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Solar energy to debut on campus

By **Jeff Samoray**, *OU Web Writer*

Later this summer, Oakland University will for the first time produce consumable energy via solar power. A 10-kilowatt system, installed on the roof of the University Student Apartments community center, will provide energy for that building and, at times, the apartment building adjacent to it – Building 5000. When complete, the system will be one of the largest building integrated systems in the Midwest.

“The energy produced by the system will pump power into the electrical grid serving those buildings,” said Jim Leidel, OU energy manager and manager of the 10 Kilowatt Photovoltaic Public Demonstration Project. “The system is fully synchronized and the energy will flow electronically into the grid as a backfeed. The power will be used for whatever energy is being consumed in the community center. Any remaining energy will go to the 5000 Building.

“Under conditions where there is total sunshine throughout the day, the system will produce enough energy for about two to four homes.”

The photovoltaic project became possible when OU received a \$100,000 grant from the **State of Michigan Energy Office**. OU collaborated on the project with Oakland Community College, Berkaert ECD Solar Systems LLC and consultant Robert Pratt.

Exterior solar panels were installed earlier this spring. Contractors currently are completing interior work installing inverters that will convert the DC power produced by the solar cells into AC power for consumption. The system is expected to be complete by late July or early August.

“The endeavor is a demonstration project meant to educate our students and the public to show that it’s possible to generate solar power and how it’s done,” Leidel said. “(Assistant Professor of Engineering) Laila Guessous is a team member and our engineering department will help out with analysis.”

Such a solar-powered system, though expensive, also is feasible for home use.

“If you were to build a house, you could finance such a system with your mortgage,” Leidel said. “The costs are around \$8 to \$10 per watt, installed. So it would cost roughly about \$16,000 to \$20,000 to put such a system on your house. It’s still quite expensive, but it eventually pays for itself.”

As for other alternative energy sources, Leidel is investigating the possibility of installing a wind turbine on campus.

“I’ve installed a wind sensor and am tracking the average wind speed on the campus,” Leidel said. “Wind power is one of the cheapest forms of power today and is widely practiced in California. But to make it an economical, sustainable project, we need to have average wind speeds of about 12 to 14 miles per hour, and I don’t believe our wind resources are sufficient.”

For more information on the project and other campus energy issues, visit Oakland University’s **Energy Management** Web site.

SUMMARY

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