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Solar Boston Initiative

Increasing solar energy in Boston to 25 MW by 2015

Rossmore Laundromat / JP Carwash Enjoys Solar Water Heating Savings

Summary

The Rossmore Laundromat and JP Carwash in Jamaica Plain, MA has seen such great results from its solar hot water heating panels that it's in the process of adding more. The company's 25 solar water heating panels, first installed in November of 2007, measure approximately 800 sq. ft. in area and have a capacity of 52 kilowatts (kW_{TH}). The company is planning to install 10 more SWH panels, which are expected to be up and running by the end of 2008.

The panels initially cost \$55,000 to install, but the company received \$9,000 total in utility rebates from National Grid, which provides rebates for solar thermal systems to its natural gas customers. The company was also able to take advantage of a 30% tax credit and an accelerated 5-year tax depreciation schedule from the federal government, and a Massachusetts corporate income tax deduction. Peter Janis, the manager, hired Robinson Supply and T&T Mechanical to install the panels. Mr. Janis first thought of solar hot water heating panels when he realized that paying his hot water costs upfront would buffer the company against the risk of soaring utility bills in the future.

Company Background



Picture source:
BCMEdia 2007

Rossmore Laundromat was started in 1964, and JP Carwash, a sister company, was added next door in 1985. The company has 20 employees combined, and serves the Jamaica Plain community.

The combined laundromat and car wash has an enormous hot water demand: the company stores 1,200 gallons of hot water ready to go at any time, and has an average daily water consumption of 3500 gallons.

"It makes sense for us," said Peter Janis. "Our utility costs get so high."

Solar Water Heating

The roof-mounted solar system uses solar energy to preheat water to 140-160 degrees via the panels. The panels were manufactured by Viessmann Solar (panels and storage tank pictured below).

In the summer months, the solar panels generate almost 100% of the hot water demand of the laundromat and car wash, which is incredible for a business of its size and hot water usage. As Peter Janis put it: “the more the



sun is out, the more we save.”
The company is happy to see that

its utility bills have stayed stable since the solar panels were installed, despite sharp increases in energy prices.

Renewable Energy Results

Though the panels initially cost \$55,000, they have a payback time of less than 5 years after federal and state incentives are taken into account. Furthermore, approximately 37,000 pounds of CO2 emissions are avoided each year of the SWH installation's use.

The panels are complemented by numerous energy conservation measures. Peter Janis and his co-workers were originally plumbers, so things such as added wall and pipe insulation and timers that shut off machines automatically when they aren't in use are nothing short of common sense to them. The company is now also considering a wind turbine in an attempt to further lower its utility bills.

This is one of two case studies prepared by Solar Boston, a half-million-dollar program launched in June of 2007 that aims to encourage widespread adoption of solar energy in Boston. For further information, visit our Solar Boston Interactive Map to see active renewable energy installations within the City and to calculate the solar potential of your own rooftop: <http://gis.cityofboston.gov/solarboston/>