



Jenbacher gas engines

Brihan Maharashtra Sugar Syndicate Limited
Shreepur, Maharashtra, India



Producing energy from biogas with GE's Jenbacher Gas Engines

A distillery that manufactures industrial alcohol from sugarcane in Maharashtra State, India, has been using GE's Jenbacher gas engine technology since 2001 to generate 1 MW of electricity from biogas produced from sugarcane waste. Operated by the Brihan Maharashtra Sugar Syndicate Limited (BMSS) in the remote village of Shreepur, the distillery has a Jenbacher gas engine that supplies the consistent power needed for high-quality alcohol production as well as excess power to more than 200 local households.

The government requires BMSS to achieve zero effluent discharge during the complex and costly process of treating sugarcane waste. It can do this because GE's Jenbacher gas engine converts 100 percent of the waste into electricity. That performance led the Institution of Engineers of India to bestow its DSK Award for "the implementation of the most energy efficiency measures" to the distillery. By November 2010, GE's Jenbacher gas engine had completed more than 74,000 hours of operation and reduced annual CO₂ emissions by more than 6,500 tons. Not only did it give BMSS the ability to generate all of its own power, it also created a higher quality of biogas conversion than BMSS could achieve when it generated steam from biogas prior to 2000. That has made the company's manufacturing processes more efficient.

GE's Jenbacher gas engine business has more than 230 MW delivered in India in a wide array of industries. Clarke Energy is the official distributor for GE's Jenbacher gas engines in India.



GE imagination at work

customer advantages

- Optimized components that prolong service life, even when using non-pipeline gases
- Long service intervals, maintenance-friendly engine design and low fuel consumption
- Maximum efficiency, high degree of reliability and technical maturity
- Reduction by more than 6,500 tons of annual CO₂ emissions

plant features

- Total efficiencies (electrical and thermal) of more than 83%
- Four-stroke, spark-ignited IC reciprocating engine
- LEANOX® lean burn control that ensures minimal emissions
- Two-stage mixture cooling



key technical data

Number of units and engine type	1 X J320 GS
Fuel	AD Biogas
Electrical output	1006 kW
Electrical efficiency	38.9%
Speed	1,500 rpm
Operator	Brihan Maharashtra Sugar Syndicate Limited, India
Commissioning	2000

ecomagination approved

Jenbacher biogas-fueled gas engines are ecomagination approved. Ecomagination is GE's corporate-wide initiative to aggressively bring to market technologies that help customers meet pressing environmental challenges. GE's Jenbacher biogas-fired gas engines received ecomagination approval for their ability to provide customers with a cost-effective, high output means of generating power while substantially and measurably reducing their operating emissions. For more information on ecomagination, please visit our website at www.ecomagination.ge.com.

GE 's Jenbacher gas engine division

GE's Jenbacher gas engine division is a manufacturer of gas-fueled reciprocating engines, packaged generator sets, and cogeneration units for power generation. GE's Jenbacher gas engines range in power from 0.25 to 9.5 MW, and run on either natural gas or a variety of other gases (e.g., biogas, landfill gas, coal mine gas, sewage gas, combustible industrial waste gases).

GE's Jenbacher product team has its headquarters, main production facilities, and more than 1,400 of its 2,000 worldwide employees located in Jenbach, Austria. GE also operates two regional gas engine assembly facilities in Hangzhou, China, and in Veresegyház, Hungary and its Heat Recovery Solution facility is located in Stuart, Florida.



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