

Electricity Policy and Regulatory Trends in California

About EPIC

Research Center

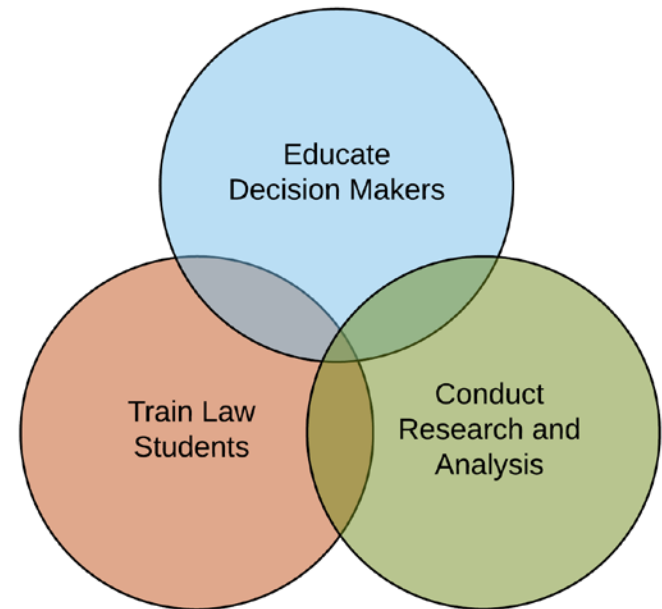
- University of San Diego
- Launched in 2005

Mission

- Conduct Research and Analysis
- Educate Decision Makers
- Train Law Students

Funding

- Endowment
- Grants and Contracts



Overview

California Policy Context

- Climate and Energy

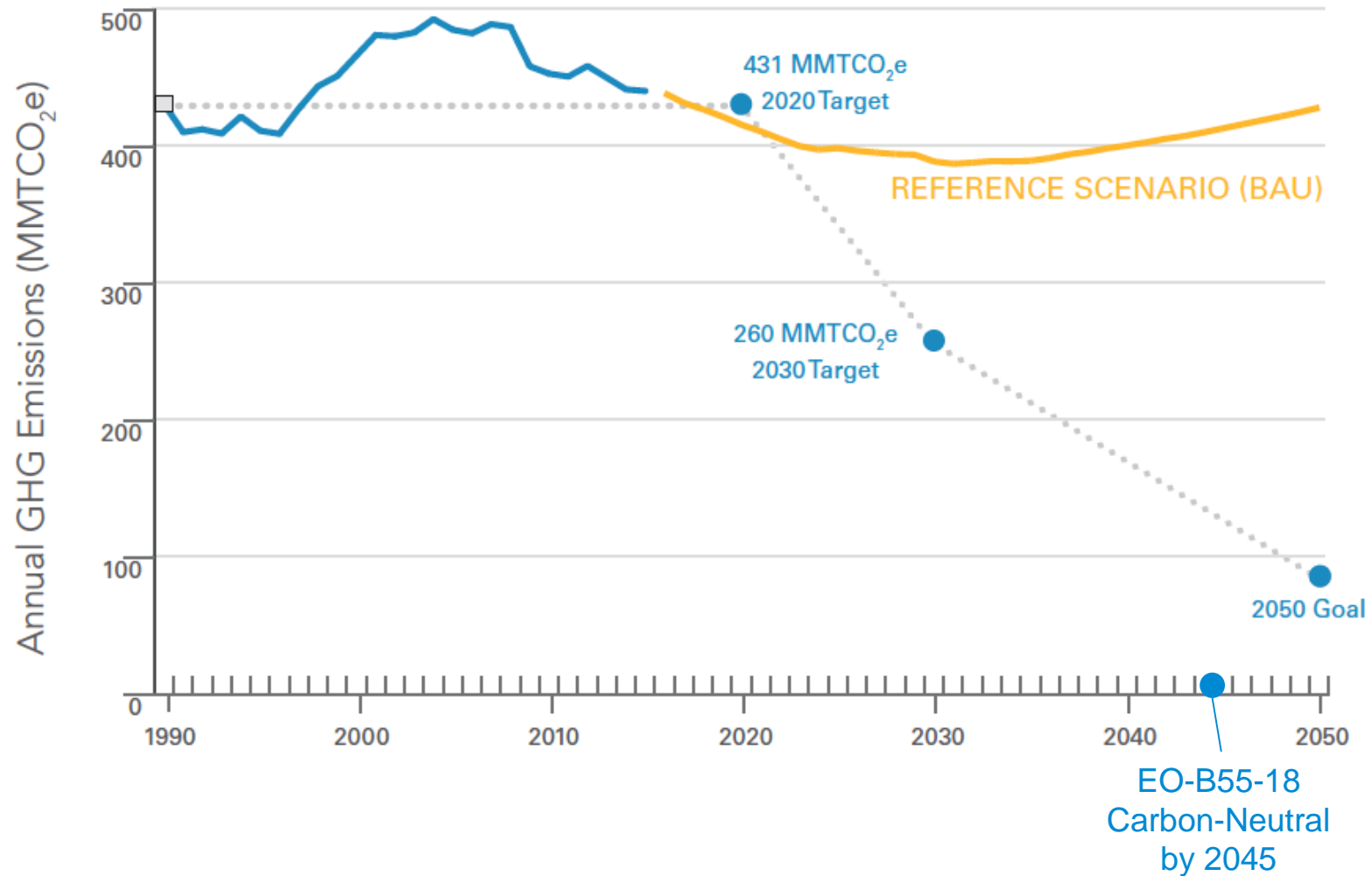
Three Important Trends

- Changes in Electricity Supply and Procurement
- Renewable Policies and Integration in the Western US
- Climate Impacts and the Response

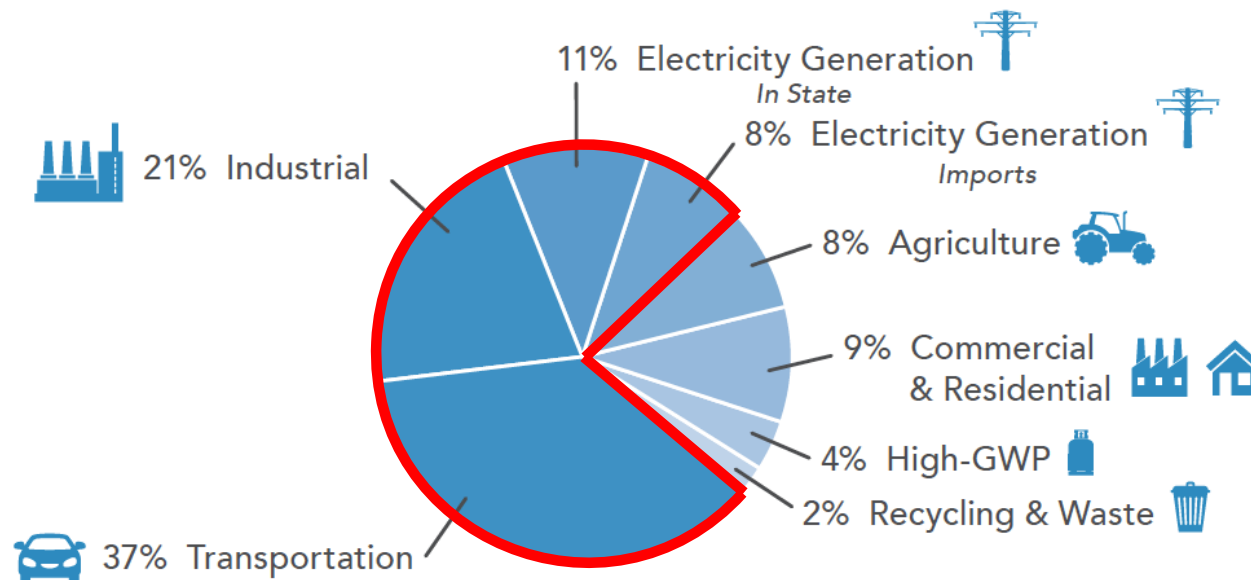
California Policy Context



California Climate Goals



California Greenhouse Gas Emissions

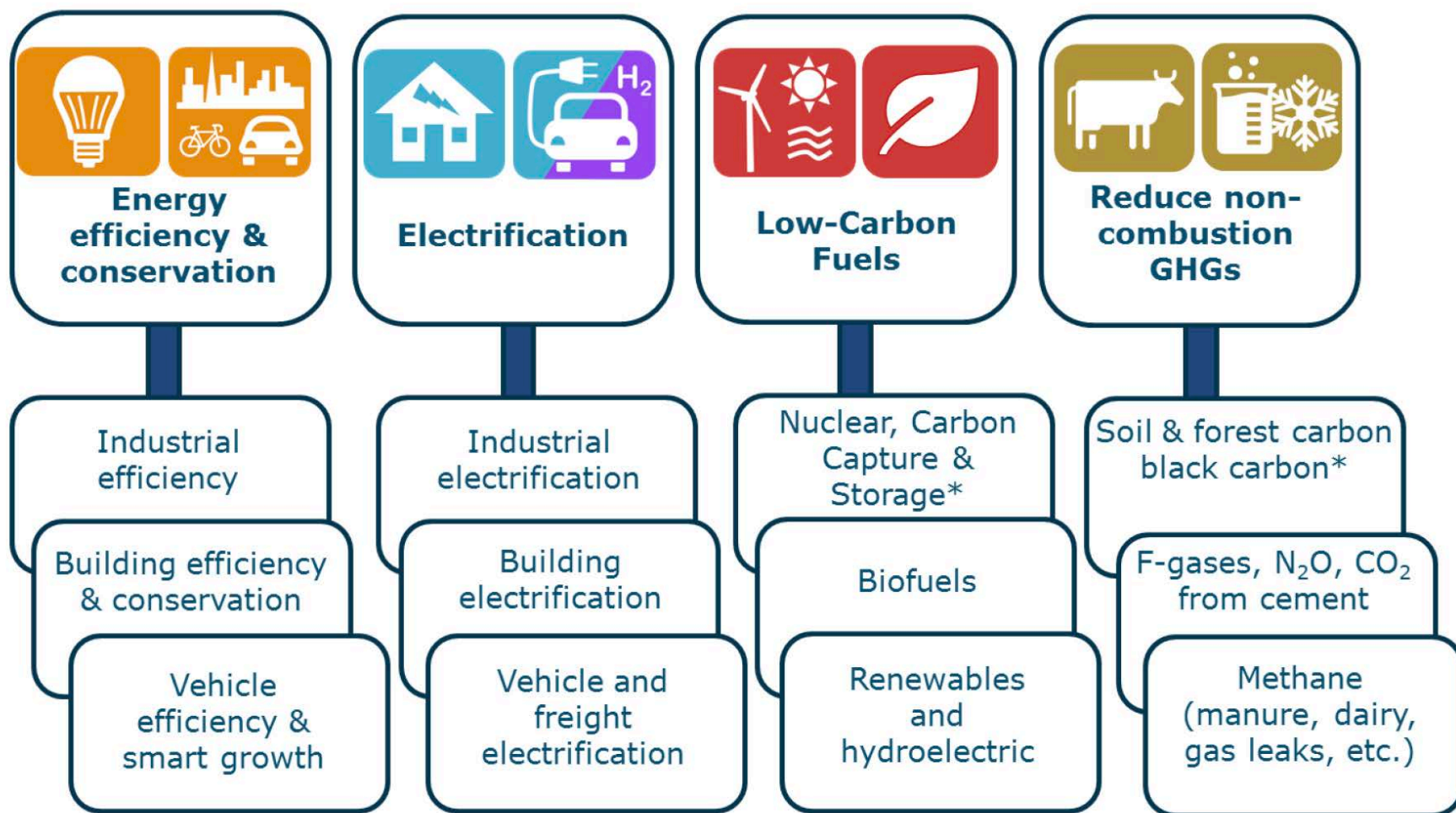


2015 Total Emissions

~75% from energy related activities

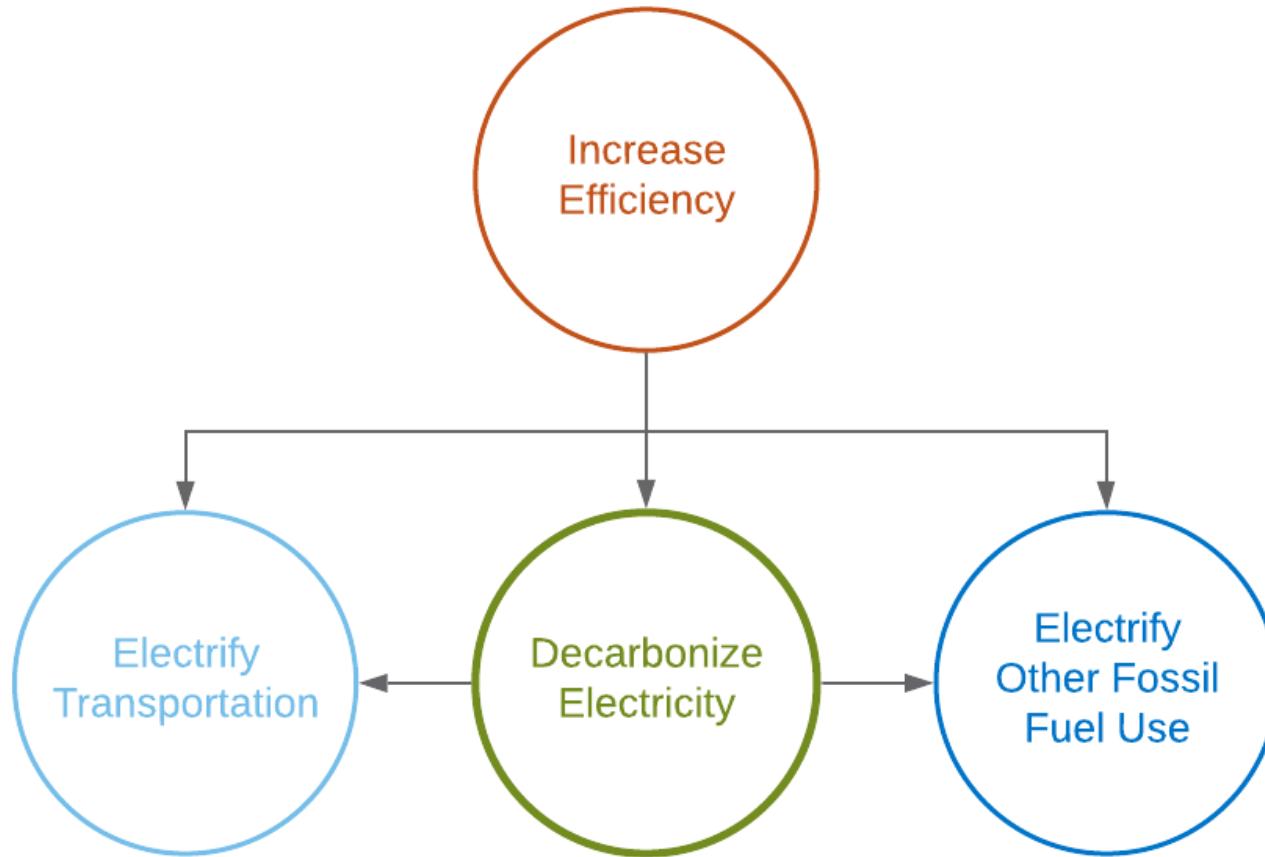
19% from electricity generation

California Climate Policy



Source: California Energy Commission, Deep Decarbonization in a High Renewables Future: Updated Results from the California PATHWAYS Model, June 2018.

California Climate Policy



California Climate Policy



Double building efficiency



60% renewable electricity by 2030
100% carbon-free by 2045



5 million zero-emission
vehicles by 2030

California Regulatory Trends



Electric Supply Trends

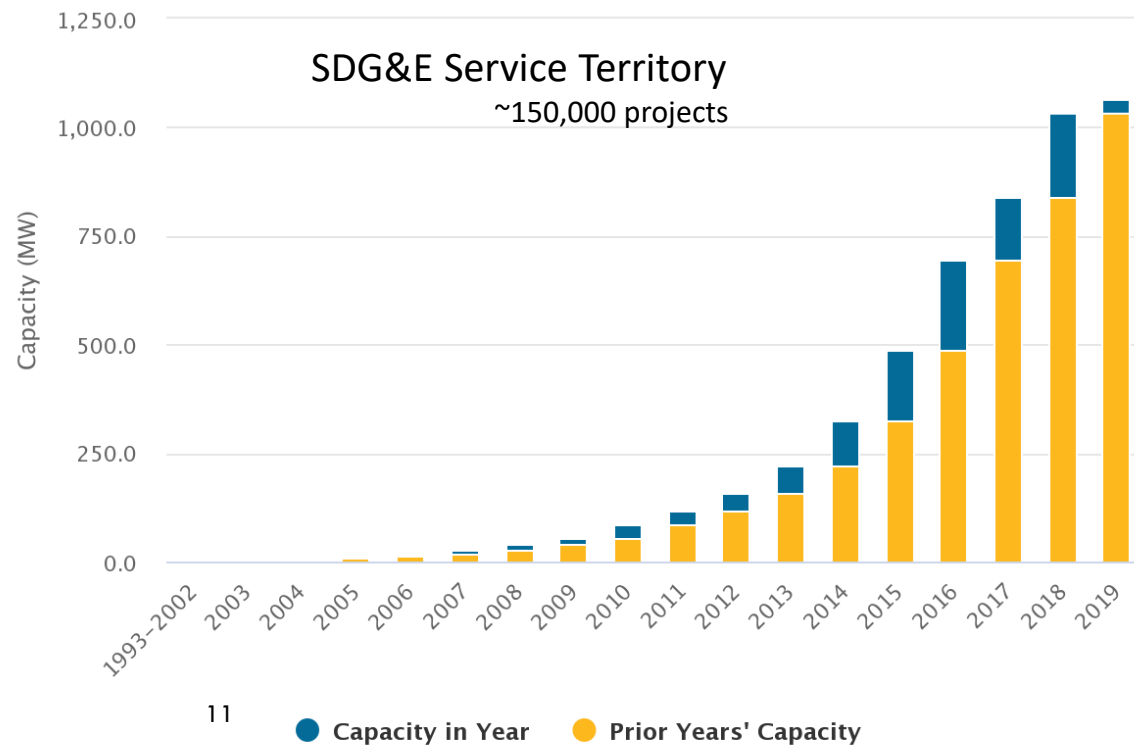
Direct Access

- Commercial and industrial customers
- AB 1890 in late 1990s
- ~15% of IOU load
- AB 237: Expanded Direct Access (DA)
 - Increase statewide cap by 4,000 GWHs for non-residential customers
 - CPUC will reopen DA proceeding to allocate between IOUs
 - CPUC will report back to Legislature on whether to open DA for all customers

Electric Supply Trends

Distributed Generation

- Photovoltaics
- Began in early 2000s
- Accelerated in 2010s



Electric Supply Trends

Community Choice Aggregation

- Cities and Counties procure energy on behalf of citizens
- Power Charge Indifference Adjustment (PCIA)
 - Exit fee for for community choice aggregators (CCA) and direct access (DA) customers
- Provider of Last Resort
 - Who is ultimately responsible for keeping the lights on?
- IOU Energy Contracts May be Reallocated
 - May create opportunity for direct access providers and customers

- Serving Customers
- Implementation Plan Filed
- Considering CCA

Redwood Coast Energy Authority:
Humboldt County, water district & 7 cities

Sonoma Clean Power:
Sonoma & Mendocino Counties

MCE: Marin & Napa Counties,
1 city in Solano County, Unincorporated
Contra Costa County & 13 cities

CleanPowerSF: San Francisco County
East Bay Community Energy:
Unincorporated Alameda County & 11 cities

Peninsula Clean Energy:
Unincorporated San Mateo County & 20 cities

San Jose Clean Energy: City of San Jose

Silicon Valley Clean Energy:
Unincorporated Santa Clara County & 12 cities

King City Community Power: City of King City

Monterey Bay Community Power:
Unincorporated Monterey, San Benito & Santa
Cruz Counties & 16 cities

Morro Bay
San Luis Obispo

Lancaster Choice Energy: City of Lancaster
Apple Valley Choice Energy: City of Apple Valley

Pico Rivera Innovative Municipal Energy: City of Pico Rivera

San Jacinto Power: City of San Jacinto
Clean Power Alliance: Unincorporated Ventura County & 7 cities,
Unincorporated Los Angeles County & 22 cities

Desert Community Energy: Cities of Palm Springs, Palm Desert & Cathedral City

Rancho Mirage Energy Authority: City of Rancho Mirage

Solana Energy Alliance: City of Solana Beach

Pioneer Community Energy:
Unincorporated Placer County & 5 cities

Valley Clean Energy Alliance:
Yolo County & cities of
Woodland & Davis

San Joaquin Co.
City of Stockton

Fresno Co.
City of Hanford
Tulare Co.
Kings Co.

San Bernardino Co.
City of Santa Paula
Westlake Village
City of Palmdale
City of Baldwin Park
City of Commerce

City of Pomona
Western Community Energy: 7 cities

Riverside Co.
North County Coastal Cities: 4 cities
San Diego Co.
La Mesa
City of San Diego
Chula Vista

Electric Supply Trends

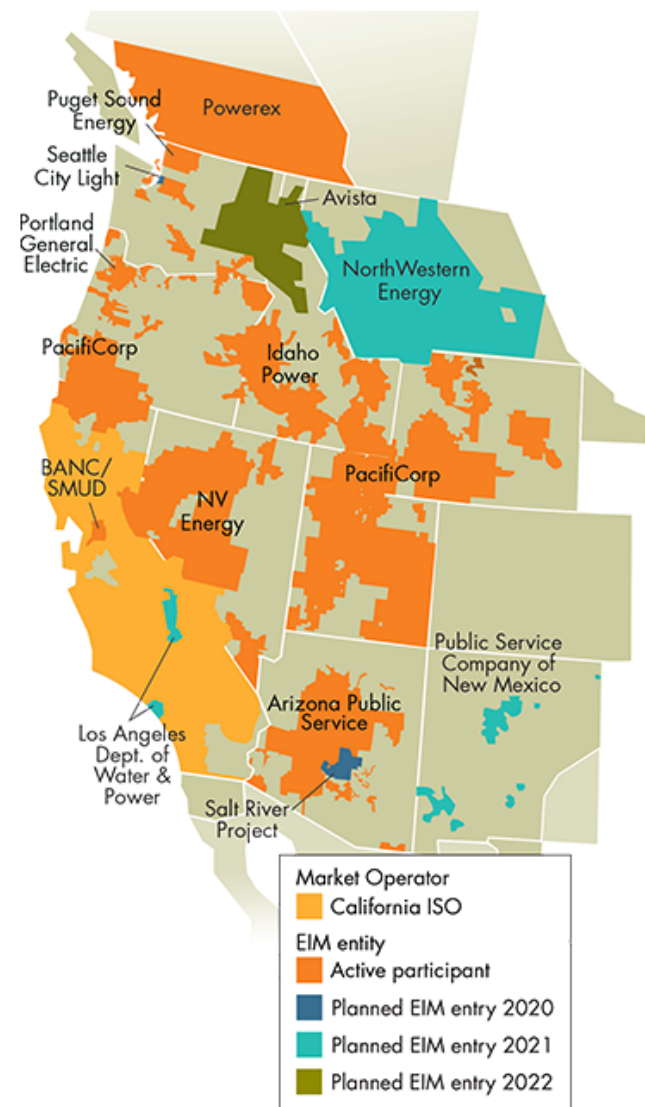
Statewide Procurement Entity

- Proposed Legislation to explore statewide procurement entity (AB 56 among other proposals)
- California Public Utilities Commission is reasserting regulatory control over procurement through the long-term Integrated Resource Planning proceeding (R.16-02-007)
- Raises questions:
 - What role should the state play?
 - How do regulated entities and regulators deal with uncertainty and State mandates?
 - How does the state achieve its climate and energy target and maintain reliability?

Regional Trends in Western U.S.

Renewable and Carbon-free Policies

- California
 - 60% renewable electricity by 2030
 - 100% carbon-free by 2045
- Nevada
 - 50% renewable electricity by 2030
- New Mexico
 - 50% renewable electricity by 2030
 - 80% renewable electricity by 2040
 - 100% carbon-free by 2050
- Energy Imbalance Market



Regional Trends in Western U.S.

Key Issues

- Shift from reducing emissions to adapting to impacts
 - Sea level rise
 - Wildfire
 - Heat waves
- IOUs looking at vulnerabilities to impacts
- Risk may make new infrastructure investments difficult
- IOUs asking for increased return on equity
- SDG&E response to wildfires has been robust
- Decentralized energy may be part of solution
 - E.g., microgrids

THANK YOU!

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