

## LUMBER PROCESSING FACILITY

POWER SOLUTIONS  
CASE STUDY of  
WOLF RIVER LUMBER



### FOUR OF A KIND CAN'T BE BEAT

#### UNITS

4 x 750 kW Gemini®  
Twin Pack Gensets

#### LOCATION

New London, Wisconsin

The art and science of processing hardwoods is the business of Wolf River Lumber, Inc., a provider of high quality materials for cabinet makers throughout North America. Wolf River's new corporate headquarters in New London, Wisconsin — built in 2001 — is a state of the art production facility that processes large quantities of oak, maple, birch, walnut, butternut, cherry, ash and other species favored by woodworkers. To keep everything operational in the event of a power outage, Wolf River Lumber invested in a comprehensive 3 Megawatt backup power system consisting of four 750 kilowatt Generac Gemini® Twin Pack gensets. Each of the Gemini gensets consists of a pair of 375 kW diesel generators, mounted side by side within a single enclosure, with Generac's onboard paralleling technology combining their output. The units were purchased from Wolter Power Systems of Brookfield, Wisconsin and installed by Master Electrical Services LLC of New London.

for the main building, with each carrying about 650 kilowatts of running load. The others are located separately near the kilns.

"Having standby power allows us to continue operating during an outage," says Gary Ort, president of Wolf River Lumber. "It also protects us against a freeze out during cold weather and prevents the spoilage of our lumber that could occur during a lengthy summer outage."

Wolf River receives batches of fresh cut random length lumber from dozens of mills for processing and drying. When a batch of wood is brought into the processing plant, the boards are inspected, graded, sorted and stacked, then taken to a kiln for drying.

The silver-colored kilns — built of aluminum and stainless steel — resemble small aircraft hangars, with a large sliding door providing easy access for forklift trucks. Steam pipes emanate heat that ranges from 90 to 160 degrees Fahrenheit, while fans move the warm, dry air through the stacked lumber. When the wood's moisture level reaches 6 to 8%, it is taken into the processing facility, where it is planed to a smooth or rough finish, then cut to standard or custom dimensions.

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Wolf River's 335,000 square foot main building houses its corporate offices (beautifully furnished in a variety of hardwoods), the processing plant and a large warehouse. Outside those walls are three steam boilers and 40 steam-heated kilns, where batches of lumber are stacked and dried. Two of the Gemini gensets are paired up to provide backup power

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Considerable planning went into the design of the backup power system, with numerous options being considered by Gary Ort and general manager Mark Christopher in consultation with Cal Lehman of Master Electrical Services. “Two of the primary corporate needs were to have electrical redundancy for the business operations and provide for future expansion of the installed systems,” says Lehman. “After reviewing various proposals, Wolter Power Systems was chosen as the equipment supplier and engineer to match those corporate needs with the generator options.”

Generac’s 750 kW Gemini models were the answer. Not only does each genset offer built-in redundancy with its two paralleled generators, but Gemini is also part of Generac’s Modular Power System, making it easily expandable. “The 277 / 480 volt three phase installation consists of four separate areas of supply,” Lehman explains. “The automatic backup system is 1.5 Megawatts and the manual backup system is another 1.5 Megawatts. Because the entire facility can operate on generator power, the local utility can temporarily take it off the grid, if necessary. After approval of the concept, we had numerous meetings to balance the placement of the generators and transfer switches with utility requirements, production needs, traffic patterns, future expansion plans and cost considerations.” The installation of the system went very well, according to Mark Christopher. He cited the

excellent work done by Master Electrical Services and Ryan Dutkiewicz of Wolter Power Systems, the master service technician who was involved in the start-up of the units. “He was extremely helpful and took the time to make certain that we knew every important aspect regarding the generators and how the system was designed. He didn’t go home until he had answered all of our questions and was certain that we felt comfortable with everything.”

Ironically, the only surprise came when a seven hour utility outage occurred on the day before the generators were commissioned. “Losing power that day was very disruptive to our business and we had to shut down for a time,” Mark Christopher says. Untimely as it was, that blackout only further confirmed the wisdom of investing in a backup system. With 3 Megawatts of standby power on site, Wolf River Lumber is now fully protected against the considerable cost and inconvenience of power interruptions.

## **GENERAC®**

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