



## **Morgan Stanley Uses Innovative Ice Storage System to Reduce its Electricity Use**

New York State Energy Research and Development Authority provides assistance to help lower peak energy and natural gas use while improving site resiliency

Purchase, NY - June 27, 2006 – Morgan Stanley, one of the world's largest diversified financial services companies, was recognized today by State and County officials at its Purchase facility for installing the New York Metropolitan area's largest ice storage based air-conditioning system, which delivers dramatic energy savings.

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."

The New York State Energy Research and Development Authority (NYSERDA) presented Morgan Stanley with a ceremonial incentive check in the amount of \$300,000. NYSERDA provides technical and financial assistance to businesses that reduce their energy costs and improve the reliability of the state's electrical grid, especially in the New York metropolitan area where peak load demand reductions have a strong impact.

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

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"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 site 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 Corporation 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. Some time 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 the next day during on-peak hours. The system is expected to lower the facility's peak energy usage by 740 kW, reduce overall electric usage by 900,000 kWh and reduce site overall fuel consumption by 15,000 MMBtu while improving the resiliency of the site.

The system includes a new 1400 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 8400 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 electrical 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.

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**Morgan Stanley** is one of the world's largest diversified financial services companies, with a reputation for excellence in advice and execution on a global scale. The firm enjoys leading franchises in three attractive businesses: Global Securities, where Morgan Stanley serves individual and institutional investors and investment banking clients; Global Asset Management, with the highly rated Morgan Stanley and Van Kampen funds; and Global Credit Card Services, with the Discover Card, held by 40% of U.S. households, as well as a growing Morgan Stanley card business in the United Kingdom.

Long-term trends are driving growth across these businesses, from advances in technology and deregulation of global securities markets to increased demand for retirement planning. The diversity of Morgan Stanley's businesses and the strength of its brands make it less vulnerable to short-term market cycles while producing superior returns on equity compared with their peers.

**The New York State Energy Research and Development Authority (NYSERDA)** is a public benefit corporation that funds projects and research in energy related fields including supply, efficiency, and environmental areas. NYSERDA manages the **New**

**York Energy \$mart<sup>SM</sup>** program which offers technical assistance and funding for research and development; environmental matters; business, residential, and low-income energy efficiency projects; and education to assist electric consumers. NYSERDA also finances, through the sale of bonds, environmental and energy improvements for the State's energy infrastructure.

**Trane**, the air conditioning systems and services business of American Standard Companies, is a leading global provider of indoor comfort systems and comprehensive facility solutions. Its offerings include energy efficient heating, ventilating and air conditioning systems, service and parts support, advanced building controls and financing solutions. Each Trane system is designed to meet the specific needs of customers who want heating, cooling, dehumidifying and air cleaning systems for residential, commercial, institutional and industrial applications. In 2004, Trane contributed \$5.3 billion to American Standard's total sales of \$9.509. For more information, visit the Trane Web site at [www.trane.com](http://www.trane.com).

Trane's offices in New York and New Jersey specialize in energy efficient, environmentally responsible systems, services and solutions. Trane Energy systems, services and solutions are available by contacting Trane New York – New Jersey, 45-18 Court Square, Long Island City, NY 11101, telephone (718) 269 3600 or by visiting their website at [www.tranenewyork.com](http://www.tranenewyork.com).

**CALMAC Manufacturing Corporation** is widely recognized for promoting energy demand conservation and energy cost savings. An Energy Star Partner and USGBC member, CALMAC is a leading manufacturer of Thermal Energy Storage/Off-Peak Cooling equipment with over 3,000 ice storage installations worldwide. More information on ice storage cooling is available by contacting CALMAC Manufacturing Corporation, 101 West Sheffield Avenue, Englewood NJ 07631-4880, telephone (201) 569-0420 or by visiting their website at <http://www.CALMAC.com>.

**ECM – Energy Management Services** specializes in energy market/financial analysis and provides retail and wholesale energy procurement services. For more information contact Eugene Garcia at (866) 974-9974.

Additional information about the Morgan Stanley Off-Peak Cooling installation is available at [www.nyserda.com](http://www.nyserda.com), [www.trane.com](http://www.trane.com) or [www.calmac.com](http://www.calmac.com).

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