



Power Generation

PROTECTING VULNERABLE RESIDENTS IN PENNSYLVANIA

Who Gracedale Nursing Home
What Three 1,000 kW MTU 16V2000 DS1000 generator sets with onboard paralleling
Where Northampton County, Pennsylvania, USA

It's a long-term care facility's worst nightmare: the power goes off and stays off. Vulnerable communities are immediately put at risk as the facility is unable to power vital systems needed to provide a wide range of health and personal care support. Gracedale Nursing Home, a 665-bed, county-owned facility in Northampton, Pennsylvania knows this all too well. When Superstorm Sandy hit the Atlantic region in 2012, Gracedale Nursing Home was without power for almost a week, causing extreme disruption in patient care.

Immediately following, Northampton County City Council members unanimously voted to secure generator sets to protect the facility from future power interruptions. Planning delays slowed the county's plans, and in 2018 Gracedale's power infrastructure was once again no match against Winter Storm Riley, this time enduring a 72-hour outage in freezing temperatures. Following this event, Lamont McClure, Northampton County Executive, prioritized the facility's update and ordered the immediate delivery and installation of backup generators.



Onboard paralleling between three 16V 2000 DS generator sets ensure emergency power supply for Gracedale's 365-acre nursing home facility.

Triple threat

County officials tasked Richard Szatkowski, PE, principal of Arris Engineering, a local electrical engineering firm, to design the project. After working together on previous projects, Szatkowski knew Emergency Systems Service Company (ESSCO), the local MTU distributor, would be ideal for this project and tapped the company as a partner. Later, the project was competitively bid and awarded to Wind Gap Electric Inc., who had worked with ESSCO on a number of projects previously. The partnership between these three entities was just the boost needed to make headway on the project.

"We assembled a solid team to tackle each technical concern that could potentially arise," said Peter Albanese, president of Wind Gap Electric. "Both ESSCO and Arris brought in high-level technical expertise that contributed to the successful and timely completion of this project." The collaboration between Arris Engineering, Wind Gap Electric and ESSCO led to the seamless delivery and installation of three 1,000 kW MTU 16V 2000 DS100 generator sets at 480 voltage. Collaboration at this level is an anomaly in the industry.

"When the distributor has the opportunity and the knowledge to partner with the electrical engineering firm during the specification stage it is the highest honor of our industry," said Bob Hafich, president of sales at ESSCO. "Our president of operations, Joe Hafich, and his deep knowledge of the system was instrumental in making this project a success for our company."

Additional collaboration with a third-party switchgear manufacturer allows onboard paralleling between the three systems to ensure readiness during outages and guaranteed support. Within 30 seconds of power failure, Gracedale's 365-acre nursing home facility will have power restored, thanks to its MTU systems and ESSCO's sophisticated paralleling syntax. At least two of the generators will provide power to the facility at any given time during an outage. The generators are housed inside of sound attenuated enclosures with sub-base fuel tanks.

"The intricacy of this project was the first of its kind for our company," said Joseph Hafich, president of operations at ESSCO. "Our service department was instrumental in final tuning and testing these complex systems and that's what we like to be known for."

Ahead of the curve

In 2018, the U.S. Department of Health and Human Services strengthened federal regulations for long-term care facilities, nursing homes and assisted living centers to include specific language for emergency preparedness. The new regulations require facilities to install and maintain emergency and standby power systems, ensuring safe temperatures for residents, medications and food in cases of power outages. Gracedale Nursing Home is ahead of the curve and its most vulnerable residents can feel at ease knowing that their power and safety is protected against another natural disaster.

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