Egg Harbor City and Sea Isle City to test hybrid streetlights

By LEE PROCIDA Staff Writer | Posted: Wednesday, May 11, 2011 12:15 am

Egg Harbor and Sea Isle cities will join Salem as the first in the state to get streetlights powered solely by the wind and sun, a technology with the potential to take tens of thousands of lampposts off the electricity grid in southern New Jersey.

One or two hybrid LED lights in each city will be installed before Memorial Day in a yearlong pilot project funded by grant money and organized by the South Jersey Economic Development District and New Jersey Institute of Technology.

These are not the first lights of their kind, just the first to be installed here.

But the makers believe they could be the best. They are self-powered, not connected to any utility, made of recycled materials and can light up for three days using rechargeable batteries if there is no wind or sun.

“There are a couple different kinds of hybrid streetlights,” said Gordon Dahl, executive director of the SJEDD. “Some are very pretty, some are very functional. We want to mesh functionality with aesthetics.”

“We’re in a tourist economy,” he said. “We want these things to look good and function well.”

Streetlights are a common and expensive part of modern life.

Atlantic City Electric, which serves all or part of eight counties in southern New Jersey, counts about 113,000 streetlights in its coverage area, spokeswoman Sandra May said. Egg Harbor City has 568 lampposts that cost $95,000 a year to power. Sea Isle City’s 683 streetlights cost nearly $120,000 annually.

“It’s amazing how much energy we use just to light things,” said Rick Dovey, president of the Atlantic County Utilities Authority, a local leader in renewable technologies.

The standard streetlights Atlantic City Electric installs use high pressure sodium and cost less than $1,000 each, May said. The hybrid lights, designed by Brooklyn-based Lumi SolAir, cost $10,000 each, but could pay for themselves in about half their projected lifetime of at least 15 years, Dahl said.

They can withstand gusts as high as 121 mph, yet operate on winds as low as 2.5 mph.

Lumi SolAir is a subsidiary of Duggal Visual Solutions, which so far has installed the lights at the Brooklyn Navy Yard and Pratt Institute in New York.

Two lights in Egg Harbor City will be installed at an expanded transit hub near the train station at the city's southern end. Sea Isle City's will be put near the beachfront promenade on JFK Boulevard. The locations were chosen to test the technology near the ocean, on the mainland and, in the case of Salem City, which will get one light, by a river.

Over the course of the first year, students at NJIT will analyze the effectiveness of the lights.

"What we're doing is not only going to be a showcase for completely off-grid lighting technology, but it's giving NJIT students some really good hands-on experience," said Gerry Gorman, acting president of Lumi SolAir and professor emeritus of Polytechnic Institute of New York University.

At some point, the SJEDD and NJIT plan to work with fiberglass manufacturers, particularly in the boat-building industry, to develop different designs for the foils in the wind turbine part of the light.

Fiberglass could be a longer-lasting and cheaper material than the specially coated aluminum commonly used. It would also be a valuable new product line for local boat builders.

"It should really rev up an industry that's taken it pretty hard in the past recession," Dahl said.

By all accounts, lampposts with the highly efficient LEDs have another important feature: They produce quality light.

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