



News Release

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March 6, 2009
NR09024

Winner Named for “Go! Green!” Energy Challenge

Aroostook County - Months of work have paid off for Northern Maine Community College senior Amber Libby, who was named the sole winner of the Go! Green! Energy Challenge which has been underway on the Presque Isle campus since last fall.

Students had been challenged to come up with innovative ideas to maximize energy efficiency and create a more environmentally-friendly campus, with the equivalent of a year’s free tuition on the line for the winning team. Four student groups took up the challenge and prepared formal written proposals. The groups presented their proposals to a panel of four judges as well as an audience of students and College employees on February 26.

“As an energy educator, I was very impressed with the amount of work and depth of research that the students put into their projects. It is exciting to see the interest and excitement that these young people had for saving energy for their college community,” said Nancy Chandler, supervisor of conservation and education services for Maine Public Service, who served as a judge for the competition.

Joining Chandler as judges were three NMCC faculty members: Jan Grieco, a communications instructor from the arts and sciences department; Betty Kent-Conant, chair of the nursing and allied health department; and Brian McDougal, chair of the trade and technical occupations department.

After careful review of the written and oral presentations presented by four teams of students, Libby, a senior in the electrical construction and maintenance program, was selected as the winner. Libby, who was the only student to work alone on the project, presented a proposal on more energy efficient windows in the residential life area of campus.

“Replacing high cost windows in Andrews, Aroostook, Penobscot, and Washington Halls with more efficient, cost effective ones will greatly improve the schools energy savings and give the students a comfortable, secure place to live while attending NMCC,” said Libby.

Libby, who is from Hollis and lives on campus, presented not only anecdotal experiences of her and her fellow students, but also details substantiated by a great deal of research over the past several weeks. After careful measurements, she determined the U-factor, which indicates how effective the window is actually insulated and how well it is resistive to heat loss, and the R-value, which measures the insulated value of the window. She measured the area of the windows and, using that information along with the U-factor and heating degree days, she determined the heat loss in BTUs.

According to Libby's calculations, the total amount of money that the College could save if it replaced the single pane windows that are currently on campus with triple pane windows with a glazing and a combination of argon and krypton gases with a low-emissive coating would be around \$16,667 annually. However, the payback to buy and install the windows would end up being 12.6 years.

"Determining which kind of windows to buy, with keeping both spending money and the pay back period in mind, has a lot of variables to consider, such as conduction, convection, radiant heat transfer and air leakage," said Libby. "The energy efficiency comes from using the proper materials and design that are applied to the certain climate in which the windows will be used."

As an affordable, "quick" fix, Libby also suggested the use of weather-stripping in Andrews Hall and the apartments to reduce heat loss.

College officials will now be further investigating Libby's proposal to determine which aspects of it can be implemented based on budget and other considerations. The proposals submitted by the other three student groups will also be evaluated to see if it is feasible to implement any parts of those proposed ideas. If the College is able to use any of the suggestions, the respective team members will each receive a tuition waiver for a three-credit course at the College in appreciation.

Two of the presentations centered around reducing electrical consumption on campus. Senior electrical construction and maintenance students William Skelton of Windham and Dan Dionne of Grand Isle proposed measures to improve lighting efficiency. First-year electrical construction and maintenance students Parker Brown of Mapleton and Tade Brooks of Augusta presented their findings on electrical usage on campus and made suggestions on ways to lower it. Lastly, a team of freshmen plumbing and heating students, Vincent Pelletier of Presque Isle and Owen Harris of Fort Fairfield, presented details on using a domestic solar hot water heater to meet some of the campus' energy needs.

"We were looking for proposals for an energy conservation measure that will result in a financial savings and awareness building without sacrificing productivity, comfort or the well-being of students and staff," said Charles Kelley, NMCC electrical construction and maintenance instructor and one of the contest coordinators. "A sincere quest to save energy and money for the college was demonstrated by each team's proposal."

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NMCC electrical construction and maintenance instructor Chuck Kelley, co-chair of the College's energy task force and one of the coordinators of the Go! Green! Energy Challenge, congratulates senior Amber Libby, a student in his program, on winning the challenge. Libby was selected by a panel of four judges based on both a written and oral presentation. As a prize, she received the equivalent of one year's worth of tuition at the College.