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MANCHESTER — A year ago, township officials placed a bet on what they believed was a sure thing. And as energy rates continue to rise, they are being shown to be smarter by the day.

A 6,400-square-foot garage used by the Public Works Department to repair police cars, dump trucks and other township equipment previously was lighted by dozens of energy-intensive fluorescent tube lights. But officials placed their money on "going green" and installed 25 tubular daylighting devices.

Now, the building's electric bill has plummeted, and the savings have begun to pile up.

"It's all natural sunlight, just about," said Stephen Stanziano, the township's public works director. "It's actually brighter in here."

The fixtures — known as tubular daylighting devices, or TDDs — capture natural sunlight on a building's roof and channel the light through an internally reflective tube. At ceiling level inside, a diffuser resembling a standard recessed lighting fixture spreads the sunlight evenly throughout the room.

The TDDs spread light more evenly, and thus more efficiently, than traditional skylights. They also filter out 99 percent of the sun's ultraviolet rays while emitting little to no excess heat.

The township installed 25 of the lights on top of the Route 70 garage in the Whiting section in September 2007 and has already seen results, Stanziano said.

"We had a third-party energy test, and in February we saved \$400 for the month," he said. "And that's a month without a lot of sunlight."

The dome-shaped heads protruding, like a field of toadstools on the garage's roof, have the ability to gather sunlight from all angles, said Joe Veni, a township project engineer who spearheaded the daylighting initiative.

About \$14,000 — a total that includes purchase and installation — was spent on the 25 tubes, Veni said.

He estimates savings on monthly electric bills will meet or exceed that amount by March 2010.

"It's cost-effective. It works, and it will pay back within a reasonable amount of time," said Mayor Michael Fressola.

Extremely overcast days can dampen the tubes' effectiveness, however, so a standard electric-powered lighting system remains in place as a backup. To minimize the amount of traditional lighting needed, Veni researched and installed a state-of-the-art sensor system that controls the artificial light to ensure bulbs stay dark or dim when not needed.

The sensor system even knows when the garage is empty and will shut off electric lights until it senses occupants.

"If the sun's out at all and beaming through or there's nobody in here, they don't need to be on," Veni said.

The TDDs have spread to town hall as well and are now providing light in several municipal offices.

"I haven't turned on my light switch since March or April, except in maybe a heavy rainstorm," said Gary Sylvester, the township's supervising engineer. "One (TDD) replaced three lamps."

During a visit to the public works garage several months ago, Ocean County Freeholder Director Joseph H. Vicari was so impressed with the TDDs he initiated plans to have them installed at county facilities. The tubes are now up and running at the Chestnut Street repair garage in Toms River and are part of a growing initiative by the Board of Freeholders to rein in energy costs and exploit green technology.

"We're going to cut our usage. We want the curve to go down," Vicari said. "Every year, we will continue to use less and less energy, and we'll get more savings for our taxpayers."

While the TDDs are already paying off for Manchester, they represent just the start of several green initiatives in the township, Fressola said.

Among the areas being targeted are lightbulbs and windows in the municipal building and the amount of energy used by parking lot lamps.

"Basically, this," he said pointing to the public works garage, "is the opening salvo to going green."

Moving toward green energy practices is a fast-increasing trend among public entities throughout the state, said William Dressel, executive director of the New Jersey League of Municipalities.

Dressel said Manchester was likely the first to tap TDDs as a cost-saving measure.

"It's abundantly clear when you get your utility bill that costs are going up. . . . It's becoming a cost burden on citizens," he said, of the way rising energy rates have become a factor when shaping municipal budgets and tax rates.

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