

Success Story

Remote Power: Snowbasin PowerGen

Introduction

Snowbasin Facility of Sinclair Oil Corp. was interested in testing an independent uninterruptible power supply that would continuously deliver facility grid electricity and provide an emergency power supply utilizing its natural gas infrastructure. The system would need to fit in a small space in close proximity to the facility and require limited to no maintenance.



Qnergy Solution

Due to power outages at the site, SnowBasin was interested in testing a Qnergy PowerGen system as a source of alternative power at their centrally located Earl's Lodge. A 6 kW Remote Power system with additional Power Interface Package, battery enclosure (3000 AH) and inverter(single-phase 110Vac grid-tied) was delivered and installed at the Snowbasin resort facility through a 48Vdc architecture. The facility was upgraded to convert natural gas into electricity as a supply to the facility grid. Additional 120Vac 45A electrical outlets were installed for independent emergency electrical supply in case of grid failure.



Results

Qnergy's PowerGen Remote Power system with additional accessories has been operating since November 1, 2016, with a daily NET power production of greater than 130 kW-hr. The system has operated continuously where temperatures have range from 23°C to -22°C and seasonal yearly snowfall is 350 inches.

Application	48Vdc/single-phase/grid-tied
Operating Profile	Alternative Power Source, Independent Electrical Supply
Power Output Configuration	110Vac, single-phase
Power Output Setting	6000 watts
Fuel Source	Natural Gas



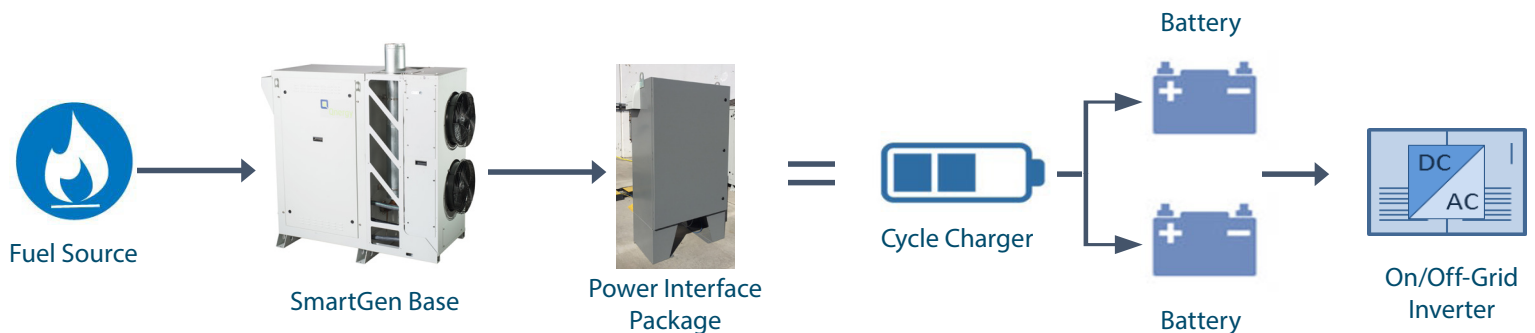
Qnergy at a Glance

Qnergy (q-ner-gy) is a company focused on providing ultra-reliable power solutions. Our technology is rugged, cost-effective, and efficient. With more than 40 years of expertise and proven reliability, Qnergy brings proprietary, high-performance Free-Piston Stirling Engine technology to the marketplace to integrate within commercial and industrial applications.

Qnergy's Free-Piston Stirling Engine (FPSE) generator can transform virtually any heat source into electricity. Once heat is applied to the FPSE the heat exchangers maintain a temperature differential across the engine causing the piston to shuttle back-and-forth. The oscillating helium drives the linear reciprocating motion of the piston, which by means of an integral linear alternator, directly converts the mechanical motion of the piston into electrical power.

The Qnergy engine has fewer moving parts than traditional kinematic Stirling engines, and no direct-contact points that cause wear and require lubrication. The Qnergy engine is truly a maintenance-free technology and offers long-life performance, two key features that make it an ideal power source. The company is headquartered in Ogden, Utah.

Snowbasin PowerGen Configuration (with options):



The PowerGen Series utilizes 5 standard configurations to meet your power needs.

About Snowbasin

Snowbasin Resort is one of the oldest continuously operating ski areas in the nation. The history of Snowbasin and the US Forest Service is a story of discovery, restoration and conservation of this unique and bountiful area as a special place of beauty and adventure.

On November 27, 1940, Snowbasin was declared officially open and began hosting the first of many ski races. Snowbasin Resort offers 3,000 acres of skiable land, which is 2,850 acres larger than the average ski resort and has a vertical well (base to peak) of 2,950 feet. Approximately 60% of Snowbasin remains on National Forest land. In 2002, Snowbasin hosted the Olympics and provided the venue for the men's and women's downhill, super G and combined races.

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