

**Office of the President**

**TO THE REGENTS OF THE UNIVERSITY OF CALIFORNIA:**

## **DISCUSSION ITEM**

*For Meeting of January 18, 2023*

### **ANNUAL REPORT ON SUSTAINABLE PRACTICES**

#### **EXECUTIVE SUMMARY**

This 19th Annual Report on Sustainable Practices highlights the achievements of the University of California's (UC) comprehensive sustainability program in 2022. It includes progress in sustainable operations required by UC's Sustainable Practices Policy as well as sustainability accomplishments in education, research, investments and public service.<sup>1</sup> As a theme for this year, the 2022 report highlights UC's community partnerships related to sustainability.

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

#### **BACKGROUND**

The 2022 Annual Report on Sustainable Practices documents progress in each sustainability policy area and includes profiles on each UC location. Many of UC's metrics continue to be influenced by the pandemic as the University transitions into a "new normal." Some of the highlights are summarized below. Additional details about UC's progress toward its sustainability goals, including progress specific to UC locations, can be found in the 2022 Annual Report on Sustainable Practices, which is available in an interactive format online.<sup>2</sup> Annual Sustainability Reports from previous years can be accessed online.<sup>3</sup>

#### **CLIMATE CHANGE**

UC's greenhouse gas emissions are reported on a calendar year basis, so the 2022 report includes emissions through the end of 2021. Those emissions were about 20 percent lower than pre-

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<sup>1</sup> <https://policy.ucop.edu/doc/3100155/SustainablePractices>

<sup>2</sup> <https://sustainabilityreport.ucop.edu>

<sup>3</sup> <https://www.ucop.edu/sustainability/policy-areas/annual-reports.html>

pandemic levels, largely due to decreased air travel and commuting. However, those travel-related emissions increased by about 21 percent in 2021 relative to 2020. Campuses purchased compliance offsets to comply with California’s Cap-and-Trade regulation and also purchased some voluntary carbon offsets. Together, these offsets reduced reported emissions by about six percent. Excluding offsets, UC’s emissions decreased by approximately 40 percent in 2021 relative to 2012, before the Carbon Neutrality Initiative was launched.

In an effort to both reduce grid energy needs and obtain local clean energy, UC has brought over 100 renewable energy projects online across the system. On-site renewable generation capacity is more than 52 megawatts systemwide, with individual projects ranging in size from two kilowatts to 16.3 megawatts. In addition to UC-sited projects, campuses and health systems are also obtaining renewable energy from a variety of off-site sources, such as utility and municipal retail tariff options and/or participation in UC’s own self-provided electricity program (“UC Clean Power”). UC Clean Power currently supplies approximately 40 percent of the University’s purchased electricity. Overall, 55 percent of UC’s electricity use comes from renewable or carbon-free sources. According to the U.S. Environmental Protection Agency, UC continues to use more green power than any other college or university in the country and ranks sixth in on-site green power generation compared to all reporting entities.<sup>4</sup>

In addition, the University completed contracts to receive biomethane from two landfills that were previously flaring the biogas, moving UC closer to the goal of supplying 40 percent of UC’s natural gas consumption with carbon neutral biomethane to reduce its scope 1 emissions.

To achieve the carbon neutrality goal by 2025, UC locations need to continue on the path to 100 percent carbon-free electricity, at least 40 percent biomethane, all-electric new buildings, and increased energy efficiency, while also advancing plans for decarbonizing all campus energy systems as soon as possible and purchasing high quality carbon offsets in the near term.

## **ENERGY EFFICIENCY**

As UC continues to grow, energy efficiency will continue to play a critical role in helping the University reach its climate and other sustainability goals.

UC policy requires each location to implement energy efficiency actions to reduce energy use intensity, or energy use per square foot, by an average of at least two percent annually. This energy efficiency goal follows the spirit of the U.S. Department of Energy’s Better Building Challenge. For the 2021 reporting year, UC locations retained many of the energy reductions resulting from the coronavirus pandemic, even with increased occupancy, allowing UC to achieve the two percent goal.

Since UC formalized its Statewide Energy Partnership with California’s utilities in 2004, more than 1,100 energy efficiency and new construction projects have been completed under the program. These projects will have received approximately \$100 million in incentive payments and avoided more than \$30 million in annual energy costs, net of debt service.

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<sup>4</sup> <https://www.epa.gov/greenpower/green-power-partnership-top-30-college-university>

## **GREEN BUILDING**

UC now has 408 LEED certifications for green buildings, totaling 35 million square feet. UC no longer allows on-site fossil fuel combustion (e.g., natural gas) for space and water heating in new buildings or major renovations, except under special circumstances. The University currently has 16 occupied electric buildings (over two million square feet) and another 34 buildings (over eight million square feet) in planning, design, or under construction.

## **TRANSPORTATION**

UC's fleet continues to move toward zero-emission vehicles. Systemwide, 53 percent of all new light-duty fleet vehicles purchased in fiscal year 2021–22 were battery-electric, plug-in hybrid, or electric hybrid vehicles. Over 1,600 active electric vehicle charging stations support the conversion of fleet and commute vehicles to electric options. In fiscal year 2021–22, most locations reported notable decreases in single-occupancy-vehicle commuting from their 2015 baseline rates. Similarly, most locations continue to report significant increases in telecommute rates compared to pre-pandemic levels. However, many locations did see an increase in single-occupancy-vehicle commute rates from the previous year, reflecting the return to pre-pandemic activities for most campuses.

## **FOOD**

In fiscal year 2021–22, approximately 19.5 percent of the University's food purchases met one or more sustainability criteria. This represents over \$27 million going to sustainable food suppliers, \$17 million dollars more than the previous year. Eleven locations were able to increase their percentage spend on sustainable food and beverages. Of the University's total food and beverage spend, 29 percent, or \$40.5 million, was on plant-based food items. The total amount spent on food (and therefore sustainable items) by UC locations increased from the previous year due to campuses reopening food service operations after many outlets were previously closed because of the pandemic.

## **PROCUREMENT**

The University was able to obtain data for \$212 million in total spend in fiscal year 2021–22 from 22 unique strategic suppliers. Within that spend, the University found that 39 percent of appliances and IT hardware, 94.5 percent of indoor office furniture, 65 percent of cleaning supplies and 37.6 percent of office supplies met UC's requirements on minimum or preferred green spend, as outlined in the Sustainable Procurement Guidelines.<sup>5</sup> Analysis of UC's support of small businesses, presented to the state each year, can be found online.<sup>6</sup>

## **WASTE**

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<sup>5</sup> <https://www.ucop.edu/procurement-services/for-ucstaff/sustainable-procurement/sustainableprocurementguidelines.pdf>

<sup>6</sup> [https://www.ucop.edu/operating-budget/files/legreports/2021-22/small\\_business\\_utilization\\_legrpt.pdf](https://www.ucop.edu/operating-budget/files/legreports/2021-22/small_business_utilization_legrpt.pdf)

In fiscal year 2021–22, campuses diverted about 70 percent of municipal solid waste and construction and demolition waste from landfills and generated significantly less total waste. With students returning to campuses in the 2021–22 fiscal year, per capita waste generation returned to pre-pandemic levels. In fiscal year 2021–22, the health systems produced, on average, 26.6 pounds of waste per adjusted patient day, a reduction of over 4.5 pounds per adjusted patient day from the previous fiscal year.

### **WATER**

UC's overall potable water use decreased from pre-pandemic levels, from over 4.1 billion gallons in fiscal year 2018–19 to 3.84 billion gallons in fiscal year 2021–22, a savings of close to 300 million gallons systemwide. Six UC locations exceeded their 2025 goal of a 36 percent reduction in potable water use per person.

## **SUSTAINABLE BUILDING OPERATIONS AND LABORATORIES**

All campuses have completed at least three assessments through their Green Labs assessment programs. By the end of fiscal year 2021–22, the cumulative number of laboratories certified as green by campuses totaled 329. In the upcoming year, campuses are excited to partner with life sciences suppliers to provide \$10,000 in rebate incentives for lab equipment that is energy- or water-efficient.

## **GENERAL SUSTAINABILITY PERFORMANCE ASSESSMENT**

UC campuses and health systems received numerous awards and recognitions for sustainability 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 (STARS ).<sup>7</sup> Six of the nine campuses currently hold a Gold rating. The other three undergraduate campuses, UC Merced, UC Berkeley, and UC Irvine, now have a Platinum rating, the highest STARS ranking. Additionally, four academic health centers received sustainability awards from Practice Greenhealth, the industry body for sustainability in health care.

## **HEALTH AND WELL-BEING**

The Healthy Campus Network, in partnership with sustainability staff, launched the Sustainability and Well-Being Working Group in 2022 after the passage of the new Health and Well-Being section in the Sustainable Practices Policy.<sup>8,9</sup> The group initiated a Health in All Policies Assessment of the policy, which was supported by ten undergraduate and graduate student fellows and their mentors.

## **RESEARCH, EDUCATION AND STUDENTS**

Finally, faculty and student leadership continue to be fundamental in achieving these operational goals while also continuing and expanding UC’s position at the forefront of sustainability research, education, and public service. UC’s research and innovation in climate-related science and solutions extend across basic and applied research, education, training, and service, as indicated by a subset of over 1,000 project awards with project title keywords “climate” and “energy” totaling nearly \$440 million in estimated award dollars over five years. The University also offers for licensing an estimated 330 energy and climate-related technologies and products across UC campuses and affiliated national laboratories. In 2022, the University of California Research Initiatives, through the UC National Laboratory Fees Research Program, made \$11.5 million in new research investments in multicampus–National Laboratory collaborative projects tackling climate and decarbonization, and providing training support for early career scientists.<sup>10,11</sup>

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<sup>7</sup> <https://stars.aashe.org/>

<sup>8</sup> <https://www.ucop.edu/global-food-initiative/systemwide-engagement/healthy-campus-network/index.html>

<sup>9</sup> <https://policy.ucop.edu/doc/3100155/SustainablePractices>

<sup>10</sup> <https://ucop.edu/research-initiatives/index.html>

<sup>11</sup> <https://www.ucop.edu/research-initiatives/programs/lab-fees/index.html>

The fiscal year 2022–23 California state budget, finalized in June, includes a \$185 million investment in UC’s trailblazing research on climate change.<sup>12</sup> This vital funding will provide seed and matching grants for promising climate research and climate-related innovation and entrepreneurship solutions. The investment also includes funds for climate initiatives at UC Riverside, UC Santa Cruz, and UC Merced. Leveraging the University’s expertise in climate action, this support will help build climate resilience in communities as UC works to mitigate the impacts of a warming world.

UC’s environmental sustainability goals have roots in student activism, beginning almost 20 years ago when students encouraged the Regents to approve UC’s first green building and clean energy policy in 2003. A selection of students’ systemwide work and awards in environmental sustainability are also featured throughout this year’s report. As one example, the Bonnie Reiss Climate Action Student Fellowship Program funds student projects that support the UC system’s goal to produce zero-net greenhouse gas emissions by 2025. The most recent cohort of 39 student fellows are part of a growing network of 319 student fellows who have been funded by this program since its launch in 2015.

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<sup>12</sup> <https://www.universityofcalifornia.edu/press-room/uc-statement-2022-23-california-budget-0>