

Welcome!



2023 | FEB 5-7
MIAMI, FL

HIGHER EDUCATION
CLIMATE LEADERSHIP SUMMIT

Decarbonizing Heating & Cooling: Thermal Transition in Action

Monday 3:30-5:00pm ET

2023 HIGHER EDUCATION

Climate Leadership Summit

Brailsford & Dunlavey

HIGHER EDUCATION OVERVIEW

Our purpose is to **inspire** and **empower** organizations to optimize investments that **advance** communities.



Student Housing



Workforce Housing



Recreation



Unions & Cultural Centers



Health & Wellness



Food Service



Athletics



Venues



Academics & Research



Innovation Districts



Campus Edge



Energy & Sustainability



Hotel / Office



Retail



Parking



Auxiliary



Dave Karlsgodt

Director
Energy and Sustainability
Brailsford & Dunlavey



Dano Weisbord

Chief Sustainability Officer

Tufts University



Camille Kirk

Director of Sustainability and Campus
Sustainability Planner

University of California, Davis



Elizabeth Drake

Director of Sustainability
Swarthmore College



Michael Ahern

Senior Vice President,
System Development
Ever-Green Energy



Rob McKenna

Senior Vice President,
Director of Planning and Development
Salas O'Brien

Tufts
UNIVERSITY



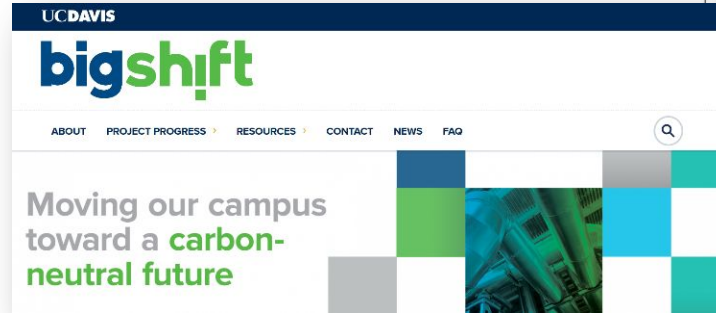




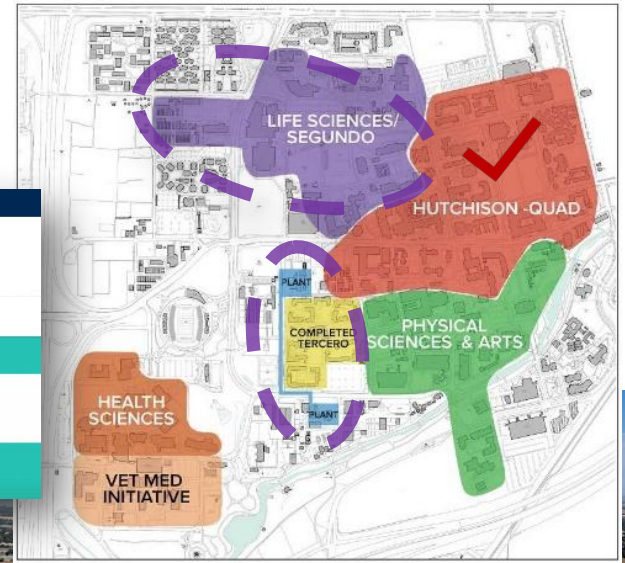
University of California, Davis

2022-23 stats:

- 38,347 students (headcount)
- 25,402 employees (half are at the Medical Center)
- 2,145 hectares / 5,300 acres
- 1,180+ buildings
- 1,888,501 m² / 20,327,656 sf (in OGSF-100)
- \$6.2 billion revenue budget



UCD Campus Heating Options - 60 Year Net Present Cost



UC Davis Large On-site Solar Power Plant

- 25 hectares/62 acres
- 16.3 MW

Advisory Committee (CACCS) Definition

- Fossil Fuel-Free Definition

Fossil Fuel-Free for UC Davis for the 2022 planning phase means 95% no fossil fuel use as measured annually for all UC Davis operations (Scope 1) and all UC Davis purchased utilities (Scope 2), against a baseline of 2019 fossil fuel use. The plan will include public input on fossil fuel-free definitions for our commuting and air travel emissions. The plan will acknowledge the need to track emissions for other Scope 3 sources and begin to set goals for these emissions sources, and devise policy recommendations that can already be implemented now while we improve on our ability to track Scope 3 emissions.

NOTE: The CACS definition does not articulate a performance date; that is part of the planning process.

May 2022: UC Academic Senate petitions the Regents to reduce on-campus fossil fuel combustion **by at least 60% of current levels by 2030 and by 95% of current levels by 2035.**

Advisory Committee (CACS) FFFPP Vision

■ Fossil Fuel-Free Pathway Plan Vision Statement

The UC Davis Campus Advisory Committee on Sustainability (CACS) envisions the Fossil Fuel-Free Pathway Plan for UC Davis will **offer scenarios for tangible actions, with proposed dates and measurable goals**, to achieve our definition of fossil fuel-free. The plan will **thread equity and climate justice, and habitat health throughout our scenarios and planned actions** to do right by the local and global communities we serve; will be adaptable and position the university for **resiliency** and to **reduce financial, operational and reputational risk** of continued dependence on fossil fuel-based energy systems. The technologies to electrify and decarbonize exist now and the CACS envisions **a phased planning process** that retains the flexibility to incorporate new scientific insights and technological advances; and reflects applicable laws and policies, and established global commitments and social and cultural shifts around the climate emergency. This plan will continue to evolve with these new inputs and information.

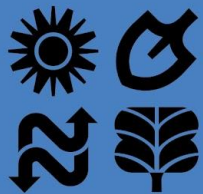
Q: Is the FFFPP the same thing as a Climate Action Plan (CAP)?

A: No. The FFFPP does not include many of the non-fossil fuel aspects of a CAP.

Q: Are carbon offsets part of the FFFPP?

A: No. The FFFPP is not about achieving carbon neutrality.

SWARTHMORE COLLEGE'S CARBON-FREE FUTURE



TO ZERO BY
THIRTY-FIVE







Bold vision. Big changes.

Oberlin College is heated & cooled by underground pipes that deliver steam and chilled water from a central plant to campus buildings.

The steam system is the biggest contributor to carbon emissions on campus. It's inefficient and the pipes need to be replaced.

The aged steam system is being replaced with new, more efficient pipes that will transport water to campus buildings.

The new pipes and switching from steam to hot water is estimated to save 3 million gallons of water each year on campus.

Oberlin's geothermal system central plant will transfer thermal energy 50 and from underground wells, which leverage 50°F temperature 600 feet below the Earth's surface.



SUSTAINABLE INFRASTRUCTURE PROGRAM COMMITMENT

- CARBON NEUTRAL BY 2025
- SAVE > \$1 MILLION IN ANNUAL OPERATING COSTS
- MODERNIZE CAMPUS INFRASTRUCTURE & BUILDINGS
- BENEFIT CAMPUS AND COMMUNITY

2022

South Campus upgrade complete

2024

East, North, & West Campus upgrades complete

2024

Geothermal fully integrated as a renewable heating & cooling source

2025

Campus achieves CARBON NEUTRALITY

CARBON NEUTRAL
OC



Oberlin College is on track to be

100% by 2025
CARBON NEUTRAL

OC'S new energy system will:

Reduce campus
water use
5 by over
million
gallons per year



Reduce campus
sewer discharge
4 by over
million
gallons per year



Improve campus
energy
efficiency
by more than



Oberlin College and Conservatory Secures \$80 Million in Certified Climate Bonds for Sustainable Infrastructure Program (SIP)

AUGUST 3, 2021 • Office of Communications



An aerial view of sustainable infrastructure work in Wilder Bowl.
Photo credit: William Bradford

- Bond enables Oberlin to initiate substantive progress on four-year project to build new geothermal energy system for the campus.

Over **\$1 million** in
annual operational savings



MISSION ROCK Utilities

Energy

100%

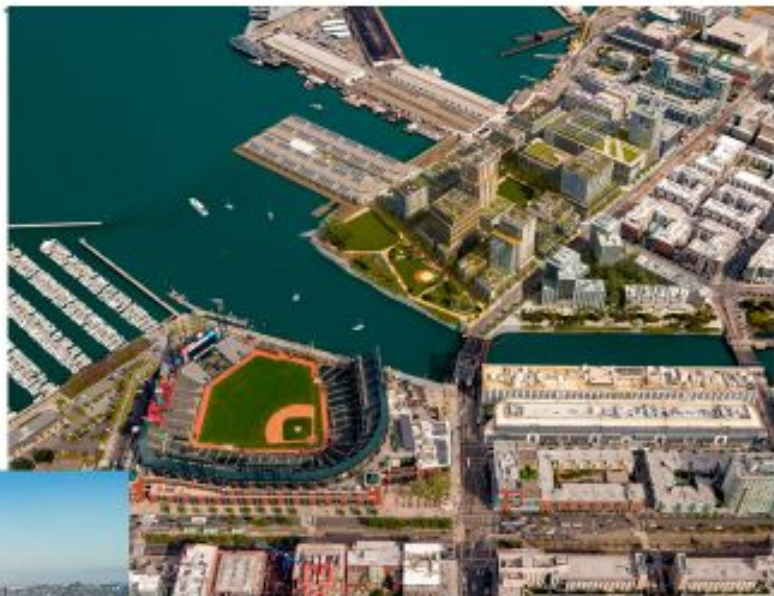
of building energy
demand met with
renewable energy
sources

Water

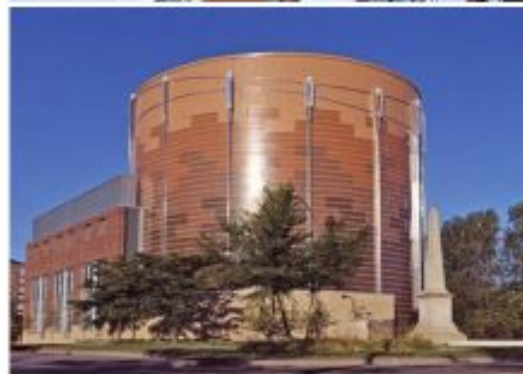
Meets

100%

of non-potable water
demand with non-
potable sources



Recent Campus and Community Decarbonization Programs





A REUTERS SPECIAL REPORT

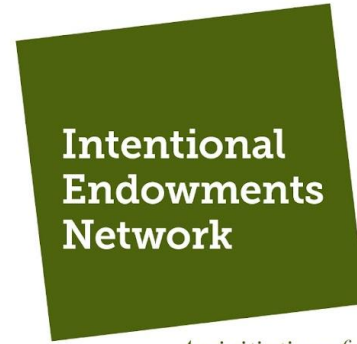
U.S. colleges talk green. But they have a dirty secret

By [TIM MCLAUGHLIN](#) and [M.B. PELL](#) | Filed November 11, 2022, 12 p.m. GMT



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CraneSustainability.org*

www.intentionalendowments.org



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