

## POWER SOLUTIONS

# CASE STUDY

### GORDON FOOD SERVICE

#### Location

Kenosha, Wisconsin

#### Market

Food distribution centers

#### Unique Obstacle

Provide backup power to a 480,000 square foot distribution center to ensure ongoing operation and on-time deliveries

#### Units

3 MW of power, 5 x 600 kW MPS, Bi-fuel (75% natural gas/25% diesel), 24.7 kV

#### Solution

5 x 600 kW MPS system providing more reliability than previous single unit

#### Contact

Readers who may have similar application challenges and would like to discuss this success are invited to call 1-844-ASK-GNRC (1-844-275-4672)



## New Food Distribution Center Secures Customer Services with MPS/Bi-Fuel

### Generac's Modular Power System (MPS) Overcomes the Limitations of Traditional Paralleling Gear

Starting as a Michigan butter-and-egg delivery business in 1897, Gordon Food Service® (GFS) today is the largest family-owned and managed food service distributor in North America. Headquartered in Grand Rapids, Michigan, Gordon Food Service is an international corporation offering more than 16,000 GFS® and nationally branded products to over 45,000 customers in 15 states within the U.S. and 10 Canadian provinces.

Gordon Food Service operates 10 distribution centers in the U.S.; Grand Rapids and Brighton, Michigan; Springfield, Ohio; Shepherdsville, Kentucky; Greenville, South Carolina; Ocala and Miami, Florida; and Pottsville, Pennsylvania. In addition, Gordon Food Services manages over 140 GFS Marketplace stores in Florida, Indiana, Illinois, Kentucky, Michigan, Ohio, Pennsylvania, and Tennessee. Open to the public seven days a week, these retail stores provide the benefits of restaurant-quality food products and do not require a membership fee. Truck delivery customers include restaurants, healthcare and educational institutions and other food service operators who prepare meals.

### Tenth Distribution Center Opens in Kenosha, Wisconsin

Gordon Food Service announced in June 2008 that it would build a new 480,000-square-foot distribution center on 80 acres east of I-94 in Kenosha, Wisconsin. In making the announcement,

President Jim Gordan said, "We are excited about this expansion of our distribution network and creating a physical presence in Kenosha. We chose Kenosha because of the attractive business climate, the opportunity to further our geographic growth, and the proximity to our many loyal customers in Wisconsin and the greater Chicago area." The first products started shipping from the facility on March 25, 2010.

With impressive stats, the newest distribution center employs 300 full-time employees, has a storage capacity of 55,000 pallets, can ship 13,000 cases per day, provides cold storage for freezer, cooler and ambient storage areas that cover over 75 percent of the 425,000-square-foot building, contains seven miles of conveyor belts, two miles of fiber optic cable, five miles of copper voice cable, 20 miles of copper data cable, has 28 shipping doors and can handle up to 105 trucks per shift (two shifts per day).

### A Century-Old Family Tradition of "Heartfelt Service"

Kirk Mortenson is director of facility development for Gordon Food Service and a 19-year veteran with the "The Gordon Family." Far more than a mission statement or empty tag line, this century-old company has carefully nurtured the family tradition – a genuine passion for heartfelt service and uncompromising value. "From top down, the culture of this company really cares for its customers," he said. "Delivering quality products and heartfelt service is more than a promise. From hospitals to hospices,

“After our continuing struggle with the complexities of the traditional paralleling of large displacement engines, I liked the simplicity, reliability and elegance of the Generac standby generators.”

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The Kenosha plant's mission critical power needs are solved by these five 600 kW MPS Bi-Fuel engines from Generac Power Systems

A 20-inch tank of diesel fuel (685 gallons) provides 16-hours of run time for a diesel only engine. Whereas, a Bi-Fuel engine, running off the same 20-inch tank, extends the run time to 62-hours by supplementing with natural gas. This option reduces on-site fuel storage needs.

from nursing homes to restaurants and schools, our customers rely on a dependable, steady conduit of food supply. We cannot afford to lose power in any one of our distribution centers which never close.”

**An Irrefutable Need for Mission Critical Power**

The company's corporate passion for quality products and service made losing power at any one of the distribution centers unacceptable. “Any outage that delays operations and affects delivery to our customers is considered very serious at Gordon Food Service.” Mortenson said.

In 2004, after one of the largest power outages ever on the east coast, Gordon Food Service invited the top four leaders in standby power generation to submit proposals for installing systems at all nine distribution centers. The final selection was given to one of the nation's largest manufacturers of single engine genset systems. Unfortunately, that choice turned out to be very problematic. After waiting 18 months for delivery and installation it was another two years before the system operated properly. It was a very disappointing installation because of the problems inherent with custom built traditional paralleling solutions - such as coordinating the operation of various

micro-controllers while still creating a reliable and expandable implementation.

When planning for the newest distribution center in Kenosha, in 2008, Mortenson recalled the issues with the 2006 installation. “At that time, we were very leery to entertain another long waiting period with unreliable results as we had with our standby power system in the Shepherdsville distribution center; Mortenson said. “Our previous system took far too much time and effort to work properly. We did not want to go through that again.”

“The frustration and disappointment at Shepherdsville forced us to look for other standby power options for our remaining distribution centers, including plans for Kenosha,” Mortenson said. “We were contacted by Wolverine Power Systems of Zeeland, Michigan regarding the Modular Power System (MPS) solution from Generac<sup>®</sup>. We met with them and were very impressed with what we learned.”

**Discovering the Simple Genius of Generac's Bi-Fuel™ System**

Wolverine Power Systems, a Generac Industrial Power dealer, introduced Gordon Food Service to MPS technology from Generac Power Systems (Generac), Waukesha, Wisconsin. A proven integrated approach to generator paralleling, MPS is more reliable than the single engine generator solution, simpler than third party switchgear implementations, available in short lead times, scalable and cost effective.

The Wolverine Power Systems team explained that the Generac MPS combines the output of multiple smaller generators without the need for expensive, space-consuming and complex paralleling switchgear. Because each genset features on board paralleling capabilities, it is easy to achieve n + 1 redundancy or increased capacity by simply adding modular generators as needed. The scalability of the MPS allows kilowatt (kW) outputs to be tailored more precisely to current and future needs.

A Generac EPA-certified Bi-Fuel generator option was the next component to be

introduced to Gordon Food Service. Bi-Fuel combines diesel fuel with natural gas as load is applied. Typically, the generator operates on 25 percent diesel and 75 percent natural gas. Because of the reduced consumption of diesel fuel by the engine, run times per tank of fuel are extended by a factor of four.

The team showed Mortenson that a 20-inch tank of diesel fuel (685 gallons) provides 16 hours of runtime for a diesel only engine, whereas a Bi-Fuel engine, running off the same 20-inch tank, extends the run time to 62 hours by supplementing with natural gas. This option reduces on-site fuel storage needs and significantly reduces fuel maintenance costs.

For Distribution, the Wolverine team stepped up the system voltage to 480 V to 24.7 kV.

Mortenson was impressed with the many advantages and benefits of this MPS and Bi-Fuel approach for his distribution centers. “After our continuing struggle with the complexities of the traditional paralleling of large displacement engines, I liked the simplicity, reliability and elegance of the Generac standby power solutions.”

After doing his homework and finding many companies around the country that were completely happy with Generac's industry-leading designs, quality of equipment and excellent service, Mortenson opted for the Generac system. The short lead time saved Gordon Food Service significant time and money and the system provided modularity, reliability, scalability and flexibility. Additional benefits include reduced fuel storage, lower costs and reduced exhaust emissions of Bi-Fuel, the small footprint, critical load redundancy and quiet operation of the system.

In 2007 Gordon Food Service started installing Generac power solutions in all distribution centers, replacing the single engine gensets in South Carolina, Florida, Michigan, Ohio, Wisconsin and Pennsylvania.