CALMAC
MANUFACTURING
CORP.

The Icebank® Cometh

Durst Organization Reduces Energy Costs With Off-Peak Cooling

Manhattan Commercial Cooling Program—Case Study

Project Profile

Type of space

41-story office building

Project Uniqueness

First off-peak cooling job in Manhattan

Project Objective

Reduce electrical energy costs

Project Benefits

Decrease of peak demand

Substantial electrical cost savings

Cleaner environment

The Durst Organization, a major Manhattan commercial property owner known for its environmental concern, has chosen Off-Peak-Cooling (OPC) to reduce the overall cost of energy in its 20-year old building on the Avenue of Americas. To deal with the high price and uncertainly of electric power in Manhattan, the Durst Organization installed, 28 Icebank tanks in the basement of their 41-story building.

OPC Reduces Costs

OPC uses inexpensive nighttime electricity to produce ice in 8ft. storage tanks. The ice is used the following day to cool the building. Shifting the electric load from expensive "on-peak" hours to "off-peak" hours dramatically reduces energy costs since "on-peak" prices are at least double and can be up to ten times the nighttime rate.

Rigging C-Model Icebank into place.

"Durst chose Calmac to execute the largest OPC operation in Manhattan as an economical and environmental way to trim costs for cooling the Avenue of Americas high-rise building."
-Alliance To Save Energy

Air conditioning systems traditionally work by blowing air past coils containing chilled heat transfer fluids. The fluids are cooled by a chiller, which must operate whenever the air conditioning system is on. Building owners using traditional air conditioning systems thereby not only use a substantial amount of "on-peak" electricity, they incur expensive "peak-demand" rates for that electricity.

In contrast, during the "peak-demand" periods, buildings that rely on OPC technology are cooled simply by using small pumps to move the ice-cooled fluid past fans that blow cool air into the

"Beyond the cost saving aspect of Off-Peak-Cooling, we selected this technology because it reduces peak electrical load on the grid. This, in turn, lowers the need for building new power plants with all the siting issues that accompany them and reduces the need for utilities to bring a dirty, peak-shaving plant on line."

-Jody Durst, Co-President of the Durst Organization