

POWER PROFILE

Customer: Children's Hospital New Orleans

Location:

New Orleans, Louisiana

Customer Business Issue:

Standby power for severe weather events

Solution:

C32 diesel generator sets (4),
3508 diesel generator sets (2)

Cat® Dealer:

Louisiana Cat



Children's Hospital New Orleans switched over to its Cat® diesel generator sets before Hurricane Ida made landfall to avoid any potential power interruptions to surgeries or hospital services.

POWER NEED

Founded in 1955, Children's Hospital New Orleans is the largest and oldest freestanding hospital for kids in the Gulf South. Following the polio epidemic, it originally opened as a rehabilitation center for physically disabled children in 1955 under the name Crippled Children's Hospital. The facility was expanded into a full-service hospital and given its current name in 1976.

Now a six-hospital health system called LCMC Health, the community-minded healthcare system operates Children's Hospital, Touro Infirmary, New Orleans East Hospital, University Medical Center, West Jefferson Medical Center, and East Jefferson General Hospital.

From its main campus in Uptown New Orleans and satellite locations throughout Louisiana, Children's Hospital New Orleans works to ensure that families across the region have access to specialized pediatric care. Recognized as a Best Children's Hospital for 2022-23 by U.S. News & World Report, Children's Hospital provided more than 236,908 clinic visits, 48,643 emergency room visits, and performed 11,432 surgeries in 2021.

Children's Hospital's main campus has one of the area's busiest emergency departments with 46 exam rooms, including a dedicated behavioral health pod and two trauma bays. Its critical care air transport team and dedicated helicopter named "Abby" brought 375 patients from across the region for life-saving critical care services in 2021.

Five years ago, Children's Hospital New Orleans broke ground on the most significant expansion project in the hospital's history. The unprecedented \$300 million investment brings together infrastructure, technology, and unmatched expertise.

Located in a park-like setting in the Uptown neighborhood of New Orleans, the expanded 17-acre campus includes 230,000-plus square feet of new clinical care space. The expansion included new, state-of-the-art facilities for enhanced heart care, cancer care, surgical and emergency services, along with a new, freestanding, 51-bed Behavioral Health Center, which is among the largest in the country for pediatrics. Complemented by family housing, gardens, playgrounds, and green space, Children's Hospital's expanded campus delivers the highest level of care for patients and families.

"From our perspective, it was really an investment in the future of Louisiana kids," said Jonathon Brouk, Chief Operating Officer and Chief Strategy Officer for Children's Hospital. "For decades we've delivered excellent clinical care. And finally, the bricks and mortar match the excellence that our clinical team has provided for years."

In 2005, Hurricane Katrina left a devastating impact on New Orleans.

While the city has made drastic improvements to its levee system since Katrina left most of the city under several feet of water, more than 50 percent of the city's residents live below sea level. To put in perspective how low New Orleans is in terms of elevation, the Mississippi River is almost 30 feet above the city level. Meanwhile, the land around New Orleans is sinking, which puts the city at increased risk should another major hurricane strike.

According to the National Oceanic and Atmospheric Administration (NOAA), the Crescent City has an 11 percent chance of experiencing the impact of a hurricane during an average year. A hurricane makes landfall within 50 miles of New Orleans once every seven to 11 years.

One year ago, Hurricane Ida came ashore in Louisiana on Aug. 29 with sustained winds of 150 mph accompanied by heavy rain. Extreme damage was recorded throughout southern parts of the state, with a very large number of homes damaged or destroyed, and the storm surge and rain causing widespread flooding and water damage. The deadly and destructive Category 4 Atlantic hurricane became the second-most damaging and intense hurricane to make landfall in Louisiana.

"Last fall, we were faced with Hurricane Ida, which really had a catastrophic impact on the city and all of Southeast Louisiana," Brouk said. "We had to figure out how we could continue to serve the critically ill children we care for day in and day out."

"To a large degree, we're Louisiana's safety net for really sick kids. When they don't have anywhere else to go, they turn to us. And we have to adjust and adapt to take care of those kids, no matter what the challenges we face.

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"As part of that, one of the big challenges we think about is energy sustainability and making sure that we can continue to power the facility," Brouk said. "That's why we turned to Louisiana Cat to help us ensure we have sufficient backup power in case we lose utility power during an event like Hurricane Ida."

SOLUTION

Prior to the expansion, Children's Hospital had four Cat® 3508 diesel generators for standby power. During 2019, Children's added four Cat C32 diesel gensets as part of the expansion, while upgrading two of the 3508s with new generator ends and controls. Combined, the six generators are capable of supplying the hospital campus with its entire electrical load in the event of an outage.

"For Ida, we decided to switch over to our generators before we had any power blinks so our surgery team and any other hospital services would not be affected," said Phil Hebert, senior director of support services for Children's Hospital. "So, we proactively switched over and they continued running throughout the storm. They performed flawlessly and maintained continuous power to our facility."

Portions of the hospital incurred exterior damage, which included wind-driven rain penetrating areas that were compromised. But, for the essential staff and seriously ill patients who sheltered in place throughout the hurricane, riding out the storm essentially turned out to be a non-event.

"We felt comfortable knowing we had the power we needed by having these Cat generators here, and they supplied us with the power we needed during and after the storm," Hebert said.

RESULTS

As an accredited health care facility, Children's Hospital is required by the Joint Commission on Accreditation of Health Organizations (JCAHO) to maintain standby power and run the generators on a weekly basis with no load, and also monthly with load, Hebert says.

"We document all amp readings, temperature—anything that's required by the Joint Commission," he says.

Hebert knows he can count on Louisiana Cat, whether for prompt service during an emergency, or any instance when he requires parts or technical support.

"In a hurricane or a storm, our response is typically immediate," says Matt Dufrene, an electric power service sales manager for Louisiana Cat. "If we're able to access the site, we'll be there. At Louisiana Cat, we are diversified in the markets we serve, and that includes electric power generation, marine, oil and gas, and industrial. During a hurricane, most of those markets shut down, whereas in electric power we're gearing up."

"We go from maybe 30 technicians in electric power to as many as 200 technicians at that point. So, we're able to respond like no one else. This is our time to shine—it's our Super Bowl."



Children's Hospital New Orleans has four Cat C32 diesel generator sets and two 3508 diesel generator sets to ensure reliable standby power in the event of a natural disaster in the hurricane-prone area.