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Harriman and Southern Maine Community College win award from the Association for the Advancement of Sustainability in Higher Education

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According to the Association for the Advancement of Sustainability in Higher Education (AASHE), Harriman and Southern Maine Community College received one of four AASHE 2013 Sustainability

Leaderships Awards for an innovative HVAC system that uses seawater for all heating and cooling needs for a recently renovated academic building.

The Sustainability Leadership Awards recognize diverse institutions and the diverse initiatives that advance sustainability on college campuses across the country.

The award for Best Case Study from an Associate's College with 5,000 or fewer full-time students will be presented at the AASHE Annual Conference and Expo in Nashville, Tennessee on October 5th.

Located in South Portland, the Southern Maine Community College system taps into nearby Casco Bay, where temperatures range from 33 degrees F in winter to 60 degrees F in summer. Essentially the system works in similar fashion to geothermal systems but without the drilling and with much colder temperatures. To fashion the first-of-its-kind system, Harriman engineers coupled marine industry technology with the only heat pump on the market that could handle the 14 degrees F to 113 degrees F temperature ranges.

"To be recognized for our innovative engineering design is quite an honor. This type of work transforming buildings with sustainable solutions is what Harriman is all about," said Rob Klinedinst, principal and architect at Harriman.

Mechanical Services installed the system at SMCC. It was designed to be completely environmentally friendly - releasing no byproducts into the water and requiring no fossil fuels. This innovative system makes regulating the building's temperature easy and is three times more efficient than conventional heating and cooling systems.

"This is a zoned facility with true heat recovery technology," said Chris Green Jr., project manager with Mechanical Services, the company involved with project and responsible for installation. "Proximity to the ocean enabled us to tap an unlimited power source."

Located under the pier, the heat exchanger is an extremely important part of the system. In the winter months it extracts heat from the ocean water that is then used to heat the building. In the summer months it rejects the heat from the building into the ocean. The actual temperature differential is very minimal and does not impact ocean life. The system has reduced heating costs by 33% and cooling costs by 27%. In the two years since the system began operating, the college has seen an annual savings of nearly \$11,000 in energy costs. While the system cost \$84,000 more than a conventional HVAC configuration, its reduced operating costs and no fuel oil costs will result in a payback period of less than eight years.

"The seawater HVAC system is just the latest example of Southern Maine Community College's ongoing initiative to transform its campus into a college leader in sustainable practices. While our approach is opportunistic since there is no formal sustainability plan, staff, or dedicated funding, the AASHE award shows that we are succeeding through our creativity," said Scott Beatty, director of admissions at Southern Maine Community College.

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