



NYSERDA-funded solar thermal systems helps Glen Falls Hospital reduce cost; installed by Apex Solar

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The New York State Energy Research and Development Authority (NYSERDA), Glens Falls Hospital and Apex Solar recently unveiled a new solar thermal system installed at the hospital's Renal Dialysis Center at 3 Broad St. Plaza.

The system is the first project through NYSERDA's Solar Thermal Incentive Program using solar thermal technology to heat significant quantities of water needed for dialysis treatment and is thought to be among the first in the country being used for dialysis.

Dialysis is a water-intensive process using an artificial kidney to filter the blood from harmful waste products, regulate chemicals and remove excess fluids in the body. Water must be heated to 77 degrees Fahrenheit before it enters the dialysis machine where it is then raised to body temperature for use in the blood cleaning process. The Center uses 5,500 gallons of heated water each day in treating 136 patients who visit three days per week for a three-and-a-half to four hour treatment regimen.

"We thank NYSERDA and Apex Solar who came together to improve the efficiency of this 13,000 s/f facility, which offers sophisticated medical treatments that are keeping our patients with kidney disease alive," said David Kruczynski, president and CEO, Glens Falls Hospital.

"Our presence at this location is significant as more than 20,000 treatments are provided here annually, and some patients travel from more than an hour away for dialysis."

The solar thermal system, which preheats incoming cold water through 15 rooftop solar panels and a 375-gallon solar water tank before it goes to the boiler, is expected to reduce the Center's water heating fossil fuel consumption by 45%. On many days, especially in the summer, the fossil fuel boilers at the Center will not be needed because the solar thermal system will handle all of the Center's hot water needs.

The Glens Fall Hospital Renal Dialysis Center is open from 5 a.m. to 10 p.m. Monday through Saturday. It uses an average of 200 gallons per hour of treated water for patient treatment and an additional 35 gallons per minute between the hours of 1 a.m. and 2 a.m. during a regeneration cycle that cleans and softens the water, preparing it for treatments.

NYSERDA provided \$25,000 from federal stimulus funds toward the \$32,500 system. Although federal stimulus funds are no longer available, NYSERDA maintains a Solar Thermal program funded by New York State's Renewable Portfolio Standard (RPS) to displace electric hot water with solar. There is also a small amount of non-RPS funding available for projects using fossil fuels to heat their domestic hot water.

NYSERDA solar thermal incentives are granted first-come, first served, and applications will be accepted until Dec. 31, 2015 or until the funds are fully committed.

"Dialysis centers are one of the many types of water-intensive facilities that can reduce fossil fuel

use and cut water heating costs by using solar thermal technology," said Francis Murray Jr., president and CEO of NYSERDA. "We applaud Glens Falls Hospital's commitment, as an early adopter of this technology, to reducing its fossil fuel usage resulting in a win-win for the hospital, its patients and the surrounding community."

The solar thermal system at the Glens Falls Hospital Center was installed by Apex Solar.

The system heats the water to anywhere between 120 and 190 degrees Fahrenheit. Then, mixing valves temper it to 77 degrees for dialysis and 140 degrees for hot water for sinks and bathrooms.

"We are very excited to be a part of the renewable energy program that NYSERDA and the Glens Falls Hospital have championed," said Stan Dobert, Managing Partner, Apex Solar. "Thanks to the foresight of the Engineering Department at the Glens Falls Hospital, this solar system will decrease fossil fuel costs for 30+ years, and give a boost to manufacturing jobs in upstate New York in the emerging renewable energy sector. We look forward to more renewable energy projects as good as this one in the future."

NYSERDA, a public benefit corporation, offers objective information and analysis, innovative programs, technical expertise and funding to help New Yorkers increase energy efficiency, save money, use renewable energy, and reduce their reliance on fossil fuels. NYSERDA professionals work to protect our environment and create clean-energy jobs. NYSERDA has been developing partnerships to advance innovative energy solutions in New York since 1975.

About Glens Falls Hospital Renal Dialysis Center:

The Renal Dialysis Center is the centerpiece of Glens Falls Hospital's Broad Street campus in Glens Falls. The 13,000-square-foot facility is designed specifically for the delivery of dialysis treatments and follow-up care. Included in the facility are a heating system specially engineered for dialysis patients, who often become cold during treatments, and a dedicated education center.

About Apex Solar:

Apex Solar, headquartered in Queensbury, N.Y., specializes in manufacturing and installing solar hot water systems for commercial and residential use. Apex Solar was founded in 2007 and, as a result of the solar thermal systems installed since then, has offset fossil fuel consumption by billions of Btu's.