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Emergency Standby Power

Case History

Centenary College,
Hackettstown, New Jersey



Where:

Centenary College, Hackettstown,
New Jersey

What:

- DQDAA 250 kW generator set
- DSFAD 60 kW generator set
- OTPC 225 A transfer switch

Dealer:

SREC Resources

Application:

Provide emergency power during
utility outages

Primary choice factors:

- Reliability
- Prior experience with dealer
- Dealer's longstanding relationship
with Cummins

Centenary College makes the grade with Cummins standby power system

Founded in 1867, Centenary College is a leading educational and cultural institution for northwest New Jersey. The school, with its main campus in Hackettstown, has over 2,000 graduate and undergraduate students.

Hurricanes and epic snowstorms

During 2011, two large-scale weather events resulted in prolonged power outages throughout New Jersey. In late August Hurricane Irene tore through the state, causing widespread flooding of the Musconetcong River in Hackettstown. Roads were washed away, and many homes and businesses were engulfed in several feet of water. Then, just a couple of months later, an October snowstorm of historic proportions downed many power lines and closed roads in the area.

Both events affected Centenary College. The hurricane delayed student move-in at the beginning of the school year. The snowstorm forced the cancellation of classes and

extracurricular events, though the college did fare better than other locations in the area by still having some power available on the campus. Recognizing their ability to offer assistance to the community at large, the college invited local residents to come to the school library to charge their cell phones, a service it had also offered in the wake of Hurricane Irene.

Help from SREC Resources

However, the school resolved to strengthen its ability to withstand the onslaughts of Mother Nature. It called upon SREC Resources of Sussex, New Jersey, an electrical contractor and Cummins dealer owned by a nearby electric utility, Sussex Rural Electric Cooperative. One of the services offered by SREC Resources is the design and installation of backup power systems as large as 2 MW.

Key components of the emergency response plan

SREC Resources conducted a Centenary site survey and recommended that two diesel-fueled backup systems be installed. Each provides emergency power, but in different locations on the campus for different purposes. Together, both generator sets are key components of the college's overall emergency response plan.

A 250 kW Cummins DQDAA unit provides emergency backup power to the school's gym and library. It is connected to a 2000-amp automatic transfer switch from another supplier. With this backup system in place, the school can now provide shelter to a large number of people in an emergency situation.



The DQDAA generator set installed beside the Centenary gym.

In a second location is a 60 kW Cummins DSFAD unit connected to a Cummins OTPC 225-amp automatic transfer switch. This combined system provides emergency backup power to the school's IT center as well as its phone and radio systems, effectively protecting the school's communication systems.

Installation without a hitch and peace of mind

The installation of both generators went smoothly, including a planned brief period when the IT center was taken offline during the installation of the 2000-amp transfer switch. Chris Reese, Vice President of SREC Resources, noted, "Cummins Power Generation did



The DSFAD generator set, with the landmark dome of the Seay Administration Building in the background.

a great job with the sizing and design of the system, including the coordination of the non-Cummins transfer switch, which added some complexity. They also offered competitive pricing."

Todd K. Miller, Associate Vice President for Operations at the college, said, "The Cummins generators give us peace of mind knowing that our designated emergency shelter areas and communication systems will be operational in the event of a prolonged power outage."

The future: exploring a demand response program

Centenary College, SREC Resources and Cummins Power Generation are looking into a possible project involving an additional, larger generator set, with a capacity of one megawatt or more at the primary utility metering point for the school. The generator set would provide backup power to the entire campus, while also enabling a demand response program with their local utility.

Under such a program, the generator set would operate to replace utility power to the campus when the utility's capacity is under stress. The potential savings from this demand response program could help offset the cost of purchasing and installing the generator set.

No commitments have been made as yet, but there is interest in exploring the viability of such a project, which would increase the amount of distributed power available and strengthen the resilience of the overall grid.

SREC Resources has sold and installed Cummins systems since 1997. As Chris Reese explained, "The Cummins generator set has proven to be very reliable, the brand stands out and carries value, and we've had a very good relationship with our partners at Cummins and Cummins Onan. In other words, we've never had a reason to look at selling another brand of generator set."



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