

Ice Storage at NYPD Facility

DCAS Energy Management, in partnership with NYPD, has completed the installation of an ice storage chiller plant at the NYPD Applicant Processing Division (APD) in the Sunset Park Courthouse in Brooklyn, a City landmark building. This cutting edge technology operates an ice making chiller at night, when electric demand and costs are low, and uses the ice to cool the building during the day. Ice storage helps to meet the goal of reducing the City's summer peak electrical demand. This \$1.9 million project will save \$50,000 annually in energy costs.

The NYPD Applicant Processing Division is the administrative center for hiring new police officers. Overnight ice production and storage reduces daytime electrical demand, and allows for the installation of a smaller 90-ton chiller. This chiller does not require 24-hour operation by a licensed operator, which results in significant personnel savings to NYPD. With ice storage, the chiller plant has an effective capacity of 140 tons.

Ice is stored in thousands of dimpled plastic balls immersed in a steel tank filled with a glycol solution. During the day, the super cold glycol solution is pumped to a chilled water heat exchanger. The chilled water is then distributed to air handlers in the building for space cooling. A number of commercial buildings in NYC use this technology, including the new Bank of America headquarters and the Hearst Building on 57th Street, both of which are LEED certified green buildings.



Chilled water pumps



Ice-making Chiller

Energy