

Valley school district lauded by BPU Named New Jersey Clean Educator of the Year

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By John Tredrea, Staff Writer

The State Board of Public Utilities (BPU) has named the Hopewell Valley Regional School District the New Jersey Clean Educator of the Year.

Among many other green technologies, Hopewell Valley currently is outfitting its second school with solar roof panels. The BPU chose Hopewell Valley from a record 53 nominees, district spokeswoman JoAnn Meyer said.

Interim Superintendent Thomas F. Butler said receiving the award was a “deeply satisfying and meaningful honor,” adding that much of the credit goes to the district Facilities Director Norman Torkelson.

Mr. Torkelson was nominated for the award by Klas C. Haglid of Haglid Engineering & Associates Inc., which has worked with Hopewell Valley on heat-recovery systems.

”Norman takes a practical, real-world approach by installing small test cases, then monitoring and verifying the operation of an energy efficient measure and then looking at how best to scale up successful systems,” Mr. Haglid wrote in his nomination. “He has had an energy recovery system in his home for many years and has taken the time to really research and become an advocate and teacher of how best to use clean energy.”

A district employee since 1999, Mr. Torkelson was feted at an awards luncheon during the state’s Clean Energy Conference, held in Jersey City.

Ms. Meyer said Mr. Torkelson’s efforts in Hopewell Valley are most apparent at Stony Brook Elementary School, opened in 2002, and the 10-classroom addition at Timberlane Middle School, opened last year. Both facilities were built with a number of Earth-friendly features. Among them are geothermal heating and cooling systems, heat-recovery systems, energy-efficient windows, subterranean insulation and a noise-mitigating design. At Timberlane, a 50-kilowatt solar-powered electrical system was installed over the summer. An identically sized system is about to be installed at the district’s largest elementary school, Bear Tavern.

In the district’s older buildings, three of which date to the 1920s, Mr. Torkelson has pushed for energy-efficient heat-recovery systems to help lower costs. The systems are huge energy savers because they capture energy from a room’s exhausted air and, depending on the time of the year, recycle it to either cool or heat incoming fresh air from the outside.

Since last year, the district has installed 10 heat recovery systems — five at Hopewell Elementary, two each at Bear Tavern and Toll Gate Grammar. Timberlane is currently getting its second system.

Analysis of district energy bills over the last five years shows that energy use, per square foot, is lowest, by far, at Stony Brook. In addition, Ms. Meyer said, energy consumption is falling at all six schools except Bear Tavern, where student enrollment is rising and officials have added free-standing, modular classrooms for extra space.

Mr. Torkelson admits the advancing age of the seven buildings in his care pose difficult challenges to reducing energy consumption.

”The challenge of our older buildings is how to apply these newer technologies,” he said. “They don’t lend themselves to easy architectural solutions, especially when it comes to heat-recovery systems”

Some energy efficiencies are achieved in a more piecemeal fashion. Mr. Torkelson reduced by one-third the significant cooling costs of a notoriously hot room at Central High School simply by adding insulated panels to the room’s windows and by coating the roof above the room with a special, reflective coating. The room houses the district’s information technology nerve center, making temperature control an important issue.

A former science teacher, Mr. Torkelson also required the solar panel contractors to include an informational kiosk in their projects. The ATM-sized units, installed in the lobbies at Timberlane and Bear Tavern, serve as teaching tools, enabling students to monitor the system’s real-time energy output. Because the data is online, it may be accessed in classrooms, as well as by home computers.

Over the years, Mr. Torkelson has worked with science classes and student environmental clubs on Earth-friendly projects ranging from reducing classroom electricity use to launching a buildingwide recycling program. He is currently working with students interested in a project to compost cafeteria waste at Central High School. He has been a frequent classroom speaker on Earth Day.

”The goal is to make kids aware of the high-efficiency buildings they’re in so they, in turn, become better consumers when they graduate,” he explained.