

NEXT GENERATION BACK UP POWER FOR DATA CENTERS

DATA CENTERS AND POWER RELIABILITY

Data centers require significant power to function, and business continuity cannot be compromised by power disruptions. These facilities must be resilient against disaster events that affect the grid to remain competitive. Enchanted Rock is a leader in power resiliency as a service, meaning your facility receives a dynamic backup power solution at a uniquely affordable cost.

RESILIENT NATURAL GAS MICROGRIDS

Data centers typically utilize diesel generators for backup power, which require frequent maintenance and are a financial burden. Alternatively, our natural gas microgrids perform like diesel generators, but they are more reliable, cost-effective, and much cleaner. Natural gas has an underground infrastructure that remains unaffected by weather events and grid disturbances, allowing the microgrid system to provide continuous power for any duration - ranging from days to weeks with no refueling.

INNOVATIVE SERVICE MODEL

The Enchanted Rock offering, called *Integrated Reliability on Call (iROC)*, delivers resilient backup power, often at half the price of diesel, by financing, operating, and maintaining the systems. This turnkey solution allows data center operators to focus exclusively on providing critical IT services. Enchanted Rock's founders created this innovative solution from their experiences with mission-critical applications in the US Navy Nuclear and NASA.

Enchanted Rock Benefits

Turnkey managed backup power system that maximizes site resiliency

Fast ramp time and transient performance like diesel, but clean enough to provide ancillary grid services for reduced net cost

Compact footprint and low noise levels allow for flexibility in design

Reliability by the Numbers

384 MW of commissioned microgrids

99.9999% combined reliability

162 microgrids in operation

24/7 support from Network Operations Center

COST-EFFECTIVE BENEFITS

Enchanted Rock's microgrids have the added benefit of providing additional financial streams, making the assets cost-effective for data center operators. Grid services can generate revenues for the backup generator's owners if they are compliant with performance requirements. Enchanted Rock's team has achieved revenues over \$120/kW-yr, which significantly offsets the cost of ownership and improves the generators' reliability through increased run hours under load.



CLEANER, MORE EFFICIENT POWER

The data center industry has successfully demonstrated its commitment to environmental initiatives. However, the diesel generator fleet at most data centers runs counter to these achievements. Diesel fuel emits high levels of carbon, particulate matter, and NOx when compared to a natural gas equivalent. Enchanted Rock's microgrids have significantly lower emissions than Tier 2 and even Tier 4f diesel generators. For example, Enchanted Rock's zero-hour emission factor for NOx is 4000 times lower than Tier 2 diesel engines and 400 times cleaner than a Tier 4f diesel engine. The resiliency microgrids have a quick-response nature in grid-synchronous mode that allows them to provide ancillary services to grid operators. Grid operators can then balance intermittent renewables and further the integration of renewable energy sources.

Power Field

The Enchanted Rock design is based on modular genset building blocks of 400kW continuous backup capacity powered by ultra-clean natural gas. The gensets have a compact, patent-pending packaging design that results in a small footprint. The modularity is taken one step further by creating a "power field" that centralizes all of the generation onto a daisy-chained MV bus that connects to both A and B sides of the switchgear. This means that single gensets can be taken out of service for maintenance without greatly affecting reliability, which is a major difference from a standard backup power design.

