



HIGH UPTIME MODULAR POWER SOLUTIONS

APPLICATION

Power Solution
for Remote
Power Sites

EQUIPMENT

Flex Turbine®

LOCATION

North Dakota



THE CHALLENGE

Access to power in remote areas is an ongoing problem for the oil and gas industry. Reliable, continuous electricity at facilities is needed to run the artificial lifts, ESPs, transfer pumps, and other equipment so the production revenue is realized. The cost of delivering to, and using diesel fuel at, remote sites is high. When site gas is available, producers try to use that gas in natural gas gensets. But the variability and higher Btu content of that gas forces downtime on gensets for monthly maintenance, unplanned shutdowns due to difficulties burning higher Btu gas, and frequent repairs. This all adds up to high lease operating expenses and lost production revenue.

THE SOLUTION

Producers in the United States and Canada are using the wide fuel operability and low maintenance of Flex Turbine® units to their benefit. These producers are seeing over 99% runtime availability, using the reliable power to increase production while reducing their lease operating expense. E&Ps are using existing site gas which may have previously been a waste, problem, or cost.

A typical North Dakota remote power site uses the Flex Turbine power to run multiple wells at a single pad, minimizing shutdowns and outages. When the producer expands production, adding higher load ESPs or additional pump jacks, additional units are deployed to run the increased site loads. Flex Turbines automatically synchronize, operating together to run the high value production and the higher horsepower loads.

THE SOLUTION (CONTINUED)

Flex Turbines are set up to operate on primary fuel gas (casing gas, wellhead gas, flare gas, tank vapors) and offer the option to automatically switch to a backup fuel gas, such as propane or other available gas, when the primary fuel gas is not available. The turbines will continue to run when the primary fuel switches back on. This seamless fuel supply switching is only available with the fuel gas tolerant Flex Turbines. If a producer decreases production or reduces the site load, the Flex Turbine modularity allows individual units to be removed from the site without impacting site production.

For one producer in North Dakota, six Flex Turbines were initially deployed and automatically synchronized to run two remote well pads as a micro-grid. When the combined pad loads were permanently reduced, four units continued to run the existing facilities' loads while the remaining two units were moved to run other remote power sites.

Flex Energy Solutions remotely monitors the site power needs through the Flex Turbine control and data system. It partners with producers to supply the correct capacity power system for the specific well pad or facility needs. The technology has been engineered to match the oil and gas application. The increased uptime through fuel tolerance and low maintenance that's realized from Flex Turbines is especially valuable for remote locations.

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RESULTS

Benefits from the power solution designed, installed and serviced by Flex:

Ability to utilize a variety of existing gases at well pad for reliable clean power

Increased production revenue from high uptime remote power

Avoids well and facility maintenance due to power outages

Reduction/use of flare gas and tank vapors, complying with environmental regulations and state mandates for flare gas capture

Runs the same whether on pipeline gas, propane, tank vapors, or a mixture of gases

Higher uptime than natural gas gensets, requiring only one 8-hour scheduled maintenance per year