

# POWER PROFILE

**Customer:** U.S. Army Corps of Engineers

**Location:**

New Orleans, Louisiana, USA

**Customer Business Issue:**

Independent power solution for new flood prevention system

**Solution:**

30 Cat® C175-16 diesel generator sets  
Two Cat C27 diesel generator sets  
One Cat C18 diesel generator set  
Cat switchgear  
Cat Automatic Transfer Switches (ATS)

**Cat® Dealer:**

Louisiana Cat



*Three new pump stations protect the New Orleans area from devastating flood damage.*

**POWER NEED**

In the aftermath of the widespread damage caused by Hurricane Katrina in August of 2005, federal, state and local authorities have undertaken numerous infrastructure projects to bolster defenses against flooding and storm damage in and around New Orleans. Faced with consistent threats of flooding from the Mississippi River, hurricane storm surge and heavy rainfall, planners sought to replace interim closure structures that were constructed along Lake Pontchartrain a year after Katrina devastated the region.

To mitigate flood risk, engineers developed a system of three permanent canal closures and pumps (PCCP) located at the 17th Street, Orleans Avenue and London Avenue outfall canals as the final major post-Katrina improvements to the regional levee system.

During storms, massive pumps feed water from the canals into Lake Pontchartrain at a rate that keeps the water levels in the canals low enough to avoid overtopping or damaging the floodwalls.

To keep the pumps operating in even the fiercest of storms, each station was designed with a standby power system, including diesel generator sets that can supply multiple redundancies independent of the utility grid. Additionally, all of the generator sets were required to meet seismic regulations.

“When a storm event occurs, we will go off city power and onto our own power, and utilize our own fuel,” explained Anthony Bertucci, a commissioning manager for M.R. Pittman Group, one of three companies participating

in a joint venture responsible for constructing the system. “The stations needed be totally independent of the grid on power, water and sewerage. The system had to be designed to handle everything on its own.”

**SOLUTION**

Project leaders selected Caterpillar and Louisiana Cat to supply a total of 33 Cat diesel generator sets, switchgear and Automatic Transfer Switches (ATS) across the three facilities to power the pump systems and support basic life safety operations.

“It’s a good design as far as multiple redundancies without having multiple pieces of equipment, and it’s the same basic design philosophy through all three sites,” observed Ken Johnson, the project manager for Louisiana Cat.

All of the Cat generator sets have been certified to meet the seismic provisions of all published editions of the International Building Code (IBC), and they are mounted on isolators to stabilize the equipment in the event of an earthquake.

“What led us to pick Caterpillar for this facility was a combination of economics and longterm reliability,” Bertucci noted. “From my perspective, Cat engines are very reliable. I’ve used them on many of the projects that we’ve completed. We’ve done a lot of drainage pump stations and facilities in the area that are part of the overall flood control system, and they are a very reliable generator and reliable engine package.”

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## RESULTS

Since the project was completed in December of 2017, technicians from Louisiana Cat have trained personnel from the New Orleans Sewerage & Water Board on the operation and maintenance of the generator sets. Additionally, Caterpillar representatives have provided training on the operation of the ATS and switchgear.

“Caterpillar and Louisiana Cat were able to provide the best solution for the PCCP pump stations,” Bertucci said. “We’ve had great service so far with startup and testing of the engines. We’ve had a really good relationship with Louisiana Cat personnel on this project and past projects.”

For more information, please visit [cat.com/powergeneration](http://cat.com/powergeneration)



*The 17th Street canal station is supported by Cat® diesel generator sets, switchgear and automatic transfer switches.*