Rental Power

> Case History
Long Island Power Authority, USA

Our energy working for you.™

Cummins Power Generation

Where:
Long Island Power Authority, Suffolk County, Long Island, New York

What:
88 MW of Rental Power installed at two large substations that were remotely dispatched and monitored

Purpose:
To supplement high electrical loads at key substations during the summer months when residential and commercial air conditioning use is high

Primary choice factors:
Selective catalytic reduction after-treatment on the reciprocating engine generators to meet environmental regulations and allow reduced operating costs compared to combustion turbines used in the past

Rental Power units from Cummins Power Generation deliver a peaking solution for Long Island Power Authority

UNIONDALE, NEW YORK, USA — When soaring summertime temperatures cause people to switch on their air conditioners, it drives up the demand for electricity and can strain a utility's power distribution system. Nowhere is that more true than during hot summers in Suffolk County on Long Island, New York. For several years, the local electric utility, Long Island Power Authority (LIPA), has been increasing its summer generating capacity with rented units installed at several substations where loads have been high.

In the past, these rented generators have been costly liquid-fueled turbines, primarily because of the need to meet local air quality regulations. In the spring of 2004, LIPA awarded a contract to Cummins Metropower, Inc., for 88 MW of clean, reciprocating-engine Rental Power from Cummins Power Generation Inc. The Rental Power units have not only met stringent air quality regulations, but have reduced installation and operating costs for LIPA as well.

"LIPA's original bid specifications seemed written with turbines in mind," said Peter Schroeck, energy services

Each unit includes a 600-gallon tank for the urea injection system that controls nitrogen oxides.

The generator enclosures feature enhanced exhaust silencers and acoustic insulation to reduce noise.

manager, Cummins Metropower. “However, we saw an opportunity to show them that our reciprocating-engine Rental Power units could deliver cost-effective power while remaining well below New York State’s emissions limits. Turbines are more expensive to rent and to run. By comparison, mobile reciprocating-engine generators have a much lower rental cost and are about 30 percent more efficient at turning Btus into kilowatt-hours.”

Over the course of about 10 weeks, Cummins Metropower installed 24 Rental Power units at the Shoreham substation plus 24 units at the Holtsville substation, both on Long Island.

State-of-the-art emissions controls

Each Rental Power unit features a 2 MW Cummins Power Generation reciprocating-engine generator equipped with state-of-the-art emissions control technology designed to meet the New York Department of Environmental Conservation’s stringent air quality standards. The emission control system consists of an oxidation catalyst/exhaust silencer to reduce hydrocarbons and carbon monoxide, a regenerative particulate trap to reduce particulate matter, and a selective catalytic reduction (SCR) system that injects aqueous urea into the exhaust stream to reduce nitrogen oxides. The total result is more than a 90 percent reduction in nitrogen oxide, carbon monoxide and particulate matter. Cummins Metropower also customized the generator enclosures with sound-reducing hoods to meet LIPA’s noise standards.

“Our mobile reciprocating-engine Rental Power units could deliver cost-effective power while remaining well below New York State’s emissions limits.”

Rental Power units deliver flexibility

“The decision to go with reciprocating-engine generators rather than liquid-fueled turbines was primarily economic,” said LIPA’s Mike Milligen, “but it also had to do with portability. In case of emergencies, the smaller mobile units could theoretically be deployed to some of our other distribution substations or a local distribution hot spot, whereas that would not be feasible with a 25 MW turbine.”

Cummins Metropower is responsible for remotely dispatching and monitoring both substation sites from its New York headquarters in the Bronx. All 48 Rental Power units are currently monitored and controlled using PowerCommand® software from Cummins Power Generation and Echelon® TP-78 network protocol. LIPA, in cooperation with the New York Independent System Operator, notifies Cummins Metropower two hours in advance of an impending system peak to start the units and bring the 88 MW online for additional capacity.

“Rental Power units offer LIPA a high degree of flexibility and scalability,” said Larry Fetting, general manager, Americas, Rental Business, Cummins Power Generation. “They can add generation in 2 MW increments wherever they need it. In addition, Cummins Metropower is handling all maintenance and repair on the rental units, leaving LIPA free to concentrate on serving their customers.”

For more information about Rental Power or other energy solutions, contact your local Cummins Power Generation distributor or visit www.cumminspower.com/rental.

Our energy working for you.™

www.cumminspower.com

F-1552 Rev 2/08 (2005)

Cummins Power Generation