

LANDFILL GAS POWER SOURCE

Two new plants generate electricity at Downstate sites.

By Kate House-Layton

DOVER — What starts as garbage is coming out “green” Downstate.

Gases released from two Delaware Solid Waste Authority-owned landfills in Kent and Sussex counties are being used to run electric generators.

The DSWA, Constellation NewEnergy of Baltimore and a Massachusetts-based energy services company called Ameresco, opened two energy plants last week near the authority’s Sandtown landfill on Del. 10 and Georgetown facility on Del. 20.

Constellation, the largest competitive power supplier in North America, signed a 10-year agreement to purchase power from the two plants.

“This is really a great example of how the private sector and public sector can work together to make a really successful project,” DSWA CEO Pasquale Canzano said Monday.

The project has been in the works for two years, said Shelley Cohen, Ameresco senior project developer.

Ameresco designed, developed, owns and operates the plants, she said.

Before last week, the DSWA burned its landfills’ methane gas, which mostly comes from organic waste, such as discarded food and yard clippings.

In the new process, Ameresco pays the DSWA for the gas, which it turns into electricity and sells to Constellation.

The seven generating engines at the Kent and Sussex plants are expected to produce a combined 7.4 megawatts.

That’s enough to power 4,500 homes, Ms. Cohen said, although Constellation’s customers are large and industrial businesses.

The Delaware project is expected to reduce direct and indirect greenhouse gas emissions by 60,000 tons a year, the equivalent to removing more than 60,000 cars from Delaware roads or 1,500 railcars of coal per year.

The gas goes to the electric generators through a series of pipes.

“If you think of the landfill as a big milkshake, and you put a straw in the milkshake and suck through the straw, it’s the same sort of concept,” Ms. Cohen said.

A series of tubes, or wells, go into the ground to siphon the methane, she said.

At the end of the tubes is a blower that sucks out the gas and directs it into a main pipe.

Once the gas is in the main pipe it is processed into electricity-generating combustion engines.

The gas is generated 24-hours per day, seven days per week, she said.

The electricity then goes into Constellation’s transformers for use on a grid and mostly serves the utility’s

more than 100 large and industrial customers in Delaware, Ms. Cohen said.

Constellation’s customers can choose how much of their energy comes from a renewable source, said Martha Duggan, Constellation’s vice president of business development.

Some of the electricity, however, could inadvertently reach residential electric grids, she said.

“It’s really an exciting project,” Mr. Canzano said, also mentioning that the new process conserves natural resources such as fossil fuels that often run electric generators.

Many of the states in the area are increasingly requiring that a certain percentage of energy comes from renewable sources, Ms. Duggan said.

Delaware has a renewable portfolio standard that requires power providers to have 10 percent of their power come from renewable sources by 2010.

Ms. Duggan said with more demand for the use of renewable energy in the Northeast, many of the company’s customers want to “green up,” or increase their renewable energy percentage.

“Ultimately, there will be a significant impact on the environment,” she said.

“If everyone is using 10 percent renewable, that has got to positively impact the environment.”