



# VGI Policy in CA

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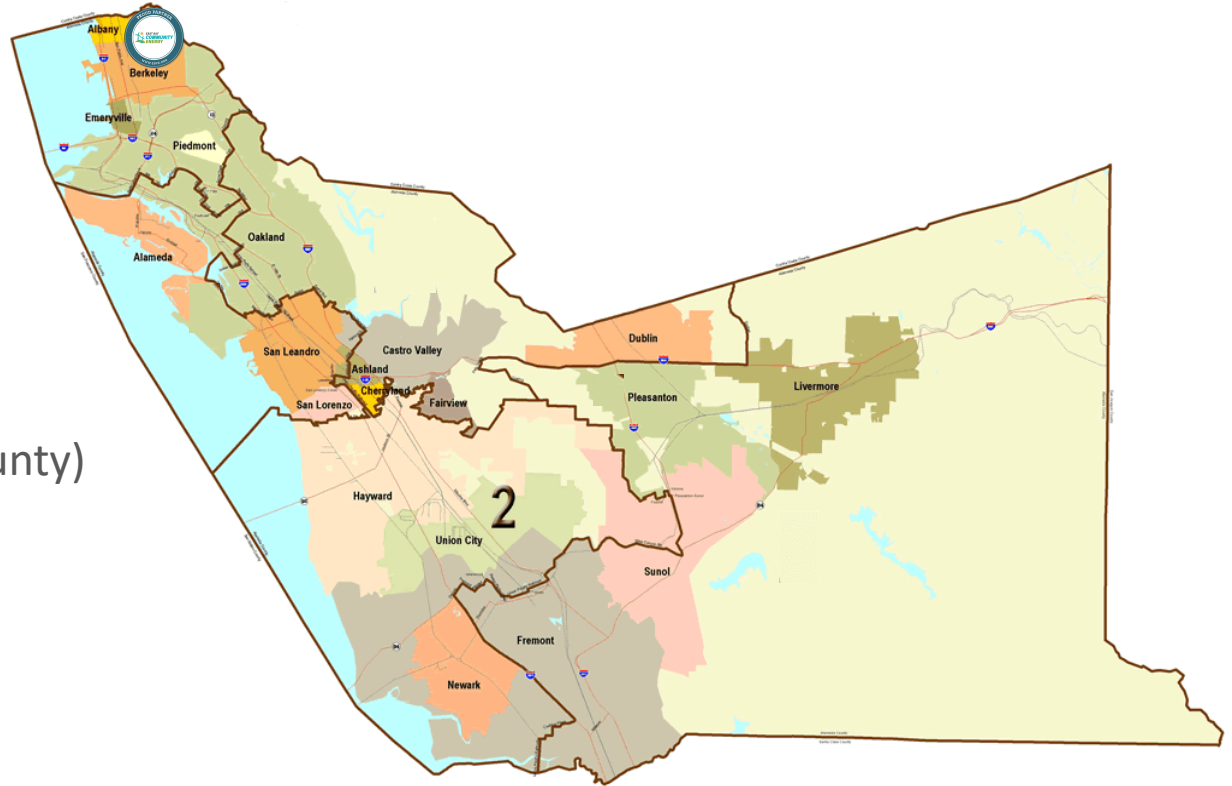
DATE: June 24, 2020



# EBCE Overview

Alameda County  
Albany  
Berkeley  
Dublin  
Emeryville  
Fremont  
Hayward

Livermore  
Newark  
Oakland  
Piedmont  
Pleasanton  
San Leandro  
Tracy (SJ County)  
Union City



# ZEV Goals

## State of CA

- 5M Zero Emission Vehicles x 2030
- 2025 Milestones
  - 1.5M ZEVs
  - 250,000 EV Chargers
    - Level 2 & DC Fast

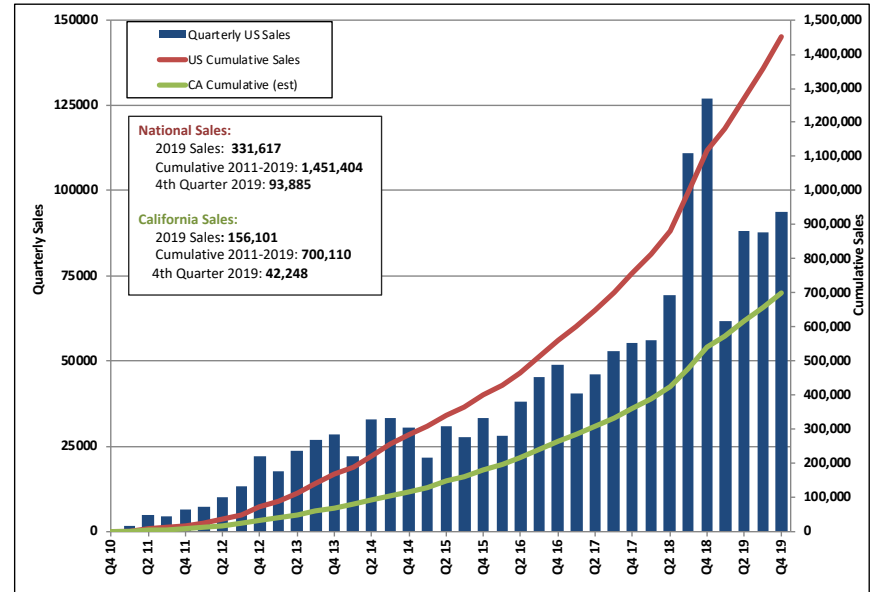
## EBCE

- 2020: 35,000
- 2025: 60,000
- 2030: 200,000 (L/M/HD)

## Widespread TE Requires VGI



Quarterly Sales of Electric Cars



Note: CA sales fluctuate between 45- 50% of national sales. Sales are now reported by quarter and not by month.  
Reference: [www.hybridcars.com](http://www.hybridcars.com) and [www.insideevs.com](http://www.insideevs.com)

Q4 2019 Data Update.  
Posted February 24, 2020

# California VGI Policy Timeline

- **2012**
  - “By 2020 EV charging will be integrated with the electricity grid” EO B-16-2012
- **2014**
  - CAISO publishes *California VGI Roadmap: Enabling Vehicle-based Grid Services*
- **2018**
  - CEC initiates process to update *Roadmap*
- **2019**
  - California’s Public Utilities Code Section 740.16 defines VGI
  - Per CPUC, new **VGI Working Group** to inform **Joint Agency** policy making (R.18-12-006)



# VGI Working Group Questions

1. What VGI use cases can provide value now & how can that value be captured?
2. What policies need to be changed or adopted to allow additional use cases to be deployed in the future?
3. How does the value of VGI use cases compare to other storage or DER?
  - *Which VGI use cases can provide value now?*



Source: MCE

# Use Case Assessment Framework:

**Sector:** SFH/MUD; Commercial; Rideshare; Truck & bus fleets

## Application

- Customer (bill mgmt., backup, RE self-consumption) vs.
- System services (ancillary, RE integration, etc.)

**Approach:** V1G or V2G

**Type:** Direct (managed charging) vs. Indirect (response to time varying rates)

*LD and M/HD represented by use cases*

# Policy Categories (90+ recommendations)

#	Category
1	Reform retail rates
2	Develop and fund government and LSE customer programs, incentives, and DER procurements
3	Design wholesale market rules and access
4	Understand & transform VGI markets by funding/launching data programs, studies & task forces
5	Accelerate use of EVs for bi-directional non-grid-export power / PSPS
6	Develop EV bi-directional grid-export power including interconnection rules
7	Fund and launch demonstrations and other activities to accelerate & validate commercialization
8	Develop, approve, and support adoption of other non-interconnection technical standards
9	Fund and launch market education & coordination
10	Enhance coordination and consistency between agencies and state goals
11	Conduct other non-VGI-specific programs and activities to increase EV adoption

## VGI WG Docs:

<https://gridworks.org/initiatives/vehicle-grid-integrationwg/>

# THANK YOU!

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[EBCE.org](http://EBCE.org)

