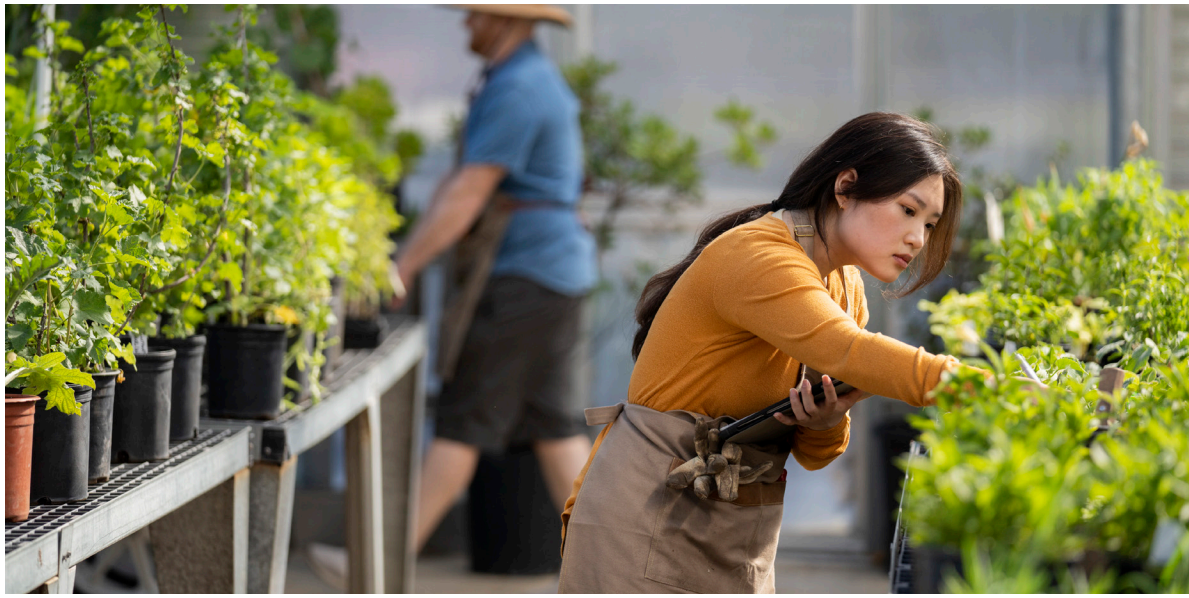
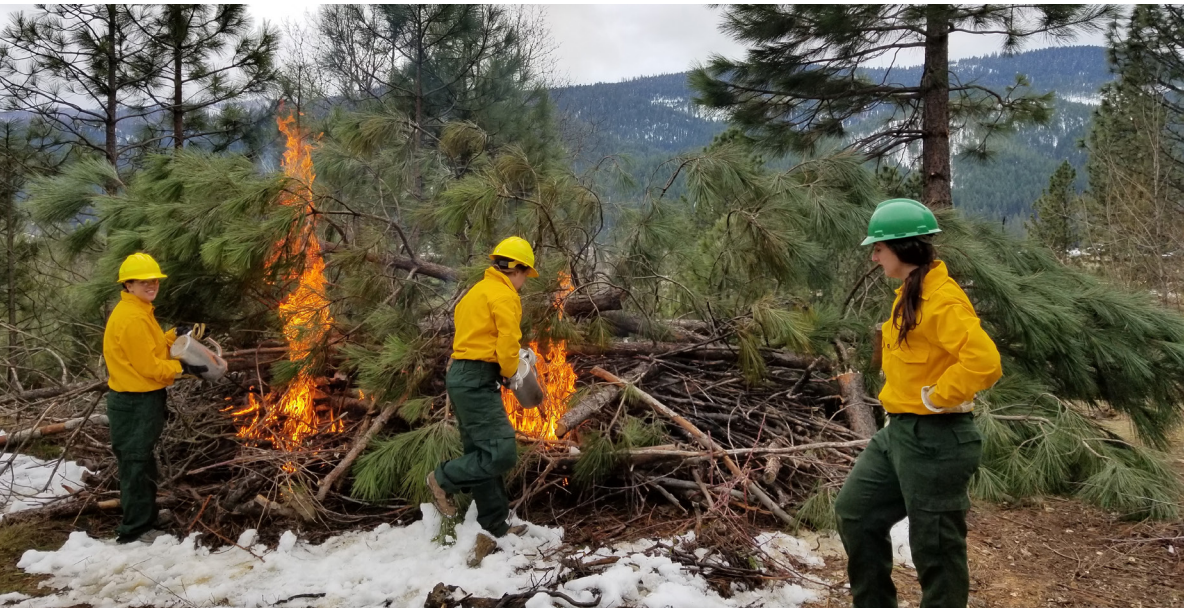
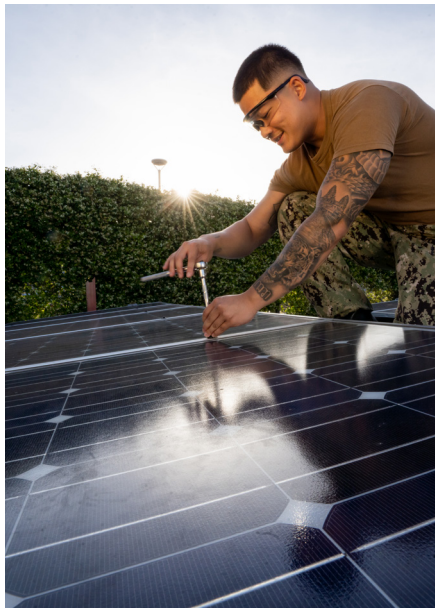




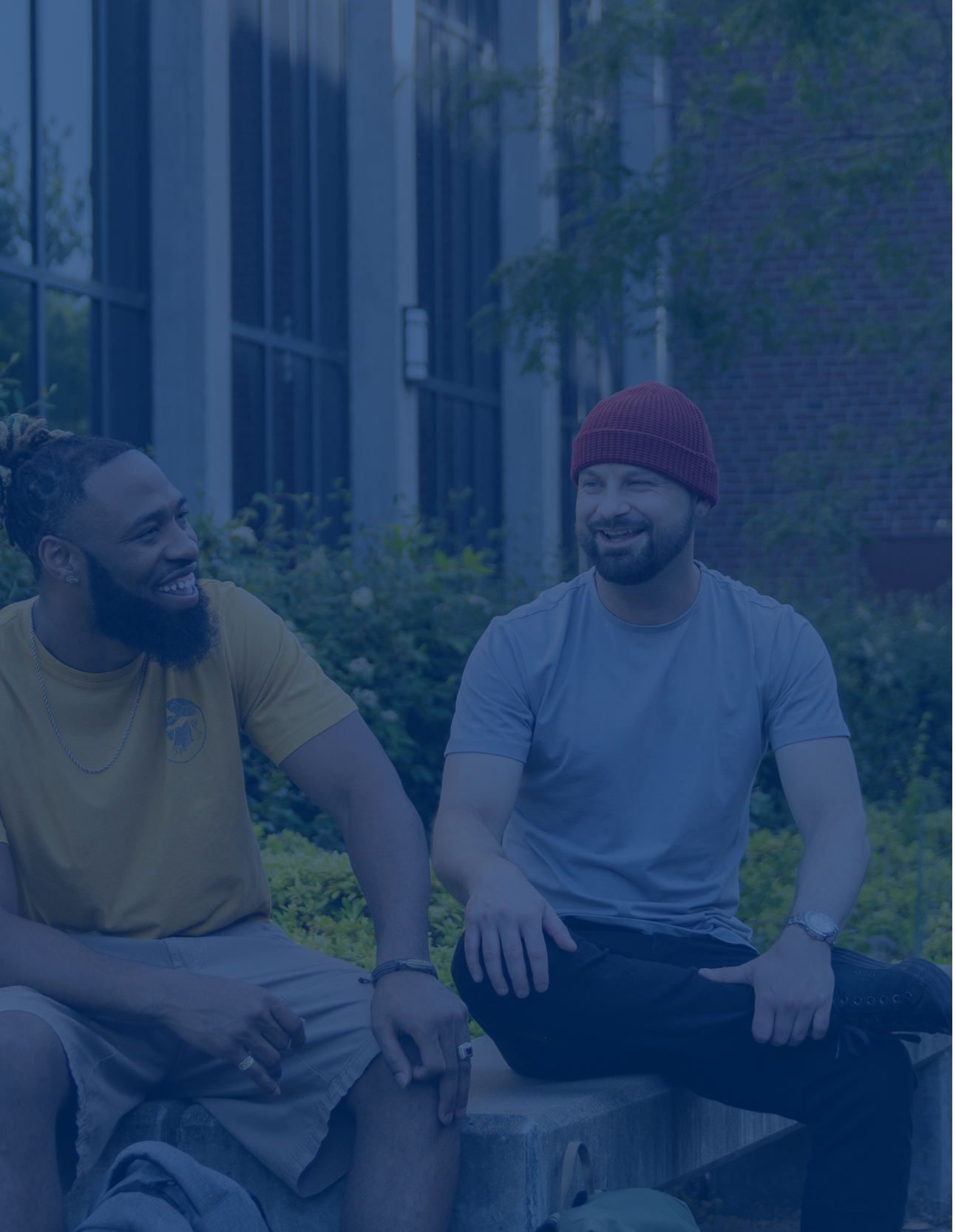


CALIFORNIA COMMUNITY COLLEGES

Leading the Way on Climate Action

California Community Colleges

September 2024



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Background

This inaugural report will highlight the unique roles in climate action of the California Community Colleges, the largest system of higher education in the nation. The report details the California Community Colleges' work to date across three fields of climate practice: Workforce Development and Curriculum, Assistance to Communities for Climate Resilience, and Sustainability in Facilities and Operations. Additionally, the report serves as a resource for colleges, partners, policymakers, funders and beyond to learn about connection between the system and climate issues, leveraging the California Community Colleges to advance climate solutions across the network and state.

The Moment

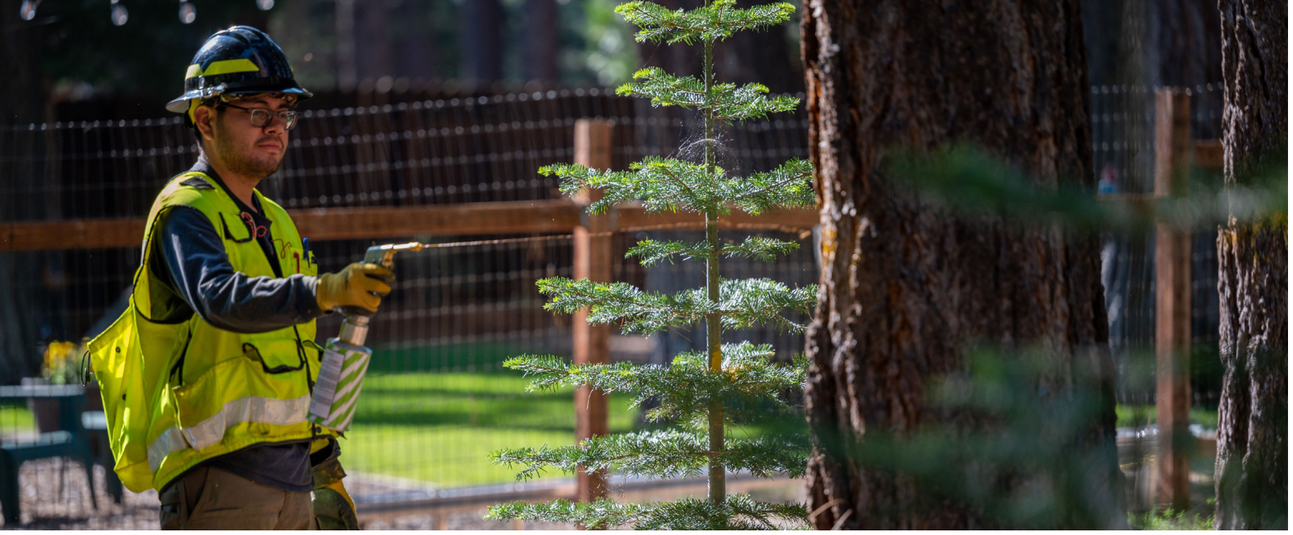
Climate change is impacting the health, livelihood and safety of individuals across California. Disruptive effects are seen in weather patterns such as extreme heat, drought and flooding as well as in an increasing prevalence of catastrophic wildfires. Communities with fewer resources, including historically underserved ones, find themselves with less capacity to adapt to changing climate and climate policy. Young people's mental health has measurably suffered from climate-related anxiety. This is an urgent time for community colleges to respond to the climate crisis.

This moment also coincides with significant investments in this area at the federal and state levels. Notably, at the federal level, historic funding through the Inflation Reduction Act, the Chips and Science Act, the Investment and Jobs Act, and a slate of executive orders has created the most comprehensive climate legislation the U.S. has ever seen, accelerating the much-needed green energy transition.

California is also leading the nation in many of its climate investments, including through the California Climate Commitment, which invests $54 billion to fight climate change. The Commitment's ambitions to cut air pollution by 60% will save the state $23 billion in damages caused by pollution. It also aims to create 4 million new jobs and reduce fossil fuel use in buildings and transportation by 92%.

"Both the national and state administrations have an ambitious climate agenda that includes decarbonization, electrification, and grid resilience and more. Community colleges must be at the core of this large-scale transformation in a multifaceted way."

— **Dr. Sonya Christian**
Chancellor, California Community Colleges



Lake Tahoe College

The System and Climate Action

> “The perspective of [the system’s] diverse student body will be critical to inform discussions on climate change damages and mitigation efforts.”
>
> — **California Air Resources Board**

Aligned with our state’s ambitions for emissions reductions, the California Community Colleges’ Climate Action and Sustainability Framework sets ambitious energy reduction goals to reduce greenhouse gas emissions for the 73 California community college districts. The system has an important role to play in helping the state meet its climate targets. California Air Resources Board’s Scoping Plan for Achieving Carbon Neutrality calls out academic institutions and community colleges as implementers of solutions, given their “ability to fill knowledge gaps and push us toward new frontiers.”

The California Community Colleges has invested in climate solutions for decades — including rolling out a statewide clean air program affecting every vehicle and individual across the state in 2010. But rapid change requires new approaches to our operations and programs. For this reason, climate action is a cornerstone of the Governor’s Roadmap and Vision 2030. This inclusion continues our long-standing legacy actions that take care of the health and well-being of our students, communities and planet.

In the past year, a series of climate-themed events hosted by three different colleges with commitments to climate action brought together over 400 community college affiliates. These events explored in detail the three fields of climate practice — Workforce Development and Curriculum, Assistance to Communities for Climate Resilience, and Sustainability in Facilities and Operations. Colleges were able to highlight successful sustainability projects, curriculum development initiatives, climate equity-enhancing activities and community resilience work. These exchanges helped colleges across the state see themselves as essential components of global climate solutions and provided “how-to” guides for replicating that work.

Building the Climate Workforce

The **Workforce Development and Curriculum** field of climate practice recognizes that community colleges are the only institutions with the capacity and scale needed to build the climate workforce to meet energy transition targets. As a provider of career and technical training for millions of Californians, the system plays an unparalleled role in workforce development. In fact, anyone who has installed a solar panel, inverter or heat pump in the last decades has very likely gone through the California Community Colleges system to learn their trade. With 116 colleges serving 2 million students, these colleges’ scope and reach, their accessible pathways to economic mobility and skilled training, and their deep community ties — particularly in communities where energy, agriculture and forestry are key — make them ideal hubs for innovative workforce initiatives.

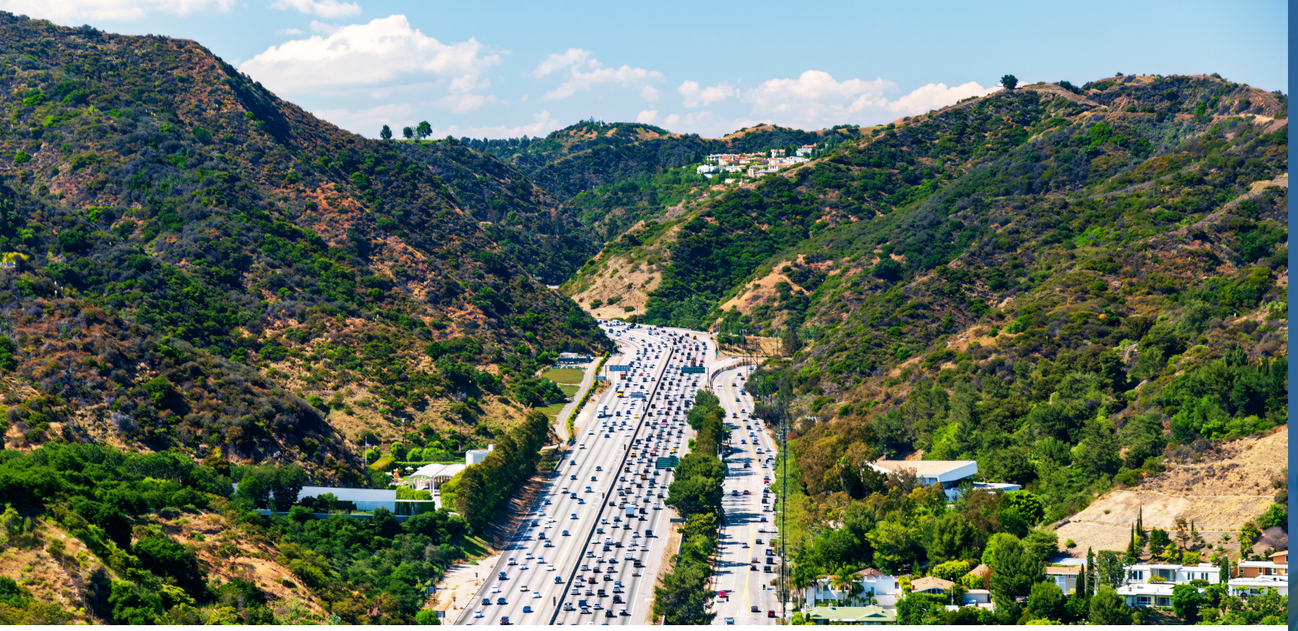
Creative approaches to workforce development, such as apprenticeship associate degrees, paid work-based learning programs and baccalaureate degrees offered by community colleges foster career preparedness and ensure equitable access to opportunity. The system can also provide training and education for building decarbonization, renewable energy installation and maintenance, climate-smart agriculture, zero-emission vehicle manufacture and other green energy fields.

> “... only community colleges have the public trust and the institutional reach that can allow [existing] green technologies to be rolled out at scale.”
>
> — **Dr. Martin Keller**
> *Director of the National Renewable Energy Laboratory*

Strengthening Communities

California’s increasingly severe droughts, floods, wildfires, rising sea levels and record temperatures, in addition to a shifting landscape of climate policy, mean that communities need support for adaptation to this rapid change. The **Assistance to Communities for Climate Resilience** field of climate practice recognizes that communities with the least resources are those least equipped to shield themselves from these challenges. Our network provides extraordinary potential for helping Californians build resilience.

As anchor institutions in communities across the state, community colleges can use their deep community ties to link state and federal programs with systemically overlooked communities, provide direct assistance and give voice to underinvested regions. As open-access institutions, community colleges provide unique opportunities to partner with public agencies; industries; tribal communities; labor organizations; nonprofits; and individuals with stakes in environmental justice, climate adaptation and climate mitigation.



Reducing Emissions

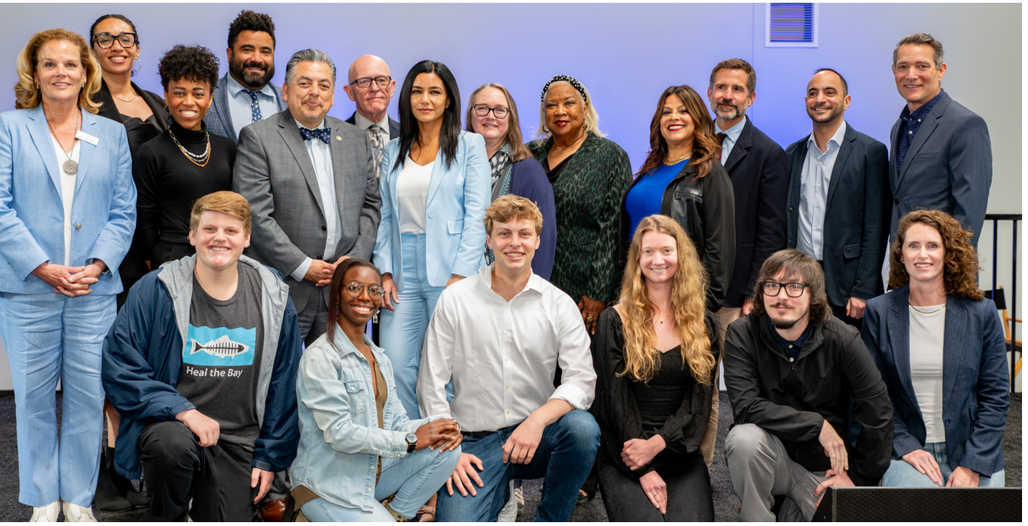
Infrastructure — including from buildings and transport — is responsible for 79% of all greenhouse gas emissions. Given the sector's outsized impact on climate change, the **Sustainability in Facilities and Operations** field of climate practices recognizes the system's extensive physical plant and operational footprint — including its 25,000 acres of land and 6,000 buildings — present rich opportunities to reduce carbon emissions, model sustainability for communities and train students in green infrastructure.

For over a decade, the California Community Colleges has been a bold proponent of climate actions, energy conservation and other sustainability measures. To meet the goals outlined in the system's Climate Action and Sustainability Framework, the system is making facilities upgrades that decrease energy demand, implementing waste-reduction initiatives and recycling programs, as well as adopting sustainable purchasing practices and low-carbon transportation.

Outlined below are examples of how the California Community Colleges continues to play a key role in mitigating and adapting to climate change through building the next wave of climate leaders, promoting resilience among communities and reducing emissions.

> "[Santa Monica College's] new aquaculture certificate has been developed to meet a local workforce need, help move the needle in combating climate change, and impact the lives of our students by providing them the means to transform their future. It is a true win-win—for California community college students, the Blue Economy, Los Angeles, and for the planet!"
>
> — **Dr. Kathryn E. Jeffery**
> *Santa Monica College Superintendent*

Community College Climate Work in Action

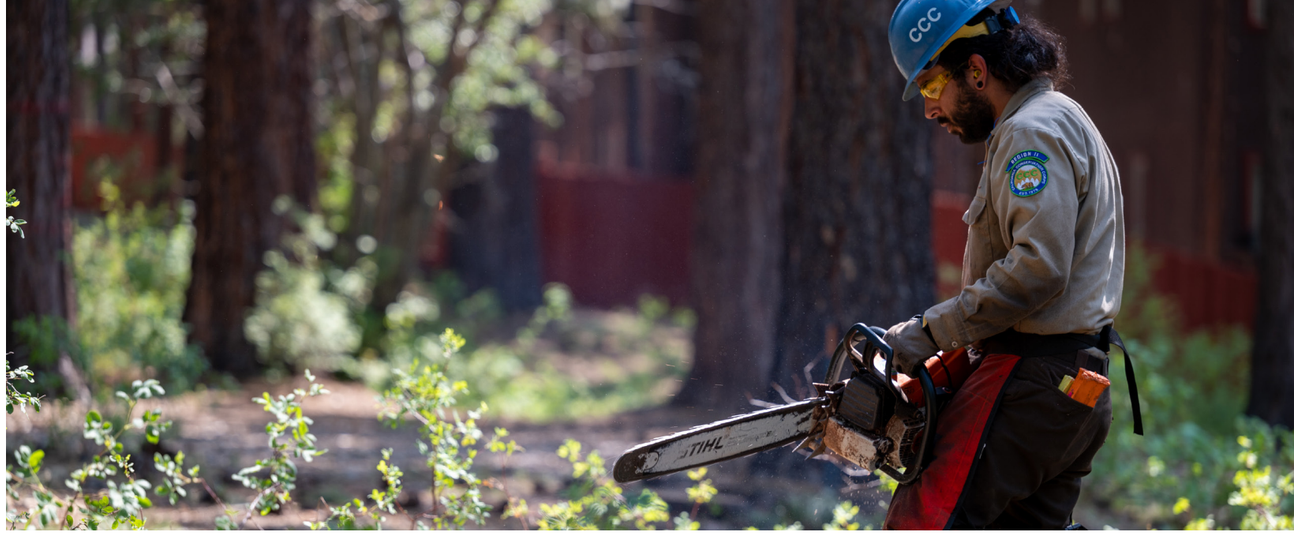


Santa Monica College

Santa Monica College: **Blue Economy Workforce**

Demand for employment in sustainable ocean-related labor markets continues to build. By 2030, the Blue Economy — the economic activities associated with the oceans and seas — is projected to more than double its contribution to global value added, reaching over $3 trillion. This sector is vital to California, with its coastline, productive fisheries, bustling ports, and renowned coastal cities and towns making it one of the fastest-growing economic sectors in the state. For example, the city of Los Angeles — home to the busiest container port in the Western Hemisphere — needs a workforce trained in zero-emission transportation logistics and other related fields. Also in the region, new regenerative aquaculture initiatives are an important approach that will help ensure the seafood industry meets growing demand for its products while preserving fish and their habitats.

The Blue Economy Climate Action Pathways certification program (BECAP) aims to close workforce gaps and harness these opportunities by aligning academia with businesses to help students access sustainable jobs with family-sustaining wages in ocean-related fields. This groundbreaking collaboration between Santa Monica College, 13 community colleges and AltaSea — a public-private ocean institute — is developing new curriculum and programs to fill the next generation of jobs focused on the ocean. This curriculum includes Regenerative Aquaculture, Ocean Renewable Energy & Clean Air, Blue Tech & Underwater Robotics, and Ecosystems Conservation and Restoration. Santa Monica students shared that they have become more interested in pursuing careers related to aquaculture or environmental activism after taking BECAP classes.



California Tahoe Conservancy

Sierra Nevada Colleges: **Forest and Wildfire Management Training**

California's forested, rural areas have been dramatically affected by climate change, recently experiencing record-breaking wildfires that are impacting communities across the state. While the forestry and fire safety sector faces a shortfall of thousands of workers, the sector could grow into a $39 billion industry while protecting communities and landscapes and fostering natural carbon storage in our state's forests.

The Foundation for California Community Colleges and five community colleges — Shasta, Feather River, Lake Tahoe, Butte and Reedley — have partnered with educational institutions including the University of California Agriculture and Natural Resources, nonprofits, agencies as well as industry to build a stronger forest management workforce through the Resilient Careers in Forestry program.

Part of the Good Jobs Challenge and funded by President Biden's American Rescue Plan, this program helps provide the workforce needed to treat 1 million acres of California forests each year, to reduce the risk of catastrophic wildfires and to promote economic development in rural mountain communities. Partners work with employers to ensure the skills they learn are applicable to available roles, and colleges provide students with holistic support toward their success, including transportation and equipment.

By working to recruit, support and train local residents in partnership with multiple Hispanic-serving institutions, Indigenous-led partners and other community-based organizations, the project is expanding the industry's talent pool and diversifying the field.

> **"We know that the scale of this work will continue to increase and we need more people doing this work [...] we're really excited about this program that works with community colleges, which are the gateway to career in our state. [...] This is the future."**
>
> — **Wade Crowfoot**
> *Secretary, California Natural Resources*

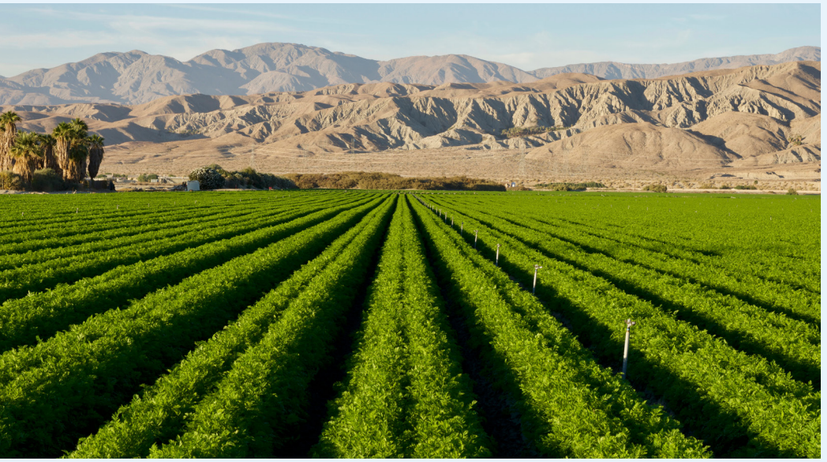
Central Valley Colleges: **Climate-Smart Agriculture**

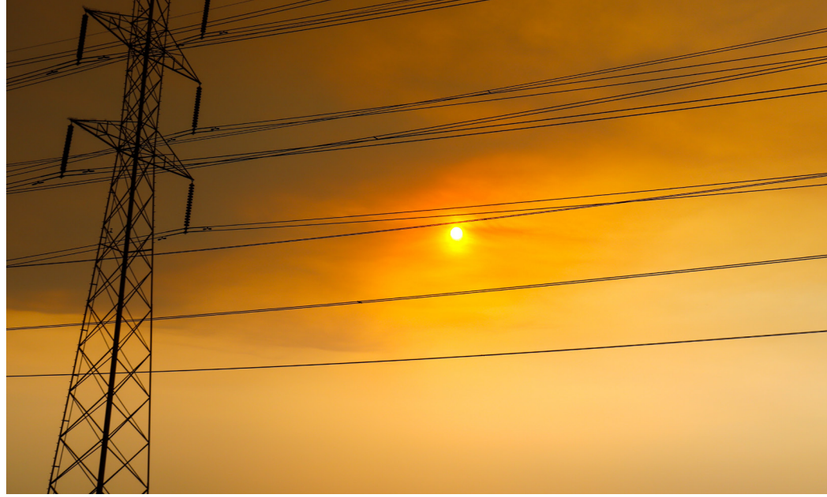
California's Central Valley supplies 25% of the United States' fruits, and agriculture accounts for 14% of the area's gross domestic product as well as 17% of its jobs. Disasters associated with climate change and water shortages as well as persistent racial and geographic inequity are risks in this key sector.

As part of the U.S. Economic Development Administration's Build Back Better Regional Challenge and led by Merced and Reedley colleges, eight colleges are partnering with industry and farmworker organizations to implement the AgTEC workforce training program. This program is upskilling over 8,000 agricultural workers in high-tech methods across the San Joaquin Valley. The initiative builds agrifood pathways for thousands of workers, with the goal of transferring new technology skills and increasing salaries by 60%. It includes a new AgTEC Innovation Center, which equips students with valuable work experience in the sector while fostering a cycle of innovation, technology adoption and curriculum development to inform education programs and bolstering the workforce.

In addition to improving salaries and quality of life for agricultural workers, Californians gain resilience to drought and other harsh environmental conditions through the program's focus on climate-smart agriculture. The advanced technologies in the training programs are key to climate-smart agriculture, which helps California farmers adapt to changing climate and water availability.

> **"To maintain economic competitiveness and inclusive opportunity for all residents, the [Central Valley] must embrace agricultural technology for climate-adaptive and sustainable food production."**
>
> — **"Fostering inclusive & sustainable agricultural innovation in California's Central Valley"**
> *Brookings Case Study*



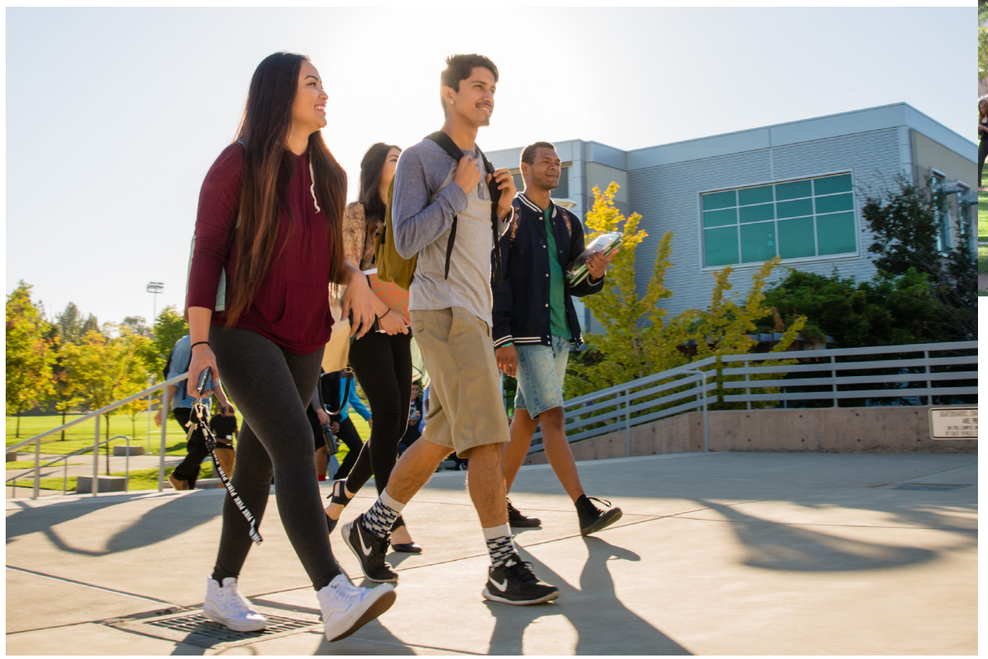


Santa Rosa Junior College: **Microgrid Network**

Renewable-supported microgrids are widely considered to be a key component of the transition to renewable energy due to their cost-saving and emissions-reduction capabilities as well as their ability to continue providing power in the event of severe weather. The California Community Colleges also recognizes the need for this technology to meet the system's climate action and sustainability goals to reduce greenhouse gas emissions to 100% below baseline by 2035.

Sonoma County has experienced several recent devastating fires, including the Tubbs fire in 2017, one of the most destructive in California's history. In addition to direct effects of fire on lives and infrastructure, local residents experienced public safety electricity shutoff events, further disrupting residents' lives. The Microgrid Project at Santa Rosa Junior College (SRJC) reduces emissions while helping communities adapt to increasingly unstable electric grid systems. Where most microgrids rely on fossil fuels to meet basic demand, SRJC's microgrid uses 100% renewable energy. It also prevents power interruptions by quickly and seamlessly disconnecting from the public grid in the event of power outages.

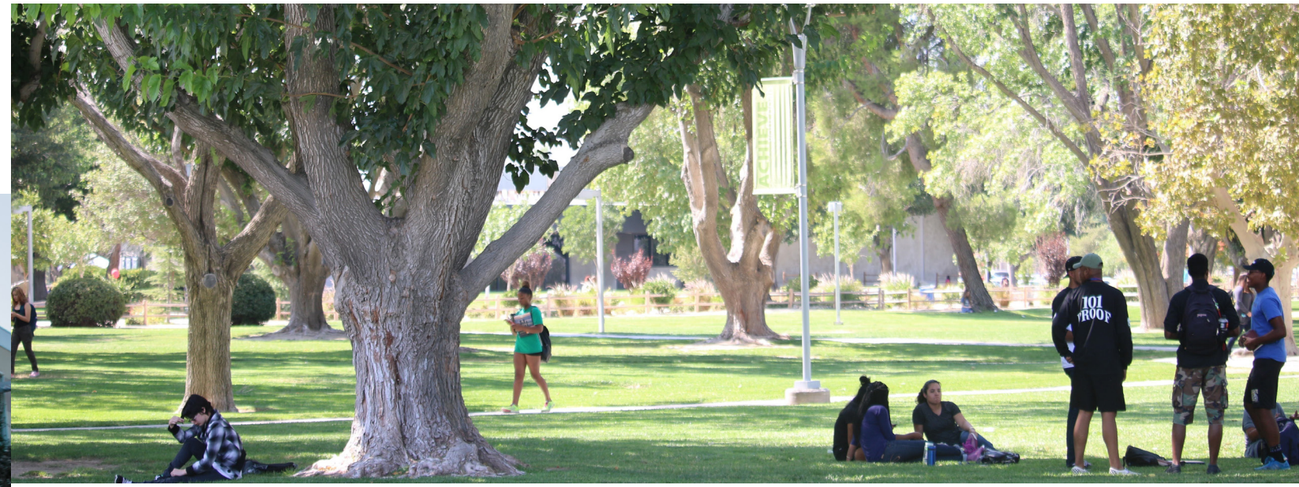
The project is replicable across the education system, including at the community college level and at universities and research institutions. New initiatives aim to launch microgrid adoption at more campuses in the coming years.



Los Medanos College

Climate Fellows Program

The Chancellor's Office invited community college faculty and staff interested in climate action and sustainability to participate in its Climate Fellows Program, which engages individuals to support statewide climate action efforts across the system's fields of climate practice. Over two years, Climate Fellows can work on initiatives ranging from collaborating with community organizations to advance Vision 2030's climate and sustainability goals to finding ways to develop living laboratories for students to participate in hands-on learning opportunities and help build the next wave of climate leaders.



Antelope Valley College

Meeting the Moment

Unique among educational institutions, the California Community Colleges is advancing the implementation of climate mitigation and adaptation through these three fields of climate practice: empowering and resourcing colleges to adopt climate practices in their operations; engaging students motivated by climate issues to address their professional and personal goals; as well as strengthening campus, community and statewide resilience to climate and climate policy change.

To build and scale our climate work, the Chancellor's Office, colleges and their respective foundations must access grants, contracts and philanthropic donations. We are continuing to explore opportunities, including state agency needs for workforce and community outreach; federal economic development initiatives and requirements such as community benefit plans; and philanthropic support for innovation in education, training and community impact.

With longer fire seasons, rising sea levels and droughts that threaten agriculture, Gov. Gavin Newsom has emphasized the urgency to act: "later is too late to act on climate change. California isn't waiting any more." As we confront these challenges, the California Community Colleges must continue to build on colleges' work that will scale our impact. Given our broad reach across the state and ongoing climate efforts, the California Community Colleges should be part of the solution and join partners across the state to address the scale of the challenge and meet the moment.

> "...later is too late to act on climate change. California isn't waiting any more."
>
> — **Gavin Newsom**
> *Governor, California*

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