

UNIVERSITY OF CALIFORNIA 2023 ANNUAL REPORT ON SUSTAINABLE PRACTICES

Summary

This 20th Annual Report on Sustainable Practices highlights the achievements of the University of California's (UC) comprehensive sustainability program in 2023. It includes progress in sustainable operations required by [UC's Sustainable Practices Policy](#) as well as sustainability accomplishments in education, research, investments, and public service. As a theme for this year, the 2023 report highlights UC's climate action for a fossil-free future.

The University's sustainability commitment began in 2003 with a Regental action that led to the adoption of a Presidential Policy on Green Building Design and Clean Energy Standards in 2004. Since adopting that policy, UC has expanded the scope to include climate, transportation, building operations, waste, procurement, food, water, health and well-being, health care operations and sustainability performance, as well as anti-racism, diversity, equity, and inclusion. The Sustainable Practices Policy includes all ten campuses, six academic health centers, UC Agriculture and Natural Resources, Lawrence Berkeley National Laboratory and UC Office of the President.

Climate Change

UC's greenhouse gas (GHG) emissions are reported on a calendar year basis, so the 2023 report includes emissions through the end of 2022. Emissions rose in 2022, reflecting the impact of returning to work and school as COVID-19 pandemic restrictions eased. In aggregate, net GHG emissions in 2022 increased ten percent compared with 2021. This included a two percent increase in scope 1 emissions, a 12 percent increase in scope 2 emissions and a 40 percent increase in scope 3 (commute and air travel) emissions. However, the University's total net emissions remained nine percent lower than pre-pandemic levels and 26 percent lower than when tracking began in 2009, despite increases in enrollment and building square footage.

In July 2023, the University adopted new, stronger climate action goals in its Sustainable Practices Policy, superseding the 2013 Carbon Neutrality Initiative and its goals that were codified in University policy in 2015. The new climate action goals prioritize direct emission reductions, limit the use of carbon offsets, and align UC's climate goals with the State's. In addition, the policy enacts a framework and timetable for campuses and health centers to hit progressively significant GHG emissions reductions in 2030, 2035, and 2040 and fully decarbonize no later than 2045. The State provided \$12 million to fund decarbonization studies at each campus and academic health center. These studies, which will be completed in July 2024, will develop strategies and plans for achieving or exceeding the policy's decarbonization targets.

Many campuses and academic health centers are already making progress towards a fossil-free future, including establishing aggressive decarbonization targets. For example, UC Berkeley is replacing its natural gas-fueled co-generation plant with a [clean and resilient energy system](#), with the first phase to be complete by 2028. UC Davis completed the first phase of its [Big Shift infrastructure project](#) and released its [draft Fossil Fuel-Free Pathway Plan](#). UC Santa Cruz is [assessing the feasibility of reducing fossil fuel use by 95 percent](#), potentially as soon as 2030. UC Health locations are also making progress to greatly reduce or eliminate the use of fossil fuels in their operations. For example, UC Irvine is building the [first all-electric medical center](#) in the U.S., and UCSF's new hospital and an outpatient surgery center will be heated and cooled with all-electric systems and powered by 100 percent carbon-free electricity.

Clean Energy and Energy Efficiency

Procuring clean energy and using energy efficiently play a major role in reducing GHG emissions. The University has made significant progress towards its clean energy goals, and is [ranked first](#)

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among colleges and universities in green electricity use according to the U.S. Environmental Protection Agency. UC has installed more than 100 solar projects on campus representing 55 megawatts of capacity. In addition to projects on-site, the University continues to expand its renewable energy commitments off-site in support of decarbonization. In 2023, UC signed its first-ever wind energy contract representing the University's largest renewable energy commitment to-date as well as an agreement to add utility-scale batteries to the University's next Southern California solar project. UC's own electric service provider, UC Clean Power, continues to serve campuses with 100 percent clean electricity.

Additionally, the University is the largest voluntary buyer of biomethane in the country. UC's biomethane projects collect methane from landfills and anaerobic digesters, remove the impurities, and then inject it into the country's natural gas pipeline network. Biomethane serves as a transition fuel as UC shifts away from fossil fuels. In 2023, UC began receiving biomethane from a landfill that was previously flaring the biogas. This project will help move the University closer to its goal of displacing 20 percent of fossil gas currently used on campus with zero-carbon biomethane by 2025.

UC continues to pursue energy efficiency across its operations. In this reporting year, UC locations worked to retain energy reductions while managing increased occupancy as activities returned on-site following the coronavirus pandemic. Energy efficiency projects and high efficiency new buildings avoided approximately \$89 million in energy costs in 2022, for a cumulative avoidance of approximately \$416 million since 2010. UC has also been part of Southern California Edison's recent Clean Energy Optimization Pilot, completing energy efficiency and other GHG reduction projects that have resulted in 82,000 metric tons of GHG savings and more than \$7.1 million in program incentives to date.

Anti-Racism, Diversity, Equity, and Inclusion

In 2023, the University adopted a new section in the Sustainable Practices Policy focusing on the intersection of sustainable practices with the University's goals for anti-racism, diversity, equity, and inclusion. As part of the University's commitment to center equity and climate justice in its sustainability efforts, the policy requires a diversity, equity, inclusion, and justice (DEIJ) assessment of the existing sustainability policy, development of goals that incorporate anti-racism, diversity, equity, and inclusion into specific areas of the policy by 2025, and analysis of the DEIJ impacts of any policy addition or revision.

Food

In fiscal year 2022–23, approximately 19 percent of the University's food purchases met one or more sustainability criteria. This represents over \$33 million going to sustainable food suppliers, \$6 million dollars more than the previous year. Eight locations — four campuses and four academic health centers — were able to increase their percentage spend on sustainable food and beverages. In support of efforts to define the actions and resources that would be needed to procure at least 25 percent of the University's food supplies from sustainable sources by 2025, five years ahead of the University's existing goal, the University launched a Sustainable Food Services Fellowship in fall 2023 with funding for fellows at each campus and academic health center.

Of the University's total food and beverage spend, 29 percent, or nearly \$51 million, was on plant-based food items. This fiscal year, seven campuses and two academic health centers were able to reach the newly published policy goal of at least 25 percent spend on plant-based food by 2030.

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General Sustainability Performance Assessment

All nine undergraduate UC campuses participate in the [Association for the Advancement of Sustainability in Higher Education's Sustainability Tracking, Assessment and Rating System \(STARS\)](#). Six of the nine campuses currently hold a Gold rating. The other three undergraduate campuses, UC Merced, UC Berkeley, and UC Irvine, now have a Platinum rating, the highest STARS ranking. Additionally, five academic health centers received sustainability awards from Practice Greenhealth. UC Davis Health and UC San Diego Health also received the Top 25 Environmental Excellence Award, Practice Greenhealth's highest honor for hospitals.

Green Building

UC now has 427 LEED certifications for green buildings, totaling over 37 million square feet. UC no longer allows on-site fossil fuel combustion (e.g., natural gas) for space and water heating in new buildings or major renovations, except under special circumstances. The University currently has 24 occupied electric buildings (approximately 2.5 million square feet) and another 34 buildings (over eight million square feet) in planning, design, or under construction.

Health and Well-Being

The Healthy Campus Network, in partnership with sustainability staff, completed the [Health in All Policies Executive Report](#) to analyze the UC Sustainable Practices Policy through a health-focused lens. Also, Healthy Vending Guidelines were incorporated into the policy in July 2023.

Procurement

The University and its procurement staff continued to partner with strategic suppliers to improve sustainability practices. The University analyzed data from 27 strategic suppliers representing \$89 million in total spend during fiscal year 2022–23. Within that spend, the University found that 52 percent of electronics, 97 percent of indoor office furniture, 58 percent of cleaning supplies and 62 percent of office supplies met UC's requirements on minimum or preferred green spend, as outlined in the [Sustainable Procurement Guidelines](#). As an additional component of UC's sustainable procurement goals, analysis of UC's support of small businesses, presented to the state each year, [can be found online](#).

Sustainable Building Operations and Laboratories

All campuses have completed at least three assessments through their Green Labs assessment programs. Through fiscal year 2022–23, the cumulative number of green-certified laboratories totaled 375, a 14 percent increase from the previous year.

Transportation

The University continues to implement sustainable transportation programs and related GHG emission reduction strategies. In fiscal year 2022–23, more than 70 percent of students and employees telecommuted or commuted to campus by walking, biking, transit, vanpool, or carpool. Almost two-thirds of locations reported a decline in single-occupancy vehicle commute rates compared with the previous year. Similarly, over three-quarters of locations reported a decrease in single-occupancy vehicle commuting rates from a 2015 baseline. Systemwide, 48 percent of all new fleet vehicles acquired were battery-electric, plug-in hybrid, or electric hybrid vehicles. Over 1,800 active electric vehicle charging stations support the conversion of fleet and commute vehicles to electric options. Providing sufficient charging infrastructure remains the primary barrier to fully electrifying UC's fleet.

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UC Health

All academic health centers are partnering with their associated campuses to conduct decarbonization studies to assess the technical and financial requirements to eliminate 90 percent of GHG emissions from their energy systems by or before 2045. Most academic health centers are already implementing decarbonization projects, such as the all-electric medical center at UC Irvine Health, two outpatient surgery centers at UCSF Health, a hospital and outpatient pavilion at UC San Diego Health, and expanded and more reliable electric service at UC Davis Health that is the important first step toward decarbonizing its gas cogeneration plant. Additionally, UC Health is reducing GHG emissions from energy and anesthetic gas use in operating rooms. As signatories to the White House's Health Sector Climate Pledge, UC academic health centers are also developing equity-centered climate resilience plans for their facilities and surrounding communities.

Water

UC's overall potable water use decreased from nearly 23,000 gallons per person per year in fiscal year 2018–19 to less than 12,000 gallons per person per year in fiscal year 2022–23. Ten UC campus and health center locations exceeded their 2025 goal of a 36 percent reduction in potable water use per person. Additionally, the University adopted new water policy commitments to require campuses and health centers to complete water recycling and stormwater evaluations and improve access to drinking water.

Waste

In fiscal year 2022–23, campuses diverted nearly 70 percent of municipal solid waste and construction and demolition waste from landfills. With 2022–23 marking the first full year campuses returned to in-person activities without pandemic-related closures, per capita waste generation increased from the prior year but remained under the 2025 goal of one pound per person per day.

Sustainable Investment

UC Investments continues to integrate environmental, social, and governance factors into its investments process, including efforts to reduce and address climate risk, measure the carbon footprint of UC's investment portfolio, invest in transformational solutions as well as use water and energy efficiently. UC Investments publishes an [annual report](#) on its climate-related strategies, metrics, and targets.

Academics

Faculty and student leadership continue to be fundamental in achieving these operational goals while also continuing and expanding UC's position at the forefront of sustainability research, education, and public service. As part of the University's historic \$185 million partnership with the State to address the climate crisis, the University awarded over \$80 million in climate action grants and \$15 million for climate-related innovation and entrepreneurship. The UC Multicampus Research Programs and Initiatives made \$6.5 million in investments in [multicampus and systemwide projects](#) addressing climate, energy, and equity issues.

Systemwide courses related to climate change and sustainability continued to grow and scale in fiscal year 2022–23. The Bending the Curve course platform and UC Center for Climate Justice's new climate justice course are two examples of existing systemwide educational offerings. In addition to many individual climate change courses on every campus, the UC San Diego

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Academic Senate approved a climate change education requirement for UCSD undergraduate students which will begin in fall 2024.

UC's environmental sustainability goals have roots in student activism, beginning 20 years ago when students encouraged the Regents to approve UC's first green building and clean energy policy in 2003. A selection of students' systemwide work and awards in environmental sustainability are also featured throughout this year's report. As one example, the Bonnie Reiss Climate Action Student Fellowship Program funds student projects focused on climate resilience, decarbonization, and climate and environmental justice. The most recent cohort of 43 student fellows are part of a growing network of 362 student fellows who have been funded by this program since its launch in 2015.

The University's Academic Senate continued to advance climate action and education, such as by sponsoring the State-funded campus decarbonization studies, reviewing the Policy on Sustainable Practices and advancing climate action through campus-level climate crisis committees.