



Jenbacher gas engines

Kanoria Chemicals & Industries Limited facility
Ankleshwar, Gujarat, India



Turning biogas into power with Jenbacher Gas Engines

Jenbacher gas engines are generating electricity from biogas in a 2 MW power plant at the Kanoria Chemicals & Industries Limited (KCI) manufacturing facility at Ankleshwar, in the state of Gujarat, India. Since installing GE's Jenbacher technology, the KCI facility, which makes chemical intermediates has cut its annual CO₂ emissions significantly. The waste-to-energy conversion at Ankleshwar also has reduced KCI's electricity demand considerably.

The two 1,003 kW J320 biogas engines onsite at Ankleshwar also emit engine flue gases that produce steam needed for the manufacturing plant's chemical processes. Thereby this is increasing KCI's profitability by waste heat utilization.

Biomethanation – or anaerobic digestion – of vinasse (the residue left from distillation of alcohol) creates the biogas. Changing the biogas into energy minimizes disposal and maximizes recycling of the waste vinasse. The conversion goals KCI achieved through this biogas conversion earned the company The Energy & Resources Institute's Corporate Excellence Award for Environment Management.

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

plant features

- Total efficiencies (electrical and thermal) of more than 82%
- 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	2 X JGS 320 GS
Fuel	AD Biogas
Electrical output	2x 1003 kW
Electrical efficiency	39.6%
Speed	1,500 rpm
Operator	Kanoria Chemicals & Industries Limited, India
Commissioning	1998

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.



GE imagination at work