



# Save with MTU Onsite Energy

Words: Ashleigh Artist | Pictures: MTU

Tags/Keywords

**New York has already seen a number of natural disasters – Hurricane Sandy is just another along the way. In response, the Richmond University Medical Center has just purchased two [trigeneration plants \(CCHPs\) from MTU Onsite Energy](#). These ensure a reliable supply of electricity even in case of a power outage in the public grid. As a positive side-effect, the medical center also achieves annual savings in operational expenditure totaling some 1.6 million US dollars.**

Already burdened with an unreliable power grid, the coastal community of Staten Island was hit especially hard by Hurricane Sandy. Following the devastating storm, critical care facility operators and owners on the island began exploring alternative power supply solutions. When Richmond University Medical Center, one of two Level I trauma centers on the island, began a multi-million facility expansion, the team made a conscious effort to ensure the facility was outfitted with dependable backup power supply in preparation for the next devastating event. Once complete, it is estimated that Richmond University Medical Center will have an annual operational savings of \$1.6 million thanks to the [MTU Onsite Energy CCHP systems](#).

“Our main priority with the project was to improve the capabilities of the hospital,” said Arthur LaBarbera, director of gas power systems at [Stewart & Stevenson Power Products - Atlantic Division](#). “There’s an island of people and a barrage of life-saving systems that would be impacted by a lack of power support.”

Working collaboratively with Innovative Energy Strategies (IES), the development company managing the expansion, LaBarbera and team will customize, supply and deliver two [MTU Onsite Energy natural gas-fueled](#) combined cooling, heating and power (CCHP) Tri-generation systems.

“After evaluation of all the competitive equipment offerings, it was clear to our team that the fuel conversion efficiency, cost of installation, extended maintenance periods and dense service coverage provided by Stewart & Stevenson-Atlantic Division were major factors in selecting MTU,” said Marty Borruso, principal at IES. “The fact that the MTU engines operate on low pressure gas reduced ancillary equipment cost and made compliance with local codes less costly and complicated.”

The systems will be the sole energy source providing power to the facility. Impressively, the hospital will be able to operate in “grid-isolation” mode for several hours at a time in case of disruption to the local power grid.

“The natural gas fuel source will create heat energy, which will be used for hot water and/or steam or

pumping heat into equipment to provide enough energy to power the air conditioning system,” said LaBarbera. “Hospitals typically utilize a lot of electrical power, so these systems allow the facility to maintain cool temperatures in the warm months and warm temperatures in the cool months.”

Rated at 1,500 kWe and guaranteeing performance under high ambient conditions, the CCHP systems will provide clean and efficient continuous power to the 114-year-old facility. The two 50,000-pound units will be housed in a former laundry facility adjacent to the hospital renovated to exceed sound attenuation rules and regulations to blend into the background sounds of what is a highly concentrated residential area and to ensure protection from external conditions.

The CCHP systems were assembled at one of MTU Onsite Energy’s facilities in Germany and are currently being shipped trans-ocean to Elizabeth Seaport in Elizabeth, New Jersey. From there, they will be transported to the project site in Staten Island. “The delivery of the system is just as intricate as our development,” said LaBarbera. “We’re working closely with IES and a logistics company to ensure the safe arrival and installation of the systems.”

### **Surviving Sandy**

Hurricane Sandy’s 2012 pummeling of New York left deep wounds. Each borough suffered fatalities, significant infrastructure damage and power loss to over 8 million total homes. Not immune to the wrath of the storm were critical care facilities, many of which evacuated patients to neighboring hospitals as they worked to restore failed backup power generators and electrical equipment. Conversely, the facilities that remained operational were inundated with patients while facing staff fatigue and flooding.

Crippled by Sandy, it took months for many hospitals to restore electrical systems and exam rooms, while—in many cases—relocating major equipment, including emergency standby generators, to higher ground.

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