| **Docketed** |
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| **Filer:** | Tami Haas |
| **Organization:** | California Energy Commission |
| **Submitter Role:** | Commission Staff |
| **Submission Date:** | 6/9/2020 5:12:25 PM |
| **Docketed Date:** | 6/10/2020 |
Counting Electric Vehicle Charges in California

Wednesday, June 10, 2020

Thanh Lopez
Fuels and Transportation Division
Thank You for Attending Remotely

Due to high traffic, you may experience technical difficulties during this webinar. We apologize for potential delays or compromised presentation quality.

The workshop recording will be posted on the event page:
https://www.energy.ca.gov/event/2020-06/staff-workshop-counting-electric-vehicle-chargers-california
Meeting Agenda

10:00 am  Introductions and Background

10:30 am  Presentation: Current/Future Efforts by Public Agencies

11:30 am  Public Comment

12:00 pm  Lunch break

1:00 pm   Existing Data, Gaps, and Methods Discussion

1:30 pm   Public Discussion
Commitment to Diversity

The Energy Commission adopted a resolution on April 8, 2015 to firmly commit to increasing:

• Participation of women, minority, disabled veteran and LGBT business enterprises in program funding opportunities
• Outreach and participation by disadvantaged communities
• Diversity in participation at Energy Commission proceedings
• Diversity in employment and promotional opportunities
Commitment to Diversity (cont.)

**Fairness** – Increasing funding accessibility to all Californians

**Inclusion** – Small businesses make up a significant portion of the U.S. economy

**Job Creation** – Projects can create jobs for residents of the under-served communities

**Diversity of Ideas** – Great ideas occur in a variety of areas

**Diversity in Communities’ Needs** – Needs vary widely from one area to the next (air quality, socioeconomic, etc.)
PURPOSE: Get aggregate count of public and shared private chargers in California

1) Show progress towards the state's 250,000-charger goal by 2025
2) Inform and improve public and private investment decisions

PROGRESS TO 2025 GOAL

Source: Draft Staff Report- 2020-2023 Investment Plan Update for the Clean Transportation Program
Definition of Public and Shared Private

**Public** – parking space designated by property owner or lessee to be available to, and accessible by, the public. Doesn’t include parking spaces that is part of private residences, spaces reserved for individual driver or vehicle (i.e., employees, tenants, visitors)

**Shared Private** – parking space designated by property owner or lessee to be available to, and accessible by, employees, tenants, visitors, and residents. The parking space is not reserved for an individual driver or vehicle.

**Examples:**
- Workplace charging – chargers shared between employees
- Multi-family – chargers shared between tenants and visitors
- Fleet charging – chargers shared between fleet vehicles used by an organization including, but not limited to, government, rental companies, transportation network companies, taxi services, delivery vehicles, and company owned vehicles
Barriers to Counting Chargers

- No comprehensive database
  - Incomplete data for shared private chargers

- Difficulty quantifying chargers:
  - Inconsistent nomenclature
  - Double counting
  - De-commissioned chargers
Efforts to Collect Charger Data
Public Comment/Discussion

Zoom Participants
• Use the “raise hand” feature to make verbal comments
• Use the Q&A feature to type in your question

Telephone Participants:
• Dial *9 to raise your hand
• Dial *6 to mute/unmute your phone line.

Written Comments
https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=20-TRAN-03
LUNCH BREAK

WILL RETURN AT 1:00 PM
Afternoon Agenda

• Existing Data Sources for Charger Inventory
• Gaps in Data
• Proposed Methods to Count Chargers
• Public Discussion
Previous CEC Survey

Survey issued in January 2019 to EVSPs, IOUs, large POUs, and government agencies

<table>
<thead>
<tr>
<th>Level 2 Connectors and DCFCs</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFDC Public</td>
<td>18,841</td>
</tr>
<tr>
<td>AFDC Private</td>
<td>2,514</td>
</tr>
<tr>
<td>Survey Private (Level 2 only)*</td>
<td>18,484</td>
</tr>
<tr>
<td>Total</td>
<td>39,839</td>
</tr>
</tbody>
</table>

*Note: DCFCs were already accounted for in the AFDC database count
Existing Data for Charger Inventory
# Data Collection Matrix – Public Chargers

<table>
<thead>
<tr>
<th>Data Source</th>
<th>All EVSE in CA?</th>
<th>Address Level</th>
<th>Networked</th>
<th>Non-Networked</th>
<th># of EVSEs</th>
<th>Timeframe/Updates</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFDC Station Locator</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>Daily via API Regularly via spreadsheet</td>
</tr>
<tr>
<td>PlugShare</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td></td>
<td>Daily via API Regularly from crowdsourcing, automakers</td>
</tr>
<tr>
<td>CEC Title 20 Data Collection (In development)</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
<td>Spring 2021 for Regulations</td>
</tr>
<tr>
<td>CEC POU IRP Reporting</td>
<td>POU territory Only</td>
<td>No</td>
<td>No info</td>
<td>No info</td>
<td>Only some provided aggregated #s</td>
<td>First IRP was due 1/2019. Update at least once every 5 years.</td>
</tr>
<tr>
<td>CPUC IOU Program Reporting</td>
<td>IOU Programs Only</td>
<td>Census Tract, ZIP Level</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>Quarterly/Semi-Annually Updating to Monthly</td>
</tr>
<tr>
<td>ARB EVSE Standards</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>First report due August 2020</td>
</tr>
<tr>
<td>Low Carbon Fuel Standard</td>
<td>YES</td>
<td>No Info</td>
<td>No Info</td>
<td>Connector level, no distinction in type of port</td>
<td></td>
<td>Quarterly Last updated Feb 2020</td>
</tr>
</tbody>
</table>
## Data Collection Matrix – Shared Private Chargers

<table>
<thead>
<tr>
<th>Entity</th>
<th>All EVSE in CA?</th>
<th>Address Level</th>
<th>Networked</th>
<th>Non-Networked</th>
<th># of EVSEs</th>
<th>Timeframe Updates</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFDC Station Locator</td>
<td>SOME</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>Data manually collected/submitted</td>
</tr>
<tr>
<td>PlugShare</td>
<td>SOME</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>Yes, but no downloadable database</td>
<td>Daily via API Regularly from crowdsourcing, automakers</td>
</tr>
<tr>
<td>CEC Title 20 Data Collection (In development)</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>Spring 2021 for Regulations</td>
</tr>
<tr>
<td>CEC POU IRP Reporting</td>
<td>POU territory Only</td>
<td>No</td>
<td>No info</td>
<td>No info</td>
<td>Only some provided aggregated #s</td>
<td>First IRP was due 1/2019. Update at least once every 5 years.</td>
</tr>
<tr>
<td>CPUC IOU Program Reporting</td>
<td>IOU Programs Only</td>
<td>Census Tract, ZIP Level</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>Quarterly/Semi-Annually Updating to Monthly</td>
</tr>
<tr>
<td>ARB EVSE Standards</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>First report due August 2020</td>
</tr>
<tr>
<td>Low Carbon Fuel Standard</td>
<td>Entities Collecting Credit</td>
<td>YES</td>
<td>No Info</td>
<td>No Info</td>
<td>Connector level, no distinction in type of port</td>
<td>Quarterly Last updated Feb 2020</td>
</tr>
</tbody>
</table>
Methods to Count Chargers

Submission of shared private stations to NREL

• NREL already separates public and private stations in the AFDC.

• Potential agreements with NREL to collect the data necessary to ensure chargers are not double counted.

• Private station data will remain housed at NREL in the AFDC and shared with state agencies in a manner consistent with agreements between NREL and the data provider.

• Methods to submit data:
  • API, Data Collection Spreadsheet
  • AFDC Webform (individual station reporting)
Methods to Count Chargers (cont.)

CEC Quarterly Survey Method

- Email outreach with template to EVSPs, utilities, and public agencies.

- Survey to collect aggregate counts of public and shared private chargers
  - Aggregated to either county or ZIP code level.
  - If possible, broken down between workplaces, fleet, multi-unit dwelling, and public charging.

- First survey to be sent out July 2020 (quarterly thereafter).
Terminology and Counting Chargers

**CHARGING STATION**
A physical address with one or multiple EVSEs.

**CONNECTOR**
A specific socket or cable assembly available for the electric vehicle to use. A charger may have multiple connectors.

**CHARGER = EVSE**
The device that controls the power supply to a single electric vehicle in a single session.

**COUNTING CHARGERS**
The number of vehicles that can charge at a single charger simultaneously, regardless of the number of connectors.

Two Chargers – if two vehicles can charge simultaneously.

One Charger – If only one vehicle can charge at a time.
# Workshop Schedule and Next Steps

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Scheduled Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conduct Workshop</td>
<td>June 10, 2020 ✓</td>
</tr>
<tr>
<td>Workshop Comment Period</td>
<td>June 26, 2020</td>
</tr>
<tr>
<td>Counting Chargers Survey</td>
<td>July 6, 2020</td>
</tr>
<tr>
<td>Survey Deadline (2 weeks)</td>
<td>July 20, 2020</td>
</tr>
</tbody>
</table>
CEC Proposal of Preferred Method

• Submit to NREL:
  • Shared private charger locations and charger counts.
    – OR –
  • Aggregate charger counts at the ZIP code level (preferred) or county level.

• Quarterly surveys sent network providers, utilities and public agencies to capture shared private charger counts not submitted to NREL.
Public Comment/Discussion Period

Zoom Participants
• Use the “raise hand” feature to make verbal comments
• Use the Q&A feature to type in your question

Telephone Participants:
• Dial *9 to raise your hand
• Dial *6 to mute/unmute your phone line.

Written Comments
https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=20-TRAN-03
Are there any issues/concerns with sharing shared private charger locations/counts with NREL?
Is there a preferred method to submit survey information to the CEC?
Other than EVSPs, utilities, and public agencies, are there suggested recipients to send the quarterly survey to?
How do we avoid double counting chargers?
How do we count non-networked shared private chargers?
Submit Comments to Docket 20-TRAN-03

Electronic Commenting System
Visit the comment page for this docket at:
https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=20-TRAN-03

Comment by E-mail
E-mail: docket@energy.ca.gov
Subject Line: “20-TRAN-03 Counting EV Chargers in California”

All comments due by 5:00 pm on June 26, 2020
E-Commenting for Docket 20-TRAN-03
THANK YOU!!

Counting Electric Vehicle Chargers in California
June 10, 2020

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Office: (916) 654-3929