

Jenbacher J620 gas engines provide half of peak load power for Grand Indonesia Shopping Town

PT Grand Indonesia, Jakarta, Indonesia

"Indeed, Jenbacher gas engines have proven to be much more efficient than alternative engines. Since electricity tariffs are high and will tend to increase further, PT Grand Indonesia values the possibility of becoming grid independent if economic challenges continue to grow."

Pak Slamet Ristono
PT Grand Indonesia



Background

PT Grand Indonesia manages Grand Indonesia Shopping Town (GIST), a magnificent, multi-use complex of retail shops, offices, and hotel and apartment lodgings in Jakarta, Indonesia. To obtain the 27.8 MVA of electricity it needs to operate, the mall must burn more than 560,000 cubic meters of fuel each month—causing the utility to spend about 50% of its operational expenses on fuel and electricity.

Solution

Instead of resorting to prohibitively expensive power generation from engines that burn other available fuels, GIST chose a much more cost-effective natural gas option using INNIO's Jenbacher* gas engines.

In 2007, six Jenbacher J620 gas engines, each with a 2.7 MW power output, were installed at GIST to operate during peak hours from 6 p.m. to 10 p.m.

Result

The Jenbacher J620 distributed power units deliver half of the complex's peak load power needs. And in case of a blackout, the engines can run in island mode and provide base load operation.

GIST also has posted impressive environmental protection achievements. In 2011, it won the Platinum Award for Green Building Certification, and in 2012, it won the Energy ASEAN award, in large part because the Jenbacher gas engines reduced CO₂ emissions by more than 50% compared to the mall's emissions when using power from the grid.

According to PT Grand Indonesia's general manager of engineering and maintenance, Pak Slamet Ristono, distributed power from INNIO is a faster, more flexible and more reliable power solution to cover the mall's total peak load during peak hours.

Customer Benefits

INNIO's J620 technology provides GIST with:

- Approximately 50% of flexible, reliable peak load power
- Reduced environmental impact, with CO₂ emissions reduced by more than 12,744,000 kg annually
- Significantly lower energy costs than engines burning other available fuels

Key Technical Data

Number and type of units	6 x J620 gas engines
Electrical output	16.2 MW
Electrical efficiency	42.1%
Fuel	Natural gas
Emissions	500 NOx mg/Nm ³
Commissioning	2007

INNIO* is a leading solutions provider of gas engines, power equipment, a digital platform and related services for power generation and gas compression at or near the point of use. With our Jenbacher* and Waukesha* product brands, INNIO pushes beyond the possible and looks boldly toward tomorrow. Our diverse portfolio of reliable, economical and sustainable industrial gas engines generates 200 kW to 10 MW of power for numerous industries globally. We can provide life cycle support to the more than 48,000 delivered gas engines worldwide. And, backed by our service network in more than 100 countries, INNIO connects with you locally for rapid response to your service needs. Headquartered in Jenbach, Austria, the business also has primary operations in Welland, Ontario, Canada, and Waukesha, Wisconsin, US.

