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## New York Construction

### Infrastructure News - May 2007

#### New Power Facilities for Long Island, New Jersey

A 350-MW plant on Long Island is close to a construction start. Also, construction on a methane gas-fueled facility in Columbus, N.J., is on a fast track.

##### Landfill Gas a Moneymaker

Officials in Burlington County, N.J., are hoping to turn an environmental liability into a financial gain as they move toward a technology that will convert gas released by the county landfill into usable electric power.

Construction began in March on a 7.1-MW power plant, which will use methane gas recovered from the landfill in Columbus. And while a portion of the energy produced will be used to power the county's 550-acre resource recovery complex, the remainder will be sold back into the state's power supply grid.

The county expects to bring in \$61.2 million in revenue throughout the duration of a 20-year contract from power sold to the grid.

"This was a very attractive idea from an economic standpoint," says Mary Pat Robbie, director of the county's Resource Conservation Department.

GREYHAWK of Woodbury, N.Y., is the construction manager for DCO Energy of Atlantic City, which designed and is building the \$14.6 million plant. DCO also will operate the plant under the 20-year contract with the county.

The plant will be powered by five engines that were shipped in from Austria in March. The project team will install the engines prior to construction of the 6,700-sq-ft enclosure that will surround them. The team will also install the generator sets, fuel treatment equipment, transformers, and switchgear, says Rob Notley, senior project manager with GREYHAWK.

The facility will use about 2,500 cu ft per minute of landfill gas, which will generate enough energy to power more than 8,000 households.

The first engine will start up in June, and construction on the entire facility is expected to wrap up in October, with the remaining four to be running by August, Robbie says. The first energy produced will power the county's resource complex, whose energy costs run about \$572,000 a year.

"Once we're generating [power] in excess, though, we'll put it back into the power grid," Robbie says.

##### Long Island Power Plant to Start Construction

Construction may soon start on a new 350-MW power plant in Brookhaven, N.Y., that is expected to generate 10% of Long Island's electricity needs.



The Caithness Long Island Energy Center was awaiting permits from the Brookhaven Department of Buildings and



construction is expected to start this spring, says Donald Miller, a spokesman for New York-based Caithness Energy, an affiliate of London-based Caithness Corp.

The firm obtained discretionary approvals at the federal, state, county, and

town levels, including environmental review, last summer. And the Long Island Power Authority has signed a 20-year deal for the purchase of 290 MW from Caithness.

Germany's Siemens Power Generation is the construction manager on the \$450 million project, which is expected to have 200 to 300 construction workers onsite and generate \$60 to 70 million in local wages and services. Once the plant is completed in 2009, Siemens will handle operations and maintenance of the plant for 17 years.

The natural-gas-fired, combined-cycle power plant will be on a 15-acre site in the South Yaphank community, a large industrial area inside the Brookhaven Empire Zone, which confers special business tax incentives to the owner. Caithness reports that the plant will use oil as a backup fuel source if natural gas prices rise.

The plant will combine a gas turbine and steam turbine to make up an integrated thermal cycle, which, along with other measures, will make the plant 50% more fuel efficient than existing facilities on Long Island, according to LIPA. Compared to older power facilities, the plant will release 90% fewer airborne pollutants and require 95% less water due to a closed cycle air-cooled condenser.

LIPA selected Caithness in 2004 to build the facility as part of an energy production expansion plan that includes a \$600 million underwater cable now under construction, which will import 660 MW of power generated in New Jersey, and a 140-MW offshore wind farm by FPL Energy of Juno Beach, Fla., which is still undergoing approval.

Caithness and LIPA are also funding a \$150 million community benefits package, which includes \$139 million in payments-in-lieu-of-taxes to schools and local taxing jurisdictions.

### **Manhattan Bridge Project Chugs Along**

Rehabilitation work is progressing on the lower deck of the Manhattan Bridge, and New York City Department of Transportation officials say Koch Skanska of Carteret, N.J., the contractor, is on pace to meet a planned October deadline for re-opening the roadway.

Traffic on the 5,779-ft-long lower roadway of the suspension bridge that connects Manhattan and Brooklyn was shut down in October 2006, forcing traffic to be maintained both ways on the upper roadway, which was replaced in two phases in 1996 and 2003. The span runs 1,470 ft from tower to tower and 2,920 ft from anchorage to anchorage.

The \$829 million reconstruction of the entire bridge began in 1982 after years of neglect caused considerable deterioration to the structure, which carries nearly 80,000 vehicles and 320,000 mass transit riders daily on its subway tracks. The bridge opened in 1909 on a design by Leon Moisseiff.

In addition to the upper roadway work, tasks completed thus far in the 25-year-old rehabilitation program includes repainting; re-anchoring of the main suspension cables; replacing the south transit tracks; and restoration of the colonnade and Manhattan Plaza structures.

So far, the current \$148 million lower roadway reconstruction has involved the removal of the old roadway and placement of new steel and grid deck, which started on the

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Manhattan side. Though the lower roadway is expected to reopen in October, the entire phase is scheduled for an April 2008 completion.

Koch Skanska has been offered a \$65,000-per-day incentive by the transportation department for opening the bridge before October 14, which could net the firm as much as \$3.9 million, according to an agency spokesman. Representatives from Koch Skanska did not return calls for comment.

Work on the bridge is expected to be completed in 2013 with a seismic retrofit of the entire structure.

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