

Large Oil & Gas Producer in Southwestern U.S.

Oil & Gas

The Challenge

A large producer with more than 150 Capstone Microturbines powering remote and unmanned well pads across the southwestern United States needed onsite power for a new central gathering facility. No utility power was available at the extremely remote site, which is 50 miles from the nearest town. The facility, designed to collect and transfer produced oil, gas, and wastewater 24 x 7 x 365, needed around-the-clock, reliable onsite power to operate critical equipment such as LACT units, tank heaters, oil and water transfer units, vapor recovery units, and site controls. In addition, seasonal temperatures ranging from subzero to a sweltering 110°F (43°C) required a power source able to withstand extremely harsh conditions.

The Solution

While the site only needed six microturbines, eight C65 Capstone microturbines were installed, each fueled by natural gas direct from the wellhead. These microturbines run simultaneously in order to create a reserve of power for high output conditions. The system also provides redundancy to avoid interruption of facility operations. Although not required, Horizon Power Systems custom fabricated three ventilated buildings to house the microturbines and protect them from extreme weather and temperatures.



Even during its planned air filter maintenance each year, the package continues running. While one microturbine is undergoing its scheduled maintenance, the others continue producing power."

— Sam Henry, President
Horizon Power Systems

Power Profile

Customer

Large Oil and Gas Producer

Location

San Juan Basin in New Mexico

Commissioned

February, 2015

Fuel

Wellhead Natural Gas

Technologies

• 8 C65 Microturbines

Capstone Green Energy Distributor

Horizon Power Systems



**Smarter Energy
for a Cleaner Future**



Eight C65 microturbines are fueled by natural gas and run simultaneously to provide power to the remote oil and gas producer located in San Juan Basin, New Mexico.

The Results

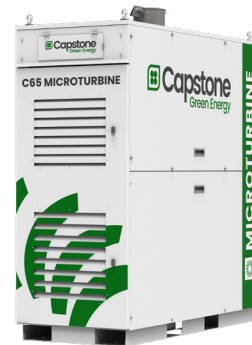
Since commissioned in the winter of 2015, the microturbines have a near unblemished record of 99 percent runtime. With 150 Capstone microturbines already operating across the Southwest, the producer knew it could count on microturbines' long maintenance intervals and flexibility as a site's power needs grow.

The microturbines can quickly change output to meet fluctuating load requirements. For this site, output from the multi pack ranges from 150–~275 kW, depending on operations.

“Even during its planned air filter maintenance each year, the package continues running. While one microturbine is undergoing its scheduled maintenance, the others continue producing power,” said Sam Henry, President of Horizon Power Systems. Another plus for the producer is microturbines' extremely low emissions, which means easier permitting and lower costs.

When compared to reciprocating engines, microturbines' total cost of ownership is significantly less. A reciprocating engine's US\$400–\$500 monthly oil changes plus labor and travel costs, repairs when parts fail, cost of diesel fuel carried to the site, utility and permitting fees, and, most important, production losses from a shutdown add up to higher long-term costs. Factor in all expenses associated with a reciprocating engine-driven generator and a microturbine's total cost of ownership is substantially less.

Capstone C65 Microturbine



A C65 Microturbine provides up to 65 kW of electrical power while the UL-Certified provides up to an additional 150 kW of thermal power for CHP and CCHP applications.