

Securing the energy supply of 60,000 New York City residents

Through Demand Response and the effective maintenance of New York City Housing Authority's backup generator fleet, Centrica Business Solutions is ensuring the resilience of the energy supply of 60,000 people in New York City.



Delivering complete energy resilience

The New York City Housing Authority (NYCHA) is the largest public housing authority in North America. They are committed to increasing opportunities for low- and moderate-income New Yorkers by providing safe, affordable housing and facilitating access to social and community services. A total of more than 365,000 people reside in NYCHA's 302 public housing developments across the city's five boroughs.

When Superstorm Sandy hit land in 2012, it became one of the most damaging natural disasters in US history, causing massive damage and power outages across the Atlantic Ocean waterfront. Many of NYCHA's properties suffered from severe flooding and major losses to their utilities, with some properties experiencing power outages lasting six weeks.

In the aftermath, the federal government awarded \$3 billion to NYCHA to make infrastructure improvements that would mitigate against future damage caused by similar storms. This is the largest investment in public housing since its inception, and a tremendous boost to NYCHA's aging infrastructure. This investment is allowing NYCHA to install over 20 new heat and hot water systems, full back up power, flood proofing, site lighting, and recreational improvements to over 200 NYCHA buildings.

NYCHA made a commitment to secure 100% energy resilience across 33 NYCHA developments, consisting of 216 buildings. If there were grid outages in the future, their residents wouldn't lose power and critical building systems could continue to operate. To deliver this resilience, in 2016 they purchased 202 natural gas standby generators, which, combined, can deliver over 98MW of power generation, and can carry the full load of these residential buildings.

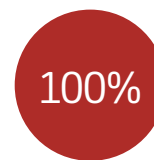
Effective operations and maintenance

In 2017, NYCHA recognized that the maintenance of power generators was outside the usual remit of their facilities staff; but that effective maintenance of the generators was key to them providing a vital resilience service.

They decided to look for a partner who could manage the operations and maintenance (O&M) of the generators. They also identified that by enrolling their generators in suitable Demand Response programs and help to stabilize New York City's power grid.



natural gas generators
providing 98MW of
power generation



energy resilience
for 60,000
New Yorkers

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In 2012, Hurricane Sandy damaged over 200 of our buildings and left many of our facilities without power. This project has allowed us to ensure that next time there is a major power outage, our residents will be able to keep the lights on.”

Joy Sinderbrand

Vice President, Recovery and Resilience Department
NYCHA

Why PowerRadar™ from Centrica Business Solutions?

- Reducing consumption during periods of peak demand on the grid.
- Access new markets with our automated advanced Demand Response solution to access lucrative markets requiring fast response.
- Minimize risk and view curtailment in real-time.
- Participate without disruption leveraging on-site generation such as standby generation for Demand Response.
- Ongoing support provided by our dedicated Demand Response Operations team.

Demand Response enrolment

When NYCHA began to look for an O&M and Demand Response partner, Centrica Business Solutions was uniquely positioned to deliver both requirements.

Centrica Business Solutions was awarded the opportunity to operate and maintain the new generator fleet, alongside managing the portfolio for Demand Response participation. This would be the first time that NYCHA had participated in Demand Response. Centrica Business Solutions enrolled them in the programs and managed their ongoing participation to ensure they maximized all available opportunities.

To date, NYCHA has 26 generators operational that Centrica will provide O&M for this upcoming Summer season, with 18 generators enrolled in Demand Response programs. NYCHA's Sandy Recovery Program anticipates to be completed in 2023 with new generators coming online as individual projects are completed.

When the New York Distribution Utility identifies that the grid is likely to be stressed, Centrica Business Solutions notifies NYCHA, who would deploy the generators to help rebalance supply and demand on the grid. However, with such a large fleet of generators spread across a wide geographic area, it was soon clear that this manual approach would be prohibitive from a cost and resource perspective. As a result, Centrica Business Solutions proposed that PowerRadar™ would be ideally positioned to support.

Remote deployment

PowerRadar is Centrica Business Solutions' state-of-the-art energy management platform, which provides organizations with the flexibility to control and manage energy data through a single, holistic platform. By deploying this technology to NYCHA generators, Centrica Business Solutions can remotely ensure the availability of the generators for Demand Response events. It is a full, turnkey solution that also provides NYCHA with complete visibility over these assets, so they can monitor their assets in real-time.

Harnessing PowerRadar has enabled NYCHA to significantly reduce their overheads, since they no longer have to deploy individuals to manually turn generators on and off in response to a Demand Response event. This has derisked their ability to participate in Demand Response.

Over the coming years, NYCHA can expect to manage one of the largest Demand Response programs in the City. Most importantly, the solution secures the energy resilience of a subset of NYCHA's properties, so they're prepared for any power outages that may affect New York City in the future.