



Welcome!

Virtual Meeting will start at 12PM

September 9, 2026
CEC Environmental Hub, Santa Barbara





SoCalREN Q3 2026 Regional Workforce Alliance Meeting

Cultivating Resilient Roots & Clean Careers: Advancing our Clean Energy Ecosystem

September 9, 2026
CEC Environmental Hub, Santa Barbara



Agenda

11:30 AM - 12:00 PM - Networking Lunch

12:00 PM Welcome - **Tessa Charnofsky**, Special Services Assistant, SoCalREN

12:10 PM Keynote & Q&A - Das Williams, Senior Advisor, Policy & Legislative Affairs, 3CE

12:30 PM - 1:30 PM - Featured Panel Discussion: Cultivating Resilient Roots & Clean Careers:
Advancing our Clean Energy Ecosystem

Dr Grace Wu, Assistant Professor, UCSB

Craig Lewis, Founder & Executive Director, Clean Coalition

Amanda Martin, Founder, Renewal Revolution

1:30 PM - 1:40 PM - Q&A

1:40 PM - 1:55 PM - Program Spotlight - CEC Environmental Hub, Kathi King and Em Johnson

1:55 PM - 2:00 PM - Closing Remarks - SoCalREN

2:00 PM - 2:30 PM- Optional Tour: CEC Environmental Hub





Das Williams

Senior Advisor of Policy and Legislative Affairs, 3CE

Das Williams currently serves as Senior Advisor of Policy and Legislative Affairs at Central Coast Community Energy (3CE), bringing more than two decades of public service experience to his work advancing local and state policy. Previously, Williams served as Chair of 3CE's Policy Board of Directors, helping the agency navigate complex state policy challenges and advance its mission of delivering economic and environmental benefits through clean energy resources. He was elected to represent the First District of Santa Barbara County in 2016 and served as County Supervisor from 2017 to 2024. Prior to that, he represented the Central Coast in the California State Assembly, where he helped advance legislation including SB 350, which established California's path toward 100% clean, renewable, and zero-carbon energy by 2045. Williams also served seven years on the Santa Barbara City Council from 2003 to 2010 and as a trustee for Peabody Charter School.





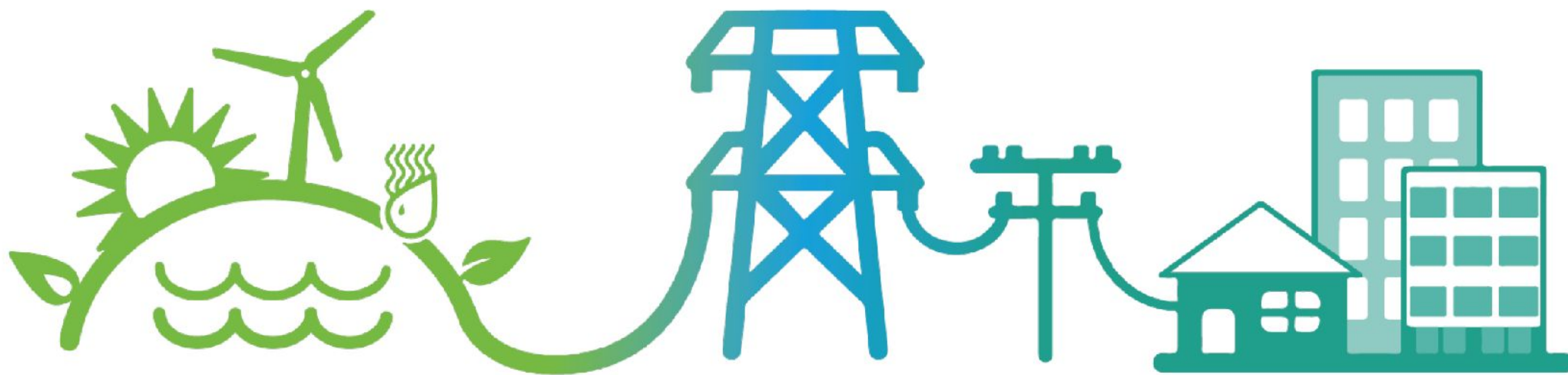
The Clean Energy Fight

Where We Stand in 2026

Das Williams
Director of Legislative and External Affairs



Central Coast
**Community
Energy**



SOURCE



3CE

Procures
electricity
supply

DELIVERY



PG&E or SCE

Delivers energy,
maintains lines and
bills customers

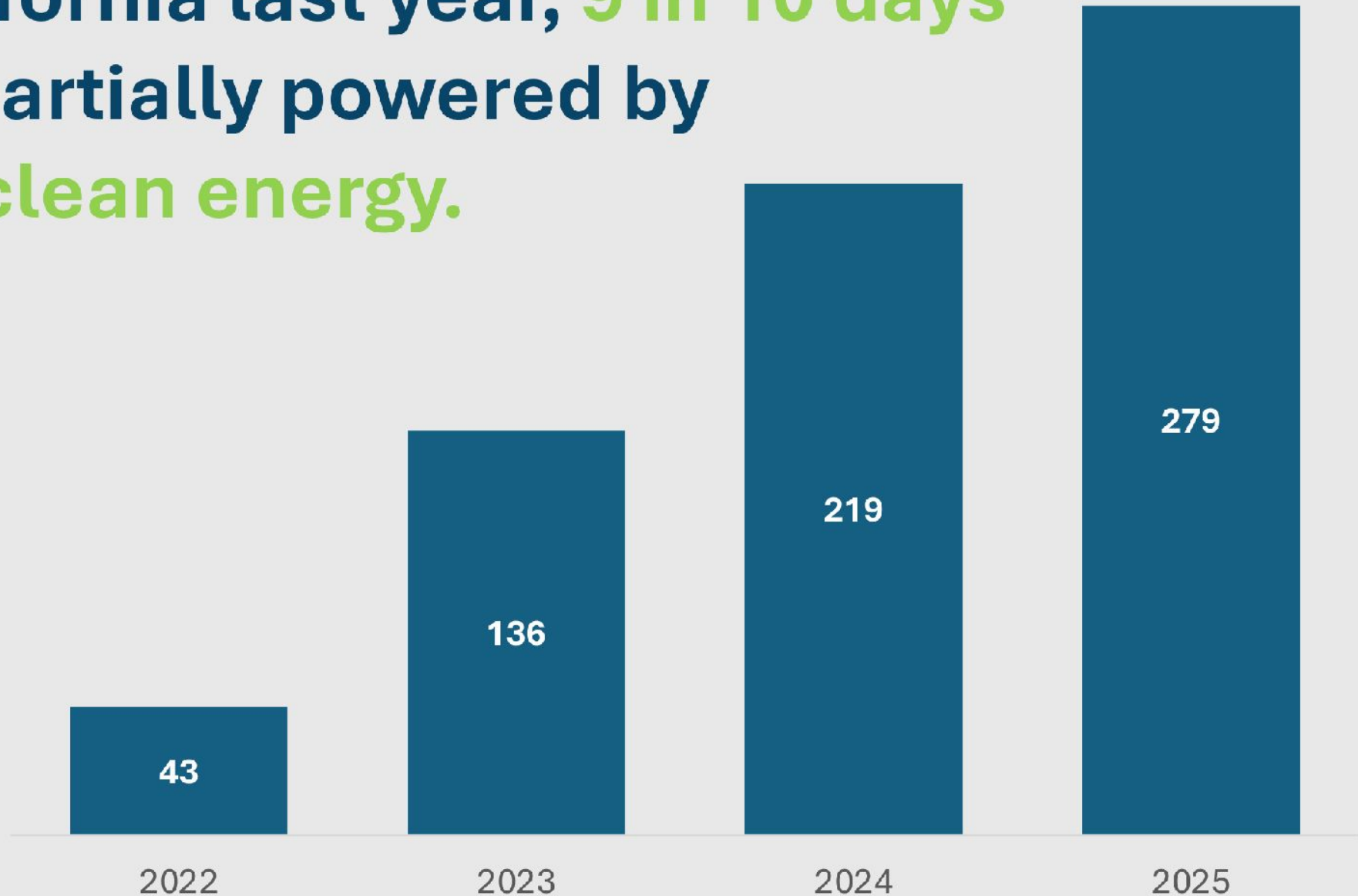
CUSTOMER



YOU

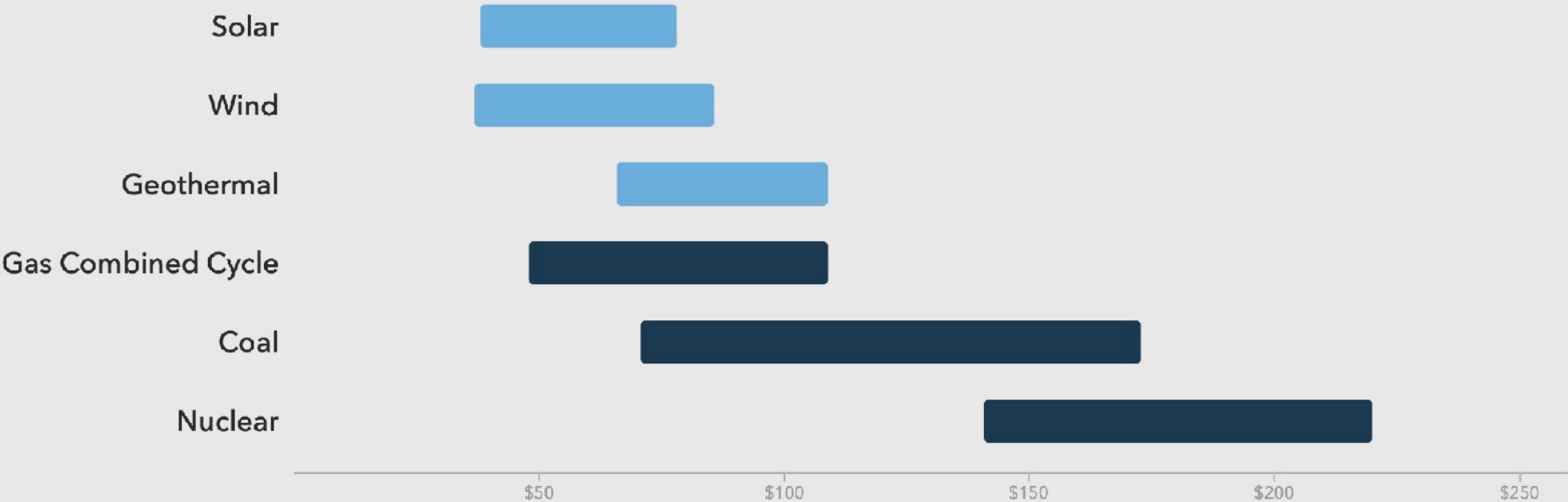
Benefit from competitive
rates, clean energy, and
community investment

In California last year, 9 in 10 days
were partially powered by
100% clean energy.

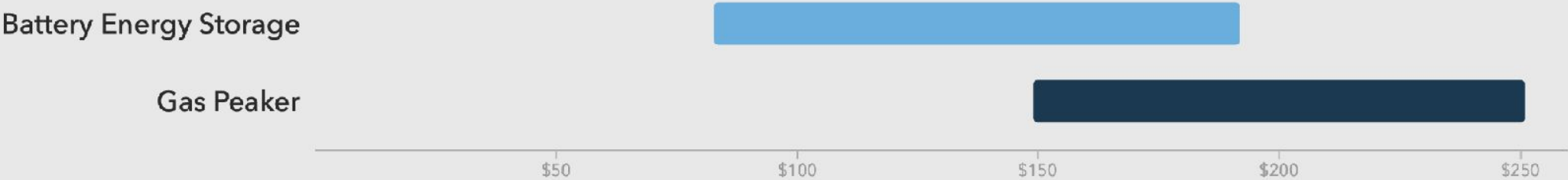


Cost to Build New Energy Resources (Nationwide Average)

ENERGY GENERATION



FIRM CAPACITY RESOURCES



Source: Lazard's 2025 Levelized Cost of Energy+ (LCOE+)

New Grid Capacity in 2026

Midway Hybrid

119 MW Generation/120 MW Storage

UNDER CONSTRUCTION

Panoche Hybrid

52 MW Generation/57 MW Storage

UNDER CONSTRUCTION

ReGen Monterey Biogas

3 MW Generation

ONLINE

SunZia Wind

205 MW Generation

ONLINE

Aratina Solar

120 MW Generation/75 MW Storage

ONLINE

Parkway Storage

9 MW Storage

CONSTRUCTION COMPLETE

Angela Solar

20 MW Generation/10 MW Storage

ONLINE

Atlas II Solar

100 MW Generation

UNDER CONSTRUCTION



Central Coast
Community
Energy

Wind Energy

SunZia Project

CORONA, NM

205 MW for 15 years

Largest Wind Energy Project
in the U.S.



Bioenergy

ReGen Monterey

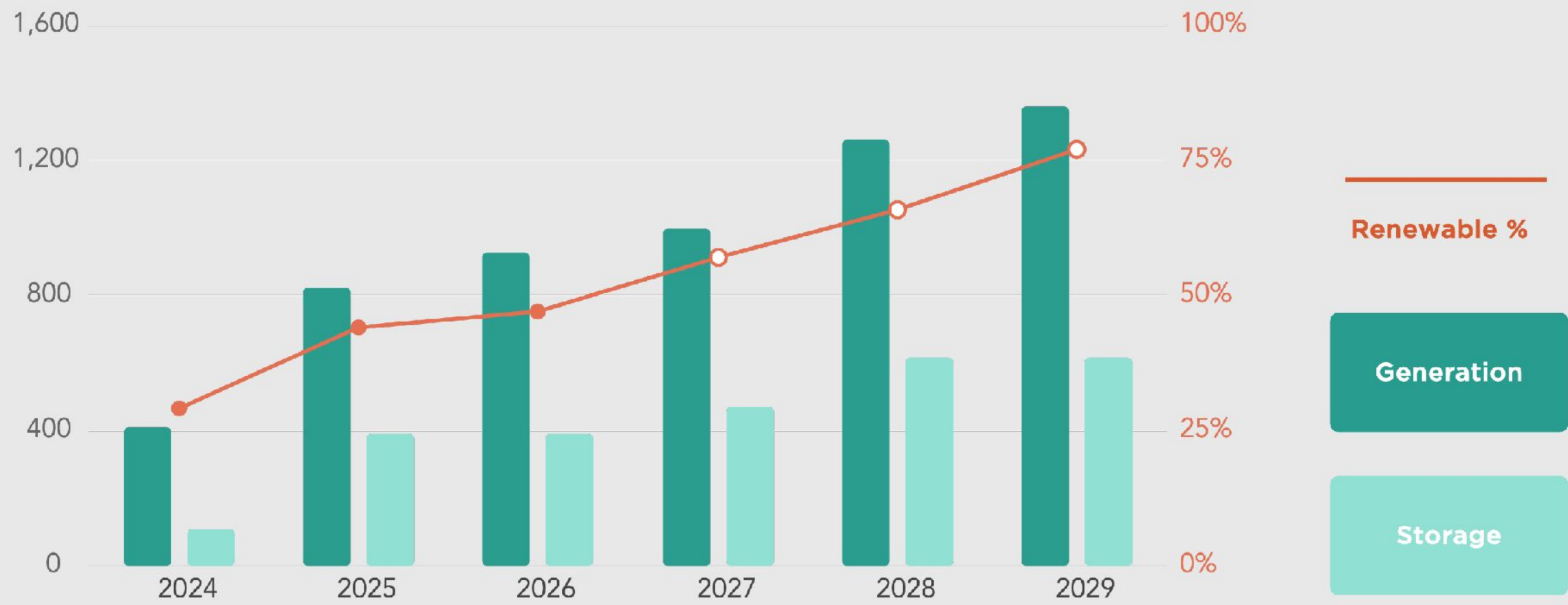
SALINAS, CA

3 MW baseload renewable
generation

Anaerobic decomposition
landfill gas



Renewable Energy Progress



Building Decarbonization

Heat Pump Water Heater at a residential household in Goleta, CA

3CE

\$1,500

Up to

3C-REN

\$1,500

Up to

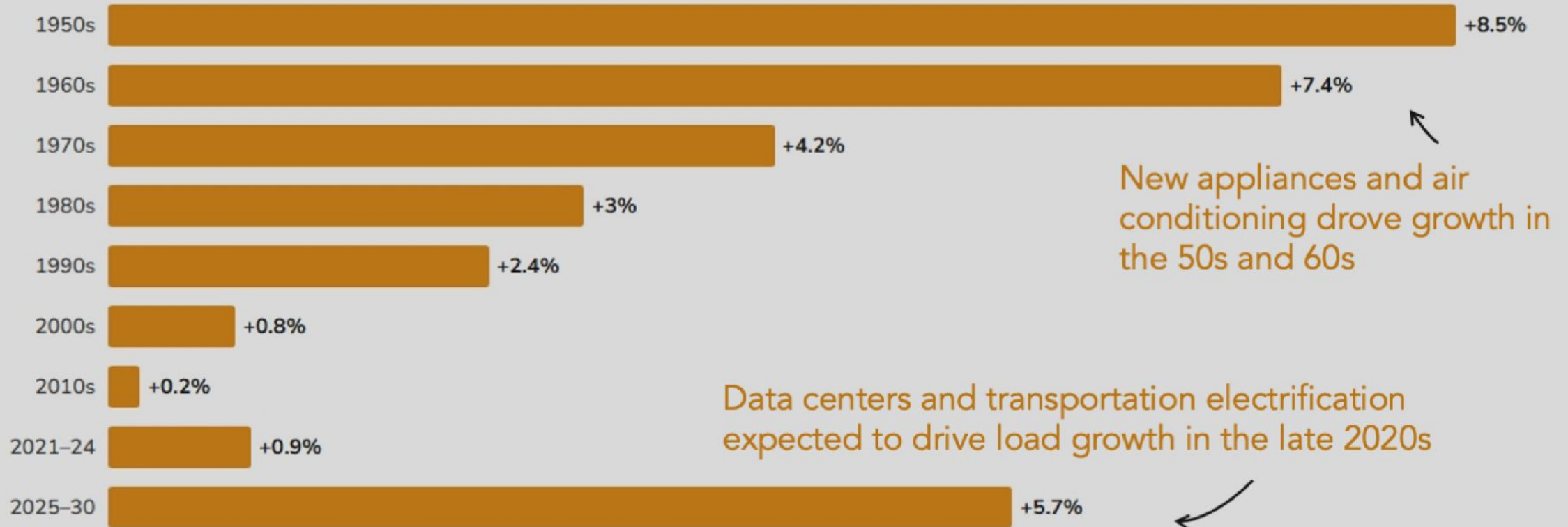
City of Goleta

\$232

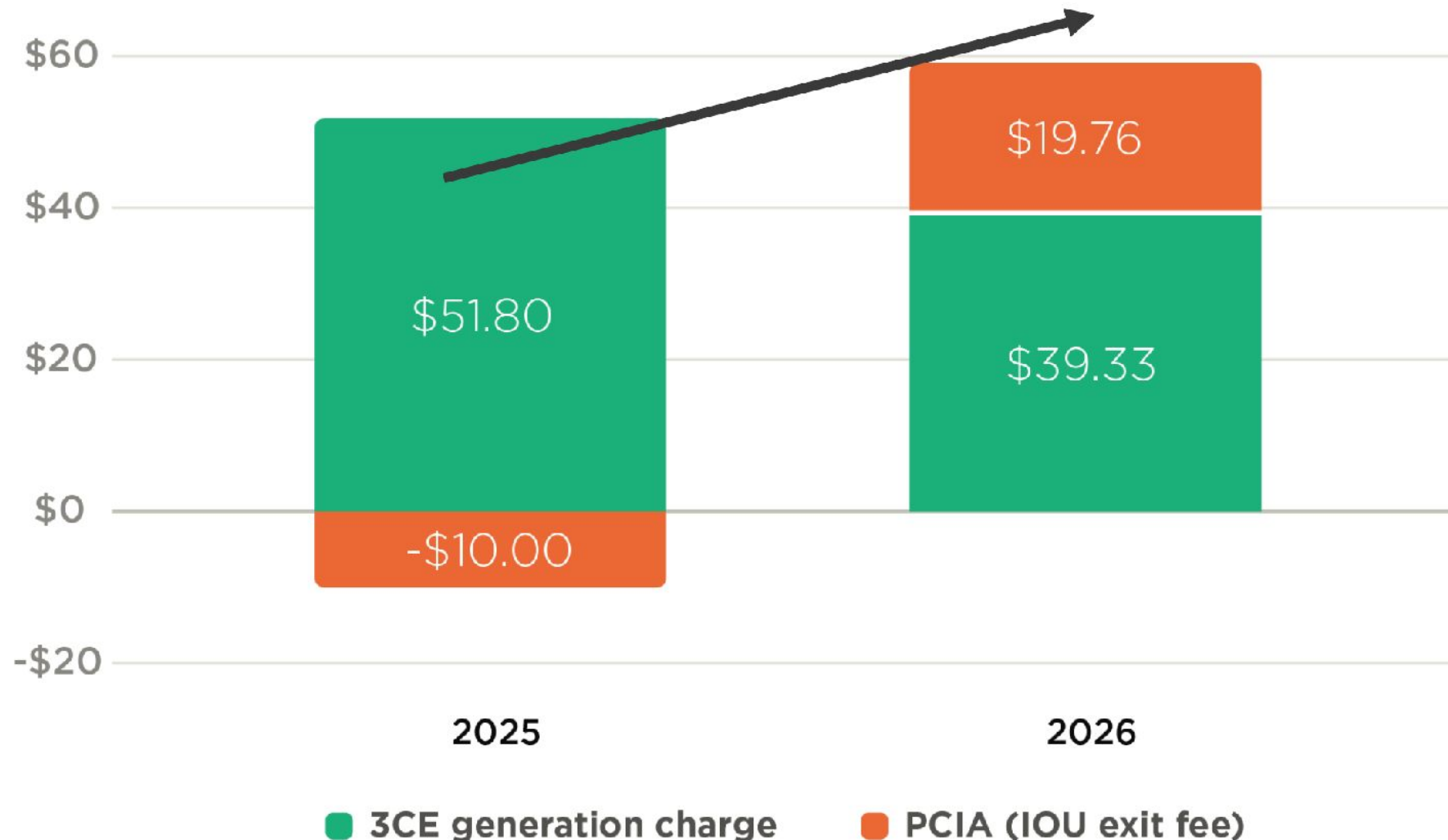
Fee savings



Average Annual Energy Usage Increase



Regulatory Cost Shifts

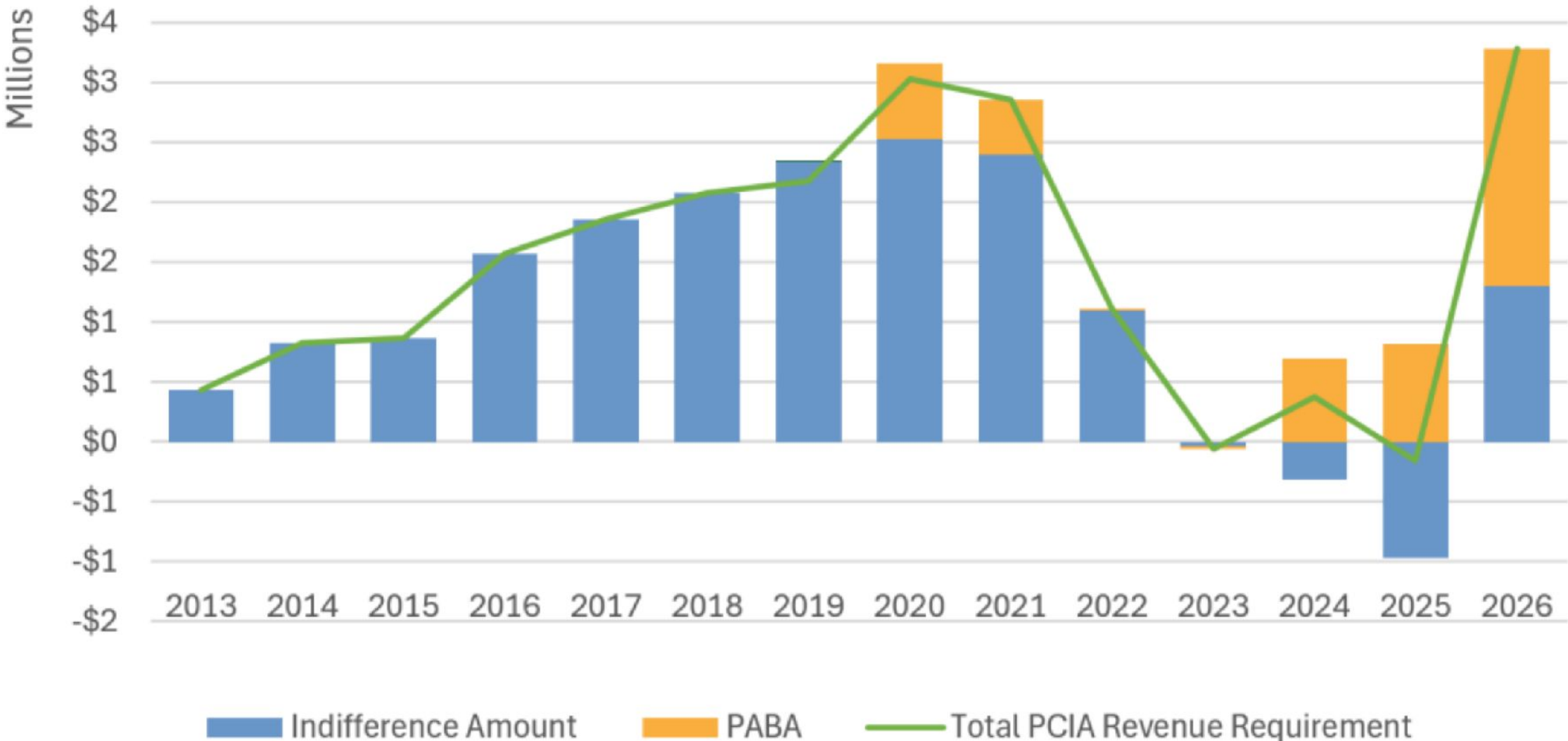


41%

**YOY increase on
the Generation side
of the customer
bill.**

Based on average 3CE
generation charges for
the average residential
customer in the 2024
vintage.

PG&E PCIA and PABA Over Time



Battery Energy Storage Systems

Permitting by Region



Coastal
3,348 MW
76 Installations

Inland
9,900 MW
138 Installations

 The Vacaville Reporter

Vacaville adopts Battery Energy Storage Systems ordinance

The Vacaville City Council voted Tuesday to unanimously to pass an ordinance that aims to severely limit Battery Energy Storage Systems...

Mar 11, 2026

 San Luis Obispo Tribune

SLO County beach town may ban utility-scale battery plants

About a year-and-a-half after Monterey County's Moss Landing battery plant went up in flames, the city of Morro Bay is considering...

3 weeks ago



 KSBW

San Benito County passes battery energy storage facility moratorium

County passes 45-day BESS moratorium to create development regulations ... The San Benito County Board of Supervisors voted to pass a 40-day...

Mar 10, 2026



 Energy-Storage.News

BESS developer opts for California Energy Commission fast-track approval after facing local county ordinance obstacles

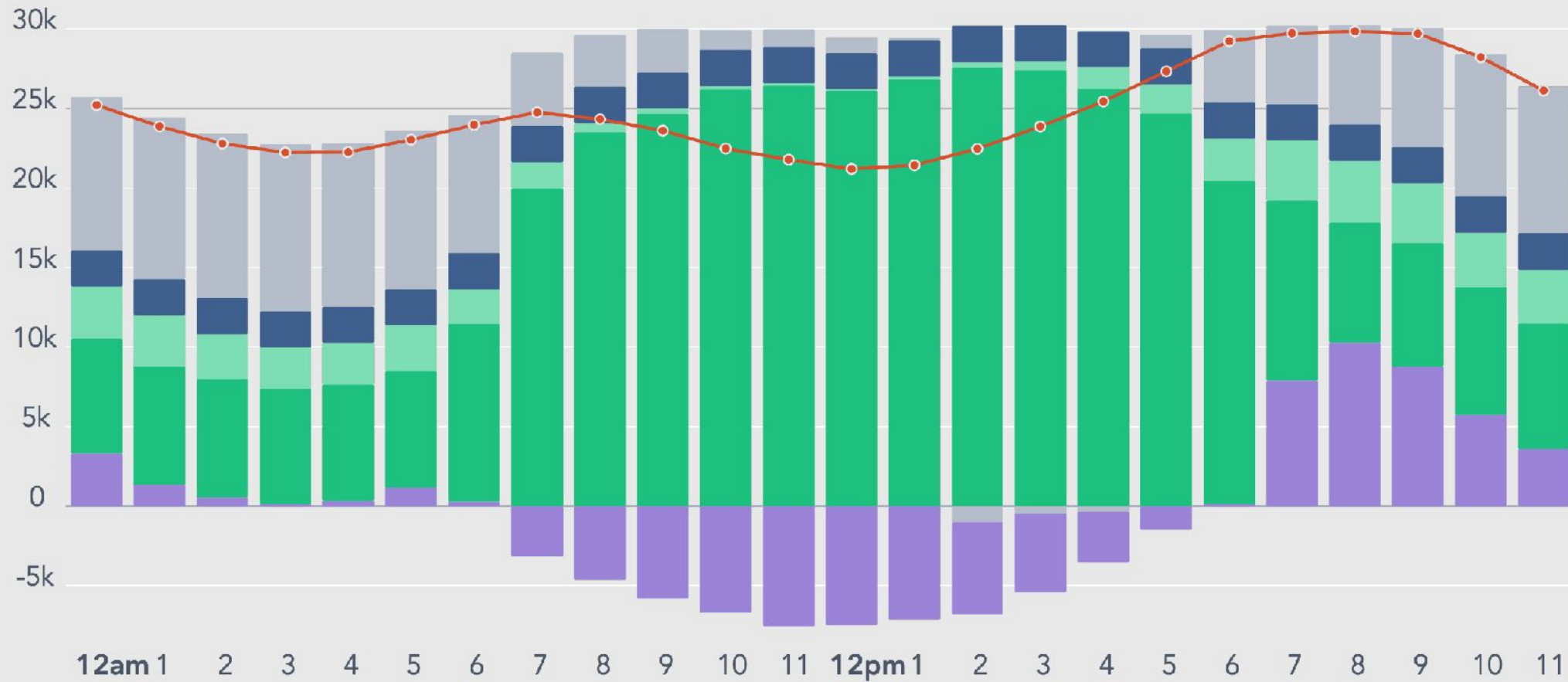
New Leaf Energy withdrew its application for a BESS in Santa Cruz County, California, seeking approval through the CEC.

Jul 8, 2026



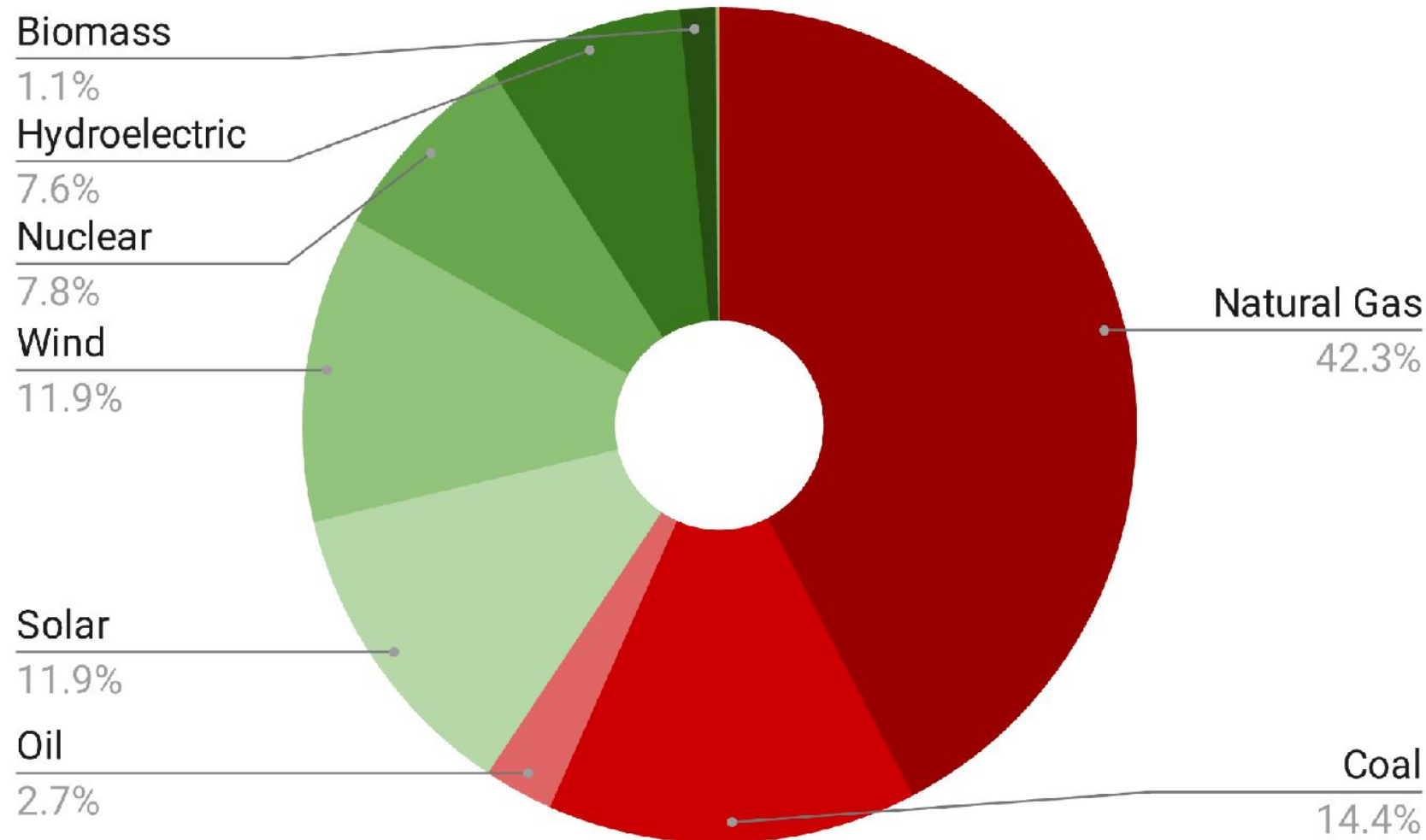
Hourly Energy Resources and Demand

June 30, 2026

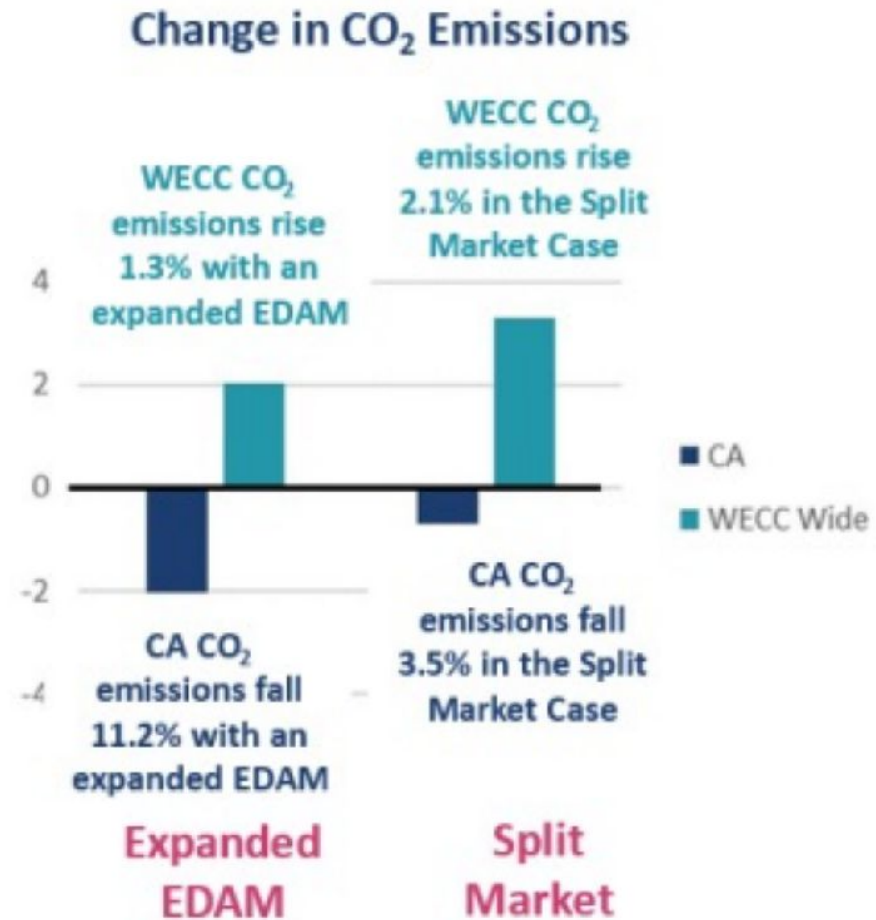
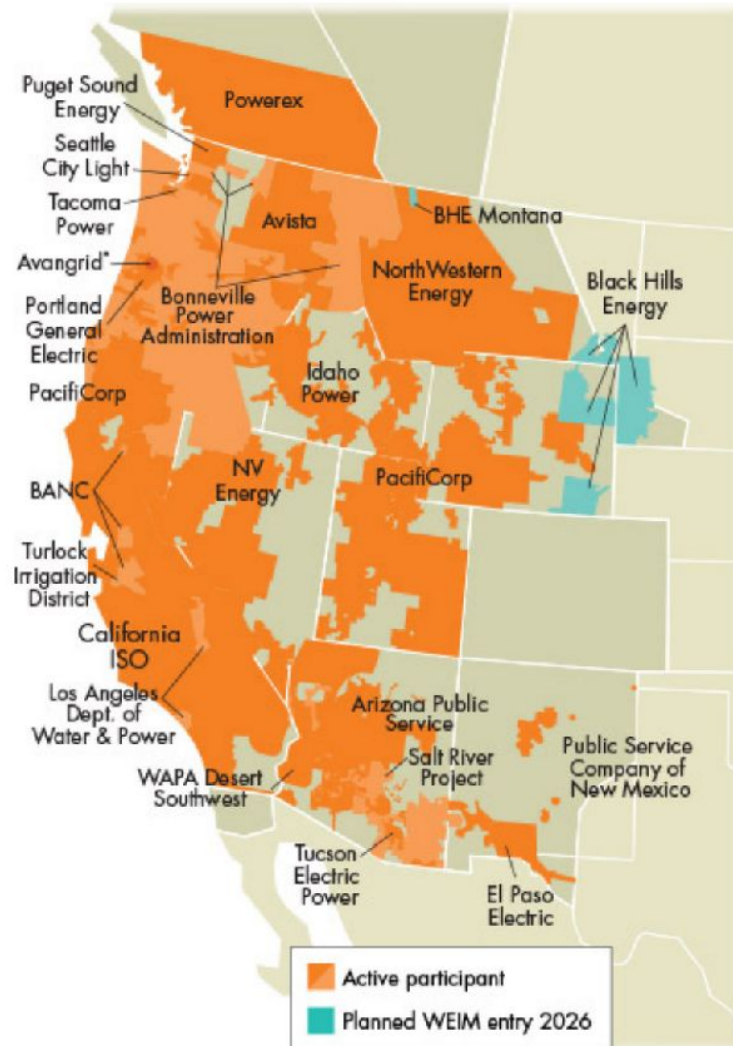


U.S. Electricity Generating Capacity

Source: Federal Energy Regulatory Commission, Energy Infrastructure
Update for October 2025



Pathways Initiative



Questions?

Das Williams

Director of Legislative and External Affairs

dwilliams@3ce.org



*Scan for information on
3CE's Energy Programs*



Cultivating Resilient Roots & Clean Careers: Advancing our Clean Energy Ecosystem



Amanda Martin-Behrendtsen

Regenerative Builder & Founder, Renewal Revolution



Amanda Martin-Behrendtsen is a California general contractor, regenerative building strategist, educator, policy advocate, and founder of Renewal Revolution. With a multidisciplinary background spanning healthcare, construction, high-performance building, education, workforce development, and community advocacy, she now brings those disciplines together to create scalable pathways to affordable, healthy, and energy-efficient living. Having built California's first permitted hempcrete ADU, her work bridges regenerative and bio-based materials, factory-built housing, manufacturing, workforce development, and the codes and policies necessary to move these solutions from innovation into widespread implementation.



Dr. Grace Wu

Assistant Professor, Environmental Studies, UCSB



Dr. Grace Wu is an Assistant Professor in the Environmental Studies Program at the University of California, Santa Barbara (UCSB), where she conducts research and policy engagement focused on spatial planning for climate action on land. Her work examines how sustainable, multi-use landscapes can protect biodiversity while advancing climate goals, with a focus on scaling land-based climate solutions, including renewable energy, agriculture, and reforestation, while minimizing impacts on conservation. Using spatial science, remote sensing, and spatial analysis, Dr. Wu studies the co-benefits and trade-offs between climate solutions and habitat conservation. Her current research focuses on sustainable spatial planning of low-carbon energy systems and developing policy, management, and technology pathways for sustainable land systems.

Before joining UCSB, Dr. Wu was a Smith Conservation Fellow at The Nature Conservancy and the National Center for Ecological Analysis and Synthesis and a UC President's Postdoctoral Fellow at the John Muir Institute of the Environment at UC Davis.

ENERGY SYSTEMS | WORKING LANDS | SPATIAL PLANNING

SPATIAL CLIMATE SOLUTIONS LAB

How can we deploy clean energy while sustaining agriculture, ecosystems, and communities?

Grace C. Wu, PhD
Assistant Professor
Environmental Studies Program

SoCalREN regional meeting | Sept 09, 2026



situated on the unceded lands and waters of the
Indigenous Chumash people

The rise of solar PV in California

42 GW

of solar already installed
in CA

~18 GW is DER

24 GW is utility-scale

26%

of California farms have
some type of renewable
energy generation
(~16,000 farms)

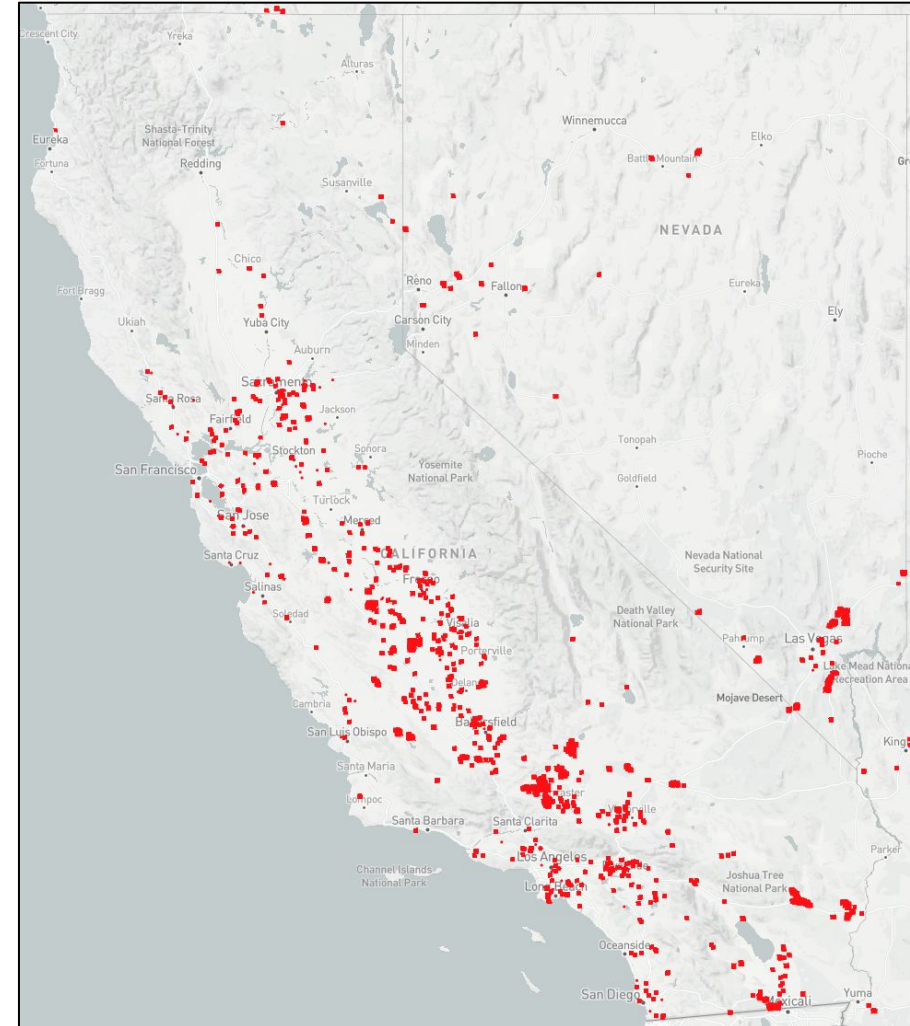
50-70 GW

of additional utility-scale solar
needed by 2045 in CA

50%

utility-scale solar has and will
be on agricultural land (best
approximation based on
studies and historical data)
□ 160-200k acres of ag land

Current solar projects in CA



USPVDB

The farm is becoming an energy system

- 1. Electrify farm operations**
- 2. Produce and manage clean energy on working farms**
- 3. Managing new energy-ag landscapes**

Each creates new combination of agricultural + clean energy skills

The farm is becoming an energy system

Electrify farm operations

- Tractors and utility vehicles
- Irrigation pumping
- Trucks
- Refrigeration and packing
- Charging infrastructure



Monarch Tractor



Community on-farm
charger

Skills for ag workers

- Electric equipment operation and charging
- Battery/range planning
- High voltage safety awareness
- Basic electrical diagnostics and troubleshooting

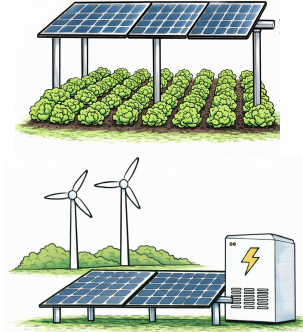
Skills for clean energy workers

- Designing charging around real ag operations
- Load assessment and charger/storage sizing

The farm is becoming an energy system

Produce and manage energy in working farms

- Crop based agri voltaics
- Distributed energy resources (solar and storage)



Peppers growing under panels



Greenhouse with solar panels to run fans

Skills for ag workers

- Operating machinery safely around solar infrastructure
- Adjusting planting, irrigation, pruning, etc
- Understanding microclimate effects on crops
- Coordinating with solar O&M activities
- Knowledge about solar design and construction

Skills for clean energy workers

- Understanding farm operational constraints and flexibilities
- Basics of agronomy and operational risk
- Construction impact on soil quality/compaction
- Engaging with farmers early in siting and design

The farm is becoming an energy system

Managing new energy-ag landscapes

- Solar grazing
- Native vegetation/reseeding
- Monitoring and solar O&M



Kettleman City Power solar farm in Kings County on July 27, 2022. Photo by Larry Valenzuela, CalMatters/CatchLight Local

Skills for ag workers

- Grazing planning within solar arrays
- Animal handling around electrical infrastructure
- Understanding where and how to interact with sensitive electrical equipment (basic solar farm design and site safety)
- Native seed establishment under panel

Skills for clean energy workers

- Understanding grazing systems and seasonal forage availability
- Designing sites to accommodate livestock access
- Integrating fire risk mitigation with biodiversity and grazing needs
- Basic plant identification



SPATIAL CLIMATE SOLUTIONS LAB

UC SANTA BARBARA

gracecwu@ucsb.edu

spatialclimatesolutions.co

Training opportunities at UCSB

- Research on agrivoltaic system design and impacts – both cropping and grazing
- Solar design engineering and economics
- Solar vegetation management

ENERGY SYSTEMS | WORKING LANDS | SPATIAL PLANNING

SPATIAL CLIMATE SOLUTIONS LAB

How can we deploy clean energy while sustaining agriculture, ecosystems, and communities?

Grace C. Wu, PhD
Assistant Professor
Environmental Studies Program

SoCalREN regional meeting | Sept 09, 2026



situated on the unceded lands and waters of the
Indigenous Chumash people

Craig Lewis

Founder & Executive Director, Clean Coalition



Craig Lewis is the Founder and Executive Director of the Clean Coalition, which he established in 2009 to advance technology and policy solutions that accelerate the transition to clean energy. He brings more than three decades of experience in technology and policy innovation, with expertise in solar microgrids, community microgrids, renewable energy, government and industry relations, and business development. Prior to founding the Clean Coalition, Lewis held leadership positions across the wireless, semiconductor, banking, and renewable energy industries, including serving as Vice President of Government Relations at GreenVolts, where he was the first to successfully navigate a solar project through California's Renewable Portfolio Standard solicitation process. He also served as energy policy lead for Steve Westly's 2006 California gubernatorial campaign and held senior government relations, corporate development, and marketing positions with companies including Qualcomm, Ericsson, and Barclays Bank.

Clean ⚡ *Coalition*

Careers in Clean Local Energy



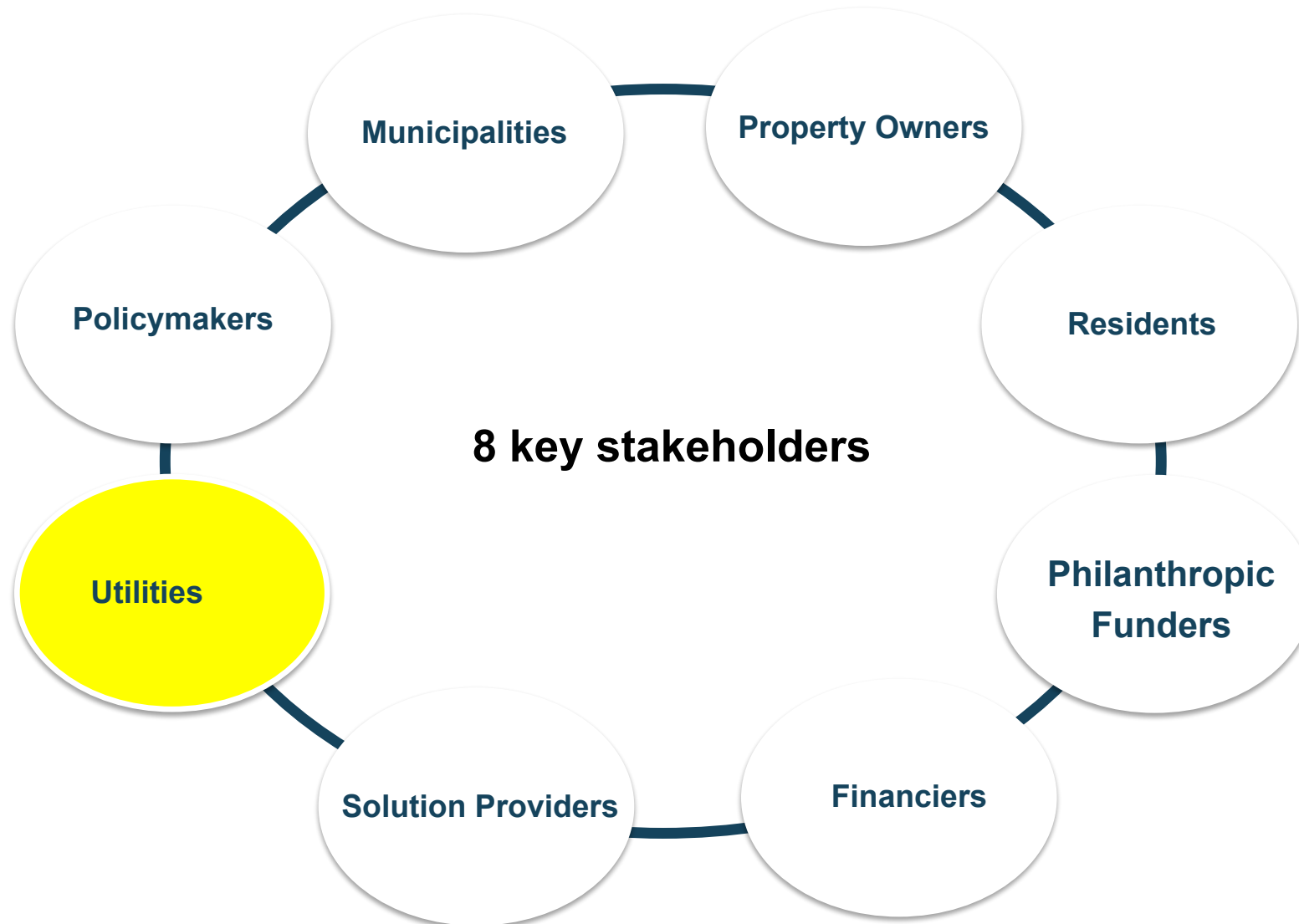
Craig Lewis
Executive Director
Clean Coalition
craig@clean-coalition.org

Mission

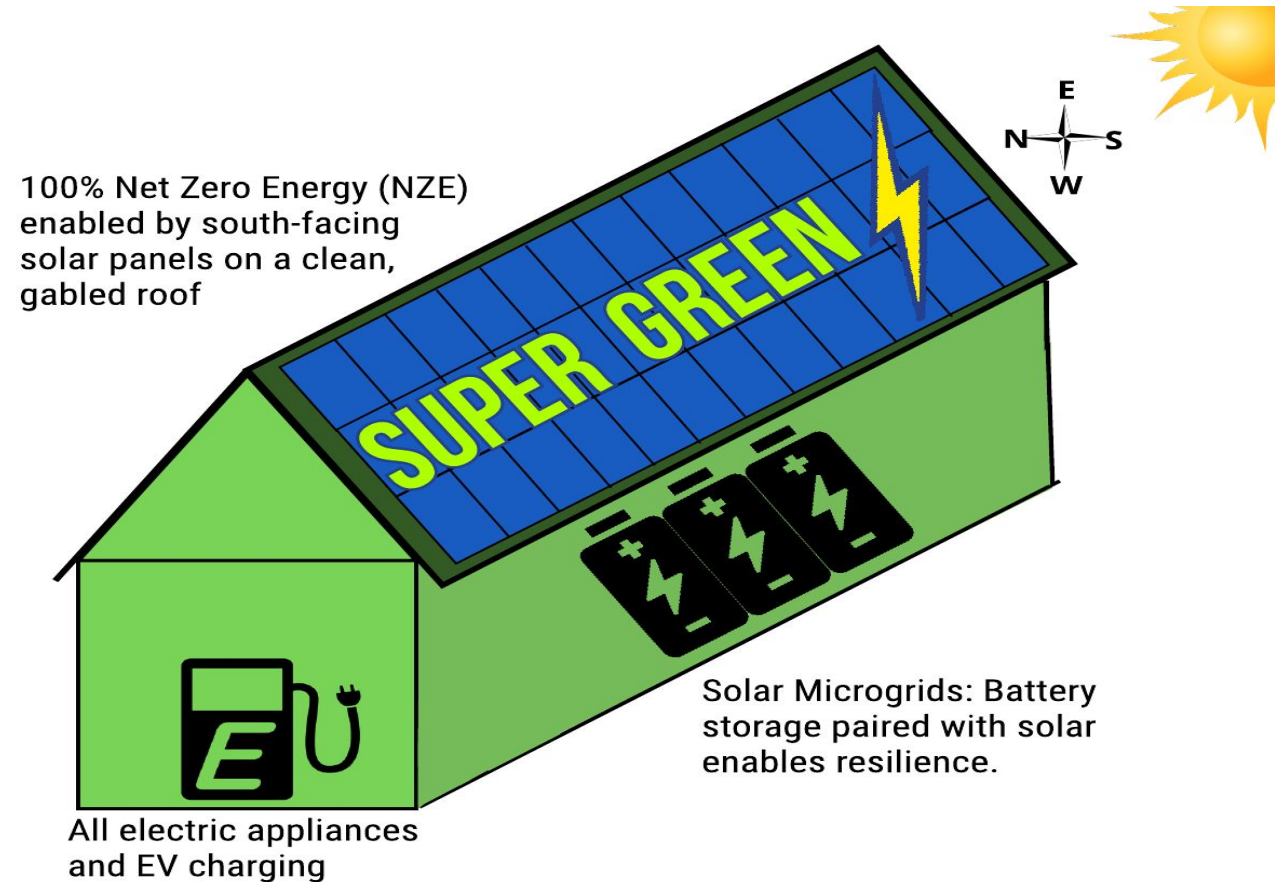
To accelerate the transition to renewable energy and a modern grid through technical, policy, and project development expertise.

Renewable Energy End-Game

100% renewable energy; 25% local, interconnected within the distribution grid and ensuring resilience without dependence on the transmission grid; and 75% remote, fully dependent on the transmission grid for serving loads.



1. 100% Electric: No gas service to the home and ideally an all-EV household.
2. Net Zero Energy (NZE): Onsite solar energy production at least equals the annual energy consumption across the premise, including to cover home EV charging.
3. Solar Microgrid: Combines a battery to the solar for economic optimization and achieving unparalleled energy resilience.



Specifications

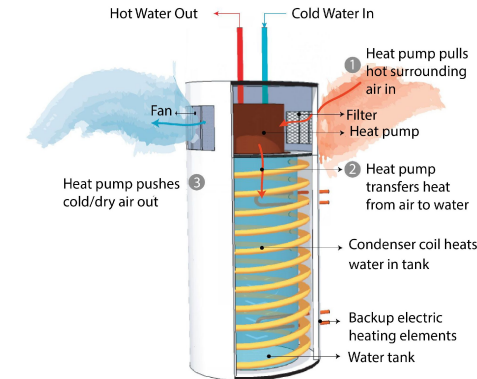
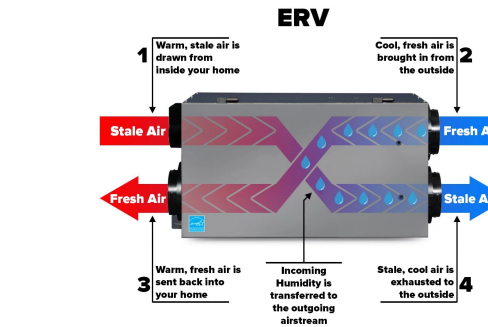
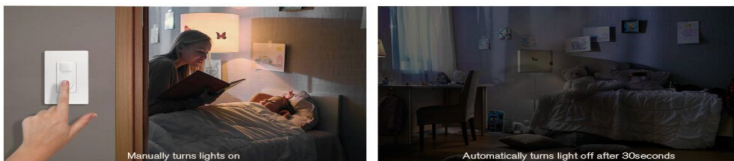
Mechanical and Plumbing

- Heat Pump HVAC
- Heat Pump Water Heater
- ERV: Energy Recovery Ventilator
- E-Fireplace: Napoleon Alluravision 60" [Optional]
- Heat Pump Pool Water Heater [Optional]

Electrical

- LED Light Bulbs
- Occupancy/Vacancy Sensors
- Dimming Switches

VACANCY MODE
Manual ON and Auto OFF / Manual ON - Manual OFF



Appliances

- Induction Cooktop
- EnergyStar Refrigerator
- EnergyStar Dishwasher
- EnergyStar Washing Machine
- Energy Efficient Microwave
- Heat Pump Dryer
- EV Charging Outlet and/or Charger (Level 2 capable)



100% Electric



Energy Efficient



Induction Cooktops

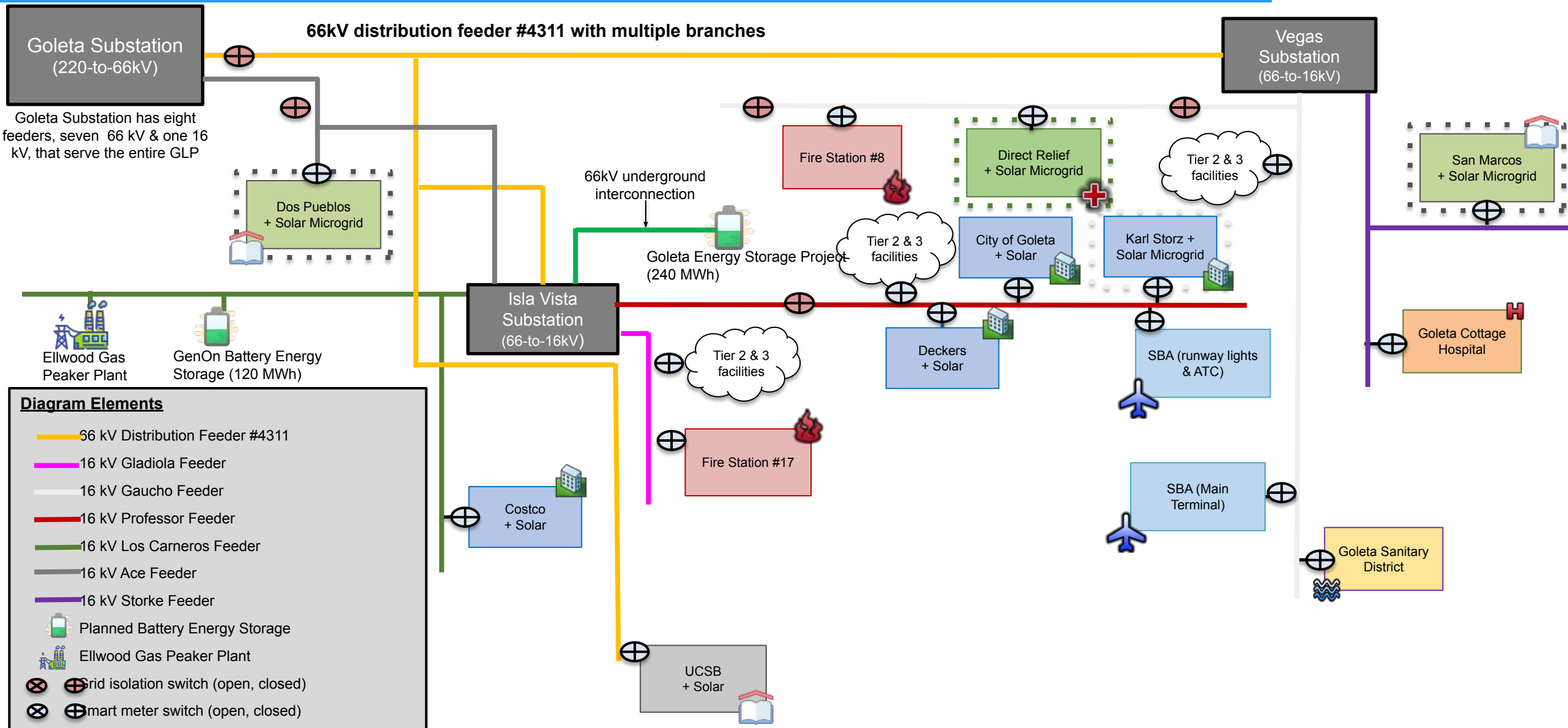


The GLP is the perfect opportunity for a comprehensive Community Microgrid



- GLP spans 70 miles of California coastline, from Point Conception to Lake Casitas, encompassing the cities of Goleta, Santa Barbara (including Montecito), and Carpinteria.
- GLP is highly transmission-vulnerable and disaster-prone (fire, landslide, earthquake).
- **200 megawatts (MW) of solar and 400 megawatt-hours (MWh) of energy storage** will provide 100% protection to GLP against a complete transmission outage (“N-2 event”).
 - 200 MW of solar is equivalent to about 5 times the amount of solar currently deployed in the GLP and represents about 25% of the energy mix.
 - Multi-GWs of solar siting opportunity exists on commercial-scale built-environments like parking lots, parking structures, and rooftops; and 200 MW represents about 7% of the technical siting potential.
 - Other resources like energy efficiency, demand response, and offshore wind can significantly reduce solar+storage requirements.

Local Energy Storage enable Community Microgrids



Greenbark will create significant economic benefits to the local community

Economic benefits to the GLP from new solar + energy storage

20-year economic benefits to Goleta Load Pocket from new solar + energy storage



10 MW solar

- \$10.9M total economic stimulation
- \$8.6M added wages
- 92 construction job-years
- 33.6 operations & maintenance job-years
- \$2M site leasing income



20 MWh energy storage

- \$6.3M total economic stimulation
- \$5.5M added wages
- 64 construction job-years
- 17.6 operations & maintenance job-years



10 MW solar + 20 MWh energy storage

- \$17.3M total economic stimulation
- \$14M added wages
- 155 construction job-years
- 51 operations & maintenance job-years
- \$2M site leasing income

Fulfilling the Goleta Load Pocket Community Microgrid 100% resilience requirements of 200 MW of solar + 400 MWh of energy storage will yield \$346 million in economic stimulation

Greenbark (120 MWh energy storage)

- \$37.8M total economic stimulation
- \$33M added wages
- 384 construction job – years
- 105.6 operations & maintenance job – years

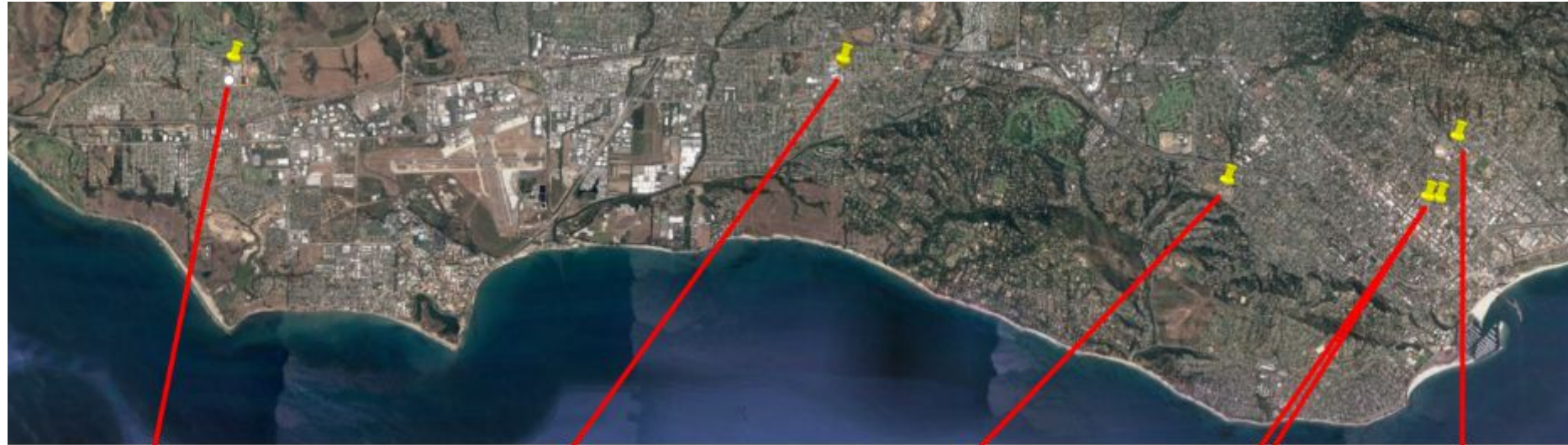
These results were calculated using the Clean Coalition's 20-year economic benefit study, which was developed using the National Renewable Energy Laboratory's (NREL) Jobs and Economic Development Impact (JEDI) models.

Clean Coalition's 20-year economic benefit study



- The entire Santa Barbara region is surrounded by extreme fire risk (earthquake & landslide risk too) and is extremely vulnerable to electricity grid outages.
- The SBUSD is a major school district that increasingly recognizes the value-of-resilience (VOR) and has embraced the Clean Coalition's vision to implement Solar Microgrids at a number of its key schools and other critical facilities.
- SMHS is in the middle of the extensive SBUSD service area.

Six SBUSD Solar Microgrid sites



Dos Pueblos High School



San Marcos High School



La Cumbre Junior High School



District Food Warehouse
& District Office

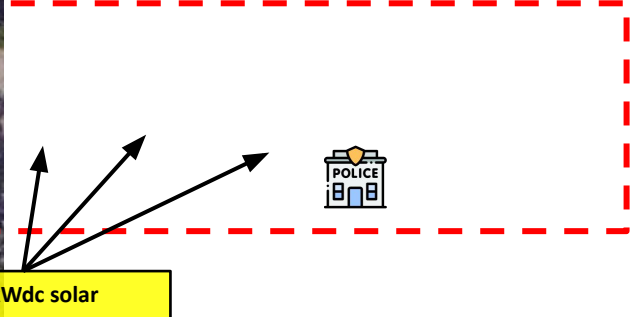


Santa Barbara High School

Isla Vista Community Microgrid



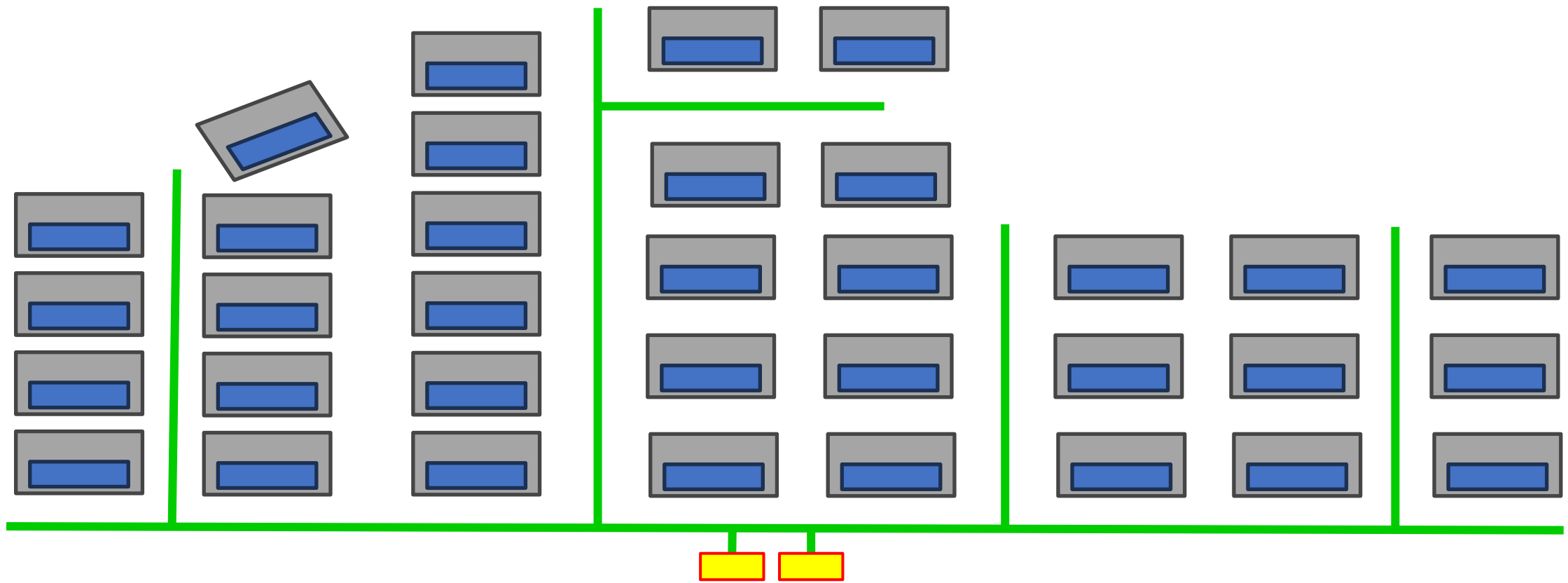
Isla Vista Community Microgrid	
Total annual load (2022-2025 Average):	
• Year 1:	1,336,759 kWh
• Year 10:	1,597,522 kWh
Peak load (CY 2022):	
• Year 1:	321 kW
• Year 10:	384 kW
Solar sizing:	
•	494 kWdc
Total annual solar generation:	
• Year 1:	838,610 kWh
• Year 10:	801,618 kWh
BESS Sizing:	
• Year 1:	1,927 kW / 7,708 kWh
• Year 10:	1,927 kW / 5,860 kWh



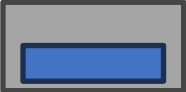
- All-electric, 8-story, commercial and permanently affordable housing community.
- 65 units of 100% affordable housing with ground floor commercial offices and retail spaces.
- Affordable home ownership via condominiums that provide homeownership benefits from original tenancy, with all being disadvantaged and low-income.
- Net Zero Energy (NZE) building with a solar canopy covering the entire roof area, including a large rooftop patio and roof-mounted mechanical equipment for HVAC etc.
- GridOptimal with the Solar Microgrid providing all energy during the 4-9pm grid-constrained period daily.
- Solar Microgrid resilience ensuring indefinite resilience for the critical loads during grid outages of any duration, with significant resilience to all other loads based on solar energy availability and battery state-of-charge. Meets the full performance requirements of the CEC-recommended VOR123 value-of-resilience (VOR) methodology.







Legend

-  Average house with average Solar Microgrid:
- 19.25 kWdc solar
 - 10 kWac / 26.4 kWh battery

-  20'x10' battery container hosting 500 kW & 1 MWh

-  Private electricity grid



Q&A



Program Spotlight: CEC Environmental Hub

Kathi King and Em Johnson

Kathi King

**Director of Education and Operations, CEC
Environmental Hub**



Kathi King currently serves as Director of Education and Operations at CEC, where she oversees outreach and education activities and manages the organization's waste reduction programs, including the Rethink the Drink bottled water reduction initiative in local schools and public spaces. An experienced climate education and leadership professional, King has expertise in sustainable development, environmental issues, sustainable business, and nonprofit organizations. Since 2021, she has taught CEC's Climate Stewards course through a partnership with the University of California, a certification program that builds a local network of climate leaders. She also serves as co-director of CEC's Santa Barbara Earth Day Festival and sits on the Santa Barbara Sierra Club Group board. Previously, King served for seven years on the Montecito Association board, contributing to its Village Fourth, Beautification Day, and Executive Committees.

Em Johnson

**Senior Director of Climate Programs, CEC
Environmental Hub**



Em Johnson currently serves as Senior Director of Climate Programs at CEC, where she leads projects and advocates for policies that strengthen the ability of Central Coast communities to respond, recover, adapt, and thrive in the face of climate change-related disruptions and disasters. Johnson brings extensive experience working alongside frontline communities to design and implement projects that enhance local socioeconomic resilience. She joined CEC in 2022 after five years as Executive Director of the Blue Sky Center, where she helped advance creativity, innovation, and investment in the Cuyama Valley while developing entrepreneurial and grassroots approaches to rural resilience. She now continues her work with Blue Sky Center as Executive Director Emeritus and Director of Strategy, supporting the scaling of resilient and inclusive rural economic development strategies, including regenerative food systems and social entrepreneurship.



Community
Environmental
Council

Bold Climate Action
Acción Climática Audaz

CEC Programs

**Kathi King and Em Johnson,
Sr. Program Directors**

LEADING
ENVIRONMENTAL
ACTION ON THE
CA CENTRAL COAST
SINCE 1970



Community
Environmental
Council
Bold Climate Action
Acción Climática Audaz

CEC's Bold Climate Action Plan

Reverse

Repair

Protect & Connect

Timeline



CEC's CEO connected with
program organizers at
Bioneers



Instructor training
2020



CEC Pilot Program
2021



First 200 Stewards Certified
2025



Sixteenth Cohort
April 2026

Field Trips

- SB Botanic Garden
- Tajiguas Landfill
- Arroyo Hondo Preserve
- Ojai Valley Land Conservancy
- UCSB North Campus Open Space
- Cultured Abalone Farm
- Coastal Clean-up Day
- Oxnard Mini-Nature Reserve











Shining Stewards



Kyle Richards



Arya, Gunner,
Katherine



Lauren Leland

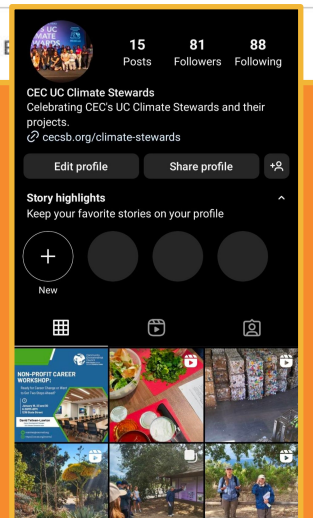
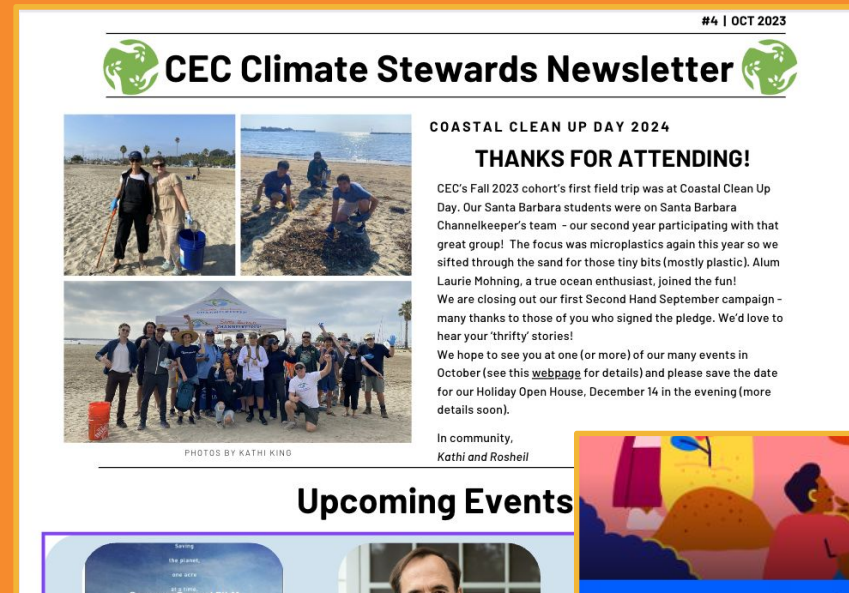
Stewardship Projects

- Restoration Projects
- Non-profit engagement
 - Climate Chats
 - Field Trips
 - Resilience Hubs
- Local Government Engagement
 - Make Polluters Pay Campaign
 - Cruise ships campaign
 - City committee representation



CEC Steward Alumni Engagement

- Newsletter
- Instagram
- Event Volunteers
- Partnerships
 - Fearless Grandmothers
 - Sierra Club Chapters
- Annual Alumni Gathering
- Environmental Stewards 2026 Conference in SB





Youth Climate Workshops

- Twice a year
- Utilizes Climate Stewards curriculum and projects
- Climate Stewards alumni are guest speakers and facilitators





Q&A



Closing Remarks - SoCalREN



Meeting Survey





SoCalREN Q3 2026 Regional Workforce Alliance Meeting

Thank You!

