



December 08, 2009 10:00 AM Eastern Daylight Time

## New Jersey's and New York City's Electricity Systems Now Talking to Each Other, Thanks to GE's Smart Grid Technology & Smart Capital

LINDEN, N.J.--(BUSINESS WIRE)--Two major Northeastern US power grids, in New Jersey and New York City, are now talking to each other and dispatching energy more efficiently and reliably using breakthrough GE smart grid technology and capital, the company announced today. Three massive "variable frequency transformers" are converting up to 315 megawatts of electricity – enough for up to 300,000 homes – from the power system in New Jersey and feeding it to New York City.

The successful technology kickoff was celebrated during a dedication ceremony today at the 900-megawatt Linden cogeneration power plant owned by GE Energy Financial Services, just up the road from where Thomas Edison designed the first reliable electric light bulb 130 years ago. It follows three years of planning, design, construction and testing.

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The rotary-type transformers – in their largest application – help control the intersection of two of the two largest electrical demand centers in the United States, the Pennsylvania-New Jersey-Maryland (PJM) transmission system and the New York City section of the NYISO grid, which are connected by an upgraded cable buried 60 feet below the Arthur Kill waterway.

These variable frequency transformers are stabilizing New York City's power grid, increasing energy reliability and providing consumers with more diverse and lower-cost power sources. Because of capacity constraints, New York City pays among the highest electricity costs in North America, creating demand for PJM's historically lower-cost power generation. The technology also reduces the need for new power plants within the city, where siting is difficult and construction costs are high.

"This investment will enable existing generating and transmission assets to help serve the needs of New York City, enhancing the return on those assets," said Bob Gilligan, vice president of GE Energy's transmission and distribution business. "Smarter technology, like these variable frequency transformers, help equip the grid with the versatility and capacity needed to power a world that's continuing to increase its reliance on electrical power."

The variable frequency transformers provide a precise control path between electrical grids, permitting power exchanges previously impossible because of technical constraints. They enable transmission system operators to control power flows with high reliability, speed and efficiency, while offering flexibility in how utilities meet growing energy demand.

"In addition to technology breakthroughs, the smart grid requires smart capital -- not only money, but expertise in understanding and navigating energy markets," said Alex Urquhart, president and CEO of GE Energy Financial Services. "The capital we provided for this Linden smart grid project underscores our ability to optimize the value of an essential, long-lived and capital-intensive asset we own."

**Transformers Could Also Send Power from NYC to NJ**

While power will most often flow from New Jersey to New York, economics and other factors could at times favor a reverse flow of power: from New York City to PJM. GE Energy Financial Services has commissioned PJM to study the transmission upgrades required for enabling such a reverse flow. GE Energy Financial Services also plans to work with PJM, as well as NYISO, to improve the system rules so the scheduling of power flows can be coordinated more smoothly between the two systems, allowing more economic, efficient and quicker use of the variable frequency transformers.

### **GE to Auction More Power from the Transformers**

Four power marketing and trading companies are buying 300 megawatts of the power, in the first truly merchant US transmission project, and reselling it to wholesale and retail customers in New York City. GE Energy Financial Services plans to auction the balance of the transformers' output, 15 megawatts, available because the system's performance is exceeding its commitment.

The Linden project builds on GE Energy Financial Services' 30-year legacy of investment in power transmission and generation. GE Energy Financial Services holds equity investments in power projects with a capacity to produce 23 gigawatts, equivalent to the installed generating capacity of the Netherlands.

### **About GE Energy Financial Services**

GE Energy Financial Services' experts invest globally with a long-term view, backed by the best of GE's technical know-how, financial strength and rigorous risk management, across the capital spectrum, in one of the world's most capital-intensive industries, energy. GE Energy Financial Services helps its customers and GE grow through new investments, strong partnerships and optimization of its more than \$22 billion in assets. GE Energy Financial Services is based in Stamford, Connecticut. For more information, visit [www.geenergyfinancialservices.com](http://www.geenergyfinancialservices.com).

### **About GE Energy**

GE Energy ([www.ge.com/energy](http://www.ge.com/energy)) is one of the world's leading suppliers of power generation and energy delivery technologies, with 2008 revenue of \$29.3 billion. Based in Atlanta, Georgia, GE Energy works in all areas of the energy industry including coal, oil, natural gas and nuclear energy; renewable resources such as water, wind, solar and biogas; and other alternative fuels. Numerous GE Energy products are certified under ecomagination, GE's corporate-wide initiative to aggressively bring to market new technologies that will help customers meet pressing environmental challenges.

### **About GE**

GE (NYSE: GE) is a diversified global infrastructure, finance and media company that is built to meet essential world needs. From energy, water, transportation and health to access to money and information, GE serves customers in more than 100 countries and employs more than 300,000 people worldwide. For more information, visit the company's Web site at <http://www.ge.com>. GE is Imagination at Work.

**Editor's Note:** B-roll and high res photos: [http://www.geenergyfinancialservices.com/LindenVFT\\_Inauguration.asp](http://www.geenergyfinancialservices.com/LindenVFT_Inauguration.asp)

Photos/Multimedia Gallery Available: <http://www.businesswire.com/cgi-bin/mmg.cgi?eid=6115080&lang=en>

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### **Smart Multimedia Gallery**



**Photo**

Shown here are three massive GE "variable frequency transformers" that are converting up to 315 megawatts of electricity – enough for up to 300,000 homes – from the power market in New Jersey (foreground) and feeding it to New York City (background). These two major Northeastern US power grids are now talking to each other and dispatching energy more efficiently and reliably using breakthrough GE smart grid technology and capital. (Photo: Business Wire)

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