

# Charge Ready Pilot (Phase 1) Program Q2/2016 Report

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# 1.0 Executive Summary

## 1.1 Charge Ready Pilot Program Overview

SCE’s Charge Ready Program Pilot (the Pilot) seeks to increase the availability of long dwell-time electric vehicle (EV) charging infrastructure. As part of the Pilot, SCE deploys, owns, and maintains the electric infrastructure needed to serve EV charging stations, or Electric Vehicle Supply Equipment (EVSE), at participating customer locations, behind the electric service meter up to and including the “make ready” stub. The Pilot also offers participating customers (Customer Participants) a rebate applicable against the cost of acquiring and installing qualified EVSEs. Customer Participants must procure, operate, and maintain the charging stations in accordance with the terms and conditions of Schedule CRPP. Customer Participants may determine their own policy about the use of the charging stations (e.g., access, financial contribution from EV drivers).

In conjunction with the Pilot, SCE is launching a complementary EV Market Education effort and Transportation Electrification (TE) Advisory Services to increase customer awareness of TE and the benefits of fueling from the grid. These efforts also educate customers on the critical importance of achieving California’s carbon-reduction goals through TE while addressing the local air-quality needs of the communities SCE serves.

The Pilot targets key market segments for deployment, including workplaces, multi-unit dwellings (MUDs), fleet parking, and destination locations where vehicles are usually parked for at least four hours. Through both its Pilot and Market Education efforts, SCE targets disadvantaged communities, which are disproportionately affected by EV adoption barriers and negative environmental impacts of gasoline- and diesel-powered vehicles.

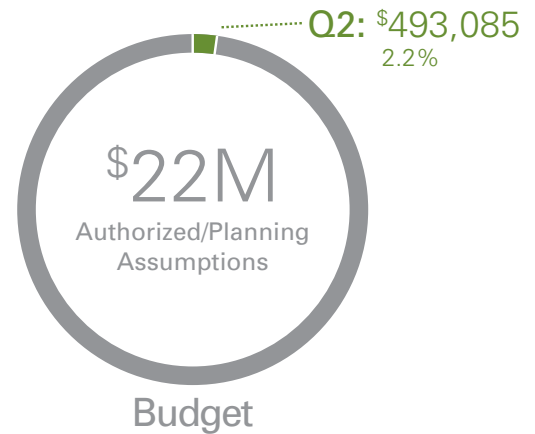
The Pilot is intended to validate the program’s design and cost estimates and develop success measures for a subsequent Phase 2. The Pilot’s quarterly reports evaluate items listed in the Pilot objectives, and include updates about progress, achievements, and lessons learned<sup>1</sup>. The quarterly reports may also include recommendations from the Advisory Board that SCE will consider incorporating in its Phase 2 proposal.

## 1.2 Pilot Summary for Quarter

In May 2016, SCE launched the Pilot and received over 190 applications in the following month, after educating customers about the Pilot through direct engagement by SCE Account Managers and communication of Charge Ready content.

The graph below summarizes the Pilot’s expenses to date.

**Graph 1.1 – Pilot Summary for Quarter**



<b>\$189,481</b>	Market Education & TE Advisory Services
<b>\$253,979</b>	Charge Ready Education and Outreach
<b>\$13,058</b>	Charging Station Testing
<b>\$14,768</b>	Design, Permitting, & Construction Costs
<b>\$0</b>	Easement
<b>\$0</b>	Charge Port Rebate - Payments
<b>\$21,799</b>	Administrative Costs

A few weeks before the official launch of Charge Ready, SCE initiated a “Pre-Pilot” with eight customers to test the Pilot’s customer materials and processes. Through this effort, SCE uncovered a few implementation issues before the formal launch of the Pilot in late May. Table 1.2 lists the main operational issues identified during the “Pre-Pilot” and their resolutions.

<sup>1</sup> See Graph 1.1 for progress on budget and site completion.

**Table 1.2 – “Pre-Pilot” Challenges and Resolutions**

Issue	Resolution
Customers using the Enrollment Portal experienced bugs during the online application process.	All known issues were resolved, allowing for successful Pilot launch.
Customer using the Enrollment Portal requested the option to wet-sign application forms.	SCE implemented enhancements to allow both electronic-signature and wet-signature approvals of application forms.
Customers proposed deployment locations too far from SCE facilities.	During initial site visit, SCE field inspector suggests site locations close to Edison facilities.
Customers with existing SCE easements requested amendments rather than a new and discrete easement applicable to the electric infrastructure serving the Charge Ready EVSEs.	SCE explored the feasibility of amending existing easements, but found that it would actually add more time and complexity to the process.



## 2.0 Customer Outreach and Enrollment





### 2.1 Charge Ready Education & Outreach

Charge Ready education and outreach efforts are designed to promote the Pilot to SCE customers. SCE is also testing and refining its tactics and marketing channels in preparation for a subsequent phase of Charge Ready, including email, website, social media, collateral, and account manager interaction.

SCE developed content to communicate to potential Customer Participants about the Pilot and highlighted key areas such as eligible rates, bill impact analysis, metering options, EV

infrastructure, access to subject matter expert resources, and EVSE information. Table 2.1 describes the materials SCE launched during Q2 2016 to provide relevant program information. The **Charge Ready Program Landing Page**<sup>2</sup> is the main source for customers to learn about the Pilot and submit their applications. The collateral resources and video vignette described in Table 2.1 can be found through the landing page.







**Table 2.1 – Charge Ready Education and Outreach Materials Deployed for Quarter 2, 2016**

Marketing Materials Deployed	Description
 Charge Ready Landing Page	<b>Website SCE.com Landing Page</b> - Provides resources that enable customers - and EVSE vendors – to learn more about Charge Ready
 Charge Ready Enrollment Portal <sup>3</sup>	<b>Website</b> - A seamless interface that allows customers to apply for participation in the Pilot and provide the required information throughout the enrollment and deployment process
 Frequently Asked Questions <sup>4</sup>	<b>Website</b> - Addresses many of the most common questions and concerns customers may have when considering the Pilot
 Participation Package	<b>Collateral (Interactive PDF)</b> - An intuitive document designed to walk interested customers through the Pilot process from start to finish

<sup>2</sup> <https://on.sce.com/chargeready>

<sup>3</sup> <https://chargeready.sce.com>

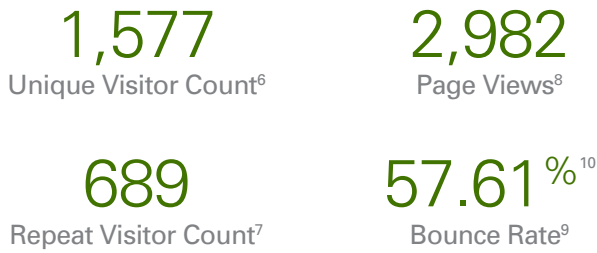
<sup>4</sup> <https://www.sce.com/wps/portal/home/business/electric-cars/Charge-Ready/Charge-Ready-Supports>

Marketing Materials Deployed	Description
 Pilot Fact Sheet	<b>Collateral</b> - A high-level overview of the Pilot that should give customers an idea of what to expect
 Demand Charges Overview	<b>Collateral</b> - Provides definition of demand charges and solutions for customers to mitigate demand charges, such as load management and SCE's available rates
 Electric Vehicle Supply Equipment Vendor Fact Sheet	<b>Collateral</b> - Provides information to prospective vendors to apply for qualification as a Charge Ready charging station vendor
 Pilot Email Invitations	<b>Promotional Email</b> - Emails sent directly to customers to spark interest and drive traffic to landing page; message is crafted specifically for four segments: MUDs, workplaces, fleet, and destination centers
 Customer Video <sup>5</sup>	<b>Video Vignette</b> - Quick and easy way for people to learn more about the Pilot
 Charge Ready Twitter Page	<b>Social Media</b> - Provides followers the latest news and developments from within the Charge Ready Program (#chargeready)

<sup>5</sup> <https://www.youtube.com/watch?v=2YjukqtY6H0>

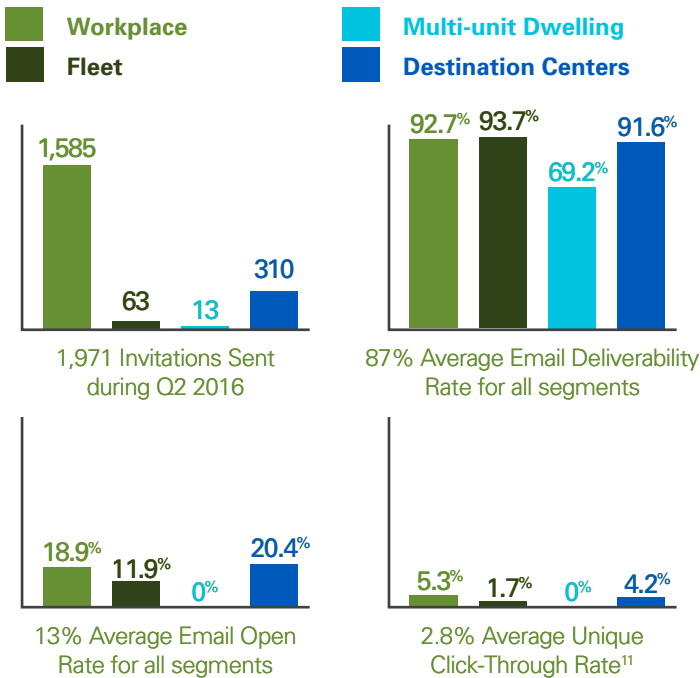
Table 2.2 presents the data collected for the Charge Ready Landing Page to measure the usability of the website.

**Table 2.2 – Charge Ready Landing Page Metrics**



SCE sent potential participants an email invitation specifically crafted for each of the target segments: workplace, destination center, multi-unit dwelling, and fleet. Graph 2.3 summarizes the number of email communications sent, the deliverability rate, open rate, and unique click-through rate.

**Graph 2.3 – Email Invitation Metrics**



As shown in Graph 2.3, the Pilot currently has low enrollment in the multi-unit dwelling (MUD) segment. SCE is developing a new outreach plan to target the MUD segment in Q3 2016.

SCE also leverages its Business Customer Division (BCD) account managers who serve as a direct outreach channel to targeted customers. Before Customer Participants submit their applications through SCE’s enrollment portal, there are a number of account manager interactions to engage with Customer Participants and answer their questions. Table 2.4 summarizes account manager interactions during Q2 2016.

**Table 2.4 – Summary of Account Manager Interactions with Customers**

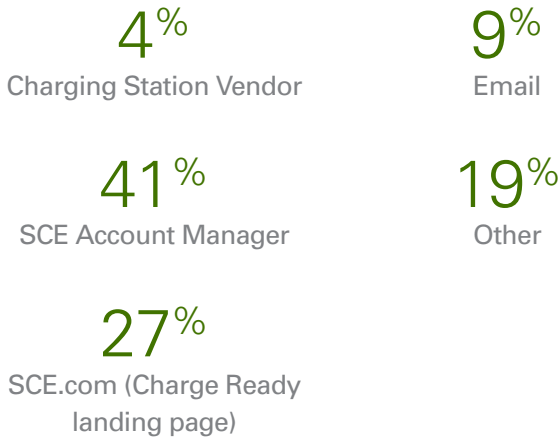
Activity	No. of Interactions
Emails <sup>12</sup>	989
Group Presentations	28
In-Person Visits	106
Positioning Event	3
Telephone Calls	136
Total	1,262

SCE captures how applicants heard about the Pilot through the enrollment form. A majority of customers became aware of the Pilot through SCE account managers or through the Charge Ready landing page. The source of the customer’s knowledge is detailed in Table 2.5.

6 A unique visitor is a person who visits the landing page at least once within the reporting period.  
 7 A repeat visitor is a person with multiple sessions of the landing page within the reporting period.  
 8 A page view refers to an instance of the landing page being loaded in a web browser.  
 9 The bounce rate is the percentage of visitors to a particular website who navigate away from the site after viewing only one page.  
 10 This bounce rate is expected; for customers to enroll in the Pilot, they must enter the Charge Ready Enrollment Portal, which means they would have effectively “navigated away from” the landing page; this registers as a “bounce,” even though the customer has taken a positive step toward enrollment.  
 11 Click-through rate is the ratio of users who click on a specific link compared to the number of total users who view a page, email, or advertisement.  
 12 These are incremental, follow-up emails to the email invitations summarized in Graph 2.3.



**Table 2.5 – Customer’s Source of Knowledge of Pilot**



**2.2 Market Education & TE Advisory Services**

SCE communicates the benefits of EVs and fueling from the grid to a broad audience through a variety of channels. The channels tested during the Pilot include:

- Website: Centralized SCE website for residential and non-residential customers. Some of the marketing channels that will be used to drive traffic to the website include bill messaging, messaging on SCE.com, and SCE social media.
- Paid Media: Digital banners, search engine marketing (SEM), social media ads, radio.
- Local Sponsorship: Booth sponsorship at EV-related events.
- Direct Messaging: Direct mail or email to targeted customer populations.

During Q2 2016, SCE developed and launched a landing page on its website to provide information about EVs. Since the websites were launched on June 27, 2016, SCE will provide a summary of the websites’ metrics in the Q3 2016 report.

Additional efforts in Q2 2016 include initiating a Transportation Burden Analysis to identify residential areas with the greatest transportation burden and the least fuel-efficient and most polluting vehicles. SCE is currently reviewing the results of the analysis and developing appropriate marketing tactics to reach residential customers in these areas.

Awareness of electric vehicle benefits and messaging will be tracked using SCE’s Customer Attitude Tracking (CAT) survey. The CAT survey is a quarterly tool designed to assess and track attitudes towards relevant marketing issues and marketing campaigns among SCE customers. This telephone survey is conducted with 450 randomly-selected SCE households by an independent marketing research firm. Baseline data was collected in Q2 2016 and will be reported in a future quarterly report.

For EV awareness, customers are asked to recall and rate messaging around the benefits of electric vehicles and preparing to buy or lease an electric vehicle, as well as SCE’s role in supporting and advancing electric transportation. As the campaign launches in Q3 2016 and continues through 2017, quarterly measures of awareness will be measured against the baseline to determine lift and the impact of the media mix on awareness levels.

SCE is developing TE Advisory Services and will report on its activities in 2017.

**2.3 Outreach Events**

SCE conducted a number of outreach events in Q2 2016 to support enrollment in the Pilot or increase EV awareness. SCE employees who attend the events provide an estimate of the number of customer communications completed during the event. These outreach events are shown in Table 2.6.

**Table 2.6 – Charge Ready Education & Outreach and Market Education & TE Advisory Services Outreach Events**

**Apr. 2, 2016** | Long Beach | Market Education & TE Advisory Services Formula E – ePrix: **300** estimated customer interactions.

**May 18, 2016** | Irwindale | Charge Ready Education & Outreach Charge Ready Pilot Kick-Off: **300** estimated customer interactions.

**May 26, 2016** | El Segundo | Market Education & TE Advisory Services AT&T/PEVC Ride and Drive: **84** estimated customer interactions.

**Jun. 10, 2016** | San Diego<sup>13</sup> | Charge Ready Education & Outreach California Association of Community Managers, Inc. (CACM) CEO Business Forum: **100** estimated customer interactions.

13 The CACM CEO Business Forum includes property managers of apartment buildings and condominium complexes throughout California, including SCE’s territory.



## 3.0 Electric Vehicle Supply Equipment Qualification

### 3.1 Requirements

The Pilot qualifies three different types of charging system profiles:

- Level 1 charging system, without network capability,
- Level 2 “A” charging system, with network capability integrated into the EVSE, and
- Level 2 “B” charging system, with network capability provided by an external device (such as a kiosk or gateway) shared among multiple stations.

Through a Request for Information (RFI) process, SCE commercially evaluates vendors and conducts technical tests on their proposed charging systems. In accordance with the terms and conditions of the RFI, qualified vendors (manufacturers, distributors) for the Pilot are required to offer Customer Participants:

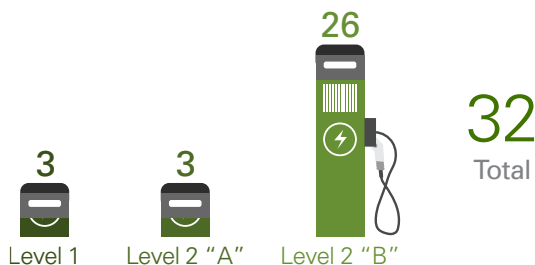
- Qualified charging systems that meet SCE’s technical requirements
- Networking services, including transactional data reporting and demand response (DR) services

As of Q2 2016, 28 vendors submitted responses to the RFI, proposing 124 EVSE models to the Pilot:

- 32 models from 9 vendors have been approved to date, while 7 models from 6 vendors were disqualified.
- 85 recently-submitted models are pending technical evaluation.

The Pilot’s Approved Package List<sup>14</sup> summarizes the vendors and EVSE models approved for the Pilot as of Q2 2016. Graph 3.1 and Table 3.2 provide a summary of the different charging system types and features of EVSE models that have been approved to date.

**Graph 3.1 – Number of Approved Charging System Models**

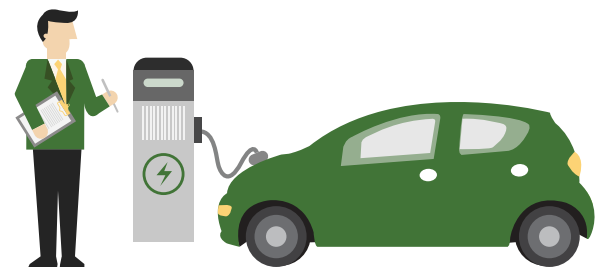


**Table 3.2 – EVSE Model Summary**

Average number of ports per EVSE	1.4
Average number of circuits per EVSE	1.4
Average number of ports per circuit	1
Number of wall EVSE unit	19
Number of pedestal units	13

The base cost of qualified EVSE for the Charge Ready Pilot is defined as “the best value offered for a charging station and its installation within each defined profile [of EVSE].”<sup>15</sup> SCE determines a price per port for each of the qualified models and configurations. SCE then selects the lowest price per port within each charging system type (using only those EVSE models that passed SCE’s technical evaluation) to determine the base costs. The base cost values as of Q2 2016 are shown in Table 3.3.

**Table 3.3 – Base Cost of Charging Systems**



<sup>14</sup> The Pilot’s Approved Package List can be found on the landing page at <https://on.sce.com/chargeready>.

<sup>15</sup> Charge Ready Program Testimony, Vol. 2, p. 9.

## 4.0 Electric Vehicle Charging Load

### 4.1 EV Charging Load

After completing deployment at participating sites, SCE will collect transactional and utility-meter data to inform EV load-related metrics, greenhouse gas (GHG) metrics, and air quality metrics. The Pilot will eventually incorporate a Demand Response program to address general load-shaping capabilities. These capabilities will be evaluated by analyzing the load shapes of the Charge Ready site hosts, at the grid and local capacity areas. Additional load-management strategies, including prices paid by EV drivers and pricing strategies implemented by the Customer Participants, will also be collected and reported.

As of Q2 2016, no EVSEs were deployed through Charge Ready and load data is not available.

## 5.0 Operations

### 5.1 Charge Ready Pilot Operations

#### Process Overview

The Pilot's end-to-end process can be described in six stages:

**Engagement, Evaluation, Confirmation, Planning and Design, Construction, and Verification.**

- **Engagement** begins with a customer submitting an application indicating their interest in participating in the Pilot. The application the customer submits is called the **Step 1 – Notice of Intent**.
- **Evaluation** follows the application submission. SCE conducts on-site assessments to evaluate the feasibility of deploying charging stations through the Pilot.
- **Confirmation** of the customer's participation includes approval by the customer of the number of charging stations and deployment location at each site (as proposed by SCE). SCE reserves funding (if available) upon receipt of **Step 2 – Agreement** signed by the customer and property owner.
- SCE then conducts **Planning and Design** for the approved site while the Customer Participant procures qualified charging stations. At the end of the procurement period, Customer Participants must provide the required proof of purchase using **Step 3 – Certification**.
- Finally, **Verification** takes place to ensure that electric infrastructure and charging systems were deployed in accordance with approved plans (using **Step 4 – Walk-Through Report** and **Step 5 – Rebate Confirmation**); SCE then issues the rebate.

#### Status Overview

For Q2 2016, all projects are currently in the Engagement and Evaluation stages.

After receiving applications (Step 1 – Notice of Intent) from customers, SCE determines whether the site meets the minimum Pilot requirements. The Pilot requires a minimum of 10 charge ports (5 in disadvantaged communities). In Q2 2016, 20 applications (10%) were rejected or withdrawn because the site did not meet this requirement.

At the end of Q2 2016, 80 applications were approved for a site visit by SCE, the next step after completing initial qualification. During the site visit, SCE evaluates potential locations for deploying charging stations, taking into account the existing utility infrastructure, the complexity of construction, and building code requirements.

Table 5.1 summarizes the Pilot's operational metrics to monitor participation and execution of the Charge Ready processes. The metrics in the table capture the project activity from the launch of the Pilot on May 27, 2016 to June 30, 2016. The metrics also include the pre-pilot applicants. Where applicable, the distribution across market segments, as well as the total number in Disadvantaged Communities, is provided.

**Table 5.1 – Pilot Operational Metrics for Quarter**

Quarter 2, 2016	Planning Assumptions	Year-to-Date Actual	Toward Goal
Total number of applications received	58 sites, 1,500 charge ports	193 sites, 1,332 charge ports	333%, 89%
Percentage of total applications received for Disadvantaged Communities	N/A	53%	N/A
Percentage of applications received for Destination Centers	N/A	22%	N/A



Table 5.1 – Pilot Operational Metrics for Quarter

Quarter 2, 2016	Planning Assumptions	Year-to-Date Actual	Toward Goal
Total number of applications received	58 sites, 1,500 charge ports	193 sites, 1,332 charge ports	333%, 89%
Percentage of applications received for Workplaces	N/A	74%	N/A
Percentage of applications received for Fleet	N/A	3%	N/A
Percentage of applications received for Multi-Unit Dwellings	N/A	1%	N/A
Percentage of charging stations requested for Disadvantaged Communities	10%	41%	410%
Percentage of charging stations requested for Destination Centers	N/A	26%	N/A
Percentage of charging stations requested for Workplaces	N/A	69%	N/A
Percentage of charging stations requested for Fleet	N/A	4%	N/A
Percentage of charging stations requested for Multi-Unit Dwellings	N/A	0.4%	N/A
<b>Number of approved and confirmed sites (Step 2 Agreement signed)</b>	<b>58 sites, 1,500 charge ports</b>	<b>0 sites, 0 charge ports</b>	<b>0%, 0%</b>
Number of approved and confirmed sites for Disadvantaged Communities (Step 2 Agreement signed)	N/A	0 sites, 0 chargers	0%, 0%
Number of approved and confirmed sites for Destination Centers (Step 2 Agreement signed)	N/A	0 sites, 0 chargers	0%, 0%
Number of approved and confirmed sites for Workplaces (Step 2 Agreement signed)	N/A	0 sites, 0 chargers	0%, 0%
Number of approved and confirmed sites for Fleet (Step 2 Agreement signed)	N/A	0 sites, 0 chargers	0%, 0%
Number of approved and confirmed sites for Multi-unit Dwellings (Step 2 Agreement signed)	N/A	0 sites, 0 chargers	0%, 0%

**Table 5.1 – Pilot Operational Metrics for Quarter**

Quarter 2, 2016	Planning Assumptions	Year-to-Date Actual	Toward Goal
<b>Number of applicants rejected</b>	N/A	<b>20 sites, 60 chargers</b>	N/A
Percentage of applicants rejected for Disadvantaged Communities	N/A	50%	N/A
Percentage of applicants rejected for Destination Centers	N/A	30%	N/A
Percentage of applicants rejected for Workplaces	N/A	70%	N/A
Percentage of applicants rejected for Fleets	N/A	0%	N/A
Percentage of applicants rejected for Multi-unit Dwellings	N/A	0%	N/A
<b>Number of applicants withdrawn</b>	N/A	<b>8 sites, 31 chargers</b>	N/A
Percentage of applicants withdrawn for Disadvantaged Communities	N/A	13%	N/A
Percentage of applicants withdrawn for Destination Centers	N/A	13%	N/A
Percentage of applicants withdrawn for Workplaces	N/A	88%	N/A
Percentage of applicants withdrawn for Fleets	N/A	0%	N/A
Percentage of applicants withdrawn for Multi-unit Dwellings	N/A	0%	N/A
<b>Number of applicants withdrawn after signing Step 2 - Agreement</b>	N/A	<b>Available once applications reach Step 2 Agreement</b>	N/A
Number of applicants withdrawn after signing Step 2 – Agreement for Disadvantaged Communities	N/A	Available once applications reach Step 2 Agreement	N/A
Number of applicants withdrawn after signing Step 2 – Agreement for Destination Centers	N/A	Available once applications reach Step 2 Agreement	N/A
Number of applicants withdrawn after signing Step 2 – Agreement for Workplaces	N/A	Available once applications reach Step 2 Agreement	N/A
Number of applicants withdrawn after signing Step 2 – Agreement for Fleets	N/A	Available once applications reach Step 2 Agreement	N/A

Table 5.1 – Pilot Operational Metrics for Quarter

Quarter 2, 2016	Planning Assumptions	Year-to-Date Actual	Toward Goal
Number of applicants withdrawn after signing Step 2 - Agreement	N/A	Available once applications reach Step 2 Agreement	N/A
Number of applicants withdrawn after signing Step 2 – Agreement for Multi-unit Dwellings	N/A	Available once applications reach Step 2 Agreement	N/A
Total number of charge ports installed	N/A	Available once chargers deployed	N/A
Total number of charge ports installed for Disadvantaged Communities	N/A	Available once chargers deployed	N/A
Total number of charge ports installed for Destination Centers	N/A	Available once chargers deployed	N/A
Total number of charge ports installed for Workplaces	N/A	Available once chargers deployed	N/A
Total number of charge ports installed for Fleets	N/A	Available once chargers deployed	N/A
Total number of charge ports installed for Multi-unit Dwellings	N/A	Available once chargers deployed	N/A
Average number of charge ports installed per site	N/A	Available once chargers deployed	N/A
Average number of charge ports installed per site for Disadvantaged Communities	N/A	Available once chargers deployed	N/A
Average number of charge ports installed per site for Destination Centers	N/A	Available once chargers deployed	N/A
Average number of charge ports installed per site for Workplaces	N/A	Available once chargers deployed	N/A
Average number of charge ports installed per site for Fleets	N/A	Available once chargers deployed	N/A
Average number of charge ports installed per site for Multi-unit Dwellings	N/A	Available once chargers deployed	N/A
Total number of completed projects	58 sites, 1,500 chargers	Available once projects completed	N/A
Percentage of completed projects for Disadvantaged Communities	N/A	Available once projects completed	N/A
Percentage of completed projects for Destination Centers	N/A	Available once projects completed	N/A



Table 5.1 – Pilot Operational Metrics for Quarter

Quarter 2, 2016	Planning Assumptions	Year-to-Date Actual	Toward Goal
Total number of completed projects	58 sites, 1,500 chargers	Available once projects completed	N/A
Percentage of completed projects for Workplaces	N/A	Available once projects completed	N/A
Percentage of completed projects for Fleets	N/A	Available once projects completed	N/A
Percentage of completed projects for Multi-unit Dwellings	N/A	Available once projects completed	N/A
<b>Customer Participant Request</b>			
Average number of total parking spaces per site	N/A	713 parking spaces/site	N/A
Average number of total parking spaces per site for Disadvantaged Communities	N/A	323 parking spaces/site	N/A
Average number of total parking spaces per site for Destination Centers	N/A	1,160 parking spaces/site	N/A
Average number of total parking spaces per site for Workplaces	N/A	536 parking spaces/site	N/A
Average number of total parking spaces per site for Fleets	N/A	695 parking spaces/site	N/A
Average number of total parking spaces per site for Multi-unit Dwellings	N/A	3,838 parking spaces/site	N/A
Percentage of total number of parking spaces located in parking structures	N/A	4%	N/A
Total number of parking spaces located in parking structures for Disadvantaged Communities	N/A	830	N/A
Total number of parking spaces located in parking structures for Destination Centers	N/A	4,086	N/A
Total number of parking spaces located in parking structures for Workplaces	N/A	14,900	N/A
Total number of parking spaces located in parking structures for Fleets	N/A	0	N/A
Total number of parking spaces located in parking structures for Multi-unit Dwellings	N/A	0	N/A

Table 5.1 – Pilot Operational Metrics for Quarter

Quarter 2, 2016	Planning Assumptions	Year-to-Date Actual	Toward Goal
Average fleet size <sup>16</sup>	N/A	1 (Fleet Segment Only) 14 (All Segments)	N/A
Percentage of applications received with charging systems already installed at the site	N/A	13%	N/A
Average number of charging systems already installed at the site	N/A	14	N/A
<b>Average number of charge ports requested per site</b>	<b>26</b>	<b>11</b>	<b>N/A</b>
Average number of charge ports requested per site for Disadvantaged Communities	N/A	9	N/A
Average number of charge ports requested per site for Destination Centers	N/A	10	N/A
Average number of charge ports requested per site for Workplaces	N/A	11	N/A
Average number of charge ports requested per site for Fleet	N/A	13	N/A
Average number of charge ports requested per site for Multi-unit Dwellings	N/A	5	N/A
<b>Pilot Costs</b>			
Total estimated Pilot costs (SCE infrastructure plus rebate paid) <sup>17</sup>	\$16,792,136	\$1,713,542 166 charge ports	10%
Average estimated cost per site (T&D + Customer infrastructure + rebate) <sup>18</sup>	\$291,070 (\$11,195 * 26 chargers)	Average Cost per Site: \$214,193 Average No. Charge Ports per Site: 21	N/A

<sup>16</sup> Applicants from all segment categories may indicate the number of fleet vehicles at their site (All Segments). Applicants in the fleet category intend to use the new charging station for their EV fleet (Fleet Segment Only).

<sup>17</sup> Estimated program costs are based on initial site assessment. Costs are subject to customer's Step 2 Agreement.

<sup>18</sup> Estimated program costs are based on initial site assessment. Costs are subject to customer's Step 2 Agreement.

**Table 5.1 – Pilot Operational Metrics for Quarter**

Pilot Costs			
Average estimated cost per port (T&D + Customer infrastructure + rebate) <sup>19</sup>	\$11,195	\$10,323	N/A
Total estimated Pilot costs for Disadvantaged Communities	N/A	\$0	N/A
Total estimated Pilot costs by segment: Destination Centers	N/A	\$306,486	N/A
Total estimated Pilot costs by segment: Workplaces	N/A	\$1,258,392	N/A
Total estimated Pilot costs by segment: Fleet	N/A	\$148,664	N/A
Total estimated Pilot costs by segment: Multi-unit Dwellings	N/A	\$0	N/A
Total amount of rebate reserved	\$5,850,000	Available once applications reach Step 2 Agreement	N/A
Average amount of rebate reserved per site	\$101,400 (\$3,900 * 26 chargers)	Available once applications reach Step 2 Agreement	N/A
Total amount of rebate reserved for Disadvantaged Communities	N/A	Available once applications reach Step 2 Agreement	N/A
Total amount of rebate reserved by segment: Destination Centers	N/A	Available once applications reach Step 2 Agreement	N/A
Total amount of rebate reserved by segment: Workplaces	N/A	Available once applications reach Step 2 Agreement	N/A
Total amount of rebate reserved by segment: Fleet	N/A	Available once applications reach Step 2 Agreement	N/A
Total amount of rebate reserved by segment: Multi-unit Dwellings	N/A	Available once applications reach Step 2 Agreement	N/A
Total amount of rebate paid	\$5,850,000	Available once chargers deployed	N/A
Total amount of rebate paid by segment: Disadvantaged Community	N/A	Available once chargers deployed	N/A
Total amount of rebate paid by segment: Destination Center	N/A	Available once chargers deployed	N/A
Total amount of rebate paid by segment: Workplace	N/A	Available once chargers deployed	N/A
Total amount of rebate paid by segment: Fleet	N/A	Available once chargers deployed	N/A
Total amount of rebate paid by segment: Multi-unit Dwelling	N/A	Available once chargers deployed	N/A

<sup>19</sup> Estimated program costs are based on initial site assessment. Costs are subject to customer's Step 2 Agreement.



Table 5.1 – Pilot Operational Metrics for Quarter

Pilot Costs			
Average amount of rebate paid per site	\$101,400 (\$3,900 * 26 chargers)	Available once chargers deployed	N/A
Average amount of rebate paid per site by segment: Disadvantaged Community	N/A	Available once chargers deployed	N/A
Average amount of rebate paid per site by segment: Destination Center	N/A	Available once chargers deployed	N/A
Average amount of rebate paid per site by segment: Workplace	N/A	Available once chargers deployed	N/A
Average amount of rebate paid per site by segment: Fleet	N/A	Available once chargers deployed	N/A
Average amount of rebate paid per site by segment: Multi-unit Dwelling	N/A	Available once chargers deployed	N/A
<b>Total actual construction costs for SCE infrastructure</b>	<b>\$10,942,136</b>	<b>Available once chargers deployed</b>	<b>N/A</b>
Total actual construction costs for SCE infrastructure by segment: Disadvantaged Community	N/A	Available once chargers deployed	N/A
Total actual construction costs for SCE infrastructure by segment: Destination Center	N/A	Available once chargers deployed	N/A
Total actual construction costs for SCE infrastructure by segment: Workplace	N/A	Available once chargers deployed	N/A
Total actual construction costs for SCE infrastructure by segment: Fleet	N/A	Available once chargers deployed	N/A
Total actual construction costs for SCE infrastructure by segment: Multi-unit Dwelling	N/A	Available once chargers deployed	N/A
<b>Average actual construction cost for SCE infrastructure per site</b>	<b>\$7,295</b>	<b>Available once chargers deployed</b>	<b>N/A</b>
Average actual construction cost for SCE infrastructure for sites with all Level 1 charging systems	N/A	Available once chargers deployed	N/A
Average actual construction cost for SCE infrastructure for sites with all Level 2 charging systems	N/A	Available once chargers deployed	N/A

Table 5.1 – Pilot Operational Metrics for Quarter

Pilot Costs				
Average actual construction cost for SCE infrastructure for sites with hybrid charging systems (both Level 1 and Level 2)	N/A		Available once chargers deployed	N/A
Total actual SCE construction cost incurred by withdrawn applicants	N/A		Available once chargers deployed	N/A
Average actual SCE construction cost incurred by withdrawn applicants	N/A		Available once chargers deployed	N/A
Pilot Cycle Times				
Average Customer "End to End" Cycle time by segment	N/A		Available once chargers deployed	N/A
Minimum Customer "End to End" Cycle time by segment	N/A		Available once chargers deployed	N/A
Maximum Customer "End to End" Cycle time by segment	N/A		Available once chargers deployed	N/A
% of customer under/above average cycle time by segment	N/A		Available once chargers deployed	N/A
% of customer under/above target cycle time by segment	N/A		Available once chargers deployed	N/A
Average time for EVSE to be Purchased by Customer by segment <sup>20</sup>	N/A		Available once Step 3 completed	N/A
Average time to schedule Site Visit	N/A		3.57 business days	N/A
Average time to complete Site Visit	N/A		7.32 business days	N/A
Average time to complete Site Assessment	N/A		10.63 business days	N/A
Average time from EVSEs purchased by Customer to chargers installed <sup>21</sup>	N/A		Available once construction completed	N/A
Average time for T&D to complete base map	N/A		Available once design completed	N/A
Average time to complete T&D preliminary design	N/A		Available once preliminary design completed	N/A
Average time to draft contingent easement	N/A		Available once easement completed	N/A
Average time to complete T&D final design	N/A		Available once final design completed	N/A

20 Time from applicant completing Step 2 Agreement form to completing Step 3 Certification form.

21 Time from Step 3 Certification form completion to chargers installed by vendors.

**Table 5.1 – Pilot Operational Metrics for Quarter**

Pilot Cycle Times				
Average time to complete utility-infrastructure permits	N/A		Available once permits issued	N/A
Average time to complete customer-infrastructure permits	N/A		Available once permits issued	N/A
Average time to complete infrastructure construction	N/A		Available once construction completed	N/A
Average time for General Contractor to complete civil & electrical to energize date	N/A		Available once construction completed	N/A
Average time for Authority Having Jurisdiction to complete final inspection for customer-side infrastructure	N/A		Available once inspections completed	N/A
Average time for “Final Job Site Walk to Rebate Check Issued”	N/A		Available once rebates issued	N/A
Charging Station Request & Rebate				
Number of Level 1 charge ports requested <sup>22</sup>	N/A		Available once applications reach Step 2 Agreement	N/A
Number of Level 2 charge ports requested <sup>23</sup>	N/A		Available once applications reach Step 2 Agreement	N/A
Number of total charge ports approved	N/A		Available once applications reach Step 2 Agreement	N/A
Average Number of Level 1 charge ports approved per site	N/A		Available once applications reach Step 2 Agreement	N/A
Average Number of Level 2 charge ports approved per site	N/A		Available once applications reach Step 2 Agreement	N/A
Number of Level 1 EVSE bought	N/A		Available once chargers deployed	N/A
Average number of ports per Level 1 EVSE	N/A		Available once chargers deployed	N/A
Number of Level 2A EVSE bought	N/A		Available once chargers deployed	N/A
Average number of ports per Level 2A EVSE	N/A		Available once chargers deployed	N/A
Number of Level 2B EVSE bought	N/A		Available once chargers deployed	N/A
Average number of ports per Level 2B EVSE	N/A		Available once chargers deployed	N/A

22 In the Step 2 Agreement, the applicant indicates the requested number of Level 1 EVSE to be approved and installed under the Program. The number of installed Level 1 EVSE must match the number of Level 1 EVSE requested in Step 2 Agreement.

23 In the Step 2 Agreement, the applicant indicates the requested number of Level 2 EVSE to be approved and installed under the Program. The number of installed Level 2 EVSE must match the number of Level 2 EVSE requested in Step 2 Agreement.

Table 5.1 – Pilot Operational Metrics for Quarter

Charging Station Request & Rebate				
Number of Level 1 EVSE installed	N/A	Available once chargers deployed	N/A	
Number of Level 2A EVSE installed	N/A	Available once chargers deployed	N/A	
Number of Level 2B EVSE installed	N/A	Available once chargers deployed	N/A	
Rebate amount reserved for Level 1 ports	N/A	Available once applications reach Step 2 Agreement	N/A	
Rebate amount reserved for Level 2A ports	N/A	Available once applications reach Step 2 Agreement	N/A	
Rebate amount reserved for Level 2B ports	N/A	Available once applications reach Step 2 Agreement	N/A	
Rebate amount paid for Level 1 ports	N/A	Available once chargers deployed	N/A	
Rebate amount paid for Level 2A ports	N/A	Available once chargers deployed	N/A	
Rebate amount paid for Level 2B ports	N/A	Available once chargers deployed	N/A	

## 5.2 Supplier Diversity

The architecture and engineering firm and general contractors selected for Charge Ready are 100% diverse business enterprises (DBEs).

## 5.3 Collaboration Efforts with Complementary EV Programs

SCE is engaging with federal, state, and local government agencies to identify collaboration opportunities in connection with Charge Ready. SCE will share collaboration efforts with these agencies in subsequent reports.

## 5.4 Disadvantaged Communities Outreach Events

SCE's outreach events for Disadvantaged Communities in Q2 2016 are summarized in the table below. SCE employees who attend the events provide an estimate of the number of completed communications with a customer in a disadvantaged community during the event.

Table 5.4 – Disadvantaged Community Outreach Events

**May 18, 2016** | Irwindale, CA

Charge Ready Kick-Off: **3** estimated customer interactions.

**May 31, 2016** | Whittier, CA

Uptown Whittier Association Meeting: **1** estimated customer interactions.

**June 2 & 29, 2016** | Multiple Cities

CA Hotel & Lodging Association: **17** estimated customer interactions.



## 6.0 Conclusion

### 6.1 Conclusion

In this first quarterly report, SCE provided data and updates on progress in implementing and executing the Charge Ready and Market Education Pilot, including the challenges we encountered and the solutions we are developing to mitigate them.

SCE has seen significant customer interest in the Pilot and received a substantial number of applications thus far, in particular from disadvantaged communities. While our current “pipeline” of applications is promising and provides a solid foundation to execute the Pilot, we expect that some applicants may not

complete the enrollment and deployment process. This is why we continue significant efforts to reach out to more customers about participating in the Pilot. We are also executing a comprehensive plan to increase awareness of the Pilot with multi-unit dwelling customers to increase applications from this segment.

Finally, we observe that initial infrastructure cost estimates appear higher than anticipated at a number of sites, but we are closely monitoring enrollments with a focus on meeting our deployment objectives. Future reports should include a broader set of sites covering various deployment situations and provide more data to inform our analysis.

