



Charge Ready Pilot Program Q3/2016 Report

Issued November 29, 2016



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1.0 Executive Summary

1.1 Charge Ready Pilot Program Overview

SCE’s Charge Ready Program Pilot (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. 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 **Charge Ready Program Pilot (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 has launched a complementary EV Market Education effort to increase customer awareness about EVs and the benefits of fueling from the grid, including supporting California’s carbon-reduction goals and improving air quality. The EV Market Education effort includes a Transportation Electrification (TE) Advisory Services program to provide a “one-stop shop” for customers to receive specialized education and support on a broad array of TE issues.

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. In particular, SCE focuses some of its efforts on disadvantaged communities¹, which are disproportionately affected by low EV adoption and negative environmental impacts of gasoline- and diesel-powered vehicles.

The Pilot’s objectives are to inform and refine the program’s design and cost estimates and develop success measures for a subsequent Phase 2. The Pilot’s quarterly reports include key metrics and updates about progress, achievements, and lessons learned. 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

By the end of Q3 2016, SCE had received 306 applications total for the Pilot. During Q3 2016, SCE received an additional 113 Pilot applications. The early Pilot applicants completed the site assessment process, which includes a site visit with SCE and determination of the proposed location and number of charge ports to be installed at their site. By the end of Q3 2016, SCE received executed agreements from 6 Customer Participants, totaling 116 charge ports.

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

Graph 1.1 – Pilot Summary for Quarter 3, 2016



At the end of Q3 2016, SCE learned from the first applications that completed the Engagement and Evaluation stages of the application process. Table 1.2 lists the main operational issues encountered during Q3 2016 and their resolutions.

¹ As defined by CalE A through **CalEnviroScreen 2.0**

Table 1.2 – “Pre-Pilot” Challenges and Resolutions

Issue	Resolution
<p>Customers experienced difficulty contacting the approved charging station vendors on SCE’s Approved Package List.</p>	<p>SCE now gathers and publishes detailed contact information for approved vendors, including a direct contact to the vendor’s sale’s department.²</p>
<p>Several schools that applied to Charge Ready could not conduct the program’s EV survey (to help identify existing and future EV adoption at the site) during the summer months due to schools not being in session. Also, the Pilot was launched in late May, and many businesses already set budget plan for the following year. This was a challenge for customers interested in the Charge Ready Program.</p>	<p>SCE will likely propose a longer and broader second phase for Charge Ready so that the program may align better with our customers’ operations.</p>
<p>For some customer sites, SCE completed multiple site visits to evaluate new charging station locations proposed by the Customer Participant. Return visits to the customer’s site are costly due to the additional labor from SCE field inspectors and 3rd party design firm.</p>	<p>For the remainder of the Pilot, SCE will conduct site visits by the SCE field inspectors and 3rd party design firm separately, in an effort to reduce costs for non-viable sites. An initial site visit will be conducted by SCE field inspectors to determine if a site has a viable location for charging stations. If so, a second site visit will be conducted with the SCE field inspector and a 3rd party design firm to complete the assessment for the customer-side infrastructure.</p>
<p>The Pilot’s easement process is a two-step process. First, property owners are asked to sign a contingent easement that provides a “blanket” easement over the entire property. Once the final design is completed and accepted by the Customer Participant, SCE amends the contingent easement and prepares a final easement that only encompasses the location of the charging station infrastructure. For government entities, this process is a challenge due to the added time and costs of retrieving approvals from their approving committees.</p>	<p>On a case by case basis, SCE allows bypassing the contingent easement and only requiring execution of the final easement</p>

² See **Approved Package List** available at on.sce.com/ChargeReady

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.

Table 2.1 presents the data collected for the Charge Ready Landing Page to measure the traffic of the website.

Table 2.1 – Charge Ready Landing Page Traffic Metrics

Metric	Q2 2016	Q3 2016	% Change
Unique Visitor Count ³	1,577	1,354	-14.1%
Repeat Visitor Count ⁴	689	620	-10.0%
Page Views ⁵	2,982	2,281	-23.5%
Bounce Rate ⁶	57.61% ⁷	54.96% ⁸	-4.6%

In Q3 2016, SCE focused some of its Charge Ready marketing efforts toward the multi-unit dwelling (MUD) market segment. To increase enrollment in Charge Ready by MUD customers, SCE developed a new customer outreach and engagement plan that will continue at least through Q4 2016. The engagement plan for this segment includes:

- **Direct Engagement:** SCE account managers are individually reaching out to a list of MUD customers that have been screened as potential participants in Charge Ready. Table 2.2 summarizes account manager interactions for the MUD segment during Q3 2016.

- **Targeted Marketing Collateral:** SCE has developed a new MUD Customer Fact Sheet articulating the value proposition for MUDs to deploy EV charging, in general, and through Charge Ready, in particular.
- **MUD Customer Outreach Events:** SCE conducted an in-person meeting at SCE's Energy Education Center on August 30, 2016. SCE presented a program overview and organized a meet-and-greet with the program's charging station vendors. Participating MUD customers also learned about complementary financing opportunities from representatives from CARB and the California State Treasurer's office (CPCFA/CalCAP). Additional educational events and workshops are planned in Q4 2016.

Table 2.2 – Summary of Account Manager Interactions with MUD Customers

Activity	No. Interactions Q3 2016
Emails ⁹	59
Group Presentations	19
In-Person Visits	7
Positioning Event ¹⁰	0
Telephone Calls	64
Total	149



³ A unique visitor is a person who visits the landing page at least once within the reporting period.

⁴ A repeat visitor is a person with multiple sessions of the landing page within the reporting period.

⁵ A page view refers to an instance of the landing page being loaded in a web browser.

⁶ The bounce rate is the percentage of visitors to a particular website who navigate away from the site after viewing only one page.

⁷ 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.

⁸ 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.

⁹ These are incremental, follow-up emails to the email invitations originally sent to customers at the launch of the Program.

¹⁰ Presentations provided by SCE Account Managers to industry or civic events.

Table 2.3 summarizes all account manager interactions for all segments during Q3 2016.

Table 2.3 – Summary of Account Manager Interactions with Customers

Activity	No. Interactions Q3 2016	Cumulative Interactions
Emails ¹¹	478	1,467
Group Presentations	9	37
In-Person Visits	293	399
Letter	6	6
Positioning Event ¹²	5	8
Telephone Calls	438	574
Total	1,277	2,539

SCE captures how applicants heard about the Pilot through the enrollment form. A majority of customers became aware of the Pilot through SCE's account managers or through the Charge Ready landing page. The source of the customer's knowledge is detailed in Table 2.4.

Table 2.4 – Customer's Source of Knowledge of Pilot

Pilot Awareness Sources	% of Q2 2016 Applications	% of Q3 2016 Applications
EVSE Vendor	4%	7%
SCE Account Manager	41%	41%
Other	19%	22%
SCE.com (Charge Ready landing page)	27%	21%
Email	9%	9%

2.2 Market Education & TE Advisory Services

Separately from its education and outreach efforts to support enrollment in Charge Ready, SCE also communicates about EVs and the benefits of fueling from the grid to a broad audience

through a variety of complementary channels. These channels include: Paid Media: Digital banners, search engine marketing (SEM), sponsored social media ads, radio.

- Local Sponsorship: Booth sponsorship at EV-related events.
- Direct Messaging: Direct mail or email to targeted customer populations.
- Other channels: bill inserts, messaging on SCE.com, and organic social media.

To track engagement, customers exposed to the above channels are driven to relevant content on the updated sce.com EV website. The following metrics capture traffic for key campaign pages within the site:

Table 2.5 – Charge Ready EV Awareness Website Metrics

EV Awareness	Q2 2016	Q3 2016
Electric Vehicle Overview Page on SCE.com		
Unique Visitor Count	212	9,627
Repeat Visitor Count	89	2,938
Page Views	284	13,457
Bounce Rate	19.18%	53.88%
Multi-page Visits	207	7,146
Electric Vehicle Campaign Landing Page on SCE.com		
Unique Visitor Count	N/A	2,853
Repeat Visitor Count	N/A	271
Page Views	N/A	3,578
Bounce Rate	N/A	92.16%
Multi-page Visits	N/A	309



¹¹ These are incremental, follow-up emails to the email invitations originally sent to customers at the launch of the Program.

¹² Presentations provided by BCD Account Managers to industry or civic events.

Additional efforts in Q3 2016 will leverage the Transportation Burden Analysis developed by SCE to identify residential areas (multi-unit dwellings and single-family residences) where customers have the longest commute to work and the lowest household income. A copy of the Transportation Burden Geographic Analysis can be found in the Appendix of this report. Additionally, a list of the residential zip codes where customers have the longest commute to work and the lowest household income can also be found in the Appendix of this report. These residential zip codes, along with the disadvantaged communities identified by the CalEPA, will be targeted using the following marketing tactics to educate them about EVs and the benefits of fueling from the grid:

- Targeted digital banner ads
- Targeted radio (in-language)
- Targeted social
- Website content
- Email/E-news
- MUD Tenant Toolkit
- Trade associations, ethnic organizations

For SCE's Market Education efforts, customer 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, brand favorability, and awareness of relevant marketing messages among SCE customers. This telephone survey is conducted with 450 randomly-selected SCE households and 250 small businesses by an independent marketing research firm. 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. Since the campaign fully launched in late August 2016, the data collected from the Q1, Q2, and Q3 CAT surveys will be used to establish a baseline around message recall. Future quarterly reports will include comparisons against the baseline to determine effectiveness of the marketing efforts.

Table 2.6 summarizes the CAT survey baseline data. Respondents were asked, "In the past three months, do you recall seeing, hearing, or reading any ads about SCE and the benefits of electric vehicles?"

Table 2.6 – CAT Survey Results

Response	Baseline
Total Respondents	1,354
Yes	189 14%
No	1,147 85%
No Response	18 1%

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 Q3 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 2.7.

Table 2.7 – Charge Ready Education & Outreach and Market Education & TE Advisory Services Outreach Events

Jun. 16, 2016 | Studio City | Charge Ready Education & Outreach

CBS Eye on the Environment Event: **100** estimated customer interactions.

Jun. 23, 2016 | Los Angeles | Charge Ready Education & Outreach

Faith-Based Business Summit: **75** estimated customer interactions.

Jun. 29, 2016 | Fullerton | Charge Ready Education & Outreach

CA Higher Ed Summit: **50** estimated customer interactions.

Aug. 4, 2016 | Anaheim | Charge Ready Education & Outreach

Filipino American Chamber of Commerce of Orange County: **100** estimated customer interactions.

Aug. 24, 2016 | Webex | Charge Ready Education & Outreach

EV Virtual Summit: **75** estimated customer interactions.

Aug. 30, 2016 | Irwindale/ Skype | Charge Ready Education & Outreach

SCE MUD Workshop: **20** estimated customer interactions.

Sep. 21, 2016 | AAGLA Headquarters | Charge Ready Education & Outreach
Apartment Association of Greater Los Angeles (AAGLA) : **45** estimated customer interactions.

Sep. 10, 2016 | SCAQMD/ Diamond Bar | Market Education & Charge Ready
National Drive Electric Week - SCAQMD/Diamond Bar: **80** estimated customer interactions.

Sep. 11, 2016 | Los Angeles | Market Education & Charge Ready
National Drive Electric Week - Los Angeles: **118** estimated customer interactions.

Sep. 16-17, 2016 | Santa Monica | Market Education & Charge Ready
AltCar Expo: **142** estimated customer interactions.

Sep. 28, 2016 | Costa Mesa | Charge Ready Education & Outreach
Apartment Association of Orange County - Reverse Trade Show: **45** estimated customer interactions.



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

Following two rounds of the RFI process held in Q2 and Q3 2016, SCE is currently evaluating 40 submitted charging systems.

The Pilot’s Approved Package List¹³ summarizes the vendors and EVSE models available to Customer Participants as of Q3 2016. The Pilot offerings have not changed since Q2 2016; the Pilot currently offers 33 models from 9 vendors. Tables 3.1 and 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

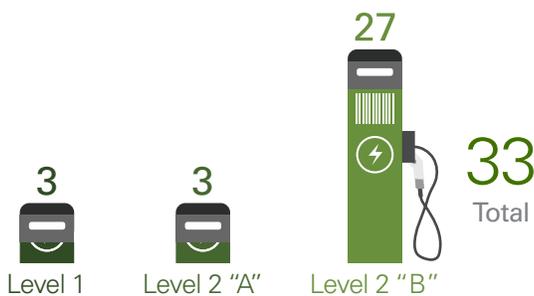


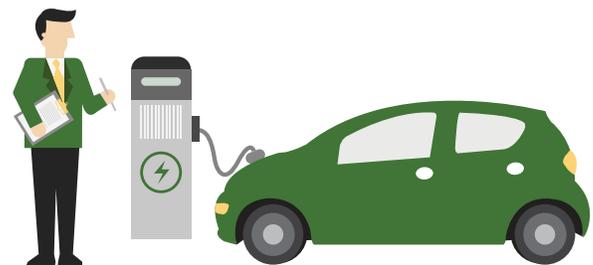
Table 3.2 – EVSE Model Summary

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 units	13
Number of pedestal units	13
Number of both wall and pedestal units	7

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].”¹⁴ 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 Q3 2016 are shown in Table 3.3. The base cost values have not changed from the prior reporting period.

Table 3.3 – Base Cost of Charging Systems

\$1,613	\$1,636	\$1,958
Level 1	Level 2 “A”	Level 2 “B”



¹³ The Pilot’s Approved Package List can be found on the landing page at <https://on.sce.com/chargeready>.
¹⁴ 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. Prices paid by EV drivers and pricing strategies implemented by Customer Participants will also be collected and reported in this quarterly report, if available. The Pilot will eventually incorporate a Demand Response program to address general load-shaping capabilities. The Pilot report will analyze different Customer Participants' load shape profiles, at the grid and local capacity areas, and load management strategies

In addition to requiring that all Customer Participants take service under a time-of-use rate plan, the Pilot will also incorporate a Demand Response (DR) program for Customer Participants with Level 2 charging stations. SCE's Charge Ready DR program will be filed for Commission approval as part of SCE's 2018-2022 DR program application. Additional load-management strategies, including prices paid by EV drivers and pricing strategies implemented by the Customer Participants, will also be collected and reported where available.

As of Q3 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**.
- SCE then conducts **Construction** for the approved site. A pre-construction meeting is held with the Customer Participant before construction begins. Once the infrastructure is completed and passes inspection, the Customer Participant's selected charging station vendor installs the charging stations.
- 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 Q3 2016, a majority of applications are currently in the Engagement and Evaluation stages. Several applications have completed the initial site evaluation visit and cost assessment. Six projects submitted a

signed Step 2 Agreement and have started the Planning and Design stage. SCE observed varied, at times lengthy, customer internal approval processes to execute the Step 2 Agreement.

SCE is finding that the estimated infrastructure deployment costs are higher than anticipated in SCE's Charge Ready Testimony. SCE's original budget for infrastructure and rebate was \$11,195 per charge port, but SCE is now estimating the average cost per port to be \$13,706. In the Charge Ready testimony, SCE anticipated sites installing an average of 26 charge ports per site. However, most applicants are requesting the program minimum of 10 ports (or 5 ports if located in a disadvantaged community). Sites with the minimum number of ports are significantly more costly to deploy if they require a new transformer to serve the incremental EV load. Other infrastructure cost drivers include:

- Site Conditions/Complexity of Construction – In some cases, SCE found the site conditions not viable for charging stations. Examples of non-viable site conditions include:
 - Older buildings with parking lots that could not conform to authority having jurisdiction (AHJ) requirements
 - Primary metered sites where SCE cannot bring power to proposed charging station site; currently, the Pilot does not allow for sub-metering, and installation of infrastructure before the meter is cost prohibitive
 - Poor condition of customer's parking lot would require restoration of the entire parking lot
- Proximity – Longer distances from the charging station site to the existing transformer increase trenching or boring costs.
- AHJ Constraints – The cost associated with municipality fee requirements or other jurisdictional constraints vary by jurisdiction and influence the viability of sites.
 - Underground parking garages present challenges, such as non-level grade, space constraints, and height restrictions, to serve power primarily due to AHJ requirements that drive significant civil work to bring a site into compliance

To mitigate costs, SCE is streamlining its processes and working with vendors to reduce design costs. SCE is also working with customers to select cost-effective locations to deploy charging stations and reduce project complexity. SCE determines the feasibility of deploying EV charging based on cost-estimate thresholds¹⁵.

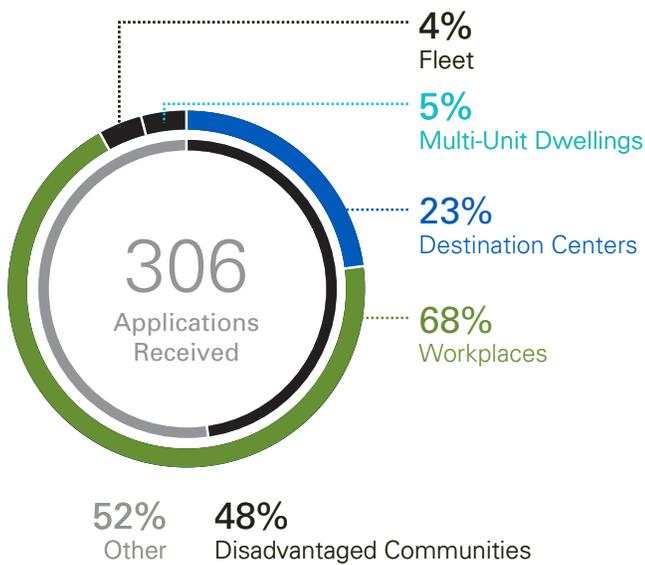
Due to the low number of applications from MUD customers, SCE developed a new engagement strategy to increase enrollment in this segment, as described above. SCE also is also earmarking 25% of the Pilot’s infrastructure and rebate funds for MUD customers until at least December 31, 2016, to support this effort. In 2017, SCE will release unused funds to other applicants.

Table 5.1 summarizes the Pilot’s operational metrics about customer participation in Charge Ready. The metrics in the table capture the project activity from the launch of the Pilot on May 27, 2016, to September 30, 2016. Where applicable, the distribution across market segments, as well as the total number in disadvantaged communities, is provided.

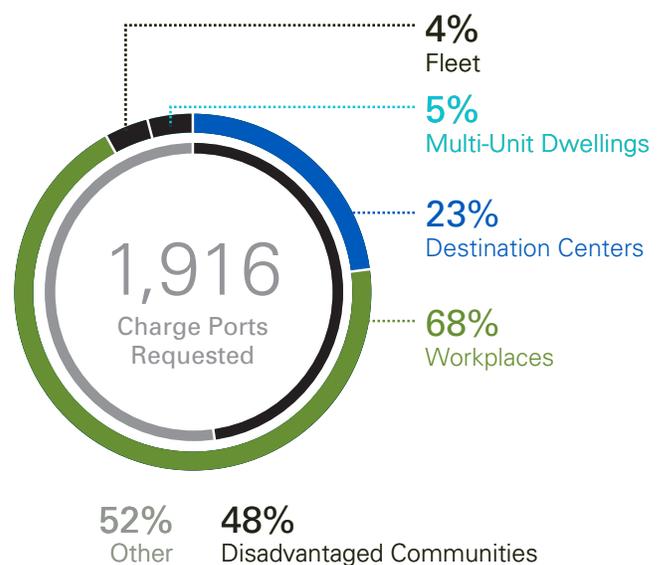
Table 5.1 – Pilot Operational Metrics for Quarter

	Planning Assumptions	Quarter 3, 2016	Year-to-Date Actual	Toward Goal
Total number of applications received	58 sites, 1,500 charge ports	113 sites, 584 charge ports	306 sites, 1,916 charge ports	528%, 128%
Number of approved and confirmed sites (Step 2 Agreement signed)	58 sites, 1,500 charge ports	6 sites, 116 charge ports	6 sites, 116 charge ports	10%, 8%
Number of applicants rejected	N/A	24 sites 152 requested chargers	44 sites 212 requested chargers	N/A
Number of applicants withdrawn	N/A	64 sites, 83 chargers	72 sites, 114 chargers	N/A

Graph 5.1 – YTD Applications Received



Graph 5.2 – YTD Charge Ports Requested



¹⁵ SCE used a higher threshold for sites in disadvantaged communities than in the rest of its service territory to achieve its goal of deploying at least 10% of the program’s charging station in these communities.

Table 5.2 – Customer Participant Request

Customer Participant Request	Year-to-Date Actual
Average number of total parking spaces per site	645 parking spaces/site
Percentage of total number of parking spaces located in parking structures	7%
Average fleet size ¹⁶	1 (Fleet Segment Only) 10 (All Segments)
Percentage of applications received with charging systems already installed at the site	15%
Average number of charging systems already installed at the site	11.5
Average number of charge ports requested per site	10

Table 5.3 – Pilot Costs

Pilot Costs			
Total estimated Pilot costs (SCE infrastructure plus rebate) ¹⁷	\$16,792,136	\$12,084,590 879 charge ports	72%
Average estimated cost per site (T&D + Customer infrastructure + rebate) ¹⁸	\$291,070 (\$11,195 * 26 chargers)	Average Cost per Site: \$212,010 Average No. Charge Ports per Site: 15	N/A
Average estimated cost per port (T&D + Customer infrastructure + rebate) ¹⁹	\$11,195	\$13,748	123%
Total amount of rebate reserved	\$5,850,000	\$212,448	3.6%
Average amount of rebate reserved per site	\$101,400 (\$3,900 * 26 chargers)	\$35,408	35%

¹⁶ 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).

¹⁷ Estimated program costs are based on initial site assessment. Actual costs will be available following charging station installation and rebate issuance.

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

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

Graph 5.3 – Rebate Reserved by Segment



Table 5.4 – Pilot Cycle Times

Pilot Cycle Times	
Average time for the Customer to confirm Site Visit date	4 business days
Average time for the Customer to execute Step 2 Agreement	17 business days
Average time to complete Site Visit	10 business days
Average time to complete Site Assessment	21 business days
Average time for Customer to execute contingent easement	9 business days

Table 5.5 – Charging Station Request & Rebate

Charging Station Request & Rebate	
Number of Level 1 charge ports requested ²⁰	0
Number of Level 2 charge ports requested ²¹	116
Number of total charge ports approved	116
Average Number of Level 1 charge ports approved per site	0
Average Number of Level 2 charge ports approved per site	19.3

²⁰ 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.

²¹ 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.

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.

On July 29th, SCE attended the Environmental Justice Advisory Group meeting to collaborate with AQMD and encourage the deployment of charging stations in Environmental Justice areas. SCE provided the Advisory Group with an overview of the Pilot, including requirements and process to participate, and provided a status of applications received.

On August 30th, SCE held an MUD outreach event in Irwindale to provide an overview of the Pilot and describe the benefits of charging station specifically for MUDs. SCE invited complementary EV Programs to support the shared goal to accelerate the adoption of EVs in California. The Disadvantaged Communities Liaison from the California Air Resources Board discussed its Clean Vehicle Rebate Program (CVRP) and its Enhanced Fleet Modernization Program with SCE customers so that the property owners and managers could maximize the benefits of installed charging infrastructure with their residents. From the California State Treasurer's Office, the Program Manager for the California Capital Access Program (CalCAP) - Electric Vehicle Charging Station (EVCS) Financing Program shared the additional financing options to help offset the cost of the charging stations purchased for SCE's Charge Ready Program.

Table 5.6 – Charge Ready Collaboration Efforts with Complimentary EV Programs

Jul. 29, 2016 | SCAQMD Headquarters - Diamond Bar
Environmental Justice Advisory Group meeting at AQMD: **15** estimated customer interactions.

Aug. 30, 2016 | Irwindale
SCE MUD Event: **20** estimated customer interactions.

SCE will continue to collaborate with complementary EV programs in MUD outreach efforts in Q4 2016.

5.4 Disadvantaged Communities Outreach Events

SCE's outreach events for Disadvantaged Communities in Q3 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 5.7 – Disadvantaged Community Outreach Events

Jul. 29, 2016 | SCAQMD Headquarters - Diamond Bar
Environmental Justice Advisory Group meeting at AQMD: **15** estimated customer interactions.

Jul. 2016 | Carson
Connecting Women to Power Business Conference: **5** estimated customer interactions.

Aug. 30, 2016 | Irwindale
SCE MUD Event: **1** estimated customer interactions.

6.0 Conclusion

6.1 Conclusion

In this 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.

As customers continue to express an interest in the Pilot, SCE will launch a waitlist process in Q4 2016 to help manage customer expectations while maintaining a healthy pipeline of potential participants.

In the next quarter, SCE anticipates breaking ground for the first charging stations of this Pilot. SCE plans to learn from the first deployed projects to improve cost estimates and determine ways to mitigate costs for other future projects.



Appendix

Appendix

Transportation Burden Geographic Analysis



Combined Household Income and Travel Time

Format: Microsoft® Excel



Transportation Burden Geographic Analysis

Format: Adobe® Acrobat



SCE Transportation Burden 06-04-2016

Format: Google Earth File

Pilot Operational Metrics for Quarter**Total number of applications received**

	Planning Assumptions	Quarter 3, 2016	Year-to-Date Actual	Toward Goal
	58 sites, 1,500 charge ports	113 sites, 584 charge ports	306 sites, 1,916 charge ports	528%, 128%
Disadvantaged Communities	N/A	40%	48%	N/A
Destination Centers	N/A	21%	23%	N/A
Workplaces	N/A	61%	69%	N/A
Fleet	N/A	7%	4%	N/A
Multi-Unit Dwellings	N/A	11%	5%	N/A

Percentage of charging stations requested

	Planning Assumptions	Quarter 3, 2016	Year-to-Date Actual	Toward Goal
	58 sites, 1,500 charge ports	113 sites, 584 charge ports	306 sites, 1,916 charge ports	528%, 128%
Disadvantaged Communities	10%	31%	38%	376%
Destination Centers	N/A	17%	25%	N/A
Workplaces	N/A	81%	65%	N/A
Fleet	N/A	2%	5%	N/A
Multi-Unit Dwellings	N/A	0% ²²	5%	N/A

Number of approved and confirmed sites (Step 2 Agreement signed)

	Planning Assumptions	Quarter 3, 2016	Year-to-Date Actual	Toward Goal
	58 sites, 1,500 charge ports	6 sites, 116 charge ports	6 sites, 116 charge ports	10%, 8%
Disadvantaged Communities	N/A	5 sites, 106 chargers	5 sites, 106 chargers	N/A
Destination Centers	N/A	3 sites, 21 chargers	3 sites, 21 chargers	N/A
Workplaces	N/A	1 site, 80 chargers	1 site, 80 chargers	N/A
Fleet	N/A	2 sites, 15 chargers	2 sites, 15 chargers	N/A
Multi-Unit Dwellings	N/A	0 sites, 0 chargers	0 sites, 0 chargers	N/A

²² Note that some applicants did not share their requested number of ports in their application.

Number of applicants rejected

	Planning Assumptions	Quarter 3, 2016	Year-to-Date Actual	Toward Goal
	N/A	24 sites 152 requested chargers	44 sites 212 requested chargers	N/A
Disadvantaged Communities	N/A	21%	34%	N/A
Destination Centers	N/A	25%	27%	N/A
Workplaces	N/A	66%	68%	N/A
Fleet	N/A	0%	0%	N/A
Multi-Unit Dwellings	N/A	9%	5%	N/A

Number of applicants withdrawn

	Planning Assumptions	Quarter 3, 2016	Year-to-Date Actual	Toward Goal
	N/A	64 sites, 83 chargers	72 sites, 114 chargers	N/A
Disadvantaged Communities	N/A	61%	56%	N/A
Destination Centers	N/A	10%	9%	N/A
Workplaces	N/A	85%	85%	N/A
Fleet	N/A	3%	3%	N/A
Multi-Unit Dwellings	N/A	3%	3%	N/A

Number of applicants withdrawn after signing Step 2 - Agreement

	Planning Assumptions	Quarter 3, 2016	Year-to-Date Actual	Toward Goal
	N/A	0%	0%	N/A
Disadvantaged Communities	N/A	0%	0%	N/A
Destination Centers	N/A	0%	0%	N/A
Workplaces	N/A	0%	0%	N/A
Fleet	N/A	0%	0%	N/A
Multi-Unit Dwellings	N/A	0%	0%	N/A

Total number of charge ports installed

	Planning Assumptions	Quarter 3, 2016	Year-to-Date Actual	Toward Goal
	N/A	Available once chargers deployed		N/A
Disadvantaged Communities	N/A	Available once chargers deployed		N/A
Destination Centers	N/A	Available once chargers deployed		N/A
Workplaces	N/A	Available once chargers deployed		N/A
Fleet	N/A	Available once chargers deployed		N/A
Multi-Unit Dwellings	N/A	Available once chargers deployed		N/A

Average number of charge ports installed per site

	Planning Assumptions	Quarter 3, 2016	Year-to-Date Actual	Toward Goal
	N/A	Available once chargers deployed		N/A
Disadvantaged Communities	N/A	Available once chargers deployed		N/A
Destination Centers	N/A	Available once chargers deployed		N/A
Workplaces	N/A	Available once chargers deployed		N/A
Fleet	N/A	Available once chargers deployed		N/A
Multi-Unit Dwellings	N/A	Available once chargers deployed		N/A

Total number of completed projects

	Planning Assumptions	Quarter 3, 2016	Year-to-Date Actual	Toward Goal
	58 sites, 1,500 chargers	Available once chargers deployed		N/A
Disadvantaged Communities	N/A	Available once chargers deployed		N/A
Destination Centers	N/A	Available once chargers deployed		N/A
Workplaces	N/A	Available once chargers deployed		N/A
Fleet	N/A	Available once chargers deployed		N/A
Multi-Unit Dwellings	N/A	Available once chargers deployed		N/A

Average number of total parking spaces per site

	Customer Participant Request		
	N/A	645 parking spaces/site	N/A
Disadvantaged Communities	N/A	371 parking spaces/site	N/A
Destination Centers	N/A	1,004 parking spaces/site	N/A
Workplaces	N/A	525 parking spaces/site	N/A
Fleet	N/A	360 parking spaces/site	N/A
Multi-Unit Dwellings	N/A	821 parking spaces/site	N/A

Percentage of total number of parking spaces located in parking structures

	Customer Participant Request		
	N/A	7%	N/A
Disadvantaged Communities	N/A	830	N/A
Destination Centers	N/A	6,050	N/A
Workplaces	N/A	22,991	N/A
Fleet	N/A	0	N/A
Multi-Unit Dwellings	N/A	905	N/A

Average fleet size²³

	Customer Participant Request		
	N/A	1 (Fleet Segment Only) 10 (All Segments)	N/A
Percentage of applications received with charging systems already installed at the site	N/A	15%	N/A
Average number of charging systems already installed at the site	N/A	11.5	N/A

²³ 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)

Average number of charge ports requested per site

	Customer Participant Request		
	26	10	N/A
Disadvantaged Communities	N/A	8	N/A
Destination Centers	N/A	9	N/A
Workplaces	N/A	10	N/A
Fleet	N/A	10	N/A
Multi-Unit Dwellings	N/A	9	N/A

Pilot Costs

	Pilot Costs		
Total estimated Pilot costs (SCE infrastructure plus rebate paid) ²⁴	\$16,792,136	\$12,084,590 879 charge ports	72%
Average estimated cost per site (T&D + Customer infrastructure + rebate) ²⁵	\$291,070 (\$11,195 * 26 chargers)	Average Cost per Site: \$212,010 Average No. Charge Ports per Site: 15	N/A
Average estimated cost per port (T&D + Customer infrastructure + rebate) ²⁶	\$11,195	\$13,748	N/A

²⁴ Estimated program costs are based on initial site assessment. Costs are subject to customer's Step 2 Agreement.

²⁵ Estimated program costs are based on initial site assessment. Costs are subject to customer's Step 2 Agreement.

²⁶ Estimated program costs are based on initial site assessment. Costs are subject to customer's Step 2 Agreement.

Total estimated Pilot costs

Customer Participant Request			
Disadvantaged Communities	N/A	\$5,810,926	N/A
Destination Centers	N/A	\$3,489,201	N/A
Workplaces	N/A	\$7,799,019	N/A
Fleet	N/A	\$796,370	N/A
Multi-Unit Dwellings	N/A	\$0	N/A

Total amount of rebate reserved

Customer Participant Request			
	\$5,850,000	\$212,448	3.6%
Average amount of rebate reserved per site	\$101,400 (\$3,900 * 26 chargers)	\$35,408	N/A
Disadvantaged Communities	N/A	\$207,548	N/A
Destination Centers	N/A	\$26,438	N/A
Workplaces	N/A	\$156,640	N/A
Fleet	N/A	\$29,370	N/A
Multi-Unit Dwellings	N/A	\$0	N/A

Total amount of rebate paid

Customer Participant Request			
	\$5,850,000	Available once chargers deployed	N/A
Disadvantaged Communities	N/A	Available once chargers deployed	N/A
Destination Centers	N/A	Available once chargers deployed	N/A
Workplaces	N/A	Available once chargers deployed	N/A
Fleet	N/A	Available once chargers deployed	N/A
Multi-Unit Dwellings	N/A	Available once chargers deployed	N/A

Average amount of rebate paid per site

Customer Participant Request			
	\$101,400 (\$3,900 * 26 chargers)	Available once chargers deployed	N/A
Disadvantaged Communities	N/A	Available once chargers deployed	N/A
Destination Centers	N/A	Available once chargers deployed	N/A
Workplaces	N/A	Available once chargers deployed	N/A
Fleet	N/A	Available once chargers deployed	N/A
Multi-Unit Dwellings	N/A	Available once chargers deployed	N/A

Total actual construction costs for SCE infrastructure

Customer Participant Request			
	\$10,942,136	Available once chargers deployed	N/A
Disadvantaged Communities	N/A	Available once chargers deployed	N/A
Destination Centers	N/A	Available once chargers deployed	N/A
Workplaces	N/A	Available once chargers deployed	N/A
Fleet	N/A	Available once chargers deployed	N/A
Multi-Unit Dwellings	N/A	Available once chargers deployed	N/A

Average actual construction cost for SCE infrastructure per site

Customer Participant Request			
	\$7,295	Available once chargers deployed	N/A
Level 1 charging systems	N/A	Available once chargers deployed	N/A
Level 2 charging systems	N/A	Available once chargers deployed	N/A
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

Pilot Cycle Times	
Average Customer "End to End" Cycle time by segment	Available once chargers deployed
Minimum Customer "End to End" Cycle time by segment	Available once chargers deployed
Maximum Customer "End to End" Cycle time by segment	Available once chargers deployed
% of customer under/above average cycle time by segment	Available once chargers deployed
% of customer under/above target cycle time by segment	Available once chargers deployed
Average time for EVSE to be Purchased by Customer by segment ²⁷	Available once Step 3 completed
Average time for the Customer to execute Step 2 Agreement	17 business days
Average time for the Customer to confirm Site Visit date	4 business days
Average time to complete Site Visit	10 business days
Average time to complete Site Assessment	21 business days
Average time from EVSEs purchased by Customer to chargers installed ²⁸	Available once construction completed
Average time for T&D to complete base map	Available once design completed
Average time to complete T&D preliminary design	Available once preliminary design completed
Average time for Customer to execute contingent easement	9 business days
Average time for Customer to execute final easement	Available once final easements completed
Average time to complete T&D final design	Available once final design completed
Average time to complete utility-infrastructure permits	Available once permits issued
Average time to complete customer-infrastructure permits	Available once permits issued
Average time to complete infrastructure construction	Available once construction completed
Average time for General Contractor to complete civil & electrical to energize date	Available once construction completed
Average time for Authority Having Jurisdiction to complete final inspection for customer-side infrastructure	Available once inspections completed
Average time for "Final Job Site Walk to Rebate Check Issued"	Available once rebates issued

²⁷ Time from applicant completing Step 2 Agreement form to completing Step 3 Certification form

²⁸ Time from Step 3 Certification form completion to chargers installed by vendors

Charging Station Request & Rebate

Charging Station Request & Rebate	
Level 1 charge ports requested ²⁹	0
Level 2 charge ports requested ³⁰	116
Total charge ports approved	116
Average Number of Level 1 charge ports approved per site	0
Average Number of Level 2 charge ports approved per site	19.3
Number of Level 1 EVSE bought	Available once chargers deployed
Average number of ports per Level 1 EVSE	Available once chargers deployed
Number of Level 2A EVSE bought	Available once chargers deployed
Average number of ports per Level 2A EVSE	Available once chargers deployed
Number of Level 2B EVSE bought	Available once chargers deployed
Average number of ports per Level 2B EVSE	Available once chargers deployed
Number of Level 1 EVSE installed	Available once chargers deployed
Number of Level 2A EVSE installed	Available once chargers deployed
Number of Level 2B EVSE installed	Available once chargers deployed
Rebate amount reserved for Level 1 ports	Available once applications reach Step 3 Certification
Rebate amount reserved for Level 2A ports	Available once applications reach Step 3 Certification
Rebate amount reserved for Level 2B ports	Available once applications reach Step 3 Certification
Rebate amount paid for Level 1 ports	Available once chargers deployed
Rebate amount paid for Level 2A ports	Available once chargers deployed
Rebate amount paid for Level 2B ports	Available once chargers deployed

²⁹ 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.

³⁰ 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.