

**DOCKETED**

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<b>Project Title:</b>	Counting Electric Vehicle Chargers in California
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<b>Document Title:</b>	Presentation - Counting Electric Vehicle Chargers in California
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<b>Docketed Date:</b>	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

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- 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

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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.)

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**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

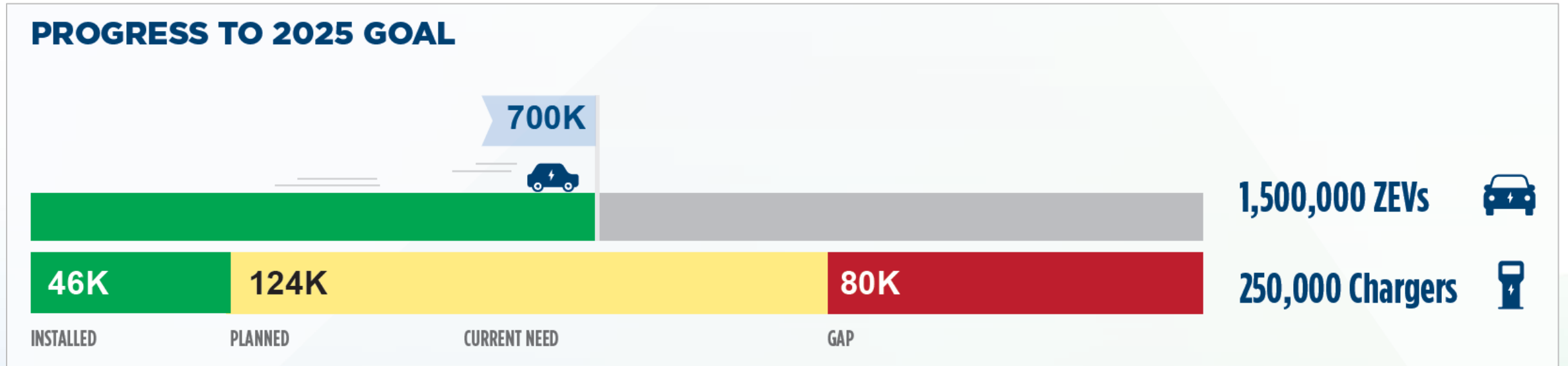
**Diversity in Communities' Needs** – Needs vary widely from one area to the next (air quality, socioeconomic, etc.)



# Background – Count to 250,000

**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



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

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## 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



**Counting Electric Vehicle Chargers in California**  
June 10, 2020

# Afternoon Agenda

- Existing Data Sources for Charger Inventory
- Gaps in Data
- Proposed Methods to Count Chargers
- Public Discussion



**Counting Electric Vehicle Chargers in California  
June 10, 2020 – Afternoon Session (1:00 pm)**



# Previous CEC Survey

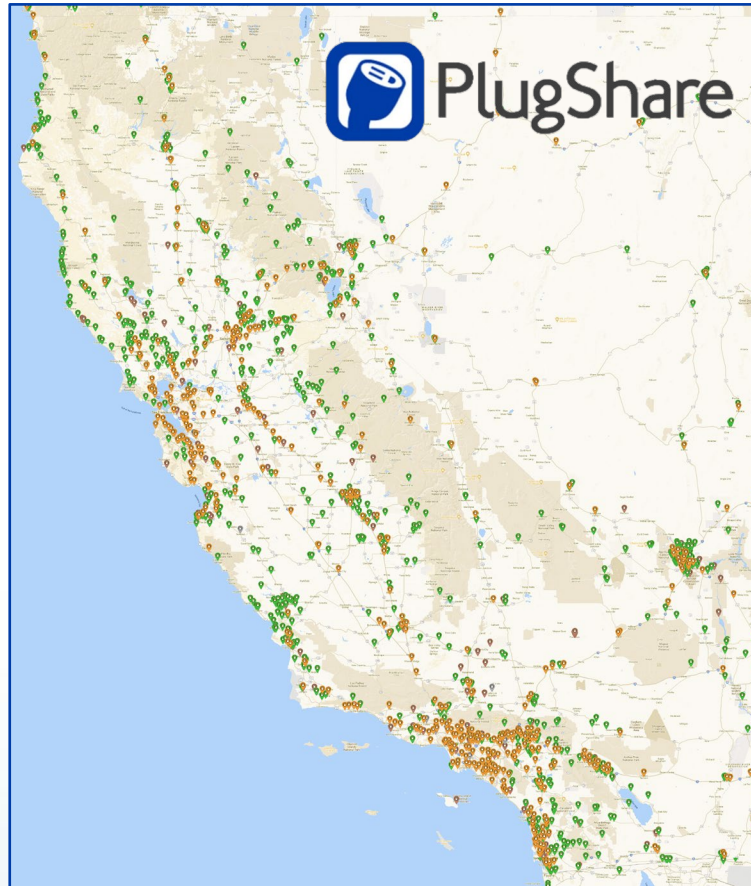
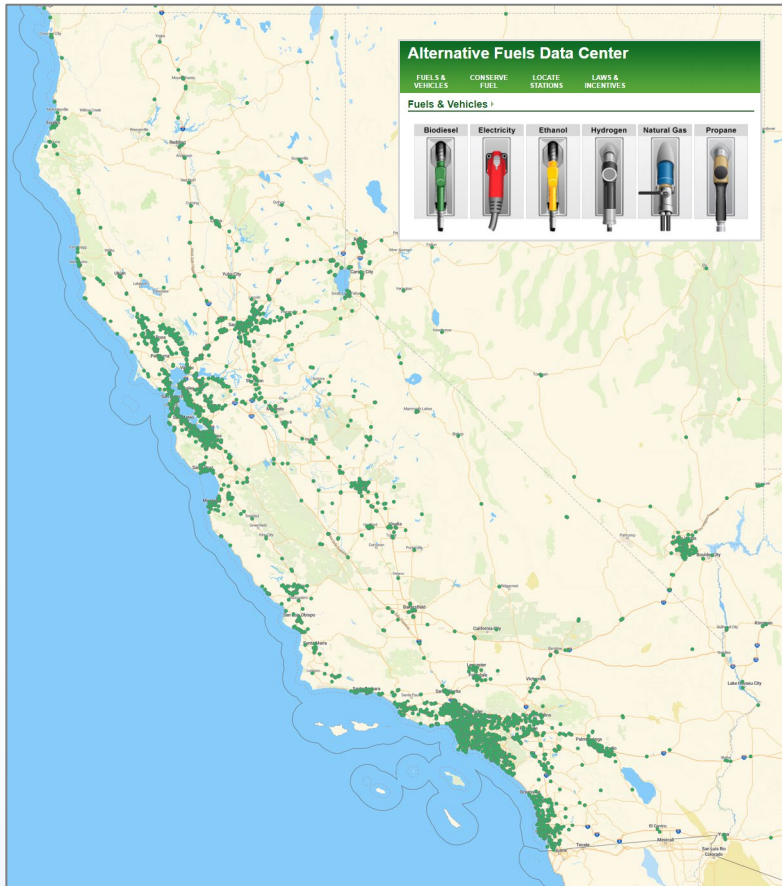
Survey issued in January 2019 to EVSPs, IOUs, large POUs, and government agencies

Level 2 Connectors and DCFCs	Number
AFDC Public	18,841
AFDC Private	2,514
Survey Private (Level 2 only)*	18,484
Total	39,839

\*Note: DCFCs were already accounted for in the AFDC database count



# Existing Data for Charger Inventory



Settlement Year 7 – Q4 Report  
Progress Report to California Public Utilities Commission  
Electric Vehicle Charging Station Project

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Consider  
Alternative-Fueled Vehicle Programs, Tariffs,  
and Policies.

Rulemaking 13-11-007  
(Filed November 14, 2013)

Reporting Period:  
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Settlement agreement  
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Report to California  
Resources Board

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**SOUTHERN CALIFORNIA  
EDISON**  
An EDISON INTERNATIONAL Company

Together, Building  
a Better California

Pacific Gas and Electric Company  
**EV Charge Network  
Quarterly Report**  
Report Period: October 1, 2019 – December 31, 2019

**ev charge  
network**



# Data Collection Matrix – Public Chargers

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





# Data Collection Matrix – Shared Private Chargers

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



# 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

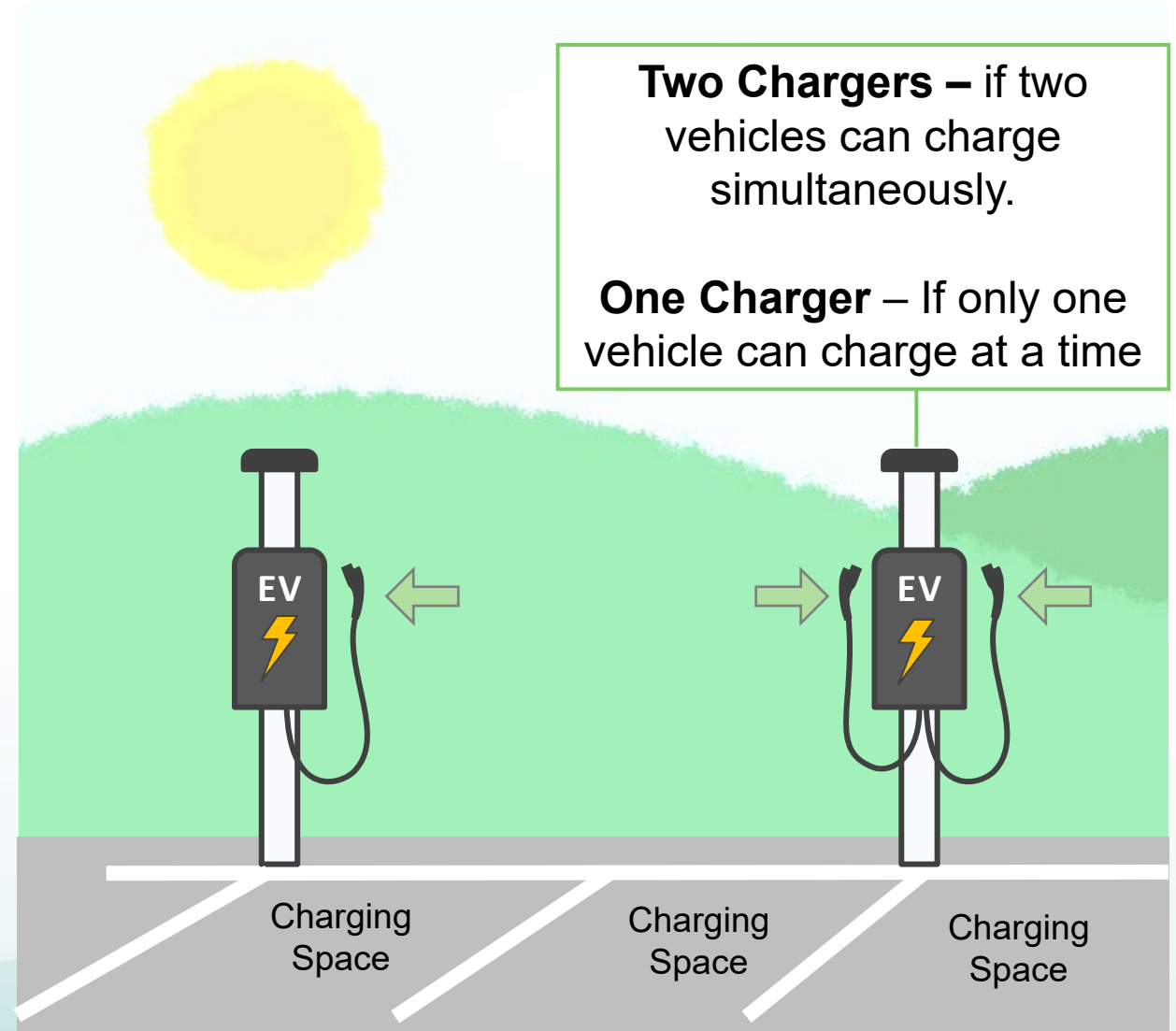
A specific socket or cable assembly available for the electric vehicle to use. A charger may have multiple connectors.

## 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.





# Workshop Schedule and Next Steps

Milestone	Scheduled Date
Conduct Workshop	June 10, 2020 ✓
Workshop Comment Period	June 26, 2020
Counting Chargers Survey	July 6, 2020
Survey Deadline (2 weeks)	July 20, 2020



# CEC Proposal of Preferred Method

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- 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

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## Zoom Participants

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

## Telephone Participants:

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## 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?**



**Public Discussion Period**



# Is there a preferred method to submit survey information to the CEC?



## Public Discussion Period

**Other than EVSPs, utilities, and public agencies, are there suggested recipients to send the quarterly survey to?**



**Public Discussion Period**

# How do we avoid double counting chargers?



## Public Discussion Period

# How do we count non-networked shared private chargers?



## Public Discussion Period



# Submit Comments to Docket 20-TRAN-03

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## Electronic Commenting System

Visit the comment page for this docket at:

<https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=20-TRAN-03>

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## Comment by E-mail

E-mail: [docket@energy.ca.gov](mailto: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

The screenshot shows the California Energy Commission website. At the top, there is a navigation bar with the CA.GOV logo, social media icons, and links for About, Careers, Contact, Events, Newsroom, Resources, and Settings. Below this is the main header with the California Energy Commission logo and a search bar. A dropdown menu for 'PROCEEDINGS' is open, showing options like Active Proceedings, Business Meetings, Dockets, E-Filing and E-Commenting (highlighted with a red box and a red arrow), Opportunities for Public Participation, and Siting Cases. The background features a large image of solar panels with the text '100% clean energy'.

The screenshot shows the 'E-Filing and E-Commenting' page. The main heading is 'E-Filing and E-Commenting' in a dark blue banner. Below this, there is a sub-heading: 'Information and resources about the California Energy Commission's e-filing and e-commenting systems.' A list of resources is provided:

- User Training Guide for E-Filing and E-Commenting - PDF
- Access E-Filing and E-Commenting for Specific Power Plant Projects
- Order regarding Copies Required for Applications for Certification and Small Power Plant Exemptions
- Order regarding Copies Required for Applications for Certification and Small Power Plant Exemptions

Below the list is a video player titled 'How to e-Comment' with 'Watch later' and 'Share' buttons. A red arrow points to the 'Share' button. To the right, there are two sidebar sections:

- PROCEEDINGS**
  - Active Proceedings
  - Business Meetings
  - Dockets
  - E-Filing and E-Commenting**
  - Opportunities for Public Participation
  - Siting Cases
- POPULAR LINKS**
  - Comment on a Proceeding** (highlighted with a red box and a red arrow)
  - E-File Document for a Proceeding
  - Search All Dockets

At the bottom, the text 'HOW TO E-COMMENT' is visible.

# THANK YOU!!

## Counting Electric Vehicle Chargers in California June 10, 2020



Staff Contact: Thanh Lopez

Email: [thanh.lopez@energy.ca.gov](mailto:thanh.lopez@energy.ca.gov)

Office: (916) 654-3929