



Continuous Heat And Power From Sour Associated Gas

Industrial & Commercial

At A Glance

Installation:
2 X OP16-3A

Location: Tedinskoe field, Northern Russia

Output:
Electricity: 3.6 MWe
Thermal Energy: 6 MWth for Hot Water Boiler

Customer: Lukoil Sever LLC

The Challenge

Many oil fields are in remote areas that are difficult to access, especially in Russia. The Tedinskoye oil field is located onshore in the Komi Republic and is operated by Lukoil-Komi.

At this remote site, the temperature drops to -40 C in winter and rises to 35 C in summer. The site is completely isolated and needs to have a reliable source of power for operations as well as housing for onsite personnel.

The Solution

The technology of the OP16 was chosen due to its ability to handle raw sour associated remove the comma pretreatment. The all-radial design is robust, and the arrangement of the rotating elements keeps the lubrication oil in the cold section of the turbine. The design of the lubrication system protects the oil from any degradation and contamination from the combustion or exhaust gases. This combination of unique features sets the OP16 apart from other power generation systems by enabling the utilization of highly contaminated fuels, such as the high sulfur content at Tedinskoe.

For this isolated site, reliability, fuel flexibility and low maintenance requirements are key factors for successful operation. Despite a sulfur content above 5% and a variable composition, OPRA was able to guarantee the same performance and availability than with commercial natural gas.



The Results

Two 1.8 MW OP16 gas turbine gensets utilize wellhead gas to supply 1.8 MWe each continuously as base load output power. The heat of the exhaust stream is used to produce hot water in boilers providing 3 MWth each for site heating, process operations and oil line trace heating services.

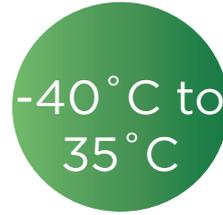
Even in this high-sulfur environment, the units achieve the same maintenance interval as with pipeline-quality gas, demonstrating yet again the reliability, efficiency and robustness of the OP16 gas turbine.



Content of H2S



Time Between Overhaul



Extreme Ambient Conditions

Get in Touch With Us

OPRA, Haaksbergerstraat 71,
7554 PA HENGELLO, THE NETHERLANDS

+31 (0)74 245 2121
www.opra.energy
sales@opra.nl

