Severneftegazprom: Story Of Long-Term Friendship

Oil & Gas

SUCCESS STORY

At A Glance

Application:
Electricity And Hot Water

Output:
Electricity: 13.6 MWel
Hot Water: 33,6 MW
Heat: Up To 659 t/Hour Of Hot Water

Benefits:
Reliable Power Generation At Far-Distance Site In Island Mode
Reliable Heating In Extremely Cold Conditions

Installation:

7 X OP16-3A
2007 - 2014

Location:
Yuzhno Russkoe Gas Field, Urengoy, Russia

Customer:
Severneftegazprom, Oil & Gas (North Stream 1)

The Challenge

Severneftegasprom is the daughter company of Gazprom that operates the heading part of North Stream 1 pipeline system. North Stream 1 is one of the largest pipeline system and supply gas to the Northern Europe. The main challenge was to provide reliable and uninterrupted power to general gas treatment equipment of the gas field as well as to the living camp. Outstanding CHP features of OP16 solution made this possible, even in the most extreme weather conditions of Northern Russia.

The Results

A CHP plant produces electricity and uses the heat of the exhaust, which would otherwise be lost, for hot water production. Cogeneration ensures reliable and highly efficient energy supply, with a cost effective solution in terms of savings on the energy bill.

The Solution

The first stage of construction included the installation of 7 x OP16 Gas Turbines to the power plant (10,5 kV) and later, in 2014, one more OP16 Gas Turbine unit was added to the operation.

For hot water production, 8xUT-52 boilers were installed to utilize heat of the OP16 exhaust. These boilers were specially engineered and manufactured for the project in the UEMZ plant (Ukhta, Russia). The power plant includes all necessary auxiliary equipment (electrical, SCADA etc.) to provide heat and power in a continuous mode.

The effectiveness and reliability of the OP16 Gas Turbine is proven at this site with more than 350,000 burning hours of operations, which are supported by Service department of OPRA.

25 Billion m^2
Natural Gas Production Per Year

7 + 1
Power Generation Model (Reliability Increased)

40%
Savings For Heat Generation (CHP Model)

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OPRA TURBINES

OPRA's Mission: To Drive The World's Energy Transition