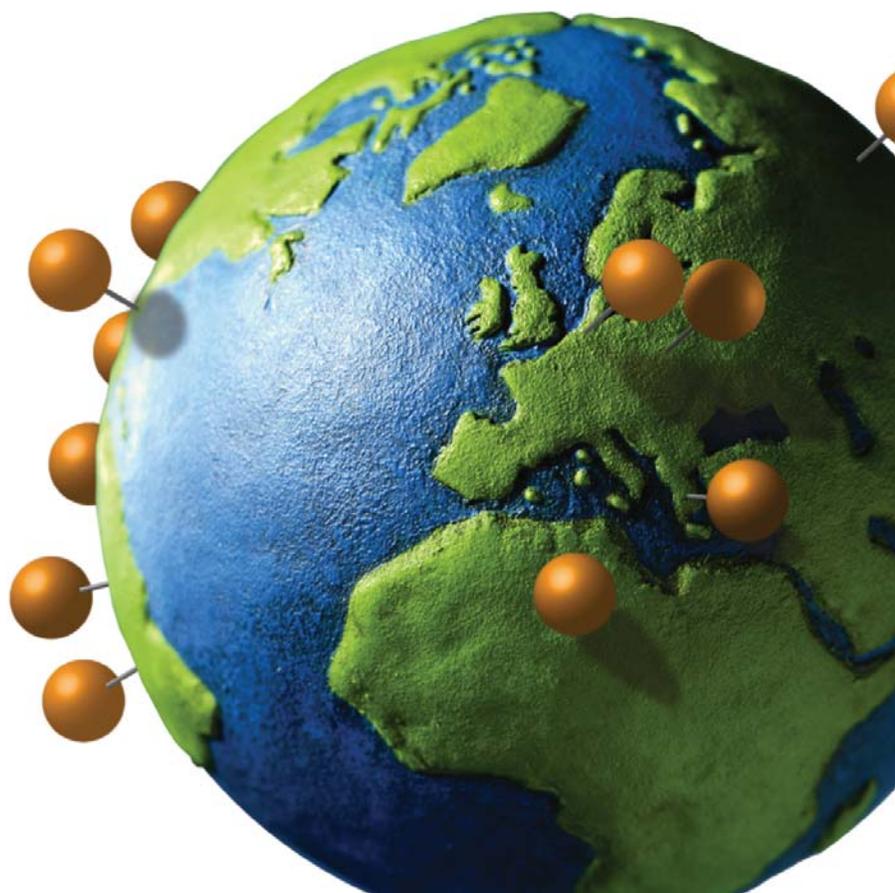


GE Power & Water
Gas Engines

Waukesha* gas engines

Powering the world's energy infrastructure



imagination at work

GE Power & Water's Waukesha* gas engines power the world's energy infrastructure

Waukesha engines are hard at work powering the world's energy infrastructure – driving compressors in gas-gathering, processing and transmission operations and providing electrical power for oil and gas fields in remote corners of the globe.

GE Power & Water's Waukesha engine-driven generator sets are a primary power source for spinning mills on the Indian subcontinent. Waukesha generator sets also can be found in isolated communities where they are the only power source; in landfills where they turn waste into energy; in bustling metropolitan areas where airports, hospitals and factories depend on them for peak-shaving and standby power, and in combined heat and power installations that derive maximum benefit from fuel by capturing and using engine heat for steam, hot water and chilling infrastructure needs.

Meeting the needs of today's energy-hungry world with clean, efficient power requires knowledgeable, trustworthy partners at every point along the energy supply chain. That's why so many decision-makers have selected Waukesha engines for their projects.

Designed for a demanding industry and backed by more than a century of engine building experience, a Waukesha engine is a sound investment that provides peace-of-mind through multiple benefits:

- Durable designs that perform with extreme reliability in remote, demanding and often mission-critical applications.
- Unsurpassed tolerance for variable fuel quality that maximizes power output, uptime and profitability.
- A portfolio of models with the emissions flexibility to meet local air quality mandates even when the engines are redeployed to new locations.
- Biogas models to make best use of available fuels.
- Only from GE Power & Water, the state-of-the-art ESM¹ control system, an easy-to-use total engine management system that optimizes engine performance and maximizes uptime.
- A global network of channel partners who provide parts and service for Waukesha engines around the clock and around the world.
- Strategically located factory-authorized training that delivers the know-how to protect and maximize the value of a Waukesha engine.



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Gas Compression

Gas Transmission

Indonesia -

Six VHP* L7044GSI engines drive reciprocating compressors at a combined cycle power plant. The gas booster compressors feed gas to turbines that drive generators to produce electricity.



Vietnam -

Four 12VAT27GL engines operate on a gas compression platform. The compressed gas is used for gas lifts in oil exploration.



Gas Injection

Algeria -

One VHP* F3524GSI engine drives gas compressors at this oil and gas production site.



Gas Compression

Gas Gathering

China -

Three VHP L5794GSI engines are fueled by field gas at one of the oldest oilfields in the country.



Gas Processing

Poland -

One L7042GL engine drives a gas compressor at this gas mine. The engine is rated at 1480 bhp (1104 kWb) at 1200 rpm..



Kazakhstan -

More than 15 ATGL engines drive compressors at this remote oil and gas treatment site.



Gas Processing

United States -

Two L5794GSI engines are driving booster compressors at a gas compression site.



United States -

Two 16VAT27GL engines operate on field gas at one of the first sites to install an ESM retrofit kit on an existing ATGL engine.



Canada -

Two 16V275GL engines, featuring the ESM engine control system, operate compressors that transport gas from a remote processing plant to the main transmission station.



United States -

One VGF* F18GL engine drives a three stage reciprocating compressor.



Oilfield Power Generation

Russia -

Three APG3000 generator sets provide prime power on field gas at a remote power station.



Colombia -

A remote oilfield uses the following Waukesha equipment, all running on field gas:

- One VHP9500GSI generator set for prime power
- Four L5790GSI engines drive water injection pumps
- Two F18GSI engines drive oil pumps



Russia -

Four VHP9500GSI generator sets operating on variable quality field gas provide prime power to drive electric booster pumps.



Power Generation

Prime Power

Bangladesh -

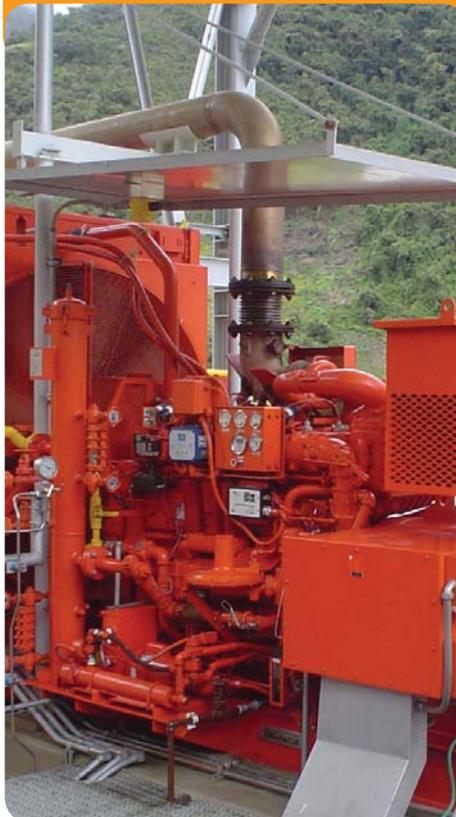
Five VHP5904LTD generator sets provide 4.5 MW of prime power for a spinning mill.



Peru -

A series of remote pumping stations use the following equipment, all running on field gas at altitudes up to 13,800 ft (4200 m):

- Six VGF18GLD and two VGF24GLD generator sets provide reliable, prime power
- Twelve L5790GSI engines drive pumps that send natural gas liquids to various processing plants



United States -

Three VGF24GL generator sets provide prime power for an oil transfer station. Each unit produces 415 kWe at 1800 rpm.



Power Generation

Poland -

Two VGF48GLD generator sets produce electrical power and heat for this oil and gas mine. Each unit produces 629 kWe at 1500 rpm.



Peak shave

Cogeneration

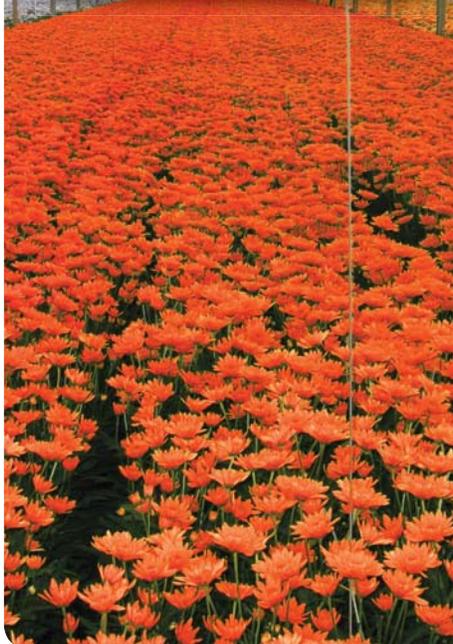
United States -

Three VHP7100GSI generator sets and one APG1000 are used for peak shaving at a hospital. The units are also utilized for cogeneration, capturing the heat for steam generation.



Netherlands -

A 16V150LTD engine produces power for a greenhouse. In addition, the engine's exhaust provides thermal energy to heat the greenhouse as well as carbon dioxide to fertilize the plants.



Greece -

A VGF36GLD provides cogeneration and peak shaving power for a hospital. The engine heat is used to drive an absorption chiller and for hot water production.



Landfill

Greece -

Two VGF48GLD generator sets run on landfill gas to produce a total of 1250 kWe.



United States -

Three VHP5904LTD generator sets produce 3 MW of power from a mix of methane and carbon dioxide released from a landfill.



New Zealand -

Four containerized APG1000 generator sets produce 1MW of electricity each on landfill gas.



Czech Republic -

A VGF24GLD generator set provides up to 310 kWe while powered by landfill gas.



Power Generation

Digester

Czech Republic -

Two VGF36GLD generator sets operate at a wastewater treatment plant. In addition to providing electricity, the engine heat is used to warm the digesters. Each unit produces 520 kWe and runs on biogas with natural gas as a backup fuel.



Greece -

Three 12VAT27GL generator sets operate on digester gas. The excess electricity is sold to the local power grid.



Mechanical Drives

United States -

An F3524GSI engine drives a pump to provide fresh drinking water to industrial and residential customers.



United States -

A gas compression station uses the following equipment to blend compressed air with hot gas:

- One L36GL engine drives a centrifugal air compressor to compress air to 115 psi (7.9 bar)
- Two F18GL engines drive two stage reciprocating compressors to further increase the air pressure to 1100 psi (75.8 bar)



Colombia -

An L36GL engine drives a horizontal pump to inject water to increase oil and gas production.



United States -

A waste disposal treatment plant uses the following equipment:

- Three F18GSI engines to drive blowers
- Two VHP9500GSI generator sets to provide standby power for the site



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A legacy of reliability and innovation

GE and Waukesha represent over 200 years of commitment to advanced technology that continues to drive the world forward. With a reputation for rugged durability and ongoing design advancements, Waukesha engines are the sound investment you can depend on in mission-critical applications. Now a part of GE's Gas Engines business, enhanced support in the form of parts, service and a network of distributors makes us an even stronger partner for today's global energy industry.



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