



# Thinking Beyond the Building: A Community Choice Perspective

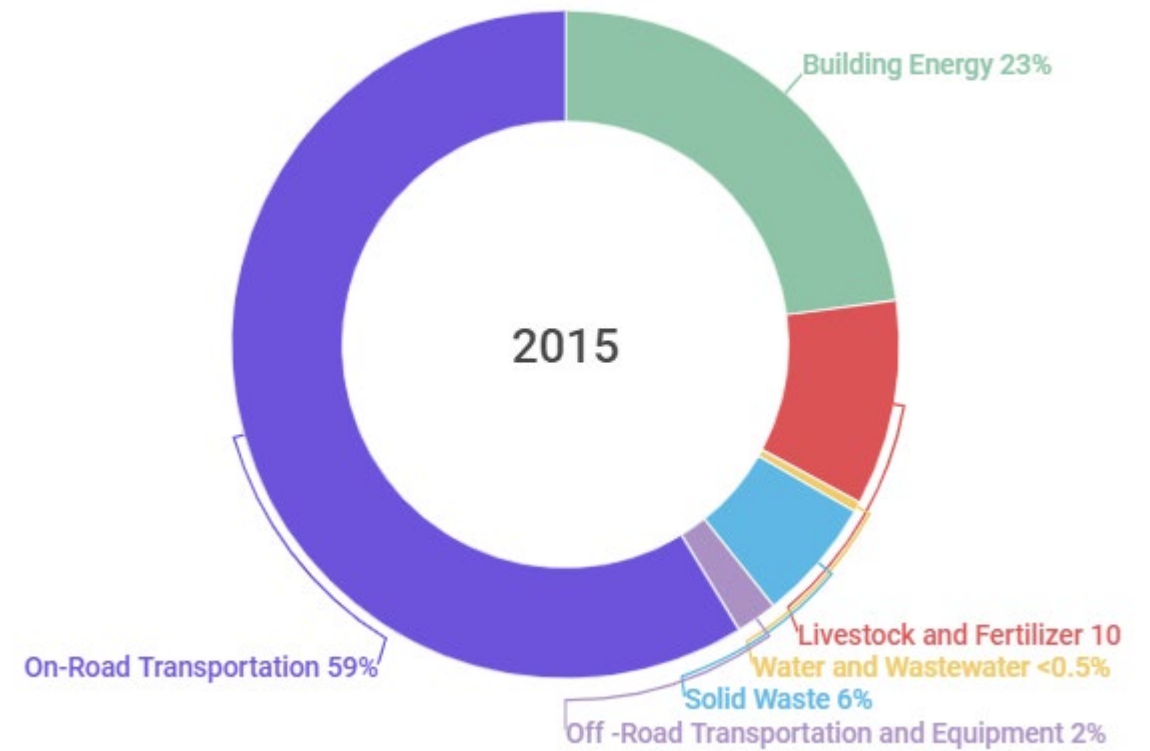
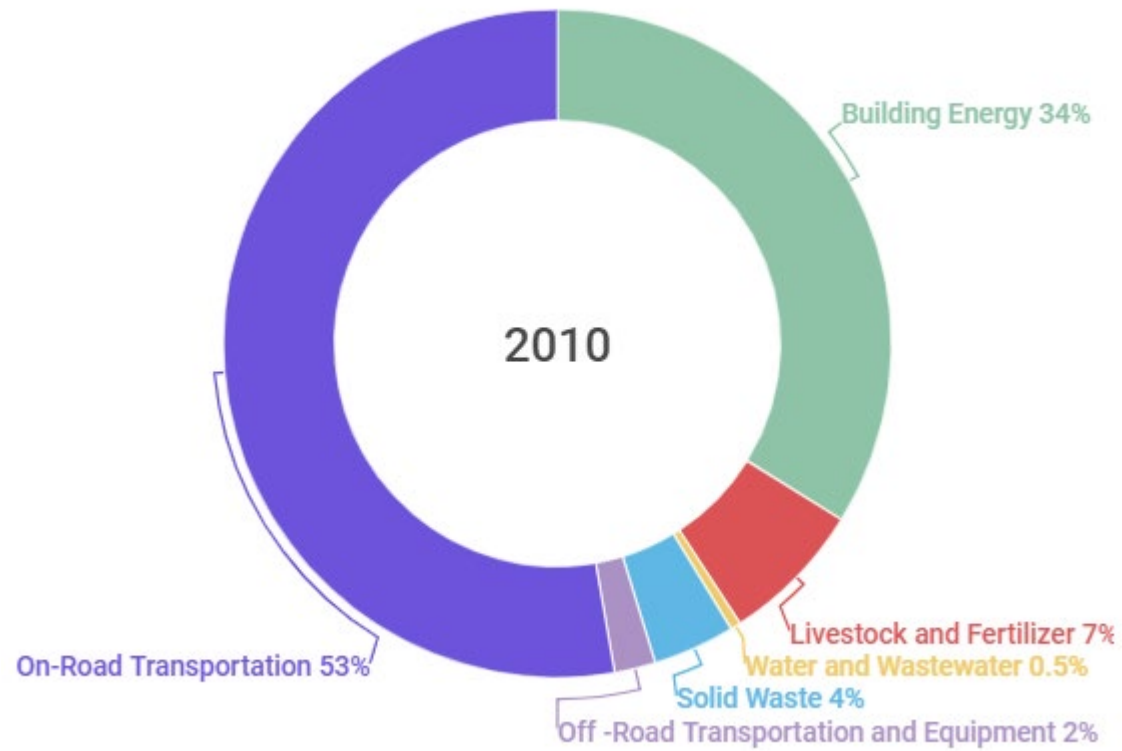
# Who is Sonoma Clean Power?

- **Not-for-profit** public agency that started serving customers in 2014.
- First stated mission of the joint power's authority establishing SCP is “**reducing greenhouse gas emissions** in Sonoma County and neighboring regions.”
- Generates electricity for approximately **600,000 customers** in California's Sonoma and Mendocino counties.
- Pacific Gas & Electric (PG&E) provides distribution of electricity.
- SCP customers pay for, and can participate in, PG&E programs.



# What's Happening at the Grid Scale

# Service Territory Emission Sources



## Transportation Sector – What We've Done

- 1,060 electric vehicles directly sold or leased to residents through Drive EV
- 2,053 free residential electric vehicle chargers provided to residents through GridSavvy
- 650 chargers participating in demand response

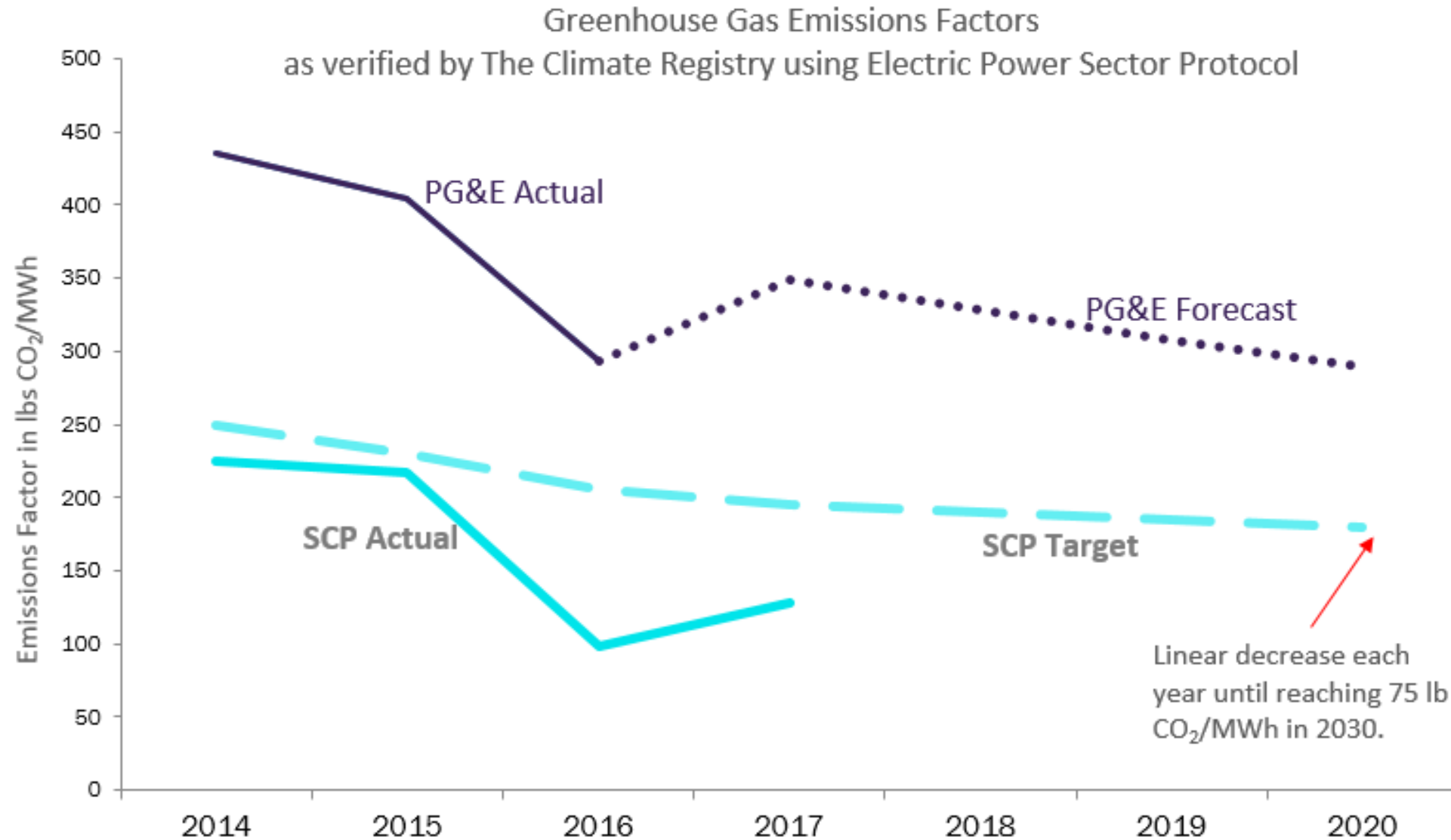
## Transportation Sector – Where We're Going

- Additional public charging (level 2, 3) infrastructure
- Encouraging workplace charging
- Thinking of program models to engage non-early adopters



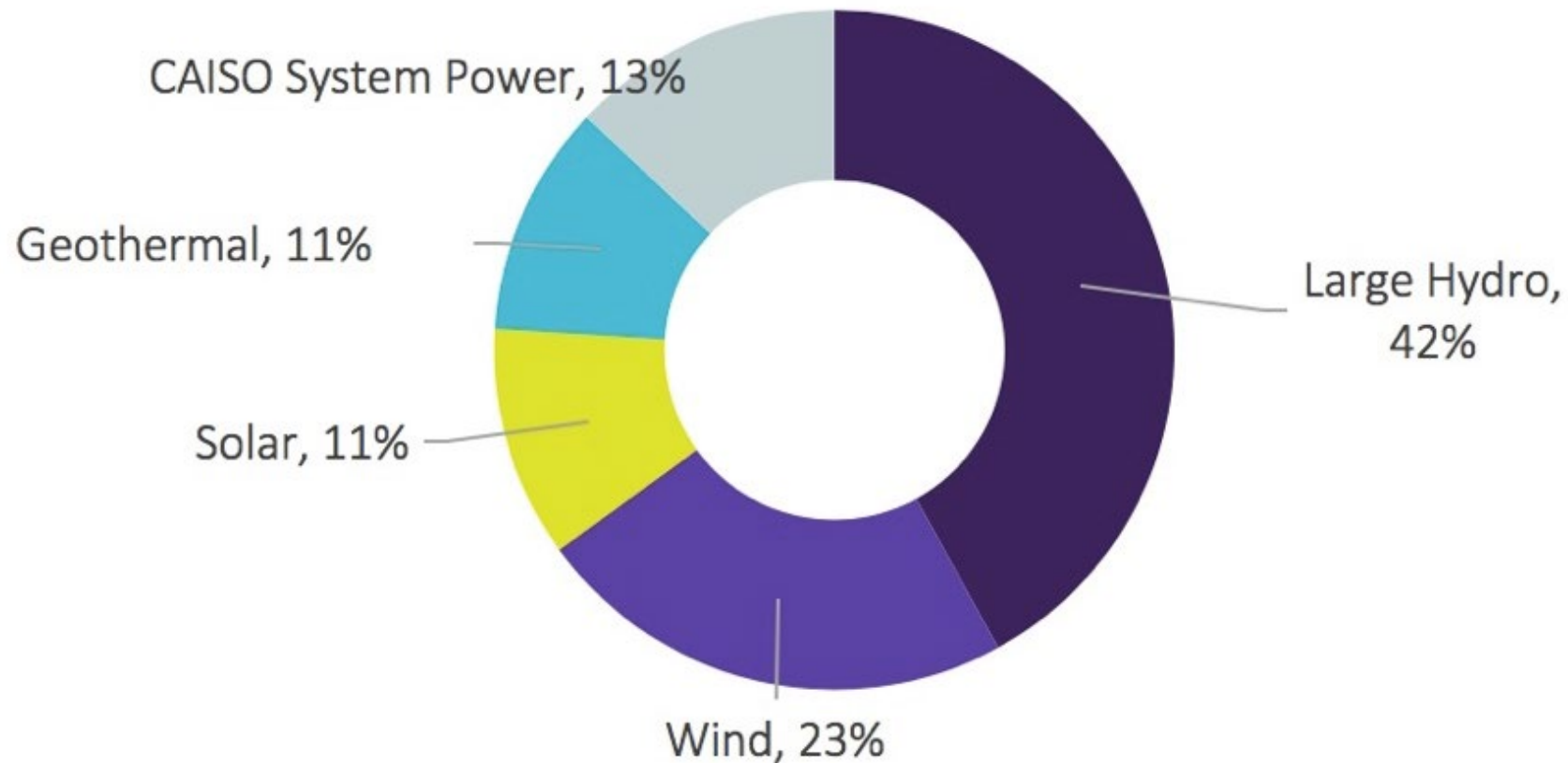


# SCP's Emissions and Power Sources



# SCP's Emissions and Power Sources

SCP's 2017 Power Sources



# Resource Adequacy

“As one means of dealing with the so-called Duck Curve problem, each LSE must procure a certain amount of its RA from **“Flexible” resources** that can ramp up or down on short notice to meet variations in load and intermittent energy production.”

Source: <http://morethansmart.org/2017/06/resource-adequacy-what-is-it-and-why-should-you-care/>





# Step 1 – Reduce and Decarbonize

## Building Energy – What We've Done

- Further decarbonized electricity powering existing buildings
- Offered free energy saving items through Santa Rosa libraries
- Lending customer induction cooktops to test
- Established Advanced Energy Rebuild, which helps reduce GHG impact of fire rebuilds

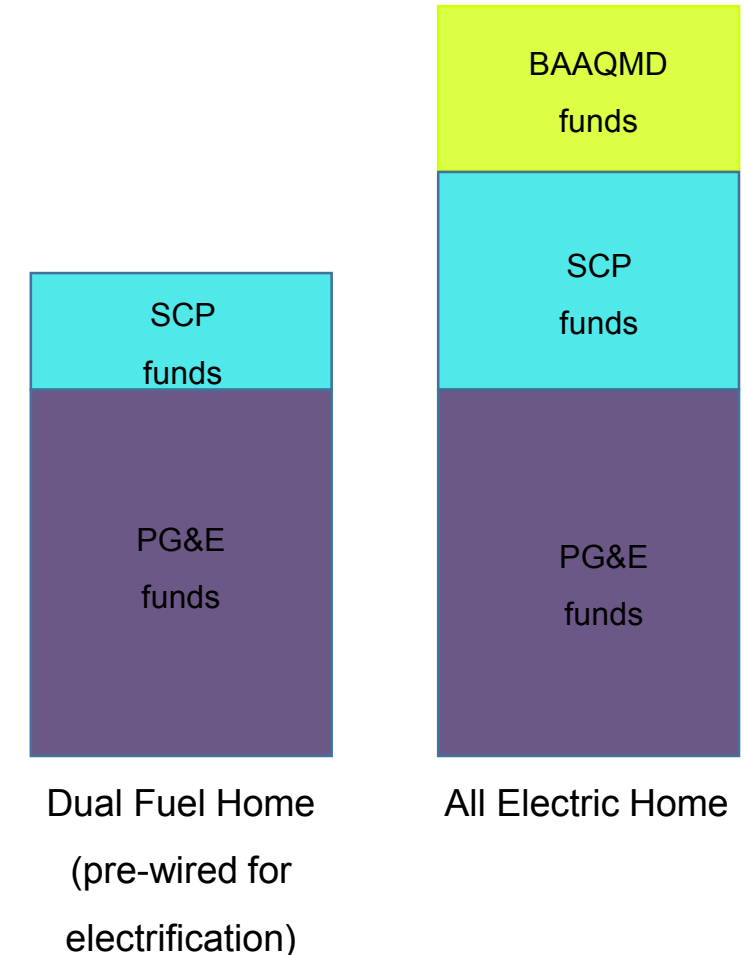
## Building Energy – Where We're Going

- Tackling existing buildings through Santa Rosa Energy Store offering discounts on energy efficiency equipment
- On-bill repayment options to bring energy efficiency to all
- Expanding GridSavvy Community to help technologies connect to the grid

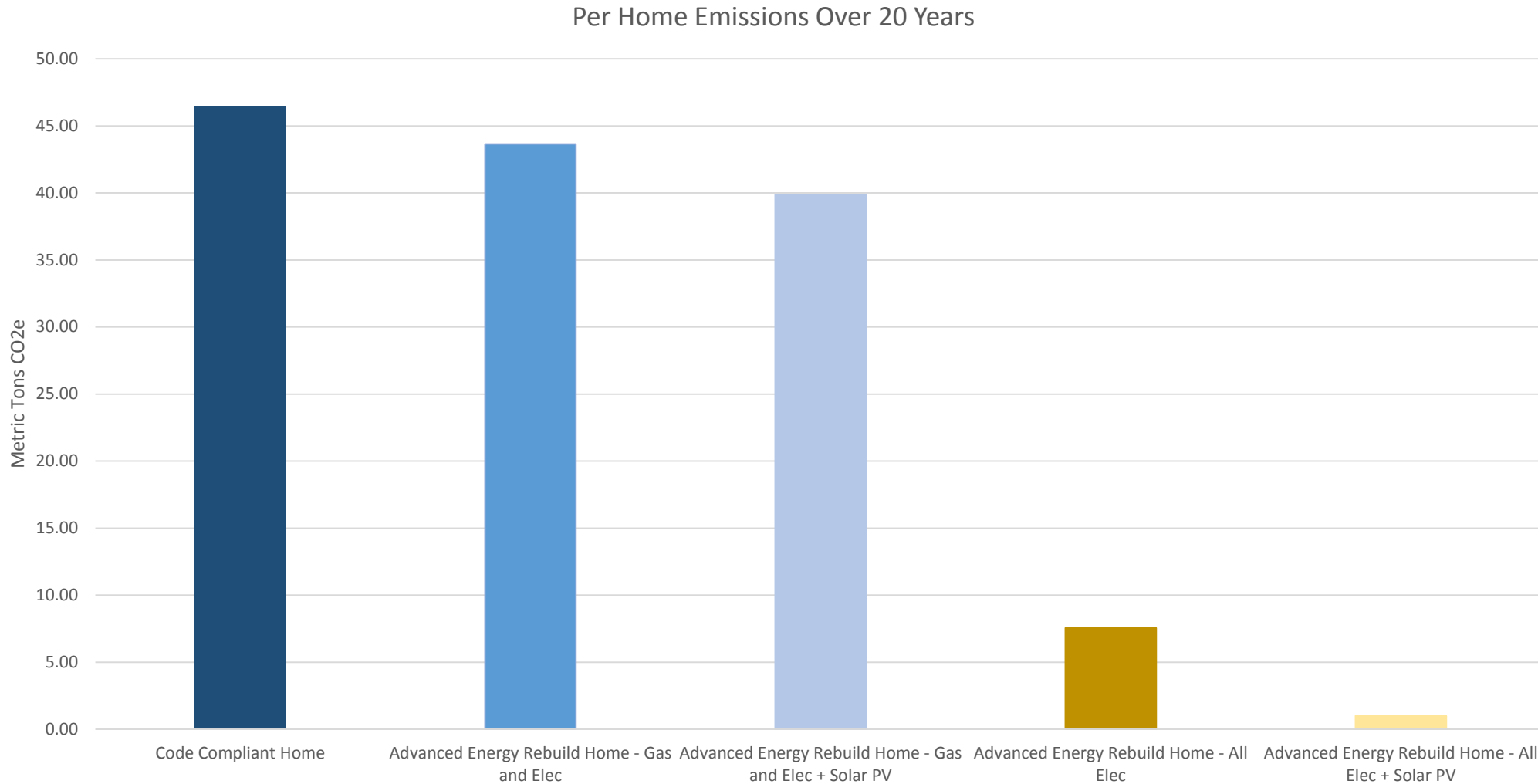


# Advanced Energy Rebuild Overview

- Collaboration between Sonoma Clean Power, Pacific Gas and Electric (PG&E) and the Bay Area Air Quality Management District.
- Up to **\$17,500 in incentives** with one easy online application.
- Goes beyond existing program models by adding in non-standard measures like electric vehicle charging, grid responsiveness, battery storage, and water measures.
- **124 homes** have applied for the program. Approximately **50% of which are all-electric**.
- Energy models for the submitted projects are on average **26% better than current Title 24 code** and are predicted to **save \$650 annually on their utility bills**.



# Advanced Energy Rebuild – What's the Impact



# Advanced Energy Home

- \$7,500 base incentive for dual fuel homes
- Performance-based and menu-based options.
- Requires pre-wiring for future switch to electric appliances and pre-wiring for solar PV
- Requires electric vehicle charging stations, which can be grid-integrated through SCP's GridSavvy Community

**1**

Advanced Energy Home

**\$7,500**

Flexible Performance Path

- 20% above Title 24 energy code
- 220V outlet at stove/range, water heater, and clothes dryer
- Design roof for additional structural loads associated with solar panels, and add conduit for future installation
- Electric Vehicle Charging Station - Equipment free from Sonoma Clean Power

**\$7,500**

Simple Menu-Based Path

- 2016 Title 24 High Performance Walls or 2016 Title 24 High Performance Attics\* (note: unvented attic can qualify)
- 2019 Code windows (Max U-factor 0.30, SHGC 0.23)
- High efficiency water heater: Heat Pump Water Heater w/ EF of 3.0+ or gas tankless w/ EF of 0.92 and 220v outlet
- Heating/cooling ducts that are well sealed, insulated (R-8), and located primarily in conditioned space (note: buried ducts as defined by Title 24 can qualify)
- WaterSense efficient plumbing fixtures
- Water efficient landscaping
- Energy Star Appliances
- 220V outlet at stove/range and clothes dryer
- Electric Vehicle Charging Station – Equipment free from Sonoma Clean Power

\*Must meet requirement of CEC Climate Zone 4. See program handbook.





# All Electric Home

- \$12,500 base incentive for dual fuel homes
- Additional incentive provided by Sonoma Clean Power and Bay Area Air Quality Management District is associated with GHG reductions.
- Performance-based and menu-based options.
- Requires electric vehicle charging stations, which can be grid-integrated through SCP's GridSavvy Community

2 All Electric Home	
\$12,500	
Flexible Performance Path	
<ul style="list-style-type: none"><li>• 20% above Title 24 energy code, all electric end uses</li><li>• Design roof for additional structural loads associated with solar panels, and add conduit for future installation</li><li>• Electric Vehicle Charging Station - Equipment free from Sonoma Clean Power</li></ul>	
\$12,500	
Simple Menu-Based Path	
<ul style="list-style-type: none"><li>• 2016 Title 24 High Performance Walls</li><li>• 2016 Title 24 High Performance Attics* (note: unvented attic can qualify)</li><li>• Insulation inspected by a HERS Rater (QII)</li><li>• Building Enclosure Airtightness verified by a HERS Rater (less than 3 ACH50)</li><li>• "Cool" Roof</li><li>• 2019 Title 24 Windows (Max U-factor 0.30, SHGC 0.23)</li><li>• NEEA Tier 3 Heat Pump Water Heater w/ grid-integration controls installed</li><li>• High efficiency heat pump for heating/cooling (EER of 12.5+, HSPF of 9.5+)</li></ul>	<ul style="list-style-type: none"><li>• Heating/cooling ducts that are well sealed, insulated (R-8), and located primarily in conditioned space (note: buried ducts as defined by Title 24 can qualify)</li><li>• Smart Thermostat</li><li>• WaterSense efficient plumbing fixtures</li><li>• Water efficient landscaping</li><li>• Induction Cooking</li><li>• Energy Star Appliances for all Refrigerators, Dishwashers, Clothes Washers, and Bathroom Fans</li><li>• Heat Pump or Electric Clothes Dryer</li><li>• Electric Vehicle Charging Station – Equipment free from Sonoma Clean Power</li></ul>
*Must meet requirement of CEC Climate Zone 4. See program handbook.	





## Kicker for Homes Powered by Renewable Energy

- \$5,000 extra in incentives by using either on-site or off-site renewable energy.
- On-site: Install Solar PV + battery storage.
- Off-site: Pre-purchase a 20 year commitment to 100% local renewable power (ie: EverGreen)





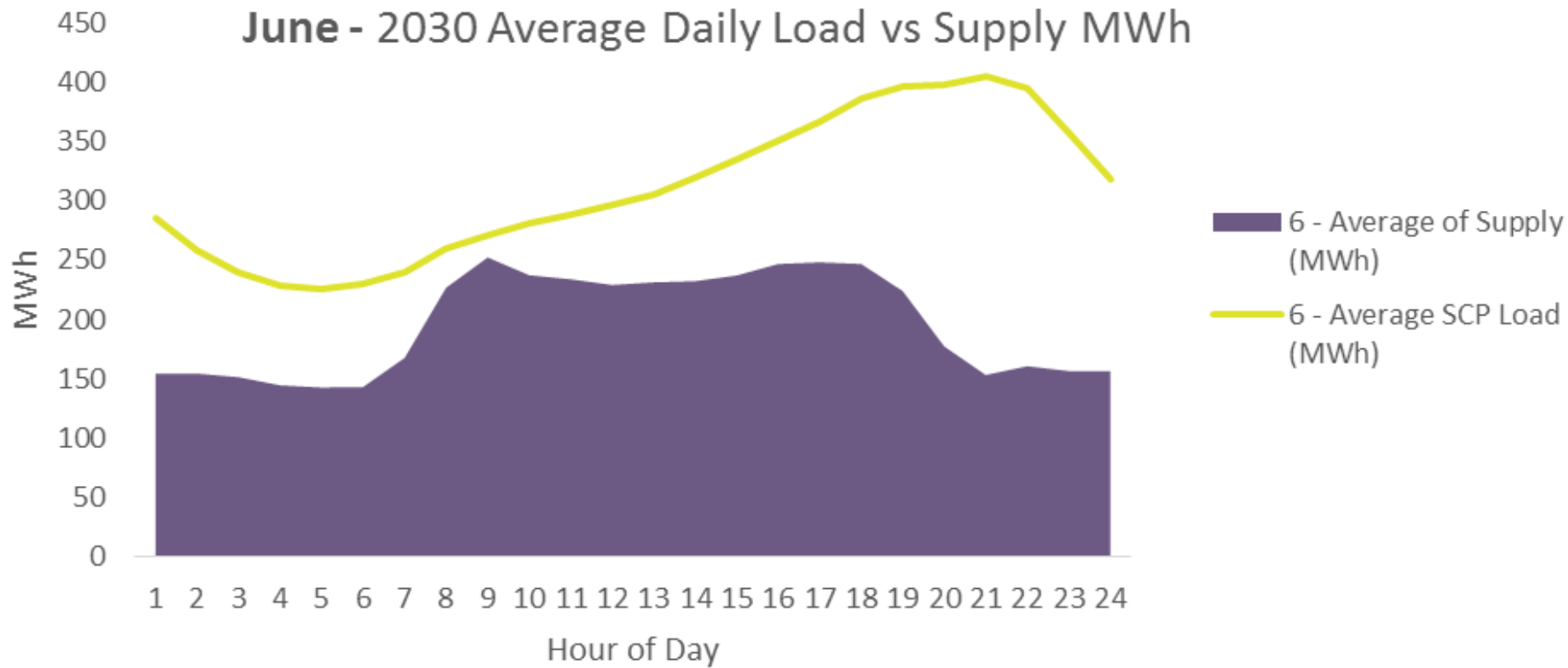
## Additional Resources Offered

- Education classes at the North Coast Builder's Exchange
- Certification Courses (and discounts!) for Certified Energy Analysts and HERS Raters
- Induction Cooktop Lending Program



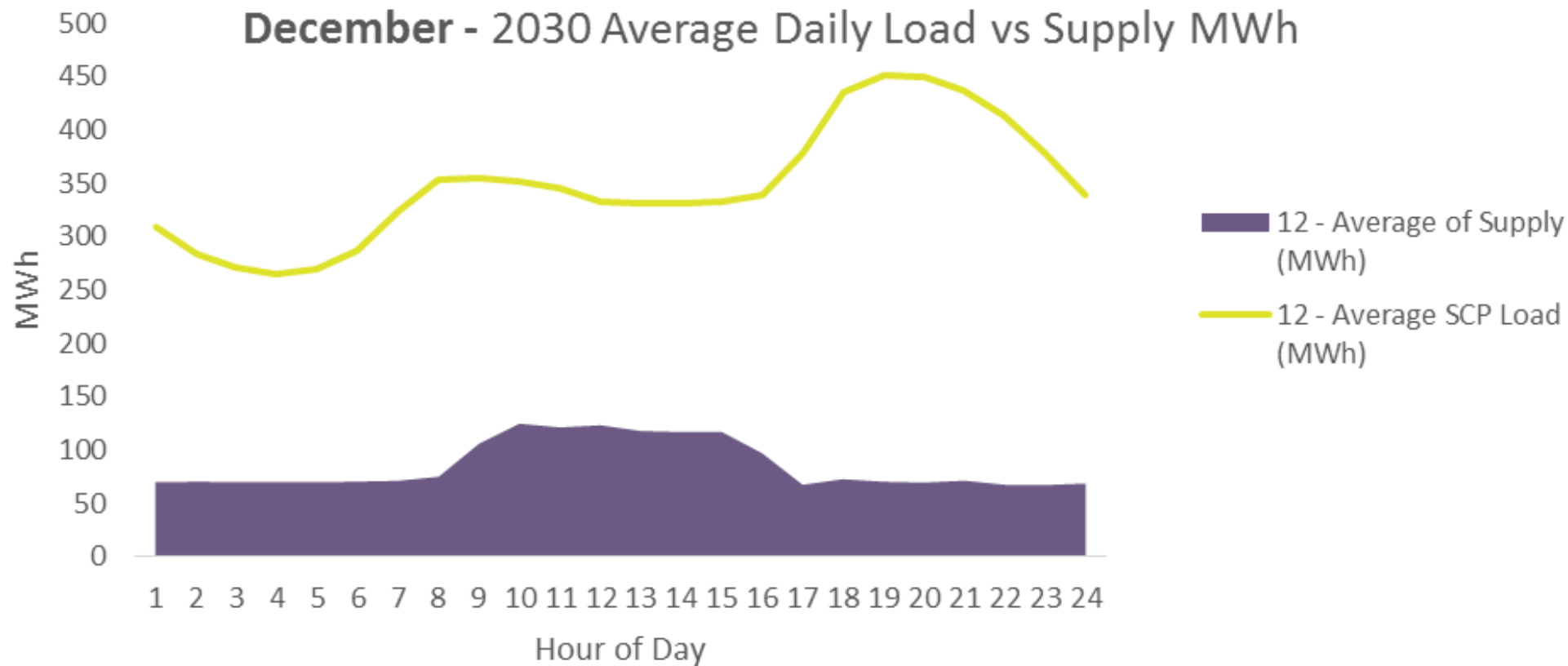
# Step 2 – Shape Load

# SCP's Hourly Load and Supply (not including Hydro)






# SCP's Hourly Load and Supply (not including Hydro)



## Sonoma Clean Power GridSavvy Community Web Store



**JuiceBox® Pro 40 - WiFi-enabled 40-Amp EVSE with JuiceNet®**

40-amp, 10kW WiFi-enabled EV charging station, 24-foot cable

~~\$619.00~~

You Pay: \$250.93 + Tax + \$50 S&H


Installation Type

Plug in (NEMA 14-50P) ▾

[Product Questions?](#)

More Info

Add to Cart



**ClipperCreek HCS-40 JuiceNet® Edition, Hardwire**

32-amp, 7.7kW WiFi-enabled EV charging station, 25-foot cable


~~\$799.00~~

You Pay: \$344.50 + Tax + \$50 S&H

[Product Questions?](#)

More Info

Add to Cart



**ClipperCreek HCS-40 JuiceNet® Edition, Plug-in**

32-amp, 7.7kW WiFi-enabled EV charging station, 25-foot cable


~~\$799.00~~

You Pay: \$356.50 + Tax + \$50 S&H

[Product Questions?](#)

More Info

Add to Cart



**AeroVironment EVSE-RS JuiceNet® Edition**

32-amp, 7.6kW WiFi-enabled EV charging station, 25-foot cable

~~\$649.00~~

You Pay: \$299.50 + Tax + \$50 S&H

[Product Questions?](#)

More Info

Add to Cart

Level 2 charger products supply 240V to your vehicle and may require an electrical upgrade to provide access to a 240V outlet such as a typical outlet for a clothes dryer or RV.

Tax is calculated based on the full price of each product.

To receive a free charger, Sonoma Clean Power customers must complete a verification form after selecting product. Limit 1 per household. Must ship to Sonoma Clean Power service address.

Next >

# Thank you!

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