

Bethlehem Central Middle School

Delmar, NY

THE BACKGROUND

Bethlehem Central Middle School is generating electricity from the Sun using a photovoltaic ("PV") system provided to fifty schools across New York through School Power... Naturally – an innovative program from the New York State Energy Research and Development Authority (NYSERDA).

The program, managed by Solar Works, Inc., is **designed to educate New Yorkers about energy, and in particular, the role solar electric power – can play in providing clean energy for our homes, schools, and workplaces.**

Education is the heart of School Power... Naturally. Sixty lesson plans for teachers cover a broad range of multidisciplinary topics and address the learning standards for New York State students in grades 5-12.

Instrumentation and educational software hooked up to PV systems in each school produce computerized performance data that is automatically posted to www.SchoolPowerNaturally.org. Any school, anywhere in the world can log on for free to use our lessons and data.



THE STORY

A goal of the Board of Education of the Bethlehem Central School District is to teach energy conservation and efficiency to district students through innovative, motivational, and interactive instruction. The solar electric system and monitoring equipment installed at Bethlehem Central Middle School in 2004 provide many hands-on learning opportunities for achieving this goal.



“The Science faculty is incorporating solar concepts into Middle School science and technology courses. The PV system enhances our curriculum by providing students with kinesthetic, real-world learning opportunities in the field of solar science. Students are preparing presentations on solar energy for other schools in the district, the PTA, and local public access television,” notes Dave Kszanznak, Middle School Principal.

For more information call 1-866-NYSERDA or log on to www.SchoolPowerNaturally.org

Students in 50 New York schools are learning hands-on how PV works, but the program does not end there. Incredible educational resources are available to any school, anywhere in New York or the world!

THE PV SYSTEM

The 2 kW solar electric system installed at Bethlehem is sized for its suitability as an educational tool. Such a system can meet about 25-30% of the energy needs of a typical, energy-efficient home. The system includes solar panels, an inverter that converts the DC power from the solar array to the AC power the school uses, and a sophisticated but teacher- and student-friendly data collection and monitoring system. Sensors measure electricity, air temperature, temperature of the solar panels, wind speed, and solar radiation.

THE RESULTS

“Understanding of energy supply, efficiency, environmental impact, and alternative power systems is vitally important for our middle school students, who are the energy consumers and scientists of the future,” exclaims Margaret (Candy) Dolen, Solar Coordinator for the school.

For more information about School Power...Naturally, call 1-866-NYSERDA, or log on to visit www.SchoolPowerNaturally.org



For more information about Bethlehem Central Middle School, visit www.bcsd.k12.ny.us