



Low Carbon Energy Initiatives at the California Public Utilities Commission (CPUC)



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A Brief Disclaimer

This presentation does not necessarily represent the views of the CPUC, its Commissioners, or the State of California. It has not been approved or disapproved by the CPUC, nor has the CPUC passed upon the accuracy or adequacy of the information in it.





About the CPUC

The CPUC regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies.

Headquarters: San Francisco (Expanding in Sacramento and Los Angeles)

1,249 Positions and \$340 Million Budget in 2017-18

Founded: 1911





Low-Carbon Energy Future

- Continued progress to reduce greenhouse gas (GHG) emissions from California's electric industry
- Develop the infrastructure that will fuel California's transportation sector with clean electricity
- Changing electricity marketplace where customers exercising choice in where and how they get electricity
- Electrify buildings that burn fossil fuels for heating and hot water





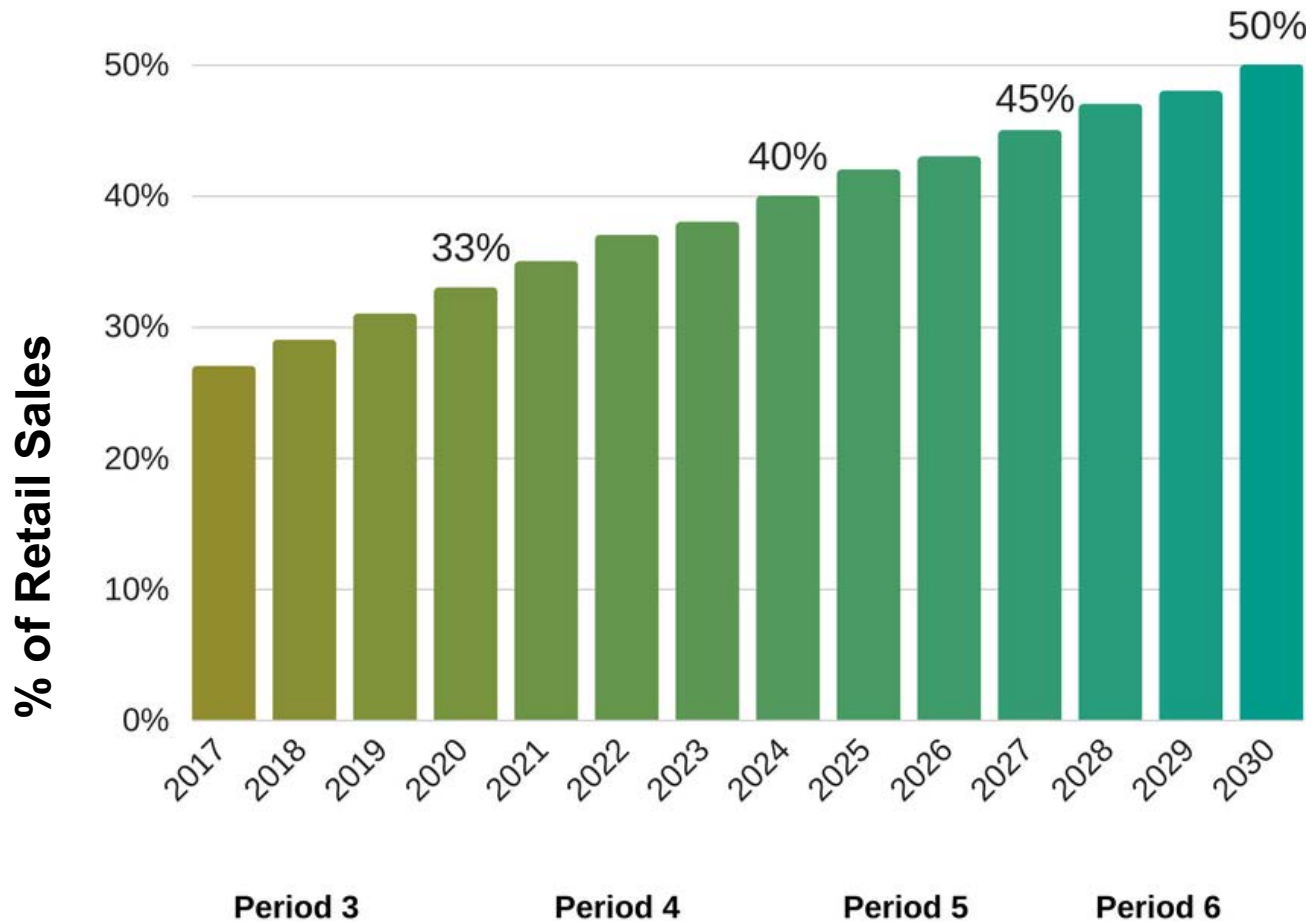
Reducing GHG Emissions from California's Electric Industry

- California's energy and environmental policies continue to drive major change
 - California's Renewable Portfolio Standard (RPS) Program was established in 2002 (20% Renewables)
- In 2017, the state received nearly 33% of its electricity from renewable sources, and is on track to have well over 40% of its energy coming from renewable sources by 2020
- California has set an even higher a goal of meeting 50% of its electrical needs with renewable energy by 2030





RPS Compliance Period Requirements (2017-2030)





Why Transportation Electrification?

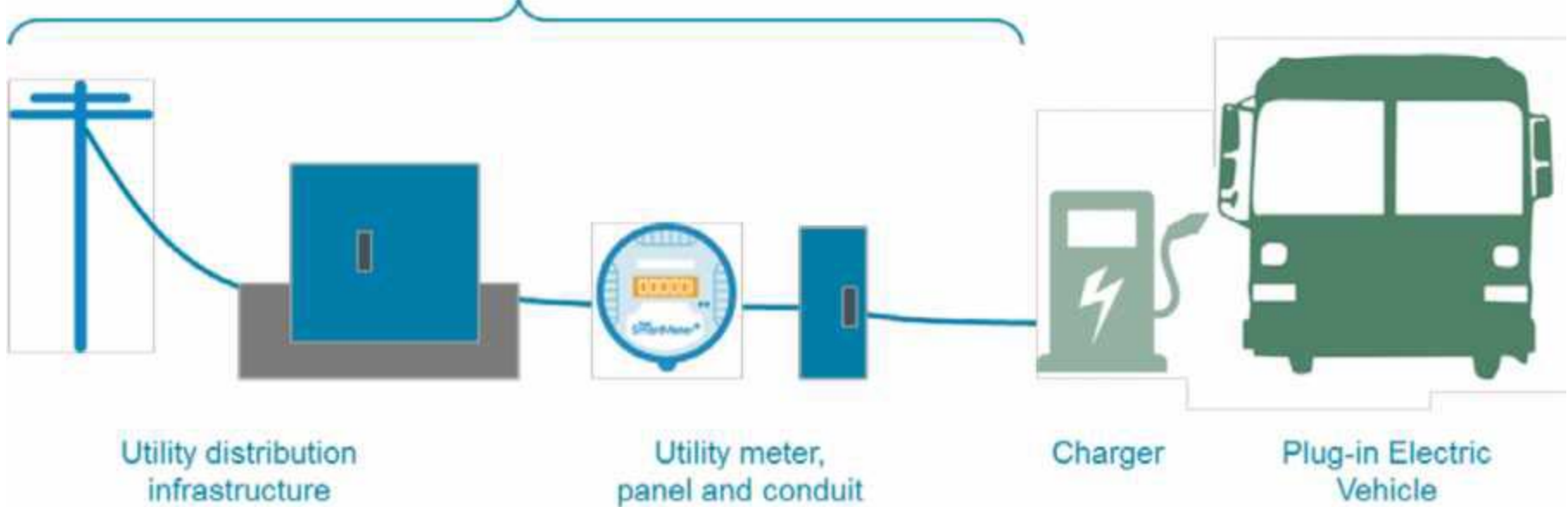
- Transportation emissions are 37 percent of statewide greenhouse gas emissions, 83 percent of statewide NOx emissions and 95 percent of statewide diesel emissions
- **Governor's goal:** 1.5 million zero emission vehicles on the roads by 2025
- **Current status:** About 340,000 electric cars





EV Charging Distribution Infrastructure

Make-ready infrastructure





What are the utilities already doing?

- Building charging at apartment/condo buildings and workplaces
- Providing a rebate or credit for buying an electric car
- Offering special rates for charging an electric car at home





Many Choices Available to California's Electric Customers

- Continue to receive bundled service from investor-owned utilities (PG&E, SCE, SDG&E)
- Self Generation with Rooftop Solar Panels
- Generation through local agencies called Community Choice Aggregators (CCAs)
- Electric resellers called Direct Access





What is Community Choice Aggregation?

How Local Energy Aggregation Works



source



CCA

buying and building
electricity supply

delivery



UTILITY

delivering energy,
maintaining lines,
billing customers

customer



YOU

benefitting from
affordable rates,
local control,
cleaner energy





Statewide CCA Activities



- **Operational CCAs**
 - MCE Clean Energy (*includes Napa County, parts of Contra Costa and Solano Counties*)
 - Sonoma Clean Power
 - Lancaster Choice Energy
 - Clean Power San Francisco
 - Peninsula Clean Energy (*San Mateo County*)
- **Exploring / In Process**
 - Butte County
 - City of Hermosa Beach
 - City of Pico Rivera
 - City of San Jacinto
 - City of San Jose
 - Contra Costa County
 - Fresno County
 - Kings County
 - Monterey County*
 - Riverside County
 - San Benito County*
 - San Bernardino County
 - San Diego County
 - San Joaquin County
 - San Luis Obispo County**
 - Santa Barbara County**
 - Santa Cruz County*
 - Solano County
 - Tulare County
 - Ventura County**
- **2017 Launch**
 - Santa Clara County / *Silicon Valley Clean Energy*
 - Alameda County / *East Bay Community Energy*
 - Humboldt County / *Redwood Community Energy*
 - Mendocino County (*as member of Sonoma Clean Energy*)
 - Los Angeles County (*Phase 1*)
 - Placer County
 - Yolo County--*City of Davis / Valley Clean Energy Alliance*
 - Town of Apple Valley

*Monterey Bay Tri-County
 **Central Coast Tri-County





Why Building Electrification?

- Scenarios with the lowest demand for natural gas tended to have significant building electrification.
- 60% of building emissions are from burning fossil fuels for heating and hot water.
- California Council on Science and Technology (CCST) Study finds:
 - Gas-fired furnaces overwhelmingly supply building space heating in California → winter peak demand for gas.
 - California has no policies building electrification so building heat will not likely switch to electricity for several decades.





Thank you!
For more information:
www.cpuc.ca.gov



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