



California Community Colleges

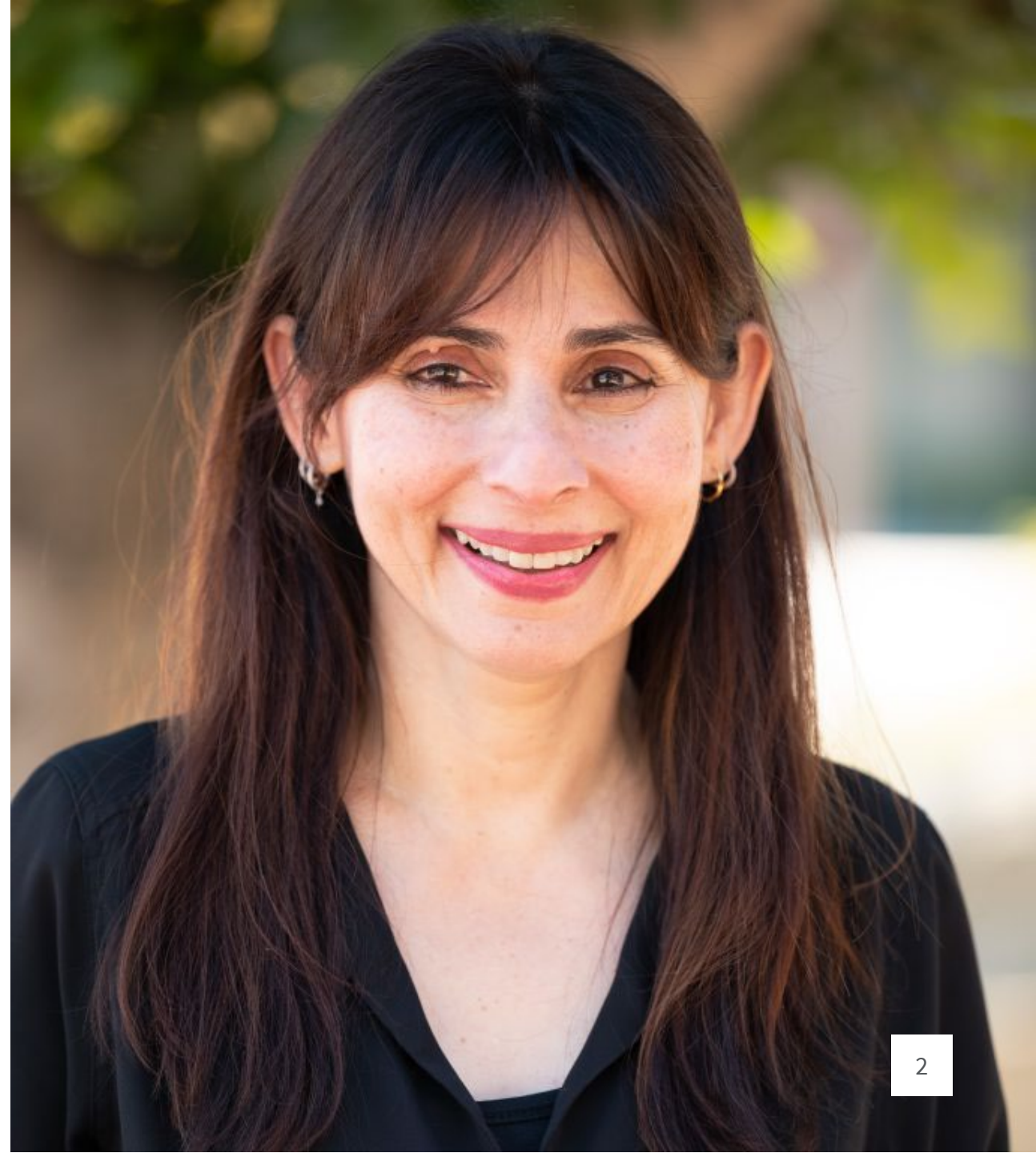
Vision 2030 in (Climate) Action:

Engaging Campus and Community through the 2025 Board of Governor's Climate Action and Sustainability Goals

March 7, 2025

Sonya Christian

Chancellor,
California Community Colleges



Tom Epstein

Member,
Board of Governors
California Community Colleges





David Liebman

Sustainability and Energy Programs Manager,
Santa Rosa Junior College

Campus Facilities Climate Fellow,
California Community College Chancellor's Office

California Community Colleges Board of Governors

2025 Climate Action and Sustainability Goals

CATEGORY	2026 BENCHMARK	2030 BUILD AND INSTITUTIONALIZE	2035 IMPROVE AND REASSESS
Greenhouse Gas Emissions Reduction	Conduct emissions inventory baselines and create climate action plan	Reduce greenhouse gas emissions to 75% below baseline	Reduce greenhouse gas emissions to 100% below baseline
Green Buildings & Grounds	Benchmark % of Buildings and Landscapes that meet LEED (SITES for Landscapes), Living Building Challenge LBC Certification or Nationally Recognized Greenbuilding Certification (New Construction & Major Renovation)	All new Buildings and Landscapes will achieve LEED Gold (SITES for Landscapes) or higher, Living Building Challenge LBC Certification, or Nationally recognized Greenbuilding certification (New Construction & Major Renovation)	All new Buildings and Landscapes that achieve LEED Platinum (SITES for Landscapes), Living Building Challenge LBC Certification or Nationally Recognized Greenbuilding certification (New Construction & Major Renovation)
	Benchmark % of Buildings and Landscapes meeting LEED O & M standards	25% of Districts Buildings and Landscapes meeting LEED O & M certification	50% of Buildings and Landscapes meeting LEED O & M certification
Energy	Benchmark Energy Usage Intensity (EUI)	Decrease EUI by 25% from benchmark	Decrease EUI by 50% from benchmark
	Benchmark % of energy that comes from Natural Gas	Reduce Natural Gas usage in buildings by 30% from benchmark	Reduce Natural Gas usage in buildings by 75% from benchmark
	Benchmark % of energy that comes from Renewable Energy	50% of energy comes from Renewable Energy	100% of energy comes from Renewable Energy
Water	Benchmark potable water usage	Reduce potable water usage by 25%	Reduce potable water usage by 50%
	Benchmark Water Use Profile across the District (landscape use, cooling towers, specialty use)	Increase use of non-potable water use for applicable uses by 25%	Increase use of non-potable water use for applicable uses by 50%

California Community Colleges Board of Governors
2025 Climate Action and Sustainability Goals

CATEGORY	2026 BENCHMARK	2030 BUILD AND INSTITUTIONALIZE	2035 IMPROVE AND REASSESS
	Benchmark amount Stormwater Infiltrated/Captured on site	Increase Stormwater Infiltration/Capture on site by 10% from benchmark	Increase Stormwater Infiltration/Capture on site by 20% from benchmark
Waste	Benchmark and comply with state regulations	Divert 50% of all Construction & Demolition Waste from landfill	Divert 75% of all Construction & Demolition Waste from landfill
	Benchmark and comply with state regulations		
	Benchmark Waste Profile for total Waste produced	Reduce total waste generated by 20% per combined FTES & FTE (On-site & hybrid)	Reduce total waste generated by 40% per combined FTES & FTE (On-site & hybrid)
	Benchmark % diverted from landfill and comply with state regulations	75% diverted from landfill and comply with state regulations	90% diverted from landfill and comply with state regulations
Purchasing Procurement and Food Systems	Benchmark % of dollars spent of products and services that have sustainability characteristics and meet third party sustainability certification. Create Sustainable Purchasing Policy	Increase procurement of sustainable products and services by 25%	Increase procurement of sustainable products and services by 50%
	Benchmark % of dollars spent of products and services that are local, as defined by the area the district serves	Increase percentage of dollars spent on local products and services by 25%.	Increase percentage of dollars spent on local products and services by 50%
	Benchmark & track food purchases, products and meals served across District	Increase sustainable food purchases to 20% of total food budget	Increase sustainable food purchases to 80% of total food budget
	Benchmark % of locally sourced-ingredients, and food products	Increase percentage of dollars spent on locally sourced-ingredients, and food products by 25%	Increase percentage of dollars spent on locally sourced-ingredients, and food products by 50%

California Community Colleges Board of Governors
2025 Climate Action and Sustainability Goals

CATEGORY	2026 BENCHMARK	2030 BUILD AND INSTITUTIONALIZE	2035 IMPROVE AND REASSESS
Transportation	Conduct accounting/assessment of fleet vehicles; develop EV charging infrastructure	50% of vehicles that are zero emission vehicles	100% of new fleet vehicles that are zero emissions
	Benchmark Student Staff Faculty Commuting Mode to and from campus or campuses	25% increase of commuters that use alternative transport from benchmark	50% increase of commuters that use alternative transport from benchmark
	Benchmark District Vehicles Mile Traveled (VMT)	25% reduction in Vehicle Miles Traveled (VMT) from benchmark	50% reduction in Vehicle Miles Traveled (VMT) from benchmark
General Sustainability University & College Performance	Each District will submit a STARS report to AASHE and achieve a STARS reporter Benchmark	Each District will achieve Bronze STARS Certification	Each District will achieve Gold STARS Certification

Examples of California State Law & Goal Alignment

S.B 416 Requires that all new State Buildings or major renovations larger than 10,000 square feet earn “Gold” Level of LEED Certification and incorporate on-site renewable energy if economically feasible. CALGreen New Mandatory Embodied Carbon Reduction Regulations. (Cal Green Code, SB 416)

100% Clean Energy by 2045: California aims to achieve a 100% renewable and zero-carbon electricity grid by 2045.(SB, 100, 1020)



Dr. Jonathan Eldridge

Superintendent/President
College of Marin



MARIN
COLLEGE OF MARIN

**Environmental Action:
From Roadmap to
Implementation**

Sustainability & Climate Action Roadmap

COLLEGE OF MARIN

1 EFFICIENCY

1.1

Strategic Energy Management

1.2

Building Standards

1.3

Water Use

2 ENERGY TRANSITION

2.1

Building Electrification

2.2

Fleet & Equipment Electrification

2.3

Renewables & Energy Resilience

3 TRANSPORTATION

3.1

Commuting

3.2

Infrastructure

3.3

Sponsored Travel

4 RESOURCE MANAGEMENT

4.1

Purchasing & Procurement

4.2

Waste

4.3

Food Systems

4.4

Biodiversity

5 LEADERSHIP & INNOVATION

5.1

Academics & Education

5.2

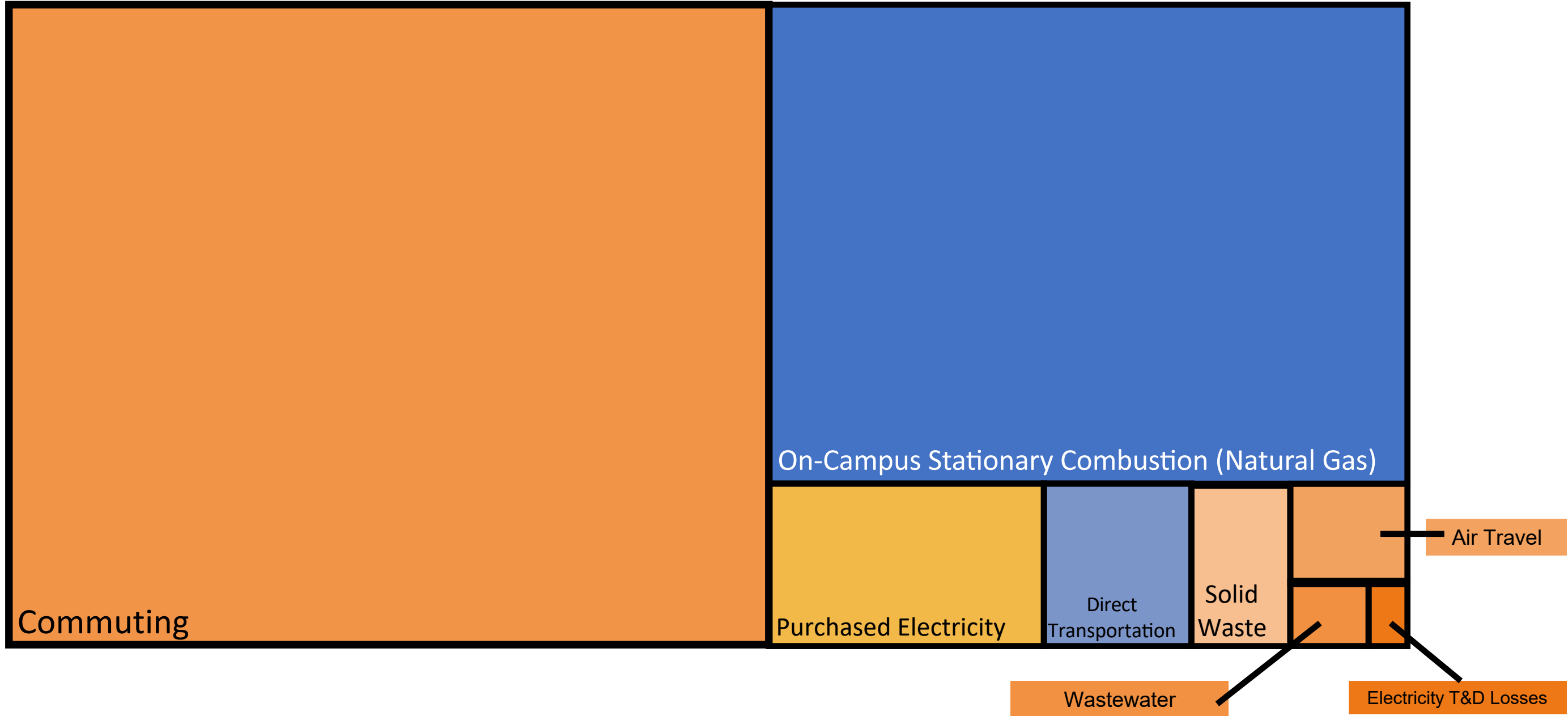
Environmental Justice

5.3

Outreach & Communications

Greenhouse Gas Emissions – By Source

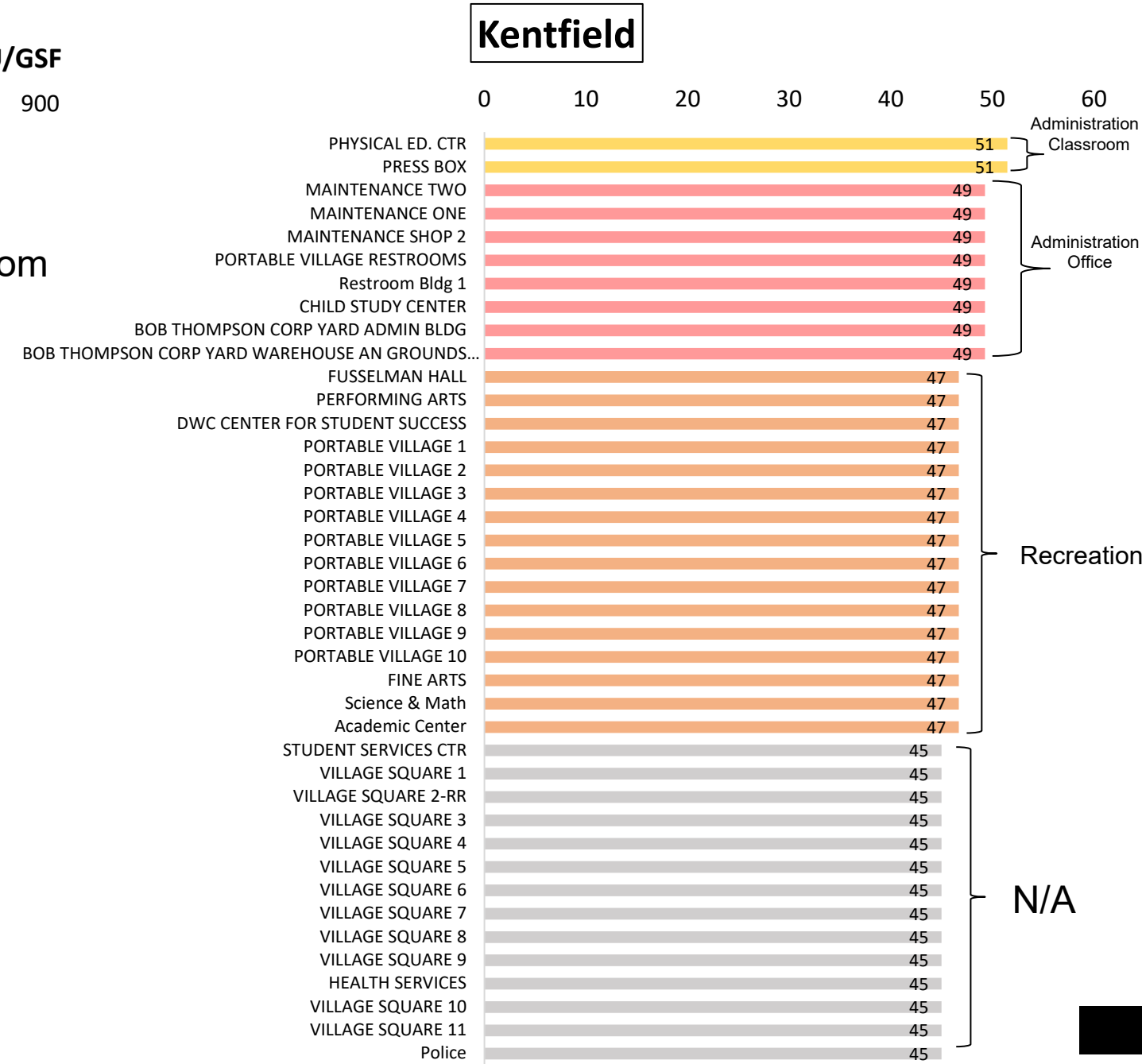
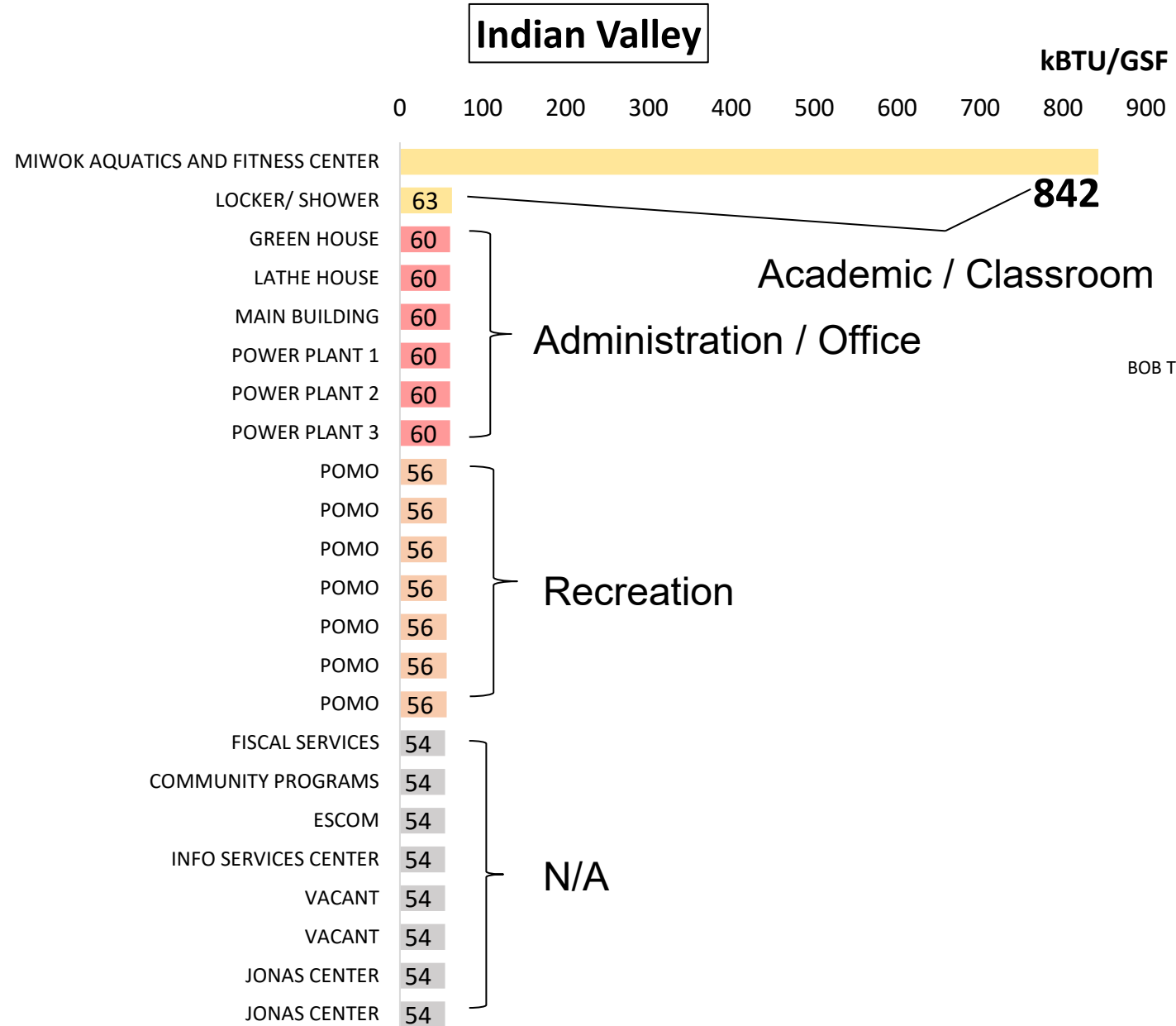
FISCAL YEAR END 2024



Energy Use Intensity (EUI)

KEY METRIC TO UNDERSTANDING CAMPUS ENERGY USE

Building level intensity is measured using total energy consumption (natural gas + electricity) and gross square footage



Key Factors:

Board Commitment

Participatory Governance

Community Partnerships

**Environmental Impact
Mitigation Plan**





Dr. Julianne McCall
Chief Executive Officer,
California Council on Science
and Technology

STRONGER WITH SCIENCE

AN OVERVIEW OF CCST AND
OUR SCIENCE SERVICES



CCST
CALIFORNIA COUNCIL ON
SCIENCE & TECHNOLOGY



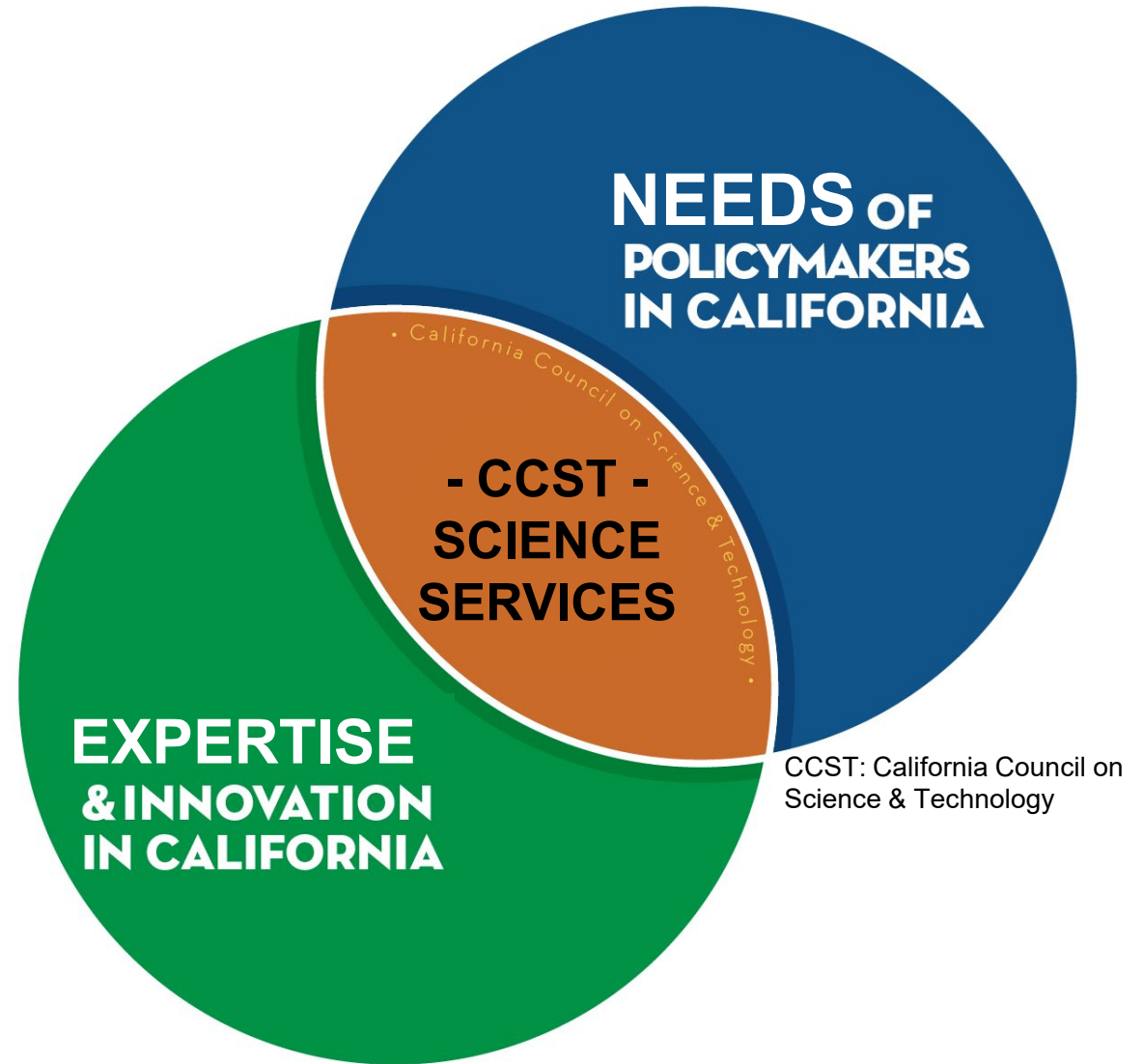
The Challenge

California policymakers need science and technology advice from **trusted and independent sources** that is both **timely and actionable**.



Our Approach

Connect California's leading experts with the needs of California policymakers to enable science-informed policies.



CCST: California Council on Science & Technology



CCST
CALIFORNIA COUNCIL ON
SCIENCE & TECHNOLOGY

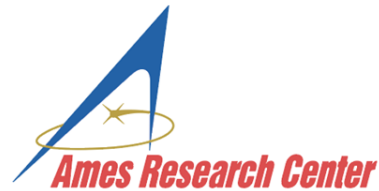
Our Mission

To engage leading experts in science and technology to advise State policymakers – ensuring that California policy is strengthened and informed by scientific knowledge, research, and innovation.



CCST's Partner Institutions

We accomplish our mission with the active participation and support from our **Partner Institutions**.



CCST supports California and its Partners when we fulfill our mission.

- **Helping the State** by giving California policymakers broad access to scientific and technical advice from network of experts — to inform evidence-based policies.
- **Helping Partners** fulfill their collective mission of service to society through the transmission of scientific knowledge to the public.



What does success look like?



Policymakers actively **seek our advice** because it is timely, credible, relevant



Experts readily **contribute** their time and expertise



CCST's Partners **recognize the value** of increasing engagement with CCST



Leaders from State government publicly **affirm the value** of independent science

All partners, at the highest levels — including those in the philanthropic community — **work together** to build and sustain durable and efficient pathways for science to inform policy.

Core Strengths

- Independent and non-partisan
- Legislatively created
- Formal partnerships with widely respected and powerful institutions
- Convening power across institutions and perspectives
- Delivers credible information on complex issues
- Trusted partner who delivers on efficient timelines

Fellowship + Science Services



15 YEARS

2009 - 2024
CCST Science & Technology
Policy Fellows

Celebrating 15 Years of impact, placing PhD scientists, engineers, and social scientists for a year of public service working as staff in California State Legislature, State Agencies, and Offices of the Governor.



Science Services



Our Science Services help to fulfill our mission



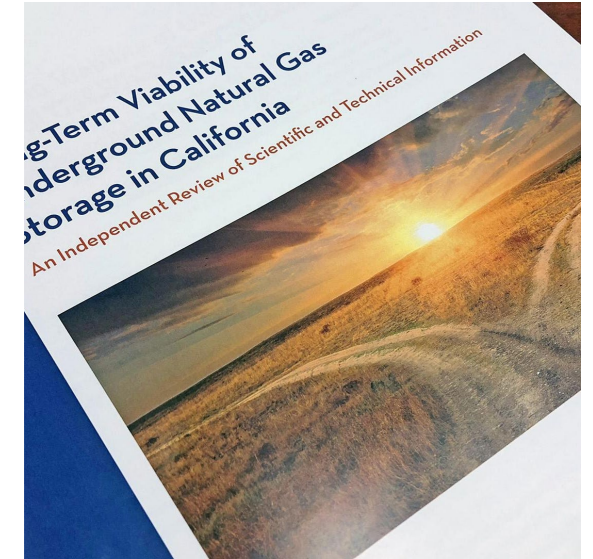
Connecting with Experts



Expert Briefings



Workshops



Peer Reviewed Reports



Services: Connecting with Experts

AUDIENCE

- Decision makers who want to have a conversation w/ an expert on a particular topic
- Experts who wish to engage in the policy process, inform policy with their work

BENEFITS

- Quick responses to requests get decision makers rapid access to expertise
- Inexpensive way to bring science into policy discussions
- Maintains CCST connection with network

CHALLENGES

- Difficult to quickly ID experts from CCST's vast network of Partner Institutions
- Experts may not be able to respond in relevant time frame or w/ actionable info



Services: Workshops

AUDIENCE

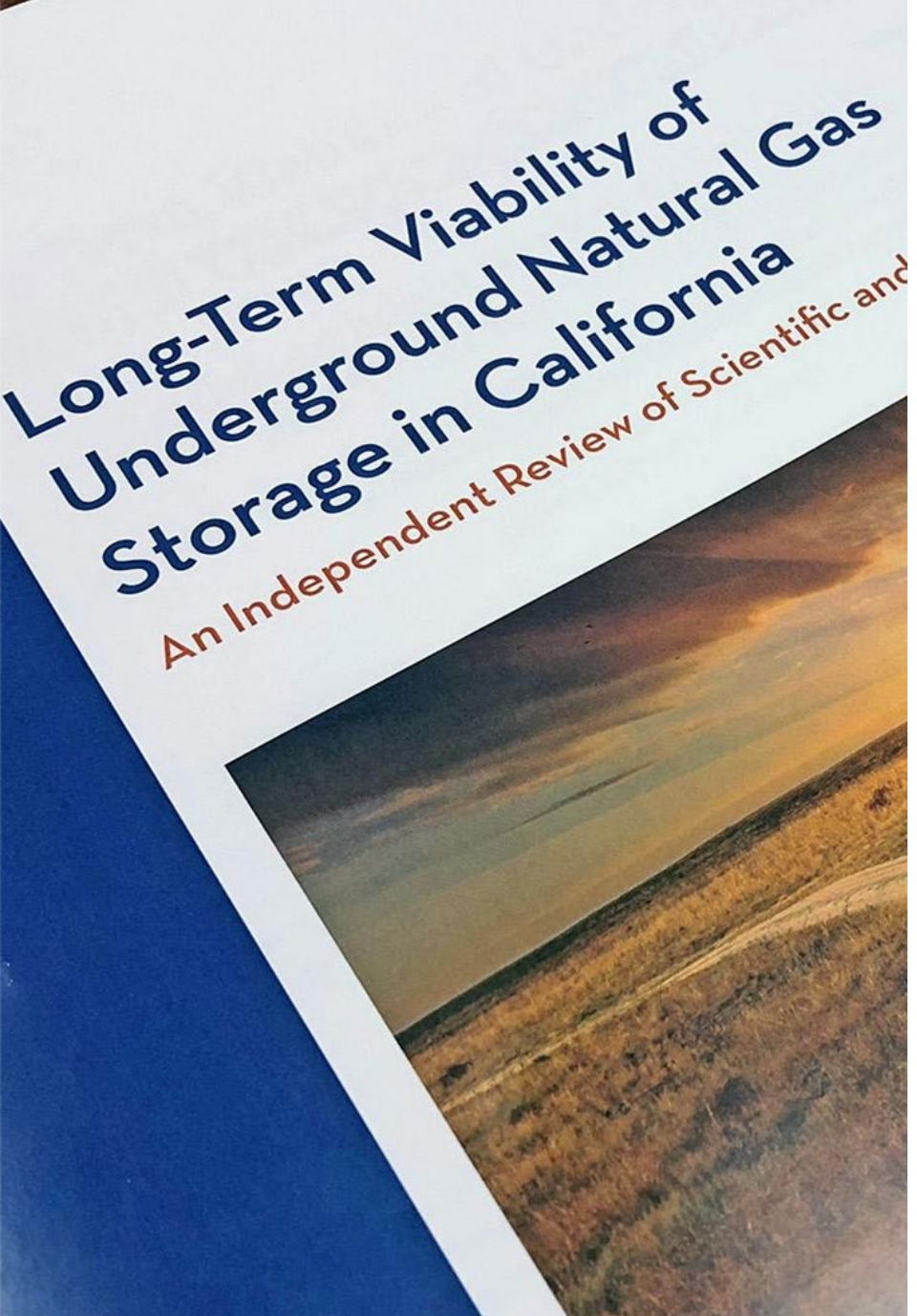
- Researchers working in fields relevant to a particular policy issue
- Decision makers interested in discussing issues w/ those working in relevant fields

BENEFITS

- Bring together multiple perspectives from State and Academic research partners
- Opportunity to discuss background and identify high-level research gaps in a particular issue in real time
- Opportunity for decision makers to articulate the importance of filling research gaps, inform future research directions

CHALLENGES

- Deliverable not always clear or useful
- Funding source not always available
- Workshop audience rarely includes public



Services: Peer-Reviewed Reports

AUDIENCE

- Governor's Office, Agencies, Legislature
- Decision makers with an interest in a deep dive into an issue
- Collaborative partners

BENEFITS

- Definitive state of the science on an issue
- Rigorous and trusted independent study process, including peer review
- Multiple and balanced perspectives
- Science-informed policy-relevant recommendations included when appropriate
- Appropriate for landscape analyses and forward-looking topics

CHALLENGES

- Requires significant funding
- Take typically 9-18 months to complete

Engage with CCST!



S&T Week + Science Day



Panels + Workshops



S&T Policy Fellows



Policy Training



Expert Briefings



Special Events



Subscribe
[Bit.ly/EmailMeCCST](https://bit.ly/EmailMeCCST)

- Monthly Newsletter
- Calls for Experts
- Events
- S&T Policy Fellowship
- Press Releases

Follow @CCSTorg @CCSTfellows



[CCST.us](https://www.ccst.us)



Tracy Marcial, P.E.

Energy & Sustainability Manager,
Contra Costa
Community College District



Utilizing Goals as Guiding Principles

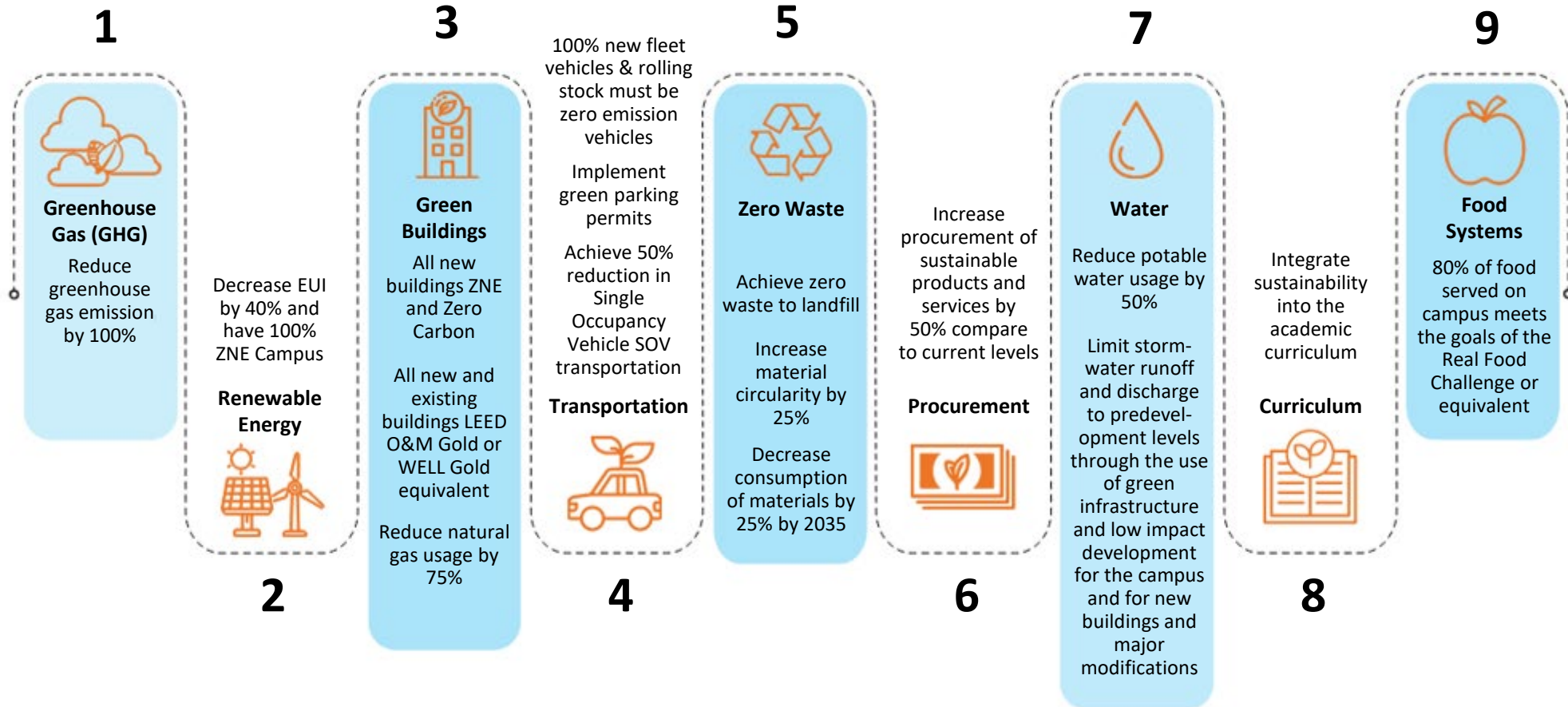
March 7, 2025 - Vision 2030 in (Climate) Action

Tracy Marcial P.E. - Energy and Sustainability Manager

OUTLINE

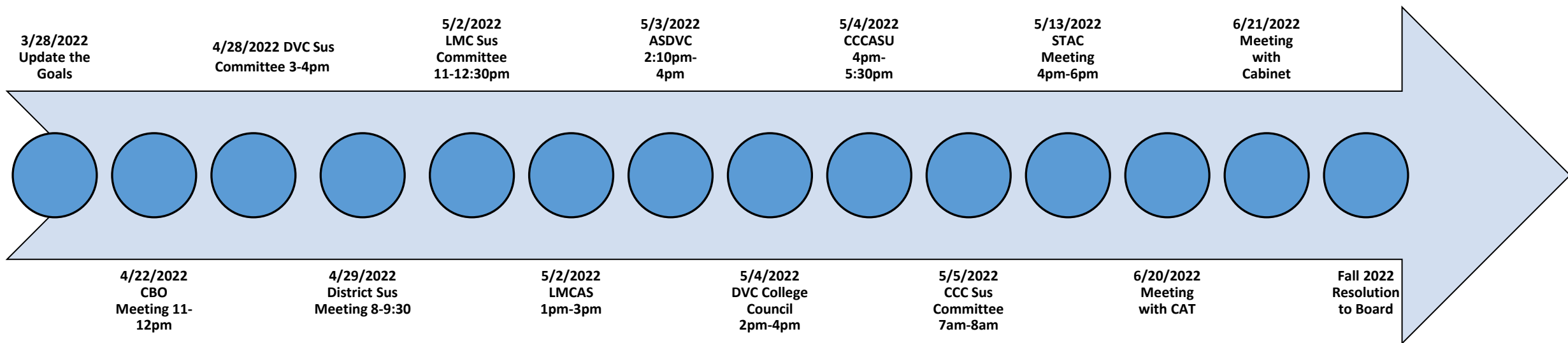
- Road to 4CD Nine Sustainability Goals
- Incorporating Goals into Our Projects
 - Zero Net Energy (ZNE)
 - Facility Plans (FP)
 - Electrification (Decarbonization)
 - Bond Projects
- Annual Report to the Governing Board - showing Progress Toward our Goals

2035 Districtwide Sustainability Goals



Based on BOG 2021 Climate Action & Sustainability Framework
 Goals 1-3, 6-7: District led with campus input
 Goals 4-5, 8-9: Campus focused

Road to 4CD Sustainability Resolution



4CD Sustainability Goals Pathway

We laid the springboard for the goals by incorporating a lot of this into our bond projects prior to formally having adopted goals.

We daylighted this to Sustainability Committees, CBOs, Associated Student groups, and student trustees.

Had been trying for years to develop the goals using back-casting, using all the state and local mandates, UC goals, CSU goals other CCD goals, etc.

The State Chancellor's Office came out with the 2019 goals and then the 2021 Framework, which seemed to outline what we also were moving towards, so we adopted/moved it forward.

4CD Zero Net Energy

Importance of Being Proactive and Pushing the Envelope while Getting Buy-in:

Zero Net Energy in A/E RFQ/Ps:

- Our goals spell out what to do
- ZNE Ready requirement in our RFQ/Ps for our projects – plan and spec
 - Resulted us in being able to shift to a lower EUI target
 - Shifted us to all-electric buildings
 - For recent Design-Build projects RFQ and RFP, we switched to ZNE (dropped the Ready)

Created a high-level summary document that explains/provides background to the goals and shows what we're doing in ALL our projects

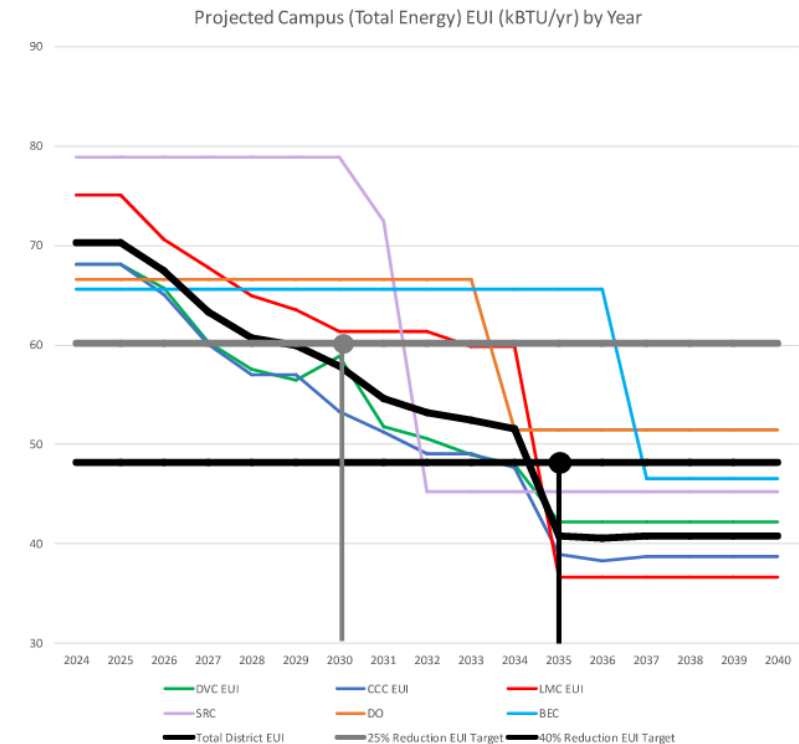


- [2022 4CD Sustainability Goals & Policy](#)
- New construction is more straightforward; renovation is when it gets sticky: may need a more specific scope or direct relation to the goals that apply to projects with more detail

4CD Electrification Plan in Facility Plans

- Developed Baseline and Target EUI for each building on each campus as part of our FMP effort.
- Determined Energy Conservation Measures (ECMs) to get us to a reduced EUI
 - LED lighting
 - End of Life (EUL) HVAC replacements (electrification)
 - Building Automation System Controls
 - More PV to help offset the increased cost of utilities
 - Replace old building stock
 - Determine timing/schedule/cost
 - Also need clean, green energy purchases
- Transform EUI into GHG Emissions
- **EUI = Energy Use Index (energy in kBtus per square foot)**

District Energy and Carbon Timeline – EUI Targets



4CD Electrification Plan in Facility Plans

Data Table: District Energy and Carbon Timeline - EUI Targets

Projected Campus (Total Energy) EUI (kBTU/yr) by Year

Year	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
DVC EUI	68.13	68.13	65.70	60.33	57.53	56.50	58.80	51.82	50.59	48.93	47.98	42.18	42.18	42.18	42.18	42.18	42.18
CCC EUI	68.15	68.15	65.05	60.00	57.02	57.02	53.30	51.26	49.06	49.06	47.59	38.88	38.29	38.69	38.69	38.69	38.69
LMC EUI	75.12	75.12	70.58	67.75	65.00	63.59	61.36	61.36	61.36	59.87	59.87	36.62	36.62	36.62	36.62	36.62	36.62
SRC	78.84	78.84	78.84	78.84	78.84	78.84	78.84	72.44	45.21	45.21	45.21	45.21	45.21	45.21	45.21	45.21	45.21
DO	66.60	66.60	66.60	66.60	66.60	66.60	66.60	66.60	66.60	66.60	51.48	51.48	51.48	51.48	51.48	51.48	51.48
BEC	65.66	65.66	65.66	65.66	65.66	65.66	65.66	65.66	65.66	65.66	65.66	65.66	65.66	46.52	46.52	46.52	46.52
Total District EUI	70.26	70.26	67.42	63.27	60.75	59.92	57.88	54.64	53.22	52.39	51.61	40.79	40.62	40.74	40.74	40.74	40.74
25% Reduction EUI Target	60.2	60.2	60.2	60.2	60.2	60.2	60.2	60.2	60.2	60.2	60.2	60.2	60.2	60.2	60.2	60.2	60.2
40% Reduction EUI Target	48.2	48.2	48.2	48.2	48.2	48.2	48.2	48.2	48.2	48.2	48.2	48.2	48.2	48.2	48.2	48.2	48.2



CCC Science Center : LEED Gold

- First Zero Net Energy (ZNE) Ready project at 4CD
- First All Electric Building
- 2021 California Community Colleges Board of Governors Energy and Sustainability Award for the Best Overall Large District Innovative Project

DVC PEK and Art Complex: LEED Gold and ZNE (expected)

- First ZNE project at 4CD
- All Electric Buildings
- 2022 California Community Colleges Board of Governors Energy and Sustainability Award for the Best Overall Large District Innovative Project

LMC Kinesiology and Student Union: LEED Gold Certified

- Award of Honor in the Growth Category through the 2021 Community College Facility Coalition (CCFC)

Brentwood : LEED Gold Certified

- In the Process of Adding PV & Resiliency

Goal #1: GHG



Goal #2: Renewable Energy



Goal #3: Green Buildings



Goal #5: Zero Waste



Goal #7: Water





Goal 1 Greenhouse Gas (GHG) Emissions



Policy Goals -

District-led with campus input

2025:

Establish baseline by creating an inventory of greenhouse gas emissions. Create a Climate Action Plan.

2030:

Reduce greenhouse gas emissions by 75% below 2013 baseline.

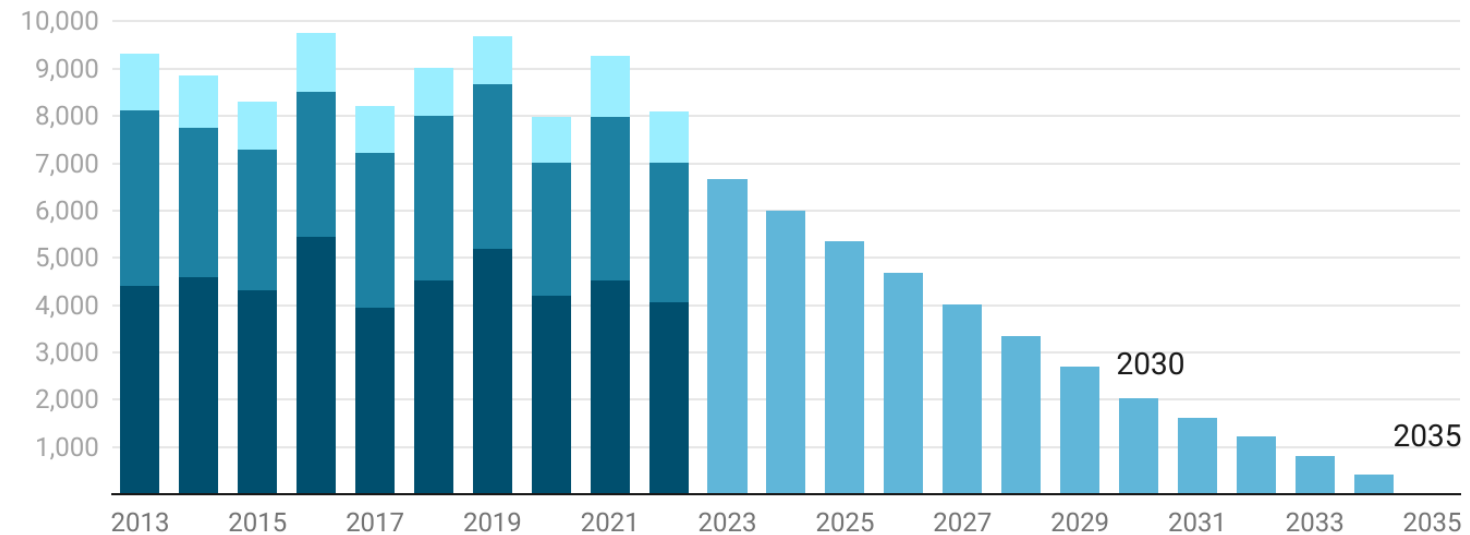
2035:

Reduce greenhouse gas emissions by 100% below 2013 baseline.

4CD Greenhouse Gas Emissions Compared to Goal

(metric tons CO₂e)

■ Purchased Electricity ■ Climate Goal ■ Natural Gas ■ Avoided GHG from Onsite Solar PV



Campus fleet not yet incorporated into chart. 2023 Fleet vehicles contribute 155 metric tons to our GHG emissions.

Created with Datawrapper

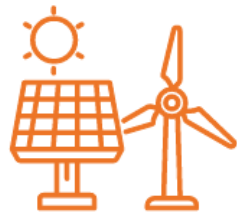
Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Purchased Electricity	4400	4592	4317	5436	3949	4524	5190	4193	4523	4112	3793	0	0	0	0	0	0	0	0	0	0	0	0
Natural Gas	3726	3159	2977	3074	3275	3486	3475	2815	3466	2967	3396	0	0	0	0	0	0	0	0	0	0	0	0
Climate Goal	0	0	0	0	0	0	0	0	0	0	0	6003	5341	4679	4017	3355	2693	2031	1625	1219	813	406	0
Avoided GHG from Onsite Solar PV	1185	1105	1004	1252	981	1013	1021	970	1291	1084	773	0	0	0	0	0	0	0	0	0	0	0	0

Policy Goals -
District-led with campus input

2025:
Establish a campus-level baseline energy use intensity (EUI) score. Conduct effective useful life (EUL) analysis of all gas appliances and systems. Plan for electrification of systems with EUL's of less than 10 years.

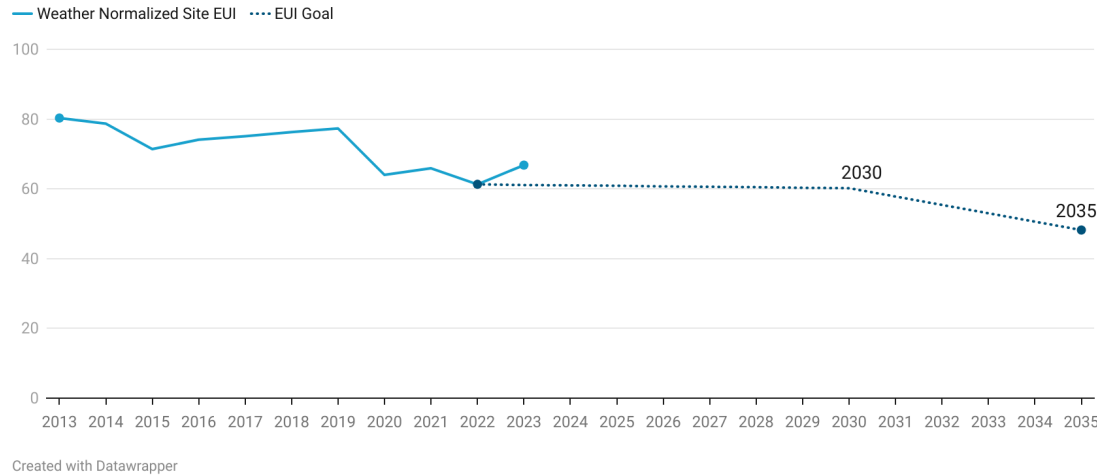
2030:
Decrease campus EUI's by 25% from 2013 baseline. Produce or procure 75% of 4CD's electrical consumption through renewable energy.

2035:
Decrease EUI by 40% from 2013 baseline. Achieve zero net energy (ZNE) at all campuses.

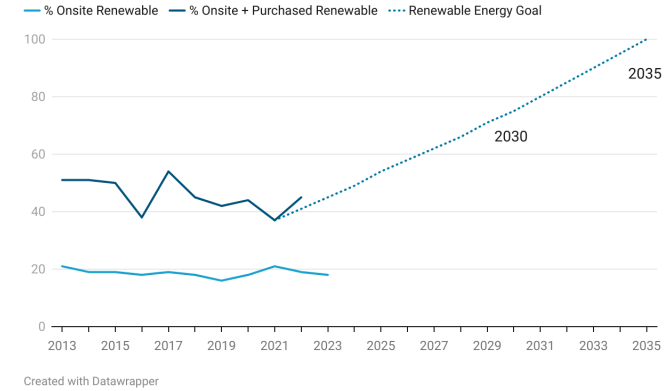


Goal 2 Renewable Energy

4CD Energy Usage Index (EUI) Compared to Goal



4CD Onsite and Purchased Renewable Energy



4CD Energy Usage Index (EUI) Compared to Goal

Fiscal Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	
EUI (kBtUs/SF/Year)	90.2	83.2	78.4	78.3	81.2	84.0	83.3	66.6	72.0	68.7	74.4	0	0	0	0	0	0	0	0	0	0	0	0	0
Weather Normalized Site EUI	80.3	78.7	71.4	74.1	75.1	76.3	77.3	64.0	65.9	61.3	66.8	0	0	0	0	0	0	0	0	0	0	0	0	0
EUI Goal	0	0	0	0	0	0	0	0	0	61.3	61.1	61.0	60.9	60.7	60.6	60.5	60.3	60.2	57.8	55.4	53.0	50.6	48.2	

4CD Onsite and Purchased Renewable Energy

Fiscal Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
% Onsite Renewable	21%	19%	19%	18%	19%	18%	16%	18%	21%	19%	18%	0	0	0	0	0	0	0	0	0	0	0	0
% Onsite + Purchased Renewable	51%	51%	50%	38%	54%	45%	42%	44%	37%	45%	0	0	0	0	0	0	0	0	0	0	0	0	0
Renewable Energy Goal	0	0	0	0	0	0	0	0	37%	41%	45%	49%	54%	58%	62%	66%	71%	75%	80%	85%	90%	95%	100%

Policy Goals -

District led with campus input

2025:

Establish a baseline energy use intensity (EUI) score for all campus buildings. Develop a zero net energy (ZNE) and campus electrification strategy. As appropriate, conduct LEED or WELL assessments of existing 4CD buildings.

2030:

All new buildings are LEED or WELL Gold certified. Reduce natural gas usage by 30%.

2035:

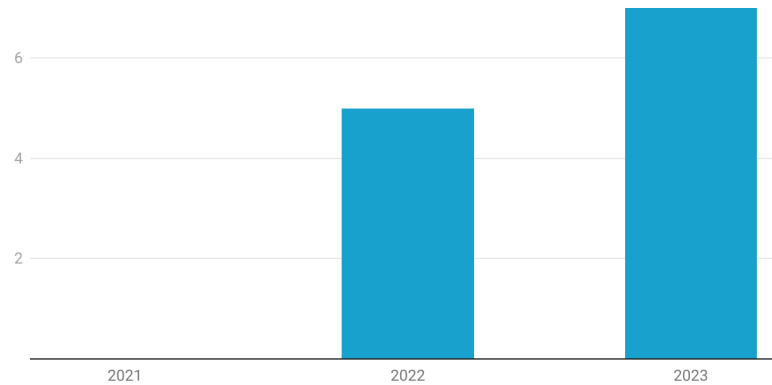
All new buildings are ZNE and Zero Carbon rated. All existing buildings are certified LEED O&M Gold or WELL Gold equivalent. Reduce natural gas usage by 75%.



Goal 3

Green Buildings

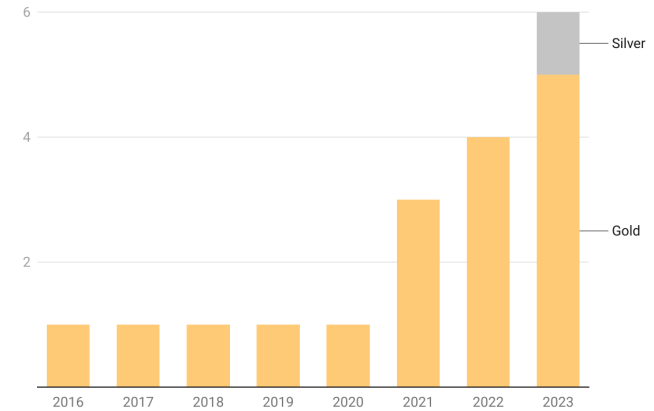
Cumulative Number of 4CD All Electric New Buildings



Six of these buildings are projected to be Zero Net Energy by using existing Onside Solar PV
Created with Datawrapper

Year	2021	2022	2023
All Electric Buildings	0	5	7

4CD Cumulative Number of LEED Certifications by Year



2030 Goal - 100% new buildings LEED or WELL Gold
Created with Datawrapper

Year	2016	2017	2018	2019	2020	2021	2022	2023
Gold	1	1	1	1	1	3	4	5
Silver	0	0	0	0	0	0	0	1
Total Certified	1	1	1	1	1	3	4	6

Thank you!

Q&A

Tracy Marcial
tmarcial@4cd.edu
925-229-6933

[4CD Sustainability Report-2024.pdf](#)





Dr. Ellen Morris

Managing Director

California Renewable Energy Lab,
Kern Community College District

CALIFORNIA RENEWABLE ENERGY LABORATORY



CREL

KERN COMMUNITY COLLEGE DISTRICT

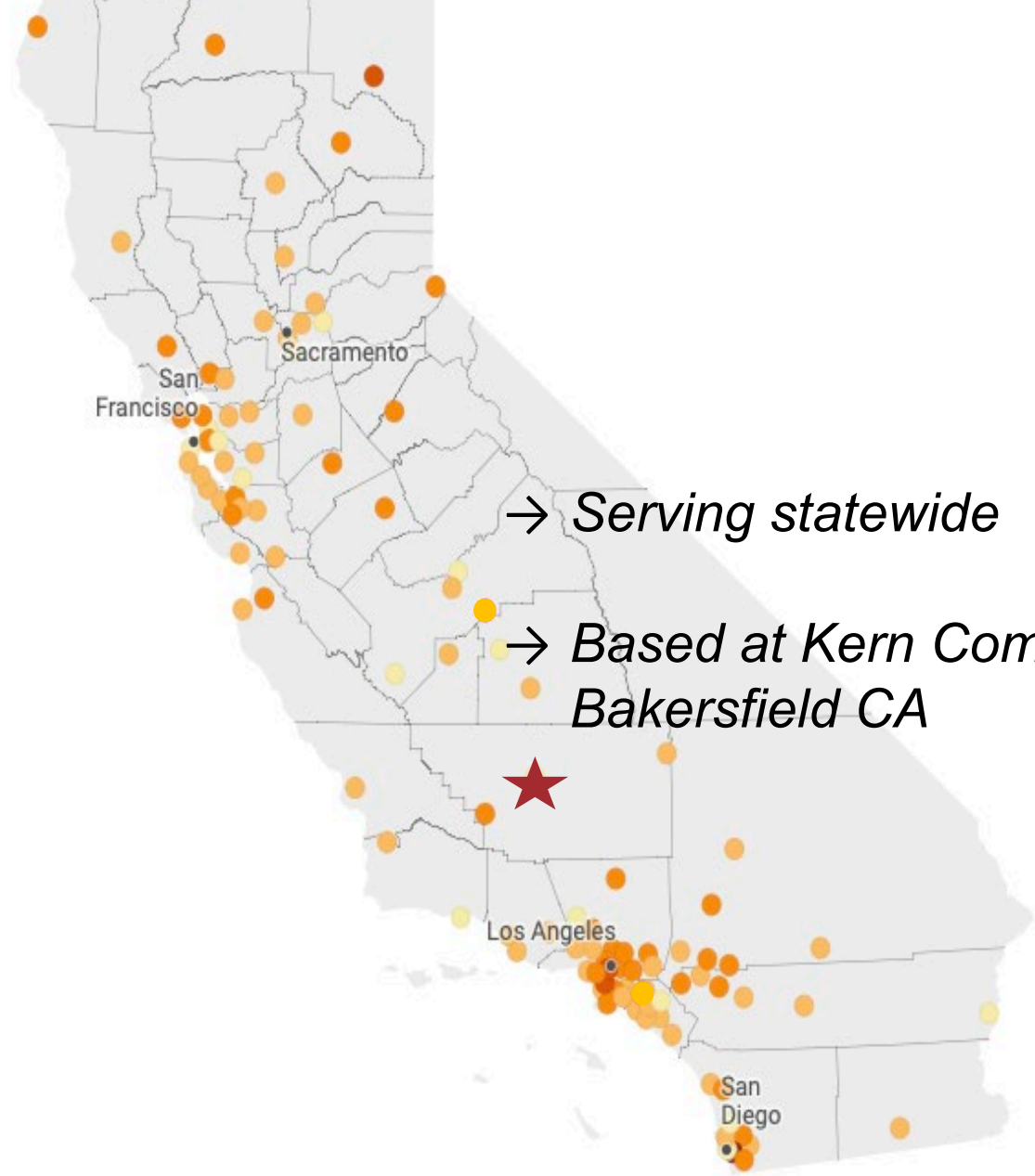
Visioning for the Future

Ellen Morris, Ph.D.
Managing Director

March 7, 2025 9:00 a.m. – 10:30 a.m.



California Renewable Energy Laboratory (CREL)



→ *Serving statewide*

→ *Based at Kern Community College District
Bakersfield CA*



California Renewable Energy Laboratory (CREL)

Connects industry, local and national governmental agencies, and workers with the most up-to-date information and approaches for clean energy innovations that will shape the regional and statewide energy economy for decades to come

Access and adapt state-of-the-art technologies & novel design approaches

Engage with federal & state research laboratories

Connect with leading industry partners



CREL Centers of Excellence



**Clean Energy and
Grid Resilience**



**Clean
Transportation**



Carbon Management



Buildings

CREL supporting climate action and sustainability

Clean Energy & Grid Resilience

Expand clean energy education, training, and community outreach opportunities in **renewable-energy powered microgrids, agrivoltaics, cybersecurity and battery storage**

Clean Transportation

Be recognized as a regional leader in technology implementation and workforce training in **electric vehicle technology**, operations, and alternative fuels (e.g., hydrogen)

Carbon Management

Become a regional resource hub dedicated to education, workforce training, and outreach in carbon management focused on **carbon dioxide capture, transport and storage** systems that consider the economic, environmental, and equity implications

Buildings

Exploring **potential new area** focusing on design and deployment of technologies for efficient and resilient buildings for campuses and communities

Community colleges leading the way on climate action and sustainability

- Renewable energy-powered microgrids
- Electric vehicles
- Agrivoltaics



Call for Interest

Microgrid Deployment at California Community Colleges

The National Renewable Energy Laboratory (NREL), in collaboration with Kern Community College District (KCCD) and the Foundation for California Community Colleges, is offering **technical assistance to 3-5 California Community Colleges campuses for the deployment of microgrids on their campuses**. This initiative aims to enhance energy resilience, reduce costs, and support sustainability goals through localized energy solutions.

Interested Colleges are invited to apply for participation in this opportunity, which includes:

- **Data Collection & Modeling:** NREL will collect the necessary data from the selected campuses to develop conceptual microgrid designs using the REopt microgrid modeling tool. <http://reopt.nrel.gov/tool>
- **RFP Development:** We will assist in developing Requests for Proposals (RFPs) with clear language and requirements for microgrid projects.
- **Additional Support:** NREL may help with contractor selection, preliminary designs, and possibly creating electrical drawings using advanced modeling tools, depending on budget and time constraints.

Criteria for selection of participating campuses may include geography, existing infrastructure, data, regulatory constraints, and "living laboratory" potential. Microgrids offer the following benefits:

- **Energy Resilience:** Ensure continued power during outages by operating independently from the main electrical grid.
- **Cost Savings:** Lower energy costs through integration of renewable energy sources and energy storage systems.
- **Environmental Impact:** Support sustainability efforts by reducing reliance on fossil fuels.
- **Energy Independence:** Manage campus energy needs locally, reduce dependency on external utilities, and provide sophisticated centralized control and monitoring systems.
- **Educational and Research Opportunities:** Serve as a hub for energy innovation and hands-on learning for students to train the future workforce.

We invite interested colleges to complete the Call for Interest questionnaire. Together, we can create more resilient and sustainable campus energy infrastructure.

Application Due: January 23, 2025



Renewable energy-powered microgrids

- **CREL partnering** with National Renewable Energy Laboratory and Foundation for CA Community Colleges
- **Five campuses** across the state
- **Tailored technical assistance and guidance** from NREL technical team for campus microgrid
- **Resiliency and sustainability showcases**

Porterville College electric vehicle technology program



- **Upskilling** for vehicle technicians
- **Retrofitting/conversion** of forklifts, trucks, tractors, and buses
- **Five course modules** for non-credit program to cover all fundamentals EV technology
- **Flexibility and affordability** built in



Agrivoltaics demonstration project



The simultaneous use of areas of land for both solar panels and agriculture.

- **Agrivoltaics** project is part of CREL's Clean Energy and Grid Resilience Center of Excellence
- **Planning underway for installation** adjacent to Kern CCD's regenerative farm on the Bakersfield College Delano Campus
- **Hands-on teaching, research, demonstrations, and raising awareness** about this cutting-edge technology
- **Will serve as a blueprint** for other campuses in Kern County and the broader agricultural sector in California



Our time is now...

- **CREL can serve as a hub** for climate action and sustainability to community colleges across the state
- **Be a part of our shared vision**—a clean energy future for the world that leaves no one behind
- **Knowledge sharing** through workshops, seminars, workforce development, and technology demonstrations
- **Collaborate on research and deployment** of technology and teaching that taps into the ingenuity and innovation at community colleges



Learn more and join us at CREL! Ellen Morris ellen.morris@kccd.edu

Next Steps:

Climate Action & Sustainability Goals Primer

“You can’t manage what you can’t measure”

Explains the intention of each section and the associated metrics

Describes what data is in important and how you can go about collecting data if it is not available.

This will allow Colleges & Districts to compare with each other as well allow the CCC System to aggregate the data into system wide impact

Save the
Date

Vision 2030 in (Climate) Action: Spotlighting CCC Faculty Climate Curriculum Innovation



Monday, April 28
1:00 – 2:30 pm
Zoom Webinar

Registration Coming Soon

- *Chancellor Sonya Christian, College leadership and Climate Fellows will discuss the vital role of faculty in climate action across the curriculum and research underway*
- *Faculty at Folsom Lake College, SD Miramar College, and West Los Angeles College will share climate curricular innovations spanning multiple disciplines*



Upcoming Events

**April 8, 2025 | Community
Colleges & Climate Futures:
*Pedagogical Approach to
Climate Curriculum webinar***

**September 29-30, 2025 | C3
CONVERGE *Climate Summit
in Anaheim, CA***



California Community Colleges

Thank you!

cgrandy@cccco.edu

dliebman@cccco.edu

www.cccco.edu