UNIVERSITY OF CALIFORNIA

2023 ANNUAL REPORT

SUSTAINABILITY

ACTION FOR A FOSSIL-FREE FUTURE

Overview

This 20th Annual Report on Sustainable Practices highlights the achievements of the University of California's comprehensive sustainability program in 2023. It includes progress in sustainable operations required by UC's Sustainable Practices Policy as well as sustainability achievements in education, research, investments and public service.

Commitment

The 2023 Annual Report on Sustainable Practices highlights UC's climate leadership and action for a fossil-free future.

Letter from the President

This is the University of California's 20th annual sustainability report — an occasion to take stock of our progress, and to chart a bold course for our future.

Since the University began tracking its climate impact in 2009, it has cut its carbon emissions by approximately 25%, saved $400 million through energy efficiency programs and installed more than 100 on-campus solar projects. This year, the University also signed its first wind power contract, our largest renewable energy commitment to date. We also signed an agreement to add utility-scale batteries to our next Southern California solar project. By 2025, all 10 UC campuses and six academic health centers will use 100 percent clean electricity. Remarkable achievements like these have made the University an acknowledged global leader in sustainable practices. We have much to be proud of.

This kind of transformative change doesn't happen spontaneously. The University is a more sustainable institution today because of the ambitious goals it set in the past, and because our community came together to make this work a priority. Now, as we grapple with a growing climate crisis, we're raising the bar once again. In 2023 we adopted stronger climate goals that put the University on a path to carbon-free operations by 2045. These goals prioritize direct emission reductions, limit the use of carbon offsets and align the University's climate goals with those of California.

In 2023, we also launched a historic partnership with the State of California to supercharge climate research and innovation statewide. Through $80 million in state-funded climate action grants, the University is supporting dozens of immediate, solutions-focused collaborations between academic researchers and experts across California. An additional $15 million in innovation grants will enable each UC campus to support climate-focused entrepreneurial efforts. This partnership with the State is the kind of decisive action needed to address the challenges climate change poses for California.

Setting new, increasingly bolder goals is central to our mission at the University of California. By setting ambitious goals and building on our record of success, I know we can meet the urgency and the gravity of the climate crisis, while building a brighter future for all.

MICHAEL V. DRAKE, MD

President, University of California

Letter from the AVP of Capital Programs, Energy & Sustainability

The University of California began reporting on its sustainability progress 20 years ago. UC's first annual sustainability report covered two policy areas at the time, green buildings and clean energy, marking a fitting foundation for UC's climate leadership. This anniversary presents an opportunity to reflect on how far we've come and what we've learned along the way.

From 2004 to 2023, the University of California grew its LEED certifications from a single LEED certified building at UC Santa Barbara's Bren School of Environmental Science and Management to 427 LEED buildings across the system, three-quarters of which are Gold or Platinum certified. This accomplishment reflects UC's commitment to a green building policy that saves energy, reduces emissions, uses resources responsibly and creates healthy places for our community to work, study and live. Learning from that first pilot building at UCSB and other early pioneers, UC's sustainability policy turned a best practice into standard practice across the system.

Similarly, UC locations have demonstrated incredible progress toward our clean energy goals since 2004. When those goals were adopted, the University had only two small solar rooftop systems, which generated just 0.1 megawatts of renewable power. Today, UC can generate more than 55 megawatts of renewable power at our campuses and academic health centers, producing enough electricity to power over 12,000 homes. UC's own Clean Power Program, formed in 2015, has provided 100 percent clean electricity to all eligible campuses and academic health centers since 2018. The University has also aggressively pursued energy efficiency improvements, resulting in cumulative utility bill savings of more than $400 million since the clean energy policy goals were adopted in 2004. These investments in clean electricity and energy efficiency are foundational to the University's pursuit of electrification and decarbonization.

Our first annual sustainability report highlighted staff and student participation in sustainability activities, describing the activities of UC's first sustainability professional, Matthew St.Clair. Twenty years later, sustainability offices lead comprehensive sustainability programs at all UC locations, 13 cross-disciplinary working groups develop and guide implementation of our robust Sustainable Practices Policy, and more than 700 student fellows have conducted innovative research, operational and engagement projects. A commitment to diversity, equity and inclusion continues to anchor the growth of our sustainability community and practices. This year, the Sustainability and Diversity, Equity, Inclusion and Justice Working Group led the development of a new section in the UC Sustainable Practices Policy which formalizes the University's commitment to applying principles of anti-racism to all sustainability policy areas, programs and initiatives.

This 2023 sustainability report also marks an important transition for UC as we announced new, stronger climate goals to accelerate our transition away from fossil fuels. The report's theme, UC climate action for a fossil-free future, provides us with the opportunity to showcase how the University is pursuing decarbonization locally and systemwide.

It's clear that UC needs to continue building on our accomplishments and looking ahead to address the mounting challenges of the climate crisis. Looking back at what we've accomplished over the past two decades gives me hope that the University's innovative, committed and inspiring community will lead the way.

DAVID PHILLIPS

Associate Vice President, Capital Programs, Energy & Sustainability

Policy Areas

The University of California's formal sustainability commitments began in 2003 with a Regental action that led to the adoption of the Presidential Policy on Green Building Design and Clean Energy Standards in 2004. Since then, UC has expanded the scope of the Sustainable Practices Policy to include climate, transportation, building operations, waste, procurement, food, water, health and well-being, UC Health and sustainability performance, as well as anti-racism, diversity, equity and inclusion.

The Sustainable Practices Policy applies to all 10 campuses, six academic health centers, UC Agriculture and Natural Resources, Lawrence Berkeley National Laboratory and the UC Office of the President.

The complete UC Policy on Sustainable Practices can be accessed online, and a summary is available below. UC's sustainability data summarizes progress toward the goals.

CLIMATE

Each UC campus, including its associated academic health center, LBNL and UCOP will set targets and prepare climate action plans to reduce greenhouse gas emissions from a 2019 baseline that will address:

- Total emissions
  - Reduce total emissions (scopes 1, 2 and 3) at least 90% by 2045 without relying on voluntary carbon offsets.
  - Negate any residual emissions remaining in 2045 through investments in carbon removal (no more than 10% of 2019 emissions levels).
- Scope 1 emissions
  - By 2025, set reduction targets for 2030, 2035 and 2040.
  - Incrementally reduce annual greenhouse gas emissions from the on-site combustion of fossil fuels.
  - Allocate funds equal to $25 per metric ton of carbon dioxide equivalent for all remaining scope 1 and 2 emissions beginning in 2025 through 2030 toward projects that achieve direct emissions reductions or support climate justice or community benefit programs.
- Scope 2 emissions
  - Purchase 100% clean electricity beginning in 2025 (LBNL will follow federal requirements).
- Scope 3 emissions
  - Set scope 3 emissions reduction targets for business travel, commuting and solid waste disposal in alignment with the state of California's goals.

DIVERSITY, EQUITY, INCLUSION AND JUSTICE

As part of its commitment to applying anti-racism principles to all sustainability policy areas, programs and initiatives, the University will:

- Complete a diversity, equity, inclusion and justice (DEIJ) assessment of the existing policy.
- Develop goals that incorporate principles of anti-racism, diversity, equity and inclusion into specific areas of the policy by 2025.
- Include a DEIJ impact analysis with any policy addition or revision.

ENERGY

- Energy efficiency: Reduce each location's energy use intensity by an average of at least 2% annually.
- Renewable electricity: Locations will install on-site renewable electricity supplies and storage systems as appropriate to support the location's climate action goals.
- Clean electricity: Obtain 100% clean electricity at each campus and health location by 2025. The UC Clean Power Program has been meeting this standard since 2018.
- On-campus combustion: Increase biogas combustion to at least 20% of on-site natural gas combustion at each campus and academic health center by 2025. These volumes will double by 2030 and then decrease over time. Central procurement of biomethane will conclude before 2040.

FOOD SERVICE

- Procure 25% sustainable food as defined by the Association for the Advancement of Sustainability in Higher Education's Sustainability Tracking, Assessment and Rating System (AASHE STARS) at each campus and 30% sustainable food as defined by Practice Greenhealth at each academic health center by 2030.
- All campuses and academic health centers will procure 25% plant-based food by 2030 and strive to procure 30%.

GENERAL SUSTAINABILITY PERFORMANCE ASSESSMENT

All undergraduate campuses must achieve an Association for the Advancement of Sustainability in Higher Education's Sustainability Tracking, Assessment and Rating System's (AASHE STARS) Gold rating and strive for Platinum.

GREEN BUILDING

- Design and construct all new buildings and major renovations to a minimum LEED BD+C (Building Design and Construction) Gold rating.
- Design and construct renovation projects with a cost over $9 million (except acute care facilities) to a minimum LEED ID+C (Interior Design and Construction) certified rating.
- New parking structures will be designed and constructed to achieve, at a minimum, a Parksmart Silver certification.
- Prohibit on-site fossil fuel combustion (e.g., natural gas) for space or water heating in all new buildings and major renovation projects (except those projects connected to an existing campus central thermal infrastructure).
- Energy-efficient design:
  - Acute care/hospital facilities and medical office buildings: Outperform the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) standard 90.1-2010 by at least 30% or meet UC's whole-building energy performance targets.
  - All other buildings: Outperform the energy requirements of the California Building Code by at least 20% on all new construction and major renovation projects or meet UC's whole-building energy targets.
- Achieve at least five points within the available credits in LEED BD+C's Water Efficiency and Sustainable Sites: Rainwater Management categories.

HEALTH AND WELL-BEING

The UC Healthy Campus Network will review the strengths and gaps in the UC Sustainable Practices Policy and make recommendations for integration based on the following:

- Environmental and human health co-benefits.
- Social, physical and emotional well-being.
- Health equity.

By 2025, suppliers that operate or maintain vending machines on UC locations will:

- Ensure at least 50% of the beverages and 35% of the food in a vending machine meet the UC Healthy Vending Guidelines for Healthy Spend.

By 2027, suppliers that operate or maintain vending machines on UC locations will:

- Ensure at least 60% of the beverages and 40% of the food in a vending machine meet the UC Healthy Vending Guidelines for Healthy Spend.

PROCUREMENT

- Achieve full compliance with required level green spend criteria per product category; target to be reached within three fiscal years after a category is added to the Sustainable Procurement Guidelines.
- Reach 25% preferred level green spend per product category; target to be reached within three fiscal years after a category is added to the Sustainable Procurement Guidelines.
- Reach 25% economically and socially responsible spend; target to be reached within five fiscal years of adoption of this section in the Sustainable Procurement Guidelines.
- Allocate a minimum of 15% of the points utilized in competitive solicitation evaluations to sustainability criteria.

SUSTAINABLE BUILDING OPERATIONS AND LABS

Implement an ongoing Green Labs assessment program and assess three research groups in total at each campus. Report the number of researchers directly and indirectly engaged by the program annually.

TRANSPORTATION

Fleet:

- All sedan and minivan acquisitions will be zero-emission or plug-in hybrid vehicles, except for public safety vehicles with special performance requirements.
- At least 50% of all vehicles acquired by each UC location after July 2023 will be zero-emission or plug-in hybrid.

Commute:

- Each location shall strive to:
  - Reduce its percentage of employees and students commuting by single-occupancy vehicles (SOVs) by 10% relative to its 2015 SOV commute rates by 2025.
  - Have no more than 40% of its employees and no more than 30% of all employees and students commuting to the location by SOV by 2050.
  - Have at least 4.5% of commuter vehicles be zero-emission by 2025.
  - Have at least 30% of commuter vehicles be zero-emission by 2050.
  - Take steps needed to normalize and promote telecommuting and flexible work options.

UC HEALTH

Each academic health center will:

- Obtain 100% clean electricity by 2025.
- Design and construct new acute care/hospital facilities and medical office buildings to outperform the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) 90.1 – 2010 by at least 30% or meet whole-building energy performance targets per the policy.
- Maintain membership in Practice Greenhealth, a nonprofit dedicated to health care sustainability, and achieve Practice Greenhealth's Greenhealth Partner for Change award.
- Achieve a target of 25 pounds of total waste as defined by Practice Greenhealth per adjusted patient day by 2025 and strive for 20 pounds of total waste per adjusted patient day by 2030.
- Reduce growth-adjusted potable water consumption 20% by 2020 and 36% by 2025, when compared to a three-year-average baseline of fiscal year 2005–06, fiscal year 2006–07 and fiscal year 2007–08.

- Procure 30% sustainable food as defined by Practice Greenhealth by 2030.
- Procure 25% plant-based food by 2030 and strive to procure 30%.
- Meet UC's required level green spend target and 25% of UC's preferred level green spend target for procurement of office supplies, IT hardware and appliances.
- Ensure at least 50% of the beverages and 35% of the food in a vending machine meet the UC Healthy Vending Guidelines for Healthy Spend by 2025.
- Evaluate at least three products/devices and associated contracts for reprocessing collection and buyback, and implement a medical device reprocessing program with an FDA-approved third-party reprocessor by 2025. Strive for new contracts to specify that at least 20% of disposables purchased be reprocessed.

WATER

- Reduce growth-adjusted potable water at each location consumption by 36% by 2025, when compared to a three-year-average baseline of fiscal year 2005–06, fiscal year 2006–07 and fiscal year 2007–08.
- By 2025, campuses and academic health centers will initiate new water reuse and conservation feasibility evaluations to develop water conservation, water recycling and stormwater reuse projects.
- By 2025, propose a goal to increase the number of bottle filling stations as a percentage of drinking fountains and identify deficiencies in drinking water access, including consideration of increased drinking water demand during heat wave events.

ZERO WASTE

- Reduce per capita municipal solid waste generation to 25% below fiscal year 2015–16 levels by 2025 and 50% below fiscal year 2015–16 levels by 2030 at each campus.
- Divert 90% of municipal solid waste from the landfill at each campus.
- Reduce and eliminate single-use plastic items such as bags, foodware accessory items and beverage bottles by 2024.
- Prohibit the sale, procurement and distribution of packaging foam.

Timeline of Sustainability

For many decades, the University of California has been committed to sustainability in its operations, education, research and public service.

1970

- UC Santa Barbara creates the first environmental studies program in the country

1971

- UC Santa Cruz establishes the first student farm in the country

1998

- UC issues policy on Trademark Licensing Code of Conduct providing guidance on how workers should be treated to companies granted permission to use the University's name

1999

- UC Santa Barbara students approve student fee to create Coastal Fund

2002

- UC's first LEED certification, UC Santa Barbara's Bren School, is also the first LEED Platinum laboratory building in the world

2003

- UC Berkeley establishes the Chancellor's Advisory Committee on Sustainability

2004

- President Dynes issues policy on Green Building Design and Clean Energy Standards
- UC launches a Statewide Energy Partnership with four California utilities to accelerate campus energy efficiency

2006

- The Green Initiative Fund referendum passes at UC Santa Barbara
- UC amends Sustainable Practices Policy to include transportation, building renovation, operations, waste management and procurement

2007

- All 10 UC chancellors sign the American College and University Presidents' Climate Commitment

2009

- Sustainable food service section added to Sustainable Practices Policy

2012

- Goal of installing 10 megawatts of on-campus renewable energy met two years early
- UC achieves 100th LEED certification

2013

- President Napolitano announces the Carbon Neutrality Initiative, committing UC to carbon neutrality by 2025

2014

- President Napolitano announces the Global Food Initiative
- UC becomes the first university in the world to sign the United Nations Principles for Responsible Investing

2015

- UC hosts Bending the Curve Carbon Neutrality Research Summit
- UC commits to invest $1 billion in clean and renewable energy over five years
- UC publishes Framework for Sustainable Investing
- UC sells investments in companies with major revenue from tar sands or thermal coal

2016

- UC signs on to Task Force on Climate-related Financial Disclosures
- UC begins documenting annual carbon footprint of public equities holdings

2017

- Largest solar purchase by any U.S. university (80 megawatts) comes online

2018

- UC Health sustainability section added to Sustainable Practices Policy
- UC achieves 300th LEED certification
- UC Regents vote to make Environmental, Social and Corporate Governance (ESG) part of the UC Investment Policy
- UC's internal power company provides 100% carbon-free electricity

2019

- UC General Endowment Pool sells investments in companies that own fossil fuel reserves
- UC recognized as the top college/university in the U.S. Environmental Protection Agency's Green Power Partnership rankings

2020

- UC attains $1 billion in cumulative clean energy investments
- UC investment portfolios are free of fossil fuel reserve–owning assets after the sale of more than $1 billion in assets from its pension, endowment and working capital pools
- UC Merced becomes the first public research university in the country to achieve carbon neutrality
- Report and Recommendations on the Use of Herbicides and Other Pesticides completed
- 20% sustainable food procurement goal met systemwide
- UC adopts policy to phase out single-use plastics

2021

- UC Center for Climate Justice launches
- UC's Energy Efficiency Partnership marks $100 million in incentives received from utility companies since the program launched in 2004
- UC receives Environmental Protection Agency Green Power Leadership Award
- UC adopts Small Business Forward Policy

2022

- UC Center for Climate, Health and Equity launches
- UC and CSU jointly launch the K–12 Environmental and Climate Change Literacy Projects initiative
- UC Health becomes a member of the National Academy of Medicine's Action Collaborative on Decarbonizing the U.S. Health Sector
- UC announces $80 million grant program to spur climate action research in partnership with the state of California
- UC Health joins the nationwide Health Care Sector Climate Pledge led by the White House and U.S. Department of Health and Human Services
- UC's Retirement Savings Plans sell roughly $1 billion in fossil fuel reserve–owning assets and will exclude such investments going forward

- UC Academic Senate issues memorial on reducing fossil fuel combustion and President Drake creates Pathways to a Fossil Free UC Task Force

2023

- UC adopts new, stronger climate action goals focused on direct decarbonization
- Anti-Racism, Diversity, Equity and Inclusion section added to Sustainable Practices Policy
- UC enters into first wind energy contract, the University's largest renewable energy commitment
- UC announces $15 million in grants supporting innovation and entrepreneurship toward reaching California's climate action goals
- UC campuses and academic health centers launch decarbonization studies

2024

- UC campuses and academic health centers to complete decarbonization studies
- UC locations to develop interim greenhouse gas reduction targets for 2030, 2035 and 2040

2025

- Locations to update their climate action plans
- Campuses to reduce per capita potable water use by 36%
- All campus and academic health center purchased electricity to be 100% carbon-free

2030

- 25% sustainable food procurement goal for campuses and 30% sustainable food procurement goal for academic health centers to be met

2045

- UC campuses, academic health centers and LBNL to achieve 90% reduction in total greenhouse gas emissions; any residual emissions will be negated by carbon removal

Investments

Since 2015, UC Investments has integrated environmental, social and governance factors into its investment process to protect and generate value on behalf of UC's endowment, employees, retirees and working capital.

Reducing and Addressing Climate Risk

Over the past year, UC Investments continued to focus on managing material risks climate change poses to its investments.

To do so, the University uses two main strategies.

The first climate risk management strategy is to not invest in companies that own any amount of fossil fuel reserves — some 300 companies around the world. All the products that UC Investments manages — the endowment, pension, retirement savings program and working capital — are essentially fossil-free.

UC Investments' other primary climate risk management strategy is to advocate for improved climate change governance at the companies in which it invests. As an active owner, UC Investments engages with the leaders of hundreds of such companies annually on their climate change risks and strategies. To increase the University's effectiveness and expand its reach, UC Investments engages in concert with other institutional investors through groups such as Climate Action 100+ and the FAIRR Initiative. Over the past year, UC advocated with dozens of companies in which it invests to develop and report business-relevant metrics on climate change and to take actions to decarbonize their businesses.

Measuring the Carbon Footprint of UC's Investment Portfolio

UC Investments tracks and makes public the carbon footprint of its public equities, corporate debt, private equity and private credit, which amount to roughly 73% (by dollar value) of the pension, retirement savings plan, endowment and working capital products, as of June 30, 2023.

UC Investments is a signatory to the Task Force on Climate-related Financial Disclosures (TCFD), because it knows that consistent rigorous disclosure of climate risks and opportunities is important to inform investment decisions. More information can be found in UC's third annual TCFD report.

Investing in Transformational Solutions

Innovative companies need access to capital in the early stages of their development. UC is proud to be an anchor funder of early-stage climate tech companies, putting approximately $218 million of UC's capital to work through Congruent Ventures and the MIT Engine Fund.

From electric vehicle fleet charging software to solar finance tools to superconducting electric transmission lines, portfolio companies in these venture capital funds are enabling and accelerating the transition to a clean, resilient energy system.

RENEWABLE ENERGY INVESTMENTS AROUND THE WORLD

Over 3.15 gigawatts of wind, solar and battery storage have been installed in the U.S., Canada, Ireland, India and Japan due to UC's cumulative investment.

Academics

The University of California is at the forefront of understanding the climate crisis and implementing practical solutions to global climate disruption and other sustainability challenges through research, teaching and public service.

As part of its commitment to addressing the climate crisis, UC integrates efforts to accelerate its transition away from fossil fuels with its academic mission: building upon cutting-edge climate research, expanding UC's development of next-generation climate leaders and spreading knowledge to benefit California and the nation.

Research

The University of California awarded $1 million for climate-related innovation and entrepreneurship to each UC campus, as well as the UC Health system, the UC statewide division of Agriculture and Natural Resources, the statewide UC Natural Reserve System, and the UC-affiliated Lawrence Livermore and Lawrence Berkeley national laboratories. These funds were made possible by a $185 million investment by the state of California in partnership with the University to encourage applied research and innovation to meet California's climate mitigation, adaptation and resilience needs.

In 2023, the University of California Research Initiatives, through Multicampus Research Programs and Initiatives awards, made $6.5 million in new investments in multicampus and systemwide research projects tackling climate, energy and equity. Highlights from these investments include:

- The California Initiative for Solid-to-Plasma Dynamics for Fusion Energy, a collaboration between UC campuses and the Lawrence Berkeley and Lawrence Livermore national labs that explores possibilities for controlled fusion and its implications for sustainable energy
- Toxic Air Pollutants in California Environmental Justice Communities, bringing together researchers from UC campuses, as well as community partners, to develop novel approaches to air quality measurement and advocacy for disadvantaged communities

UC Research and Innovation spearheaded the establishment of the Alliance for Renewable Clean Hydrogen Energy Systems, California's public-private hydrogen hub consortium to accelerate the development and deployment of clean, renewable hydrogen projects and infrastructure. Clean hydrogen can supplement renewable energy sources to reduce greenhouse gas emissions and advance a zero-carbon economy. The U.S. Department of Energy will award $8 billion to as many as 10 regional hubs to build self-sustaining hydrogen economies of producers, infrastructure and users. In partnership with the Governor's Office of Business and Economic Development, UC Research and Innovation convened key public and private stakeholders to build the framework for a California clean hydrogen hub.

CalTestBed is the nation's largest ecosystem of test bed facilities for clean energy entrepreneurs. Since CalTestBed's inception in 2019, UC Research and Innovation has partnered closely with program administrator New Energy Nexus and with UC and LBNL testing facilities to advance the commercialization of California's clean energy technology. Funded by the California Energy Commission, CalTestBed will provide $16.7 million in vouchers to clean energy innovators to test their proposed technology at one of more than 70 unique facilities and labs across the UC system.

UC Natural Reserve System

The UC Natural Reserve System (NRS) received $1 million from the state of California to seed climate-focused entrepreneurial efforts as part of an $80 million award to UCOP to support climate innovation research. The NRS Climate Awards will support five projects providing applied solutions to California's pressing climate needs:

- Automation of the analysis of drone data to assess the risk of wildfire on landscapes
- Use of image recognition technology to speed identification of small vertebrates captured on remote trail cameras, aiding efforts to monitor state biodiversity
- Utilization of data collected by NRS coastal reserves to help communities forecast climate-related hazards such as flooding and marine heat waves
- Funding for students from backgrounds underrepresented in the field sciences to participate in field research at NRS reserves to diversify the environmental workforce
- Development of a tool for land managers to customize fire fuel treatments and understand how different management choices will affect wildfire risk, ecosystem impacts and wildfire resilience

Education

Systemwide courses relating to climate change and sustainability continued to grow and scale in fiscal year 2022–23. The UC Global Climate Leadership Council supported the ongoing expansion of the Bending the Curve course platform with topics on resilience, adaptation and climate justice, with more than 4,300 enrollees at UC and institutions around the world through the spring 2023 term. The open-access Bending the Curve Digital Textbook, a companion to the course, was downloaded over 22,000 times through fiscal year 2022–23. Additionally, the Center for Climate Justice began updating and expanding its systemwide climate justice course in response to emerging developments in the field as well as growing interest in climate justice education and career opportunities.

Students

CLIMATE ACTION FELLOWS

43
annual fellows in 2022–23

362
annual fellows since 2014

GLOBAL FOOD INITIATIVE FELLOWS

43
annual fellows in 2022–23

364
annual fellows since 2014

The University of California's environmental sustainability goals are rooted in student activism, beginning 20 years ago when students encouraged the Regents to approve UC's first green building and clean energy policy, which they did in 2003.

The UC Office of the President oversees the Bonnie Reiss Climate Action Student Fellowship and Global Food Initiative (GFI) Student Fellowship programs, which fund student-generated research and engagement projects across all UC campuses, academic health centers, UC Agriculture and Natural Resources, Lawrence Berkeley National Laboratory and the UC Office of the President.

The Bonnie Reiss Climate Action fellows engage their peers in local and systemwide climate action and conduct innovative research to advance climate solutions. In fiscal year 2022–23, fellows focused on climate resilience, decarbonization, and climate and environmental justice. The fellows helped pursue a fossil-free UC through projects such as analyzing energy storage needs, conducting cost-benefit analyses on different clean energy technologies and researching strategies to support the decarbonization plans being developed at their campuses.

Academic Senate

The University of California's Academic Senate carries out shared governance responsibilities established by the Regents and relating to academic matters. Academic Senate divisions continue to advance climate action and education, as the highlights below illustrate.

SPONSORSHIP OF STATE-FUNDED CAMPUS DECARBONIZATION STUDIES

A 2022 memorial petitioning the Regents for investments in UC's infrastructure to reduce on-campus fossil fuel combustion prompted the formation of the Pathways to a Fossil Free UC Task Force by President Drake. The task force, which includes the Academic Senate chair and vice chair, is responsible for developing recommendations on the necessary steps and a

timeline to eliminate the use of fossil fuels in each location's energy systems and to strengthen UC's climate action policy goals, informed by the findings of state-funded decarbonization studies at each campus and academic health center. The leadership of the ad hoc systemwide Senate Climate Crisis Task Force helped ensure involvement of local senate representatives in the decarbonization studies and co-executive sponsorship of the studies by divisional senate leaders.

REVIEW OF POLICY ON SUSTAINABLE PRACTICES

In its review of proposed revisions to the UC Policy on Sustainable Practices, the senate applauded the University's efforts to advance climate neutrality goals but also urged UC to move more quickly and proactively to reduce greenhouse gas emissions, to shift its focus and effort away from climate neutrality goals to decarbonization goals, and to implement the fossil fuel reduction targets in the Academic Senate Memorial on Reducing Fossil Fuel Combustion. The senate's recommendations were reflected in the updated policy published in July 2023.

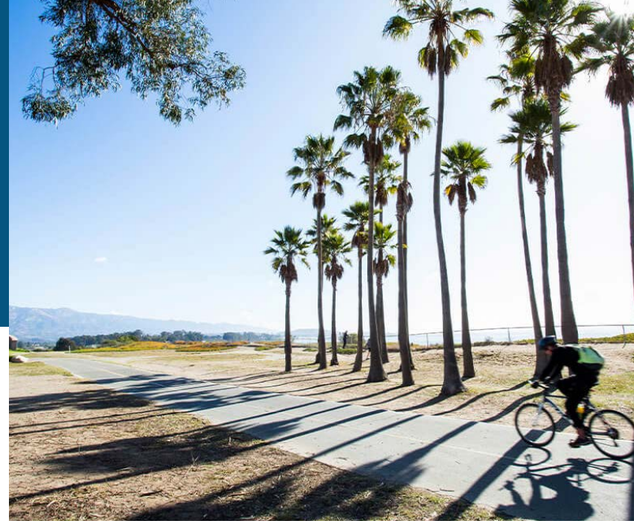
CAMPUS-LEVEL SENATE CLIMATE CRISIS COMMITTEE ACCOMPLISHMENTS

Academic Senate divisions advocated for climate leadership and provided input on plans to reduce carbon emissions in campus facilities, transportation, clinical work and academic travel.

Some additional notable campus-level senate climate crisis committee activities include the following:

- UCLA's Special Committee on the Campus Response to the Climate Crisis affirmed in a letter to the Campus Expansion Joint Task Force the importance of climate neutrality and climate justice in the academic theme and operations of UCLA's planned South Bay campus.
- UC Merced's Faculty Advisory Committee on Sustainability worked with its Office of Sustainability on a campus biodiversity initiative and submitted a proposal to partner with the city of Merced on the topic of xeriscaping. The committee also met with department chairs to discuss improving environmental communication and interdisciplinary collaboration and drafted updated sustainability program learning outcomes for campus-wide adoption.
- UC San Diego's Climate Change Committee worked with the administration to halt a hydrogen blending experiment proposed for graduate student housing, collaborated with campus engineers on a series of courses focused on campus decarbonization, and passed a climate change education requirement and a financial disclosure policy through the senate.
- UCSF designated 2022–23 and 2023–24 as theme years focused on reducing carbon emissions, and the Senate Committee on Sustainability is leading working groups to engage the campus on topics such as electrification, medical waste, transportation and the culture of academic travel.
- The UC Riverside, UC Merced and UC Santa Cruz senates are advising their administrations about the use of additional state funding earmarked for climate research infrastructure on those three campuses.

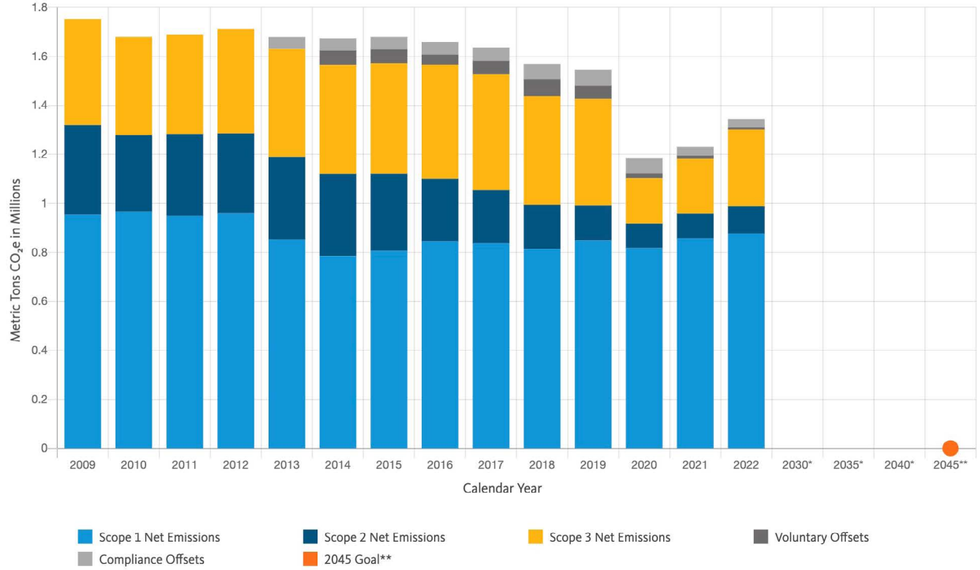
Policy Progress



The University is committed to sustainability as a part of its mission, expressed throughout its operational practices. UC has been tracking progress in sustainable operations, as required by its Sustainable Practices Policy, since 2004.

Climate

EMISSIONS



** Interim goals for 2030, 2035 and 2040 to be developed through fossil-free planning that is underway at each location*
*** 90% direct reduction of total emissions from 2019 levels with residual emissions negated by carbon removal*
Calculations exclude ANR, LBNL and UCOP

In July 2023, UC adopted stronger climate policy goals focused on direct action to reduce greenhouse gas (GHG) emissions. Decarbonization studies launched in 2023 are evaluating pathways for each campus and academic health center to meet those goals. During the past year, the University also advanced climate resilience planning, developed climate and environmental justice tools, and adopted an equity-weighted social cost of carbon for analyzing energy projects.

While GHG emissions rose in 2022, reflecting the impact of returning to work and school as COVID-19 pandemic restrictions eased, the University's total net emissions remained 9% below pre-pandemic levels and 26% lower than when tracking began in 2009 (despite increases in enrollment and building square footage). In aggregate, net GHG emissions in 2022 increased 10% compared with 2021. This included an approximate 2% increase in scope 1 emissions, a 12% increase in scope 2 emissions and a 40% increase in scope 3 (commute and air travel) emissions. These numbers are based on reported emissions that will be verified by a third party by early 2024.

The updated climate action policy section aligns with science-based targets that require decarbonization no later than mid-century and supports the state's latest climate goals. The new policy goals require each campus and its associated health system to reduce total (scope 1, scope 2 and identified scope 3) emissions 90 percent from 2019 levels by 2045 and neutralize any residual emissions through investments in carbon removal projects.

The new policy builds on the successes and lessons learned from the prior carbon neutrality policy, in place since 2015. Since then, UC made significant progress in reducing GHG emissions through programs such as UC's Clean Power Program, which provides 100% clean electricity to seven campuses, and energy efficiency projects that have saved more than $400 million in energy costs.

The biggest remaining source of emissions is natural gas combustion for electricity, heating and cooling at UC locations. The State of California provided $12 million for each campus and academic health center to complete a decarbonization study by July 2024. The studies will produce an electrification strategy to achieve a 90% or greater reduction in natural gas consumption in campus energy systems.

Diversity, Equity, Inclusion and Justice

The Sustainable Practices Policy update, published in July 2023, for the first time integrates and prioritizes anti-racism, diversity, equity and inclusion principles into all of the University's sustainable practices. To position the new goals and commitments for success, President Drake's Global Climate Leadership Council funded an 18-month capacity building project that concluded in July 2023.

More than 60 sustainability officers, staff and working group chairs participated in a comprehensive needs assessment and a series of workshops covering everything from foundational equity, diversity and inclusion skills to the history and current context of environmental justice issues nationally and in California. The project's outcomes, including strategies and tools to improve equity analysis, recruitment, retention, communication and relationship-building, reflect a comprehensive approach to creating sustainable and just solutions on and off campus.

The systemwide Sustainability and Diversity, Equity, Inclusion and Justice Working Group that developed the new sustainability policy language also provided feedback and guidance for the Pathways to a Fossil Free UC Task Force sprint on equity and climate justice. The task force affirmed the critical connection between environmental sustainability and social justice by identifying equity dimensions for the state-funded decarbonization and electrification studies that each campus is currently developing or implementing.

These are just the first steps in the University's commitment to addressing sustainability challenges through an inclusive and justice-oriented framework.

Energy

To continue to reduce its carbon footprint, the University is efficiently using its resources and changing the sources of energy that campuses and academic health centers consume.

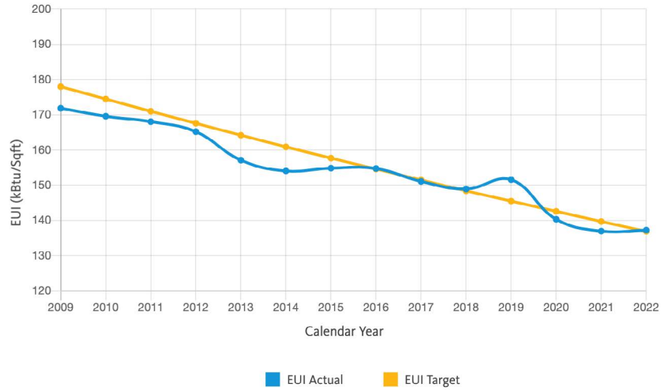
Energy Efficiency

Energy efficiency and green building practices have reduced UC's energy use intensity across its portfolio of buildings.

$89M
Cost savings in 2022

$416M
Cumulative cost savings since 2010

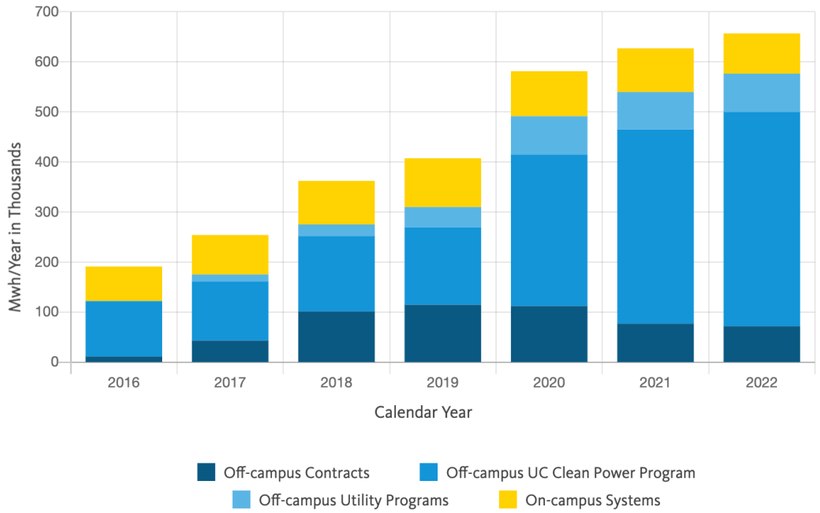
ENERGY USE INTENSITY (EUI)



As a metric for relative efficiency, energy use intensity (EUI) is calculated by totaling all of the energy used by a location and dividing by the associated square footage. In 2022, UC locations continued their energy efficiency efforts while working to retain the energy use reductions realized from the coronavirus pandemic, now with increased occupancy and campus activity, resulting in flat year-over-year performance.

Renewable Energy and the UC Clean Power Program

RENEWABLE ENERGY USE



The University of California ranks first among colleges and universities when it comes to green electricity use, according to the U.S. Environmental Protection Agency. In addition to over 55 megawatts of on-campus projects, the University has two operating utility-scale solar projects in California under contract — Five Points (60 megawatts) and Giffen Solar Park (20 megawatts) — and an additional 30-megawatt solar facility with a 15-megawatt battery expected to come online in 2025.

Earlier this year, the University of California signed its first-ever wind energy contract, the largest renewable energy commitment by the University to date in support of campus decarbonization. The contract with SunZia Wind is from a 3,500-megawatt wind project in New Mexico that will deliver electricity to California with help from a to-be-constructed 550-mile transmission line. The expected electricity generation from UC's 85-megawatt portion of SunZia is equivalent to the total annual electricity consumption of UC Santa Cruz, UC Santa Barbara, UC Riverside and UC Merced combined.

Renewable energy from the project will be used by every UC campus and academic medical center. UC Clean Power — an electric service provider operating through California's Direct Access Program — will use a significant portion to continue serving campuses with clean electricity. The project will be a key resource for the Clean Power Program to continue meeting the state's Renewables Portfolio Standard and statewide energy sector greenhouse gas reduction targets.

Biogas

UC is the largest voluntary buyer of biomethane (methane from landfills and food waste) in the country. In 2023, the University began receiving biomethane from one landfill that was previously flaring the biogas; the biomethane from this project is equivalent to the amount of fossil natural gas UC Riverside consumes each year. Additionally, the University finalized an expansion of the biogas collection system at the Shreveport landfill, which resulted in an improvement in methane capture and biogas production. These projects bring UC to its goal of displacing 20% of the fossil gas currently used on campus with zero-carbon biomethane by 2025. This supply will sunset by 2040 as locations transition to other decarbonization solutions.

Food Service

19%
of food and beverage purchases met sustainability criteria ($33.2M)

29%
of food and beverage purchases were plant-based ($50.6M)

In fiscal year 2022–23, dining operations continued to ramp up with students returning to full-time in-person classes. Increased demand for food on campuses, as well as food supply chain disruptions and associated inflation, led to a 25% increase in food spend systemwide compared to the prior year. Spend on food purchases that met one or more sustainability criteria increased by 22% during the same period and represented 19% of the University's food purchases. This amounts to over $33 million going to sustainable food suppliers, $6.1 million more than the previous year. Eight locations — four academic health centers and four campuses — were able to increase their percentage spend on sustainable food and beverages.

Of the University's total food and beverage spend, 29%, or over $50 million, was on plant-based food items. Nine locations are already on track to meet the newly published policy goal of at least 25% spend on plant-based food by 2030.

In response to President Drake's Leading on Climate Change priority, the Global Food Initiative Fellowship shifted focus to regenerative agriculture and sustainable food systems. In this pilot year, Sustainable Food Services Fellows will support campuses and academic health centers in their efforts toward President Drake's goal of "defining the actions and resources needed to procure at least 25 percent of our own food supplies from sustainable sources by 2025, five years ahead of the University's existing goal."

In addition, University stakeholders established new goals for healthy beverages and food in vending machines at UC locations in the Health and Well-Being section of the Sustainable Practices Policy. The University continued collaborating on efforts to phase out single-use plastic and increase food recovery and security.

General Sustainability Performance Assessment

BERKELEY
Received in 2021

DAVIS
Received in 2023

IRVINE
Received in 2021

UCLA
Received in 2023

MERCED
Received in 2022

RIVERSIDE
Received in 2021

SAN DIEGO
Received in 2021

SANTA BARBARA
Received in 2021

SANTA CRUZ
Received in 2022

All nine undergraduate UC campuses participate in the Association for the Advancement of Sustainability in Higher Education's Sustainability Tracking, Assessment and Rating System (AASHE STARS). The University's General Sustainability Performance Assessment Working Group developed a policy update that was published in 2023 to raise the STARS rating requirement from Silver to Gold with an additional goal to strive for Platinum. In his Presidential Priorities Plan, President Drake's Leading on Climate Change priority includes the curriculum subcategory in STARS as an indicator for his goal to "lead coordination of existing curricula and expand UC's development of next-generation climate leaders."

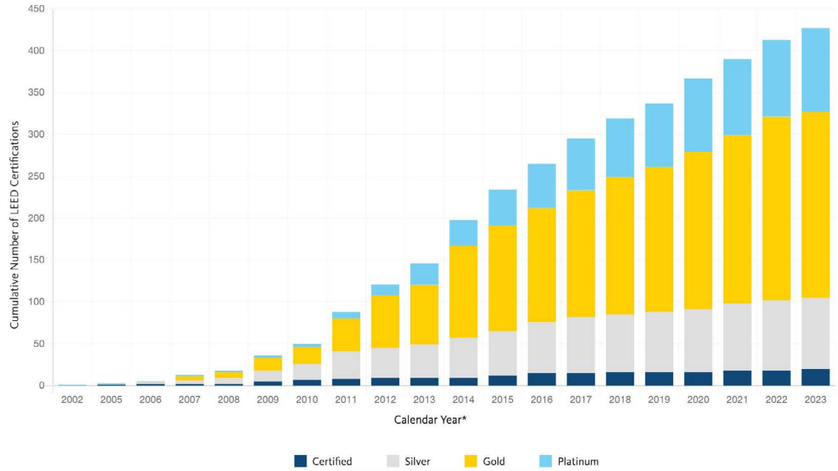
Six of the nine undergraduate campuses currently hold an AASHE STARS Gold rating. The other three undergraduate campuses, UC Merced, UC Berkeley and UC Irvine, have a Platinum rating and are scoring 90% or higher in the STARS curriculum subcategory.

STARS is the leading North American sustainable campus rating system and was developed by colleges and universities, including UC. The AASHE STARS Steering Committee guides the STARS development and implementation process and currently includes representation from the University's sustainability staff. STARS is a transparent, self-reporting framework for colleges and universities to measure their sustainability performance. STARS provides the foundation for other campus sustainability rankings and is a primary standard by which peer institutions evaluate their overall achievements and progress in sustainability.

UC campuses, academic health centers and Lawrence Berkeley National Laboratory received many additional awards in fiscal year 2022–23.

Green Building

LEED CERTIFICATIONS



**Data reported only accounts for buildings certified through the first half of 2023*

The University has 427 LEED certified green building projects (over 37 million square feet). Since the last report, UC added 19 new LEED certifications, including 10 LEED Platinum, five Gold, two Silver and two certified buildings.

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 8 million square feet) in planning, design or under construction. These projects encompass all major building types.

In 2023, two significant updates were made to the green building section of the Sustainable Practices Policy. These included increasing the minimum LEED certification level from Silver to Gold and adopting a new requirement for new parking structures to achieve a Parksmart Silver certification. UC currently has two structures that have earned Parksmart Silver certification, one that achieved Gold certification and another five under construction that are pursuing certification. Additionally, the University increased the minimum number of LEED water efficiency credits that new buildings are required to earn from two to five points.

Health and Well-Being

The Sustainability and Well-Being Working Group is responsible for implementing the Health and Well-Being section of the UC Policy on Sustainable Practices. The working group collaborated with the Healthy Campus Network's Faculty and Student Consortium to complete the Health in All Policies (HiAP) Executive Report on the UC Policy on Sustainable Practices.

The HiAP process was driven by 10 undergraduate and graduate student fellows and their mentors, who assessed the Sustainable Practices Policy through a health-focused lens by reviewing existing language, published research and basic practices related to sustainability topic areas as well as by interviewing key stakeholders and experts.

In summer 2023, the Healthy Vending Guidelines were officially adopted into the UC Policy on Sustainable Practices. The working group also developed a draft UC Healthy Vending Best Practice Guide to assist campuses in implementing the new guidelines.

Procurement

$27.1M
green spend on electronics (52%)

$6.1M
green spend on cleaning supplies (58%)

$19.5M
green spend on indoor office furniture (97%)

$4.1M
green spend on office supplies (62%)

Green spend is defined as meeting preferred or minimum criteria in UC's Sustainable Procurement Guidelines.
Suppliers reporting: Electronics (10), Furniture (5), Cleaning supplies (7), Office supplies (5).
UC Systemwide Spend Analytics category data provided by CalUSource.

Despite global supply chain disruptions that continued into 2023 as a result of the COVID-19 pandemic, procurement staff mobilized to enable campuses and health centers to maintain research and teaching activities. UC is continuing to partner with its strategic suppliers on improving their sustainability practices and that of their supply chains. This year UC used the EcoVadis tool to obtain sustainability ratings for 304 suppliers, representing over $4 billion in spend. The sustainability ratings cover environmental practices, labor and human rights, ethics and sustainable procurement and can help begin a dialogue on aligning supplier practices with UC values.

The University analyzed data for $89 million in total spend from 27 strategic suppliers for the 2022–23 fiscal year. Within that spend, the University found that 52% of electronics, 97% of indoor office furniture, 58% of cleaning supplies and 62% of office supplies met UC's requirements on minimum or preferred green spend, as outlined in the Sustainable Procurement Guidelines. This represents nearly $57 million in spend on products meeting green certification standards. The University looks forward to improving its data collection processes in future years. Analysis of UC's support of small businesses, presented to the state each year, can be found online.

UC Code of Conduct for Trademark Licensees

While continued post-pandemic recovery occupied UC trademark licensing programs during 2022–23, UC campuses upheld as urgently as ever their commitments to workers and communities manufacturing UC-licensed products around the globe.

Notable social and environmental sustainability issues considered by the Code of Conduct for Trademark Licensees Steering Committee during the year included:

- Continued concern regarding imports presumed to be made by the forced labor of Muslim minority residents of the Xinjiang province of western China, with special focus on the Uyghur Forced Labor Prevention Act and its enforcement by U.S. Customs and Border Protection.
- Support for UC licensees sourcing their products from production facilities in Pakistan to sign the new Pakistan Accord for health and safety in the textiles and garment industry, a legally binding agreement for factory safety among apparel businesses, international unions, worker advocacy organizations and the International Labor Organization. Signatories include a growing list of licensee and international apparel brands.
- Actions by UC campuses to assist the nonprofit Worker Rights Consortium to ensure that the Trax Apparel factory in Cambodia offered reinstatement and back wages for union leader workers.
- Renewed efforts by UCLA and UC Berkeley to drive licensee sustainability through the EcoVadis Sustainability Assessment.

The global impact of the University of California's licensed product manufacturing extends to 52 countries where more than 3,800 disclosed suppliers manufacture for 361 companies licensed to use university trademarks on products that are sold to the public.

Sustainable Building Operations and Laboratories

375
total assessed green laboratories

All campuses have completed at least three assessments through their green lab assessment programs. By the end of fiscal year 2022–23, the cumulative number of laboratories certified as green by campuses totalled 375. This number represents an increase of 14% from the previous year. Systemwide, green lab certifications increased due to the lifting of many COVID restrictions, which had hindered much of the work in previous years. This year also represented the launch of the energy and water-efficient equipment incentive program funded through a partnership with Thermo Fisher Scientific, enabling 17 pieces of energy-intensive equipment to be replaced across the system. Collectively, campuses reported engagement with 1,711 individual researchers throughout the year.

Transportation

72%
of students and employees are utilizing alternative commuting methods

48%
of all vehicles acquired in 2023 were electric (zero-emission), plug-in hybrid or clean transportation fuel

1,800
EV charging ports

In 2022–23, the overall (student and employee) single-occupancy vehicle (SOV) rate for the University of California was approximately 28%, meaning more than 70% telecommuted or commuted to campus by walking, biking, taking transit, or in a vanpool or carpool. This figure reflects the higher telecommuting rates that have persisted even after COVID-19 restrictions eased.

While telecommuting practices have remained steady over the last two years (much higher than pre-pandemic levels), many locations also saw employees and students return to other alternative commute modes such as carpooling, transit, walking and biking. In 2022–23, almost two-thirds of locations reported a decline in SOV commute rates from the past year. Similarly, over three-quarters of locations reported a decrease in SOV commuting from their 2015 baseline, and almost half the locations reported reductions that exceed the 2025 goal of reducing SOV commutes by 10% from 2015 rates.

Systemwide, 48% of all new fleet vehicles (light, medium and heavy-duty) acquired in fiscal year 2022–23 were battery-electric, plug-in hybrid or another qualifying clean transportation fuel vehicle. Starting in July 2023, alternatively powered vehicles must account for 50% of all vehicle acquisitions at each campus (regardless of vehicle size). Compliance with the new UC policy requirement for all sedan and minivan acquisitions to be zero-emission or plug-in hybrid vehicles will require significant change, but UC is making progress. Systemwide, 34% of all sedans and minivans acquired this year were alternatively powered. The state has mandated that 35% of new cars and light trucks sold in 2026 be zero-emission vehicles, and UC's purchases are in line with that goal.

Over 1,800 active electric vehicle (EV) charging stations (and many more EV-ready locations) are installed at UC locations to support the conversion of fleet and commute vehicles to electric options.

UC Health

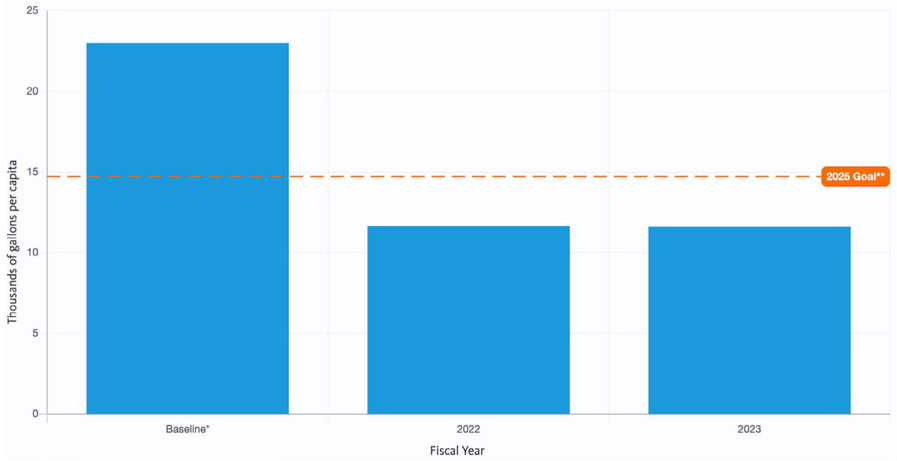
UC Health made significant strides toward a fossil-free future. Most academic health centers are in the planning, design or construction stages of buildings that will greatly reduce or eliminate the use of fossil fuels in their operations, including a medical center at UC Irvine Health, two outpatient surgery centers at UCSF Health and a hospital and outpatient pavilion at UC San Diego Health. UC Davis Health began decarbonizing its 26-megawatt natural gas cogeneration plant by partnering with the Sacramento Municipal Utility District to provide expanded and more reliable electrical service, an important step before transitioning to an all-electric system.

In addition to the progress in new construction, each academic health center has begun a decarbonization study, in partnership with the campuses, to assess the technical and financial requirements to eliminate at least 90% of greenhouse gas emissions from their energy systems by 2045. UC Health worked locally and collaboratively to reduce greenhouse gas emissions from energy and anesthetic gas usage in resource-intensive operating room areas. The effort included reducing nitrous oxide usage, energy consumption and emissions from inhaled anesthetic gases.

UC academic health centers are developing equity-centered climate resilience plans as part of their commitment to decarbonizing the health sector through the White House/HHS Health Sector Climate Pledge.

Last year, the new UC Center for Climate, Health and Equity expanded its work in education, policy, research and health care sustainability. It trained over 100 faculty and reached 7,000 students with its climate-health courses, created wildfire patient care materials in English, Spanish and Chinese, assembled a course repository listing all climate-health courses within UC, attended and presented at international climate negotiations and launched its research on wildfire smoke and health impacts on vulnerable populations thanks to funding from the historic partnership with the state of California. The center also joined the National Academy of Medicine's Climate Collaborative as a Network Organization, is serving on the National Academies Climate Security Roundtable and was appointed to the Joint Commission's Environmental Sustainability Technical Advisory Panel. To complement these efforts, the UC Health section of the Sustainable Practices Policy was updated in 2023 to incorporate new sustainable procurement goals.

Water



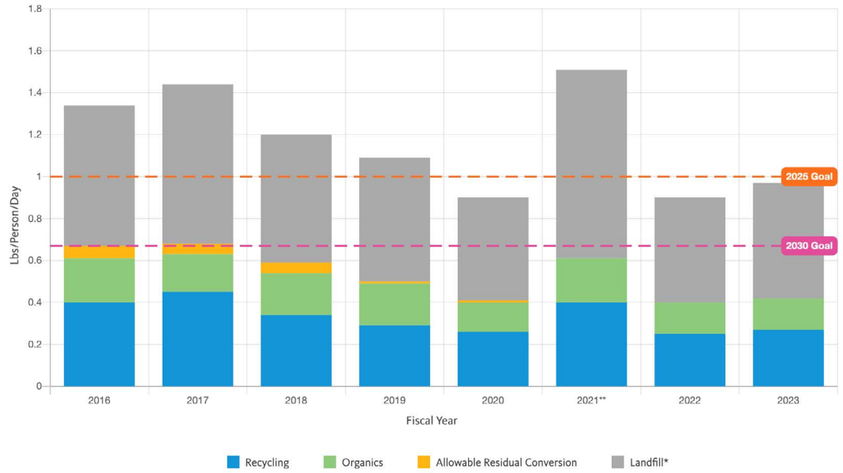
**Based on a 3-year average of fiscal years 2005–08*
***2025 goal is a 36% reduction from baseline*
Systemwide calculations exclude ANR, UCDH, UCIH, and UCSFH

Over the course of 2022 and into 2023, the UC Sustainable Water Systems Working Group collaborated with stakeholders across the system to develop new water policy commitments. The new policies increase LEED water credit requirements as well as require campus and academic health centers to complete water recycling and stormwater evaluations and take measures to provide easy access to drinking water.

While UC's overall water use increased from the previous year, total water use per capita (excluding Agriculture and Natural Resources) remained at the same level as the prior year due to continued water conservation measures and irrigation water use restrictions during the drought. Progress in water conservation continues, as 10 UC locations exceeded their 2025 goal of reducing potable water use per person by 36%.

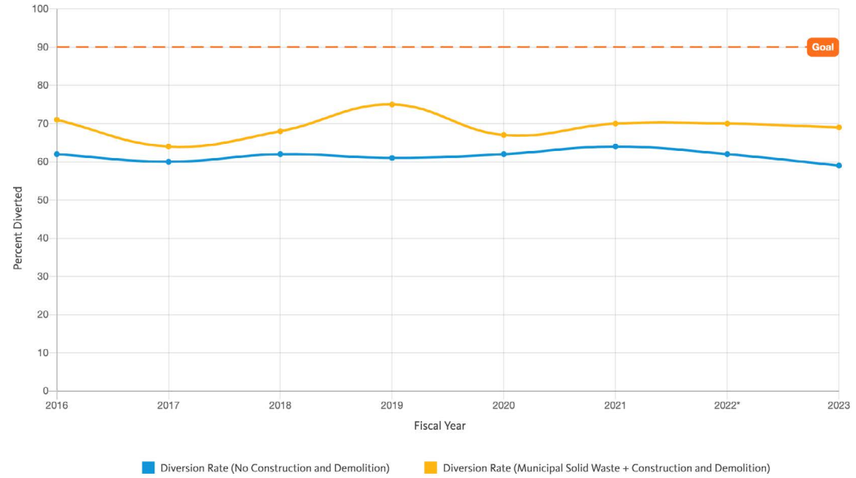
Zero Waste

WASTE GENERATION



**These numbers might include a small amount of incineration that is being phased out.*
***In 2021, waste generation per weighted campus user spiked due to pandemic-related closures as base-level operations continued but the number of users on campus decreased.*

WASTE DIVERSION



**Waste incineration was counted as diversion prior to July 2022.*

The 2022–23 academic year marked the first full year campuses returned to in-person instruction without pandemic closures. Most campuses were able to maintain steady diversion rates, while three campuses exhibited continued improvement. Overall, the University diverted 69% of its municipal solid waste and construction and demolition wastes from landfills.

Campuses have refocused on zero waste priorities now that they are able to move away from required COVID protocols. The University extended the deadline for the single-use plastic ban by one year, to June 2024, to allow campuses additional time to replace disposables with reusable and compostable options after emerging from the pandemic. In response to SB 1383 requirements, campuses are developing initiatives and programs to increase food recovery and organics recycling. Additionally, the University is assessing methods to calculate scope 3 greenhouse gas emissions from waste.

UNIVERSITY OF CALIFORNIA

Berkeley

UC Berkeley continues to make significant progress toward its sustainability goals and proudly earned the No. 1 spot in the first Quacquarelli Symonds World University Sustainability Rankings.

Berkeley
UNIVERSITY OF CALIFORNIA

Berkeley's recognition as a global leader in sustainability was comprehensive, including its sustainable operations, education and research. Notably, the groundbreaking Clean Energy Campus initiative, slated to reduce building carbon emissions by 85%, achieved significant milestones this year, including the conceptual design of the new electrified heating and cooling central plant and on-site renewable energy and storage.

The Student Environmental Resource Center celebrated a decade of impactful activism and community engagement, further propelling the campus vision for a more environmentally just world. Additionally, the Office of Sustainability launched the UC Berkeley Business Air Travel Carbon Mitigation Program, which will invest in campus carbon reduction projects and increase climate action awareness.

With on-site operations resuming following closures, emissions understandably increased. UC Berkeley, though, remains ahead of the curve to reach UC carbon emissions goals, with phase one of the Clean Energy Campus initiative slated for completion in 2028. Berkeley continues to progress in meeting its ambitious sustainability goals.

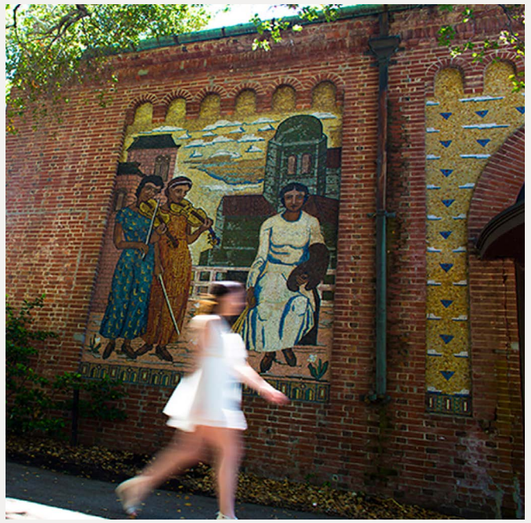
STORIES

UC Berkeley Drills Borehole To Explore Geothermal Heating on Campus

As part of UC Berkeley's decarbonization efforts, researchers drilled a 400-foot-deep borehole on UC Berkeley's campus to explore the viability of using a geothermal heat pump system to help heat and cool its buildings more efficiently.

Read full article:

https://news.berkeley.edu/2022/03/30/uc-berkeley-drills-400-foot-borehole-to-explore-geothermal-heating-on-campus/



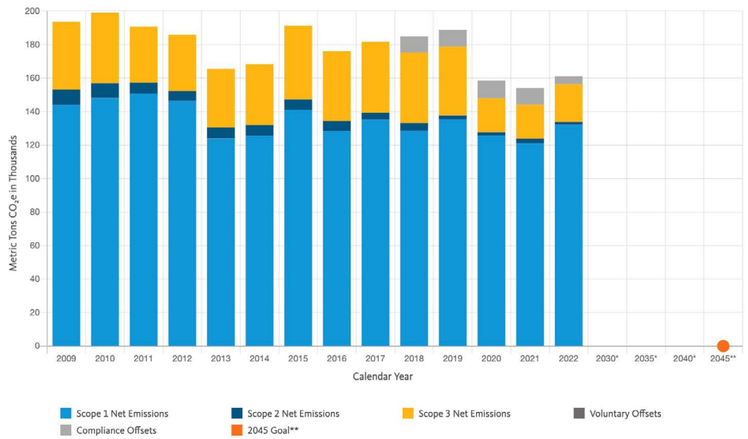
UC Berkeley To Embark on $700 Million Campuswide Clean Energy Plan

UC Berkeley plans to replace its natural gas-powered cogeneration plant with a clean and resilient energy system through the Berkeley Clean Energy Campus project. The first phase is slated to be complete by 2028.

Read full article:

https://dailycal.org/2023/05/03/uc-berkeley-to-transition-from-natural-gas-to-cleaner-energy-sources

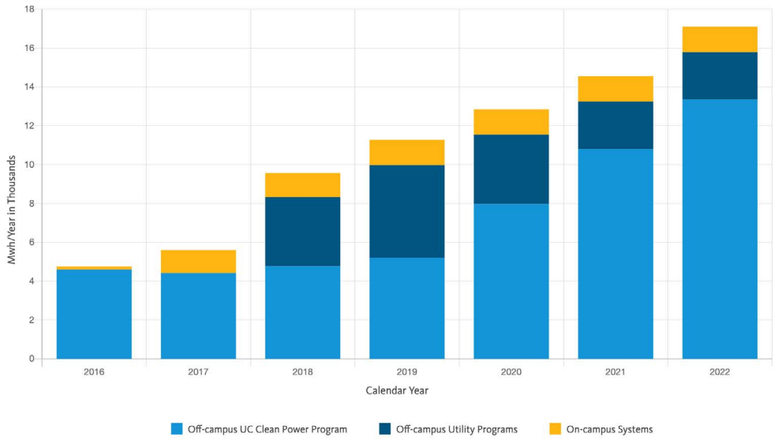
CLIMATE PROTECTION – EMISSIONS



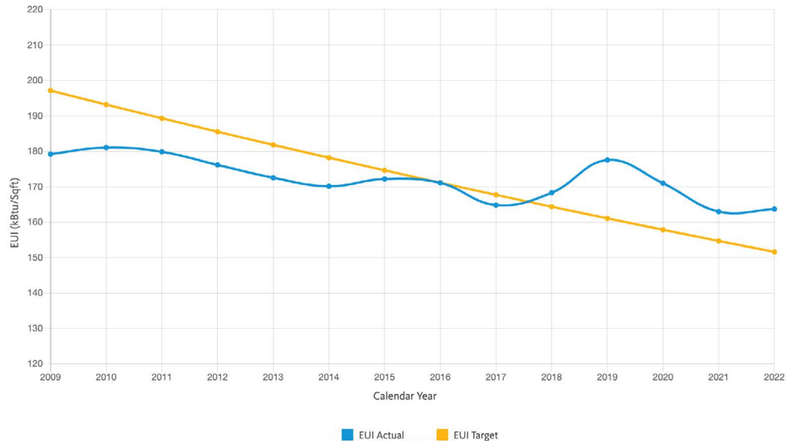
** Interim goals for 2030, 2035 and 2040 to be developed through fossil-free planning that is underway at each location*
*** 90% direct reduction of total emissions from 2019 levels with residual emissions negated by carbon removal*

Compared to years with pandemic-related closures, the data from 2022 portrays a more typical operational scenario. A new cogeneration turbine is expected to reduce natural gas usage. Purchased electricity came from a cleaner mix in 2022, which led to fewer scope 2 emissions. Employee commute-related emissions declined due to an upswing in carpooling and remote work. However, there was a surge in business air travel following the post-pandemic resumption of conferences and business trips.

ENERGY – RENEWABLE ENERGY USE



ENERGY USE INTENSITY (EUI)



UC Berkeley saw an increase in its EUI in 2022.

FOOD

29%
of food and beverage purchases met sustainability criteria ($4.7M)

29%
of food and beverage purchases were plant-based ($4.8M)

The increase in sustainable purchasing can be attributed to Berkeley Dining's strategic decision to procure additional seafood, aligning with Menus of Change principles and their commitment to sourcing sustainable seafood. Additionally, Berkeley Dining's dedication to procuring sustainable beef, chicken and local organic produce underscores the ongoing commitment to environmentally conscious dining practices.

GREEN BUILDING

There are nine electric building projects at Berkeley: Three are under construction, four are in design, and two are in the planning phase. The Bakar BioEnginuity Hub, the most recent certified building, received LEED Gold certification in 2022 and is Berkeley's first occupied all-electric building.

2 Platinum, 15 Gold, 9 Silver and 1 Certified

- Total number of LEED certifications

PROCUREMENT

$2.8M
green spend on electronics (33%)

$693K
green spend on cleaning supplies (50%)

$1.8M
green spend on indoor office furniture (98%)

$279K
green spend on office supplies (73%)

Green spend is defined as meeting preferred or minimum criteria in UC's Sustainable Procurement Guidelines.
Suppliers reporting: Electronics (6), Furniture (4), Cleaning supplies (6), Office supplies (4).
UC Systemwide Spend Analytics category data provided by CalUSource.

The University reports on green spend, as defined in the Sustainable Procurement Guidelines, and reached out to suppliers for spend data in four product categories for this year's report.

SUSTAINABLE BUILDING & LABORATORY OPERATIONS

18
total assessed green laboratories

The Green Labs program, housed under the Office of Environment, Health and Safety at UC Berkeley, continues to operate, certifying more labs this year. The campus upgraded lab equipment, replacing two older autoclaves with newer models.

TRANSPORTATION

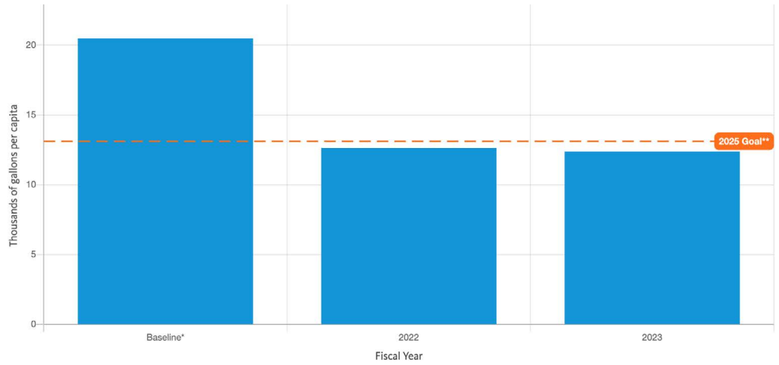
86%
of students and employees are utilizing alternative commuting methods

24%
of all vehicles acquired in 2023 were electric (zero-emission), plug-in hybrid or clean transportation fuel

12
EV charging ports

The campus fleet acquired 13 electric vehicles this fiscal year. There was no change in the number of parking and EV charging stations. The campus continues to see heavier use of hybrid and remote schedules with employees following the pandemic. Additionally, there was a higher percentage of zero-emission vehicles in fiscal year 2022–23 compared with past years.

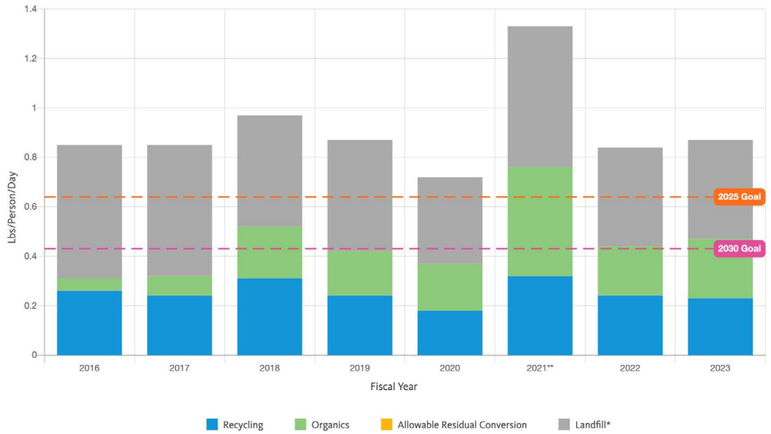
WATER



**Based on a 3-year average of fiscal years 2005-08*
***2025 goal is a 36% reduction from baseline*

In fiscal year 2022–23, water consumption per capita decreased by nearly 300 gallons. This decline can be attributed to a range of drought response initiatives that were put into action across UC Berkeley's campus facilities and housing locations. These efforts included improved leak detection and the efficient management of water usage, aided by the successful pilot of smart meters in collaboration with the local water utility.

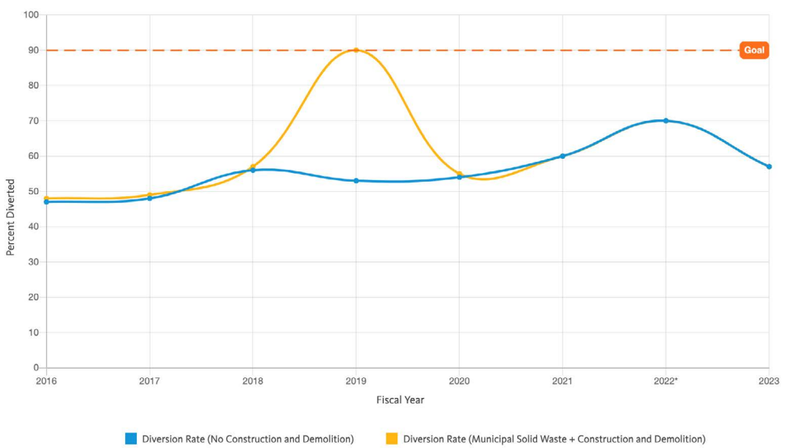
ZERO WASTE – GENERATION



**These numbers might include a small amount of incineration that is being phased out.*
***In 2021, waste generation per weighted campus user spiked due to pandemic-related closures as base-level operations continued but the number of users on campus decreased.*

Solid waste at UC Berkeley remained relatively consistent compared to prior years, with a slight increase in landfill and compost generation.

ZERO WASTE – DIVERSION



**Waste incineration was counted as diversion prior to July 2022.*

Solid waste diversion decreased compared with last year due to a smaller percentage of reuse projects in the last academic year. Over time the diversion rate has stayed consistent.

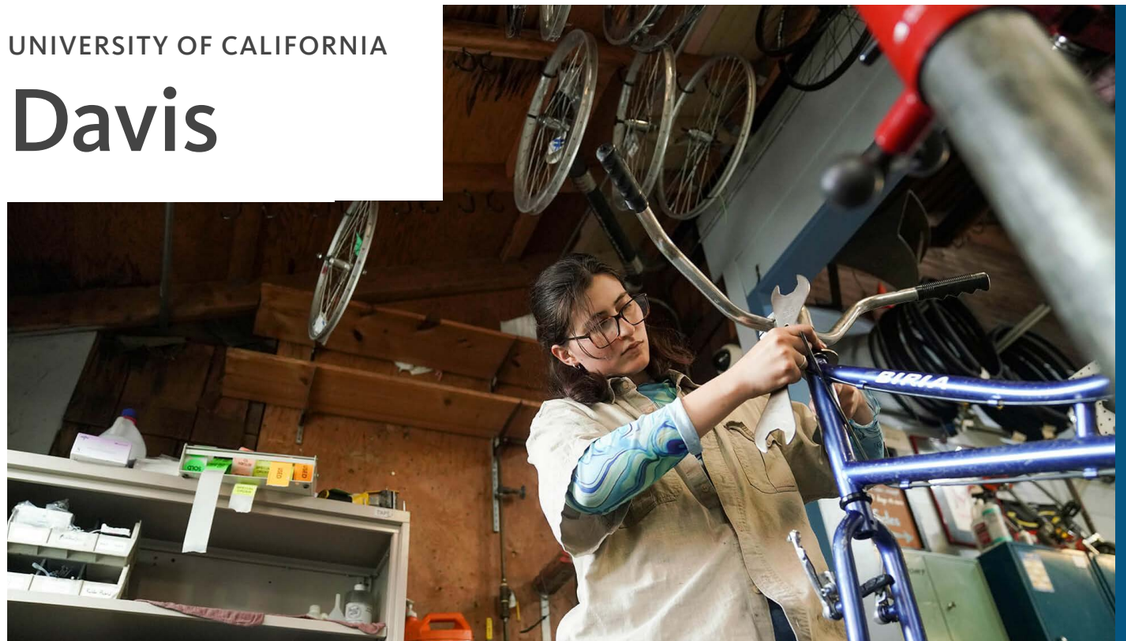
AWARDS

Out of 700 global higher education institutions, UC Berkeley was named the top sustainable university in the Quacquarelli Symonds World University Sustainability Rankings for its focus on tackling environmental, social and governance issues. The campus achieved a perfect score of 100.

A full list of awards is featured on the UC Office of the President's website.

UNIVERSITY OF CALIFORNIA

Davis



The UC Davis Fossil Fuel-Free Pathway Plan, the first of its kind at UC, was released in draft form in June 2023. The Campus Advisory Committee on Sustainability hosted a series of town halls to collect community input.

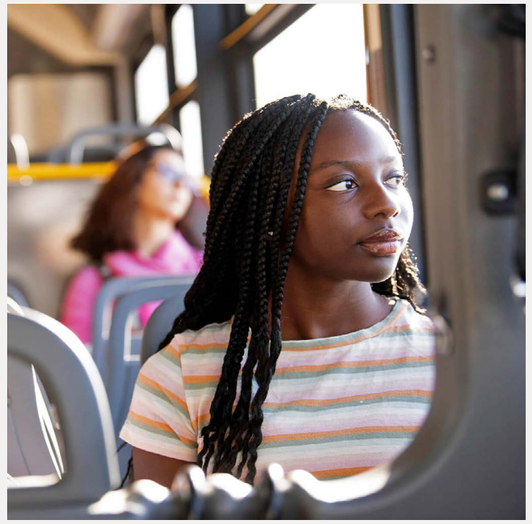
Sustainability fellows' projects embodied the aim of the United Nations' Sustainable Development Goal 13 — to take urgent action to combat climate change and its impacts — focusing on climate resilience, climate and environmental justice, and advancing zero emissions goals. Campus operations worked to secure a fossil-free future by completing the first phase of the Big Shift, launching service of the first electric bus fleet on campus and extending the Causeway Connection free ride program.

UC Davis achieved a third Gold STARS rating and Custodial Services earned a certification for its sustainable cleaning program. In an effort to reduce single-use items, campus Dining piloted a reusable linens program and partnered with Sustainability on a reusable utensils campaign. Students utilized campus as a living lab by completing LEED documentation standards on six credits for new construction, helping the campus earn three additional LEED certifications and adapting the campus tree canopy to be climate-ready.

In the aftermath of recent tragic events in Davis, the Davis Day of Reflection provided an opportunity for the campus community to pause and mourn at scenic locations, strengthening the important link between mental health and sustainability.

Marking a significant transition in UC Davis's sustainability journey, the campus said farewell to Camille Kirk, director of sustainability and leader in UC Davis sustainability planning for 18 years.

STORIES



Going Electric

Unitrans, a partnership between the Associated Students of UC Davis and the City of Davis, is doing its part to carry UC Davis closer to its fossil fuel-free goals. With the completion of phase one of Unitrans' electrification program, six electric buses are now in service, a significant first step in its commitment to ultimately replace all 48 vehicles in the fleet with electric buses.

Read full article:

https://magazine.ucdavis.edu/going-electric/

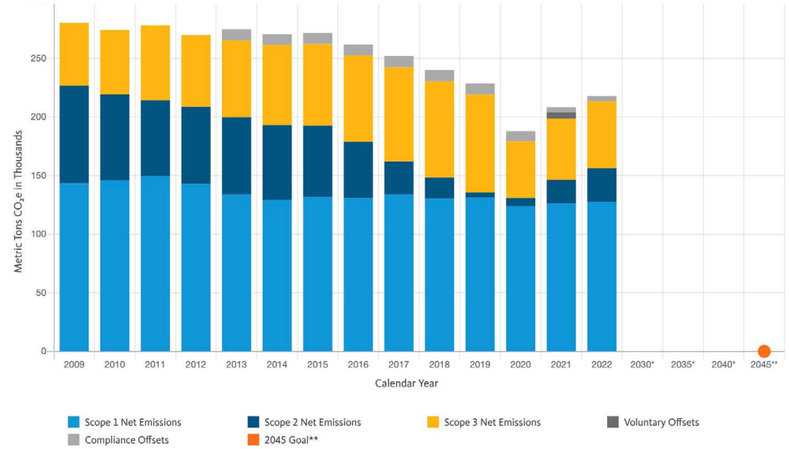
UC Davis Invites Public Feedback on Its Fossil Fuel-Free Plan

In 2023, UC Davis solicited comment on the campus Fossil Fuel-Free Pathway Plan, which identifies opportunities and solutions for eliminating fossil fuel use. The Campus Advisory Committee on Sustainability was charged by Chancellor Gary S. May to create the plan in response to a petition for a fossil fuel-free UC Davis initiated by a group of students, faculty and staff.

Read full article:

https://sustainability.ucdavis.edu/news/feedback-fossil-fuel-free-plan

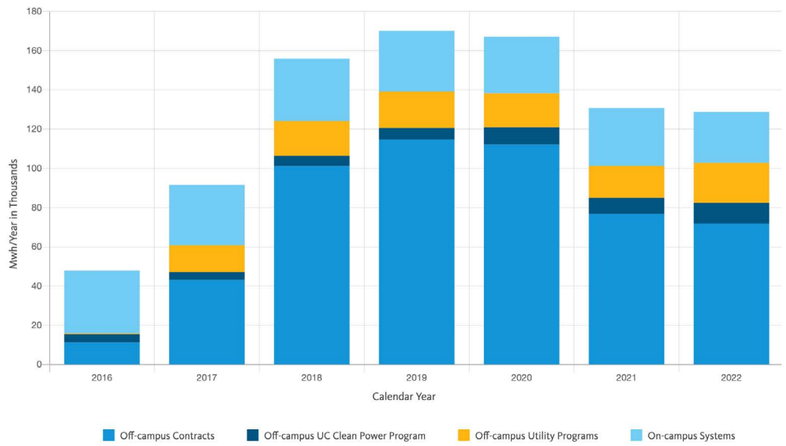
CLIMATE PROTECTION - EMISSIONS



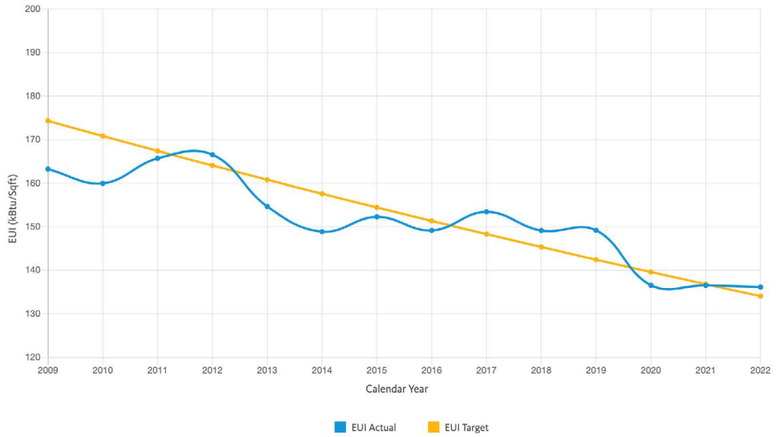
** Interim goals for 2030, 2035 and 2040 to be developed through fossil-free planning that is underway at each location*
*** 90% direct reduction of total emissions from 2019 levels with residual emissions negated by carbon removal*

As the campus returned to more in-person activity, behavior-based emissions rose to closer to pre-pandemic levels, although commuting and air travel emissions remain considerably lower than pre-pandemic. In addition, the campus purchased or swapped fewer renewable energy certificates than in recent years, contributing to an increase in scope 2 emissions. The campus drafted a Fossil Fuel-Free Pathway Plan, which demonstrates a path to eliminating most fossil fuel use in operations and offers policy ideas for tackling behavior-based emissions related to commuting and business travel.

ENERGY – RENEWABLE ENERGY USE



ENERGY US INTENSITY (EUI)



UC Davis saw a slight decrease in its EUI in 2022.

FOOD

8%
of food and beverage purchases met sustainability criteria ($1.6M)

33%
of food and beverage purchases were plant-based ($6.7M)

UC Davis's total food and beverage spend increased by $6.3 million over the previous year due to a spike in in-person activities on campus, cost of goods and frequency of events catered by on-campus catering services. In recent years, sourcing sustainable food has been challenging due to food supply shortages and other impacts of the COVID-19 pandemic. UC Davis dining operation's percentage of total spend on plant-based items is similar to recent years.

GREEN BUILDING

UC Davis continues to make strides in increasing the number of LEED certified buildings on campus. The main campus constructed two new LEED buildings and earned one Gold certification for an existing building, totaling three LEED certifications in fiscal year 2022–23. Since 2007, UC Davis has certified 31 newly constructed buildings, 12 interior renovation projects and 14 existing buildings for a total of 57 LEED projects. Nine all-electric buildings on the UC Davis main campus are occupied, and two are under construction.

11 Platinum, 28 Gold, 8 Silver and 1 Certified

- Total number of LEED certifications

PROCUREMENT

$3.2M
green spend on electronics (63%)

$784K
green spend on cleaning supplies (71%)

$1.9M
green spend on indoor office furniture (96%)

$631K
green spend on office supplies (72%)

Green spend is defined as meeting preferred or minimum criteria in UC's Sustainable Procurement Guidelines.
Suppliers reporting: Electronics (7), Furniture (3), Cleaning supplies (5), Office supplies (3).
UC Systemwide Spend Analytics category data provided by CalUSource.

The University reports on green spend, as defined in the Sustainable Procurement Guidelines, and reached out to suppliers for spend data in four product categories for this year's report.

SUSTAINABLE BUILDING & LABORATORY OPERATIONS

13
total assessed green laboratories

UC Davis Green Workplace assessed one additional lab in fiscal year 2022–23 for a total of 13 certified labs. Twelve labs are in the process of being certified. UC Davis Facilities Management and UC Davis Sustainability, as a part of an autoclave water savings project, installed water-saving fixtures on six additional autoclaves in the last year.

TRANSPORTATION

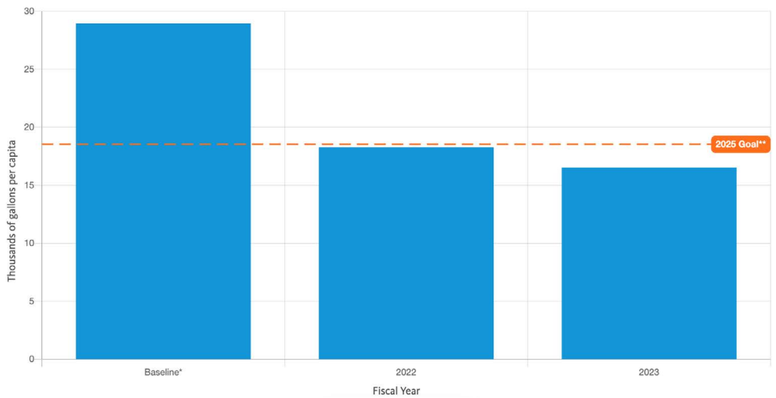
74%
of students and employees are utilizing alternative commuting methods

33%
of all vehicles acquired in 2023 were electric (zero-emission), plug-in hybrid or clean transportation fuel

100
EV charging ports

UC Davis's 2022 travel survey found over 33% of employees and 0.45% of students telecommuted on average, demonstrating a return to more in-person activity compared with the 2021–22 fiscal year. The campus's boost in in-person activities during 2022–23 led to a slight increase in single-occupancy-vehicle (SOV) commuting when compared with the 2015 baseline, though SOV commutes remain about 26% of the overall mode split.

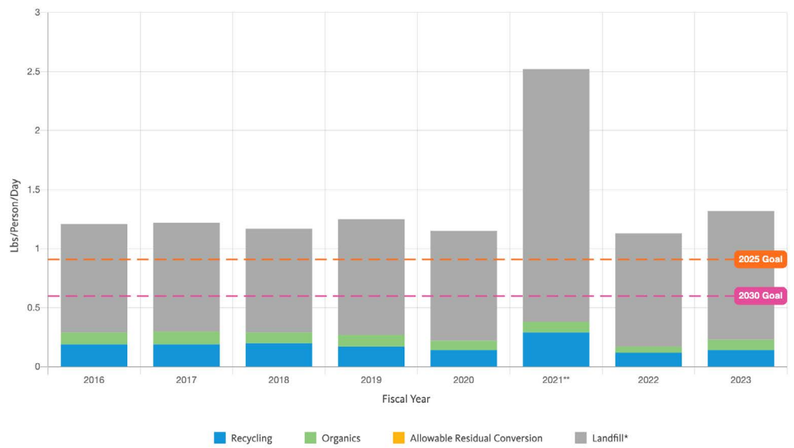
WATER



**Based on a 3-year average of fiscal years 2005-08*
***2025 goal is a 36% reduction from baseline*

UC Davis's total potable water use decreased by 87 million gallons, a 10% decrease per capita compared with fiscal year 2021–22. The decline in water use was largely attributable to potable water in agricultural water systems, landscape and buildings. UC Davis is meeting the 2025 water reduction target with a 43% reduction in per capita potable water use since the baseline year.

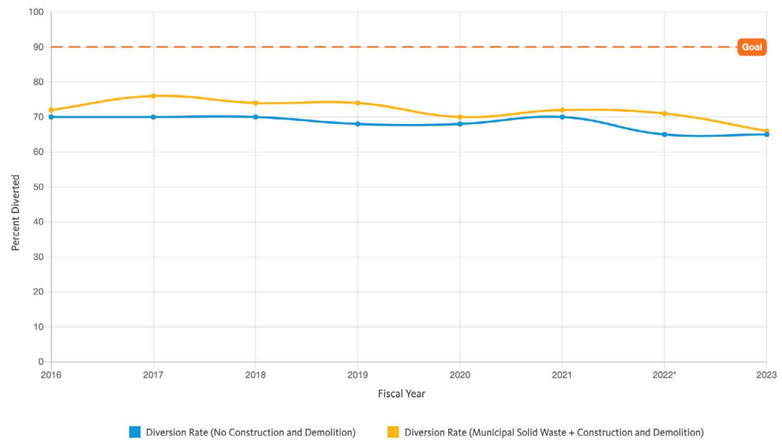
ZERO WASTE – GENERATION



**These numbers might include a small amount of incineration that is being phased out.*
***In 2021, waste generation per weighted campus user spiked due to pandemic-related closures as base-level operations continued but the number of users on campus decreased.*

As in-person activity continued to increase on campus, the total overall municipal solid waste (excluding construction and demolition) generated at UC Davis in fiscal year 2022–23 increased by 927 tons or 0.19 pounds per capita. This is a 9.32% increase from the 2015–16 baseline.

ZERO WASTE – DIVERSION



**Waste incineration was counted as diversion prior to July 2022.*

UC Davis diverted 12,840 tons, or 65%, of its waste (excluding construction and demolition) in fiscal year 2022–23, a diversion rate that is about the same as fiscal year 2021–22.

AWARDS

UC Davis submitted a new STARS report in spring 2023, earning a Gold rating in STARS 2.2. The report is valid until 2026. The campus plans to conduct a gap analysis of the new report in the next year. UC Davis is currently meeting the goal of maintaining a valid STARS report with a Gold rating.

A full list of awards is featured on the UC Office of the President's website.

UNIVERSITY OF CALIFORNIA

Davis Health

As a premier academic health system, UC Davis Health is committed to fostering innovation, collaboration and positive impact through advancing sustainability. For the second year in a row, UC Davis Health received the highest honor from Practice Greenhealth with the Top 25 Environmental Excellence Award.

UC Davis Health is prioritizing sustainability throughout the institution in many ways. Every anesthesia machine in all 51 operating/procedure rooms has migrated from piped gas to canister. UC Davis Health reduced procurement of nitrous oxide by 1.2 million liters or 95%, representing a reduction of 537 metric tons of carbon dioxide equivalent since 2021.

The health center developed a multiyear plan for energy savings in operating rooms, which includes replacing lighting and implementing HVAC scheduling setbacks, saving 500,000 kilowatt-hours per year or 300 metric tons of carbon dioxide equivalent, which is equal to removing 63 cars from the road. Additionally, UC Davis Health is home to more than 90 electric vehicle charging stations. With each new parking project, additional EV charging stations will be installed.

In accordance with the state's emergency regulations effective June 2022, UC Davis Health stopped irrigating nonfunctional turf (areas of grass without trees) throughout campus. In addition, a turf replacement master landscaping plan underway will focus on the replacement of turf with California native, drought-tolerant plantings and dryscape to further reduce water use.

UC Davis Health also advanced its sustainable transportation goals. The Causeway Connection is a zero-emission bus service between the Davis and Sacramento UC Davis campuses, providing a free and convenient travel option. The Green Commuter Program is designed to promote sustainability and environmental stewardship while reducing the cost and stress of an employee's commute by encouraging use of sustainable transportation options. Additionally, in honor of Earth Day 2023, UC Davis Health launched the first sustainability walking tour. The self-guided tour covers more than a dozen sustainability highlights throughout the beautiful medical center campus.

STORIES

How Anesthesiologists Are Tackling Greenhouse Gas Emissions in the Operating Room

In addition to transitioning to less-polluting anesthetic gases in its operating rooms, UC Davis Health is studying whether it can reduce the amount of anesthetic gas used during surgery. The academic health center provides anesthesiologists with feedback on gas flow rates and gas usage via an online dashboard to help reduce emissions.

Read full article:

https://health.ucdavis.edu/news/headlines/earth-day-how-anesthesiologists-are-tackling-greenhouse-gases-in-the-operating-room/2023/04

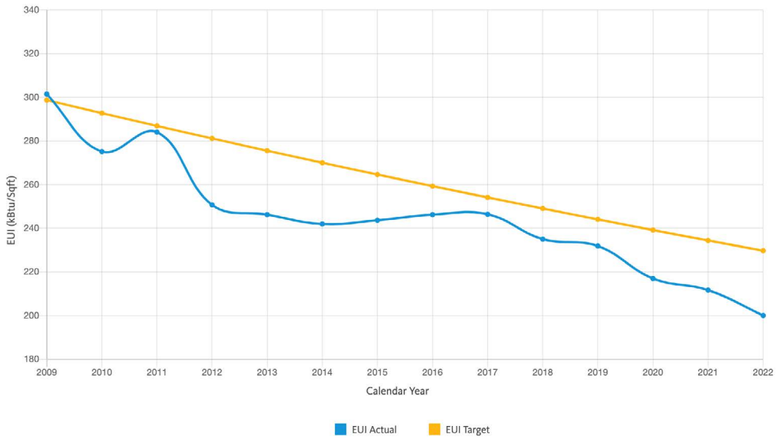
New Elk Grove Express Bus to UC Davis Medical Center

UC Davis Health partnered with its local transit district to launch an express bus service at no cost to its students and employees.

Read full article:

https://health.ucdavis.edu/insideout/news/headlines/coming-soon-new-elk-grove-express-bus-to-uc-davis-medical-center/2023/08

ENERGY USE INTENSITY (EUI)



UC Davis Health saw a decrease in its EUI in 2022.

FOOD

38%
of food and beverage purchases met sustainability criteria ($3.4M)

32%
of food and beverage purchases were plant-based ($2.9M)

Uncharacteristically severe weather conditions early in the year affected the majority of local farmers' crops and thus impacted overall spring local produce attainment by UC Davis Health. As a result, total local procurement decreased by 2%. However, UC Davis Health increased procurement of organic fruits and vegetables by approaching local farmers directly and adapting menus according to seasonal food availability. Also, Dining included new sustainable products that pivoted results favorably last year.

GREEN BUILDING

UC Davis is making consistent strides in increasing the number of LEED certified buildings on campus. UC Davis Health constructed one new LEED building and earned one Gold certification for a renovation, totaling two LEED certifications in fiscal year 2022–23. Since 2007 UC Davis campus and health center have certified 31 newly constructed buildings, 12 interior renovation projects and 14 existing buildings for a total of 57 LEED projects. The UC Davis Health campus has three all-electric buildings occupied and two under construction.

1 Platinum, 8 Gold

- Total number of LEED certifications

TRANSPORTATION

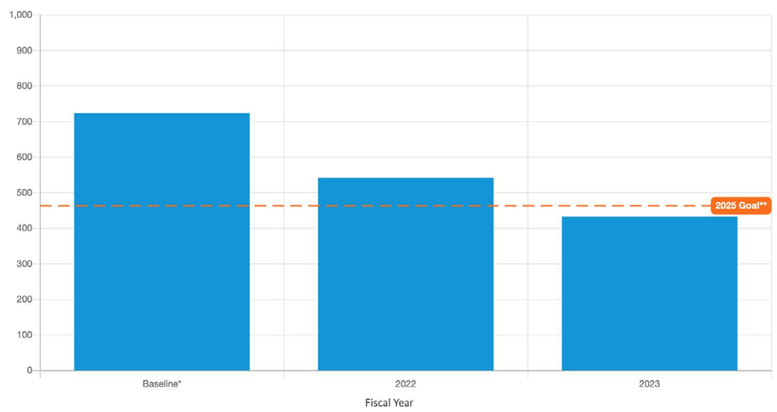
25%
of students and employees are utilizing alternative commuting methods

83%
of all vehicles acquired in 2023 were electric (zero-emission), plug-in hybrid or clean transportation fuel

118
EV charging ports

UC Davis Health and its Green Commuter Program continue to create community, provide education and develop programs to facilitate positive behavior change related to transportation. In fiscal year 2022–23, UC Davis Health opened two new bike shelters, offering secure parking for over 100 additional bikes. The program started hosting Transit Field Trips and provided low-cost helmets for employees and free helmets for students. Additionally, a sustainable transportation newsletter is digitally distributed monthly to increase communication and outreach. The UC Davis Health campus is expanding its daily parking options by including reserved and premium locations. Shift work, office site relocation and hybrid commuters pose new barriers to sustainable commutes, and UC Davis Health is working to offer flexibility in commute choices.

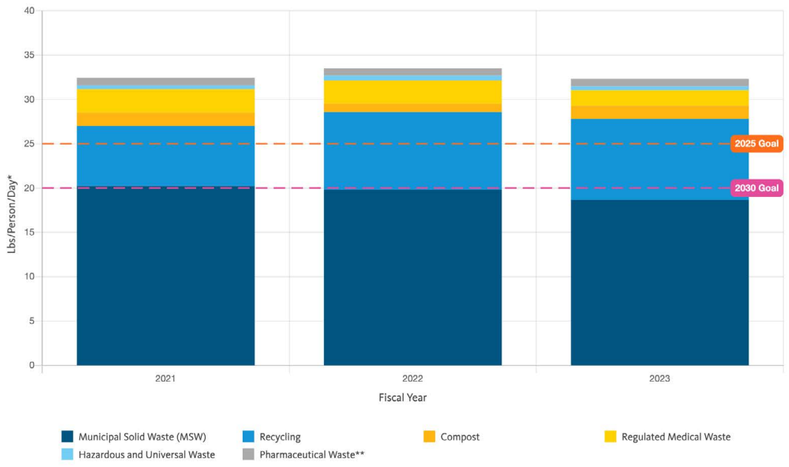
WATER



**Based on a 3-year average of fiscal years 2005-08*
***2025 goal is a 36% reduction from baseline*

UC Davis Health reduced its annual water use by 27 million gallons, or 13%, by using smart controllers to limit turf irrigation, upgrading autoclaves to reduce steam use and eliminating single-pass cooling on medical equipment.

ZERO WASTE – GENERATION



**Per capita figures are calculated using Adjusted Patient Day (APD)*
***Data provided if not counted in other waste streams*

In the past fiscal year, UC Davis Health continued to focus on a number of waste-reducing tasks, including electronic prescribing, double-sided printing, piloting a program for reusing isolation gowns, continuing to lessen red bag waste, recycling blue wrap and transitioning from disposable to reusable mops. Additionally, UC Davis Health is repurposing unused instruments and supplies by collecting opened and expired medical instruments, equipment and supplies for reuse and redistribution through the Second Breath program.

AWARDS

2023 Practice Greenhealth TOP 25 ENVIRONMENTAL EXCELLENCE AWARD

UC Davis Health was the proud recipient of many Practice Greenhealth awards in 2023, including the Top 25 Environmental Excellence Award.

A full list of awards is featured on the UC Office of the President's website.

COMBINED DATA

Progress on the following policy areas for this Health System is reported by the campus location:

- Emissions
- Renewable Energy

UNIVERSITY OF CALIFORNIA

Irvine

UC Irvine is dedicated to creating a culture of sustainability, integrating sustainability concepts and knowledge throughout campus engagement, academics, research, initiatives and operations.

A highlight of the past year was greater focus on and integration of diversity, equity, inclusion and justice, health and well-being, and climate resiliency throughout campus sustainability planning efforts.

In partnership with UCI Health, the main campus conducted several forms of outreach and engagement for ongoing climate resiliency planning. Workshops, tabling, social media content and survey distribution all played a significant role in beginning the conversation of climate resilience and learning about the lived experiences and insights of the campus community regarding climate change impacts. UCI will continue these efforts in the following year, with greater incorporation and discussion of decarbonization efforts.

UCI continued its legacy as a Tree Campus USA for the 13th consecutive year and was listed on Princeton Review's Green College Honor Roll for the 11th straight year. Among other highlights, UCI Dining was awarded silver for outreach and education by the National Association of College & University Food Services, and UCI Transportation and Distribution Services earned the Race to Excellence gold award from Best Workplaces for Commuters. An interdisciplinary team of UCI graduate students received the top prize in the U.S. Environmental Protection Agency's Environmental Justice Video Challenge for Students. The group produced a video about a proposed project to enlist Santa Ana residents in bioremediation efforts to remove lead from soil contamination hot spots throughout the city.

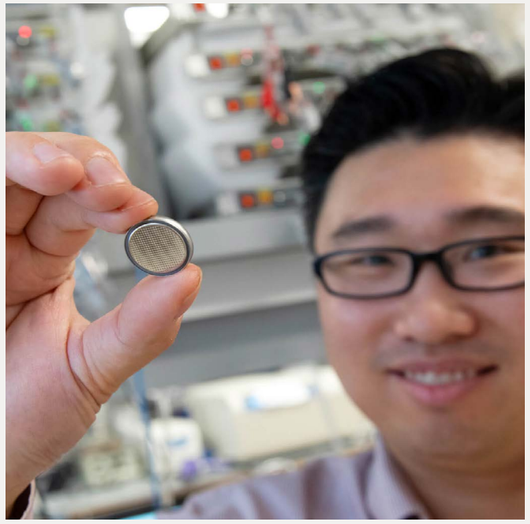
STORIES

DOE Awards $3.75 Million to Engineering for Research in Clean Energy Technologies

The award is one of 22 issued by the Department of Energy to advance critical technologies for producing, storing, deploying and utilizing hydrogen in support of President Biden's goal of a 100% clean electrical grid by 2035 and net-zero carbon emissions by 2050.

Read full article:

https://news.uci.edu/2023/06/27/doe-awards-3-75-million-to-engineering-for-research-in-clean-energy-technologies/



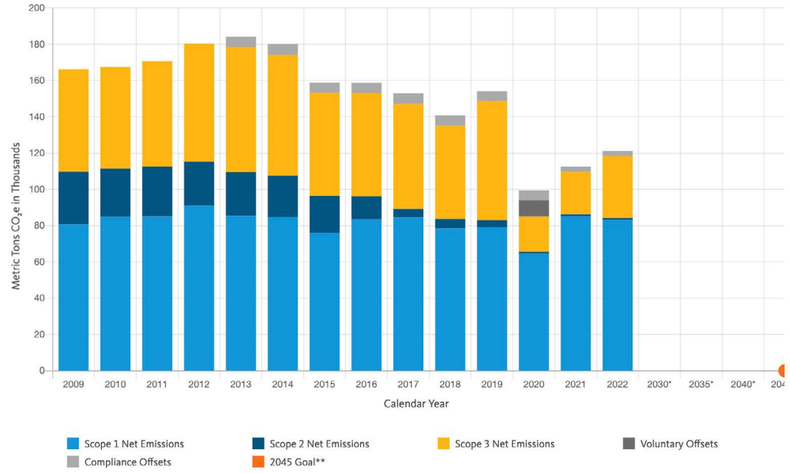
UC Irvine Scientists Create Long-lasting, Cobalt-free, Lithium-ion Batteries

In a discovery that could reduce or even eliminate the use of cobalt — which is often mined using child labor — in the batteries that power electric cars and other products, scientists at UC Irvine developed a long-lasting alternative made with nickel.

Read full article:

https://www.universityofcalifornia.edu/news/uc-irvine-scientists-create-long-lasting-cobalt-free-lithium-ion-batteries?utm_source=fiat-lux&utm_medium=internal-email&utm_campaign=article-general&utm_content=text

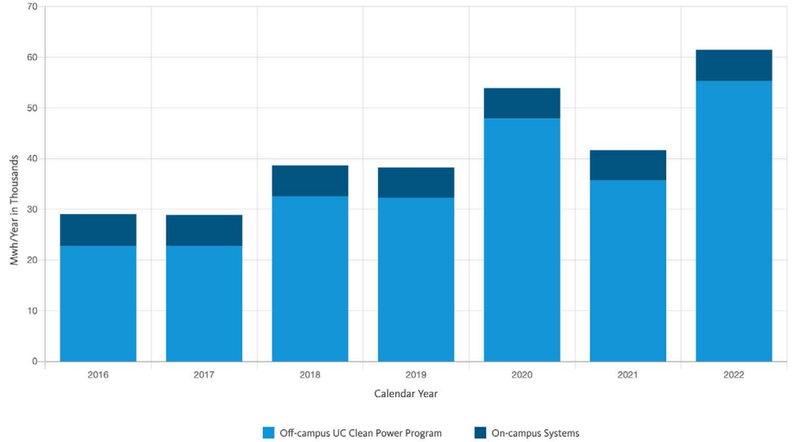
CLIMATE PROTECTION – EMISSIONS



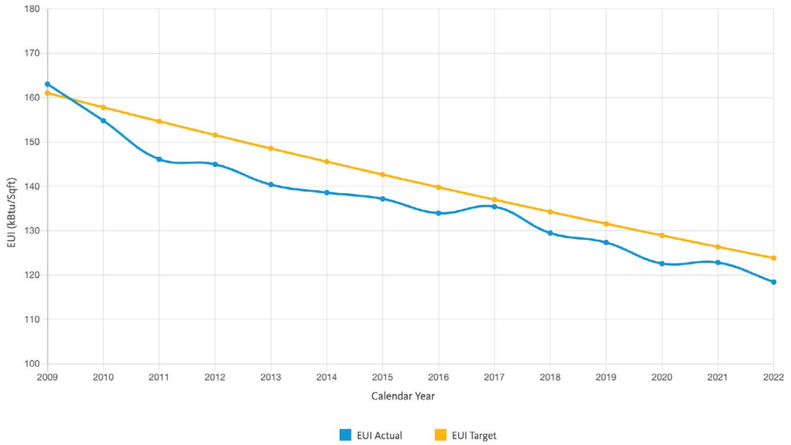
** Interim goals for 2030, 2035 and 2040 to be developed through fossil-free planning that is underway at each location*
*** 90% direct reduction of total emissions from 2019 levels with residual emissions negated by carbon removal*

Student Housing reduced its scope 2 emissions by transitioning three housing areas to the Clean Power Program. However, scope 2 emissions increased slightly from the previous year for the campus as a whole.

ENERGY – RENEWABLE ENERGY USE



ENERGY USE INTENSITY (EUI)



UC Irvine saw a decrease in its EUI in 2022.

FOOD

35%
of food and beverage purchases met sustainability criteria ($2.9M)

30%
of food and beverage purchases were plant-based ($2.5M)

As UC Irvine's plant-based food and beverage percentage has grown due to more menu items being offered, the campus has seen the amount spent on these products increase as compared with last year. The sustainability team implemented a new approach to educational large-scale food waste events that includes a clear course of action for the dining halls' management team, reinforcing preventive food waste measures and setting long-term goals and solutions.

GREEN BUILDING

UC Irvine achieved one Platinum rating for the College of Health Sciences, School of Nursing Building

21 Platinum, 13 Gold, 4 Silver and 2 Certified

- Total number of LEED certifications

PROCUREMENT

$1.9M
green spend on electronics (73%)

$448K
green spend on cleaning supplies (68%)

$3.1M
green spend on indoor office furniture (99%)

$168K
green spend on office supplies (53%)

Green spend is defined as meeting preferred or minimum criteria in UC's Sustainable Procurement Guidelines.
Suppliers reporting: Electronics (8), Furniture (2), Cleaning supplies (5), Office supplies (3).
UC Systemwide Spend Analytics category data provided by CalUSource.

The University reports on green spend, as defined in the Sustainable Procurement Guidelines, and reached out to suppliers for spend data in four product categories for this year's report.

SUSTAINABLE BUILDING & LABORATORY OPERATIONS

10
total assessed green laboratories

The UC Irvine Green Labs program was put on hiatus this past year due to redevelopment of the certification program. UC Irvine did not certify any new labs but continued engagement with previously certified labs. The new certification program, which is expected to be launched in the 2023–24 academic year, has been designed to encourage greater participation, boost the understanding of sustainability in lab settings and provide an interactive experience.

TRANSPORTATION

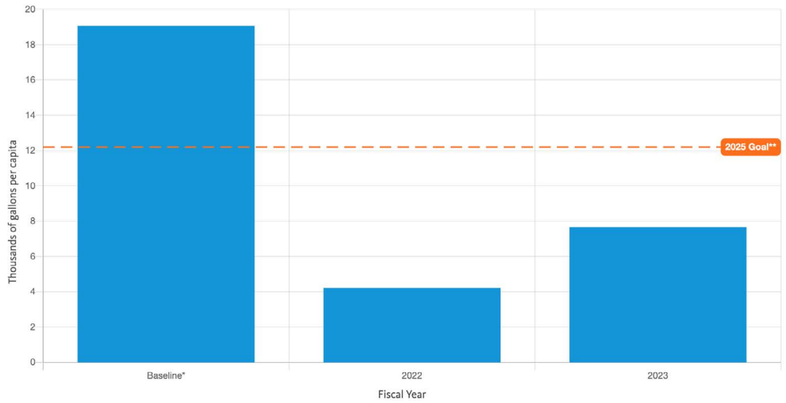
86%
of students and employees are utilizing alternative commuting methods

79%
of all vehicles acquired in 2023 were electric (zero-emission), plug-in hybrid or clean transportation fuel

262
EV charging ports

UC Irvine opened a new parking facility with two secured bicycle parking areas and 50 level 2 electric vehicle chargers, promoting sustainable transportation options. Through enhanced programming supporting carpooling, biking, walking and transit use, UC Irvine significantly decreased the drive-alone rate, demonstrating a holistic approach toward reducing its carbon footprint and fostering greener commuting alternatives.

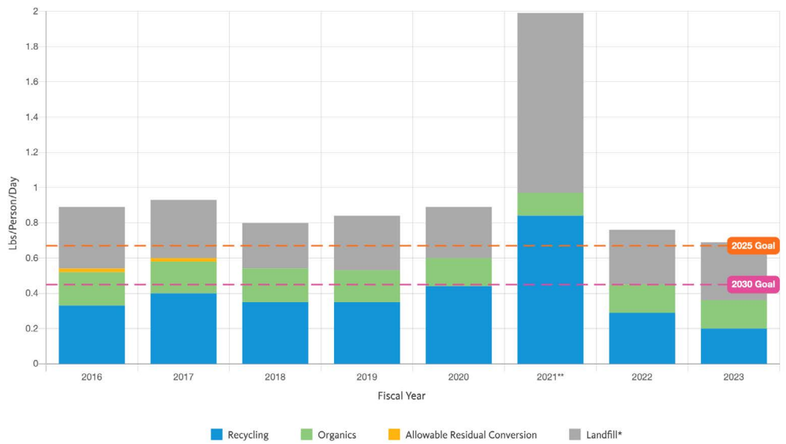
WATER



**Based on a 3-year average of fiscal years 2005-08*
***2025 goal is a 36% reduction from baseline*

Total water use at UC Irvine was lower than pre-pandemic levels.

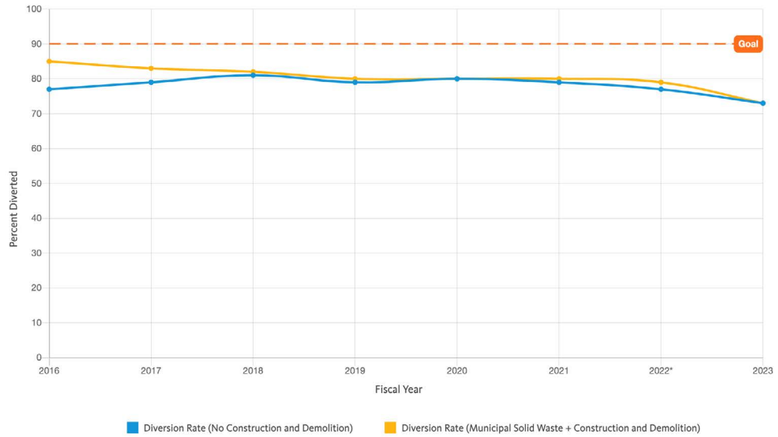
ZERO WASTE – GENERATION



**These numbers might include a small amount of incineration that is being phased out.*
***In 2021, waste generation per weighted campus user spiked due to pandemic-related closures as base-level operations continued but the number of users on campus decreased.*

UC Irvine's overall municipal solid waste (excluding construction and demolition) for fiscal year 2022–23 remained approximately the same compared to the prior year. As UC Irvine adjusted to in-person activities following the pandemic, the amount of waste generated has remained relatively consistent with pre-pandemic levels.

ZERO WASTE – DIVERSION



**Waste incineration was counted as diversion prior to July 2022.*

Compared to the previous year, UC Irvine's waste diversion decreased by 4%, from 77% to 73%. The campus will focus on improved education and training to increase student, staff and faculty understanding of recycling and composting.

AWARDS

UC Irvine has continued its legacy as a Tree Campus USA for 13 consecutive years, as well as being listed on Princeton Review's Green College Honor Roll for 11 consecutive years. Additional highlights include UCI Dining's receipt of the Silver award for Outreach and Education by the National Association of College and University Food Services and the Gold award for Race to Excellence by Best Workplaces for Commuters.

A full list of awards is featured on the UC Office of the President's website.

UNIVERSITY OF CALIFORNIA

Irvine Health

In fiscal year 2022–23, UCI Health maintained its commitment to sustainability. Accomplishments include continued progress on constructing the nation's first all-electric medical center and receipt of Practice Greenhealth's Emerald Award for overall sustainability practices. Additionally, UCI Health received the Circle of Excellence award in the categories of reducing carbon and energy.

UCI Health

UCI Health continued its efforts to meet commitments for the White House/HHS Climate Pledge to reduce emissions 50% by 2030. This involved reducing anesthetic gases 10% and nitrous oxide 8% from last fiscal year. Cross-organizational stakeholders worked together to identify opportunities for reduction and implement strategies, including transitioning from piped nitrous oxide to canister in all operating rooms, as well as removing the piped system from the new hospital design.

Additionally, UCI Health kicked off a decarbonization study to determine how to reduce scope 1 emissions; decommissioned a fossil-fuel energy source, resulting in a 30% reduction in natural gas consumption; and supplied zero-carbon electricity to all UCI Health-owned facilities and 90% of leased spaces.

For food service and waste, one major achievement in the past year has been removing all single-use plastic bottles from every retail space. Previously, more than 20,000 bottles of water, juices, sodas and protein shakes were sold every month in plastic bottles. Now those beverages are sold in aluminum cans and glass bottles. After a successful introduction, plant-based meals became a regular part of the menu. UCI Health spent approximately 25% of its food budget on sustainable products. Additionally, UCI Health continues to expand its food waste to animal feed program. Each month, on average, it donates 2,000 pounds of pre-consumer food waste to be converted to animal feed.

UCI Health is committed to ensuring that resilience and equity are accounted for in climate action plans and organizational strategies. In partnership with the main campus, UCI Health conducted outreach and engaged students and marginalized communities in supporting equity-centered climate resilience planning efforts and developing a plan by December 2023.

STORIES

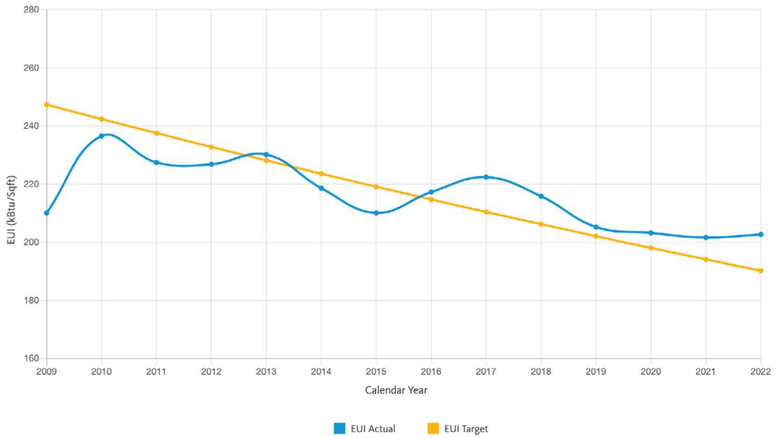
UC Irvine Takes Sustainability to New Level With All-Electric Medical Center

UCI Medical Center in Irvine is designed, positioned and built to preserve the nearby San Joaquin Marsh Reserve and reduce the facility's solar gain — its increase in temperature or thermal energy due to absorption of sunlight — by 85%. It will be the first medical center in the country to operate on an all-electric central plant.

Read full article:

https://www.bdcnetwork.com/uc-irvine-takes-sustainability-new-level-all-electric-medical-center

ENERGY USE INTENSITY



UC Irvine Health saw an increase in its EUI in 2022.

FOOD

25%
of food and beverage purchases met sustainability criteria ($1.3M)

21%
of food and beverage purchases were plant-based ($1.1M)

UCI Health procured over $5.4 million of food and beverage products in fiscal year 2022–23. Of that spend, $1.3 million (24%) was on sustainable food and $1.1 million (21%) was on plant-based products.

TRANSPORTATION

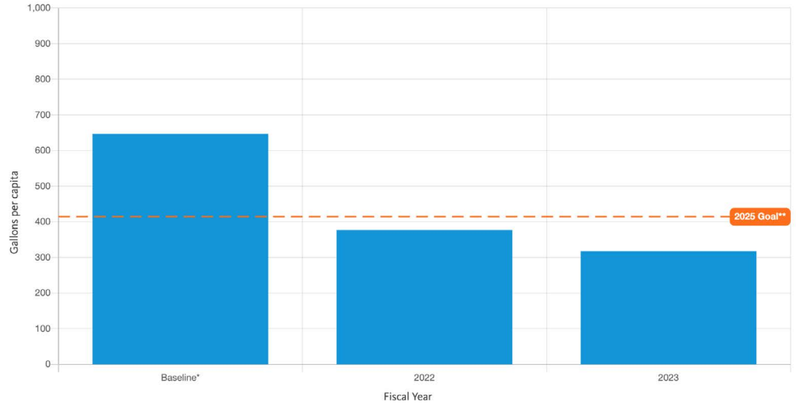
23%
of students and employees are utilizing alternative commuting methods

9%
of all vehicles acquired in 2023 were electric (zero-emission), plug-in hybrid or clean transportation fuel

57
EV charging ports

In fiscal year 2022–23, UCI Health added one new electric vehicle to its fleet population. The percentage of commuters traveling by alternative means increased in the past year. To support those investing in EVs, UCI Health installed 17 more EV charging ports.

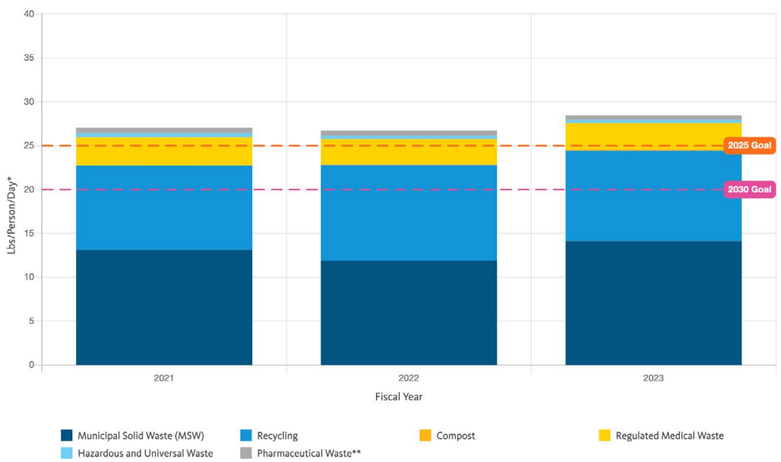
WATER



**Based on a 3-year average of fiscal years 2005-08*
***2025 goal is a 36% reduction from baseline*

UCI Health reduced water usage by 51% from the policy-established baseline, remaining well above the 2025 reduction goal of 36%. In addition to reducing its total water use from the previous year, UCI Health's water use per person decreased by 60 gallons in fiscal year 2022–23.

ZERO WASTE – GENERATION



**Per capita figures are calculated using Adjusted Patient Day (APD)*
***Data provided if not counted in other waste streams*

While total waste per person rose by 6% from fiscal year 2021–22, UCI Health accomplished a higher diversion rate in fiscal year 2022–23, with 2.9 million pounds of waste being recycled or composted.

AWARDS

2023 Practice Greenhealth ENVIRONMENTAL EXCELLENCE AWARDS

UC Irvine Health was the proud recipient of many Practice Greenhealth awards in 2023.

A full list of awards is featured on the UC Office of the President's website.

COMBINED DATA

Progress on the following policy areas for this Health System is reported by the campus location:

- Emissions
- Renewable Energy
- Procurement
- Green Building

UNIVERSITY OF CALIFORNIA

UCLA

UCLA

Highlights of progress this year include recognition as having the greenest fleet in a national ranking and a new EV Readiness Plan that targets electric vehicle adoption at UCLA.

Beyond the campus, the UCLA Sustainable LA Grand Challenge launched a new initiative to bring UCLA scholars together with community stakeholders. Called TRACtion —Transformative Research and Collaboration — the program began with a series called Transformative Transportation in Los Angeles. Water conservation and biodiversity efforts continued with the conversion of over 27,000 square feet of turf to native plants. UCLA expanded its dedication to protecting biodiversity through a commitment to the international coalition Nature Positive Universities Alliance.

At the intersection of health and sustainability, UCLA Dining increased sustainable food and beverage spending by 50% and worked with students on a Sustainability Action Research team to improve sustainable food tracking. Bruin Dine, a student-run organization that works to bridge the gap between food waste and food insecurity by recovering food that would have been thrown away, recovered over 4.5 tons of food with support from Sustainability, the Community Programs Office and a grant from CalRecycle.

UCLA's Green Building program continued to expand. Four new LEED Gold apartment buildings welcomed 2,300 students, additional Gold and Platinum projects are pending, and two all-electric buildings are planned. As Southern California braces for more summer heat waves, the city of Los Angeles has launched its most comprehensive and equitable response, thanks in part to partnerships with student, faculty and staff researchers from the UCLA Luskin School of Public Affairs.

STORIES

UCLA Teams Up With LADWP for Equitable Solutions To Reach 100% Renewable Energy

More than 20 UCLA faculty members and researchers continue to conduct research for the Los Angeles Department of Water and Power (as a result of a $2.6 million agreement set forth in 2022) to help the city achieve its goal of producing all of its energy from carbon-free and renewable energy sources by 2035 and doing so in ways that benefit all Angelenos equitably. A report is forthcoming later in 2023.

Read full article:

https://sustainablela.ucla.edu/news/ucla-teams-ladwp-equitable-solutions-reach-100-renewable-energy

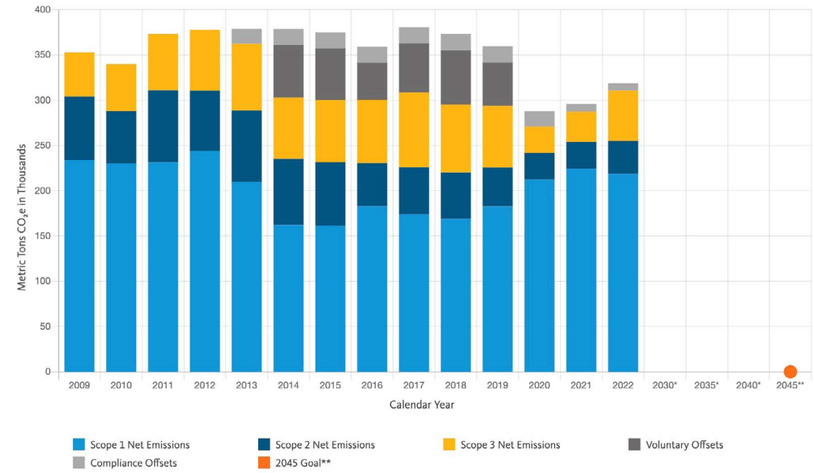
New Sustainable LA Grand Challenge Programming Gains TRACtion With Focus First on Transportation

The UCLA Sustainable LA Grand Challenge launched a new initiative to bring UCLA scholars together with community stakeholders to address a rotating list of four key topics related to sustainability: transportation, energy, water and ecosystems. The program, called TRACtion — for Transformative Research and Collaboration — began with a two-year series of activities and funding opportunities called Transforming Transportation in Los Angeles that will tackle the city's seemingly intractable transportation challenges.

Read full article:

https://sustainablela.ucla.edu/news/new-sustainable-la-grand-challenge-programming-gains-traction-focus-first-transportation

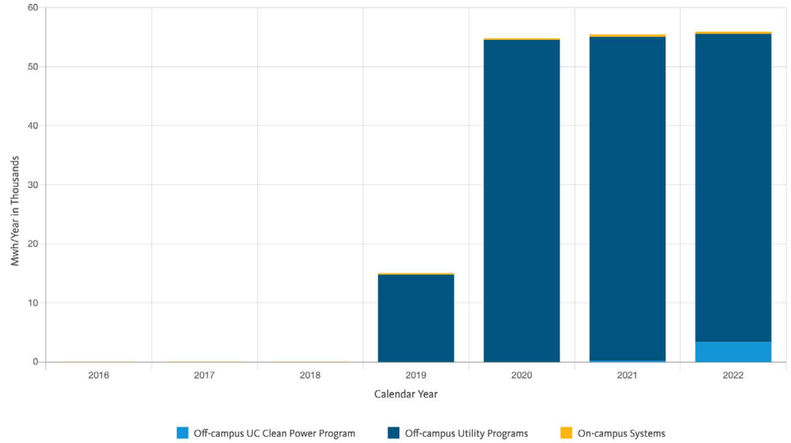
CLIMATE PROTECTION – EMISSIONS



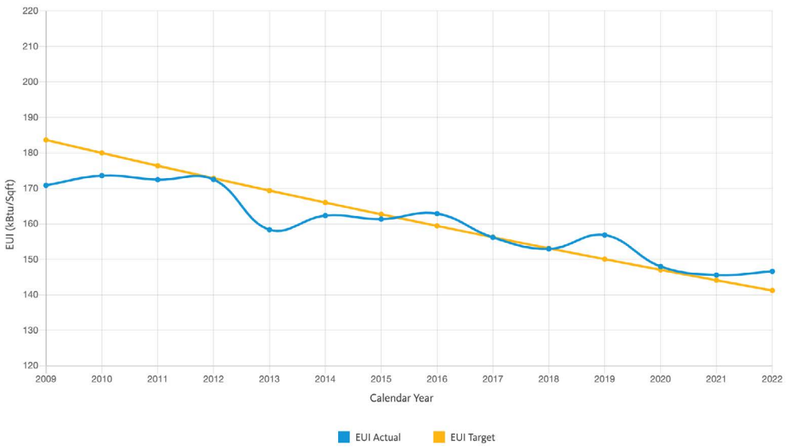
** Interim goals for 2030, 2035 and 2040 to be developed through fossil-free planning that is underway at each location*
*** 90% direct reduction of total emissions from 2019 levels with residual emissions negated by carbon removal*

Scope 2 emissions increased by almost 24% due to increased campus demand from new construction coming online as well as decreased electrical production in the cogeneration plant due to a steam turbine generator being offline for several months of repairs.

ENERGY – RENEWABLE ENERGY USE



ENERGY USE INTENSITY (EUI)



UCLA saw an increase in its EUI in 2022.

FOOD

12%
of food and beverage purchases met sustainability criteria ($3.1M)

37%
of food and beverage purchases were plant-based ($9.4M)

UCLA Dining increased its plant-based purchasing percentage in fiscal year 2022–23. It also increased spending on sustainable food and beverages by over $1.2 million from the previous year, representing an increase of over 100%. UCLA Housing's sustainability and dining teams partnered with a Sustainability Action Research (SAR) team to find ways to improve sustainable food tracking. The teams implemented some of the SAR team's findings when compiling this year's data, allowing for previously missed sustainable items to be tracked.

GREEN BUILDING

During fiscal year 2022–23, UCLA's Green Building program had 26 LEED projects in design or construction, including several community-oriented off-campus buildings, such as the historic Nimoy Theater and the James Lawson, Jr. Worker Justice Center at MacArthur Park. Gold certifications are anticipated soon for three campus buildings, while the restored Paul Revere Williams-designed Botany Building is seeking Platinum certification. In Westwood Village, four new LEED Gold apartment buildings opened to welcome 2,300 students, and several campus lab remodels will soon begin their design reviews.

17 Platinum, 33 Gold and 11 Silver

- Total number of LEED certifications

PROCUREMENT

$6.7M
green spend on electronics (72%)

$1.4M
green spend on cleaning supplies (51%)

$5M
green spend on indoor office furniture (95%)

$1.9M
green spend on office supplies 65%)

Green spend is defined as meeting preferred or minimum criteria in UC's Sustainable Procurement Guidelines.
Suppliers reporting: Electronics (9), Furniture (4), Cleaning supplies (6), Office supplies (3).
UC Systemwide Spend Analytics category data provided by CalUSource.

The University reports on green spend, as defined in the Sustainable Procurement Guidelines, and reached out to suppliers for spend data in four product categories for this year's report.

SUSTAINABLE BUILDING & LABORATORY OPERATIONS

26
total assessed green laboratories

Three new lab remodels are nearing completion and targeting LEED Gold certification (Boelter Robotics, Reed B-Level Labs and Molecular Sciences third floor). A fourth, in the recently restored Botany Building, is operating in accordance with Green Labs criteria.

TRANSPORTATION

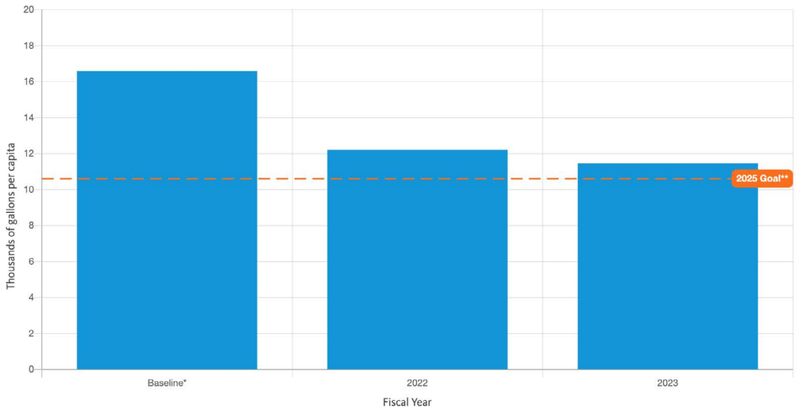
74%
of students and employees are utilizing alternative commuting methods

79%
of all vehicles acquired in 2023 were electric (zero-emission), plug-in hybrid or clean transportation fuel

359
EV charging ports

Scope 3 commute emissions rose from approximately 31,000 metric tons in 2021 to 44,000 metric tons in 2022 due to a greater return to campus by the commuting population (the telecommute rate dropped to 25.9%).

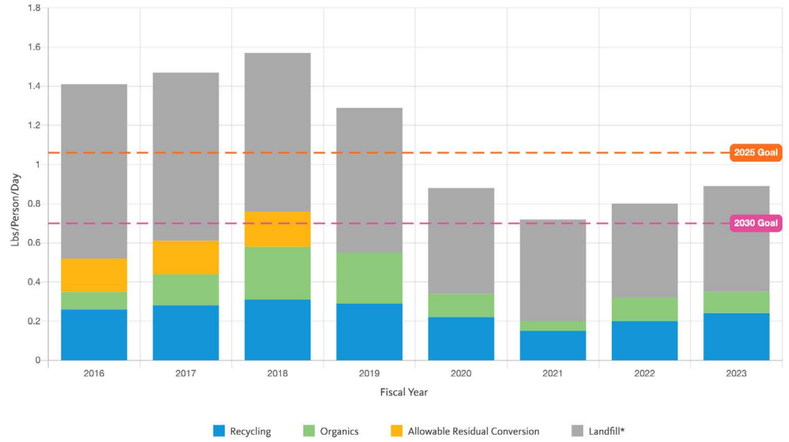
WATER



**Based on a 3-year average of fiscal years 2005-08*
***2025 goal is a 36% reduction from baseline*
Includes UCLA Health

Water use was lower than pre-pandemic levels despite increases in campus square footage and population. In addition to ongoing water reclamation efforts, increased water conservation and turf conversions continued to reduce water use in landscaping. Native and drought-adapted plantings at both the newly restored Botany Building and Rosenfeld Hall help reduce water demand for irrigation and reduce site runoff volumes, while both projects also detain captured stormwater to partially supply irrigation needs.

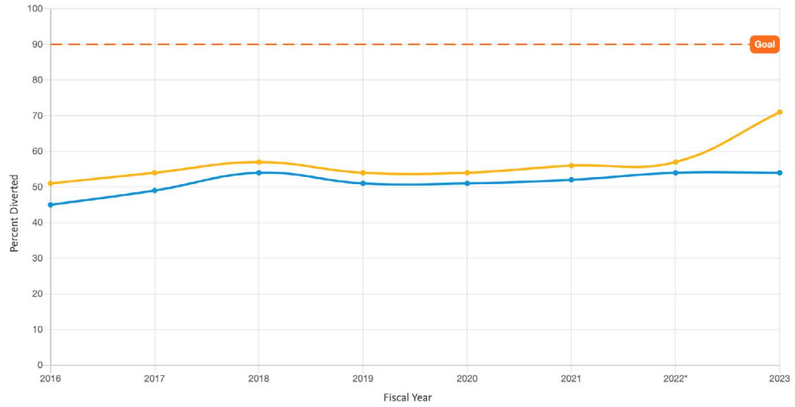
ZERO WASTE – GENERATION



**These numbers might include a small amount of incineration that is being phased out.*

The overall municipal solid waste (excluding construction and demolition) generated at UCLA in fiscal year 2022–23 increased by nearly 2,000 tons, a 13.96% increase from fiscal year 2021–22. The number of students and staff on campus increased due to continuing reintegration as the campus moves further out of the COVID pandemic adjustments. The 2022–23 year also saw an unusual influx of heavy rain periods, causing a mixture of water with the municipal solid waste (excluding construction and demolition) on campus. This inflates the weight in any open-top bins.

ZERO WASTE – DIVERSION



**Waste incineration was counted as diversion prior to July 2022.*

While the overall municipal solid waste (excluding construction and demolition) increased at UCLA in fiscal year 2022–23, the percentage of diverted materials increased in conjunction with landfill items to maintain the diversion rate of 54% on campus (excluding construction and demolition) from 2021–22 to 2022–23. The efforts to ensure all landfill bins on-site are paired with a recycle and/or compost bin likely played a key role in informing users of sorting methods and increasing access to recycling and compost sorting locations.

AWARDS

In 2022, the Association for the Advancement of Sustainability in Higher Education announced that UCLA ranked fourth internationally in its tally of the Green Buildings Impact Area for STARS certification.

A full list of awards is featured on the UC Office of the President's website.

UNIVERSITY OF CALIFORNIA

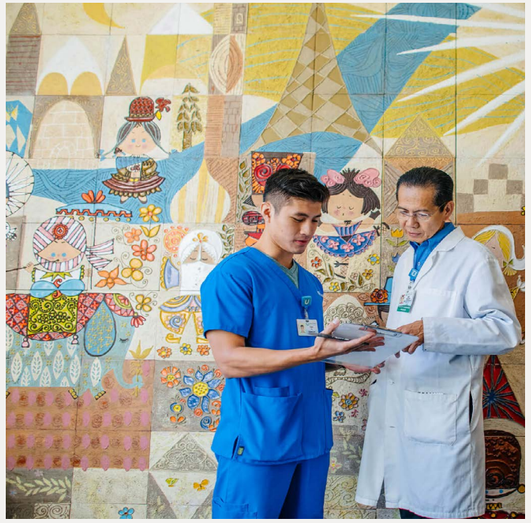
UCLA Health

UCLA Health is committed to achieving the University's sustainability goals. As UCLA Health strives to meet its waste reduction goal of 25 pounds per adjusted patient day, the health center implemented a blue wrap recycling program to collect sterile surgical wrap and increased collection of single-use devices to promote a circular economy.

In fiscal year 2022–23, the UCLA Health dining commons installed public hydration stations to provide water access to all guests and decrease the use of disposable water bottles. The UCLA Health zero waste website went live with information for staff to better divert their specialty and universal waste from the landfill. Stakeholders convened to evaluate nitrous oxide usage, committing to reduce usage by 5%, further assess and expand the transition from piped infrastructure to canister and identify operating room energy reduction opportunities.

The Food Services and Nutrition team continues to innovate its procurement practices, achieving 34% sustainable food spend in fiscal year 2022–23. UCLA Santa Monica Medical Center staff commute to work with zero-emission vehicles — 174 more staff than the previous fiscal year, supported by efforts to increase EV charging stations. UCLA Health waste diversion remained steady at 26%, while efforts to increase recycling resulted in 287,000 more pounds of recycling. Per the White House/HHS Climate Pledge, UCLA Health's Sustainability Dashboard reports on greenhouse gas emissions in relation to its goal to reduce emissions 50% by 2030. UCLA Health is working toward an equity-centered climate resiliency plan by the end of 2023 as an additional element of the White House/HHS Climate Pledge.

STORIES



UCLA Health Climate Action Fellow Proposes an Analysis To Reduce Emissions Related to Employee Commuting

UCLA Health's 2022–23 Climate Action Fellow evaluated employee commuting data to provide evidence of greenhouse gas emissions and a roadmap for increased alternative commuting support.

Read full article:

https://www.uclahealth.org/sustainability/get-involved/sustainability-blogs/alternative-transportation

UCLA Health Operating Rooms Are Being Retrofitted With New LED Lighting To Reduce Carbon Emissions

In an effort to reduce greenhouse gas emissions from the operating rooms, UCLA Health performed an assessment to retrofit lighting fixtures with new LED bulbs. The first two operating rooms to undergo lighting updates will save an estimated 5.6 metric tons of carbon dioxide equivalent per year. It is expected that, once completed, the project will save 45.5 metric tons of carbon dioxide equivalent annually.

Read full article:

https://www.uclahealth.org/sustainability/get-involved/sustainability-blogs/or-lighting

FOOD

34%
of food and beverage purchases met sustainability criteria ($3.5M)

22%
of food and beverage purchases were plant-based ($2.3M)

UCLA Health Food Services and Nutrition increased sustainable food procurement by over $1 million. The Food Services team is dedicated to sourcing sustainable and antibiotic-free meat, fish and poultry, such as Monterey Bay Aquarium sustainable salmon. Plant-based food procurement is also an area of focus — UCLA Health's salad bar reopened in the dining commons with no meat options. Plant-forward menu options include alternative meats and vegan milk offered in the cafe.

TRANSPORTATION

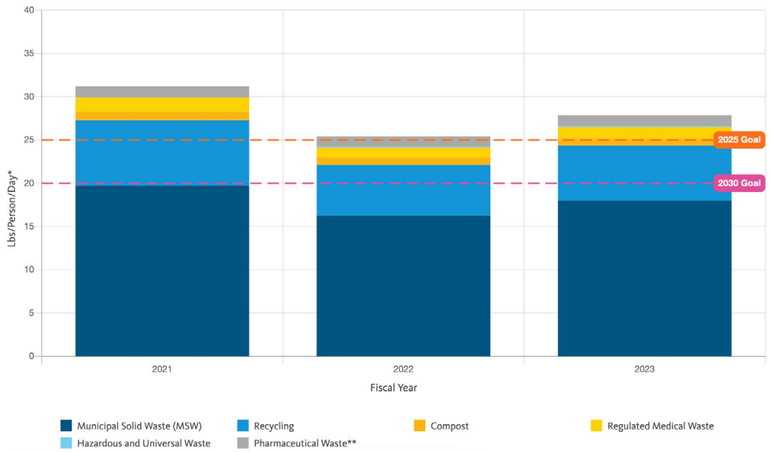
36%
of students and employees are utilizing alternative commuting methods

18
EV charging ports

UCLA Health Transportation is increasing awareness of alternative transportation benefits offered by UCLA. Employees who commute by methods other than single-occupancy gasoline vehicles can benefit from reduced bus fares, bicycle reimbursements and carpool parking credits. In fiscal year 2022–23, UCLA Health Santa Monica Medical Center saw a 132% increase in employees commuting with zero-emission vehicles (ZEV). Compared with fiscal year 2021–22, 174 more employees are driving ZEVs — reducing carbon dioxide emissions by over 1.3 million pounds per year.

UCLA Health's vehicle acquisitions are reported by campus.

ZERO WASTE – GENERATION



**Per capita figures are calculated using Adjusted Patient Day (APD)*
***Data provided if not counted in other waste streams*

UCLA Health implemented programs in fiscal year 2022–23 to increase recycling by over 287,000 pounds. Efforts such as reprocessing medical devices, laundering isolation gowns, and cardboard and pallet recycling contributed to the gains. These efforts have saved over 85 metric tons of carbon dioxide equivalent from being emitted into the atmosphere. In fiscal year 2022–23, UCLA Health accumulated 28 total pounds of waste per adjusted patient day and is working toward a goal of 25 pounds per adjusted patient day.

AWARDS

2023 Practice Greenhealth ENVIRONMENTAL EXCELLENCE AWARDS

UCLA Health was the proud recipient of many Practice Greenhealth awards in 2023.

A full list of awards is featured on the UC Office of the President's website.

COMBINED DATA

Progress on the following policy areas for this Health System are reported by the campus location:

- Emissions
- Renewable Energy
- Energy Use Intensity
- Water
- Green Building

UNIVERSITY OF CALIFORNIA

Merced

UC Merced continues to make great strides to build on its culture of sustainability. Efforts are underway to engage a consultant to assess existing fossil fuel-based systems on campus.

UNIVERSITY OF CALIFORNIA MERCED

The consultant will develop strategies the campus can adopt to transition existing systems to electric and eliminate the use of fossil fuels in future operations. UC Merced also recently installed electric vehicle charging on-site, increasing the campus's capacity to accommodate the transition to clean vehicle use for community members.

The campus is planning for and designing a medical education building that will target LEED Platinum certification. This building will be all-electric, prioritizing in the design a shade structure to reduce energy consumption and a smart facade to avoid excess solar heat gain and glare. The building will also include infrastructure to accommodate the installation of a photovoltaic system.

An infrastructure and utility master plan for future campus expansion is also in progress. Planned efforts for the phased expansion will evaluate the campus utility capacity and include strategies to support the electrification of the next phase of campus development. The concepts will also include consideration of on-site renewable energy and electrical and thermal energy storage.

UC Merced is also prioritizing the assessment of existing on-site infrastructure to eliminate waste. Scaling and increasing centralized waste locations has been essential to establishing the infrastructure needed to support zero waste on campus. The Pavilion and Dining Commons transitioned to reusable dishware to reduce waste, cut costs and enhance the overall dining experience.

UC Merced will also launch an on-site composting program utilizing green waste. The program will serve as a demonstration site for student learning and support faculty research. It will also reduce the amount of compost purchased by the campus and expenses associated with green waste hauling fees. Students will be a vital part of the program.

Additionally, the campus is exploring establishing nature trails on campus that will give students an opportunity to enjoy the outdoors, highlight native plant species and provide areas of respite for animals and insects to help build biodiversity on campus.

STORIES

Experimental Smart Farm at UC Merced Integrates Fossil-free Technology

UC Merced's Experimental Smart Farm enables experiments, such as use of a state-of-the art electric tractor and study of agrivoltaics to generate shade and renewable energy via solar voltaic panels.

Read full article:

https://news.ucmerced.edu/news/2023/farming-data-uc-merced-students-spend-summer-working-crops-and-spreadsheets

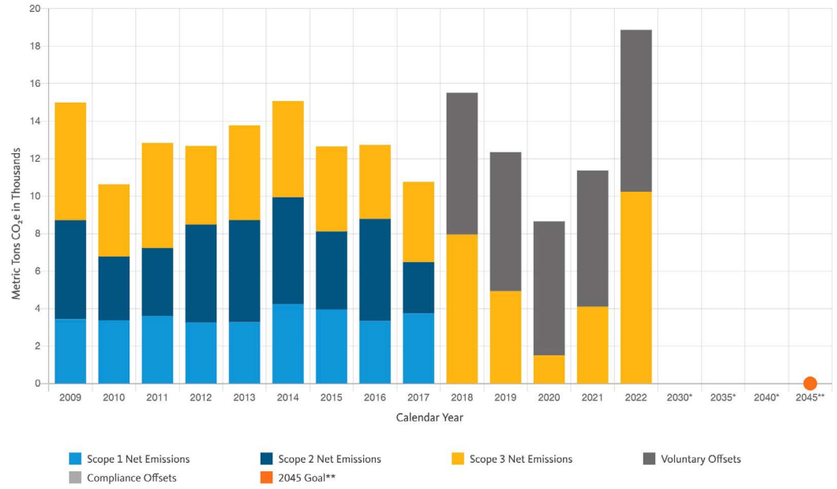
UC Merced Researchers Receive State-funded Grants To Spur Climate Action

Four researchers at UC Merced received grants stemming from a historic partnership between UC and the state of California. The projects — focused on improving community preparedness for emergency evacuation using zero-emission vehicles, increasing publicly available tools for climate-smart seed sourcing for reforestation, developing new equity-centered water planning tools and providing decision support for optimal benefits from California's methane policy — respond to the call for innovative proposals to support California's climate action.

Read full article:

https://news.ucmerced.edu/news/2023/university-awards-over-80-million-state-funded-grants-spur-climate-action

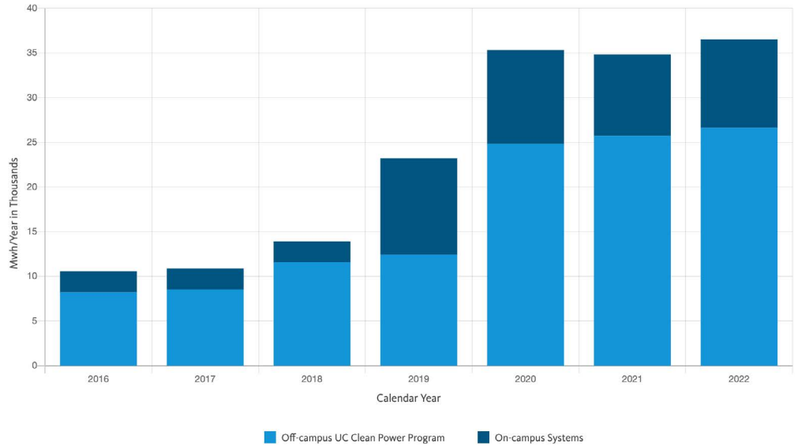
CLIMATE PROTECTION – EMISSIONS



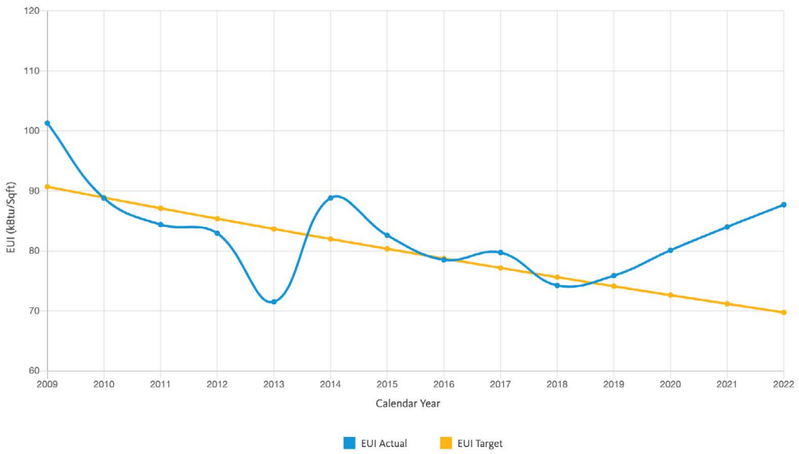
** Interim goals for 2030, 2035 and 2040 to be developed through fossil-free planning that is underway at each location*
*** 90% direct reduction of total emissions from 2019 levels with residual emissions negated by carbon removal*

UC Merced continues to remain a carbon neutral campus for scopes 1 and 2 emissions with a redirected focus on investing in projects that support direct emission reductions for current fossil fuel systems. Planning efforts are underway to assess the electrification of future campus development.

ENERGY – RENEWABLE ENERGY USE



ENERGY USE INTENSITY (EUI)



UC Merced saw an increase in its EUI in 2022.

FOOD

24%
of food and beverage purchases met sustainability criteria ($1.7M)

24%
of food and beverage purchases were plant-based ($1.7M)

UC Merced has achieved plant-based spend of 24% and sustainable food spend of 24%. While UC Merced's plant-based and sustainable food spend slightly decreased in fiscal year 2022–23 after surpassing the systemwide goal of 25% in fiscal year 2021–22, campus dining operations continue to prioritize sustainable food purchases.

GREEN BUILDING

The Medical Education Building is in the planning and design phase with a prioritization in energy-efficient design to include a shade structure to reduce energy consumption and infrastructure to accommodate photovoltaic technology on the roof. The building is expected to be a stand-alone all-electric LEED Platinum building.

19 Platinum, 11 Gold and 2 Silver

- Total number of LEED certifications

PROCUREMENT

$324M
green spend on electronics (49%)

$311K
green spend on cleaning supplies (77%)

$251K
green spend on indoor office furniture (99%)

$32K
green spend on office supplies (69%)

Green spend is defined as meeting preferred or minimum criteria in UC's Sustainable Procurement Guidelines.
Suppliers reporting: Electronics (5), Furniture (2), Cleaning supplies (4), Office supplies (3).
UC Systemwide Spend Analytics category data provided by CalUSource.

The University reports on green spend, as defined in the Sustainable Procurement Guidelines, and reached out to suppliers for spend data in four product categories for this year's report.

SUSTAINABLE BUILDING & LABORATORY OPERATIONS

25
total assessed green laboratories

The Sustainability Office worked with researchers and postdoctoral researchers to support Green Lab certifications. Nine labs were certified this past year, and additional certifications are underway.

TRANSPORTATION

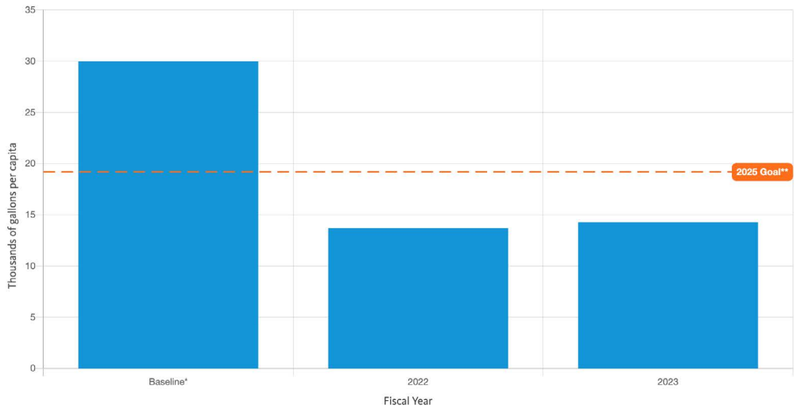
49%
of students and employees are utilizing alternative commuting methods

50%
of all vehicles acquired in 2023 were electric (zero-emission), plug-in hybrid or clean transportation fuel

34
EV charging ports

Scope 3 emissions substantially increased as additional data was retrieved to inform calculations. Continued assessment of this year's and past years' emissions output will be necessary to ensure the campus has captured all of its scope 3 travel and commuting emissions.

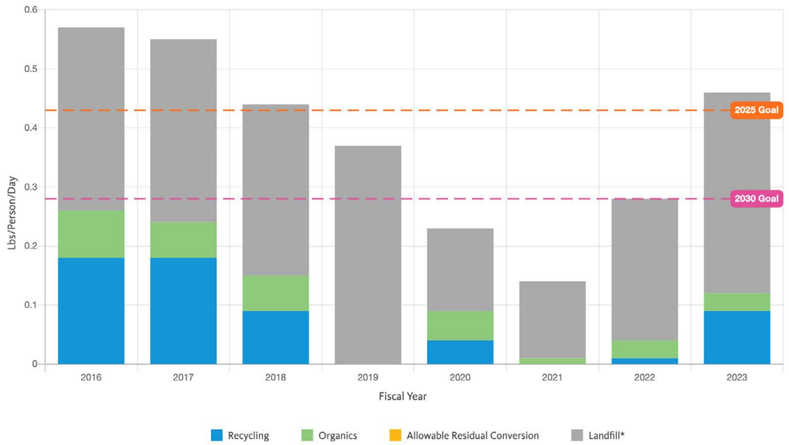
WATER



**Based on a 3-year average of fiscal years 2005-08*
***2025 goal is a 36% reduction from baseline*

As the campus continues to grow, water usage has increased. The campus engages in outreach to students to increase awareness of practices they can implement to reduce on-site water consumption.

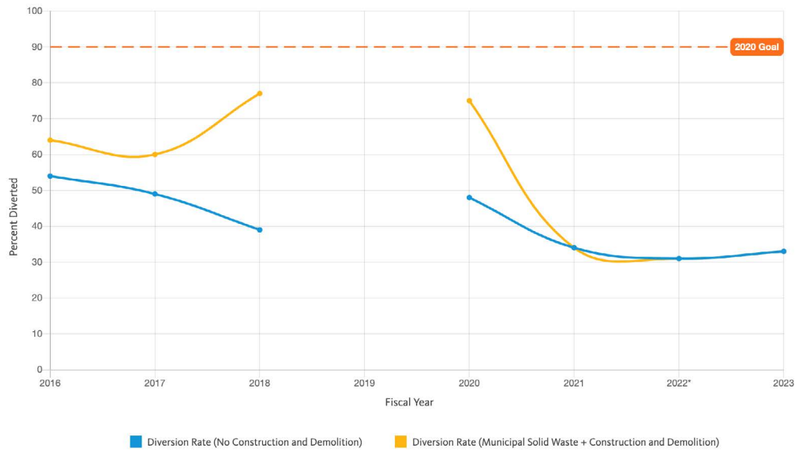
ZERO WASTE – GENERATION



**These numbers might include a small amount of incineration that is being phased out.*

UC Merced observed an increase of 157 tons of waste sent to the landfill compared with fiscal year 2021–22. This was largely due to a return to normal business operations.

ZERO WASTE – DIVERSION



**Waste incineration was counted as diversion prior to July 2022.*
No data is available for 2019.

UC Merced diverted 33% of the waste generated on campus during the 2022–23 fiscal year (excluding construction and demolition waste), which represents a 2% increase in the waste diversion rate compared with the prior fiscal year. The total amount of waste diverted increased significantly, from 179 tons in 2021–22 to 269 tons in 2022–23.

AWARDS

UC Merced continues to remain a Platinum-rated institution under the Association for the Advancement of Sustainability in Higher Education. The campus was also awarded the Urban Land Institute's 2023 Americas Awards for Excellence for its 2020 master architect project. The program evaluates submissions on overall excellence, including achievements in marketplace acceptance, design, planning, technology, amenities, economic impact, management, community engagement, innovation and sustainability, among others.

A full list of awards is featured on the UC Office of the President's website.

UNIVERSITY OF CALIFORNIA

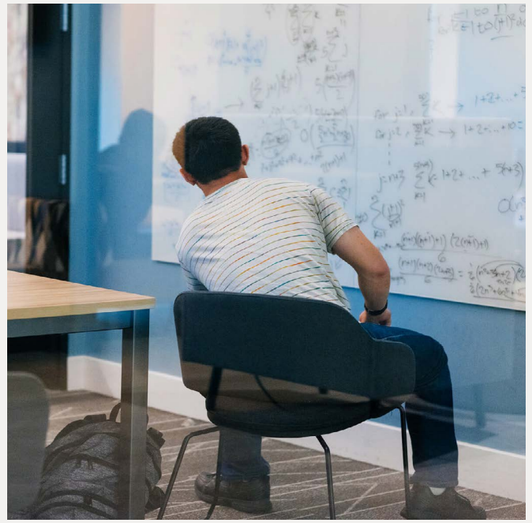
Riverside

UC Riverside returned to in-person classes for the first full year since the outbreak of the COVID-19 pandemic, bringing life to campus in many new ways.

The Student Success Center, one of the newest buildings on campus, gained national recognition and awards from multiple organizations, including the Design Build Institute of America's National Award of Excellence. The first solar rooftop projects for the campus located on the Student Recreation Center South and the Student Services Building received the Rooftop Project of the Year Award from Solar Builder Magazine, and a new parking structure that achieved Parksmart certification at the Silver level was recognized by the International Parking & Mobility Institute with the 2023 Award of Excellence for Sustainable Design.

The bustling campus found renewed efforts in zero waste, alternative transportation and green labs, and broke ground on several new building projects. In addition, the total waste generated per person was reduced to 0.5 pounds. These efforts were bolstered by the addition of two California Climate Action Corps fellows through the governor's California Volunteers office. Remote work adoption, new student housing and electric vehicle (EV) adoption all helped reduce commute emissions compared to pre-pandemic levels. Green Labs launched an incentive program that provided up to $2,500 per lab for more efficient lab equipment. Three major campus building projects commenced, including the School of Business New Building, the Student Health and Counseling Center, and the School of Medicine Education Building II — two of which include rooftop solar photovoltaics.

STORIES



Study Ties Fracking to Another Type of Shaking

New research confirms fracking causes slow, small earthquakes or tremors, whose origin was previously a mystery to scientists. The tremors are produced by the same processes that could create large, damaging earthquakes.

Read full article:

https://news.ucr.edu/articles/2023/08/10/study-ties-fracking-another-type-shaking

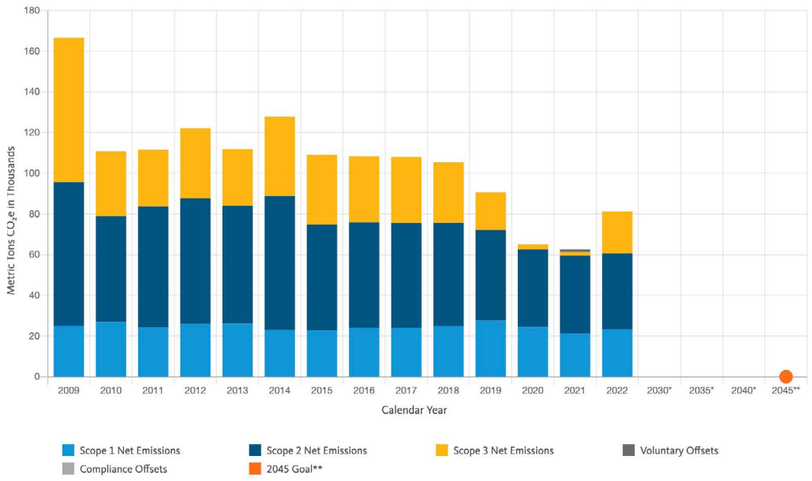
NSF-funded Project Aims To Enhance STEM Graduate Training in Sustainable Transportation

The University of California Riverside received a $3 million grant from the National Science Foundation to train STEM graduate students to conduct research focused on sustainable transportation, with the aim to speed up the transition to low-carbon fuels, such as electricity and hydrogen.

Read full article:

https://news.ucr.edu/articles/2022/07/05/nsf-funded-project-aims-enhance-stem-graduate-training-sustainable

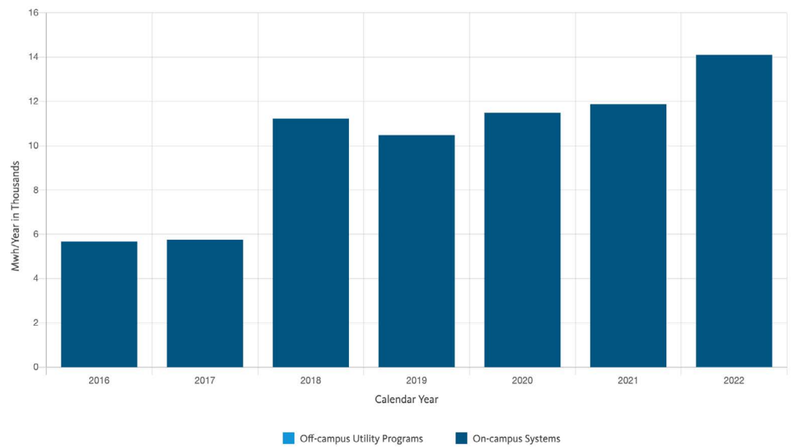
CLIMATE PROTECTION – EMISSIONS



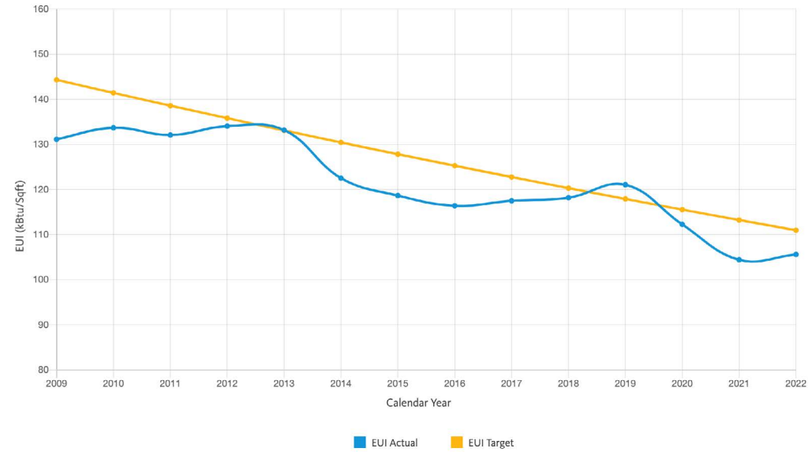
* Interim goals for 2030, 2035 and 2040 to be developed through fossil-free planning that is underway at each location
** 90% direct reduction of total emissions from 2019 levels with residual emissions negated by carbon removal

In 2022, overall emissions increased by 32% from the previous year. This was driven primarily by the lifting of COVID restrictions resulting in an increase in commuting and air travel. Natural gas usage on campus remained steady compared with the previous year for an increase of 2.2% in scope 1 emissions. Scope 2 emissions decreased by 2.2% even while electricity usage increased due to Riverside Public Utilities acquiring additional renewable energy providers.

ENERGY – RENEWABLE ENERGY USE



ENERGY USE INTENSITY (EUI)



UC Riverside saw a minor increase in its EUI in 2022.

FOOD

3%
of food and beverage purchases met sustainability criteria ($201K)

30%
of food and beverage purchases were plant-based ($2.3M)

The campus purchased 30% plant-based foods in fiscal year 2022–23, representing a 0.6% increase from the previous year. The campus also purchased 2.6% sustainable food products this year, a 2.7% decrease from the year prior. The fluctuation is due in part to limited operations at some dining halls owing to staffing and sales challenges.

GREEN BUILDING

In fiscal year 2022–23, the campus initiated three new major campus building projects: the School of Business New Building, the Student Health and Counseling Center, and the School of Medicine Education Building II. Plans for two of the projects call for incorporating solar photovoltaic cells on their rooftops, adding to the campus's current solar photovoltaic capacity of 8.5 megawatts.

1 Platinum, 11 Gold, 2 Silver and 1 Certified

- Total number of LEED certifications

PROCUREMENT

$1.2M
green spend on electronics (35%)

$437K
green spend on cleaning supplies (62%)

$942K
green spend on indoor office furniture (98%)

$130K
green spend on office supplies (52%)

Green spend is defined as meeting preferred or minimum criteria in UC's Sustainable Procurement Guidelines.
Suppliers reporting: Electronics (7), Furniture (3), Cleaning supplies (5), Office supplies (3).
UC Systemwide Spend Analytics category data provided by CalUSource.

The University reports on green spend, as defined in the Sustainable Procurement Guidelines, and reached out to suppliers for spend data in four product categories for this year's report.

SUSTAINABLE BUILDING & LABORATORY OPERATIONS

30
total assessed green laboratories

In fiscal year 2022–23, UC Riverside Green Labs expanded by growing its student staff, implementing the Fisher incentive program and overhauling its approach to assessments. This enabled the group to increase overall engagement in labs, workshops and assessments. In its first year, the Fisher incentive program made $10,000 available to assist labs in switching equipment to more energy-efficient alternatives.

TRANSPORTATION

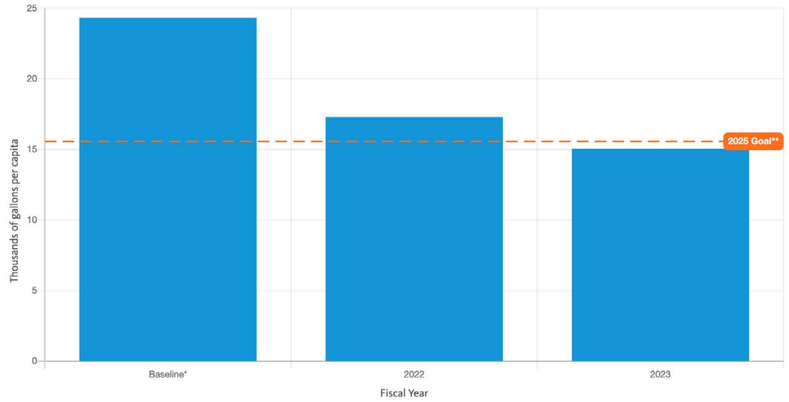
In the 2022–23 fiscal year, UC Riverside's single-occupancy-vehicle (SOV) commute rate did not return to pre-pandemic levels despite a full return to campus activities, plateauing at 44% below the 2019 SOV commute rate. This is a welcome sign that remote work arrangements, increased student housing and electric vehicle (EV) adoption are all helping reduce commute emissions. In addition, the Fleet department reported 59% of new vehicle purchases were alternative-fuel vehicles, including 20 all-electric carts and three EVs.

66%
of students and employees are utilizing alternative commuting methods

59%
of all vehicles acquired in 2023 were electric (zero-emission), plug-in hybrid or clean transportation fuel

173
EV charging ports

WATER

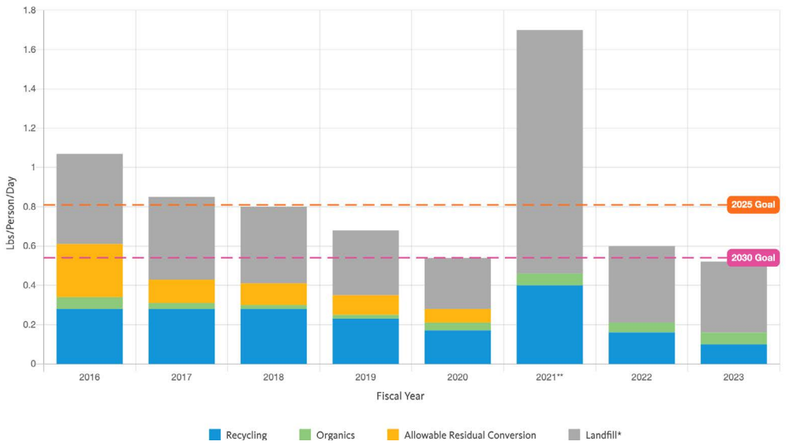


**Based on a 3-year average of fiscal years 2005-08*
***2025 goal is a 36% reduction from baseline*

UC Riverside exceeded the systemwide potable water reduction goal by 2 percentage points in fiscal year 2022–2023, coming in at 38%. Factors affecting water use included a return to in-person classes, full capacity at residential housing and the addition of new campus buildings. Total potable water use from Riverside Public Utilities and Coachella Valley Water District were gathered from EnergyCAP. Gage Canal water was not included as it is agricultural (nonpotable) water used at the Agricultural Experiment Station.

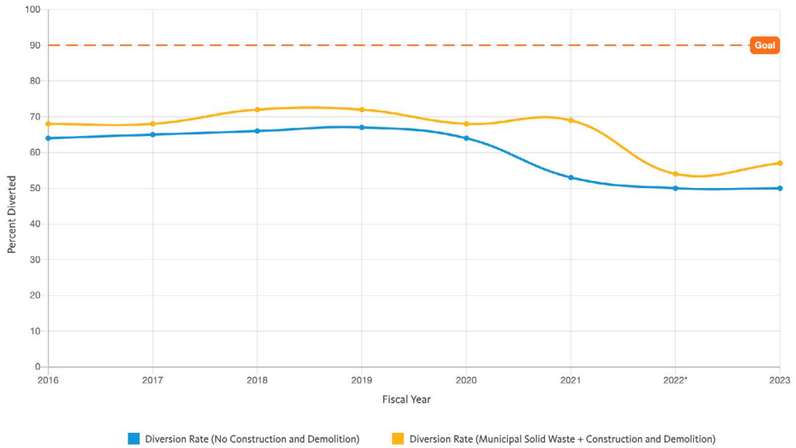
ZERO WASTE – GENERATION

In fiscal year 2022–23, UC Riverside's total waste generated per capita was 0.52 pounds per person per day, 51% below the baseline year, thus reaching the systemwide 2030 target early despite a full return to in-person campus activities. Multiple retail food establishments and dining halls began ramping up dining operations near the end of the fiscal year, which may have impacted the amount of campus waste generated.



*These numbers might include a small amount of incineration that is being phased out.
**In 2021, waste generation per weighted campus user spiked due to pandemic-related closures as base-level operations continued but the number of users on campus decreased.*

ZERO WASTE – DIVERSION



Waste incineration was counted as diversion prior to July 2022.

In fiscal year 2022–23, the campus increased its diversion rate by 3% over the previous year, bringing it to 57%. UC Riverside worked with its soft drink provider to replace single-use plastic water bottles with aluminum bottles, eliminating 68% of single-use plastic beverage bottles used on campus.

AWARDS

UC Riverside's Student Success Building received multiple recognitions this year, including a National Award of Excellence and Merit from the Design Build Institute of America and first place in Keep Riverside Clean and Beautiful's annual beautification awards. UC Riverside was also recognized for its first solar rooftop installations, on the Student Recreation Center South and the Student Services Building, by the Solar Builder Magazine's Project of the Year Awards.

A full list of awards is featured on the UC Office of the President's website.

UNIVERSITY OF CALIFORNIA

San Diego

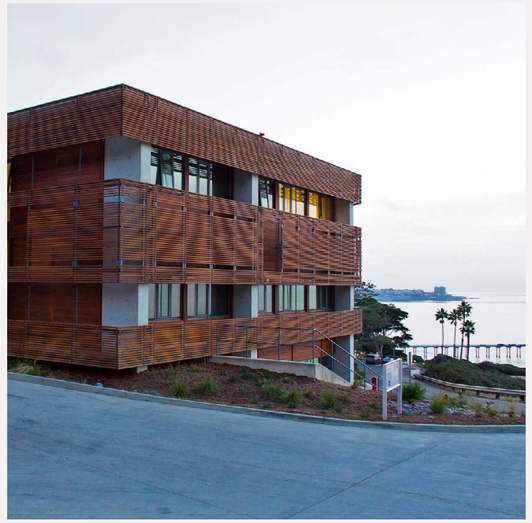
UC San Diego

Educating the community on its various energy, climate and sustainability projects and initiatives, UC San Diego hosted five virtual Sustainability Town Halls on a broad range of topics, including strategic energy, hydrogen energy, water, zero waste, sustainable landscapes and green building.

The campus continued to lead in sustainable design and construction. Senior Director Walt Kanzler was named a LEED fellow, joining the ranks of fewer than 300 LEED fellows around the world. North Torrey Pines Living and Learning Neighborhood received multiple design awards, such as the Platinum Level Touchstone Award by The Center for Health Design and recognition as ASID Outcome of Design Award Winner and Optimizer and Fast Company Honoree for its 2022 Innovation by Design Awards under the Best Educational Design of 2022. North Torrey Pines Living and Learning and the Marine Conservations and Technology Facility received Platinum and Silver LEED ratings, respectively.

University Centers launched an educational campaign, Meatless Monday, in the winter 2023 to guide community members in choosing more sustainable food options. Then in spring, it hosted the cherished tradition called the Sustainable Food Expo. After having taken a hiatus during the pandemic, its return set a record high in attendance.

STORIES



Fighting Climate Change Isn't an Automatic Win for Environmental Justice

A study conducted by the UC San Diego Scripps Institution of Oceanography and School of Global Policy and Strategy shows that while reducing greenhouse gases will likely improve overall air quality, reducing emissions could maintain or even exacerbate environmental inequality in years to come.

Read full article:

https://today.ucsd.edu/story/fighting-climate-change-isnt-an-automatic-win-for-environmental-justice

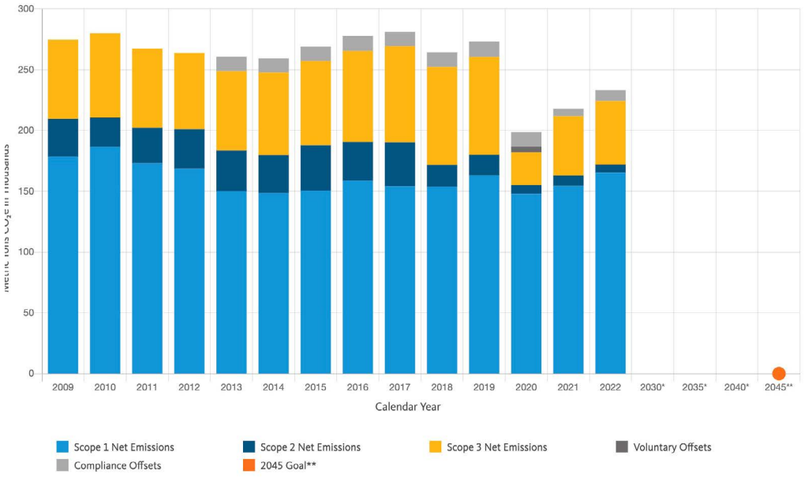
Reimagining the Academic Calendar for a Changing Climate

Researchers from UC San Diego reimagined the academic calendar through a study examining energy reductions by shifting the end of fall term to align with Thanksgiving break. If implemented at all undergraduate UC campuses, this strategy would produce a significant reduction of nearly 50,000 tons of carbon dioxide equivalent in the annual carbon footprint of the system, an impact approximately equal to decarbonizing all UC-owned vehicles.

Read full article:

https://www.sciencedirect.com/science/article/pii/S2666789423000077?via%3Dihub

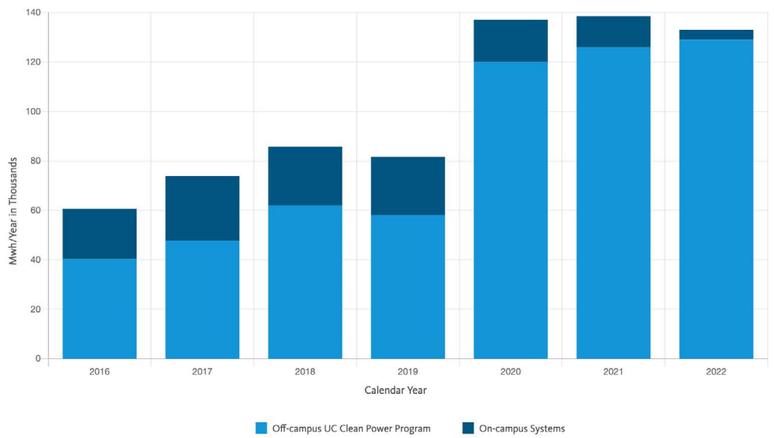
CLIMATE PROTECTION – EMISSIONS



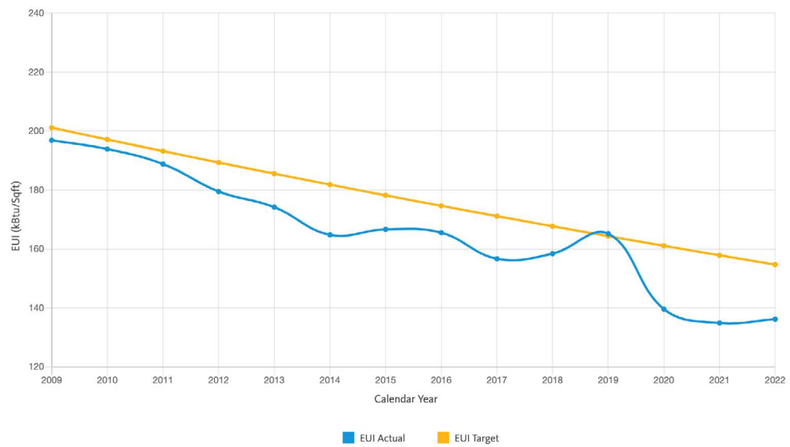
** Interim goals for 2030, 2035 and 2040 to be developed through fossil-free planning that is underway at each location*
*** 90% direct reduction of total emissions from 2019 levels with residual emissions negated by carbon removal*

UC San Diego's overall emissions increased by 6%. In the prior year, unplanned gas turbine outages reduced scope 1 emissions. The campus returned to normal cogeneration operations in fiscal year 2022–23.

ENERGY – RENEWABLE ENERGY USE



ENERGY USE INTENSITY (EUI)



UC San Diego saw an increase in its EUI in 2022.

FOOD

18%
of food and beverage purchases met sustainability criteria ($4.2M)

23%
of food and beverage purchases were plant-based ($5.3M)

UC San Diego's sustainable food spend was affected by the loss of a major local bread supplier.

GREEN BUILDING

UC San Diego continues to excel in sustainable design and construction, adding seven Platinum projects, one Silver project and one certified project this year. North Torrey Pines Living and Learning Neighborhood garnered several design awards.

11 Platinum, 28 Gold, 15 Silver and 4 Certified

- Total number of LEED certifications

PROCUREMENT

$3.7M
green spend on electronics (49%)

$791K
green spend on cleaning supplies (48%)

$1.7M
green spend on indoor office furniture (95%)

$273K
green spend on office supplies (41%)

Green spend is defined as meeting preferred or minimum criteria in UC's Sustainable Procurement Guidelines.
Suppliers reporting: Electronics (5), Furniture (3), Cleaning supplies (5), Office supplies (4).
UC Systemwide Spend Analytics category data provided by CalUSource.

The University reports on green spend, as defined in the Sustainable Procurement Guidelines, and reached out to suppliers for spend data in four product categories for this year's report.

SUSTAINABLE BUILDING & LABORATORY OPERATIONS

110
total assessed green laboratories

UC San Diego added four more certified green labs this year and continues to lead UC in total labs certified.

TRANSPORTATION

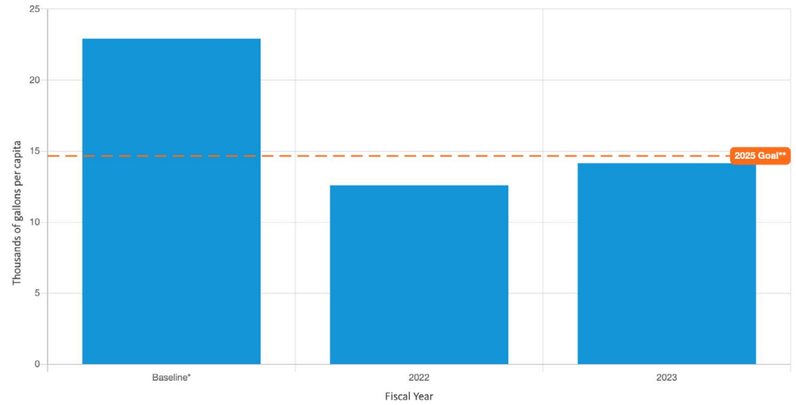
Telecommuting continued to positively impact emissions, along with the use of multi-occupant vehicles. Alternative commuting increased by approximately 30% from the pre-pandemic 2019 level.

72%
of students and employees are utilizing alternative commuting methods

45%
of all vehicles acquired in 2023 were electric (zero-emission), plug-in hybrid or clean transportation fuel

344
EV charging ports

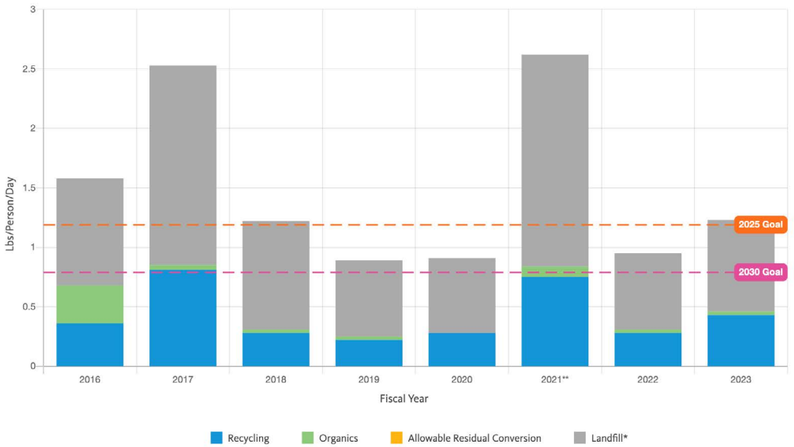
WATER



**Based on a 3-year average of fiscal years 2005-08*
***2025 goal is a 36% reduction from baseline*
Includes UCSD Health La Jolla Medical Center

Potable water use per capita rose due to increased potable water use in cooling towers this fiscal year.

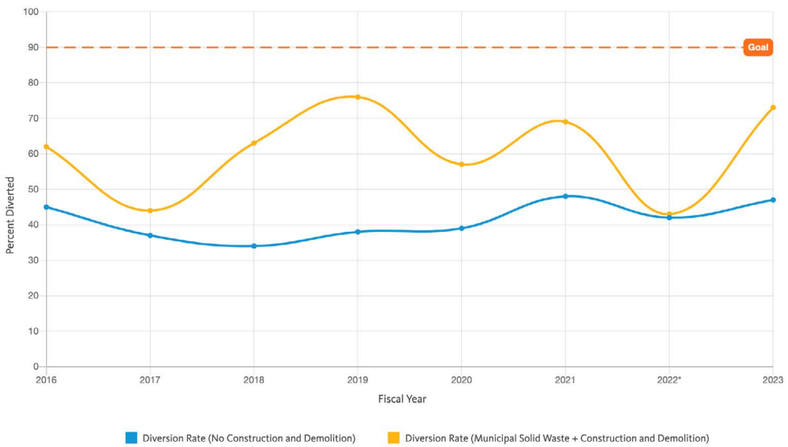
ZERO WASTE – GENERATION



**These numbers might include a small amount of incineration that is being phased out.*
***In 2021, waste generation per weighted campus user spiked due to pandemic-related closures as base-level operations continued but the number of users on campus decreased.*

UC San Diego's Return to Learn programming saw an increase in activity on campus that impacted waste generation in both recycling and landfill quantities.

ZERO WASTE – DIVERSION



**Waste incineration was counted as diversion prior to July 2022.*

UC San Diego increased its recycling and reuse quantities which resulted in a waste diversion increase of 5% from the previous year.

AWARDS

Neighborhood Torrey Pines Living and Learning Neighborhood received the American Institute of Architects COTE Top Ten award for sustainable design excellence and the American Society of Interior Designers Outcome of Design award, and was a Fast Company honoree for its 2022 Innovation by Design awards under the Best Educational Design category.

A full list of awards is featured on the UC Office of the President's website.

UNIVERSITY OF CALIFORNIA

San Diego Health

UC San Diego Health, named Top 25 in Environmental Excellence in the U.S., is committed to being fossil-free by 2045 and is focused on building community health and resilience through advancing sustainability.

In 2022, the organization was recognized by the Health Care Climate Council for leading the way in climate-smart health care through mitigation, resilience and leadership. A new outpatient pavilion, currently under construction, will reduce carbon intensity by over 90% and is designed to achieve a LEED Silver sustainability rating.

The organization developed a multiyear plan for energy-saving measures and reduced greenhouse gas emissions (GHGs) by migrating all 60 operating rooms from nitrous oxide central supply. This success follows elimination of desflurane, an anesthetic gas that is 2500 times more harmful to the atmosphere than carbon dioxide.

These efforts contribute to the White House/HHS Health Sector Climate Pledge, signed in 2022, to reduce GHGs by 50% by 2030 and create an equity-centered climate resilience plan to protect people, assets and services.

UC San Diego Health continued to decrease its total waste, surpassing the 2025 goal. By purchasing 99% EPEAT-certified electronics and imaging equipment, the organization received an EPEAT Purchaser Award. The organization increased the number of telehealth visits from fiscal year 2019–2020 by over 300%, reducing GHG emissions associated with patient travel. Electric vehicle charging is available in all public parking garages including 100 Level 2 chargers and 10 Direct Current fast chargers.

The inaugural medical director of sustainability, one of only 17 in the country, was named in 2022, a public facing sustainability website was launched and additional staff joined both the sustainability and energy teams. Staff and providers continue to engage through the Green Certifications Program for medical clinics, units, and offices and grass-roots initiatives.

STORIES

Modeling Sustainable Health Care at UC San Diego Health

UC San Diego Health is the only health care organization in the region with a program solely focused on sustainability. The organization is setting the bar when it comes to sustainable health care and was one of 50 health care institutions from over 15 countries to be named a 2022 Climate Champion.

Read full article:

https://today.ucsd.edu/story/modeling-sustainable-health-care-at-uc-san-diego-health

Hospitals Are Carbon Bombs. Some Are Trying To Change

UC San Diego Health successfully changed the nitrous oxide anesthesia delivery systems to reduce greenhouse gas emissions. Nitrous oxide is a potent greenhouse gas that can linger in the atmosphere for 114 years. Over the past two years, the organization reduced nitrous oxide waste by 68%, saving 1,400 metric tons of CO2e, equivalent to taking over 300 gas-powered cars off the road for one year.

Read full article:

https://www.politico.com/newsletters/the-long-game/2023/06/06/hospitals-are-carbon-bombs-theyre-trying-to-change-that-00100343

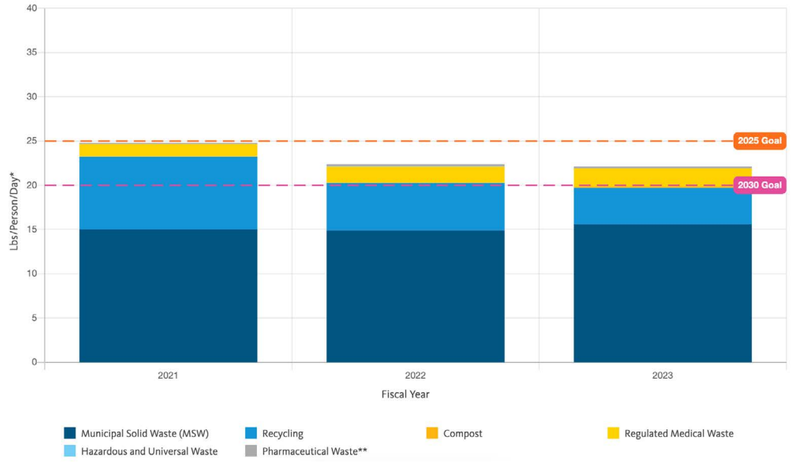
FOOD

14%
of food and beverage purchases met sustainability criteria ($1.0M)

19%
of food and beverage purchases were plant-based ($1.4M)

UC San Diego Health Food and Nutrition is committed to offering more plant-based entree and salad options on patient menus and in cafes, promoting SOUL food (food that is sustainable, organic, unprocessed and local). While the amount of meat purchased increased, the number of ounces of meat per meal decreased and the purchase of plant-based protein and dairy substitutes increased by 64%. As patient meals and retail services began to normalize following the pandemic, the organization increased its purchases and sales overall.

ZERO WASTE – GENERATION



**Per capita figures are calculated using Adjusted Patient Day (APD)*
***Data provided if not counted in other waste streams*

UC San Diego Health continued to decrease its total waste per adjusted patient day (APD) to 22 pounds, nearing the 2030 goal of 20 pounds per APD. Overall recycling numbers declined while solid waste, regulated medical waste and pharmaceutical waste increased alongside a 4% increase in patient days. Composting increased by 123% as a new vendor was brought on board. Hazardous waste decreased by over 35%.

AWARDS

2023 Practice Greenhealth TOP 25 ENVIRONMENTAL EXCELLENCE AWARD

UC San Diego Health was the proud recipient of many Practice Greenhealth awards in 2023, including the Top 25 Environmental Excellence Award.

A full list of awards is featured on the UC Office of the President's website.

COMBINED DATA

Progress on the following policy areas for this Health System is reported by the campus location:

- Emissions
- Renewable Energy
- Energy Use Intensity
- Transportation
- Water
- Green Building

UNIVERSITY OF CALIFORNIA

San Francisco

In fiscal year 2022–23, various groups across UCSF actively engaged staff and learners to support strong sustainability and climate action.

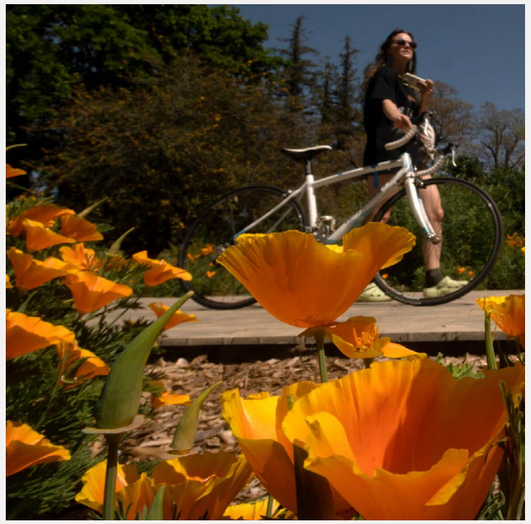
The Academic Senate hosted a town hall on sustainability titled "From Carbon Neutrality to Decarbonization — UCSF Opportunities" and a video was created to share broadly. Senior Vice Chancellor Erin Gore created the Fossil-Free Governance Committee to lead the $1.5 million state-funded decarbonization study.

Facilities Services implemented a SMART Labs project, LED lighting retrofits, metering and building controls. Facilities, Procurement and Sustainability partnered to expand the ultra-low-temperature freezer rebate program. UCSF Sustainability, Academic Senate and Transportation developed strategies to reduce business travel, increase the zero-carbon commute rate and install more electric vehicle charging stations. UCSF Real Estate designed a new hospital and research building to be 92% carbon-free while an all-electric parking garage and the Bayfront Medical Building will open in fiscal year 2024 with 100% clean power.

UCSF is the home of the UC Center for Climate, Health and Equity, which seeks to incorporate climate and health into the UC health curricula, and the EaRTH Center, which works to accelerate the discovery of harmful exposures and preventive solutions to improve health across the lifespan. In November 2022, UCSF staff made a presentation on taking action on climate to improve health" at the 27th United Nations Framework Convention on Climate Change.

Many UCSF stories are shared on the sustainability website. The Annual Sustainability Awards ceremony returned this year to celebrate the UCSF community members who remain committed to sustainability despite the pandemic. Last, the second annual Waste to Art Competition was held to highlight the problems of waste in health care and academia.

STORIES



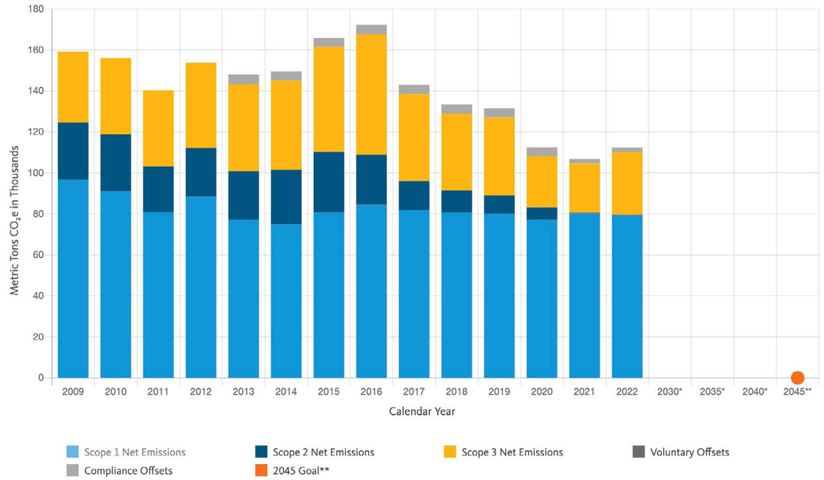
UCSF Bicycle and Micromobility Plan

In its commitment to build sustainable practices into all operations, UCSF created its first Bicycle and Micromobility Plan. The plan serves as a blueprint to help the campus increase its bicycle and micromobility programming, raise the proportion of people using these modes and improve access to these options. The plan's coordinating committee included 20 representatives from across the University and surveyed over 850 stakeholders.

Read full article:

https://ucsf.app.box.com/s/mevqd1qhl0a4rv4m3k34r2m9ujbx63jk

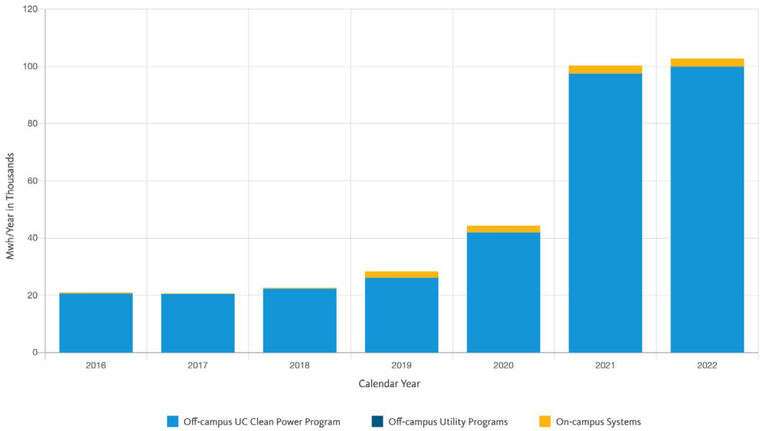
CLIMATE PROTECTION – EMISSIONS



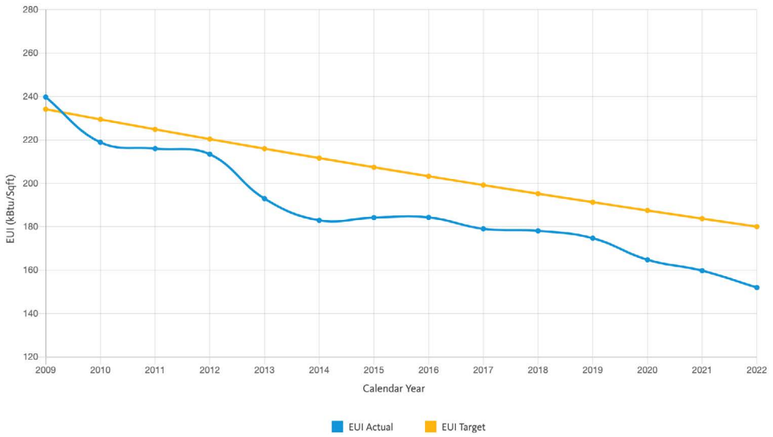
** Interim goals for 2030, 2035 and 2040 to be developed through fossil-free planning that is underway at each location*
*** 90% direct reduction of total emissions from 2019 levels with residual emissions negated by carbon removal*

Scope 1 emissions decreased in calendar year 2022 while, with the return to campus, scope 3 emissions increased as a result of greater commute and business travel (approximately 6,000 metric tons of carbon dioxide equivalent and 700 metric tons of carbon dioxide equivalent, respectively).

ENERGY – RENEWABLE ENERGY USE



ENERGY USE INTENSITY (EUI)



UCSF saw a decrease in its EUI in 2022.

FOOD

57%
of food and beverage purchases met sustainability criteria ($520K)

40%
of food and beverage purchases were plant-based ($361K)

UCSF's retail food tenants experienced supply chain issues and challenges with the cost of sustainable food options. These tenants are recovering economically from the COVID years, adapting to changing demands due to patrons telecommuting and adopting different eating habits over the years (such as bringing food from home). UCSF's sustainable food spend percentage of total food spend decreased 2.4% and may be affected by lack of supply or increased costs.

GREEN BUILDING

UCSF completed construction of its first Parksmart garage and is seeking Silver certification pending final documentation submittal in fiscal year 2023–24. The Bayfront Medical Building is an outpatient surgery center and clinic scheduled for completion and LEED Gold certification in fiscal year 2023–24.

16 Gold, 6 Silver and 5 Certified

- Total number of LEED certifications

PROCUREMENT

$5.2M
green spend on electronics (45%)

$313K
green spend on cleaning supplies (53%)

$2.8M
green spend on indoor office furniture (96%)

$586K
green spend on office supplies (58%)

Green spend is defined as meeting preferred or minimum criteria in UC's Sustainable Procurement Guidelines.
Suppliers reporting: Electronics (7), Furniture (3), Cleaning supplies (4), Office supplies (3).
UC Systemwide Spend Analytics category data provided by CalUSource.

The University reports on green spend, as defined in the Sustainable Procurement Guidelines, and reached out to suppliers for spend data in four product categories for this year's report.

SUSTAINABLE BUILDING & LABORATORY OPERATIONS

35
total assessed green laboratories

With its new Thermo Fisher funds, UCSF has signed up six labs to be Green Certified. UCSF is pushing for procurement restrictions that stop labs from purchasing non-Energy Star -80°C freezers. This restriction aligns with UCSF's energy conservation policy. UCSF hopes to accelerate the replacement of all non-Energy Star -80°C freezers by enhancing its current rebates by next year.

TRANSPORTATION

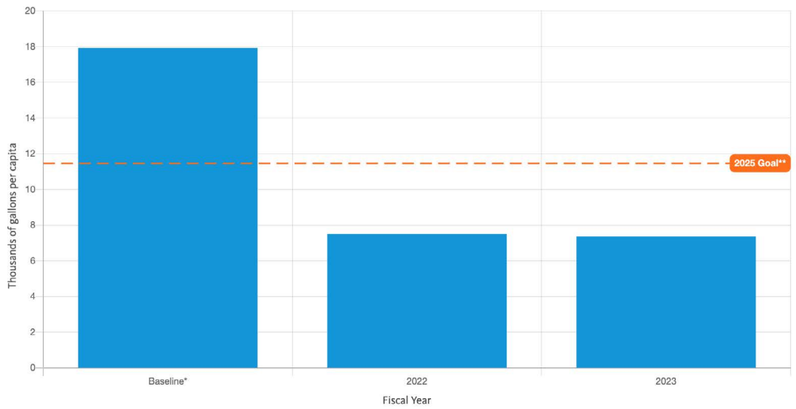
Scope 3 transportation emissions grew due to increases in commute (approximately 6000 metric tons of carbon dioxide equivalent) and business travel (approximately 700 metric tons of carbon dioxide equivalent) emissions with the return to on-campus activities.

71%
of students and employees are utilizing alternative commuting methods

0%
of all vehicles acquired in 2023 were electric (zero-emission), plug-in hybrid or clean transportation fuel

152
EV charging ports

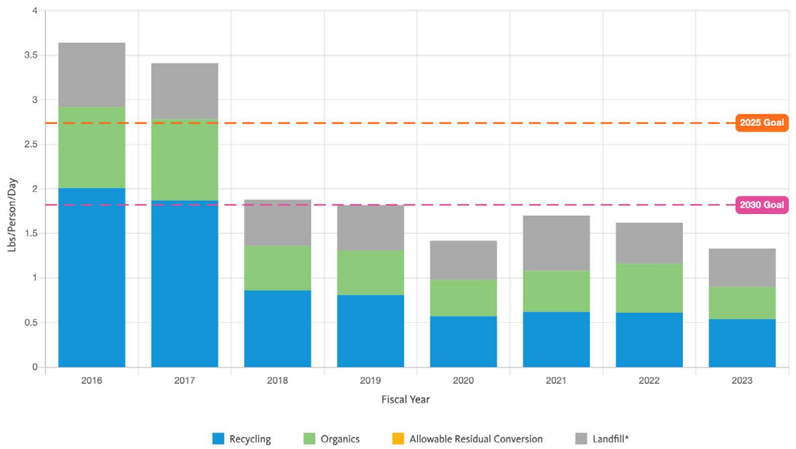
WATER



**Based on a 3-year average of fiscal years 2005-08*
***2025 goal is a 36% reduction from baseline*

UCSF's water use per capita in fiscal year 2022–23 was 59% lower than its baseline, representing an increase in water savings from last year.

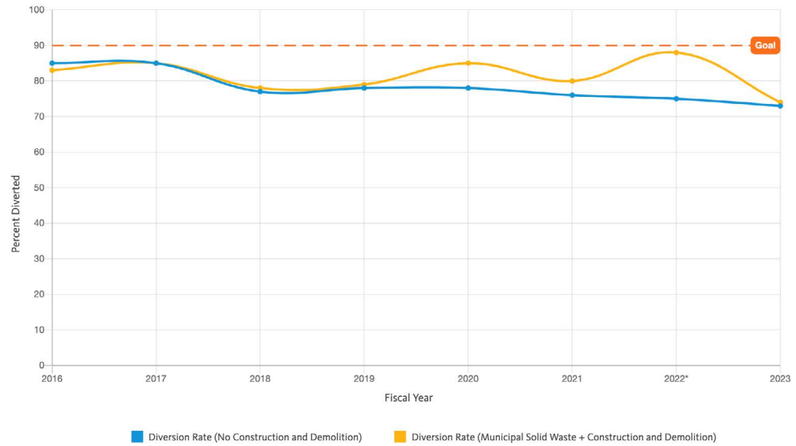
ZERO WASTE – GENERATION



**These numbers might include a small amount of incineration that is being phased out.*

UCSF's total waste generated decreased due to the closing and consolidation of a few buildings where staff have mostly transitioned to hybrid or permanent remote status.

ZERO WASTE – DIVERSION



**Waste incineration was counted as diversion prior to July 2022.*

UCSF's waste diversion rate (without construction and demolition) fell 2% as labs increased activity in contrast with offices and event spaces. A pilot project to address lab plastics and increase waste diversion within the labs will be expanded in the coming year. The construction and demolition diversion rate likely decreased due to the completion of a number of large projects that diverted a lot of materials in previous years.

AWARDS

UCSF received recognition as a Best Workplace for Commuters in 2022.

A full list of awards is featured on the UC Office of the President's website.

UNIVERSITY OF CALIFORNIA

San Francisco Health

UC San Francisco Health continued its legacy of sustainable operations excellence, receiving recognition from Practice Greenhealth for the 14th consecutive year.

UCSF Health was awarded the Emerald Award for overall sustainability practices, the special Circle of Excellence award for achievements in energy, climate and green buildings, as well as the Greening the OR Recognition award.

UCSF Health began its decarbonization study to determine how to achieve a 90% reduction in greenhouse gas (GHG) emissions by 2045. As part of that effort, its new hospital in Parnassus Heights, along with a new outpatient surgery center, will be heated and cooled with 100% all-electric systems and powered by 100% carbon-free electricity. In addition, UCSF Health created a multiyear plan for saving energy and reducing GHG emissions in operating rooms by migrating leaky central nitrous oxide supply to local supply in all 71 ORs.

UCSF Health is a leader in reducing scope 1 emissions from inhaled anesthetics. In addition to reducing emissions of inhaled anesthetics like desflurane by 83%, which is equivalent to removing 219 cars from the road, UCSF Health facilitated emissions reductions from inhaled anesthetics at other UC academic health centers through a UC Global Climate Leadership Council-funded project.

In partnership with UC Health, UCSF Health continued its efforts to fulfill commitments in the White House/HHS Health Sector Climate Pledge to reduce GHGs by 50% by 2030, create a climate resilience plan to protect people, assets and services, and complete a baseline scope 3 emissions assessment.

Additional sustainability efforts were realized with sustainable food and waste reduction. The food program continued to reduce GHGs through food purchases and received recognition for sustainable food excellence with the rest of UC Health. UCSF Health's waste auditing program expanded from the three San Francisco hospital campuses to include a large ambulatory care center. Additionally, a mobile technology platform audited waste diversion, providing feedback on waste reduction and diversion opportunities. To help build awareness, the Waste to Art challenge is dedicated to turning waste into art. Its 2023 event led to 15 submissions about the waste created by the health care industry.

STORIES

Waste to Art

First introduced in 2022, the Waste to Art program provides staff an opportunity to showcase their artistic talents while shedding light on the large amount of waste produced by the health care industry.

Read full article:

https://campuslifeserviceshome.ucsf.edu/sustainability/news/waste-art-2023-winners

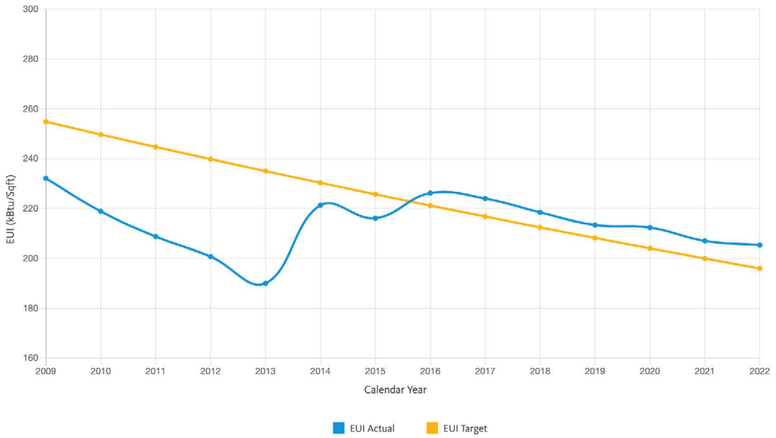
UCSF Health System's Sustainability Journey: Pioneering New Practices To Minimize Nitrous Oxide Emissions

Commonly known as laughing gas, nitrous oxide is more harmful to the ozone than any other gas. This story follows UCSF Medical Director of Sustainability Dr. Seema Gandhi as she takes on the ambitious challenge of removing central piped nitrous oxide from UCSF Health's facilities.

Read full article:

https://campuslifeserviceshome.ucsf.edu/sustainability/news/ucsf-health-systems-sustainability-journey-pioneering-new-practices-minimize-0

ENERGY USE INTENSITY (EUI)



UCSF Health saw a minor decrease in its EUI in 2022.

FOOD

11%
of food and beverage purchases met sustainability criteria ($1.0M)

35%
of food and beverage purchases were plant-based ($3.2M)

UCSF Health improved the percentage of sustainable and plant-based foods procured compared with the prior reporting year. For the second year, the team used Key Green Solutions as a data aggregation and reporting service for food. UC Health food leaders met to work on standardizing food data reporting for each campus with the goal of aggregating the data. UC Health, including UCSF Health, was also recognized with a Circle of Excellence Food award from Practice Greenhealth.

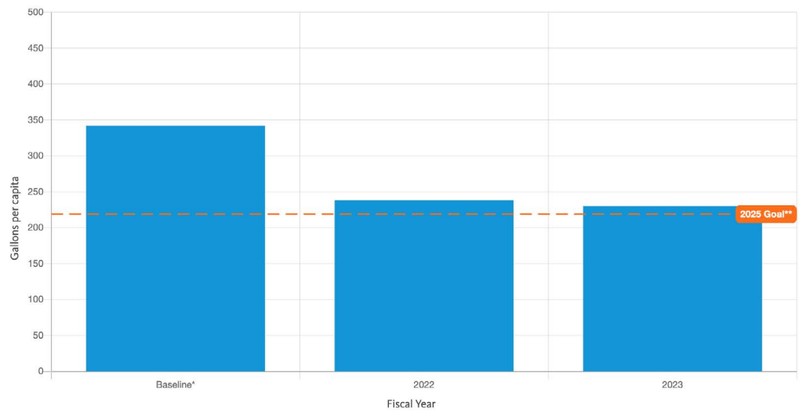
GREEN BUILDING

UCSF's Ambulatory Care Center 2 Spine Center was LEED certified for Interior Design and Construction this year.

2 Gold, 4 Silver and 1 Certified

- Total number of LEED certifications

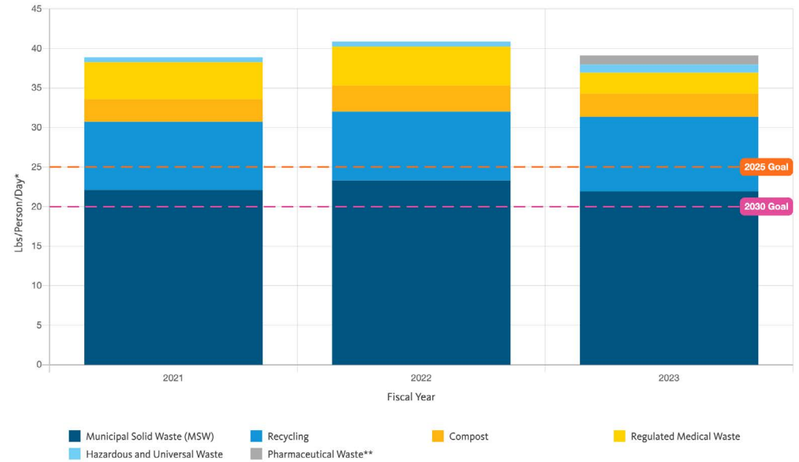
WATER



**Based on a 3-year average of fiscal years 2005-08*
***2025 goal is a 36% reduction from baseline*

UCSF Health is in the process of designing a new hospital in Parnassus Heights, which will include numerous water reduction strategies, including using air handler condensate water for irrigation and minimizing use of cooling towers by relying on heat recovery chillers. In its existing hospitals, UCSF Health made progress this year on reducing cooling tower dependence and has plans to pursue low-flow water fixture retrofits in all spaces.

ZERO WASTE – GENERATION



**Per capita figures are calculated using Adjusted Patient Day (APD)*
***Data provided if not counted in other waste streams*

UCSF Health developed a comprehensive action plan to reduce waste in line with UC Health goals.

AWARDS

2023 Practice Greenhealth ENVIRONMENTAL EXCELLENCE AWARDS

UCSF Health was the proud recipient of many Practice Greenhealth awards in 2023.

A full list of awards is featured on the UC Office of the President's website.

COMBINED DATA

Progress on the following policy areas for this Health System is reported by the campus location:

- Emissions
- Renewable Energy
- Transportation

UNIVERSITY OF CALIFORNIA

Santa Barbara

UC SANTA BARBARA

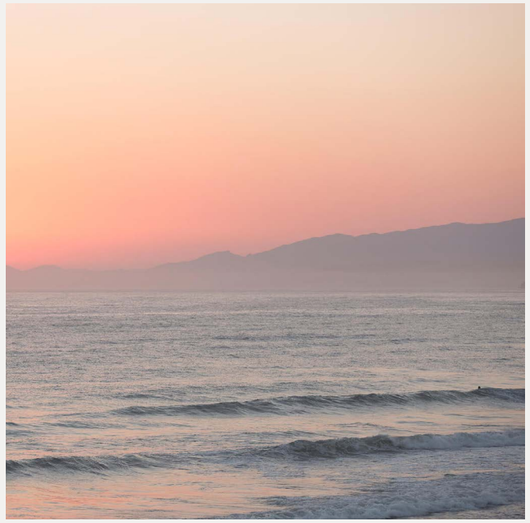
UC Santa Barbara took significant steps toward climate resilience in 2023 with a dynamic team of UC Climate Action Fellows, Environmental Health and Safety, Campus Planning and several faculty leaders. UCSB completed its first sea level rise adaptation strategy and started developing a climate-focused hazard vulnerability and risk assessment process.

UCSB continues to increase LEED projects on campus. The new Interactive Learning Pavilion is targeting a minimum of LEED Gold certification and is designed as an all-electric facility. In addition, students in the Bren School of Environmental Science and Management completed a decarbonization study for UCSB Housing, Dining and Auxiliary Enterprises, an important step toward a campuswide decarbonization study that will be completed in the coming year.

The UCSB Sustainability Department is dedicated to the service of students and was recognized as such this year. Sustainability Director Katie Maynard received the Unsung Heroine award from the UCSB Professional Women's Association for her dedication and outstanding contributions to the University and its students. The Food Security and Basic Needs Program, which UCSB Sustainability is a founding member and leader of, also received the William J. Villa Departmental Service to Students Award.

UCSB also maintained its recognition as a Gold-certified STARS campus, Platinum Level Bicycle Friendly University and Certified Bee Campus.

STORIES

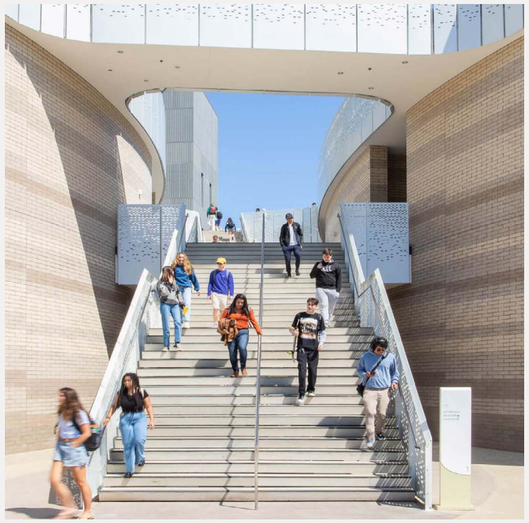


UC Santa Barbara Researchers Study Ways To Equitably Reach California's Decarbonization Goals

UCSB Professor Ranjit Deshmukh compared three decarbonization policies — carbon taxes, excise taxes and setbacks — to determine the most equitable approaches for the state of California to reach carbon neutrality by 2025.

Read full article:

https://www.kcbx.org/environment-and-energy/2023-05-24/uc-santa-barbara-researchers-study-ways-to-equitably-reach-californias-decarbonization-goals



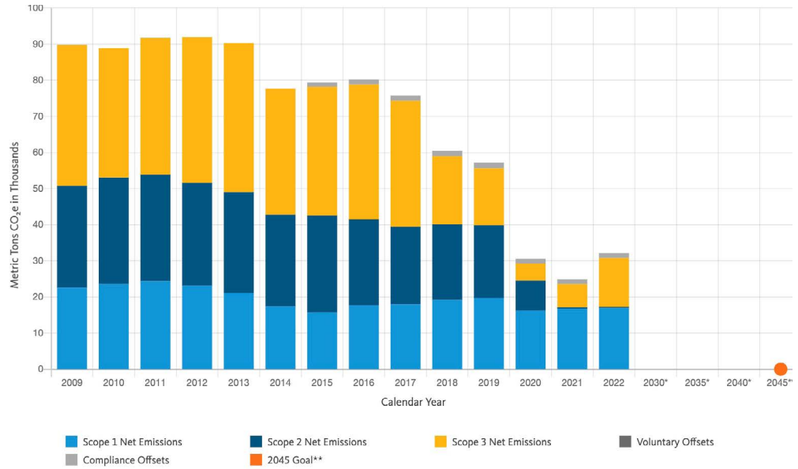
A New, Fully Electric Facility Increases Classroom Capacity by 35%

Just in time for spring quarter, UCSB opened the Interactive Learning Pavilion (ILP). The ILP is on track to achieve a LEED Gold certification from the U.S. Green Building Council.

Read full article:

https://news.ucsb.edu/2023/020896/interactive-place-learn

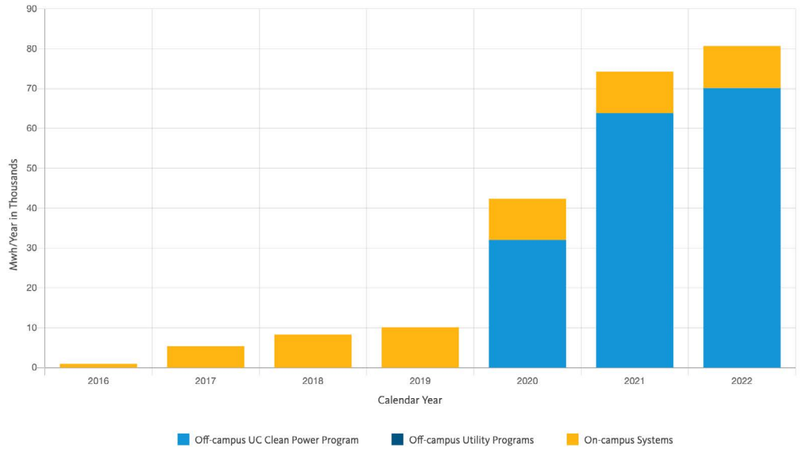
CLIMATE PROTECTION – EMISSIONS



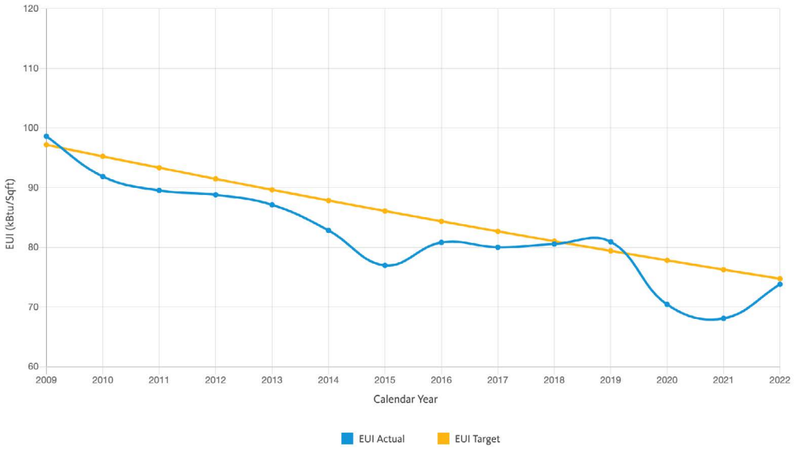
** Interim goals for 2030, 2035 and 2040 to be developed through fossil-free planning that is underway at each location*
*** 90% direct reduction of total emissions from 2019 levels with residual emissions negated by carbon removal*

UC Santa Barbara's scope 1 and 2 emissions remained low with scope 2 emissions close to zero, while scope 3 emissions increased, largely due to commuting patterns that more closely resemble pre-pandemic patterns.

ENERGY – RENEWABLE ENERGY USE



ENERGY USE INTENSITY (EUI)



UC Santa Barbara saw an increase in its EUI in 2022.

FOOD

11%
of food and beverage purchases met sustainability criteria ($1.4M)

37%
of food and beverage purchases were plant-based ($4.5M)

Both the plant-based and sustainable food spend numbers are similar to last year's for UC Santa Barbara. In 2022, the sustainable dining education program returned in the campus's "all you care to eat" dining facilities.

GREEN BUILDING

UC Santa Barbara continues to increase LEED projects on campus, with all new buildings required to meet a minimum LEED Gold standard. The campus's new Interactive Learning Pavilion is targeting a minimum of LEED Gold certification and is designed as an all-electric facility.

15 Platinum, 41 Gold, 15 Silver and 2 Certified

- Total number of LEED certifications

PROCUREMENT

$819M
green spend on electronics (73%)

$417K
green spend on cleaning supplies (54%)

$912K
green spend on indoor office furniture (100%)

$14K
green spend on office supplies (99%)

Green spend is defined as meeting preferred or minimum criteria in UC's Sustainable Procurement Guidelines.
Suppliers reporting: Electronics (6), Furniture (1), Cleaning supplies (4), Office supplies (2).
UC Systemwide Spend Analytics category data provided by CalUSource.

The University reports on green spend, as defined in the Sustainable Procurement Guidelines, and reached out to suppliers for spend data in four product categories for this year's report.

SUSTAINABLE BUILDING & LABORATORY OPERATIONS

60
total assessed green laboratories

UC Santa Barbara's LabRATS program focused on sustainable lab procurement during the 2022–23 academic year. Although most of the partnering labs were catching up after the pandemic and not ready to reopen their labs to focused lab assessments, the campus was able to conduct one Green Lab certification. UC Santa Barbara replaced three old inefficient ultra-low-temperature freezers with Energy Star models through its equipment rebate program.

TRANSPORTATION

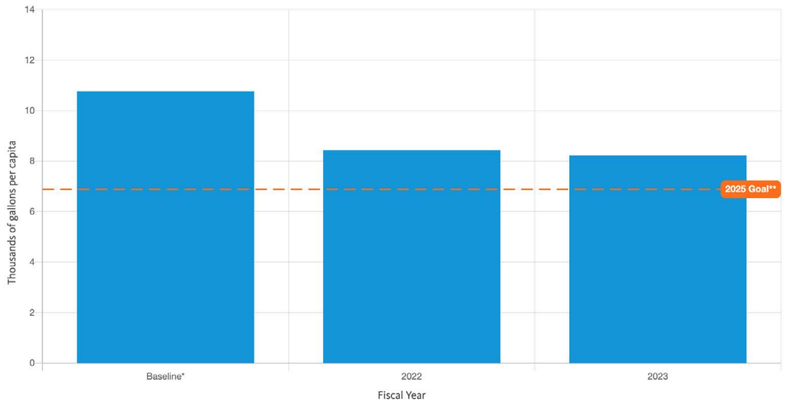
83%
of students and employees are utilizing alternative commuting methods

38%
of all vehicles acquired in 2023 were electric (zero-emission), plug-in hybrid or clean transportation fuel

105
EV charging ports

Based on its spring 2023 commuter mode split survey, over 80% of weighted faculty, staff and students used alternative transportation to commute to campus.

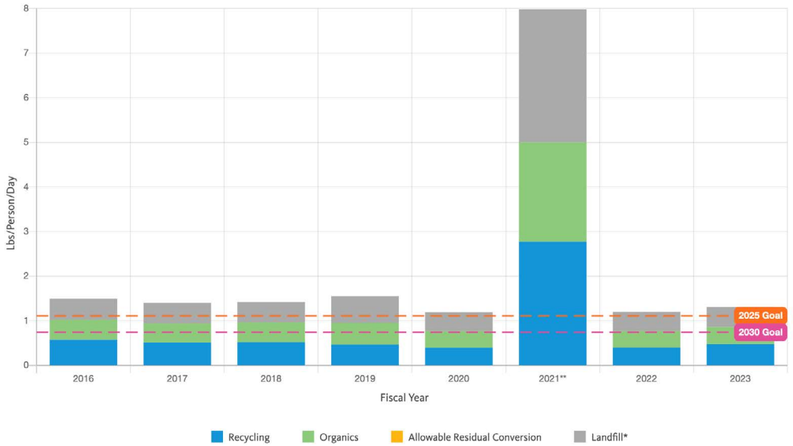
WATER



**Based on a 3-year average of fiscal years 2005-08*
***2025 goal is a 36% reduction from baseline*

Potable water use decreased by over 2 million gallons in fiscal year 2022–23.

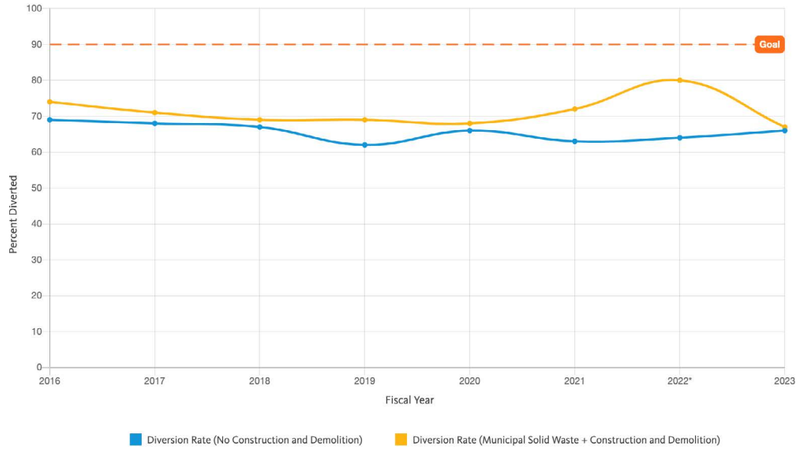
ZERO WASTE – GENERATION



**These numbers might include a small amount of incineration that is being phased out.*
***In 2021, waste generation per weighted campus user spiked due to pandemic-related closures as base-level operations continued but the number of users on campus decreased.*

UC Santa Barbara has been working diligently on food waste reduction, specifically as it relates to California Senate Bill 1383. Campus food eateries and recovery programs have made great strides in reducing the amount of food waste.

ZERO WASTE – DIVERSION



**Waste incineration was counted as diversion prior to July 2022.*

UC Santa Barbara increased its waste diversion percentage by 2% from last year. UCSB's waste diversion efforts have seemed to plateau as a result of market changes. The local material recovery facility that UCSB and the County of Santa Barbara use is yet to provide comprehensive data to customers. Once this occurs, the campus anticipates that its diversion rate will increase.

AWARDS

In addition to maintaining its recognition as a Gold certified campus by the Association for the Advancement of Sustainability in Higher Education Sustainability Tracking, Assessment and Rating System, Platinum level Bicycle Friendly University by the League of American Bicyclists and Certified Bee Campus by the Xerces Society for Invertebrate Conservation, UC Santa Barbara was pleased that its sustainability director and the Food Security and Basic Needs Program were recognized for their excellent service to students.

A full list of awards is featured on the UC Office of the President's website.

UNIVERSITY OF CALIFORNIA

Santa Cruz

UC SANTA CRUZ

In 2022, UCSC launched a campuswide strategic planning process, Leading the Change. One of the plan's five pillars — Climate Change, Sustainability and Resilience — centers sustainability as a core University value for years to come.

A key goal is to decarbonize UCSC to create an equitable, accessible and fossil-free future, and Chancellor Cynthia Larive charged a decarbonization and electrification task force to assess the feasibility of reducing fossil fuel use by 95%, potentially as soon as 2030. Simultaneously, the campus launched a major project to reduce natural gas in the campus's central heating hot water system and advanced design work for a microgrid at Westside Research Park as a living lab.

Santa Cruz and Monterey counties were impacted severely by the rainiest winter in decades along the California central coast, including a major levee breach in the neighboring Pajaro Valley area. While the community awaited a presidential disaster declaration, UCSC stepped up, donating several cases of to-go boxes and fresh produce for Pajaro evacuees. UCSC has increased collaborations with numerous local community organizations and nonprofits, including Regeneración, which also participated in The Humanities Insitute's Deep Read event.

UCSC received a $20 million National Science Foundation grant for an Equitable Nature-based Solutions Hub to assess climate risks and identify where coral reefs and mangroves can best protect underserved coastal communities. Additionally, the Center for Agroecology notably earned the Agricultural Experiment Station designation and will support a new USDA regional food business center.

STORIES

UCSC Launches Decarbonization and Electrification Planning

UC Santa Cruz is embarking on the next phase toward the full decarbonization and electrification of the campus. To reach this goal, Chancellor Cynthia Larive has charged the UCSC Decarbonization and Electrification Task Force with developing a long-term plan to end the University's use of fossil fuels. The ultimate goal is to reduce carbon emissions, ideally to zero, by 2030, using current or emerging technologies and leveraging strategies and projects that have already been identified and are underway.

Read full article:

https://news.ucsc.edu/2023/10/long-term-plan-to-end-fossil-fuels-at-ucsc.html

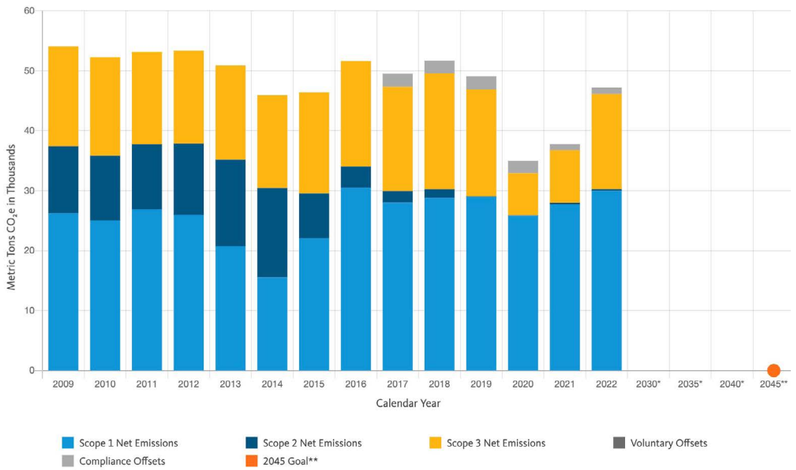
UC Santa Cruz's Center for Coastal Climate Resilience Awards Over $4.6 Million To Support California Coastal Projects

The UC Santa Cruz Center for Coastal Climate Resilience has awarded funding to 23 UC Santa Cruz research groups for pilot projects and implementation projects supporting efforts to fight climate change in coastal communities of California and beyond. Funds for these grant programs came from the California State Budget Act of 2022–23.

Read full article:

https://www.universityofcalifornia.edu/news/uc-santa-cruzs-center-coastal-climate-resilience-awards-over-46-million-support-california?utm_source=fiat-lux&utm_medium=internal-email&utm_campaign=article-general&utm_content=text

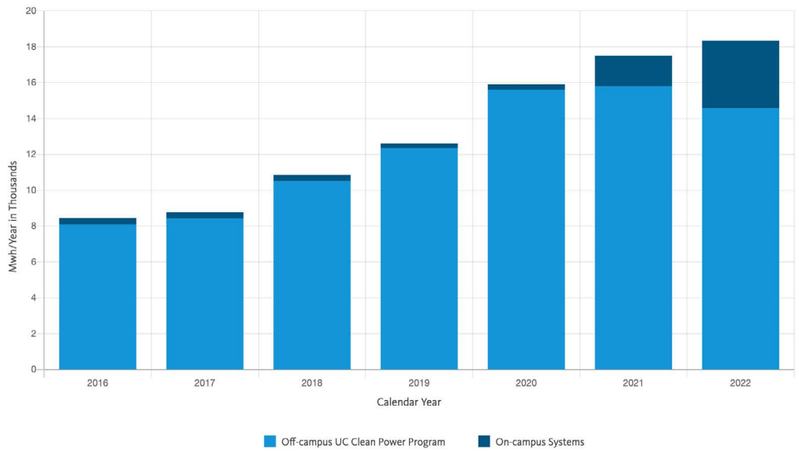
CLIMATE PROTECTION – EMISSIONS



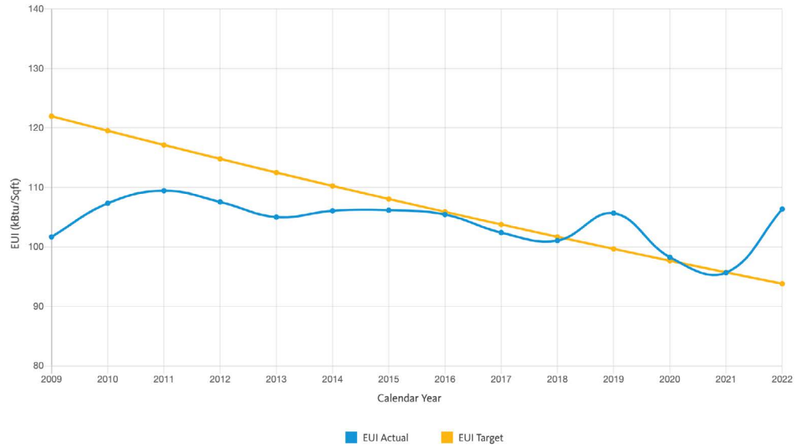
** Interim goals for 2030, 2035 and 2040 to be developed through fossil-free planning that is underway at each location*
*** 90% direct reduction of total emissions from 2019 levels with residual emissions negated by carbon removal*

UC Santa Cruz's emissions increased significantly as the campus rebounded from low levels during the pandemic. Commute emissions decreased 18% from pre-pandemic levels while air travel increased 24% compared with 2019 travel emissions.

ENERGY – RENEWABLE ENERGY USE



ENERGY USE INTENSITY (EUI)



UC Santa Cruz saw an increase in its EUI in 2022.

FOOD

21%
of food and beverage purchases met sustainability criteria ($2.7M)

18%
of food and beverage purchases were plant-based ($2.2M)

Of the food purchased for campus dining, 21% was sustainably sourced and 18% was plant-based. While this was down from last year due to supply chain issues and insufficient data to determine Real Food qualifications for some products, UC Santa Cruz is on track to meet the goal for 25% of its food to be sustainability sourced by 2030. Additionally, UCSC's Center for Agroecology grew 20,400 pounds of food that went to support students through the campus's Basic Needs program.

GREEN BUILDING

UC Santa Cruz received one Interior Design and Construction LEED Gold certification this year, for the Crown College Residential Hall.

8 Gold, 7 Silver and 2 Certified

- Total number of LEED certifications

PROCUREMENT

$638K
green spend on electronics (38%)

$570K
green spend on cleaning supplies (85%)

$355K
green spend on indoor office furniture (99%)

$18K
green spend on office supplies (77%)

Green spend is defined as meeting preferred or minimum criteria in UC's Sustainable Procurement Guidelines.
Suppliers reporting: Electronics (7), Furniture (3), Cleaning supplies (3), Office supplies (3).
UC Systemwide Spend Analytics category data provided by CalUSource.

The University reports on green spend, as defined in the Sustainable Procurement Guidelines, and reached out to suppliers for spend data in four product categories for this year's report.

SUSTAINABLE BUILDING & LABORATORY OPERATIONS

48
total assessed green laboratories

The Green Labs team reached its goal this year of 25% of UC Santa Cruz labs being certified.

TRANSPORTATION

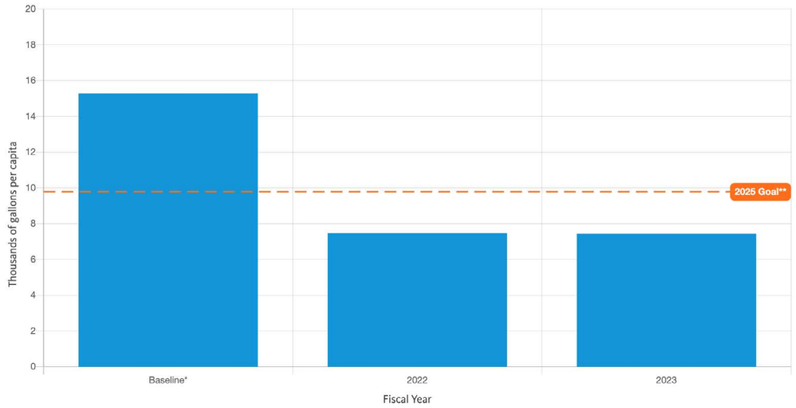
52%
of students and employees are utilizing alternative commuting methods

21%
of all vehicles acquired in 2023 were electric (zero-emission), plug-in hybrid or clean transportation fuel

69
EV charging ports

Of purchased vehicles, 21% were zero emission or plug-in hybrid electric. UC Santa Cruz will focus on improving fleet electric vehicle charging infrastructure next year.

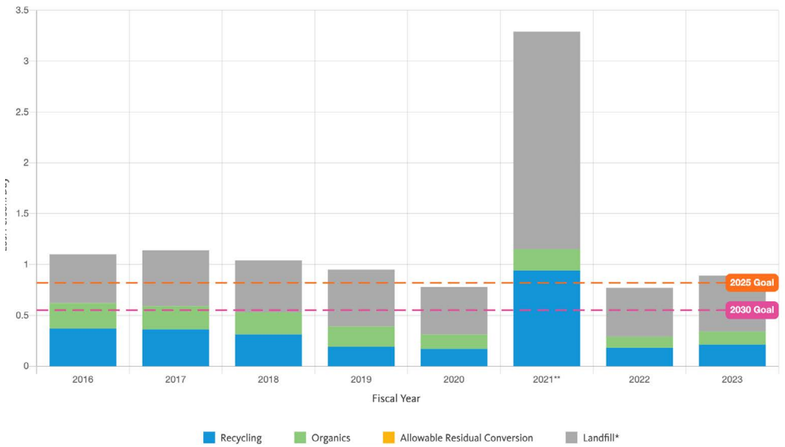
WATER



**Based on a 3-year average of fiscal years 2005-08*
***2025 goal is a 36% reduction from baseline*

UC Santa Cruz continues its exceptional performance in water conservation with a 51% reduction from baseline.

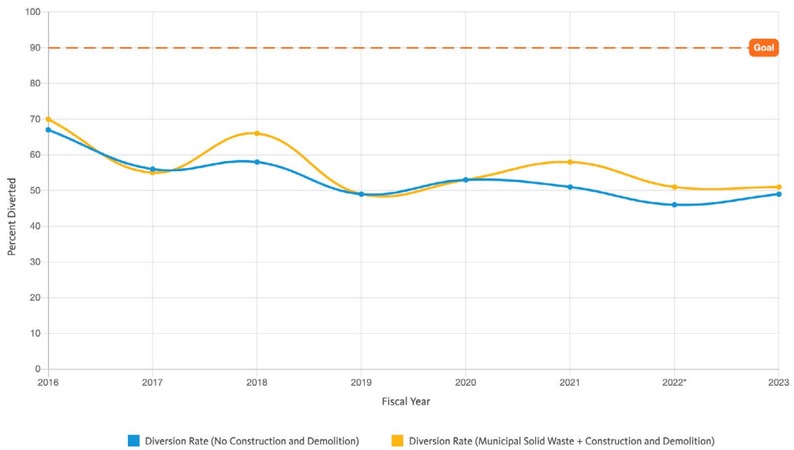
ZERO WASTE – GENERATION



**These numbers might include a small amount of incineration that is being phased out.*
***In 2021, waste generation per weighted campus user spiked due to pandemic-related closures as base-level operations continued but the number of users on campus decreased.*

UC Santa Cruz reduced its per day waste generated per weighted campus user by 19% compared with a baseline of fiscal year 2015–16. This decrease is the smallest of the past three years since COVID restrictions have eased and more activity is occurring on campus. Compared with the last non-pandemic year, fiscal year 2018–19, UC Santa Cruz dropped its total waste generation by 6%.

ZERO WASTE – DIVERSION



**Waste incineration was counted as diversion prior to July 2022.*

UC Santa Cruz increased its diversion rate to 49% from 46% in the previous year. The work of the campus's Zero Waste Action Committee to increase the availability of compost bins on campus is a big driver of this increase. As more infrastructure and education efforts are undertaken by the committee in the coming year, UC Santa Cruz's diversion rate should continue to rise.

AWARDS

UCSC continues to maintain its Association for the Advancement of Sustainability in Higher Education Sustainability Tracking, Assessment and Rating System Gold rating, and also received several notable recognitions this year, including the Seal of Excelencia from Excelencia in Education for its robust work as a Hispanic Serving Institution.

A full list of awards is featured on the UC Office of the President's website.

UNIVERSITY OF CALIFORNIA

Agriculture and Natural Resources

UC Agriculture and Natural Resources (UC ANR) delivers the land grant mission for UC and California by developing and promoting practical, science-based solutions for the state's food systems, water resources and natural ecosystems.

UC ANR's statewide facilities — including nine Research and Extension Centers (RECs), the Elkus Ranch Environmental Education Center and an administrative building — continued sustainable practices in fiscal year 2022–23.

Between 2022 and 2023, UC ANR's facilities reduced carbon dioxide emissions from 1,266 to 979 metric tons and reduced natural gas use 4% by improving facilities' energy efficiency and encouraging a reduction in employees' overall energy use. In fiscal year 2022–23, potable water consumption decreased from the prior year, from 20.5 million gallons to 18 million gallons. This was largely due to the relocation of the Hansen REC: research concluded at the former site in 2022 and will ramp up at the new site in 2023.

While electricity use increased by 62%, overall indirect greenhouse gas emissions decreased by 52% as UC ANR transitions to purchased carbon-free electricity through UC's Clean Power Program. Several factors impacted electricity use. UC ANR facilities store temperature-sensitive crops and research materials. With hotter weather, more energy is required to keep them — as well as employees — cool. Additionally, as of June 2023, UC ANR hired 60 additional academic staff with plans to recruit another 95 personnel. More people are accessing facilities. That said, new hires also expand UC ANR's capacity to conduct research and outreach to support sustainable transitions.

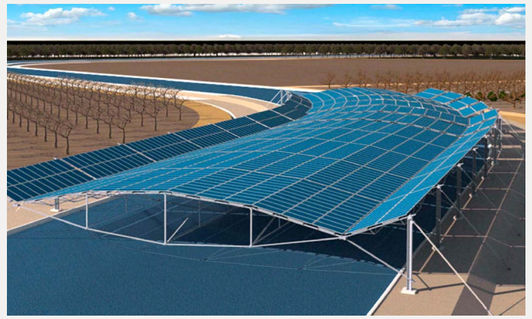
STORIES

UC Climate Stewards Take Action To Reduce Carbon Emissions and Build Climate Resilience

UC Environmental Stewards, a statewide UC ANR program, works with over 70 partner organizations to promote environmental literacy and stewardship through discovery and action. Its newest certification program, UC Climate Stewards, builds statewide capacity to advance climate goals and improve ecosystem resilience by improving public access to climate science and fostering local communities of practice.

Read full article:

https://ucanr.edu/News/?routeName=newsstory&postnum=56734



UC ANR Research and Outreach Expand Solar Power by Covering Canals

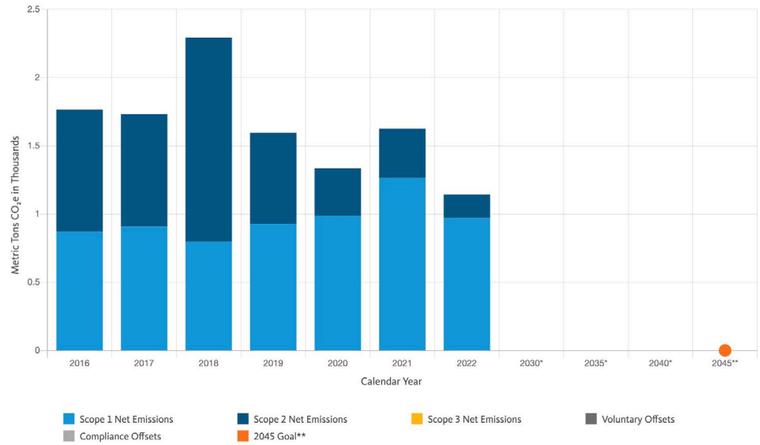
UC ANR research and outreach contributed to implementation of an innovative approach for expanding solar energy production while also delivering water savings to agricultural lands in the Central Valley. A UC Cooperative Extension (UCCE) specialist located at UC Merced collaborated with UC Merced and UC Santa Cruz researchers on a study of energy and water co-benefits from covering irrigation canals with solar panels. The study was published in a high-impact academic journal and subsequently picked up across traditional and social media outlets nationally. The UCCE specialist also conducted extensive outreach, including discussing results with about 150 elected officials at a Latino Leaders for Water Education panel discussion.

The study directly influenced Turlock Irrigation District to implement the first-in-the-nation construction of solar panels over water canals. On February 8, 2022, Turlock Irrigation District was awarded $20 million from the California Department of Water Resources for the project, which the district publicly acknowledged was directly inspired by the UCCE published study. Results show potential water savings of 63 billion gallons of water annually, which is comparable to the amount needed to irrigate 50,000 acres of farmland or meet the residential water needs of more than 2 million people. Moreover, the 13 gigawatts of solar power the panels would generate annually equals about one-sixth of the state's current installed capacity — roughly half the projected new capacity needed by 2030 to meet the state's decarbonization goals. This project shows promising potential for water savings and electricity generation that would benefit both agricultural and urban sectors.

Read full article:

https://news.ucmerced.edu/news/2021/solar-panels-over-canals-can-save-money-energy-and-water-study-shows

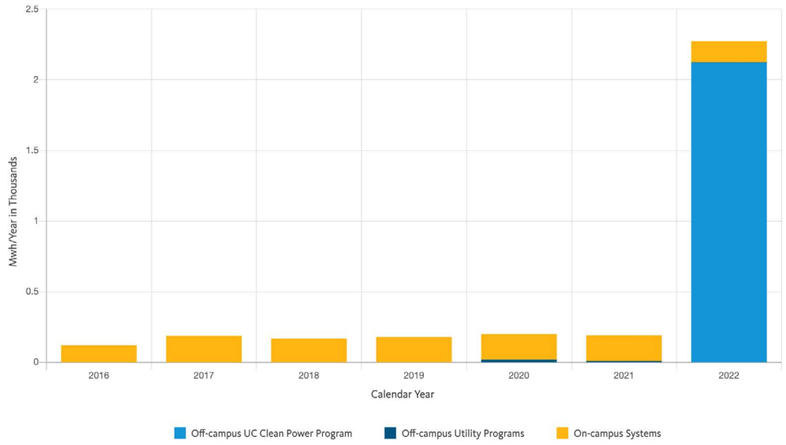
CLIMATE PROTECTION – EMISSIONS



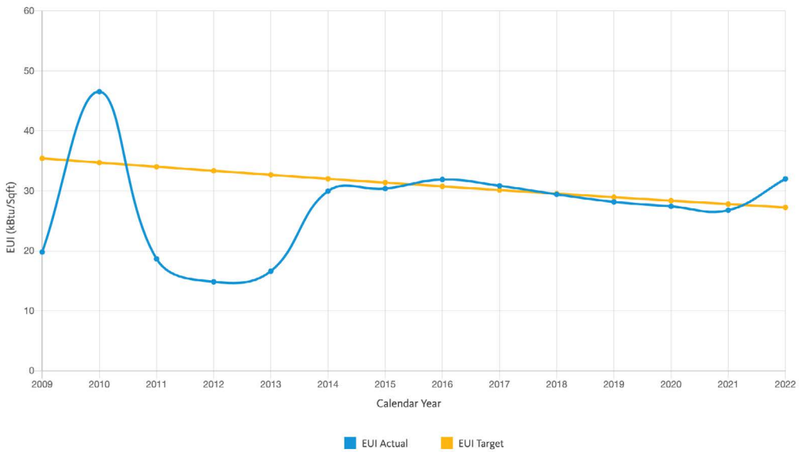
** Interim goals for 2030, 2035 and 2040 to be developed through fossil-free planning that is underway at each location*
*** 90% direct reduction of total emissions from 2019 levels with residual emissions negated by carbon removal*

UC ANR hired 60 additional academic and staff personnel in order to increase its capacity to conduct research and outreach. In addition to this additional staffing, other factors that impacted the increase of electricity use included hotter weather, which required more energy to keep temperature-sensitive crops and research materials, as well as employees, cool. UC ANR decreased its scope 2 emissions by 52% due to the associated transition to purchased carbon-free electricity through UC's Clean Power Program.

ENERGY – RENEWABLE ENERGY USE



ENERGY USE INTENSITY (EUI)



UC ANR saw an increase in its EUI in 2022.

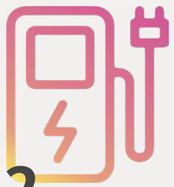
GREEN BUILDING

UC ANR did not add any new LEED certified buildings but still maintains certification for its headquarters on Second Street in Davis.

1 Certified

- Total number of LEED certifications

TRANSPORTATION

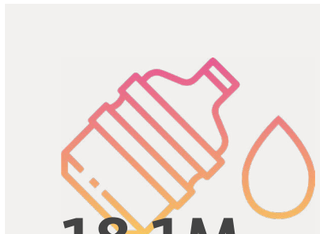


2

EV charging ports

Although it is often not feasible for UC ANR to purchase or lease electric or hybrid vehicles (given the need for pickup trucks that are not yet available in those models), when possible, UC ANR purchases or leases flex-fuel vehicles, which use alternative fuel. As the industry makes more electric or hybrid vehicles available, UC ANR is committed to replacing vehicles with these models.

WATER



18.1M

gallons of water used in 2023

Potable water use decreased by 2 million gallons because one research and extension center moved. As this center transitions to its new location, research will gradually ramp back up.

AWARDS

A full list of awards is featured on the UC Office of the President's website.

UNIVERSITY OF CALIFORNIA

Lawrence Berkeley National Laboratory

Lawrence Berkeley National Laboratory (Berkeley Lab) is a Department of Energy Office of Science research laboratory operated by the University of California. Sustainability performance highlights from the past year include:

Net-zero planning: In May 2023, the Lab released a net-zero vision and roadmap to define a decarbonization pathway across all reported greenhouse gas emissions by no later than 2045.

Energy savings: The Lab maintains a portfolio of energy and water savings that currently generates an annual utility bill savings of over $1.3 million, driven primarily by a dedicated ongoing commissioning team. As of the end of March 2023, the Lab's total weather-corrected energy consumption per square foot in its general building stock is 28% lower than in 2015. Fossil gas consumption across the Lab is down 28%.

Greenhouse gas (GHG) emissions: Total reported GHG emissions as of October 2022 are 31% below 2015 levels.

ISO 50001: The Lab completed a third-party three-year re-certification audit of its energy and water management system against ISO 50001, an international energy management standard.

Circular economy: The Lab conducted a pilot project with a local vendor to divert laboratory plastics and use them to manufacture new laboratory plastic ware. These items are not currently accepted by the Lab's waste-hauling contractor for recycling. As of fall 2023, the Lab has circularized approximately 2,000 pounds of plastics into new laboratory consumables.

Energy consumption is up slightly compared to the previous year as on-site populations increase, but lower than pre-pandemic levels.

STORIES

Making Renewable, Infinitely Recyclable Plastics Using Bacteria

Scientists at Berkeley Lab engineered microbes to make the ingredients for recyclable plastics, replacing finite, polluting petrochemicals with sustainable alternatives. The new approach shows that renewable, recyclable plastics are not only possible but also outperform those from petrochemicals.

Read full article:

https://newscenter.lbl.gov/2023/07/27/making-renewable-infinitely-recyclable-plastics-using-bacteria/

Berkeley Lab's Vision and Roadmap for Net-Zero Campus

Berkeley Lab has created a vision and roadmap to achieve net-zero greenhouse gas (GHG) emissions across its campus by no later than 2045. Released in May 2023, the document identifies seventeen actions to reduce GHG emissions by at least 90% and negate remaining emissions through carbon removal, consistent with the new UC climate action policy.

Berkeley Lab has already taken important steps toward this goal. The Lab has reduced natural gas consumption by 28% since 2015 by improving existing building operations. In new construction, the Lab has followed a standard of using all-electric systems for space and water heating in buildings occupied since 2015. Two more electrified buildings, a laboratory and a replacement of the Lab's main cafeteria, are currently under construction.

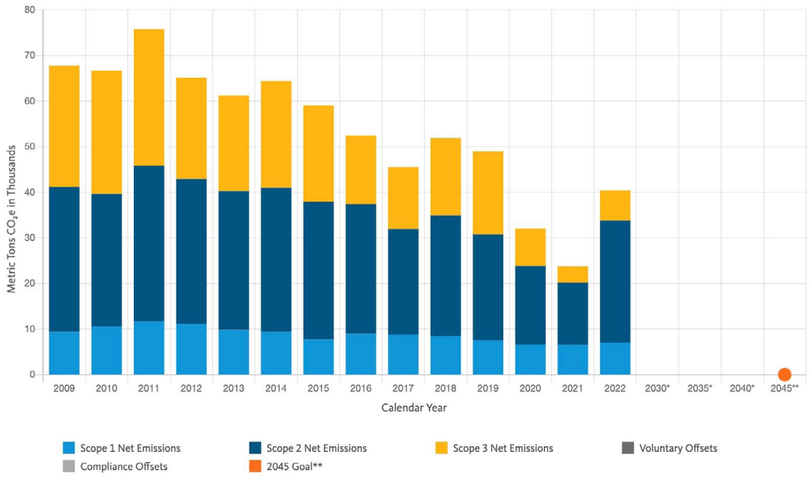
Development of the vision and roadmap involved detailed input from subject matter experts and a diverse, 30-person Net-Zero Lab Visioning Team with representatives from across the Lab. The Net-Zero Lab Visioning Team met monthly to explore net-zero topics and became the first-line reviewers for the document. Several rounds of review from the campus community, Lab management and outside reviewers helped strengthen approaches.

Berkeley Lab anticipates numerous challenges along the way reaching net-zero by 2045. For example, significant new investment is needed to meet net-zero targets. Net-zero capital planning projects must be closely coordinated to ensure alignment with other infrastructure and budgetary priorities. The vision and roadmap have helped focus the effort to identify resources, undertake more detailed and integrated planning across its operations, and take near-term climate action.

Read full article:

https://docs.google.com/document/d/1N1NBWCOIjc0sS1V-TLoISNAWg5CWohiebD8n-xQPD6Y/edit

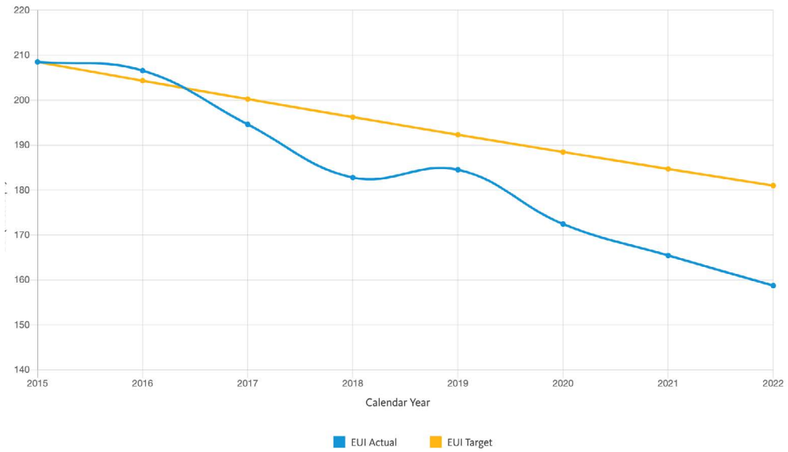
CLIMATE PROTECTION – EMISSIONS



** Interim goals for 2030, 2035 and 2040 to be developed through fossil-free planning that is underway at each location*
*** 90% direct reduction of total emissions from 2019 levels with residual emissions negated by carbon removal*

Berkeley Lab greenhouse gas emissions for federal fiscal year 2022 (the 12 months through September 2022) were 31% lower than in fiscal year 2015. Some reductions are attributable to significant improvements in energy efficiency. The energy consumption per square foot of the Lab's general building stock is 28% below 2015 levels. Natural gas efficiency improvements are deeper: the Lab's sitewide natural gas consumption per square foot is 35% below 2015 levels. Scope 3 emissions remain at about one-third pre-pandemic levels.

ENERGY USE INTENSITY (EUI)



Berkeley Lab saw a decrease in its EUI in 2022.

GREEN BUILDING

A new 74,000-square-foot laboratory building, called BioEPIC, is under construction and targeting LEED Gold certification. BioEPIC will use only electricity for space and water heating. A new 47,000-square-foot cafeteria and conference center is just beginning construction. It is also targeting LEED Gold and will be all-electric, including the cafeteria kitchen.

1 Platinum and 6 Gold

- Total number of LEED certifications

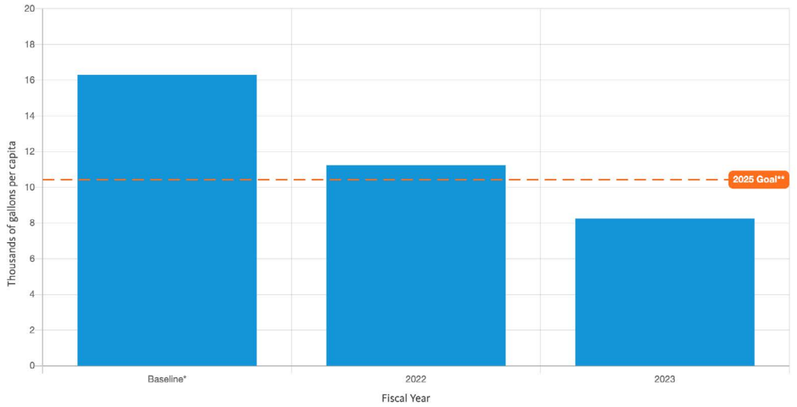
TRANSPORTATION

23%
of all vehicles acquired in 2023 were electric (zero-emission), plug-in hybrid or clean transportation fuel

29
EV charging ports

Berkeley Lab has approximately 1,960 employee and fleet parking spaces on the main site, including 29 active employee electric vehicle charging locations. In UC fiscal year 2022–23, utilization of EV charging surpassed pre-pandemic levels and continues to grow. The Lab's employee EV charging program had a membership of about 300 people as of June 2023, a significant increase from the previous year. During the reporting period, 45% of all light-duty fleet vehicle acquisitions were fully electric.

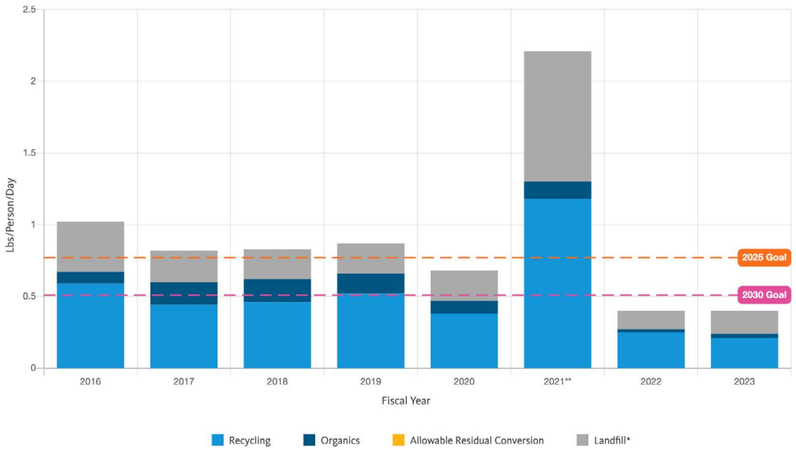
WATER



**Based on fiscal year 2007-08*
***2025 goal is a 36% reduction from baseline*

Berkeley Lab recently installed three new water meters to directly measure the water consumption at its main site. This replaces the previous method, which utilized East Bay Municipal Utility District meters and an aggregation of submeters owned by UC Berkeley to calculate sitewide consumption. This change has improved the accuracy of metering and indicates that water consumption at Berkeley Lab's main site is approximately 25% lower than historically reported. Water consumption per square foot, based on the three new meters, is 22.5 gallons per square foot-year for the 2022–23 UC fiscal year.

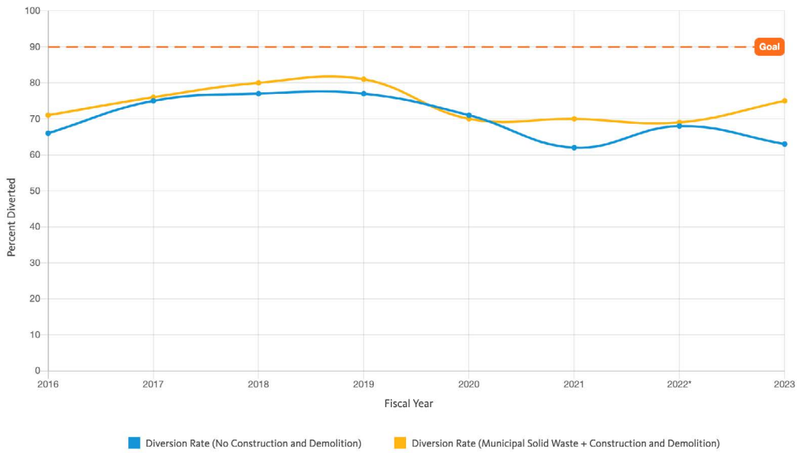
ZERO WASTE – GENERATION



**These numbers might include a small amount of incineration that is being phased out.*
***In 2021, waste generation per weighted campus user spiked due to pandemic-related closures as base-level operations continued but the number of users on campus decreased.*

Berkeley Lab's waste generation per person for UC fiscal year 2022–23 remains similar to last year at 0.4 pounds per person-day. Waste generation per person is on a downward trend since UC fiscal year 2018–19. In total for UC fiscal year 2022–23, the Lab generated 579 tons of waste and diverted 363 tons of waste from building operations (excluding construction and demolition). Construction waste increased compared with last year due to construction of the new BioEPIC building and demolition of the cafeteria building. Due to the shutdown of the Lab's cafeteria services, overall included organic waste generation decreased.

ZERO WASTE – DIVERSION



**Waste incineration was counted as diversion prior to July 2022.*

Berkeley Lab had a diversion rate of 63% excluding construction and demolition and a rate of 75% including construction and demolition. One large source of diverted material is scrap metal, the generation of which decreased by 28% compared with last year. Due to the shutdown of the Lab's cafeteria services, diverted organic waste has decreased, leading to reduction in the overall diversion rate (excluding construction and demolition).

AWARDS

2022 U.S. Department of Energy Sustainability Award Winners

The Lab received Honorable Mention in the 2022 U.S. Department of Energy Sustainability Awards for its Sustainability Data Integration, Organization, Processing, Analytics, and Visualization Project.

A full list of awards is featured on the UC Office of the President's website.

UNIVERSITY OF CALIFORNIA

Office of the President

The UC Office of the President (UCOP) is the systemwide headquarters of the University of California that manages UC's fiscal and business operations and supports the academic and research missions across its campuses, labs and health systems.

UCOP owns and leases spaces primarily in California, and also owns a building in Washington, D.C. (UCDC). In spring 2023, UCOP executed the second phase of the Return to Work program, with in-office anchor days for staff increasing to two days per week in the Oakland headquarters and other locations similarly ramping up in-person operations.

UCOP continues to strive to improve the sustainability of its internal operations and model best practices. This year, two additional locations, 1100 Broadway and Morgan House, enrolled in clean energy purchasing programs, including the UC Clean Power Program and the East Bay Community Energy's Renewable 100 rate schedule. More than one water leak was identified and remedied in 1111 Franklin, and in the future, UC Path and UCDC will further sub-meter their potable water infrastructure to more accurately identify discrepancies in consumption year over year. Additionally, a new composting program was launched at UCDC to divert the organic waste produced in the student apartments to local compost facilities.

UNIVERSITY OF CALIFORNIA Office of the President

STORIES

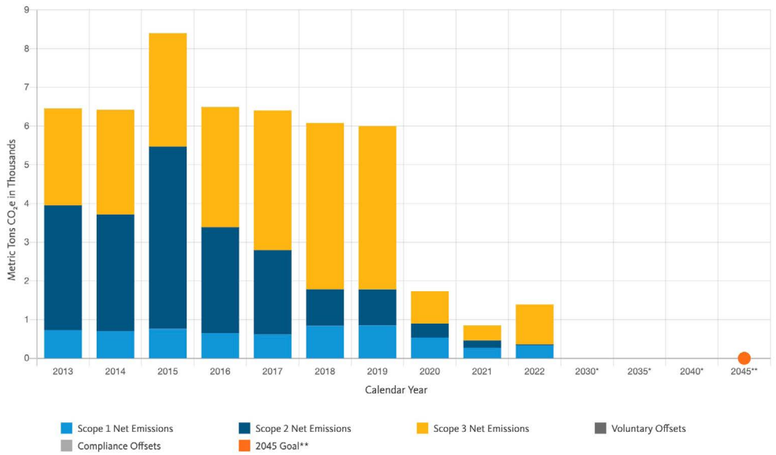
Optimizing Clean Energy Use at the UCPath Center

During winter 2022–23, the UCPath Center modeled decarbonization strategies to achieve a 90% reduction in natural gas consumption with only a 5% increase in electricity use compared to the previous year. This is attributed to the use of underfloor electric resistance zone reheat coils and fans to supply the heating capacity typically provided by gas-powered rooftop units.

Read full article:

https://link.ucop.edu/2023/06/13/optimizing-clean-energy-use-at-the-ucpath-center/

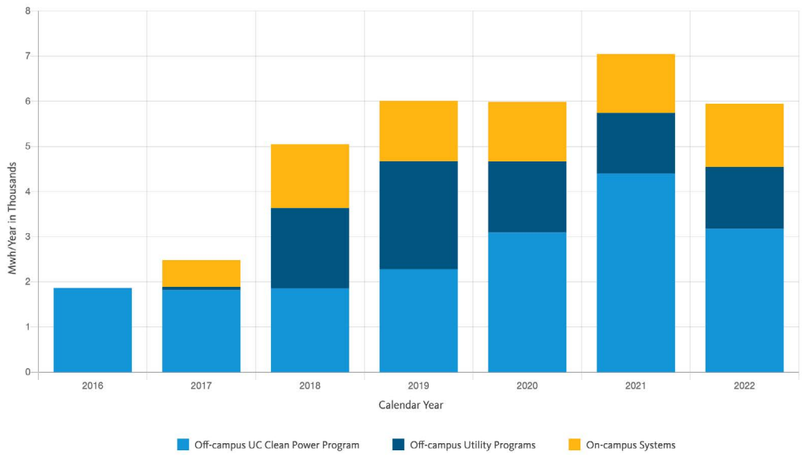
CLIMATE PROTECTION – EMISSIONS



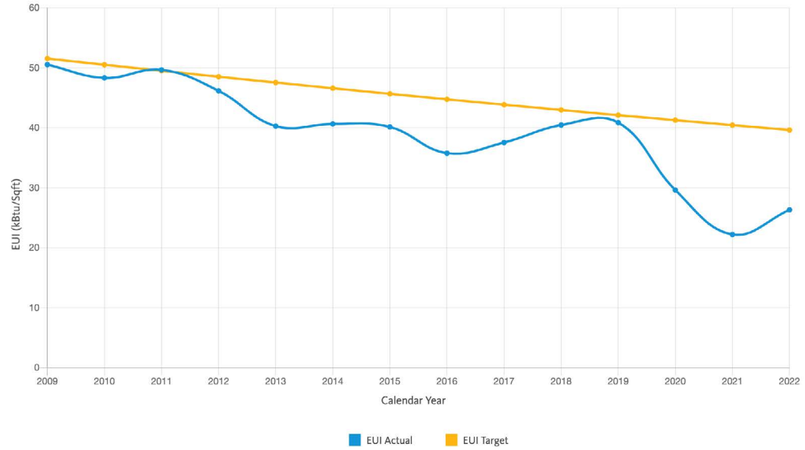
** Interim goals for 2030, 2035 and 2040 to be developed through fossil-free planning that is underway at each location*
*** 90% direct reduction of total emissions from 2019 levels with residual emissions negated by carbon removal*

UCOP's greenhouse gas emissions increased in 2022 as employees returned to the office and resumed business travel. UCOP's scope 1 emissions increased 23% due to greater natural gas, fuel and refrigerant use. New building operating procedures will reduce fossil fuel-derived resource usage (e.g., shifting to electric heating and curtailing natural gas consumption in boilers). UCOP's scope 2 emissions decreased 87% due to building consolidation efforts and the associated transition to purchased carbon-free electricity through UC's Clean Power Program. UCOP's scope 3 emissions more than doubled in 2022 with employees resuming commuting and business travel; however, estimated scope 3 emissions remain 76% lower than pre-pandemic levels.

ENERGY – RENEWABLE ENERGY USE



ENERGY USE INTENSITY (EUI)



UCOP saw an increase in its EUI in 2022 due to a phased return to on-site operations.

GREEN BUILDING

No UCOP locations earned green building certifications in fiscal year 2022–23.

1 Platinum, 2 Gold and 2 Silver

- Total number of LEED certifications

PROCUREMENT

$737K
green spend on electronics (72%)

$11K
green spend on cleaning supplies (78%)

$669K
green spend on indoor office furniture (99%)

$12K
green spend on office supplies (36%)

Green spend is defined as meeting preferred or minimum criteria in UC's Sustainable Procurement Guidelines.
Suppliers reporting: Electronics (4), Furniture (2), Cleaning supplies (2), Office supplies (2).
UC Systemwide Spend Analytics category data provided by CalUSource.

The University reports on green spend, as defined in the Sustainable Procurement Guidelines, and reached out to suppliers for spend data in four product categories for this year's report.

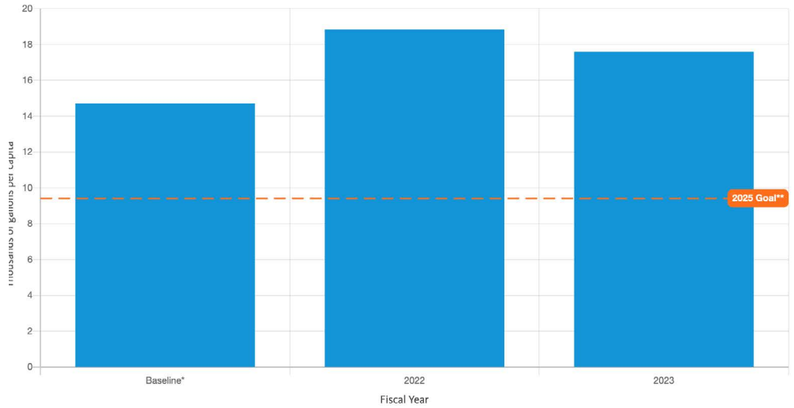
TRANSPORTATION

UCOP employees began returning to the office during this reporting period. In early 2023, the Oakland offices instituted a program to bring employees into the office on the same two days each week. These changes contributed to a shift in estimated commute modes, notably a reduction in telecommute rates and an increase in the percentage of employees using alternative commute modes. These findings were estimated based on data sources such as parking and commuter benefits enrollment. UCOP hopes to conduct a full commuter survey as post-pandemic operations normalize.

88%
of employees are utilizing alternative commuting methods

6
EV charging ports

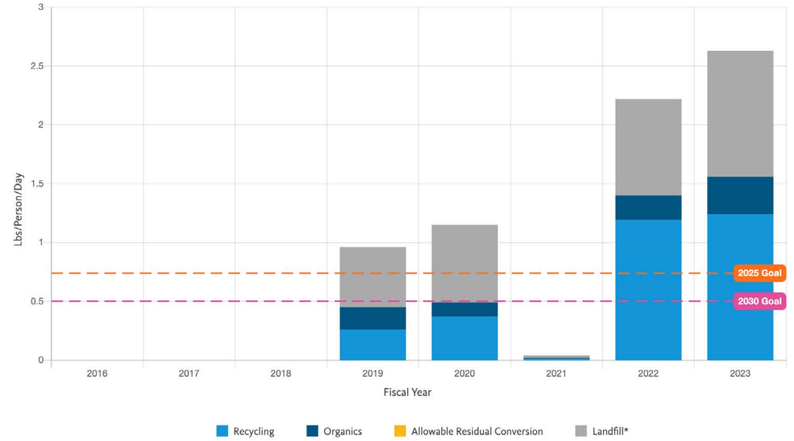
WATER



*Based on a 3-year average of fiscal years 2005-08
**2025 goal is a 36% reduction from baseline

With the partial return to work, UCOP saw a significant increase in total potable gallons consumed compared to fiscal year 2021–22, although water use was lower than it was in fiscal year 2019–20. While total water use increased, UCOP reduced its water consumption per capita by 7% compared to last year due to more staff being on-site. Methodological changes pertaining to estimating meter readings also impacted year-over-year results.

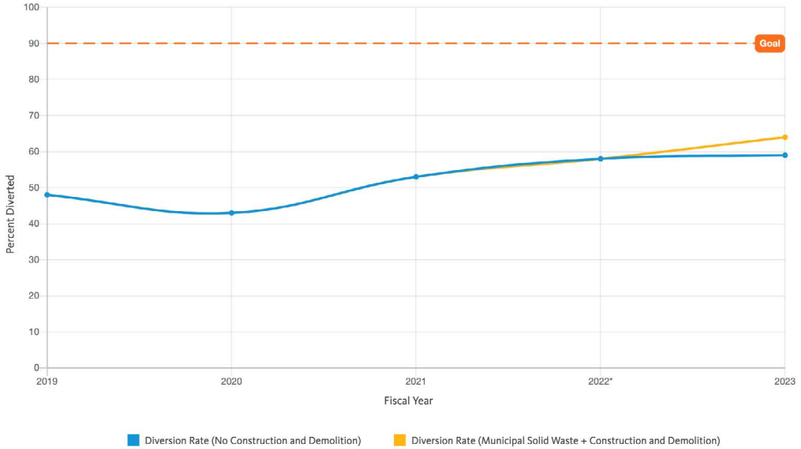
ZERO WASTE – GENERATION



*These numbers might include a small amount of incineration that is being phased out.
Boundary changes give cause to difference in values from previous years (i.e. leased buildings).

Year-over-year comparisons are difficult due to changes in calculation methods and the lack of recent waste audits during the pandemic. The available data show that UCOP's per capita waste generation increased from 2.2 to 2.6 pounds per person this year. This estimate could be attributed to more staff returning to the office as pandemic restrictions eased. Additionally, at the UC Washington Center, student enrollment — and the associated waste generated — dramatically increased as residential programs returned.

ZERO WASTE – DIVERSION



*Waste incineration was counted as diversion prior to July 2022.

UCOP reported an estimated municipal solid waste diversion rate of 59%, roughly the same as fiscal year 2021–22. Including construction and demolition, the total diversion rate was 64%. As UCOP renovated and prepared to open the new UC Center Sacramento, 94 tons of construction and demolition waste were diverted from the landfill.

UNIVERSITY OF CALIFORNIA Office of the President

1111 Franklin St. Oakland, California 94607

Contact us at: www.universityofcalifornia.edu/contact-us

www.sustainabilityreport.ucop.edu/2023/