

powerprofile

RENTAL

CUSTOMER: Guadalupe Power Plant

LOCATION: Marion, Texas

Customer Requirement: Temporary power for scheduled maintenance

Scope of Supply: **Equipment –**
Three Cat XQ2000 Power Modules
Three 4160-volt transformers
Three 4160-volt disconnect switches
Three-quarters of a mile of cable

Services –
Delivery, setup and testing
Installation
On-site operation and maintenance

Cat Dealer: Holt Power Systems
San Antonio, Texas



Three Cat XQ2000 Power Modules provided up to 6 MW of temporary power to the Guadalupe Power Plant during scheduled substation maintenance.

POWER NEED

As an independent power producer to the 345-kV grid in the state of Texas, Guadalupe Power (part of the Texas Independent Energy fleet) can't afford unscheduled downtime. Recently, when the Marion, Texas plant's substation required maintenance, Guadalupe Power Plant's Glenn Anizan, plant manager of operations, and David Harrill, I&E technician, turned to Cat Rental Power.

"Both feeds coming in to our combined-cycle, 1000-MW plant had to be shut down for maintenance," explains Anizan. The local transmission line company requested that utility power to the plant be shut down for the 24 to 36 hours it took to replace the plant's insulators.

"Even when the plant goes off-line, it's necessary for several MW of power to be flowing to the plant," says Harrill. The plant requires electro-hydraulic motors to keep the four dry, low-NOx gas turbines and two steam turbines turning at low speed to prevent the generator shafts from bending under the weight of the compressor fans. Power is also needed for the operations offices, control room, cooling fans, lights and other key equipment.

to ensure that when the insulator maintenance was completed, the plant could restart its turbines and resume revenue generation on schedule with minimal income loss.

To accommodate the plant's 2.4-MW power requirement, Tom Barry, Holt Rental Power manager, and Al Reinhardt, Holt Rental Power salesman, recommended three Cat XQ2000 Power Modules, operating in parallel, each capable of providing up to 2 MW of prime power. The third XQ2000 was specified redundant to act as an emergency backup.

The job also required three 4160-volt transformers, three 4160-volt disconnect switches and more than three-quarters of a mile of cable. "There were 138 connections necessary to parallel to our 4160-volt bus," recalls Harrill. "It was something to see."

The connections were a critical element for the project. "Not one of those connections could be crossed or it generates an out-of-sequence trip," says Harrill. "Our dealer made sure that didn't happen by performing phase-sequencing checks to make sure everything was correct. It performed perfectly."

SOLUTION

Cat Dealer Holt Power Systems was called upon to provide a solution that would provide enough critical power

RESULT

This rental job went without a hitch, according to all involved. “It ran very smoothly; just like clockwork,” says Harrill. The equipment was delivered and installed in just under 16 hours. The dealer provided trained operators to watch the units during the substation shutdown to ensure trouble-free operation. “The dealer provided a 24/7 technician and he did a great job,” adds Anizan.

“One of the reasons this project was so successful is that we worked as a team throughout the planning stages and during the execution,” notes Barry. “We shared a mutual desire to succeed—the faster the plant went back online, the better it was for everyone.”

“It was a seamless project,” concludes Anizan. “The equipment arrived when it was supposed to. Holt planned for it, delivered it and installed it all. They tested the equipment before the job began and when it came time, the equipment performed just like it was supposed to.”

Anizan was so pleased with the project that he wrote in a recent letter to Barry: “We want to thank Holt for all the help they gave us during this (power) outage. It was very much appreciated by us. The Holt staff was very knowledgeable and professional. If we have any need for generators in the future, Holt will get the first call.”



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