

GENERAC®

INDUSTRIAL POWER

C7 DATA CENTERS

Bluffdale, UT

CASE STUDY

CHALLENGE:

As a multi-tier data center, reliability redundancy and the ability to expand rapidly as capacity is met are crucial.

SOLUTION:

Generac 13 MW MPS solution consisting of ten Gemini® generators and two 1.5 MW diesel-fueled generators.

RESULT:

The Generac MPS configuration is a scalable solution, making it efficient to increase backup capacity easily as clients and services are added—without affecting backup power needs.

“C7 not only requires a backup power system that is reliable and redundant but also one that is flexible. The MPS system from Generac Industrial Power provides all of that for them.”



Modular power. Meeting the needs of a growing business that demands continuous power.

C7 Data Centers, Inc. is a privately-held operator and provider of multiple data centers and associated services, founded in 2000. Their four data centers span 127,000 square feet of floor space and the company is researching additional acquisition and expansion opportunities. In 2013, C7 announced the construction of its flagship data center and office complex in Bluffdale, Utah and turned to Generac Industrial Power, launching an ongoing relationship.

As a multi-tier data center, reliability and redundancy were crucial. Beyond disaster protection, a backup generator's role to provide power is important when utility providers consider rolling blackouts and brownouts and data center operators see reduced utility service reliability.

When considering partners for a backup power system installation, C7 saw value in the details. Dave Petersen, division manager, Major Projects and Engineering Services Group at Energy Management Corporation (EMC), took the time to walk C7 through previous successful projects like its implementation at the University of Utah's

data center. C7 was able to tour the facility and physically see how the ten Generac Gemini backup generators synchronized to the bus within ten seconds. Petersen also took the time to fly the customer to the Generac facility in Wisconsin to show how the generators were manufactured. They also toured the training center to demonstrate the company's commitment to technology and its approach to backup redundancy methods.

“I never want to be just a vendor,” Petersen said. “I want to be a partner throughout the entire process. I want each customer to be happy and understand the entire process thoroughly.”

Working with Salt Lake City engineering firm Hunt Electric, EMC began implementing a Modular Power System (MPS) with three Gemini® units from Generac Industrial Power for C7's Granite Point I colocation data center. Each diesel-fueled Gemini unit features two 500 kW generator sets configured in parallel within a single space-saving enclosure for a total capacity of 1 MW.



APPLICATION:

Data Center

SYSTEM CONFIGURATION:

13 MW MPS

MODELS:

10 x 1 MW Gemini®

2 x 1.5 MW Diesel-fueled gen-sets

The three Gemini units were installed and commissioned in 2014, providing 3 MW of backup power to the 65,000 sq. ft. facility with a reliability of 99.999%.

“We can actually provide a better engineered solution for the data centers than what the larger 2 MW can,” said Curt Gibson, power solutions manager, Generac Industrial Power. “The benefit is to have multiple generators paralleled so if anything went wrong with anyone of them we would have a backup.”

In 2016, C7 invested in seven more Gemini units for the company’s flagship Granite II facility, also in Bluffdale. EMC installed and commissioned these units, and later that year installed an additional three Gemini systems for a total of 10 MW for C7. Then in 2017, EMC provided backup power to C7’s newest data center. That system is also an MPS configuration, but does not feature Gemini units. Instead, two 1500 kW diesel-fueled Generac Industrial Power gen-sets provide 3 MW of power, with room for expansion to 6 MW.

“C7 Data Centers has aggressive business plans, and they fill their capacity very rapidly,” said Petersen. “This means that they not only require a backup power system that is reliable and redundant but also one that is flexible. The MPS system from Generac Industrial Power provides all of that for them.”

Other factors contributing to the ongoing relationship included the scalability of the MPS system, which allows C7 to increase backup capacity as they add clients. The MPS solution also gives them the flexibility to service individual nodes within the system without affecting their backup power needs.

Overall, C7 said that the Generac Industrial Power solutions implemented by EMC were the most cost-effective of all those the company considered. C7 said they have been pleased with the solution, support and service they received and will continue to support their decision to use Generac and EMC in the future.

