NORTHERN MAINE COMMUNITY COLLEGE

News Release

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NMCC campus facilities undergo "green transformation" to maximize energy efficiency

Aroostook County **-** Efforts to maximize efficiency on the Northern Maine Community College campus are showing impressive early returns on the most significant investment in energy conservation in the institution's physical plant.

Several projects, designed to both reduce energy costs and the College's carbon footprint, have been undertaken by the campus in recent months. The work represents an investment of more than $2.25 million, and the scope of work completed ranges from building and lighting upgrades to mechanical renovations and insulation and building controls installation.

"Energy efficiency and taking steps to make our campus facilities more environmentally friendly have been among our top priorities over the past few years. As a campus community we take very seriously our role and responsibility to be good stewards of both the public funds we receive to support the work of the institution and the planet. We believe that the recent projects we have undertaken are good examples of how we are achieving both," said NMCC President Timothy Crowley. "The investments we have made in our buildings and around campus in recent months will pay dividends for years to come."

Most of the efficiency improvement work completed on campus is the result of an overall energy conservation effort initiated by NMCC in 2007. An energy task force established on campus has worked collaboratively with the NMCC information technology and facilities office to identify areas in which the campus could reduce energy costs and simultaneously be more environmentally friendly.

As a result of those initial discussions, College officials began to explore entering into a performance contract to upgrade existing facilities. The arrangement, approved by the Maine Community College System last year, allowed NMCC to borrow $1.36 million from the system to initiate energy conservation work on campus.

Under the contract with Honeywell, NMCC is guaranteed a minimum dollar amount in savings on its energy costs each year for the next 15 years as a result of the private contracted firm's work to maximize energy efficiency on campus. NMCC would use the savings to repay the MCCS loan. If for whatever reason the savings do not achieve the targeted figure, Honeywell is responsible for paying the balance in that given fiscal year.

The project began in early 2010 with a comprehensive energy audit of campus facilities. Several buildings and areas on campus were targeted for improvements.

Work on the facilities began in early April during the College's spring break with a targeted effort to better insulate buildings across campus. The energy audit showed large areas of air infiltration in all buildings on campus. Many needed to have the area where the roof and wall join together sealed to prevent air from entering buildings and heat loss.

"The results of what they found and the work that they completed was significant," said Barry Ingraham, NMCC director of information technology and facilities. "In the Christie Building alone, which was built in the early 1960's and serves as our main administration and classroom building, Honeywell found and properly insulated the cumulative equivalent of a small garage door in spaces where heat was being lost."

Energy efficiency upgrades resumed on campus following commencement in May with work on extensive updates to the building control mechanisms across campus. Many of the existing controls were installed in the 1970's and 1980's and had outlived their usefulness. As a result of the new computer systems installed, the College will have better control of the heating and ventilation in all buildings.

According to Ingraham, individual rooms can now be scheduled for heat as needed as opposed to the former method of heating a whole wing or floor. The system will allow the College to trend building temperature and equipment operation over long periods of time to help verify all is working properly.

The final area of work completed over the summer months under the energy conservation project performance contract involved campus interior and exterior lighting projects. All of the interior lighting was reviewed and inefficient lighting has been replaced with new high efficiency lighting. The college has also added new motion detectors and day light harvesting controls, which turn the lights off if there is no motion in the room or enough natural light.

All exterior campus lights have been replaced with light emitting diode, or LED, fixtures. In addition to providing better lighting, the new fixtures will afford the college a significant reduction in electrical usage and ongoing maintenance costs of exterior lighting. The upgrades have also provided more lighting in the parking lots and walkways, enhancing campus security.

Ingraham cites one example of savings in the residential life area of campus. The old exterior lighting fixtures in the parking lot near Penobscot Hall on the far north end of campus used 996.45 kilowatt hours per month. The projected usage of the new fixtures is 173.01 kilowatt hours per month.

In addition to the projects undertaken through contract with Honeywell, two other building upgrades at NMCC, funded through the American Recovery and Reinvestment Act, will result in energy savings on the campus.

A $419,839 project to install a new roof system and other exterior repairs to the Mailman Trades building, which houses many of the trade and technical occupations programs at the College, had several components relating to efficiency. Insulation in the roof was doubled and exterior repairs to the facility corrected many air infiltration issues. The project also included the installation of new solar tubes in the main corridor that bring in natural light and will help reduce the amount of energy for lighting during the day.

The final project, a $477,979 renovation to the mechanical systems in Andrews Hall, a residential facility, is ongoing and expected to be complete in October. A new high-efficiency boiler is being installed in the building along with a new domestic hot water system. A new heat recovery unit for the entire building will be installed to capture approximately 60 percent of heat that is normally exhausted out of the building. Although work will not be completed for another month, the residence hall will be functional for students to occupy at the start of the semester.

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Honeywell employee Peter Lajoie completes energy efficiency work on the Northern Maine Community College campus recently. The work is part of the largest energy conservation measures ever undertaken by the institution.