

UT incubators help grow technology into businesses

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UT is committed to nurturing and growing research and technology into viable businesses at a number of incubation facilities both on the main and health science campuses.

"We're deeply committed to the incubation process at the university," said UT President Lloyd Jacobs.

The university's board of trustees approved two projects at its June 4 meeting that will increase and improve incubator space on both campuses. It approved the renovation of additional incubation space on the health science campus, Jacobs said.



The board also approved the new Technology and Incubation Center proposed on the main campus.

The Mixed Use Technology Incubator will include flexible space for use by information technology and other new business start-ups developed from research conducted in engineering, physical science and business disciplines.

"That mixture of divergent companies with different disciplines provides unique opportunities for multi-dimensional companies," said Megan Reichert-Kral, director of research and development for the Clean and Alternative Energy Incubator.

Funding is in place for the \$3.75 million, 30,000 square-foot facility that will be built next to the existing Research and Technology Complex located at Dorr and Westwood.

The banks of solar panels in front of that building represent the solar energy technology being developed at the Clean and Alternative Energy Incubator located there. UT has been involved in advancing solar cell technology for more than 20 years.

The nation's largest manufacturer of solar cells, First Solar Inc. of Perrysburg, is the product of research and technology originally developed at UT as McMaster Energy Enterprises. Another start-up, Integrated Thin Films, graduated from the incubator and became Solar Fields LLC also located in Perrysburg.

UT received an \$18.6 million award from the state of Ohio in January to establish the new Wright Center for Photovoltaics Innovation and Commercialization (PVIC) to advance the use of solar power in collaboration with BGSU and Ohio State University.

During the next three years, UT will receive a total of \$9 million, while partners BGSU and OSU

will share the remainder of the award. The program brings together 50 Ohio institutions, companies, nonprofit organizations and industry and university scientists.

Photovoltaics is the process by which the energy in sunlight is converted into electricity. Photovoltaic or solar cells capture photons from sunlight and convert them into electrons to generate electricity.

The Wright Center for PVIC will be located at the Clean and Alternative Energy Incubator at UT. The building will be undergoing a major renovation this summer to accommodate the center along with other companies already operating in the incubator.

The renovation will place a second floor across the existing 19,000 square-foot high bay area that will allow modular lab space to be constructed below for the Wright Center. The second floor space will remain as developable space for future tenants in the incubator, Reichert-Kral said.

Developing incubation

The existing incubator is already home to Midwest Opto Electronics, another product of UT research and tech transfer, Advanced Distributed Generation and Ugly Data Inc. with leased offices for Green Energy Ohio. The complex is projected to be fully occupied within the next 18 months, another reason for building additional incubation space.

"We've been in discussion with several companies that are interested in working with UT and its developing incubation program," Reichert-Kral said. "Some are interested in the Clean and Alternative Energy Incubator while others are interested in other incubation efforts at UT. It's extremely competitive and having an incubator here is an advantage."

The Center for Photovoltaic Energy and Hydrogen (CPEH) was established at UT last November with a \$3.6 million grant from the U.S. Department of Defense. Establishment of a DOD research center for alternative energy was UT's top federal research priority during fiscal year 2006.

"This university is going to help lead America into a new day of energy independence. In fact, it's going to be a world leader," said U.S. Rep. Marcy Kaptur when she presented the federal award to university officials. Kaptur championed this project from her position on the defense subcommittee of House Appropriations.

The CPEH center is working with lab space at the Research and Technology Center and the Physics Department in McMaster Hall on research to generate hydrogen from solar energy for the DOD. The program will work collaboratively with the PVIC program.

"One grant complements the other and the research activities are related to each other," Reichert-Kral said.

H2 Engine Systems, another UT incubator tenant, is working on a project with TARTA, comparing biodeisel and hydrogen engines with ones that run on a combination of both fuels.

In February, a 20-member consortium of corporations, universities and colleges, economic development organizations and venture capital firms, received a three-year,

\$11.6 million grant from the state's Entrepreneurial Signature Program to support technology-based enterprises and business in Northwest Ohio.

Headed by the Regional Growth Partnership, the consortium includes UT where much of the research and technology development is based. About \$6 million will be used to invest in more than 30 companies primarily focused in advanced materials and agri-biosciences, and \$5.8 million for entrepreneurial services.

Another \$5.9 million was raised by local businesses, organizations and universities as a match to the state money.

"The program is aimed at nurturing an environment for young businesses and at significantly increasing efforts to commercialize technology-based products and services," said Frank Calzonetti, vice president for research development.

"UT was a major partner in the development of the proposal and will need to be a major partner if the project is to be successful."

The conversion of biomass, organic materials such as wood chips, switch grass, and corn stalks, to create alternative fuels for the future is already under development in UT labs. This research is being developed by another spin-off of the technology transfer program at UT. Reichert-Kral said that she is currently negotiating with the company to locate in the Alternative Energy Incubator.

Calzonetti said research is being conducted in many diverse fields at UT.

Last month, UT opened a new research facility, the Center for Diabetes and Endocrine Research located in the Block Health Science Building on the health science campus.

Researchers are working to find the physiological and scientific links between diabetes and the development of medical treatments that can help slow or reverse diabetic effects.