

Cool Cases

Staples, the world’s largest retailer of office products, is committed to making its environmental footprint as small as possible. The Framingham, MA-based company’s initiatives combine environmental stewardship and operational efficiency to produce a healthier planet as well as a healthier balance sheet.



“Energy efficiency is an important area of focus for our business from both a cost and an environmental perspective.”



Customer: Staples

Utility: First Energy

Energy Shifted (kWh): TBD

Location: Howell, NJ store

Building Type/Size: Retail location/20,000 sf

Situation: According to Bob Valair, Director, Energy and Environmental Management, “Staples is always looking at or piloting new technologies to see if they might be the right fit for us. We have to first address if a technology is consistent with our environmental goals and if it will work in a retail application. We then need ongoing maintenance or monitoring to see if we sustain it across our retail network or if we consider it for a new construction project.”

Solution: Staples first considered adding energy storage to its mix of sustainable technologies in 2008 by taking part in a trial program through its utility, First Energy. The program called for installing Ice Bear distributed energy storage units at one of its retail outlets.

A store in Howell, NJ was ultimately selected from more than 1,800 Staples locations in North America to become the first test site. It is a typical single-story Staples retail store cooled by a 60-ton array of Lennox high efficiency units.

The Ice Bear supplements a commercial building’s AC unit by using more efficient, lower cost off-peak energy at night to make ice.

The ice produced cools the building – rather than the AC unit’s compressor – during the warmest daytime peak hours. Costs for acquiring, installing and maintaining the Ice Bear units were assumed by the utility and turnkey installation by Ice Energy was problem-free.

Installing Ice Bears allowed Staples to control operating costs and maintain a low environmental impact on the communities it serves.

Results: As Staples itself might say, “That was easy.”

During an average summer day, the Howell store might typically have a daily load profile of 150-160 kilowatts. With the Ice Bear storage units installed, the daily load profile dropped to 120-130 kilowatts.

After just over a year in service, the Ice Bears produced a 5-6% savings in energy costs beyond those achieved from a demand response program in which Staples was also participating.

At least twenty additional Staples stores have been designated for similar installations.