EDINBORO NEWS

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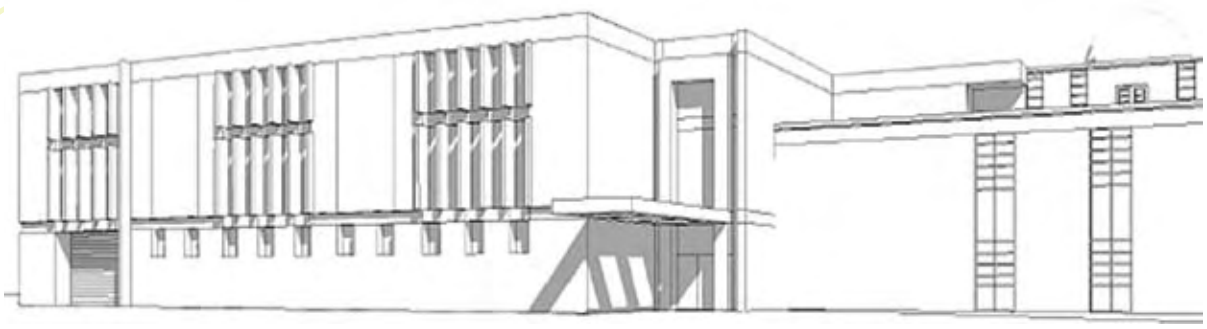

Renovation and addition to Cooper Hall is expected to be started summer of 2009.

By Mary Amidon

The tartan plaid might be Edinboro University of Pennsylvania's trademark symbol, but there's a new color boldly sweeping the campus. Edinboro is painting its campus green with alternative energy and sustainability projects that attest to its vision of leadership in the 21st Century.

Edinboro University President Dr. Jeremy D. Brown, upon his arrival on campus, quickly channeled his energies to create an Alternative Energy/Sustainability Committee to review all University operations with an eye toward transforming Edinboro's campus. He has charged faculty and staff to come on board as change agents to make Edinboro a better place, not only for current stakeholders, but for future generations to come. Stewardship of the environment is not mere talk. It is action, and much has been done.

"Every time we see an opportunity to impact sustainability, we must consider that option," Dr. Brown said. "But if you ask me if there's a timeline or deadline, I'd have to say 'no.' We will never declare victory because this commitment is forever ongoing and evolves along with new technology."

Big stakes, big challenges

From 200 geothermal wells for the quad of new University housing units to incandescent light bulb replacement, Edinboro is making strides. Solar energy, micro turbines and biodiesel fuel are all parts of the equation, but also, too, are bicycles, vigorous tree planting programs, and other forms of green transportation such as shuttle bus service and a more efficient on-campus fleet of vehicles.

The payoffs are huge — measured not just in terms of dollars saved, but also in a more eco-friendly campus, providing educational opportunities for students and demonstrating Edinboro's commitment and leadership to the environment. While energy efficiency is clearly a major concern given soaring utility costs, the benefits of reducing environmental consequence and re-using energy in alternative ways speak volumes about Edinboro's commitment as a regional leader in promoting sustainability.

The stakes are also high. The complex of eight suite-style student housing facilities under way carries a price tag of $115 million. The new Institute for Human Services building, for which ground was broken on Homecoming Weekend, will cost $5 million. Both include more environmentally-friendly construction materials and sustainability systems. The biggest prize looming on the horizon, however, is the nearly $23 million Cooper Hall expansion slated to start in the summer of 2009. The objective is to implement a Net Zero Grid Distributed Generation concept that uses natural gas micro turbines and will result in no electricity supplied by the grid on a net annual basis. (See sidebar).

"It all goes toward one common goal of conserving the environment for the next generation, and for many

Cooper Hall, the sleeping giant

A behemoth of a building, Cooper Hall is a workhorse on the University campus. Serving 2,400 students, the 76,000 sq. foot science building gets a work out. The building includes classrooms, laboratories, and have faculty offices; it also houses the Edinboro University Planetarium, the largest astronomical observatory in northwestern Pennsylvania.

Constructed in phases from 1962 to 1965, parts of the building have no cooling system, which leads to an an uncomfortable learning environment but and also leads to more rapid degradation of sensitive electronic equipment.

Dr. Eric Randall, Dean of Science, Management and Technology, and Dr. Richard Lloyd of the physics department are leading the charge to incorporate innovation, alternative energy and sustainability components. The two, along with Associate Vice President William Coleman and a committee of seven scientists, have logged hundreds of hours of research and writing grants to secure funding to enable construction that will include geothermal heating and cooling.

The proposal would create a Net Zero Grid Distributed Generation concept that would incorporate natural gas micro turbines to eliminate dependency on the electricity grid. Other components would include a highly efficient solar thermal heat pipe system, solar walls, occupancy sensors to allow efficient air distribution from hot to cold rooms during summer and winter months, and centralized monitering system for all active elements that would, in effect, provide, the basis for a learning laboratory for students.

The benefits of this huge undertaking are many, extending not only to environmental leadership but also to energy conservation and independence, education and outreach.

Partnering for progress

In highly visible and more subtle ways, change has occurred. Visitors, students and faculty might not even notice some of the changes, but Associate Vice President for Facilities William Coleman '95 and his Facilities team have been working overtime to make those changes happen with as little disruption as possible. A military man with a penchant for detail, Coleman is excited about opportunities to reduce reliance on electricity, which is costly and adversely affects operations during power outages.

In partnership with Honeywell Energy Service, the University has undertaken a campus-wide guaranteed energy savings project to completed in November. **Projected savings include:**

- **14,394,334 KHz** of electricity
- **17,960.96 kw** electricity demand
- **101,854 therms** of natural gas
- **14,143,000 gallons** of water and sewer
- Emission reductions amount to **2,860** car reduction units, nearly **1.6 million** equivalent car fuel reduction gallons a year and **3,910 acres** of forest

Recycling successes at Edinboro

- **78.15 tons** of paper
- **2.51 tons** of comingled plastic, glass, etc.
- **39,620 lbs.** of sheet iron
- **32,460** fluorescent tubes
- **77** tires
- **220 pieces** of computer and electronic equipment
- **10,083 lbs.** of fluorescent ballasts
- **32,460** fluorescent tubes
- **100 lbs.** silver
- **75** nickel cad batteries
- **118 lbs.** lead acid batteries
- **150 gallons** of motor oil
- **250 lbs.** oil filters
- **$26,549** realized from auction that recycled furnishings, equipment, vehicles, miscellaneous items

Source: Edinboro University Facilities Division, 2008

Plans are underway to institute a free bicycle service on campus. The bikes will be available to all students, faculty or staff. Need a bike to get from one end of campus to another? No problem. Simply hop on one, pedal across campus, and leave it at your destination for another student to use.

generations to come," said President Brown. "It's about taking the lead and not just improving our campus, but also creating an educational tool, an educational awareness where students will eventually see the results of their efforts in their own lives." However, it's important, Dr. Brown emphasized, for this generation of students to understand that quite often, the impact of creating sustainability today might not immediately be seen, but will indeed benefit them during their lifetimes as well as future generations.

Simple things in life

While multimillion-dollar projects command attention, the simple changes also contribute to the greening up of campus. The University is using green procurement in paper and housekeeping paper products, carpet and tile installations, and lighting. It also has implemented a green office program that includes electronic billing processes, web-based ordering to eliminate paper expenditure requests and purchase orders, and online requisition processes.

Since the campus Memorial Tree Program was initiated, nearly 40 trees have been planted campus wide to honor students, alums and staff. Thanks to an anonymous donor, 265 trees have been donated and placed across campus. Additionally, William Coleman '95, Associate Vice President for Facilities, patiently tends to hundreds of black walnut seedlings that President Brown envisions planting around campus. The trees, while providing aesthetics to the campus, also serve as windbreaks and clean the air.

Whether big or small, all the efforts are contributing to a campus that students, faculty, staff and alumni can take pride in. As President Brown says, "It's clear our environmental resources are finite. It behooves us, therefore, to discover the solutions now rather than waiting until we're shivering in the dark before attempting to find those solutions."

Glenn Green

EDINBORO EDUCATION IS HELPING TO SAVE THE PLANET

By John Mitchell

To Glenn Green '06, his position as Laboratory Manager at Lake Erie Biofuels (LEB) is far more than a job. "Because Lake Erie Biofuels is a new facility, I personally installed, started, tested and calibrated each and every piece of equipment in my lab. I hire lab technicians," he says. "I wrote the manuals, trained personnel, implemented the systems into our processes, wrote most of the step-by-step work instructions, and received national accreditation of BQ-9000 status through the National Biodiesel Board.

"I am part of an elite management team here at LEB that has built and maintained a professional workplace and produces a quality product."

That product is biodiesel, a clean-burning alternative fuel made from renewable feedstock, any vegetable oil or animal fat. Biodiesel is mixed with petroleum-based diesel to make an environmentally friendly, cleaner-burning diesel fuel and home heating oil, which significantly reduces the harmful emissions associated with global warming.

"Looking at the depletion of the ozone, the reduction of fresh water and the continuous increase in pollution, I think the world going 'green' would be a great thing," says Green. "It feels great to be a part of the 'green' movement."

Green spoke at Erie's Collegiate Academy during one

"It feels great to be a part of the 'green' movement."

Lake Erie Biofuels in Erie, PA

of their seminars and relishes the opportunity to inform the public on the virtues of "going green."

"I am in a position where I can educate the public, competitors and fellow biofuels contributors on the importance, technical aspects, and quality of what we do at LEB and in the biodiesel market," he says. "The use of biofuels is helping to reduce the amount of pollutants emitted by hydrocarbons, reducing the need for focal fuels, and giving us new industry for jobs and somewhere to put all of the animal waste from food products."

Having spent so much time in Cooper Hall, Green praises the "hands-on" education he received at Edinboro as being key to his success. Green, 29, who graduated in December 2006, rose quickly through the ranks at LEB. "As I tried to find a career after graduation," he said, "I found that the salary rate was lower for a beginning chemist, but luckily I had management experience and a large mechanical background that helped me land a job here (at LEB) as the first lab technician. After a month, the LEB management decided to promote me to lab manager."

Green began his education with the intention of becoming a pharmacist. However, he had always enjoyed working with his hands and tinkering with small mechanical items. He found that he enjoyed his chemistry and math classes over all others, and, after a little convincing from Dr. Naod Kebede of the Chemistry Department, he changed his major to biochemistry. He liked that chemistry professors used instruments both highly advanced and very basic in their lessons, which he says has improved his ability to "run and diagnose issues on all types of instrumentation," noting that you must have an understanding of the fundamentals to truly understand how much advancement has been made in the sciences.

"The teaching staff at Edinboro, unlike other more expensive and less hands-on universities, do not use graduate students to teach their classes, so the student gets the experience of a Doctor of Science, not just what the textbook says," he added.

Outside of the laboratory, Green and his wife Christina recently welcomed a son, Nicholas, who was born on August 13, 2008. Nicholas joins a brother, two-and-a-half year old Alexander, at the family's North East home.

"My wife and I gave birth to our first son, Alexander, the day before I had three speeches to present," Green recalls. "After what I had gone through with the childbirth, I just kind of smiled a little and thought to myself, 'I can't believe this could have ever made me nervous.'"