



New York City grid becomes smarter with Saft

Synerion® 24M lithium-ion energy storage systems demonstrate the Smart Grid concept in a project led by Consolidated Edison and Green Charge Networks.



Case study

Delivering power to over 3 million customers

Consolidated Edison (ConEd) supplies electricity to the more than three million customers in New York City and Westchester County. It operates one of the largest, most complex and most reliable electric power systems in the world, including 130,000 miles of underground and overhead cables.

Meeting the challenge of relieving the load on a grid operating at its maximum capacity

The electrical infrastructure in New York is under intense pressure and ConEd is extremely limited in making upgrades as underground conduits have little or no physical space for additional cabling. The infrastructure is reaching the limit of what it can deliver, but ConEd anticipates growth in demand, particularly for electric vehicles (EVs). Systems that can relieve

the load on the grid, but also avoid infrastructure investments while maximizing the utilization of current assets are therefore particularly attractive to ConEd as a much more efficient way to meet the growing demand for power.

Smart Storage and Generation Units makes the most of existing assets

In 2010, ConEd initiated a multi-year demonstration project after receiving a Department of Energy award to identify, develop and test new technologies within the electric delivery system that will help build a smarter, more efficient grid, including the integration of smart grid architecture and measuring the effects of widespread electric vehicle adoption on the electric grid. ▶



SAFT

▶ Smart grid specialist Green Charge Networks (GCN) was commissioned to install and operate a network of Smart Storage and Generation Units (SSGUs) to overcome peaks in demand and communicate directly with ConEd. The sites included several convenience stores as well as other channels of business including car rental locations, hotels and parking garages, all in the New York City area.

Modular system

Saft is supplying GCN with energy storage systems totalling close to one megawatt-hour, utilizing the Synerion® 24M medium-power lithium-ion (Li-ion) batteries. Installation, started in March 2012.

The key features of Saft's Synerion® 24M modules include:

- High capacity and immediately available power
- Individual Li-ion modules provide 24 V and 2 kWh with the best energy efficiency of all available battery energy storage systems
- 20 year design life
- Based on well proven maintenance-free Li-ion battery technology
- Developed specifically for renewable integration, grid regulation, load leveling, energy storage and UPS applications
- Compact design enables discreet installation at convenience stores and other businesses without the need to invest in bespoke housings

Saft is the ideal energy storage partner

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In projects of this magnitude, having the right partners is crucial. Saft is proving the ideal partner for the creation of the smart storage and generation unit network and continuing our important work on the New York electric grid.”

Vic Shao
 Chairman and CEO of GCN



Saft Synerion® 24M modules even out ConEd's highs and lows

Saft Synerion® 24M modules are proving their capability in ConEd's SSGUs by delivering:

- ConEd's demand for growth and managed spikes with a relatively modest capital expenditure
- Peak shaving on New York's congested and maxed out network
- Configurability to allow large commercial consumers to avoid peak demand charges
- Operation with the natural lows and highs in energy consumption to deliver more energy at peak time without additional capacity



Saft

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