



Utility Energy Forum

Role of Clean Molecules in Resilient and Affordable Decarbonization

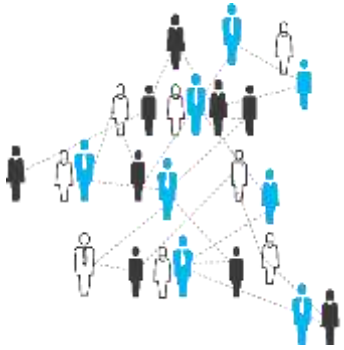
By Jennifer Medina
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April 24, 2026



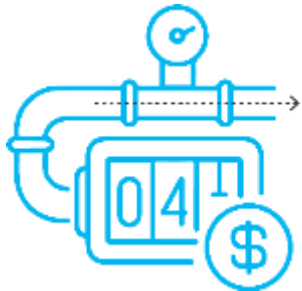
SoCalGas Overview

SoCalGas is the largest natural gas distribution utility in the U.S.



Natural Gas Service Provided to

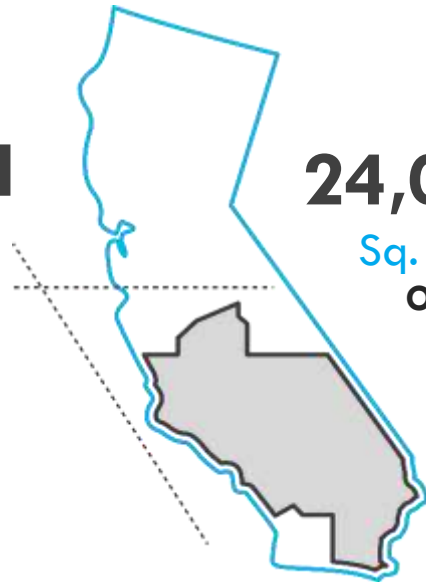
21+ MILLION
Customers



6 MILLION

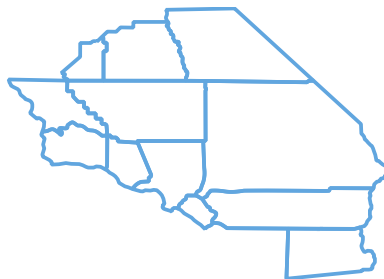
Meters

273,111 Non-Residential
5,755,780 Residential



24,000

Sq. Miles
Of Service Territory



12

California Counties and
500+ Communities

4 Storage Fields

Aliso Canyon, Honor Rancho,
Playa del Rey, Goleta

103,477

Miles
Of Distribution
Mains & Service Lines

50,541 Miles of Services
52,936 Miles of Main



119 BCF

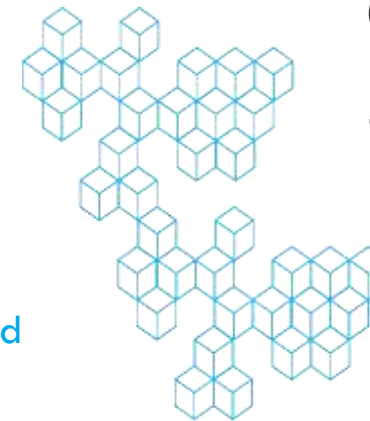
Max Authorized
Capacity

137.1 Bcf max working
capacity



3,385

Miles
Of Transmission
Pipeline



Over

820 BILLION

Cubic Feet of Natural Gas
Delivered Annually



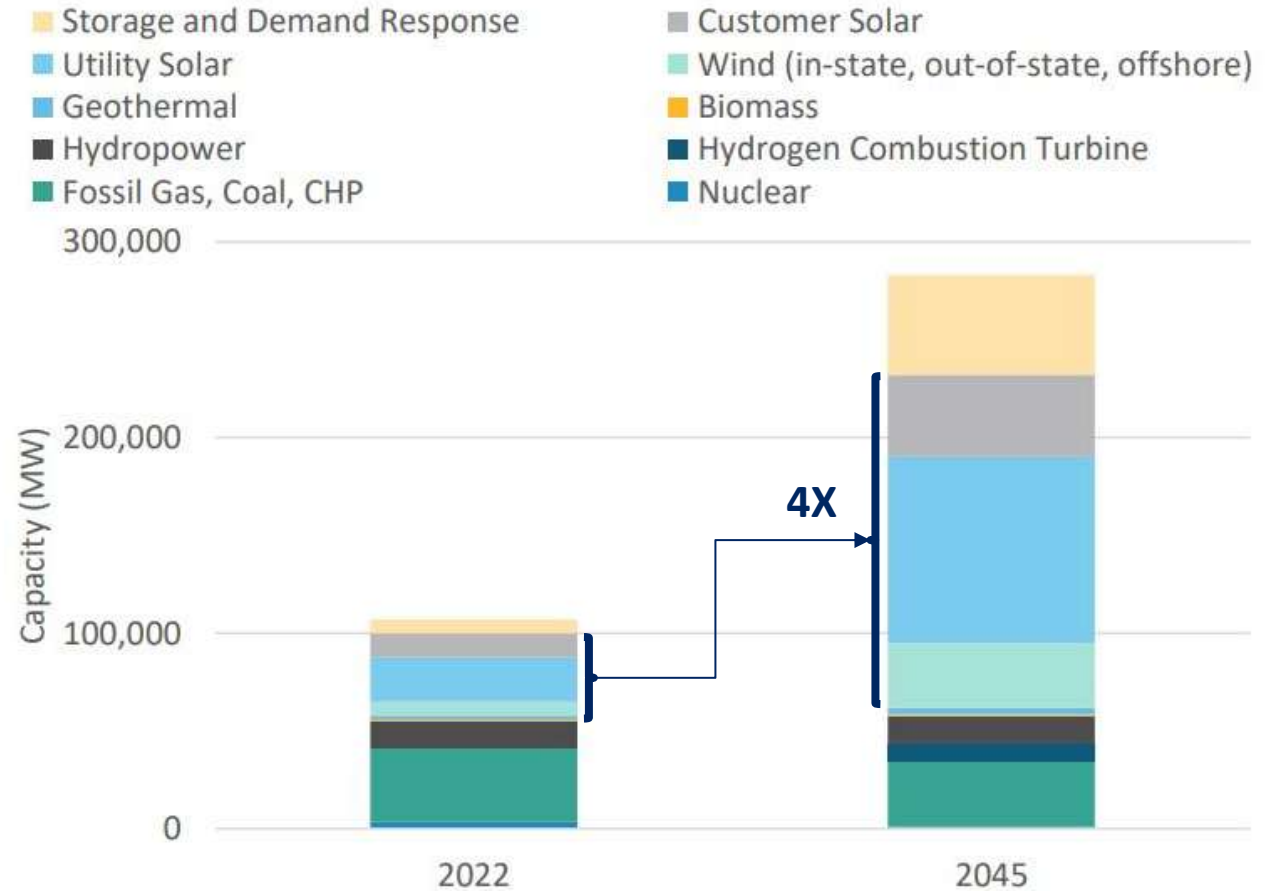
2.5%

Of U.S. Gas
Deliveries

Projected electricity resources needed by 2045 in the Scoping Plan scenario

- The California Air Resources Board's 2022 Scoping Plan projects that, to reach the 2045 target, the state will need to **quadruple** its current level of wind and solar capacity
- In 2045, intermittent resources like wind and solar are expected to comprise more than **60%** of California installed capacity
- This transformation introduces growing pressure on the reliability of the energy system, as the grid becomes increasingly dependent on intermittent and weather-driven resources

4x existing wind and solar capacity in 2045



Sources:

[2022 Scoping Plan Documents | California Air Resources Board](#)

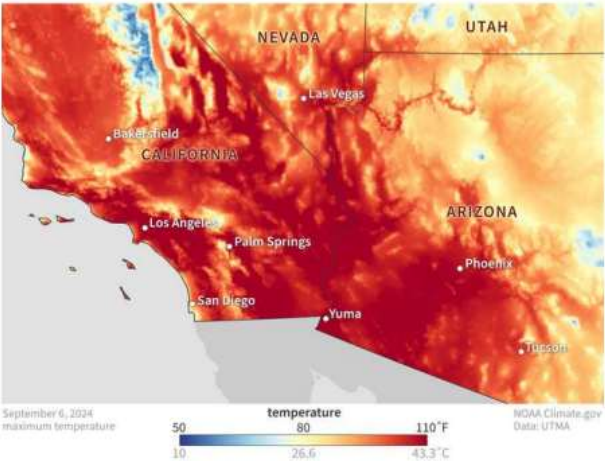
[2025 Senate Bill 100 Report Workshop Utilities' Progress Toward Statutory Goals](#)

California's ongoing resiliency challenges

IN-BASIN DISPATCHABLE GENERATION IS REQUIRED FOR RELIABILITY

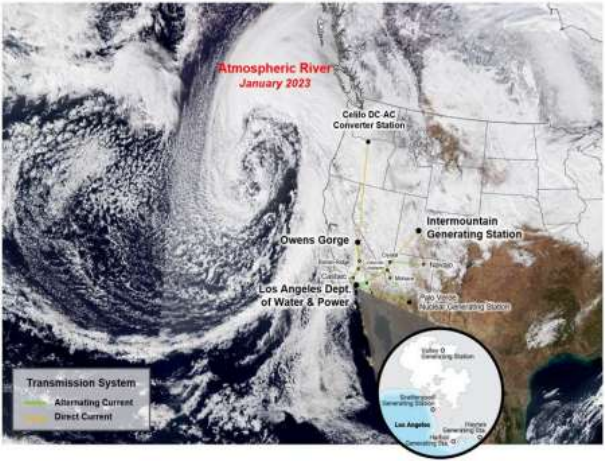
In-basin dispatchable generation is critical to avoid load shedding during stressed condition

Heat Wave



- **In-basin generation** provided more than 60% of demand during the 2024 heat storm, avoiding blackouts. LADWP avoided load shed due to in-basin generation
- **The 2020 California heat wave** resulted in rolling blackouts that affected over 300,000 Californians, LADWP's service territory avoided blackouts
- **Heat storms** are expected to occur more often due to climate change

Atmospheric River



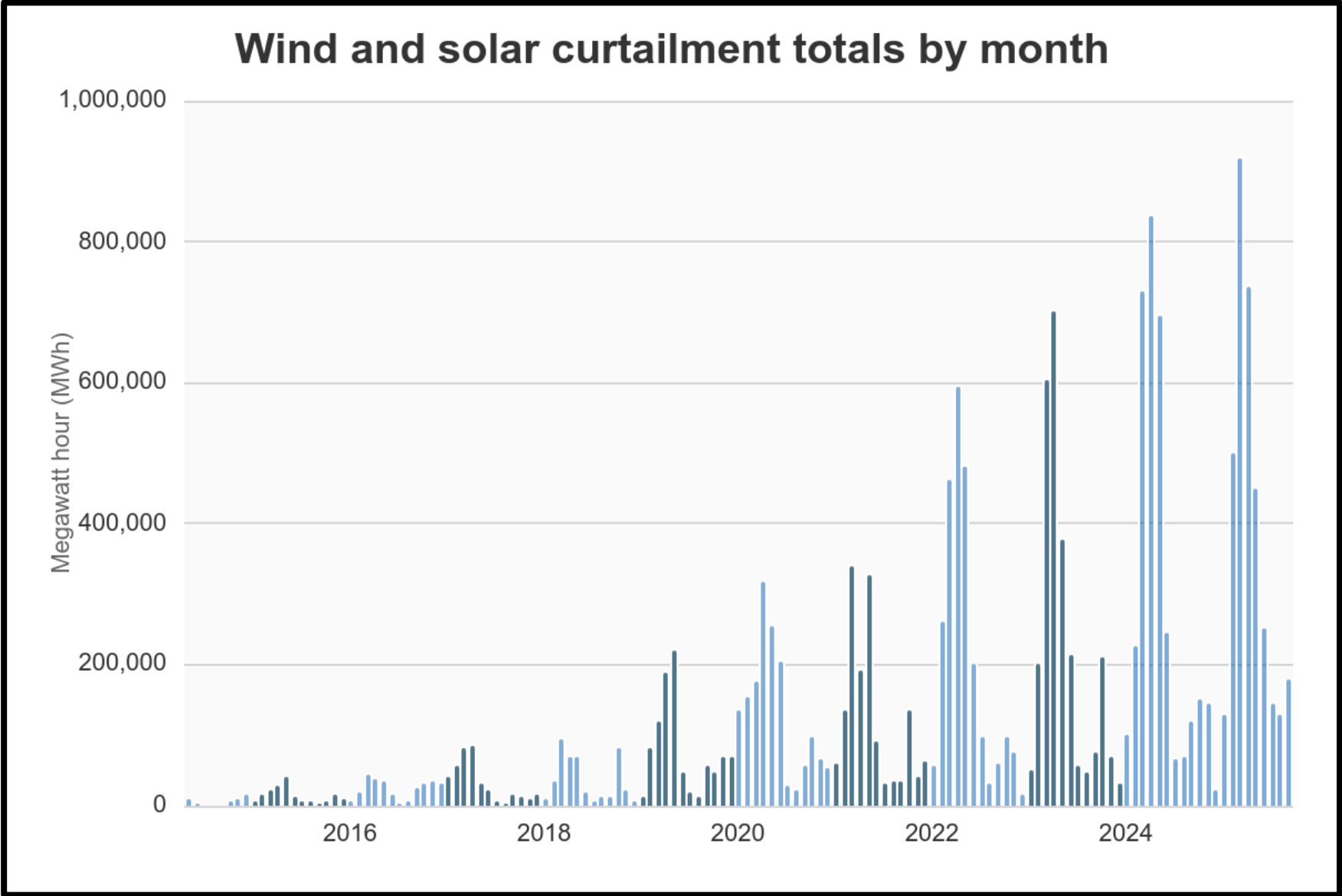
- **Renewables** mostly unavailable during the 10-day atmospheric river rainstorm in 2023. LADWP will be significantly increasing reliance on renewable energy
- **Short-Duration Energy Storage** not sufficient for prolonged periods of stressed conditions.
- **Intermittency** of renewables cannot respond to long duration outages or significant weather events
- **Dispatchable generation** is a key to long duration reliability

Wildfire



- **The 2019 Saddle Ridge Fire** led long-lasting outages over multiple transmission corridors, and LADWP's in-basin generation was relied on to avoid blackouts
- **The 2025 windstorm** and wildfires in Los Angeles caused significant transmission outages, and in-basin generation was used as backup. Scattergood played critical role in supporting the grid.

Curtailment of renewable energy: a growing challenge

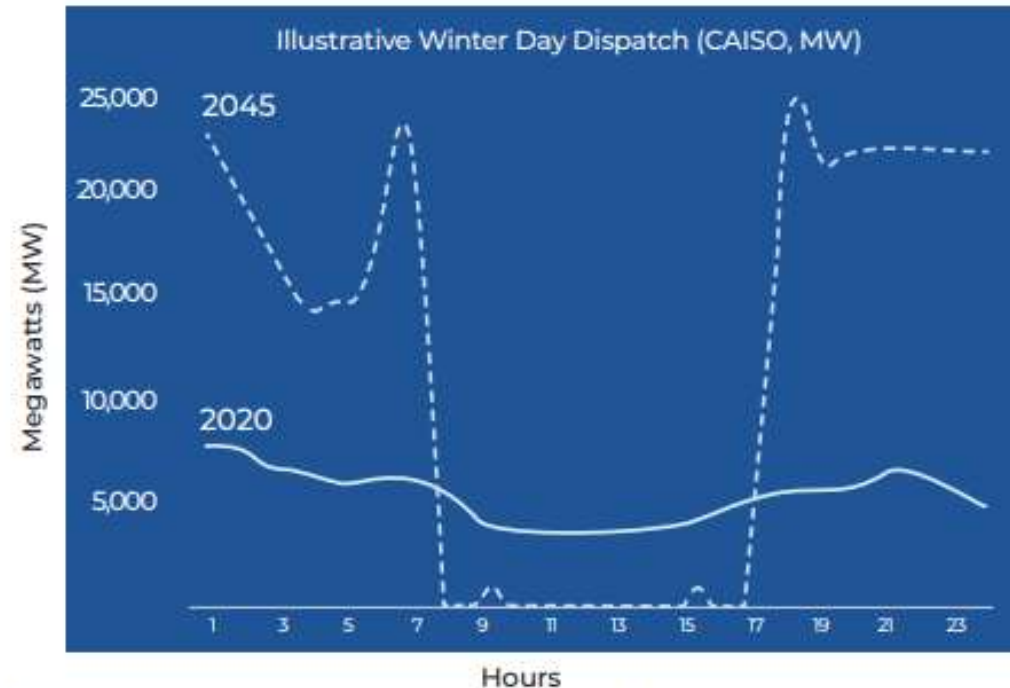
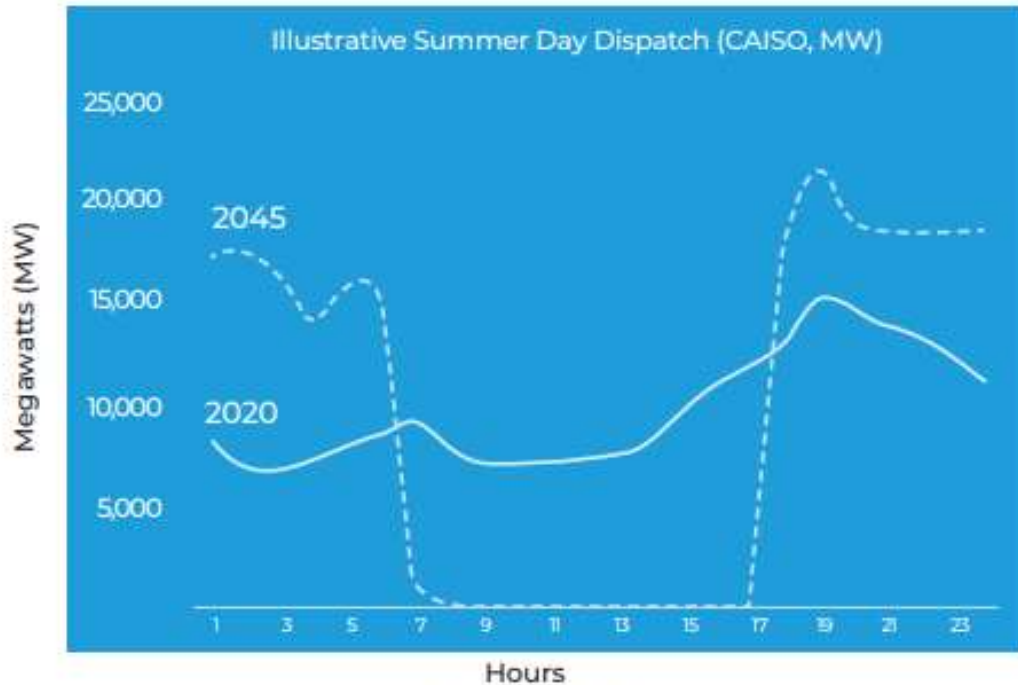


- Wind and solar curtailments in California are rapidly growing.

Clean fuels will play an essential role in maintaining reliability and resiliency

- > Today, natural gas plants are the primary source of fuel-based generation and are a critical resource for system balancing and ensuring electric reliability in California
- > By 2045, fuel-based generation could include plants that use fuels like clean renewable hydrogen, renewable gas, and synthetic gas
- > These plants will likely be an essential component of the State's resource mix and an integral tool in meeting the State's decarbonization goals

2045: Fuel Based Generation



In the future, clean, dispatchable, and flexible generation could be critical for reliability.

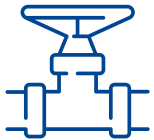
Clean Fuels Studies: Key Takeaways

The Clean Fuels Study and Reliability Analysis underscore the need for a diverse energy system and thoughtful, near-term investment in clean fuels infrastructure.

CLEAN FUELS STUDY



Combining the strengths of renewable electricity and clean fuels can be the most affordable and resilient path to net-zero



Infrastructure that transports clean fuels and captured carbon could become essential for affordably meeting California's climate goals



Stakeholders must act faster and with greater collaboration to expand and accelerate the deployment of decarbonization tools, including the clean fuels initiatives already underway

RELIABILITY ANALYSIS



Resource diversity and dispatchable generation powered by clean fuels could be vital for electric reliability



Clean fuels investments to support the electric sector can catalyze clean fuels adoption in hard-to-abate areas

Climate Benefits of Blending Clean Renewable Hydrogen

Blending clean renewable hydrogen with natural gas could help lower carbon emissions:

- » Hydrogen gas is made up of carbon-free molecules
- » At a 20% hydrogen blend by volume, hydrogen has a typical CO₂ reduction potential of 6.3%
- » Blending will use existing natural gas infrastructure
- » Hydrogen can serve key end users where electrification faces technical hurdles:



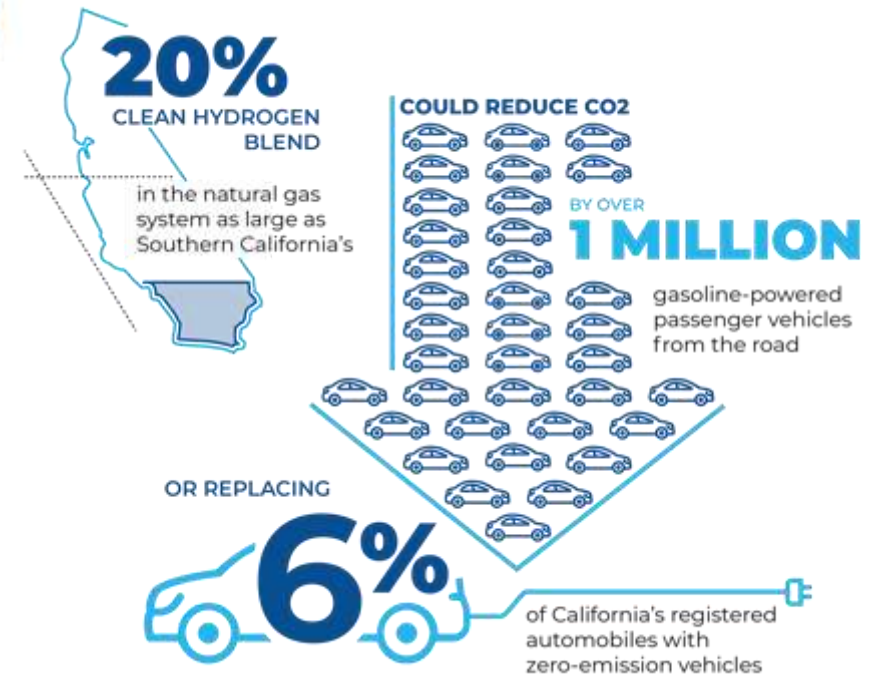
AVIATION



MARITIME SHIPPING



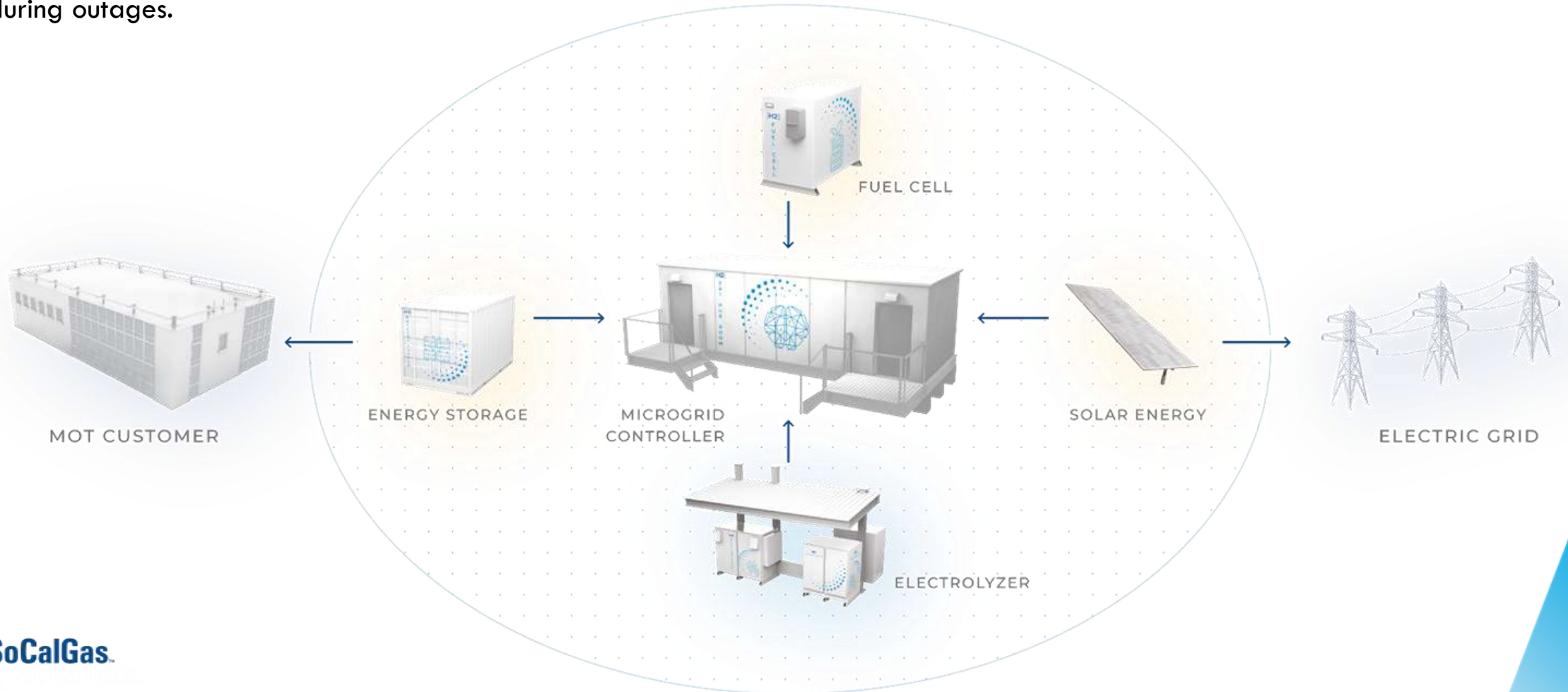
STEELMAKING



What is a Microgrid?

A microgrid is a self-contained energy system that can generate, store, and manage energy for customers such as commercial and critical facilities. It includes different energy sources (like solar panels or generators), batteries for storage, and smart technology to control how energy is used.

A microgrid can either work alongside the electric grid or off-grid on its own providing customers electricity all the time, especially during outages.



Hydrogen-Powered Microgrid

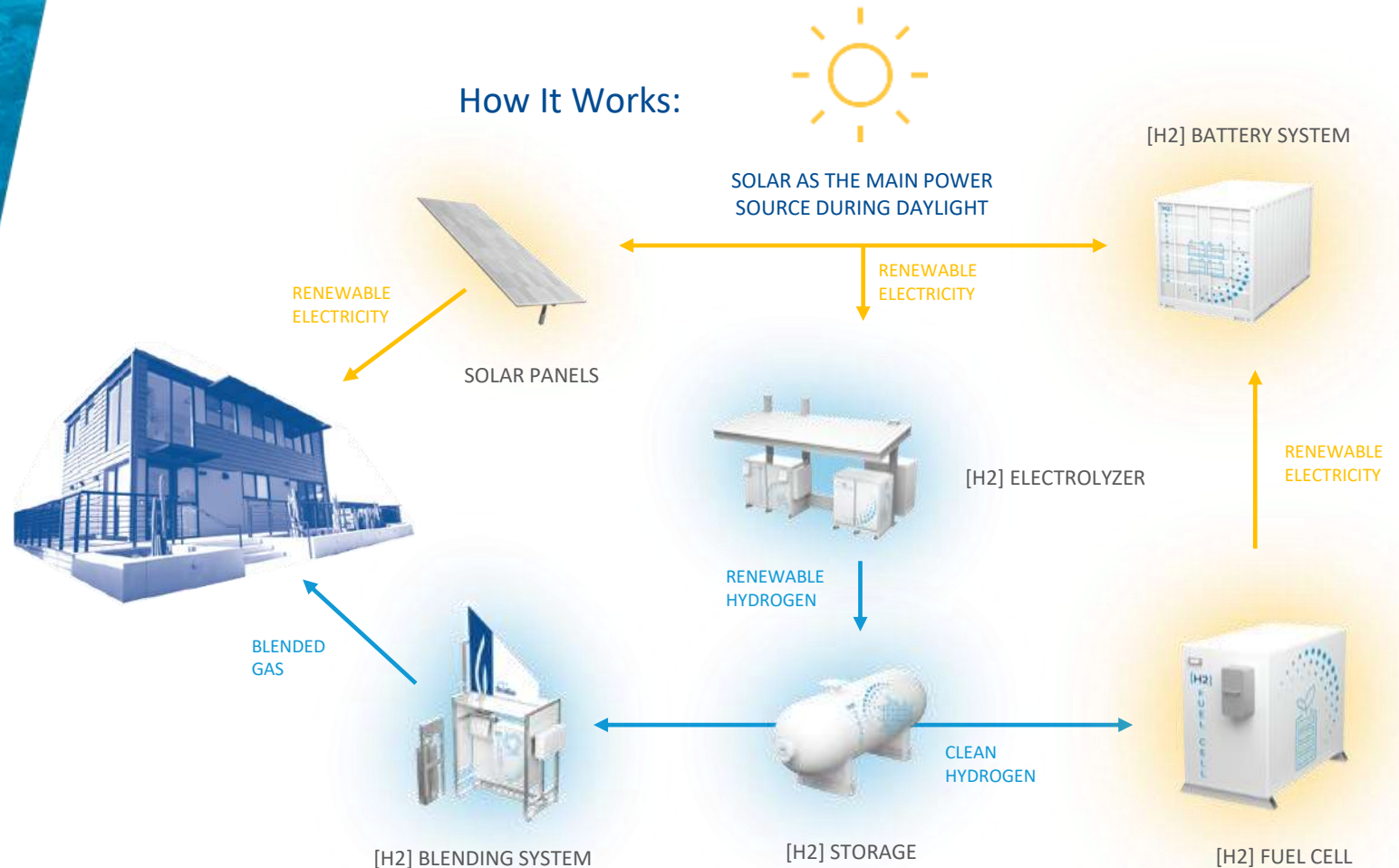
- » A demonstration of an advanced microgrid utilizing clean renewable hydrogen
- » Shows how carbon-free gas made from renewable energy can be used to enhance energy reliability and resilience with distributed renewable energy systems

MICROGRID SPECIFICATIONS

Solar	72kW
Fuel Cell	4kW
Battery	60kW / 288kWh
Electrolyzer	21kg / 62kW
H2 Storage	10kg

[H2] INNOVATION EXPERIENCE

How It Works:



Microgrids Support

California's Energy Policy and Provide Energy Solutions to Customers



Electric Demand

Provide a near term solution to support new electric demand and load growth from critical market sectors.



Reliability and Resilience

Enhance reliability and resilience for the electric grid and customers.



Affordability

Address affordability by providing price certainty.



Sustainability

Support customer sustainability goals and decarbonization efforts.



Community

Provide benefits to local communities like job creation and air quality improvements.



Microgrid Optional Tariff (MOT) Tariff

- » MOT will be open to all existing and prospective non-residential customers and located in SoCalGas' service territory
- » SoCalGas will provide a turn-key solution for behind-the-meter microgrid facilities, both grid-connected or off-grid solutions
- » MOT agreements will be customized to meet specific customer needs, including pricing and contract terms
- » All MOT project costs will be funded by shareholders and recovered from the tariff customer with no subsidies from other ratepayers
- » Customers will be able to choose the fuel of their choice allowing them to leverage existing options in the market today and transition to cleaner fuels such as hydrogen in the future



THANK YOU!