

Helping Customers Go Green

April 1, 2024

Petrified Petrol Station
Alford & Casella, 2017



CALIFORNIA
AIR RESOURCES BOARD
PUBLIC
ART
PROGRAM



DECARBONIZE ELECTRICITY

100%
RETAIL SALES
100%*



ELECTRIFY TRANSPORTATION

90%
OF VEHICLES
75%*



ELECTRIFY BUILDINGS

95%
OF BUILDINGS
70%*



USE LOW-CARBON FUELS

48%
NON-ELECTRIC
ENERGY
43%*



SINK REMAINING CARBON

75
MMT
CARBON
SINK
108
MMT*



=
CARBON NEUTRALITY
BY 2045

Countdown to 2045 – Pathway to Net Zero

As the grid gets cleaner, so too does everything plugged into it

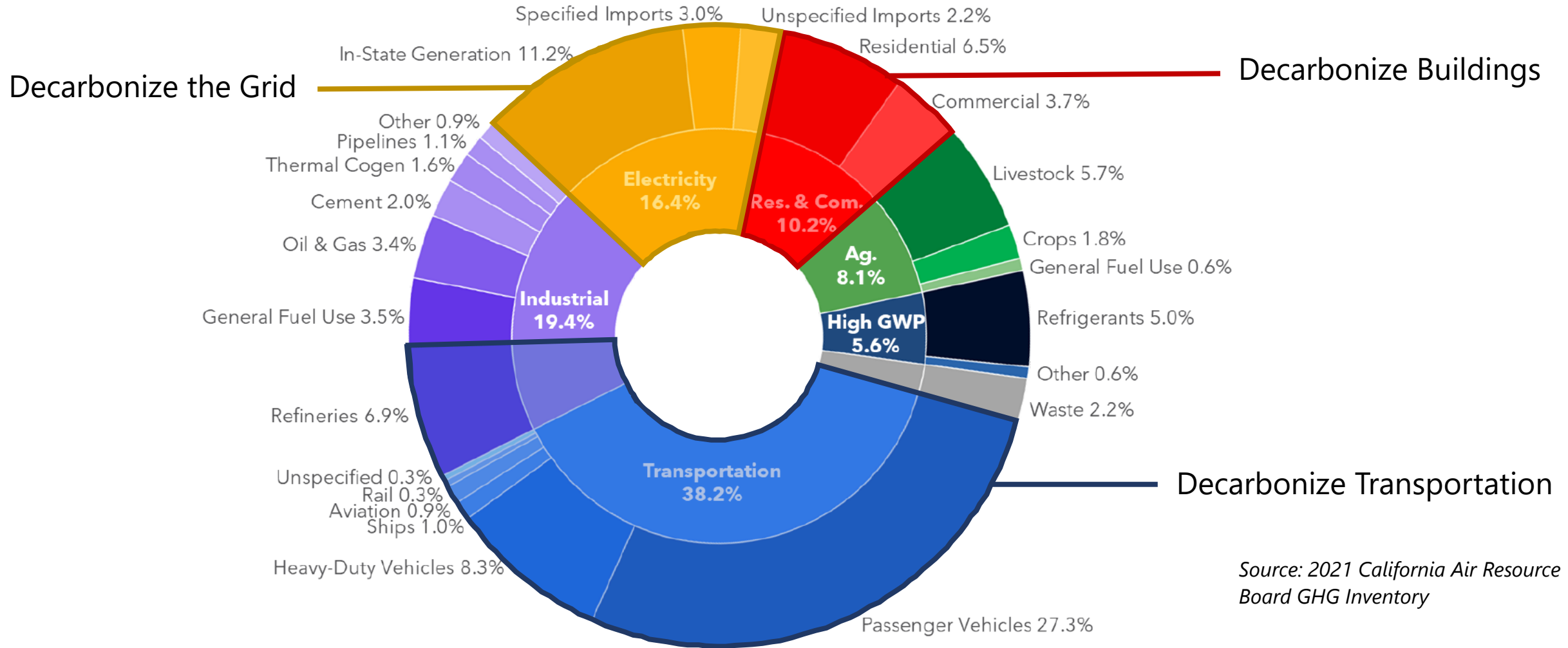
- 80% carbon-free electricity by 2030
- 2X rooftop solar & 10X customer-owned storage by 2045
- 80% increase in electricity consumption by 2045
- Average household spending across all types of energy goes down 10% by 2030 and 40% by 2045

...but none of this happens without millions of individual customer decisions to adopt clean technologies

Read more: [Edison.com/countdownto2045](https://www.edison.com/countdownto2045)

*From *Pathway 2045*, for comparison

Where GHG Emissions Are Located



Source: 2021 California Air Resource Board GHG Inventory

SCE 2022* Power Content Label

Energy Resource	SCE Default	SCE 50% Green	SCE 100% Green	CA Average	USA Average**
Eligible Renewable	33.2%	66.7%	100.0%	35.8%	15.2%
Biomass/Biowaste	0.1%	0.0%	0.0%	2.1%	1.3%
Geothermal	5.7%	2.9%	0.0%	4.7%	0.4%
Small Hydro	0.5%	0.3%	0.0%	1.1%	n/a
Solar	17.0%	58.6%	100.0%	17.0%	3.4%
Wind	9.8%	4.9%	0.0%	10.8%	10.2%
Large Hydro	3.4%	1.7%	0.0%	9.2%	6.3%
Nuclear	8.3%	4.2%	0.0%	9.2%	18.2%
Carbon Free Total	44.9%	72.6%	100.0%	54.2%	39.7%
Coal	0.0%	0.0%	0.0%	2.1%	19.5%
Natural Gas	24.7%	12.3%	0.0%	36.4%	39.8%
Other	0.1%	0.0%	0.0%	0.1%	0.9%
Unspecified	30.3%	15.1%	0.0%	7.1%	n/a
Total	100.0%	100.0%	100.0%	100.0%	100%
Retired Unbundled RECs	3.0%	1.0%	0.0%	unavailable	n/a
GHG Intensity (lbs CO2/MWh)	552	275	0	422	818

*SCE's 2023 Power Content Label is still being finalized

**Source: Energy Information Administration

Customer Actions

- **Transportation**
 - Alternative transportation
 - Electric vehicles for everything else
- **Buildings**
 - Energy efficiency
 - Heat pumps for space and water heating
 - Induction for cooking
- **Clean Energy**
 - Rate options & demand response
 - Solar plus storage
 - Green rates
 - Support build out of the grid



All-electric Homes

Local, state, and federal government programs may provide rebates or financing for energy efficiency upgrades.

SCE is currently offering a \$500 rebate to customers who go solar using [SCE Marketplace](#).

SCE offers [smart thermostats](#) rebates and on-going bill credits for participation in demand response programs.

Energy-efficient windows insulate and reduce noise.

Solar panels let homeowners produce their own power.

Ceiling fans help circulate air.

Heat pump dryers are 40%-50% more efficient than gas dryers.

High levels of **insulation** minimize the effect of outside temperatures on indoor air.

Electric vehicles can run off electricity generated at home!

[Rebates available](#) from SCE & Clean Vehicle Rebate Project for new and used EVs, including income qualified; tax incentives available from federal gov.

The [Self-Generation Incentive Program \(SGIP\)](#) can provide a rebate for the installation of a home battery.

Induction stoves are safer and healthier to use and keep kitchens cool.

Home appliances use **smart technology** to increase energy efficiency and reduce costs.

Heat pump HVAC systems replace both gas furnaces and air conditioners.

Heat pump water heaters pull heat from the air to heat the water.

Batteries save money and power by storing energy for later use.

[SwitchIsOn.org](#) can help customers find rebates for heat pumps in their area, as well as contractors.



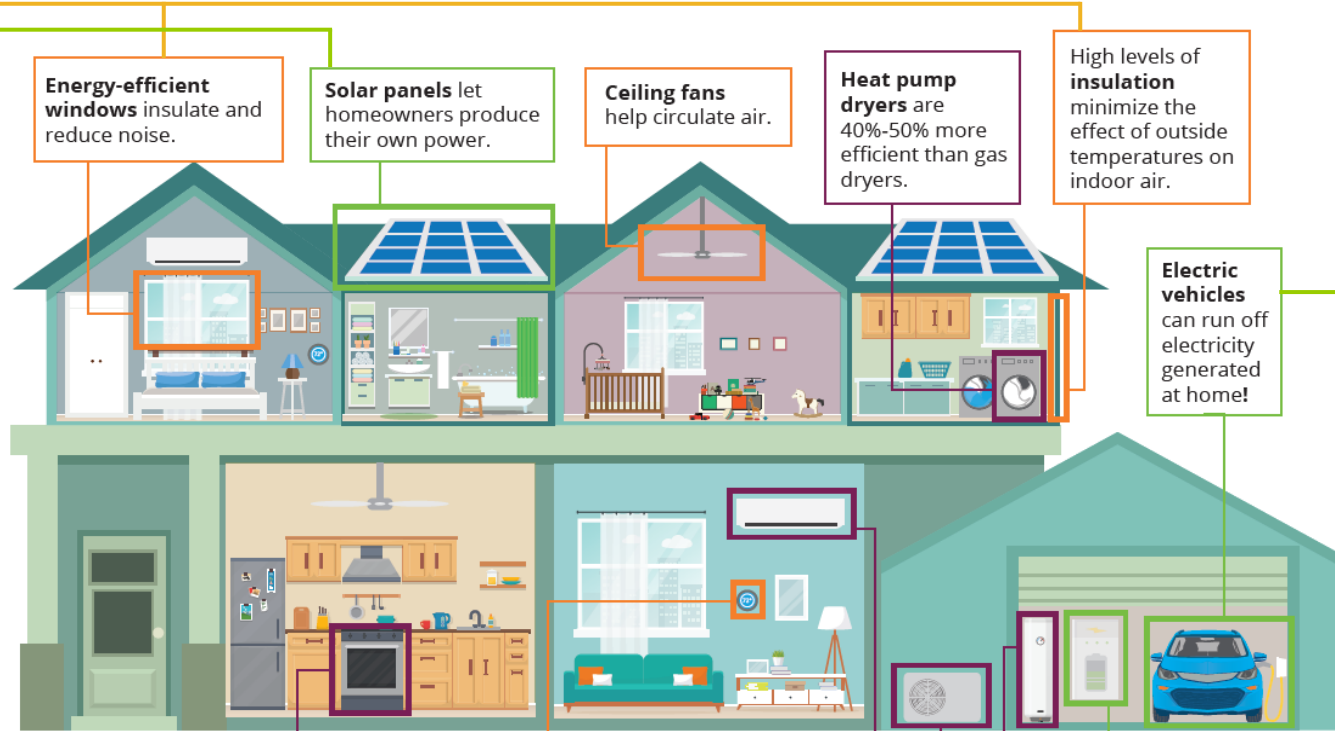
Clean All-Electric Features



Clean Energy Features



Energy Efficiency Features



Resources Available to SCE Residential Customers

- [SCEcleanenergy.com](https://www.scecleanenergy.com)
 - Links to popular electrification and clean energy programs
- **SCE.com > Your Home > [Rebates, Incentives & Saving Tips](#)**
 - Links to additional SCE customer programs, including energy efficiency, demand response, solar, time-of-use, etc.
- **SCE.com > Your Home > Home Efficiency Guide > [Benefits of an Electric Home](#)**
 - Learn about the benefits of electrifying your home
- **SCE.com > Your Home > [Electric Vehicles](#)**
 - Helpful resources to learn about whether or not you're ready to switch to an EV, including myths vs facts, home charging information, rate finder, rebate finder, and vehicle finder.
- [Tool Lending Library](#)
 - SCE customers can rent various tools for free for up to two weeks, including induction cooktops

Third-party Resources*

There are additional non-SCE resources available. These third-party websites may help you to locate additional programs and incentives for which you are eligible.

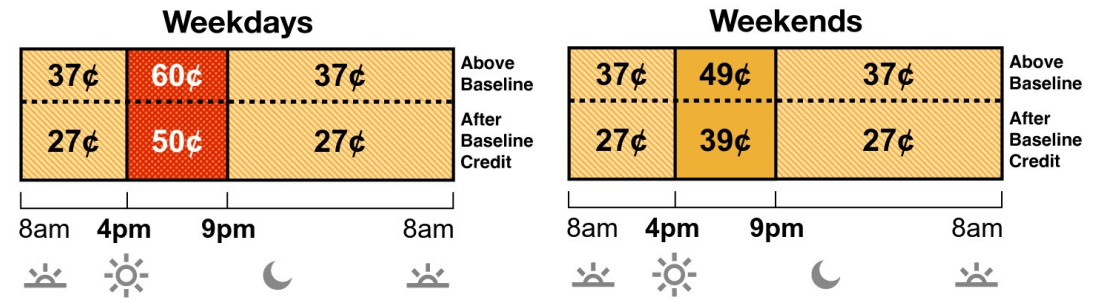
- [The Switch Is On](#)
- [Rewiring America's IRA Calculator](#)
- [White House – Clean Energy](#)

*These are third-party websites, unaffiliated with SCE. SCE does not control or influence the content on these websites, nor does SCE make any claims about the accuracy of the information on these sites. We are sharing for information purposes only. Customers are advised to do their own research and seek quotes from multiple licensed contractors before proceeding with any project.

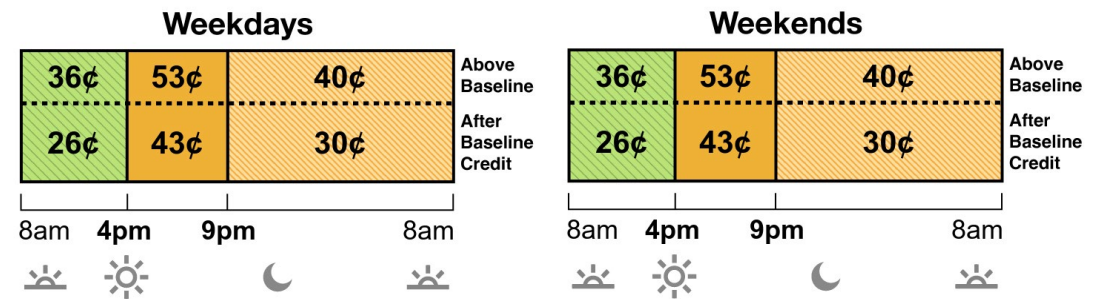
What is Time-of-Use?

- A variable rate structure that charges based on both **when** and **how much** electricity you use
- There are certain times when providing power is both less expensive and better for the environment
- Better matching the demand for electricity with supply helps to:
 - Keep electricity rates down
 - Ensure grid reliability
 - Deliver more clean energy

TOU-D-4-9 Summer Rates



TOU-D-4-9 Winter Rates



Legend: Super Off-Peak (Green), Off-Peak (Orange), Mid-Peak (Yellow), On-Peak (Red). Above rates are per kWh.

Rate Plan Comparison Tool

Your Current Rate Plan	Option 1	Option 2
TIERED	TOUD-4-9PM	TOUD-5-8PM
\$918 / year	\$887 / year	\$890 / year
	Savings \$31	Savings \$28
<p>This is your current rate plan. Based on your history, it might not be the right option for you. Consider changing how you use energy if you want to keep this plan.</p>	<p>Based on your history, this plan could cost you less than your current plan. You might benefit more from this option if you change how you use energy.</p>	<p>Based on your history, this plan could cost you less than your current plan. You might benefit more from this option if you change how you use energy.</p>
<p>High Usage Charge Applies When Usage Exceeds Tier 2</p>	<p>Hours Of Highest Rates 4 p.m. to 9 p.m. Weekdays</p>	<p>Hours Of Highest Rates 5 p.m. to 8 p.m. Weekdays</p>
	1 Year Bill Protection ✓	1 Year Bill Protection ✓
Plan Details	Plan Details	Plan Details
	Switch to This Plan >	Switch to This Plan >

- The [rate plan comparison tool](#) can help you find the best rate plan for your home
- All SCE residential customers have access to the Tiered, TOU-D-4-9, and TOU-D-5-8 rate plans
- Customers with a heat pump, electric vehicle, and/or battery system also have access to TOU-D-PRIME, which is a special rate designed for customers who electrify their homes
- Visit [SCE.com](#) to learn more about rates

Take Advantage of Time-of-Use Rates

- Take advantage of lower rates during certain times of day to help reduce energy costs and even help the environment
- Change times when you use major appliances
- Smart Thermostat Rebate
- Appliance Energy Use Cost Estimator
- TOU Text Alerts
- Budget Assistant
- Energy Efficiency Programs

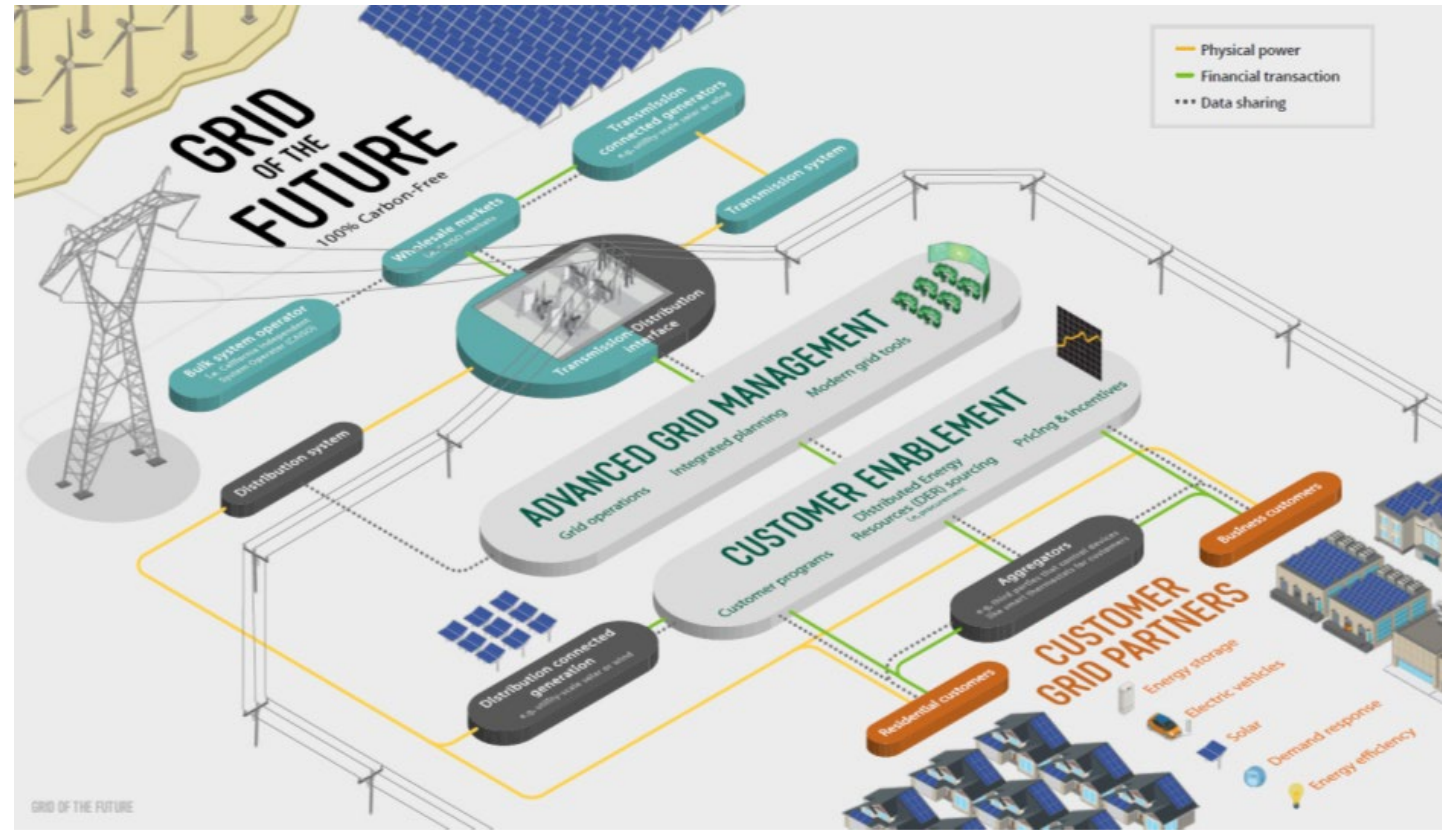




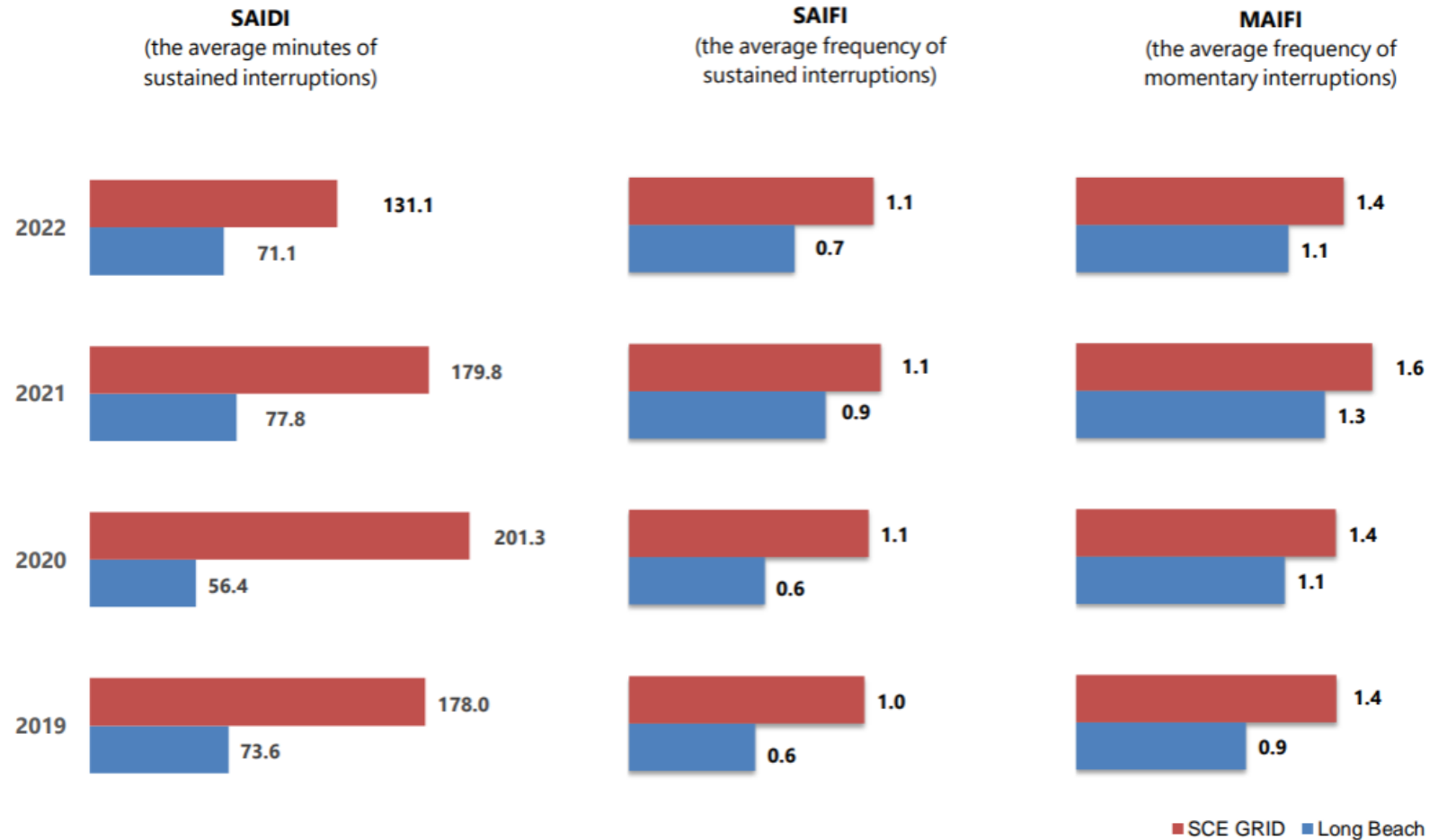
Questions?

Resiliency in the Clean Energy Future

- [Reimagining the Grid](#)
- Distributed Energy Resources
 - Solar, batteries, EVs
- Grid Investments - \$5B per year
- Electric vs gas appliances
 - Heat pump water heaters: load shifting, demand response
- As we become more dependent on electricity as a fuel source, how we receive that electricity will diversify



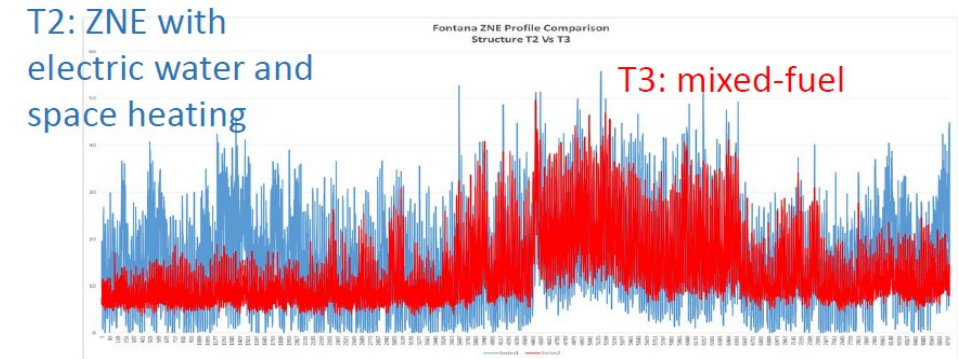
Historic Reliability of All Circuits in Long Beach



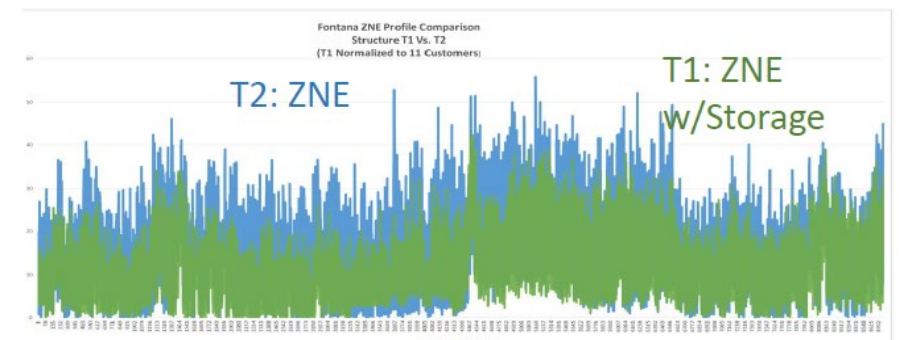
* NO EXCLUSIONS **Data is as of 03/12/2023, data can be slightly different due to outage data validation process

Grid Impacts of All-Electric Homes is Minimal

- The electric grid is designed to accommodate “peak demand,” plus a margin
- **All-electric neighborhoods do not have a noticeably higher peak** compared to mixed-fuel
- SCE conducted case studies on two all-electric neighborhoods, one in Fontana and one in Irvine
- All-electric homes do consume more electricity, but this additional consumption mostly occurs **during off-peak hours when there is abundant capacity on the grid**
- Results also showed that adding batteries can “flatten” the demand curve for all-electric homes even more, further reducing demands on the grid



Results of Fontana case study, comparing demand profile of mixed-fuel (red) to all-electric (blue). Note how the two peaks are similar.



Results of Fontana case study, comparing demand profile of all-electric with only-solar (blue) to all-electric with solar-plus-storage (green).

Green Rate Overview

- A voluntary clean energy rate program for Residential and Non-Residential customers that supports renewable energy and reduces greenhouse gas emissions associated with your electricity usage.
- For an additional cost, you can choose to purchase clean power for a portion (50%) or all (100%) of your electricity use.
- SCE will purchase solar energy on your behalf from local developers.
- The Green Rate and Community Renewables clean energy rate programs are both Green-e Energy certified.
- Green-e Energy certification guarantees that our programs meet strict environmental and consumer protection standards.
- Bundled service customers, meaning those who pay SCE for generation, transmission, and distribution services, are eligible.



Current Status of the Green Rate Program

- SCE's Green Rate Program is currently not accepting new customers.
- Customers who wish to participate are being put on a wait list.
- Customer interest in the program has exceeded the procured amount of available capacity.
- SCE held a solicitation on September 30, 2022, for a Request For Offers for new projects for Green Rate; however, no bids met the eligibility requirements.
- On August 26, 2022, SCE filed a Petition to Modify D.15-01-051 with the CPUC requesting permission to use interim resources to meet the increased customer interest in the program but we have not received a decision as of today.
- SCE also has an application at the CPUC for a new Green Share Program.
- We anticipate a decision sometime in the second half of 2024.



Community Renewables Program



- Community Renewables program allows customers to work directly with developers to subscribe to a portion of a renewable project and receive bill credits from SCE based on their portion of the project's generation
- Current projects are fully subscribed, but 32 MW of new projects are scheduled to come online in 2024.
- Customers who are interested in the 2024 projects can contact the developer directly at jason.kaplan@powermarket.io.