

# When University of Oregon says energy conservation, it means business

By Therese Lang  
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Necessity. That's what got the whole ball rolling. In 1999, Phillip Romero, the new dean of the Lundquist School of Business at the University of Oregon in Eugene, scratched his head and wondered, how are we going to accommodate all these students? Obviously, the School of Business was in dire need of an expansion, but how were they going to pay for it?

Almost as if a fairy godmother had read his mind, the Lundquist School of Business received a \$12 million donation from businessman Charles Lillis and his wife. Lillis, former chairman of MediaOne Group, earned a Ph.D. from the U of O Business College in 1972.

Finding the money to fund the \$40 million complex was one of many challenges Dean Romero faced. The other was designing a facility that would better reflect the values associated with the U of O and its students.

"Students at our college prize Oregon values, which include community and stewardship, so to express these values, we felt it critical that our building erase its environmental footprint," said Romero. Implementing sustainable design principles would add a bit to the cost of construction, but that didn't deter the planning team. They turned to two programs offered through the Oregon Department of Energy to help defray those costs, the Business Energy



*The airy atrium houses the learning centers and the Career Center. Solar panels will be installed into the skylights. Photo courtesy of the Oregon Department of Energy.*

Tax Credit and the energy loan program.

The Business Energy Tax Credit

(BETC) is intended to help businesses that invest in energy conservation, recycling, renewable energy resources



*At left, solar panels greet the students at the front of the Lillis Building. The panels provide about 6 percent of the electricity for the whole building. Below, theater seating was planned for the largest lecture hall in the Lillis Building. Each seat has a power source for laptop computers. Photos courtesy of the Oregon Department of Energy.*

and less-polluting transportation fuels. The tax credit is for 35 percent of the eligible project costs. The energy loan program is a low-interest loan available to individuals, businesses, schools, government entities, public corporations, tribes, and non-profits. Projects must be in Oregon and must promote energy conservation and/or renewable energy resource development.

Mick Westrick, director of technology and business services at the U of O Chiles Business Center, acknowledges that without these programs, the project wouldn't have come to fruition. "We're blessed in Oregon to have BETC and the low-interest loan program. It makes energy-construction projects cost-effective."

By using the natural resources available, such as the sun and cool breezes, the 145,000-square-foot structure will use 40 percent to 50 percent less energy than a building of the same size built with conventional methods.



The building is positioned in an East-West orientation, allowing the structure to take advantage of the light and wind exposure. This process enables the practices called daylighting and passive ventilation. Daylighting involves shelves that are mounted halfway up the window and reflect the incoming light into the classroom,

bouncing the light off the ceiling. This reduces the need for electric lights.

Passive ventilation uses open windows and vents which draw in outside air, distributing it underneath the slab flooring, warming or chilling it as it is delivered throughout the building. While this doesn't totally eliminate the need for heating and cooling, it certainly

ly reduces the reliance on a central heating/cooling system.

The front of the building is lined with photovoltaic solar panels and shine in the sunlight like sapphires. These south-facing panels generate 6 percent of the electricity used in the building. Other high-tech features include a massive central computer system, called an Advanced Monitoring System. This computer measures light levels, temperatures, building occupancy, heating load and power generation. It automatically adjusts the controls for maximum energy-efficiency.

Another appealing feature is the "eco-roof." This rooftop garden holds 20 different kinds of plants, mostly succulents. Because these plants absorb sunlight during the summer, it cools the building down. In the winter, the garden reduces the amount of rain runoff. The roofs that do not have a garden on them are painted either white or gray, deflecting the sunlight and thereby keeping the building cool in the summer.

An important aspect of the building that needed to be incorporated was the concept of group projects. Much of the business school curriculum centers on groups of students working with real businesses, in order to gain real-life business experience. The open and airy atrium houses the learning centers and the new Career Services Center. The six learning centers offer space for teamwork, studying, and computer access and are divided based on the six academic departments. The Career Services Center is designed to help students research jobs and potential employers.

The example set by the Lillis

Complex inspired the University of Oregon to adopt a Sustainable Development Plan in 2000. It calls for the use of sustainable design elements in any new construction or remodeling on campus. The University of Oregon intends to lead the way in sustainable design principles and to show the rest

of the world that these concepts are cost-effective and are helping to promote a renewable and sustainable way of life, values that U of O students, faculty and staff, hold dear.

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