



CALMAC Energy Storage Boosts LEED Score for Independence Station Mixed-Use Development

HVAC system aims to contribute LEED points by optimizing energy performance

Fair Lawn, N.J. – July 21, 2009 – CALMAC today announced that Independence Station, a 57,000 square foot mixed-use building in Oregon, chose CALMAC's [IceBank](#)[®] Energy Storage System for eco-friendly cooling of the flagship project by Aldeia, LLC. Scheduled for completion in 2010, Independence Station is a \$15 million mixed-use development that has the goal to be the highest scoring certified green building in the world, as measured by the Leadership in Energy and Environmental Design (LEED)[®] high performance green building rating system administered by the US Green Building Council (USGBC).

Independence Station chose CALMAC's ice storage technology as part of the overall HVAC system to offset the energy usage during the peak demand hours. By using ice created during off-peak hours inside two ice storage tanks, the building will be able to run off grid during daily peak power times, thereby saving costs by minimizing expensive electricity demand charges. During the utility's peak demand period the building will operate on power produced by biodiesel generators and be cooled by the ice storage plant. During this time, excess power generated by the 125 kW photovoltaic system will be sold back to the utility, helping the utility meet peak demand load. At night, the computer based building management system will decide when to shut down the generators, and start making ice. The goal is for Independence Station to be a net zero energy building using Smart Grid technology, with CALMAC's IceBank Energy Storage at the heart of the cooling system.

"Cooling a building represents the single, largest demand for electricity during hot summer months. CALMAC solves the problem of how to meet peak demand load with on site power generation," explains Jim Krumsick, the electrical engineer on the Independence Station project. "Making ice during off-peak hours in the summer reduces the load on the waste vegetable oil fueled co-generation system during peak demand hours. This allows us to downsize equipment and thus reduce costs and the environmental impact of on-site co-generation."

"Our goal is to earn between 64 and 66 LEED[®] Points out of a possible 69 – to make us the World's Greenest Building," notes Steven Ribeiro, Developer for the project. "As part of the overall HVAC system, CALMAC helps add crucial performance characteristics and flexibility with its energy storage technology."

"CALMAC is proud to be a part of the Independence Station project," says Mark MacCracken, CALMAC CEO and USGBC Board Member. "The HVAC system, which includes the IceBank Energy Storage System, is designed to earn LEED Points for Optimizing Energy Performance. CALMAC is dedicated to helping buildings lower their impact on the environment and the Independence Station project allows us to do just that."

LEED is a certification program by the United States Green Building Council (USGBC) and a benchmark for the design, construction and operation of high performance, green buildings. Its purpose is to promote a whole-building approach to sustainability by recognizing performance in five key areas, which include sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality.

About CALMAC

[CALMAC](#) Corporation is widely recognized for promoting peak energy conservation and energy cost savings. An ENERGY STAR[®] Partner and USGBC member, CALMAC is a leading manufacturer of IceBank[®] Energy Storage equipment with over 3,300 Ice Storage installations worldwide. IceBank systems enable energy, including renewable wind energy which mainly blows at night, to be efficiently stored for use during periods of high demand.

About Steven Ribeiro of Aldeia Development

The vision of Steven Ribeiro of Aldeia Development, Independence Station is being developed in cooperation with Oregon State University, the US Department of Agriculture, the Oregon Department of Energy, Energy Trust of Oregon and the City of Independence to bring this innovative concept to reality. Learn more about this project at www.WorldsGreenestBuilding.com.

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