

Public Works Building Paves the Way to Sustainable Energy

- \$233,100 American Recovery and Reinvestment Act grant to install 50kW photovoltaic system
- System components manufactured in New York, Colorado, and Tennessee
- Expected to produce 68% of the facility's energy use, annually

Lead by Example

Characterized by its numerous small lakes, the aptly named Town of Sand Lake draws residents and summer visitors alike to its many shorelines. Nestled in the southwestern corner of Rensselaer County, this New York hamlet of 8,000 people has maintained its small town character while simultaneously commencing progressive infrastructure developments. With an eye toward leading by example, and with the assistance of \$233,100 in American Recovery and Reinvestment Act monies granted by the New York State Energy and Research Development Authority (NYSERDA), the Town has recently undertaken a project to install two photovoltaic projects at the Public Works Department building.

"We wouldn't be making this kind of investment on our own, without NYSERDA funding," says Burton Rounds, Town of Sand Lake Supervisor. "NYSERDA has helped us a great deal, and has been very responsive to our requests."

Charged with maintaining over 85 miles of community roads, the Public Works

Department is on call 24 hours a day. In turn, the energy consumed at the 12 year old facility is greater than that of any other Town of Sand Lake building and costs the Town approximately \$12,600 each year. With a metal roof facing due south, the Public Works building presented the Town an excellent candidate for solar panels, and a 42.3kW Roof Mount system will soon be installed. In addition to the roof-top panels, the project includes a 5.1kW Ground Tracking system.

Together, the systems are expected to produce an estimated 68% of the energy required by the facility, annually, which will result in a yearly savings of \$8,610. "This solar project is good for our community," says Mr. Rounds. "There's been a significant show of interest, with lots of people stopping by to see the project progress. It's amazing the number of people I meet that think it's neat that we're doing this, and recognize that we're saving money by offsetting utility costs. And when I tell them that we're doing this at very little cost to the town, they really think it's great!"

American Made and Generating Jobs

Comprised of American-made equipment, the systems provide not only a sustainable source of energy, but also a market for locally produced goods and services. The Solarnova SNT-690 tracker, part of the ground tracking system, is domestically manufactured just north in Plattsburgh, New York, while the project's SMA Sunny Boy inverter is produced at the SMA manufacturing site in Denver, Colorado. Manufactured in Memphis, Tennessee, the Sharp photovoltaic modules above are made in America.

"Hopefully we will help the local economy and the country's economy," says Melissa Elacqua, Town Comptroller.



“Many of the materials are not only American-made, they’re New York-made,” says Steve Erby, Sales and Installation Manager of Monolith Solar LLC, the installation company completing the project. He points to the tracking system, manufactured in Plattsburgh, NY, as a superb product, comprised of sophisticated components that “can do anything we ask of them.” Mr. Erby notes that the company that manufactures the trackers, once on the verge of closure, has been buoyed by recent sales.

Local skilled labor also is integral to the sustainable nature of the project. Monolith Solar, LLC is based in New York, with offices in Nanuet and Albany. “The impact of recent projects has been drastic for our field of employment,” says Mr. Erby. “We went from two men in a garage to a group of eight, including salesmen, administrative support, and installers. We hire local electricians, and local excavators – providing business growth beyond our own. Projects using the ARRA grants have provided a 25% increase in our business.”

Mr. Rounds notes the importance of employing local labor. “Every opportunity we have, we keep economic activity within our town – we try to employ people that are close by.”

Powering Up

The 47.4kW system is expected to produce approximately 55,315 kWh of energy in the first year of operation. The Grid-Tied Net Metering Solar PV Array uses utility infrastructure as an infinitely large battery and guarantees the full monetary value of the power produced, whether the power is fully consumed at the time of production or transmitted to the Grid for use at a later time.

The environmental benefits of the system are marked. By reducing the Town’s carbon dioxide emissions by 55,282 lbs per year, the installation is the equivalent of planting of 4.5 acres of trees. “If the number one benefit of the system is education, one-A is the environmental benefit,” says Mr. Erby.

Moving Forward

“Once we started, our project sparked other groups to do the same thing. The Town has enhanced others’ desire to put up their own systems,” says Mr. Rounds. With plans in the works to install more solar lighting at the Town Hall, and install a 45,000 watt photovoltaic array at the Averill Park Sand Lake Fire District #2, the Town continues to invest in sustainable energy alternatives. “Education is a key aspect of this project,” says Mr. Erby. “Together with the town we plan to take information from these systems and bring it into classrooms. Using student’s terms, such as, ‘electricity from the system will power X number of Playstations for X number of hours,’ we’ll show the children the environmental impact of energy use.”

The educational value of the system is noted by Ms. Elacqua and Mr. Rounds. “We’re very excited about this project. Beyond saving the town money on utility bills, the panels will be a teaching tool, spreading knowledge about solar energy,” Ms. Elacqua remarks. Mr. Rounds adds, “It’s wonderful for the next generation of young people coming through the schools to see renewable energy in action.”

American Recovery and Reinvestment Act – Energy Efficiency and Conservation Block Grant

The Town of Sand Lake received this award from the [U.S. Department of Energy’s Energy Efficiency and Conservation Block Grant Program](#). The Energy Efficiency and Conservation Block Grant (EECBG) Program provides grants to states and directs funding to State Energy Offices from technology programs in DOE’s Office of Energy Efficiency and Renewable Energy. States use grants to address their energy priorities and to adopt emerging renewable energy and energy efficiency technologies. EECBG is distributing \$3.2 billion of funding to the states and U.S. territories and through competitive offerings under the [2009 Recovery Act](#).