

## Nation's largest planned zero net energy community opens



UC Davis West Village is a mixed use community that includes approximately 42,500 square feet of retail space on the perimeter of a Village Square that has been designed as a hub of neighborhood activity. (Karin Higgins/UC Davis photo)

Setting a national precedent in sustainable design, UC Davis West Village will open its doors Saturday as the largest planned zero net energy community in the country. Located on the UC Davis campus, this visionary development is designed to generate as much energy each year as it consumes.

"UC Davis West Village illustrates our commitment to cutting-edge research in sustainability and the value and impact of public-private partnerships," said UC Davis Chancellor Linda P.B. Katehi. "The success of these partnerships demonstrates what can be achieved when innovations in design, science and engineering come together for the public good."

Hundreds of residents, neighbors and supporters are expected to attend a ribbon-cutting ceremony and open house celebrating completion of major elements of UC Davis West Village's \$300 million first phase: 315 apartments, 42,500 square feet of commercial space, a recreation center and village square.

When completed, the ambitious 130-acre development will be home to about 3,000 people in 662 apartments and 343 single-family houses.

Zero net energy has never been attempted on the scale of UC Davis West Village. If the community achieves its energy goals, it will set a national precedent in sustainable design.

West Village Community Partnership, LLC (a joint venture of Carmel Partners of San Francisco and Urban Villages of Denver), brought the plans to life. The developer has a 65-year ground lease with the university for the project.

"UC Davis West Village is a visionary model for integrating pioneering sustainable principles with high-quality living environments, creating an eco-friendly lifestyle for students, faculty and staff," said Nolan Zail, Carmel Partners Senior Vice President of Development. "We believe the success of this innovative public-private partnership and demonstrated zero net energy living community will inspire other public and private institutions to build similar sustainable communities."

UC Davis West Village will also be home to:

- Sacramento City College's Davis Center at UC Davis West Village, the first community college center to be housed on a University of California campus. The center will open to an estimated 2,400 students in January.
- UC Davis' first uHub, a prototype for future campus innovation hubs and an incubator for innovation in sustainability. Located in commercial space surrounding the village square, the uHub will be home to the campus' energy research centers, where they will enhance the

living laboratory of UC Davis West Village while fostering interactions with the private sector in the area of energy research.

Students began moving into the community's Viridian and Ramble Apartments in August, with nearly all of the apartments now leased. Final build-out is expected in fall 2013. Today, the two apartment complexes are home to about 800 students, faculty and staff.

"You don't have to sacrifice a thing," senior Logan McCown of Palos Verdes, Calif., said of zero net living. Her two-bedroom unit features walk-in closets, a full-size washing machine and dryer, stainless steel kitchen appliances, unlimited high-speed Internet service – and air conditioning.

Single-family homes, for sale to staff and faculty, are slated to be completed in late 2012.

In its Zero Net Energy Action Plan, released Sept. 1, 2010, the California Public Utilities Commission called for shifting all new residential construction in California to zero net energy by 2020, and all new commercial construction by 2030.

UC Davis West Village relies on two strategies to achieve the zero net energy goal: aggressive energy efficiency measures and on-site power generation.

If built to code, the completed portions of UC Davis West Village would burn 22 million kilowatt hours of electricity a year. But by employing aggressive energy efficiency measures, planners project the annual total will come to about 11 million kilowatt hours, a 50-percent reduction.

The energy-efficiency measures include solar-reflective roofing, radiant barrier roof sheathing and extra insulation. Energy-efficient exterior lighting fixtures, indoor occupancy sensors and "daylighting" techniques will help the community use about 60 percent less energy than if standard lighting had been used. A web-based tool enables energy monitoring by unit. And a smart phone app lets residents turn off lamps and plugged-in electronics remotely.

A four-megawatt photovoltaic system is expected to meet the energy needs of the first 1,980 apartment residents and commercial spaces.

On the horizon is a biodigester, based on technology developed at UC Davis, that would convert campus table scraps, animal and plant waste into energy.

The community is sustainable in ways beyond energy. It offers an extensive bike network and is served by the campus's student-run Unitrans bus service (the buses are powered by natural gas). Drought-friendly landscaping, water-saving toilets, recycled building materials, and paints low in volatile organic compounds (VOCs) are just some of the green features incorporated into UC Davis West Village's design.

Grant funding for the UC Davis West Village energy initiative came from the U.S. Department of Energy's Community Renewable Energy Deployment program, the California Energy Commission, California Public Utility Commission's California Solar Initiative, and California Energy Commission's PIER Renewable-Based Energy Secure Community program.

PG&E, Chevron Energy Solutions, Energy+Environmental Engineering, and Davis Energy Group, together with UC Davis faculty and staff, played key roles in the zero net energy planning and feasibility studies.

Under the neighborhood master plan for UC Davis West Village, a future construction phase could include another 882 student beds and 132 single-family homes on 94

additional acres. No timeline has been set for this phase.

#### **About the UC Davis West Village Public-Private Partnership**

Located on the campus of the University of California, Davis, the development broke ground in August 2009, and is a public-private partnership between UC Davis and the West Village Community Partnership, LLC, a joint venture led by Carmel Partners with their partner, Urban Villages.

#### **About UC Davis**

For more than 100 years, UC Davis has engaged in teaching, research and public service that matter to California and transform the world. Located close to the state capital, UC Davis has more than 32,000 students, more than 2,500 faculty and more than 21,000 staff, an annual research budget that exceeds \$684 million, a comprehensive health system and 13 specialized research centers. The university offers interdisciplinary graduate study and more than 100 undergraduate majors in four colleges — Agricultural and Environmental Sciences, Biological Sciences, Engineering, and Letters and Science. It also houses six professional schools — Education, Law, Management, Medicine, Veterinary Medicine and the Betty Irene Moore School of Nursing.