP data completeness requirement? What do EVSPs do in the case of network loss?	From the RFQ, “Suppliers will provide data on charger uptime/outages. And, if network services are interrupted, Suppliers will provide mechanisms to store data.”
If an ADA compliance upgrade is needed for the site, who pays for this upgrade?	PG&E intends to locate cost-effective sites, and to the extent that ADA upgrades are within those cost thresholds, PG&E will make those upgrades.

## 8.2 Direct Program Advisory Comments

Additional comments submitted by PAC stakeholders, provided verbatim:

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**ORGANIZATION:** **Sonoma County Transportation Authority**  
**ORGANIZATION REPRESENTATIVE:** Brant Arthur  
**REPRESENTATIVE TITLE:** Community Affairs Specialist

### General Program Comments:

The program should work together with local organizations to be most cost effective by using local knowledge to highlight the areas of the distribution grid that are least constrained in the areas of greatest need.

### Program Siting Criteria:

The program should work with transportation agencies to provide an additional screen for sites that are more likely to be more highly utilized based on long-term planning, transportation/land-use data and the needs of local jurisdictions.

The program should provide a resource highlighting the top 25% of CalEnviroScreen in PG&E's service territory. The CalEnviroScreen tool only provides data for the whole state.

### Education and Outreach Plan:

The program should work through community based organizations to achieve more effective outreach.

The program should connect site hosts with information to guide EVSE siting decisions:

- The number and type of chargers to install
- Estimating costs
- Evaluating value of EVSE investment

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**ORGANIZATION:** **The Greenlining Institute**  
**ORGANIZATION REPRESENTATIVE:** Joel Espino  
**REPRESENTATIVE TITLE:** Legal Council

### General Program Comments:

Incorporate lessons learned from SCE's Charge Ready pilot, which reports difficulty signing up MUDs in disadvantaged communities. Property managers are pointing to the lack of EVs at their MUDs as a reason not to participate. I suggest formal partnerships with Community Housing Development Corporation in Richmond for targeting MUDs serving low and moderate income populations. They administer the low-income EV financing assistance program funded through CARB. Also a formal partnership with Valley CAN. They administer the scrap and replace program in the central valley. I also suggest door knocking in a few MUD locations to educate low and moderate-income tenants on benefits of EVs and incentives and gather of letters of interest in EVs and use them to persuade property managers to participate in the EV Charge Network.

**Education and Outreach:**

Comments forthcoming. Draw from lessons learned in SDG&E and SCE. Especially around targeted marketing in disadvantaged communities.

**Additional Comments:**

Greenlining agrees with TURN's proposal to limit rebate of large workplaces in DACs (disadvantaged communities). CalEnviroScreen is a good tool (not flawed) for what it is intended to do, which is to identify the census tracts in CA most burdened by pollution and socioeconomic factors. Like any tool it has limitations but those are constantly being addressed as seen by CalEnviroScreen 3.0. Greenlining, unfortunately, did not agree with the decision's definition to define DAC as the top 25% CalEnviroScreen census tracts per PG&E's service territory, instead of using the statewide definition. There are hundreds of millions of dollars on the light-duty and heavy-duty EV incentive side and those benefits use the statewide DAC definition to target investments. Greenlining wants to see a multiplier effect of benefits with alignment of targeted infrastructure with those programs. We look forward to working with PG&E and the PAC to find other ways to align PG&E's program with CARB's low-carbon transportation investments.

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**ORGANIZATION:** FreeWire Technologies, Inc.  
**ORGANIZATION REPRESENTATIVE:** Arcady Sosinov  
**REPRESENTATIVE TITLE:** CEO

**Program Siting Criteria:**

We agree with the proposed siting criteria. Furthermore Freewire Technologies proposes to add temporarily hardwired solutions to increase customer choice. By temporarily hardwired solutions we mean infrastructure that can be removed from the site with a reasonable effort by experts. This solutions can still be installed in such way that they can not be taken off the site without PG&E receiving notice of it.

The current site eligibility process prevents site owner on contaminated soil to participate in the program even though this could significantly improve the adoption within disadvantaged communities and help to achieve the goal of 15% of all site locations.

Avoiding construction by using temporary hardwired solutions would also further reduce the infrastructure implementation costs for those communities and would result in a fair choice between customer and PG&E owned equipment. Adding the proposed solution would not result in any service interruptions or reduction in service quality for the EV-driver but may enable a much higher share of site owner to participate in the program.

A more flexible charging solution can also create benefits for ADA accessible parking as it can service multiple parking spots that are ADA accessible without blocking them for EV charging at all times.

**Procurement:**

Freewire Technologies would like to request clarification of the terms "hard-wired" as well as "stationary" as these terms are not defined in the CPUC filings and respective regulations.

We do see a measurable benefit in temporarily hardwired solutions that pose significantly lower cost to provide make-ready infrastructure, installation and setup ultimately benefiting the rate payer. As stated in the siting criteria section we see no reduction in service offering or quality for the driver but significant benefits for the site owner as it would



broaden the site options. We also do not see any technical barriers as the proposed solution would go through the same thorough certification process as required by PG&E.

We further would like to comment that by adding the temporarily hardwired solution PG&E would enable especially disadvantaged communities on contaminated soil that are now by default excluded from participation.

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**ORGANIZATION:** Powertree Services Inc.  
**ORGANIZATION REPRESENTATIVE:** Stacey Reineccius  
**REPRESENTATIVE TITLE:** CEO

### **General Program Comments:**

The program appears to have many positive aspects but some adjustments would be worthwhile to ensure success.

Given the program size and potential it will be very important if not critical to partner with in-field groups and companies whose expertise will resolve the gaps in the EV Charge program.

Current marketing approaches look, as one participant said “like all my customers will go into a black hole”. Customer relationship protection must be addressed to assure willing collaboration.

### **Program Siting Criteria:**

The current siting criteria as written seem too inflexible. For example:

- Many sites esp MUDs will not have the willingness or interest in placing a second service into their property. Consideration should be provided for use of existing service panels if possible.
- The criteria of 10 EVSE per site is likely to be a significant barrier to adoption as many sites, especially in urban environments, will not be able to or be willing to allocate that many parking spots. Adjusting this criteria to address “EVs served or EVs enabled” coupling with a higher power requirement would be more beneficial.

### **Education and Outreach Plan:**

Links to EVSP and provider websites should be ensured to help address the customer control question raised earlier.

### **Procurement:**

The pricing of the rebate in the case of customer owned equipment can be gamed to exclude more feature rich equipment that customers may want. Since the rebate is 50% of the lowest cost equipment which is likely to be least feature capable care needs to be taken to assure a single vendor does not under price their equipment and so remove choices that Customers may need to be successful.

### **Additional Comments:**

Interconnection is a very important issues for both cost, time and competitive fairness per PU740.3. The mention of a 30 day process for full construction is hard to believe given real world experiences showing 12-18 month lead times from PG&E Field work and quotes. SCE EVSE program examples are over 12 months and counting.

If this can be achieved it is critical for the whole industry that such speed of installation and upgrade be available to all EVSE installers and NOT JUST this program.



**ORGANIZATION:** **Shell New Energies**  
**ORGANIZATION REPRESENTATIVE:** Phillip Villagomez  
**REPRESENTATIVE TITLE:** Business Development Manager

**General Program Comments:**

Shell appreciates the opportunity to participate in this infrastructure program as we continue to support programs that are open to consumer choice and open competition. We do encourage PG&E to open participation in all program options to all certified vendors and not just two or three selected vendors.

Shell does not support the rule requiring network service providers to provide payment solutions as we see this as an administrative burden that should not be required of vendors since a majority of program locations will not be open to the general public.

Shell encourages PG&E to monitor program participation to ensure an adequate level of participation from both vendors and community participants.

**Education and Outreach Plan:**

Shell supports efforts by PG&E to continue to promote EV education and outreach as part of this program.

### 8.3 Description of Program Operational Metrics

The section below provides a summary of the metrics that will be included in subsequent reports, once data becomes available.

**PG&E Operational Metrics:**

As data is made available, we intend to provide the following metrics:

- Total estimated pilot costs and remaining budget
  - › Actual and projected installation costs
  - › Actual and projected infrastructure costs
- Total applications received
- Total number of sites installed
- EVSE's installed by make and model
- Deployment breakdown (by MUD, Workplace, DAC)
- Total actual construction costs for PG&E infrastructure (Make Ready)
- Average actual construction cost for PG&E infrastructure per site (Make Ready)
- Total actual construction costs for PG&E infrastructure including charger costs (Turnkey)
- Average actual construction costs for PG&E infrastructure including charger costs (Turnkey)
- Operating costs



- Program installation time metrics (charger uptime)
- Customer Experience and Satisfaction (convenience, ease of use)—by survey of site hosts and EV drivers
- EV Rate Adoption
- EV Adoption in Service Territory
- EV Driver Enrollment (total and by site)
- Utilization rate by site, by type of charger
- kWh usage by price
- Average plugged in time, charging duration, charging power level
- Charging load profiles (aggregate and by charger)
- Load impacts
- PAC full program comments