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The NEWS

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July 14, 2006: Morgan Stanley Installs Largest Ice Storage A/C System in New York

July 14, 2006

PURCHASE, N.Y. — Morgan Stanley was recognized by state and county officials at its Purchase facility installing the New York metropolitan area’s largest ice storage based air conditioning system, which delivers significant energy savings. The New York State Energy Research and Development Authority (NYSERDA) presented Morgan Stanley with a ceremonial incentive check in the amount of \$300,000.

Peter R. Smith, president and CEO of NYSERDA, said, “NYSERDA offers financial and technical assistance initiatives to help with identifying and installing projects which address the energy efficiency needs of our partners in a way that improves the environment and lessens our dependence on foreign oil. Morgan Stanley took the initiative to form a partnership with NYSERDA, Trane, and Calmac, and an innovative solution to tackle the company’s energy needs through the use of an ice storage system was developed.”

Morgan Stanley engaged the Energy Services group of Trane’s New York–New Jersey offices to develop energy-saving solution. Trane, with technical and financial analysis support from ECM, proposed a the storage solution that would shift the site’s electrical load from day to night. Electricity is more plentiful, expensive, and is generated more efficiently during the night or off-peak hours.

“Aging equipment and the need for additional cooling capacity and site resiliency motivated us to investigate environmentally responsible solutions,” said James P. McAleer, vice president of facilities for Morgan Stanley. “In addition to being recognized by NYSERDA and Westchester County, the Purchase will be a beta for similar projects at Morgan Stanley facilities around the globe.”

Westchester County Executive Andy Spano said, "My administration is committed to supporting innovative ways to address the county's energy needs to reduce dependence on foreign oil and protect the environment. The installation of a thermal storage system by Morgan Stanley in its large corporate office building in Purchase helps us accomplish these important goals. I am very pleased Morgan Stanley is in Westchester and I commend them for investing in this important project. I want to thank the New York State Energy Research and Development Authority, Trane, and Calmac Manufacturing Corp. for their help in making this project possible in Westchester. I'm sure the success of this project will encourage others to recognize the significant environmental benefits and cost savings offered by this type of technology. So long ago a similar type of thermal storage system was installed in the county's own Michaelian Office Building and it has saved energy and money for us and our taxpayers."

The ice storage system, provided by Trane, makes ice at night during off-peak hours to provide cooling next day during on-peak hours. The system is expected to lower the facility's peak energy usage by 740,000 kWh, reduce overall electric usage by 900,000 kWh, and reduce overall fuel consumption by 15,000 MMBtu.

The system includes a new 1,400-ton Trane Earthwise CenTraVac chiller, which operates at .576 kW/ton in day mode and .733 kW/ton in ice-making mode. The ice made by this chiller is stored in 48 Calmac IceBank tanks with a total storage capacity of 8,400 ton-hours. The system has the flexibility to run on chiller only, ice only, or combined operation. There is also an emergency mode that can provide comfort cooling while making ice in the evening. The system includes a crossover plate and frame heat exchanger which added redundancy to the existing data cooling loop and extended the free cooling season for the facility.

In addition to the energy savings created by this system, the environmental benefits are equivalent to Morgan Stanley planting 1.5 million acres of trees to absorb the carbon monoxide caused by the electric usage from one year of usage or removing 271 cars from Westchester County roads. Thermal storage systems have been recognized for improving the reliability of the electric grid by permanently shifting peak cooling loads from on-peak to off-peak hours.

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