

LEADING CHANGE



In April 2006, the University of California-Davis (UC Davis) became the first institution of higher learning in the nation to form an academic research center exclusively dedicated to energy efficiency. After a decade's commitment to accelerating the development and commercialization of energy efficient solutions and training future leaders in energy efficiency, in 2017 the UC Davis Energy Efficiency Center became an Institute. While rooted in energy efficiency, the mission of the UC Davis Energy and Efficiency Institute (EEI) has broadened since its inception to focus on sustainable energy systems. The EEI is also home to the new UC Davis Energy Graduate Group, which offers M.S. and Ph.D. degrees in energy systems. According to their purpose statement, they "focus on addressing critical energy challenges and improved energy use through research, education, and engagement."

The EEI accelerates innovation and solves critical energy-related problems through partnerships with a variety of stakeholders, including innovators, investors, manufacturers, installers, consumers, and policy-makers. This collaborative environment is part of the Institute's very DNA, as it was formed with a challenge grant from the California Energy Fund (CalCEF) and financial support from eight

leadership sponsors: Chevron Corporation, Edison International, Goldman Sachs, Microsoft, Pacific Gas and Electric Company, Sacramento Municipal Utility District, Sempra Energy, and Walmart.

The collaborative spirit continues today in the individuals that drive the Institute forward. Since its inception, the EEI has supported the growth of its four affiliated research centers: the California Lighting Technology Center, the Western Cooling Efficiency Center, the Center for Water-Energy Efficiency, and the Plug-in Hybrid & Electric Vehicle Research Center. It has also established robust global impact efforts, educational programs, and research initiatives. Comprised of nearly 50 faculty and dozens of students, the Institute serves as a hub for UC Davis' energy-related efforts, leveraging its substantial strengths in lighting, HVAC systems, building controls, water, agriculture and food production, renewable energy siting, biofuels, sustainable transportation, fuel cells, batteries and energy storage, behavioral economics, life sciences, health and well-being, and human and community development.

The Institute has been involved with many exciting projects to date. A few of these efforts are highlighted here.

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WEST VILLAGE NEIGHBORHOOD

Opened in 2011, UC Davis West Village is the largest planned “zero net energy” community in the United States. The EEI (then EEC) developed a comprehensive energy strategy for West Village that included efficiency measures and on-site power generation to minimize energy demand, such as solar-reflective roofing, radiant barrier roof sheathing, extra insulation, energy-efficient lighting fixtures, and a densely distributed 4-megawatt photovoltaic system.

The West Village Neighborhood is the result of a public-private partnership between UC Davis and a private developer. It currently includes 663 apartments, 42,500 square feet of commercial space, a recreation center and study facilities, and the Sacramento City College Davis Center. Located in the commercial space is the UC Davis Energy and Transportation Research Hub, where EEI is located. Currently under construction is a new housing project that will include approximately 1,250 student housing units, a community center and study rooms.

GLOBAL ENERGY MANAGERS WORKSHOP

Because the Institute is dedicated to bringing products, services, and other energy-efficient technologies into widespread use, outreach is an integral mission for its staff. The EEI hosts and participates in numerous energy-related events each year, from large international conferences to small, focused workshops.

In 2019, UC Davis hosted the first annual Global Energy Managers Workshop. This was an opportunity to gather facility managers, students, and faculty from around the world to share best practices in campus energy management, education, and community engagement. Some of the sessions focused on the process or evolution of energy efficiency, with topics like Building an Energy Team, Designing Efficient



Above: Attendees collaborating at the 2019 Global Energy Managers Workshop. (Photo provided by UC Davis)

Below: 2019 Global Managers Workshop (Photo provided by UC Davis)



Buildings, Utility Metering, and Data Analytics. Several key-stone sessions examined the DNA of successful projects, including the CSU Long Beach Clean Energy Masterplan, various Stanford Energy Systems innovations, and Capital Projects LEED Certification Summary.

The workshop was a tremendous success, and the second annual event will be held this fall from October 5th to 7th. Registration opens this summer, providing an opportunity to engage in a collaborative environment to share and learn from both peers and industry leaders. The target audience for the event is energy managers of large campuses, including those at schools and universities, hospitals, corporations, military complexes, and municipalities. ✨