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ARC/Architectural completed design of \$11 million biomass plant at Colby College

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ARC/Architectural Resources Cambridge, an architectural, planning and interior design firm specializing in educational, science, sports and corporate facilities, has completed the design of a new \$11 million, 13,000 s/f biomass plant at Colby College.

"Being part of an important sustainable project such as this is extremely gratifying," said Philip Laird, AIA, LEED AP, president of ARC. "The new plant will reduce Colby's dependence on oil by 90% and makes it the first college in the state to operate a large-scale biomass plant."

Laird served as principal-in-charge and ARC's Christopher Angelakis was project architect during the design and construction of the new biomass plant.

Rist-Frost-Shumway Engineering P.C. (RFS) invited ARC to work with Colby College to reduce its reliance on oil to heat the campus through creation of the Colby College Biomass Cogeneration Plant. The new plant burns forest waste and debris - treetops and bark that cannot be used by other pulp operations - instead of oil. The cost savings switching from oil to biomass is expected to pay for the building in six to ten years. The fuel will come from sustainable forest operations within a 50-mile radius of the campus. The twin 400-horsepower, biomass-fueled boilers produce steam used for heat, hot water, cooking, and cogeneration of heat and electricity. Colby College received a \$750,000 grant from Efficiency Maine to assist with the project.

The new power plant provides thermal and partial electrical service to 30 campus buildings totaling 1.25 million s/f of space.

"We were very pleased to work with ARC and RFS on the design and construction of this project, which replaced about 1 million gallons of heating fuel with about 22,000 tons of locally sourced wood chips and forest waste annually. The initiative takes Colby College much closer to its goal of carbon-neutrality by 2015," said Gus Libby, assistant director for operations at Colby College.

The design of the biomass power plant reflects the pride Colby College officials have in the project. The plant is visible from the main campus road and features large windows to allow viewing of the biomass fueling process, while the interior design anticipates and accommodates the many tours that are anticipated as a result of interest in the innovative facility.

The new biomass power plant is expected to reduce Colby College's carbon dioxide emissions by nearly 14,000 tons per year. The project also strengthens the region's economy by bolstering the market for local biomass fuel.

The project is targeting LEED Gold Certification.

Founded in 1969, ARC/ Architectural Resources Cambridge is a nationally recognized architectural, planning and interior design firm specializing in educational, sports, science and corporate facilities. With an emphasis on innovative and sustainable design, the firm has garnered more than 70 awards from a wide range of professional organizations and publications. College and university clients

include Tufts, Boston College, Boston University, Duke, Harvard, Johnson & Wales, MIT, Princeton and UMass, among others. ARC also has extensive corporate experience for clients such as Genzyme, Millipore, Abbott Laboratories and VMware.

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