Charge Ready Pilot Program

Q4/2016 Report

Issued March 1, 2017

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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.

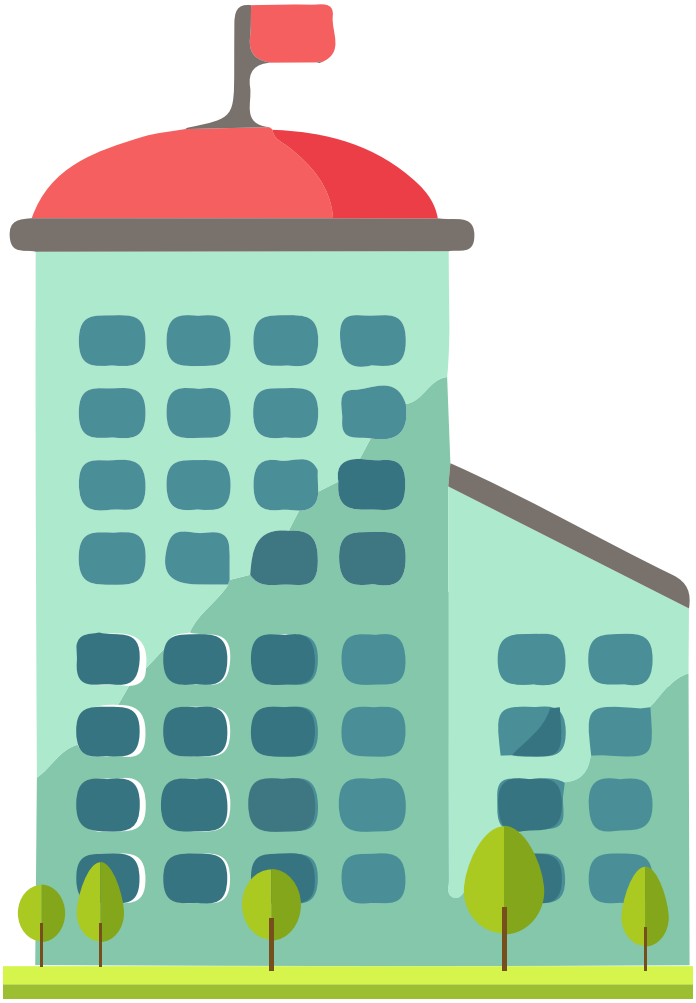
The Pilot targets key market segments for deployment, including workplaces, multi-unit dwellings (MUDs), fleet parking, and destination locations where vehicles are usually parked for at least four hours. In particular, SCE focuses some of its efforts on disadvantaged communities[1], which are disproportionately 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 As defined by CalEPA's **CalEnviroScreen 2.0**

1.2 Pilot Summary for Quarter

By the end of Q3 2016, SCE had received 306 applications total for the Pilot. During Q4 2016, SCE received an additional 28 Pilot applications. By the end of Q4 2016, SCE total 334 received applications. SCE also received executed agreements from 43 Customer Participants, totaling 687 charge ports. The projects with executed agreements started the planning and design process, and Customers began procuring qualified charging stations.



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

Table 1.1 – Pilot Summary for Quarter 4, 2016

Variables	Authorized/Planning Assumptions	Year-to-date	Remaining	% Remaining
Capital				
Utility Side Infrastructure Costs	$3,353,532	$0	$3,353,532	100%
Customer Side Infrastructure Costs	$7,586,387	$1,386,160	$6,200,227	82%
Easement	$115,942	$45,516	$70,426	61%
Station Testing	$30,000	$28,833	$1,167	4%
Business Customer Division Labor	$103,500	$8,473	$95,027	92%
Program Management Office Labor	$460,003	$322,959	$137,044	30%
Operations & Maintenance				
Rebate	$5,850,000	$0	$5,850,000	100%
Business Customer Division Labor	$51,750	$18,640	$33,110	64%
Transportation Electrification Advisory Services	$316,800	$97,427	$219,373	69%
PMO Labor & Non-Labor	$232,340	$117,157	$ 135,183	54%
Charge Ready ME&O, Market Reporting, SAP	$665,000	$365,258	$ 279,742	43%
EV Awareness	$2,830,600	$1,089,924	$1,740,676	61%
	$21,595,853	$3,480,348	$18,115,506	84%

At the end of Q4 2016, SCE learned from the first applications that completed the Planning and Design stages of the application process. Table 1.2 lists the main operational issues encountered during Q4 2016 and their resolutions.

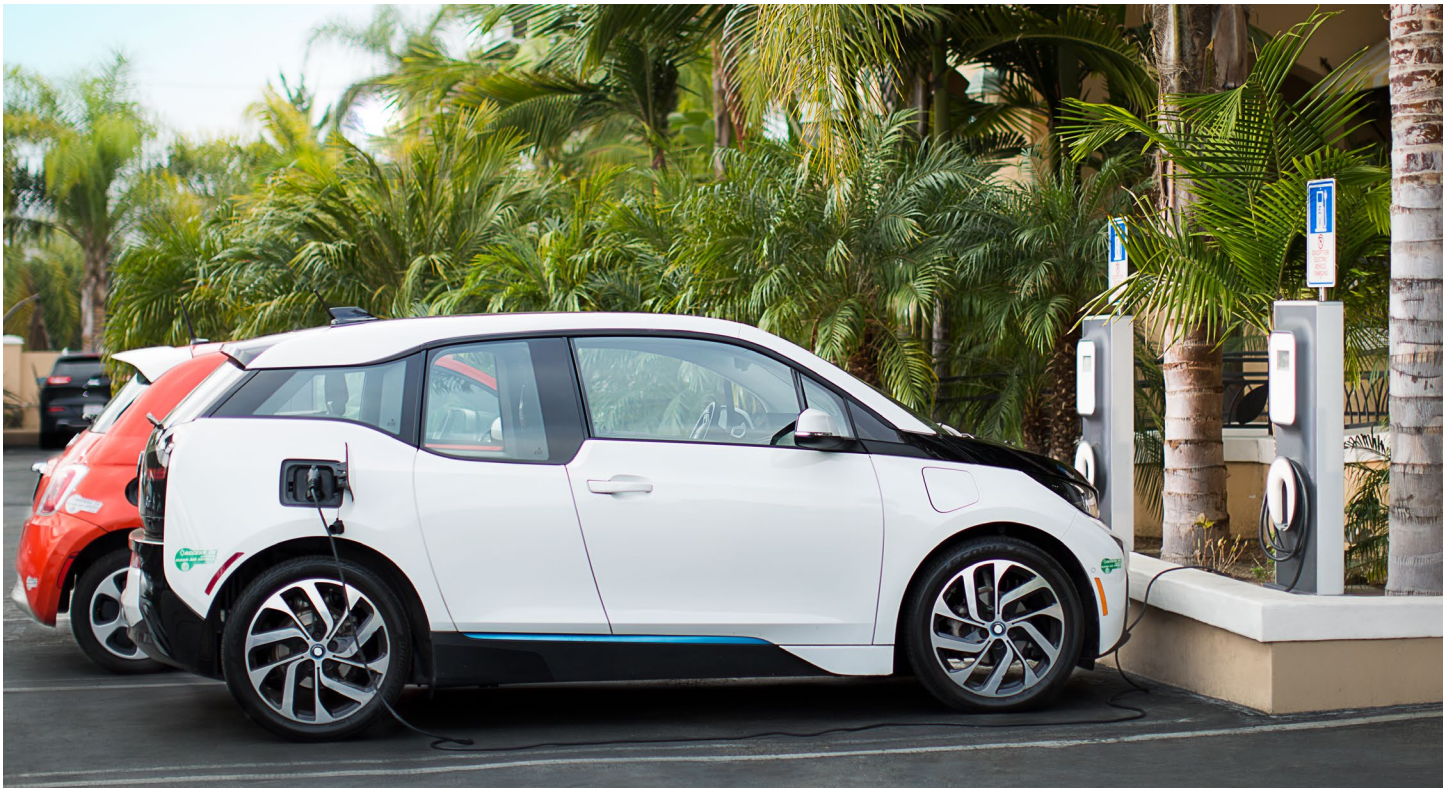


Table 1.2 – Pilot Challenges and Resolutions

Issue	Resolution
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. Several customers were resistant to executing a contingent easement over their entire property.	For all applications, SCE now bypasses the contingent easement and only requires execution of the final easement. The final easement will reflect the final design and location of the charging stations.
SCE proposes a maximum number of charging stations to deploy at a customer site which meets the anticipated utilization. For disadvantaged communities, the maximum utilization supports the minimum program requirement of 5 charge ports. This presents a challenge for customers who prefer dual port stations.	To support customer preference, SCE allows exceptions for disadvantaged communities. In disadvantaged communities, Customers who are approved for a maximum of 5 ports are allowed to deploy 6 ports if the customer selects dual port stations.
The Program's current approach is to deploy a separate panel and separate service for the charging stations. This approach is more costly than using an existing panel and service line at the customer site.	For Phase 2, SCE will consider using a customer's existing panel and service line as another design alternative. This approach will be limited to customers with existing panels that can support the new load from the charging stations.
After signing the Program Agreement, Customers are required to provide proof of purchase of the charging stations within 30 calendar days. SCE found a majority of Customer submissions to be incomplete or inaccurate.	SCE made a number of changes to improve the completeness and accuracy of the submitted documents. Customer form instructions were updated, charging station vendors were reminded of the requirements, and samples of complete submissions were shared with customers and vendors.

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	Q3 2016	Q4 2016	% Change
Unique Visitor Count[2]	1,354	940	-30.60%
Repeat Visitor Count[3]	620	458	-26.10%
Page Views[4]	2,281	1,703	-25.30%
Bounce Rate[5]	54.96%[6]	54.87%[7]	-0.2%

Due to overwhelming interest in the program, SCE initiated a waitlist process for non-multi-unit dwelling customers during Q4 2016. SCE stopped accepting new applications from fleet, workplace, and destination center segments. SCE continued to reserve 25% of infrastructure and rebate funds for multi-unit dwelling (MUD) customers and target outreach to MUDs. SCE's focus in Q4 2016 was marketing and outreaching to the MUD segment to encourage participation.

The engagement plan for MUDs composed of direct engagement by SCE account managers and customer outreach events. SCE performed over 550 interactions with MUD customers through phone calls, email, and in-person visits. Table 2.2, below, summarizes account manager interactions for the MUD segment during Q4 2016. SCE also started weekly MUD Virtual Workshops to educate MUDs about the Charge Ready Program and other complementary EV programs available to them. During the meetings, SCE shared the MUD fact sheet and other targeted marketing materials that were developed during Q3 2016. The outreach resulted in 7 new MUD applications, totaling 19 MUD applications in the program. Of the 19 MUD applications, 9 applications did not meet the minimum program requirements and 10 applications are continuing to progress through the program process. By the end of 2016, SCE received commitments from 2 MUD customers for 23 charge ports. SCE is continuing to work with and reserve funds for 8 additional MUD customers through January 2017.

Table 2.2 – Summary of Account Manager Interactions with MUD Customers

Activity	No. Interactions Q3 2016
Emails[8]	59
Group Presentations	19
In-Person Visits	7
Positioning Event[9]	0
Telephone Calls	64
Total	149

SCE learned about the MUD customer segment through their marketing and outreach approach. Low customer attendance at the first two MUD Virtual Workshops changed the outreach strategy from a mass message approach to a more targeted, direct engagement approach. SCE intended to reach large number of MUD customers through the virtual workshops, but later found direct engagement to be more effective in educating customers about the program.

2 A unique visitor is a person who visits the landing page at least once within the reporting period.
3 A repeat visitor is a person with multiple sessions of the landing page within the reporting period.
4 A page view refers to an instance of the landing page being loaded in a web browser.
5 The bounce rate is the percentage of visitors to a particular website who navigate away from the site after viewing only one page.
6 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.
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8 These are incremental, follow-up emails to the email invitations originally sent to customers at the launch of the Program.
9 Presentations provided by BCD Account Managers to industry or civic events.

SCE discontinued the weekly MUD Virtual Workshops and instead, focused efforts on direct engagement with customers. SCE's direct interactions (phone, email, and in-person meetings) with MUD customers uncovered customers interested in charging stations and also uncovered reasons why some MUD customers were not interested in the program. For the customers interested in the program, SCE was able to focus resources to support these customers during in the enrollment process. For customers not interested in the program, SCE was able to gather customer feedback that would help inform Phase 2's MUD outreach strategy. The graphic below summarizes the feedback from 71 MUD customers indicating their reason for not participating in the program:

Table 2.3 – 71 MUD Customer Feedback for not Participating in the Program

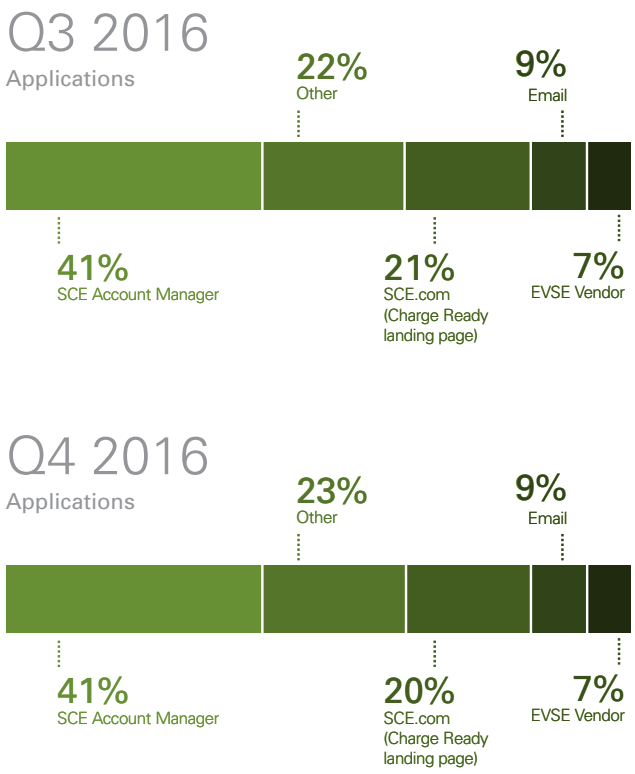
Table 2.4 summarizes all account manager interactions for all segments during Q4 2016.

Table 2.4 – Summary of Account Manager Interactions with Customers

Activity	No. Interactions Q3 2016	Cumulative Interactions
Emails[10]	167	1,634
Group Presentations	2	39
In-Person Visits	145	544
Letter	0	6
Positioning Event[11]	8	16
Telephone Calls	236	810
Total	558	3,097

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 2.5.

Table 2.5 – Customer's Source of Knowledge of Pilot



10 These are incremental, follow-up emails to the email invitations originally sent to customers at the launch of the Program.
11 Presentations provided by SCE Business Customer Division Account Managers to industry or civic events.

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 onserts, 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 2.6 – Charge Ready EV Awareness Website Metrics

EV Awareness	Q3 2016	Q4 2016
Electric Vehicle Overview Page on SCE.com		
Unique Visitor Count	9,627	6,162
Repeat Visitor Count	2,938	2,124
Page Views	13,457	8,988
Bounce Rate	53.88%	33.99%
Multi-page Visits	7,146	5,137
Electric Vehicle Campaign Landing Page on SCE.com		
Unique Visitor Count	2,853	6,524
Repeat Visitor Count	271	281
Page Views	3,578	7,934
Bounce Rate	92.16%	92.38%
Multi-page Visits	309	629

During Q4 2016, SCE continued digital banner ads, radio ads, and paid social media to support market education efforts. These marketing activities, the EV Overview Page on SCE.com, and the EV Campaign Landing Page on SCE.com included translations in English, Spanish, Korean, Chinese, and Vietnamese languages. 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 was used to establish a baseline around message recall. The Q4 2016 survey results showed levels of EV awareness consistent with the baseline. The customer segmentation of the Q4 survey results show over 28% of respondents to be over the age of 70; this demographic often does not respond to digital media.

Table 2.7 summarizes the CAT survey baseline data. Respondents were asked, "In the past three months, do you recall seeing, hearing, or reading about any ads about SCE and the benefits of electric vehicles?"

Table 2.7 – CAT Survey Results

Response	Baseline (Q1-Q3 2016)	Q4 2016
Total Respondents	1,354	450
Yes	189	58
	14%	13%
No	1,147	383
	85%	85%
No Response	18	9
	1%	2%

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 2.8.

Table 2.8 – Charge Ready Education & Outreach and Market Education & TE Advisory Services Outreach Events

Oct. 6, 2016 | Long Beach | Charge Ready Education & Outreach
League of Cities: **50** estimated customer interactions.

Oct. 25, 2016 | Westminster | Charge Ready Education & Outreach
County of Ventura: **25** estimated customer interactions.

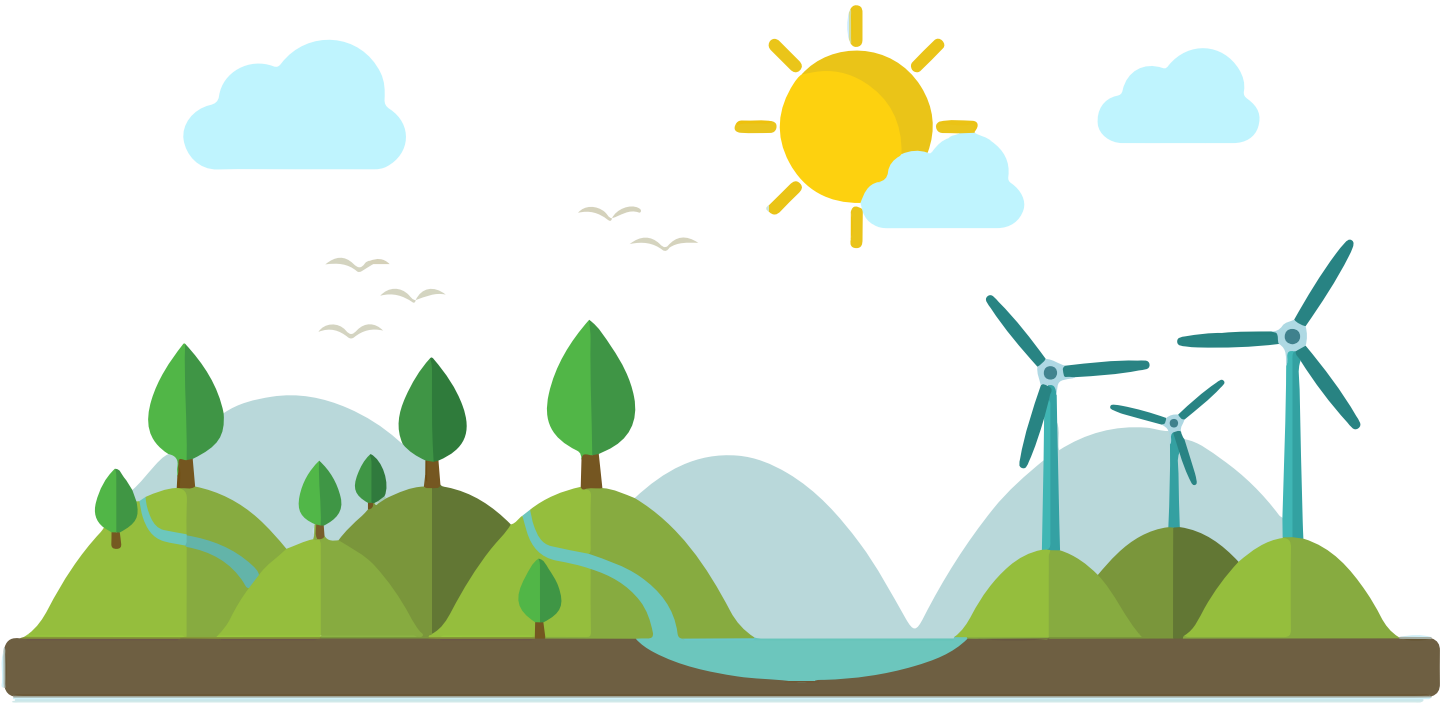
Nov. 4, 2016 | Torrance | Charge Ready Education & Outreach
Optima presentation: **2** estimated customer interactions.

Nov. 8, 2016 | Rosemead | Charge Ready Education & Outreach
Charge Ready Weekly MUD Virtual Workshop (collaboration with CalCAP): **0** estimated customer interactions.

Nov. 15, 2016 | Rosemead | Charge Ready Education & Outreach
Charge Ready Weekly MUD Virtual Workshop (collaboration with CalCAP): **0** estimated customer interactions.

Dec. 12, 2016 | Rosemead | Charge Ready Education & Outreach
Consumer Advisory Panel Brainstorming Session (hosted by SCE): **50** estimated customer interactions.

Dec. 13, 2016 | Los Angeles | Charge Ready Education & Outreach
SCAG EV Charging Stations and Multi-Family Housing: Overcoming the Obstacles: **20** 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 three rounds of the RFI process held through 2016, SCE is currently evaluating 123 submitted charging systems.

The Pilot's Approved Package List[12] summarizes the vendors and EVSE models available to Customer Participants as of Q3 2016. The Pilot offerings decreased since Q3 2016; the Pilot currently offers 32 models from 8 vendors. The decrease in models is a result of a vendor withdrawing from the program. 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

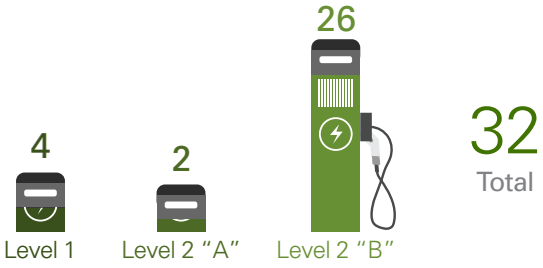


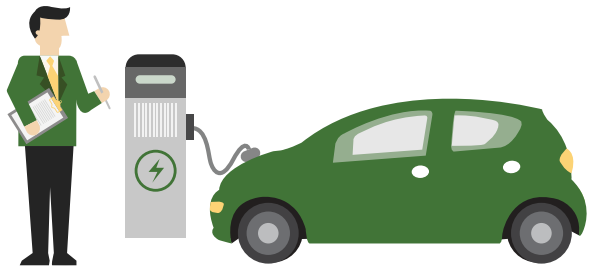
Table 3.2 – EVSE Model Summary

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	6
Number of pedestal units	0
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]."[13] 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 Q4 2016 are shown in Table 3.3. The base cost values changed from the prior reporting period due to new model additions and model removals.

Table 3.3 – Base Cost of Charging Systems

Charging System Type	Prior Base Cost	Base Cost effective 12/1/2016
Level 1	$1,613	$1,396
Level 2 "A"	$1,636	$2,188
Level 2 "B"	$1,958	$1,611



12 The Pilot's Approved Package List can be found on the landing page at https://on.sce.com/chargeready.
13 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 filed a DR Pilot proposal for Commission approval as part of SCE's 2018-2022 DR program application. The DR Pilot will inform the Charge Ready Demand Response program which will be identified in 2019. 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 Q4 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

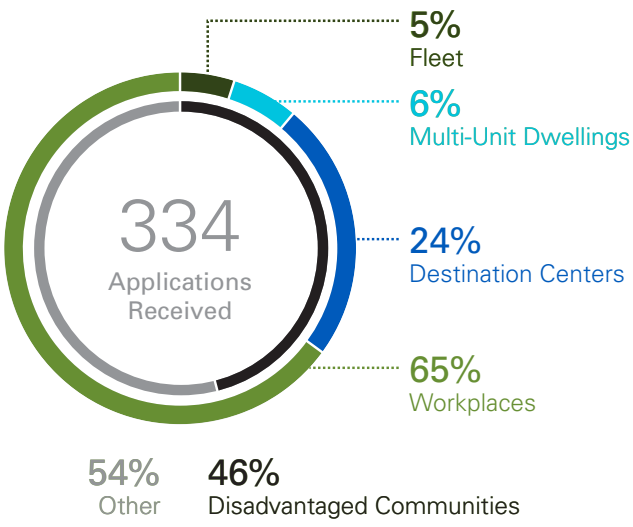
For Q4 2016, a majority of applications are currently in the Confirmation stage. Forty-three projects submitted a signed Step 2 – Agreement and have started the Planning and Design stage. These customers are currently in the process of procuring their charging stations and submitting their Step 3 – Certification within the program's 30 day deadline. SCE continues to observe varied, at times lengthy, customer timelines to execute the Step 2 Agreement. SCE also observes that a majority of customers require extensions beyond the 30 day deadline to submit their Step 3 – Certification to SCE. Internal customer approval and procurement processes are the main drivers for the extended timelines. Another cause for delays is customer concerns regarding the program's requirement for a contingent easement that provides a "blanket" easement over their entire property. To eliminate their concerns, SCE now bypasses the contingent easement and only requires execution of a final easement that corresponds to the final design and location of the charging stations.

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 December 31, 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 4, 2016	Year-to-Date Actual	Toward Goal
Total number of applications received	58 sites, 1,500 charge ports	28 sites, 127 charge ports	334 sites, 2,043 charge ports	576%, 136%
Number of approved and confirmed sites (Step 2 Agreement signed)	58 sites, 1,500 charge ports	37 sites, 571 charge ports	43 sites, 687 charge ports	74%, 46%
Number of applicants rejected	N/A	32 sites 152 requested chargers	76 sites 364 requested chargers	N/A
Number of applicants withdrawn	N/A	32 sites, 253 chargers	104 sites, 367 chargers	N/A

Graph 5.1 – YTD Applications Received



Graph 5.2 – YTD Charge Ports Requested

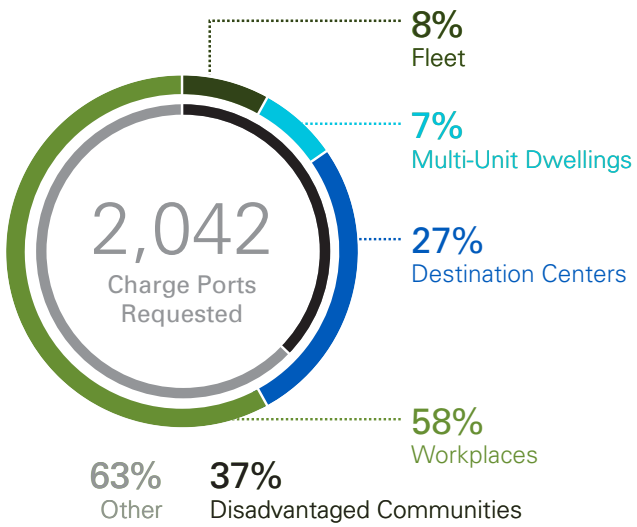


Table 5.2 – Customer Participant Request

Customer Participant Request	Year-to-Date Actual
Average number of total parking spaces per site	621 parking spaces/site
Percentage of total number of parking spaces located in parking structures	12%
Average fleet size[14]	13 (Fleet Segment Only) 25 (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	10
Average number of charge ports requested per site	7.6

Table 5.3 – Pilot Costs

	Planning Assumptions	Year-to-Date Actual	Toward Goal
Total estimated Pilot costs (SCE infrastructure plus rebate)[15]	$16,792,136	$9,435,238 687 charge ports	56%
Average estimated cost per site (T&D + Customer infrastructure + rebate)[16]	$291,070 ($11,195 * 26 chargers)	Average Cost per Site: $219,424 Average No. Charge Ports per Site: 16	N/A
Average estimated cost per port (T&D + Customer infrastructure + rebate)[17]	$11,195	$13,734	123%
Total amount of rebate reserved	$5,850,000	$855,805	15%
Average amount of rebate reserved per site	$101,400 ($3,900 * 26 chargers)	$19,902[18]	35%

14 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). .
15 Estimated program costs are based on applications with customer-signed Step 2 - Agreement. In past reports in 2016, the estimated Pilot costs were based on applications with completed site assessments. Actual costs will be available following charging station installation and rebate issuance.
16 Estimated program costs are based on initial site assessment. Costs are subject to customer's Step 2 Agreement.
17 Estimated program costs are based on initial site assessment. Costs are subject to customer's Step 2 Agreement.
18 Rebate levels in Pilot are expected to be less than planning assumptions due to reduced rebate levels established in the CPUC Final Decision 16-01-023.

Graph 5.3 – Rebate Reserved by Segment

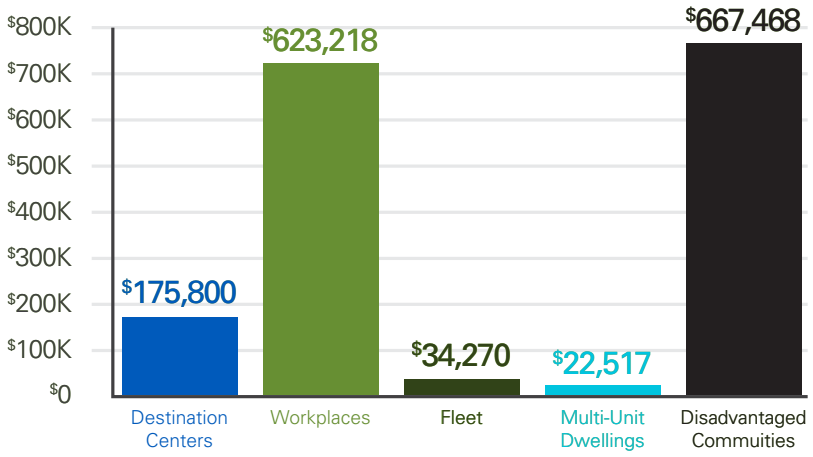


Table 5.4 – Pilot Cycle Times

Pilot Cycle Times	
Average time for the Customer to confirm Site Visit date	3 business days
Average time for the Customer to execute Step 2 Agreement	21 business days
Average time to complete Site Visit	11 business days
Average time to complete Site Assessment	23 business days
Average time for EVSE to be Purchased by Customer by segment[19]	21 business days
Average time for Customer to execute contingent easement	32 business days
Average time to complete base map	9 business days
Average time to complete preliminary design	19 business days
Average time from preliminary design complete to preliminary design approved by customer	4 business days
Average time to complete final design	13 business days

19 Time duration from customer signing Step 2 – Agreement to SCE receiving Step 3 – Certification.

Table 5.5 – Charging Station Request & Rebate

Charging Station Request & Rebate	
Number of Level 1 charge ports requested[20]	1
Number of Level 2 charge ports requested[21]	692
Number of total charge ports approved	687
Average Number of Level 1 charge ports approved per site	1
Average Number of Level 2 charge ports approved per site	16
Number of Level 1 EVSE bought	0
Average number of ports per Level 1 EVSE	0
Number of Level 2A EVSE bought	125
Average number of ports per Level 2A EVSE	1.7
Number of Level 2B EVSE bought	123
Average number of ports per Level 2B EVSE	1.1
Rebate amount reserved for Level 1 ports	$0
Rebate amount reserved for Level 2A ports	$350,104
Rebate amount reserved for Level 2B ports	$270,204

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. The table below describes events conducted in Q4 2016.

Table 5.6 – Charge Ready Collaboration Efforts with Complimentary EV Programs

Oct. 6, 2016 | Long Beach
League of Cities: **50** estimated customer interactions.

Dec. 13, 2016 | Los Angeles
SCAG EV Charging Stations and Multi-Family Housing: Overcoming the Obstacles: **20** estimated customer interactions.

5.4 Disadvantaged Communities Outreach Events

SCE's outreach events for Disadvantaged Communities in Q4 2016 are summarized in the table 5.7. 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.

In December 2016, SCE conducted the first of their Consumer Advisory Panel sessions. The purpose of this high level concept plan is to design, manage, and facilitate "listening" sessions with key stakeholders about the barriers disadvantaged communities face in acquiring electric vehicles. These "listening" sessions allow SCE to learn about potential barriers and opportunities to develop and design a future Phase 2 program that disadvantaged communities can fully support and adopt throughout SCE's service area. Please access the report from the first Consumer Advisory Panel session **here**.

Table 5.7 – Disadvantaged Community Outreach Events

Dec. 2, 2016 | Rosemead
Consumer Advisory Panel Brainstorming Session (hosted by SCE): **50** 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.

During the Planning and Design stage, SCE learned of program barriers to customer participation and made adjustments to program requirements. To better serve our customers, adjustments were made to the maximum number of ports authorized for disadvantaged communities, easement requirements, and program form instructions. In the next quarter, SCE will learn from the first projects designed and constructed through the Pilot.

Appendix

Appendix

Pilot Operational Metrics for Quarter

Total number of applications received

	Planning Assumptions	Quarter 4, 2016	Year-to-Date Actual	Toward Goal
	58 sites, 1,500 charge ports	28 sites, 127 charge ports	334 sites, 2,043 charge ports	576%, 136%
Disadvantaged Communities	N/A	24%	46%	N/A
Destination Centers	N/A	21%	24%	N/A
Workplaces	N/A	48%	65%	N/A
Fleet	N/A	7%	5%	N/A
Multi-Unit Dwellings	N/A	24%	6%	N/A

Percentage of charging stations requested

	Planning Assumptions	Quarter 4, 2016	Year-to-Date Actual	Toward Goal
	58 sites, 1,500 charge ports	28 sites, 127 charge ports	334 sites, 2,043 charge ports	576%, 136%
Disadvantaged Communities	10%	18%	37%	368%
Destination Centers	N/A	14%	27%	N/A
Workplaces	N/A	32%	59%	N/A
Fleet	N/A	32%	8%	N/A
Multi-Unit Dwellings	N/A	21%	7%	N/A

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

	Planning Assumptions	Quarter 4, 2016	Year-to-Date Actual	Toward Goal
	58 sites, 1,500 charge ports	37 sites, 571 charge ports	43 sites, 687 charge ports	74%, 46%
Disadvantaged Communities	N/A	12 sites, 88 chargers	17 sites, 194 chargers	N/A
Destination Centers	N/A	14 sites, 173 chargers	17 sites, 194 chargers	N/A
Workplaces	N/A	20 site, 365 chargers	21 sites, 445 chargers	N/A
Fleet	N/A	1 site, 10 chargers	3 sites, 25 chargers	N/A
Multi-Unit Dwellings	N/A	2 sites, 23 chargers	2 sites, 23 chargers	N/A

Number of applicants rejected

	Quarter 4, 2016	Year-to-Date Actual
	32 sites 152 requested chargers	76 sites 364 requested chargers
Disadvantaged Communities	34%	39%
Destination Centers	27%	28%
Workplaces	68%	66%
Fleet	0%	1%
Multi-Unit Dwellings	5%	5%

Number of applicants withdrawn

	Quarter 4, 2016	Year-to-Date Actual
	32 sites, 253 chargers	104 sites, 367 chargers
Disadvantaged Communities	56%	47%
Destination Centers	9%	18%
Workplaces	85%	71%
Fleet	3%	4%
Multi-Unit Dwellings	3%	7%

Number of applicants withdrawn after signing Step 2 - Agreement

	Quarter 4, 2016	Year-to-Date Actual
	0%	0%
Disadvantaged Communities	0%	0%
Destination Centers	0%	0%
Workplaces	0%	0%
Fleet	0%	0%
Multi-Unit Dwellings	0%	0%

Total number of charge ports installed

	Quarter 4, 2016	Year-to-Date Actual
	Available once chargers deployed	
Disadvantaged Communities	Available once chargers deployed	
Destination Centers	Available once chargers deployed	
Workplaces	Available once chargers deployed	
Fleet	Available once chargers deployed	
Multi-Unit Dwellings	Available once chargers deployed	

Average number of charge ports installed per site

	Quarter 4, 2016	Year-to-Date Actual
	Available once chargers deployed	
Disadvantaged Communities	Available once chargers deployed	
Destination Centers	Available once chargers deployed	
Workplaces	Available once chargers deployed	
Fleet	Available once chargers deployed	
Multi-Unit Dwellings	Available once chargers deployed	

Total number of completed projects

	Planning Assumptions	Quarter 4, 2016	Year-to-Date Actual
	58 sites, 1,500 chargers	Available once chargers deployed	
Disadvantaged Communities	N/A	Available once chargers deployed	
Destination Centers	N/A	Available once chargers deployed	
Workplaces	N/A	Available once chargers deployed	
Fleet	N/A	Available once chargers deployed	
Multi-Unit Dwellings	N/A	Available once chargers deployed	

Average number of total parking spaces per site

	Customer Participant Request
	621 parking spaces/site
Disadvantaged Communities	376 parking spaces/site
Destination Centers	932 parking spaces/site
Workplaces	523 parking spaces/site
Fleet	404 parking spaces/site
Multi-Unit Dwellings	643 parking spaces/site

Percentage of total number of parking spaces located in parking structures

	Customer Participant Request
	12%
Disadvantaged Communities	1,040
Destination Centers	12,100
Workplaces	43,982
Fleet	3,764
Multi-Unit Dwellings	3,134

Average fleet size[22]

Customer Participant Request	
	13 (Fleet Segment Only) 25 (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	10

Average number of charge ports requested per site

Customer Participant Request	
All sites	7.6
Disadvantaged Communities	8.3
Destination Centers	9.2
Workplaces	9.8
Fleet	13.1
Multi-Unit Dwellings	8.1

Pilot Costs

Pilot Costs			
Total estimated Pilot costs (SCE infrastructure plus rebate paid)[23]	$16,792,136	$9,435,238 687 charge ports	56%
Average estimated cost per site (T&D + Customer infrastructure + rebate)[24]	$291,070 ($11,195 * 26 chargers)	Average Cost per Site: $219,424 Average No. Charge Ports per Site: 16	N/A
Average estimated cost per port (T&D + Customer infrastructure + rebate)[25]	$11,195	$13,734	N/A

22 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).
23 Estimated program costs are based on initial site assessment. Costs are subject to customer's Step 2 Agreement.
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.

Total estimated Pilot costs

Pilot Costs	
Disadvantaged Communities	$5,175,891
Destination Centers	$3,014,766
Workplaces	$5,687,938
Fleet	$413,057
Multi-Unit Dwellings	$319,477

Total amount of rebate reserved

Pilot Costs			
	$5,850,000	$855,805	3.6%
Average amount of rebate reserved per site	$101,400 ($3,900 * 26 chargers)	$19,902	N/A
Disadvantaged Communities	N/A	$677,468	N/A
Destination Centers	N/A	$175,800	N/A
Workplaces	N/A	$623,218	N/A
Fleet	N/A	$34,270	N/A
Multi-Unit Dwellings	N/A	$22,517	N/A

Total amount of rebate paid

Pilot Costs		
	$5,850,000	Available once chargers deployed
Disadvantaged Communities	N/A	Available once chargers deployed
Destination Centers	N/A	Available once chargers deployed
Workplaces	N/A	Available once chargers deployed
Fleet	N/A	Available once chargers deployed
Multi-Unit Dwellings	N/A	Available once chargers deployed

Average amount of rebate paid per site

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

Total actual construction costs for SCE infrastructure

Pilot Costs		
	$10,942,136	Available once chargers deployed
Disadvantaged Communities	N/A	Available once chargers deployed
Destination Centers	N/A	Available once chargers deployed
Workplaces	N/A	Available once chargers deployed
Fleet	N/A	Available once chargers deployed
Multi-Unit Dwellings	N/A	Available once chargers deployed

Average actual construction cost for SCE infrastructure per site

Pilot Costs		
	$7,295	Available once chargers deployed
Level 1 charging systems	N/A	Available once chargers deployed
Level 2 charging systems	N/A	Available once chargers deployed
Hybrid charging systems (both Level 1 and Level 2)	N/A	Available once chargers deployed
Total actual SCE construction cost incurred by withdrawn applicants	N/A	Available once chargers deployed
Average actual SCE construction cost incurred by withdrawn applicants	N/A	Available once chargers deployed

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[26]	21 business days
Average time for the Customer to execute Step 2 Agreement	21 business days
Average time for the Customer to confirm Site Visit date	3 business days
Average time to complete Site Visit	11 business days
Average time to complete Site Assessment	23 business days
Average time from EVSEs purchased by Customer to chargers installed[27]	Available once construction completed
Average time for T&D to complete base map	9 business days
Average time to complete T&D preliminary design	19 business days
Average time from preliminary design complete to preliminary design approved by customer	4 business days
Average time for Customer to execute contingent easement	32 business days
Average time for Customer to execute final easement	Available once final easements completed
Average time to complete T&D final design	13 business days
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

26 Time from applicant completing Step 2 Agreement form to completing Step 3 Certification form.
27 Time from Step 3 Certification form completion to chargers installed by vendors.

Charging Station Request & Rebate

Charging Station Request & Rebate	
Number of Level 1 charge ports requested[28]	0
Number of Level 2 charge ports requested[29]	692
Number of total charge ports approved	687
Average Number of Level 1 charge ports approved per site	1
Average Number of Level 2 charge ports approved per site	16
Number of Level 1 EVSE bought	0
Average number of ports per Level 1 EVSE	0
Number of Level 2A EVSE bought	125
Average number of ports per Level 2A EVSE	1.7
Number of Level 2B EVSE bought	123
Average number of ports per Level 2B EVSE	1.1
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	$0
Rebate amount reserved for Level 2A ports	$350,104
Rebate amount reserved for Level 2B ports	$270,204
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

28 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.

29 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.