

UMass dedicates new net-zero economics department building

By NICOLE DeFEUDIS
For the Gazette

Wednesday, March 22, 2017

AMHERST — Not even 30-degree temperatures and a 25-mph wind could stop the progress made on Crotty Hall, the first net-zero facility at the University of Massachusetts' flagship campus.

In frigid weather Wednesday, the ribbon was cut to the new \$10 million, 16,800-square-foot economics department building at 412 North Pleasant St.

"I'm literally blown away by this," James Crotty, UMass professor emeritus of economics, said with a smile.

The building was dedicated to Crotty and his wife, Pamela, a UMass alumna who once worked as a registered nurse and served on the Union for Radical Political Economics (URPE) steering committee.

A net-zero building produces as much energy on-site as it uses in one year, explained Pratik Raval, associate director at Transsolar Engineering. Crotty Hall is equipped with many sustainable features, including photovoltaic panels on the roof, natural ventilation and lighting, heavy insulation and a geothermal heat pump system.

The building was designed by UMass professor of architecture Sigrid Miller-Pollin. The three-floor building contains 35 offices and four conference rooms, three of which can be converted into classrooms.

The project was funded by an anonymous donation of \$10 million. According to Chancellor Kumble Subbaswamy, this is one of the largest donations in UMass history.

"It's a really exciting day," Subbaswamy said in a speech. "We thank James and Pamela Crotty for their commitment to the campus and to the community."

Construction began on Crotty Hall about a year ago and finished in December. Staff began moving into the building in early January.

Uniting the department

An empty, overgrown lot once stood where Crotty Hall does now, according to Miller-Pollin. She also designed Gordon Hall, the building next door, which was completed in 2003.

Gordon Hall also houses the department of economics, as well as the school of public policy and the Political Economy Research Institute (PERI).

"It's going to bring us together in a lot of ways," said Michael Ash, professor and chairman of the economics department at UMass.

The economics department was once in Thompson Hall. Now, the department is right next door to PERI and the rest of the economics department. As a plus, Ash described the new offices at Crotty Hall as "incredibly comfortable."

According to Ash, Miller-Pollin and those she worked with "have turned a vision of sustainability into a real object of bricks and mortar."

Thanks to the dedication of those who worked on the project, "I think people (in the economics department) kind of feel excited to come to work," Ash said.

Leading the way in sustainability

Crotty Hall is one of 20 net-zero office buildings in the United States, said Raval. It is designed to use one-fifth of the energy used by the average office building in our climate, he said.

Six geothermal wells rest 400 to 500 feet in the ground below the building. Water this deep underground is always at a constant temperature of about 50 degrees fahrenheit.

During the winter, a geothermal heat pump system takes this water from deep underground and heats it to around 70 or 80 degrees. From there, the water is sent to radiant wave panels that are suspended on ceilings throughout the building. This is how the building is heated.

The same system can be used to cool the building in the summer.

Using a geothermal heat pump system is much more efficient than other methods, Raval explained. It is much easier to heat water from 50 to 70 degrees, than to heat outside air.

Miller-Pollin also utilized natural lighting and thick insulation in the design to save energy. The offices have sensors, which turn off lights when an office is left vacant for a long time. PV panels on the roof provide solar energy.

The land outside of the building is strategically terraced, so runoff from rain waters the plants.

"University and college communities can lead the way in terms of setting an example for how we should treat the planet," Miller-Pollin said.

According to UMass spokesman Larry Rivais, the chancellor is trying to promote sustainability in new developments on campus. Last year, more than 15,000 solar panels were installed on campus, including over parking lots and on the Fine Arts Center building, he said.

"This fits exactly with what the university is trying to do," Rivais said.

Building celebrates UMass

Miller-Pollin teaches classes in the department of architecture at UMass. A group of her students watched from the crowd during the ceremony.

"It's a great pleasure to have it all come together," she said. "The main thing is that the building will serve people well."

A few of Miller-Pollin's students cheered as the ribbon was cut.

"I'm just so proud of her work," said Devin Liang, one of Miller-Pollin's students. Liang is a junior majoring in architecture at UMass.

Members of the Crotty family also watched proudly from the crowd, as the building was dedicated.

James Crotty taught undergraduate and graduate courses in economics from 1974 to 2010.

"My job here turned out to be literally the best job in the world for me," he said.

Pamela Crotty graduated with a bachelor's degree in gerontology from UMass in 1987. She worked as a registered nurse from 1960 to 2002. From 1972 to 1974, she was on the URPE steering committee.

James and Pamela Crotty have four children and eight grandchildren, many of whom were at the ceremony.

"It's so nice for this to happen to my dad," daughter Jamie Calzini said. "It just means the world to him and to all of us," she said, motioning to the rest of the family.

James Boyce, an economics professor at UMass, hopes for Crotty Hall to pave the way for new net-zero buildings on campus in the future.

"Crotty Hall could really become a new standard," he said in a speech.