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# Building Performance Standards

Utility Perspective
Randall Higa

July 31, 2024

# California utilities supports codes and standards efforts at the local, state, and federal level, including BPS initiatives.

- National Codes and Standards Advocacy
- State Building Codes Advocacy
- State Appliance Standards Advocacy
- Compliance Improvement
- Reach (Stretch) Codes
- Planning and Coordination

**Building performance standards intersect with various C&S program efforts.**

# SCE aims to support California and local jurisdictions with BPS development and implementation

**Adopted BPS and preparing for implementation**

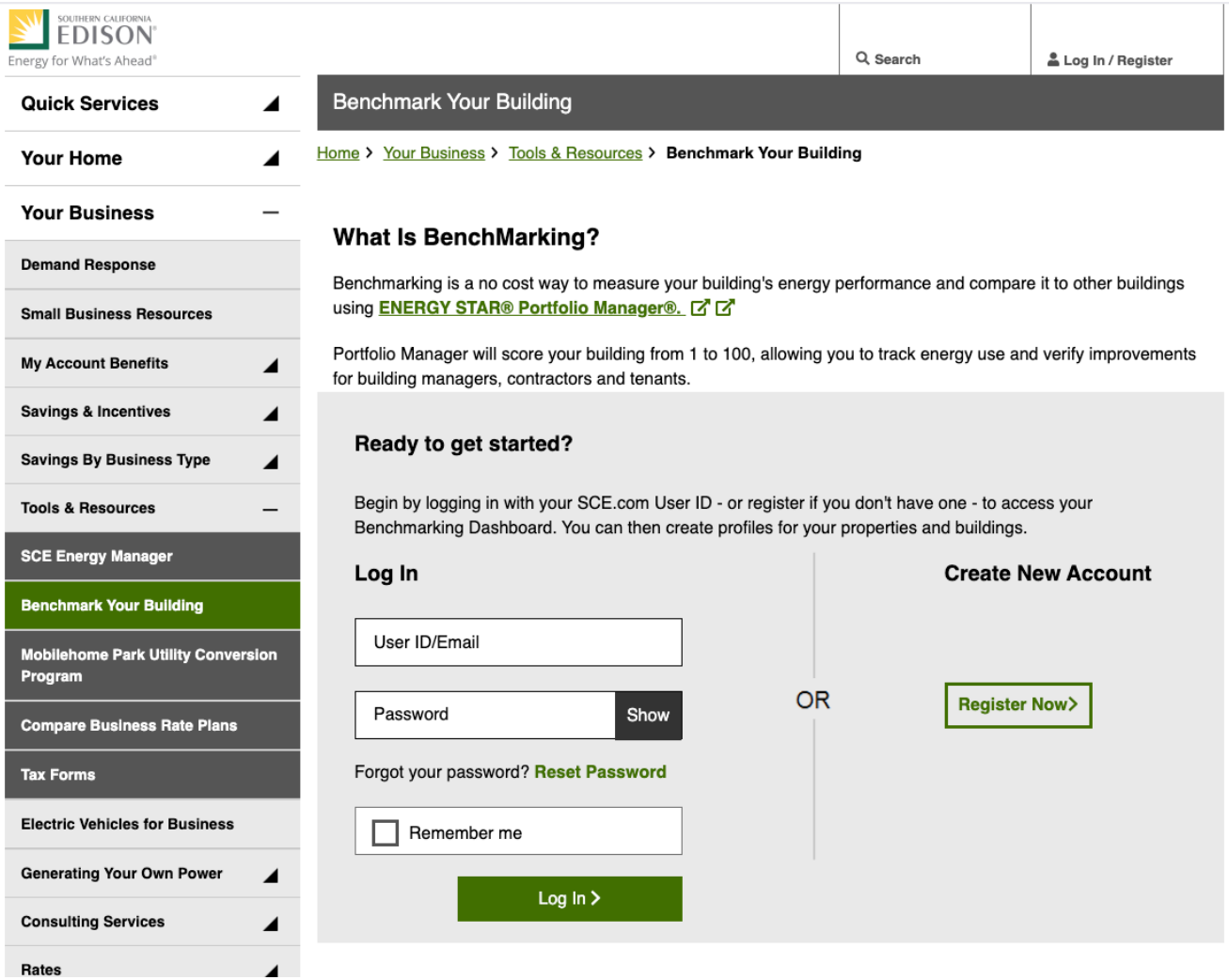
CITY OF CHULA VISTA®

- Commercial, Multifamily, Municipal >20k sf
- Based on Energy Star score, a selection of the following are required:
  - Reporting
  - Meeting conservation requirements every 5 years
  - Minimum improvement requirement every 10 years
  - Auditing and retro-commissioning
  - Prescriptive upgrades as needed
- Receiving support via the Codes & Standards program

**Conducting stakeholder engagement to inform BPS**

City of Santa Monica

| 2023 | 2024 | 2026-2027 | 2030 |
|---|---|---|---|
| • BPS Workshops<br>• Form building owner task force<br>• Draft policy language | • City Council Q1-Q2<br>• Rulemaking process<br>• Adopt BPS for buildings >50k sf<br>• Adopt Benchmarking for buildings >20k sf | • Buildings >50K sf report annually<br>• Buildings >50k sf meet BPS target<br>Buildings >20k sf benchmark yearly | • Buildings >50k sf meet BPS target #2<br>• Buildings >20k sf meet BPS target #1 |




ENERGY STAR®
# PortfolioManager®

- The Automated Benchmarking System was developed to support the benchmarking requirements of California's AB 802 for buildings over 50,000 square feet by providing aggregated energy data
- Disaggregated data is also available upon request or from Green Button
- Over 8,000 buildings have been set up in the system to receive data into Portfolio Manager

## Equity inclusions should:

# SCE supports incorporation of equitable BPS policies


## Key building types that should be addressed and supported:

- Regulated affordable housing
- Unregulated affordable housing
- Single family homes
- Low-margin businesses supporting low-income communities
- Affordable commercial spaces owned/operated by disadvantaged communities
- Rural or remote
- Healthcare
- Restaurants
- Non-profit public service providers

# Creating a Clean Energy Future

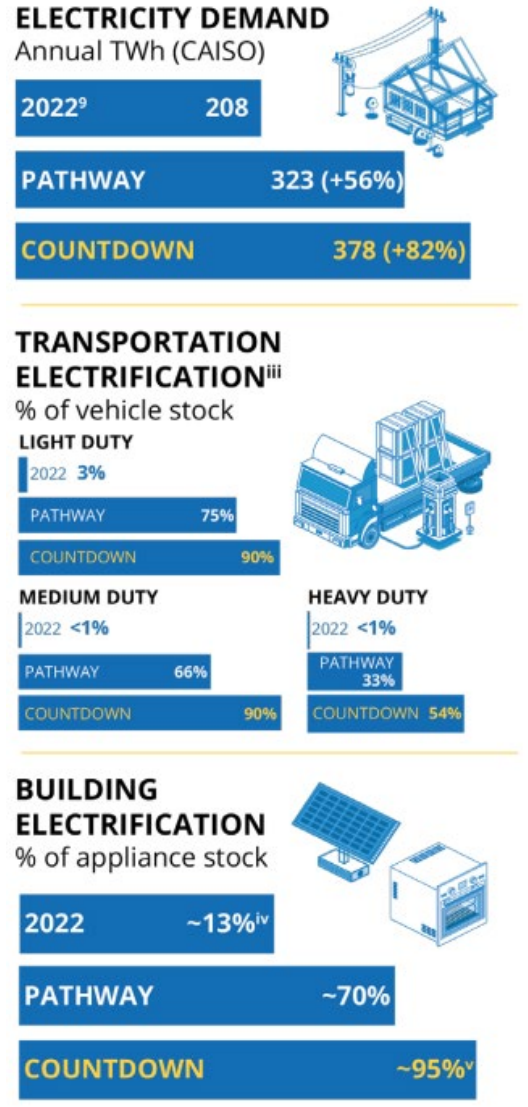
- **Pathway 2045:** A 2019 data-driven analysis of steps that California must take to meet the 2045 goals to clean our electricity grid and reach carbon neutrality; including calling for 70% of all buildings to use efficient electric space and water heating.

- **Reimagining the Grid:** SCE's vision of the future electric grid – to enable efficient integration of clean resources, support customer adoption of new technologies and ensure climate adaptation and resilience.

- **Countdown 2045:** In 2023, Pathway 2045 was updated to account for recent state policies, climate impacts, reliability modeling and market/technology advancements. Updated analysis indicates **deeper electrification** by 2045 (90+% of vehicles and appliances) drives greater load and new system peaks.

**Affordability is a Key**

- Electrification increases electricity bills
- Fossil fuel savings more than offset the increase
  - Early 2030s: 10% savings
  - 2045: 40% savings
- Barriers to electrification must be addressed so all consumers can access savings



# SCE Income Qualified and Equity Programs that may Inform and Support BPS

## Energy Savings Assistance (ESA) Program

### ESA Program

The Energy Savings Assistance (ESA) program offers income-qualified homeowners and renters the opportunity to receive energy-saving home improvements.

**Building Type**: SF, MH, and MF

**Income Eligibility:** ≤250% FPG

**Occupancy Type:** Renter & Owner-occupied

**Measures include:**

- Lighting
- Refrigerators
- Clothes Washers
- Dishwashers
- Freezers
- Pool Pumps
- Heat Pump Water Heaters
- Central AC or Central Heat Pump HVAC,
- Smart Thermostats
- Weatherization Services

### Building Electrification (BE) Pilot

The ESA BE Pilot provides no-cost electrification retrofits, available to low-income single-family homes in disadvantaged communities (DACs) within the SCE service area. The pilot promotes alternatives to gas appliances.

**Building Type**: SF

**Income Eligibility:** ≤250% FPG

**Occupancy Type:** Renter & Owner-occupied

**Measures include:**

- Heat Pump HVAC Systems*
- Heat Pump Water Heaters*
- Induction Cooking Appliances
- Electric Clothes Dryers
- Weatherization
- Minor Home Repairs
- Plumbing Upgrades, and
- Electric Panel Upgrades

* *Customers must agree to install both space and water heat pumps to participate in the pilot program*

## San Joaquin Valley DAC Pilot

### SCE SJV DAC Pilot

The pilot provides access to affordable energy to residents of three rural disadvantaged communities in the San Joaquin Valley: Ducor, West Goshen and California City, by providing replacement of propane and wood burning appliances with all electric appliances and includes bill protection measures to ensure bill savings and affordability for participants.

**Building Type**: SF, MH, an MF

**Income Eligibility:** N/A

**Occupancy Type:** Renter & Owner-occupied

**Measures include:**

- Heat Pump HVAC Systems
- Heat Pump Water Heaters
- Induction Cooking Appliances
- Electric Clothes Dryers
- Minor Home Repairs
- Plumbing and Electric Panel Upgrades

# Best Practices and Lessons Learned from Equity Programs

1. From a supply chain perspective, what are proven strategies for assuring equipment availability in rural, low-income and disadvantaged communities?
   - **Engage supply chain actors** such as manufacturers, distributors and contractors early in the process. Share budgets along with installations forecasts to ensure availability of technology that is best suited for targeted areas.
   - **Make is simple** by using a streamlined approach with minimal paperwork for supply chain.
   - **Contractor engagement** is also key for ensuring the availability of trained, skilled labor to perform installations to avoid delays and increased costs.

2. What are often overlooked or unprioritized difficulties in servicing customers in these areas?
   - **Lack of Awareness:** Most residential customers are unfamiliar with electric appliances or the benefits of electrification.
   - **Cultural Resistance:** Some customers may be a preference for traditional heating systems and may be apprehensive toward adopting newer technologies that are unfamiliar to them.
   - **Concern over potential bill impacts.** Current electricity rates as can cause skepticism of energy bill savings potential.
   - **Permitting processes** and building codes compliance requirement can cause additional barriers to participation.
   - **Grid Capacity.** Many rural areas have limited electrical grid capacity, making it challenging to support increased demand from electrification.

3. In areas that have difficulties recycling old equipment or appliances, what have you seen as strategies and/or examples for overcoming these difficulties, particularly in low-income and disadvantaged communities?
   - **Establish a centralized collection point**, such as a warehouse or storage facility, where installers can drop off old equipment and appliances from multiple jobs.
   - **Forming partnerships with recycling centers** to streamline process and coordinate with recycling center to schedule pickups once a full truckload is accumulated.

# Conclusion

- Utilities can play an important role in supporting BPS at a statewide or local level
- Utilities may already support benchmarking (Energy Star Portfolio Manager)
- The interest in BPS by states and local governments is rapidly growing
- BPS approaches vary widely but some common attributes are emerging
- Equity concerns cannot be overlooked
- Existing and future utility equity programs can be leveraged to inform and support BPS
- Value proposition is critical
- There are many sources of information and support that are available including ASHRAE and the US DOE

# Thank You!

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