



Reliability and Resilience:

MCE's Role in Advancing Clean Energy Programs and Technologies



Community Choice in California

- Over 200 California Towns, Cities, Counties with Community Choice Energy Providers
- Over 14 million customers served

The California Community Choice Association's mission is to support the development and long-term sustainability of locally-run CCA electricity providers throughout California.

Areas of Service:

Apple Valley Choice Energy
City of Apple Valley

Central Coast Community Energy
Unincorporated Monterey, San Benito, Santa Barbara & Santa Cruz Counties & 29 cities

Clean Energy Alliance
3 cities

Clean Power Alliance
Unincorporated Ventura County & 7 cities, Unincorporated Los Angeles County & 23 cities

CleanPowerSF
San Francisco County

Desert Community Energy
Palm Springs

East Bay Community Energy
Unincorporated Alameda County & 14 cities

Energy for Palmdale's Independent Choice
City of Palmdale
King City Community Power
King City

PIONEER
COMMUNITY ENERGY

Lancaster Choice Energy
City of Lancaster

MCE
Unincorporated Marin, Napa, Solano, & Contra Costa Counties & 33 cities
Orange County Power Authority
5 Cities

Peninsula Clean Energy
Unincorporated San Mateo County & 21 cities

Pico Rivera Innovative Municipal Energy
City of Pico Rivera

Pioneer Community Energy
El Dorado County, Unincorporated Placer County & 6 cities

Pomona Choice Energy
City of Pomona

Rancho Mirage Energy Authority
City of Rancho Mirage

Redwood Coast Energy Authority
Humboldt County

San Diego Community Power
Unincorporated San Diego and 6 cities

San Jacinto Power
City of San Jacinto

San Jose Clean Energy
City of San Jose

Santa Barbara Clean Energy
City of Santa Barbara

Silicon Valley Clean Energy
Unincorporated Santa Clara County & 33 cities

Sonoma Clean Power
Unincorporated Sonoma & Mendocino Counties & 11 cities

Valley Clean Energy
Yolo County & Cities of Winters, Woodland & Davis



MCE Service Area

4 Bay Area
Counties

580,000
Accounts

1.5 million +
Customers

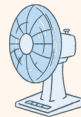


Programs Spotlight: Reliability, Resilience, and Community Equity

Conserving Energy from 4-9pm

- Transition to time-of-use rates
- Focuses on moving energy use out of the 4-9pm peak
- Reduces the need for fossil fuels
- Shifting energy use to 12-4pm takes advantage of daytime solar

When energy demand goes up, costs go up, and energy providers are more likely to switch on fossil fuel peaker plants



Use fans
instead of air
conditioning



Avoid using
major
appliances



Unplug
unused
devices

Save money and the planet by
reducing power use from 4-9!

Case Study: PeakFLEX Program

Contra Costa County



Season at a Glance

- » Participated in 9 demand response events during summer 2022
- » Enrolled 20 of the highest energy consuming buildings

Savings at a Glance

- » Saved over 7,500 kWh
- » Earned over \$15,000 in incentives from MCE and \$3,000 in bill savings

“We were able to identify nearly two dozen buildings where slight changes to HVAC schedules could deliver significant grid benefits without compromising critical services.” – Brendan Havenar-Daughton, Energy Manager

Battery Storage at Critical Community Facilities

Battery automatically charges and discharges depending on the use case

Use Case 1 Daily Peak Load Management “Blue Sky”

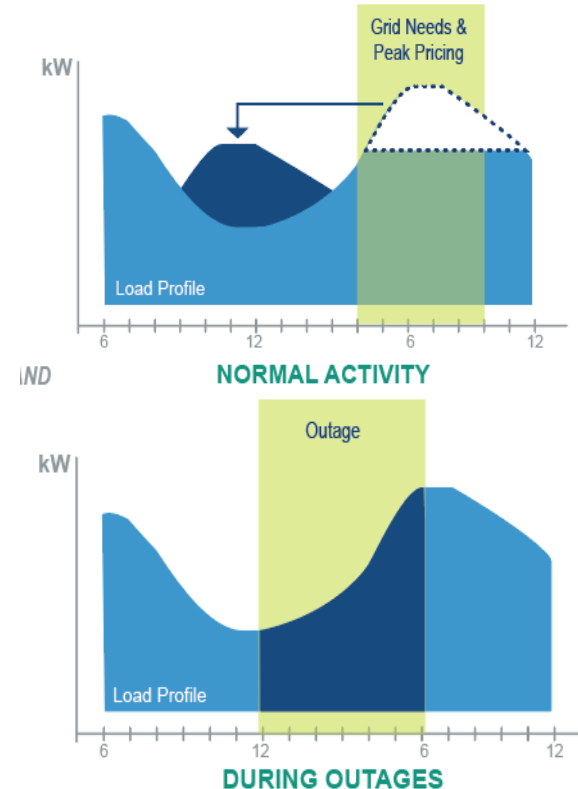
- Off-peak charging from on-site solar
- On-peak discharging (4-9pm) to help power the building

Use Case 2 Planned Public Safety Power Shutoffs

- Battery charges to full capacity at time of PSPS notification

Use Case 3 Unplanned Emergency Outages

- Battery immediately begins charging & system prioritizes essential electricity requirements



Case Study: Energy Storage Program

Pittsburg Unified School District

MCE is providing \$715,000 to Pittsburg Unified School District to help pay for over 1.6 MW (3 MWh) of energy storage at 10 of the 13 district campuses.

The batteries will be paired with 2.3 MW of existing solar and could save the school district more than \$2.8M over the 7-year agreement with MCE.



PITTSBURG UNIFIED
SCHOOL DISTRICT

PUSD

Benefits of a VPP

Better air quality

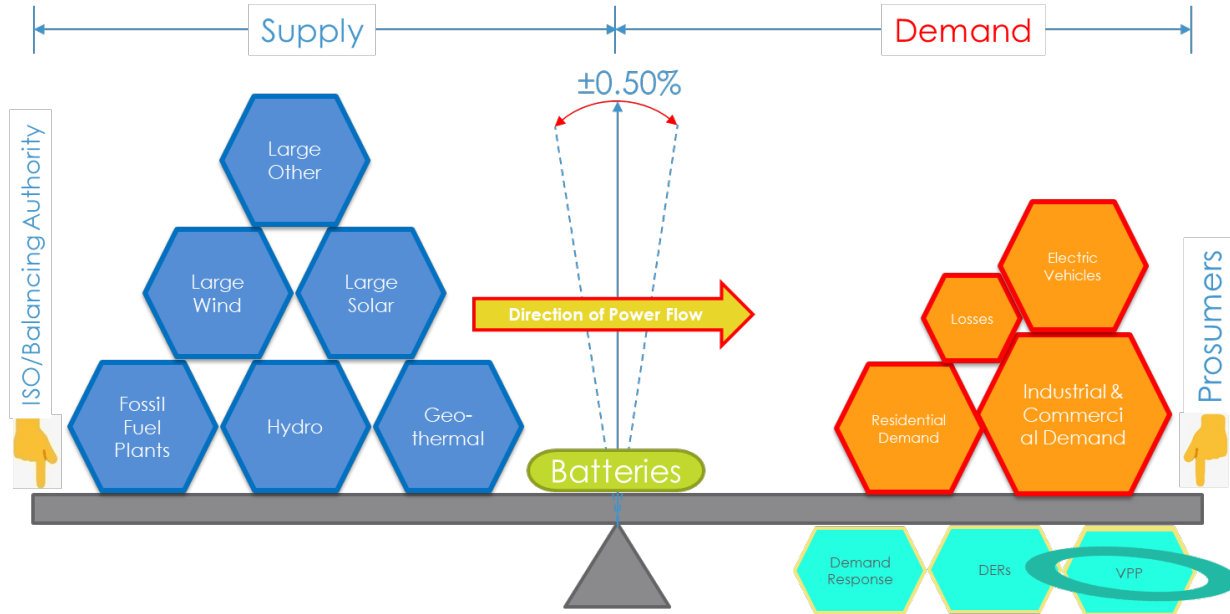
- Replacing need for peaker plants or diesel generators with green tech

Energy equity

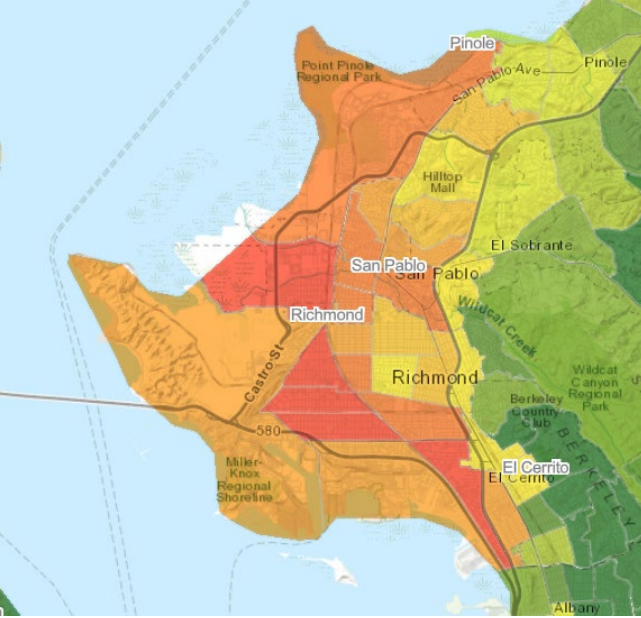
- Wealth creation and increased property values in disadvantaged community, for owners and renters alike

Real-Time Innovation

- Directly receives device level data, bypassing meter-data bottlenecks



Virtual Power Plants



- May 2022, MCE joined \$5M CEC EPIC grant for an Advanced Energy Community (AEC)
- Provide a suite of *customer-owned* distributed energy resources (DERs) by 2025 to build a quiet, invisible, clean pockets of power
 - rooftop solar, heat pump water heaters, smart thermostats, smart plugs, electric vehicles, batteries
- Weave together existing funding streams (CEC, MCE, IRA) to maximize customer value
- Allows for digital signals to remotely shift load for demand response

- Refinery built before city incorporated in 1905
- WWII temporary housing still in use today; 71% before 1980
- 99th percentile for asthma & CARB designated AB 617 community - high air pollution

Before



After



Residential

10 Zero-Net Carbon homes for First-Time Lower-income Home Buyers

- Social impact bond to acquire sites for rehabilitation to build inter-generational wealth
- Homes sold below market value with no resale restrictions

90 Existing Eligible Homeowners

- GRID installed solar + EV charging on ~50 income-qualified households
- All are eligible to receive no- to low-cost DERs for participation, made possible through various funding sources



California Independent System Operator

Long-Term Vision

- 2025: 1.5 MW Flex Load + 1 MW PV + 2 MWh BESS
- Grow to all 4 MCE counties, offering same value to MCE's ~63,000 solar customers (400MW) and ~7,000 battery systems
- Consistently responsive systems with validated loads that can be bid and settled into CAISO
- Tap into other financial resources, like IRA tax cuts or resource adequacy (RA) value
- Unique MCE approach – sharing the wealth with customers through on-bill credit structures

Thank You

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