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Industry Event: Explore Sustainable Design Principles and Strategies at the 10th Global Engineering Conference

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INDUSTRY EVENT

Explore Sustainable Design Principles and Strategies at the 10th Global Engineering Conference

The 10th Global Engineering Conference, to be held April 9-11, 2008 in Las Vegas, Nevada, will provide a unique opportunity to explore design principles and strategies that you can use in upcoming projects. In addition, you may acquire Continuing Education Units (CEUs) by participating in event workshops and sessions.



CASE STUDY

Carrier Heat Pumps & Controls Enhance Learning Atmosphere for Students with Autism

The conference will focus on designing and building for sustainability. The goals of sustainable design include reducing the consumption of non-renewable natural resources, minimizing waste, and creating healthy, productive environments.

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The event will feature workshops that explore the impact of industry standards and economic trends and provide case studies of actual projects demonstrating innovation in sustainable design. Topics covered include balancing IAQ standards and energy consumption, geothermal heating and cooling systems, and commissioning for LEED® programs.

Highlights of the event will be the keynote speeches delivered by Rick Fedrizzi, president, CEO and founding chairman of the [U.S. Green Building Council \(USGBC\)](#), and Valentine Lehr, senior partner, [Lehr Consultants International](#). Other speakers include architects and engineers drawn from top firms and educational institutions worldwide, including Robert F Fox, Jr, partner, [Cook & Fox Architects](#), and Karan Grover, Principal, [Karan Grover and Associates](#).

Speakers will discuss the use of an integrated holistic approach to finding solutions that provide environmental, societal, and human benefits reducing construction and operating costs. The approaches consider all project aspects including planning, design, construction, operation, and decommissioning.

The 2008 event is co-sponsored by [Carrier Corporation](#) and [Heating Piping Air Conditioning \(HPAC\) Engineering Magazine](#). For specific agenda and registration information, visit www.globalengineeringconference.com

Case Study: Carrier Heat Pumps & Controls Enhance Morris Union Learning Atmosphere for Students with Autism



Children with autism face many challenges in learning to navigate their day-to-day world. The recently opened Morris Union Developmental Learning Center (DLC), provides a safe, comfortable, stimulating place for 220 students with autism to acquire the skills they need for daily life, a process which enhances their self worth and independence. Special features include an entryway designed to make students feel welcome, and a “Main Street” corridor that includes learning areas in the guise of a bank, a grocery store, a hardware store, and other shops. The school cafeteria takes the form of a classic diner where children can learn to enjoy visiting a restaurant with their family. Because of the special sensitivities of children with autism, a quiet, comfortable learning atmosphere is of the utmost importance. In addition, the school has a strong commitment to the environment, and utilizes many eco-conscious design elements, including energy-minded siting, passive solar heat and clerestory windows.

Gillan and Hartmann, Inc. (G&H) located in Valley Forge, PA designed the unique geothermal heating system. The system incorporates more than 200 wells on the property as a heat sink, using Carrier heat pumps, controls and interface software to create a highly efficient heating loop. According to G&H’s assessment, the system will use a third less energy than a traditional heating and cooling system. The firm also wanted a single-source supplier for the entire heating loop and its controls. Said Tom Tate, Vice President of Gillan and Hartmann, “We wanted everything in the glycol loop to be from one manufacturer. Carrier provides a full line of HVAC products with the widest variety and the most state-of-the-art efficiency, so it was one-stop shopping for heat pumps, controls and interface.”

Forty-six Carrier heat pumps provide warmth to the DLC, from sixteen 50RTG AQUAZONE™ rooftop units to twenty-five indoor units, including the 50RHR horizontal and 50RVR vertical units. Each unit utilizes PremierLink™ controls. The system can be monitored via Carrier Comfort Network software. This interface provides diagnostics and graphic displays of data, and can be used to generate reports, troubleshoot problems and adjust



Carrier Comfort Network
Interface

The Carrier Comfort Network interface can be used to view data, troubleshoot problems and adjust individual heat pumps.



50RVR
Water Source Heat Pump

individual heat pumps as needed.

Erik Hammerdahl, Director of Property Services for the Morris Union DLC says, "We're currently refining our graphic temperature and equipment map of the school on the Carrier Comfort Network displays. We've enjoyed Carrier's strong support since the installation. The graphic interface is well done and allows me to troubleshoot the system over the phone with my Carrier support contact. We can resolve many issues without having to call a technician to the site."

"We've enjoyed Carrier's strong support since the installation. The graphic interface is well done and allows me to troubleshoot the system over the phone with my Carrier contact."

Erik Hammerdahl
Director of Property
Services for the Morris
Union DLC

In addition to the lower operational cost of these highly efficient heat pumps, the units' efficiency earned the Morris Union Jointure Commission, which owns the Developmental Learning Center, a \$140,000 efficiency rebate from the [SmartStart Buildings initiative](#) of New Jersey's Clean Energy Program.

For more information on the Carrier Heat Pumps and Controls, please visit Carrier's [Commercial](#) web site.

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