

ZURICH, SWITZERLAND, JUNE 25, 2019

ABB technology is helping New Orleans from future flooding [Click here for video](#)

As New Orleans continues to strengthen its infrastructure 14 years after Hurricane Katrina battered the city, ABB motors drive the high-performance water pumping system.



On the morning of August 29, 2005, Hurricane Katrina, a category 5 storm, slammed the US Gulf Coast. The storm's severity placed an unbearable strain on the levees system of New Orleans, a city with an average elevation six feet below sea level. As the city's levees failed, more than 80 percent of the city was under several feet of water and debris for over three and a half weeks.

"It was an event that anyone who lived in the area at the time will never forget," said Michael Yenni, President, Jefferson Parish-- one of the largest suburbs of New Orleans.

In the aftermath, government officials were faced with the challenge to not only rebuild the city, but also foster a sense of security among its residents and guarantee that such a catastrophe would never happen again. The New Orleans Permanent Canal Closures and Pumps (PCCP) project was initiated shortly after to revamp the city's three main drainage outfall canals from being overwhelmed in future super-storms. ABB, a leader in manufacturing motors and gearing, has provided the technology to make this happen.

Three massive pump stations, situated at the mouth of the 17th Street, Orleans Avenue and London Avenue canals, now in place, feature ABB vertical garmotors (VGM) that turn the massive pumps supplied by Patterson Pump Co. These enormous pumps can transfer 11 million gallons per minute – enough to empty out an Olympic-size swimming pool in just less than four seconds. In the event of storm surges, on an emergency basis the pumping station will be able to quickly move the water from the canal system that makes its way through New Orleans and evacuate it into the lake.



ABB has installed 17 VGMs, (7 x 2,500, 10 x 5,000 horsepower) distributed over the three pumping stations. VGMs are optimal for pumping—their smaller physical size reduces the footprint, while bringing the advantages of low-pole motor efficiency and power factor, and greater reliability.

ABB has also supplied seven ACS1000i and ten ACS5000i medium-voltage variable frequency drives attached with each motor, which enables a cold-start up for the motors when the pumps must suddenly be brought into action.

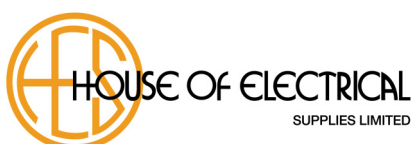
“The ability to put this together in a solution that provides the advantages requested on the footprint and weight requirements, it’s a good feeling,” said Patrick Standley, Business Development manager, ABB Motors and Generators. “I feel proud to be able to provide a reliable solution to help prevent future floods in the city. ABB isn’t simply offering a solution, but helping safeguard an entire community.”

“We live in a bowl and the only way to live in a bowl is to be able to drain the bowl,” says Jefferson parish president Yenni. Drainage officials at the parish use a supervisory control and data acquisition system (SCADA), provided by ABB, to predict the amount of rainfall in specific areas and the capacity at which

the parish’s pumps are running. This helps authorities better understand the possible impact of the storm and forewarn the public about hazards such as falling trees and snapped power lines.

While Hurricane Katrina caused widespread devastation in New Orleans, it did nothing to dampen the spirit of its residents, who were determined to bring the city back to from the devastation. ABB’s technology is helping it stay that way. “New Orleans today has a state of the art flood protection system. The fact that we can do now something we couldn’t do in 2005 makes us feel a lot better,” said Yenni.

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