GENERAC®
INDUSTRIAL POWER

POWER SOLUTIONS
# CASE STUDY

## COMPUTER ALTERNATIVE PROCESSING SITES

**Location**
Shelton, Connecticut

**Market**
Data Protection

**Unique Obstacle**
Provide flexible backup power solution to a critical business continuity command center

**Units**
2 X 400 kW MPS
(Can expand to 4 Gensets)

**Solution**
400 kW MPS to start and a second genset a couple of years later, with the expandability of up-to-4 units

**Contact**
Readers who may have similar application challenges and would like to discuss this success are invited to call 1-844-ASK-GNRC (1-844-275-4672)

*"The "We needed a reliable system like Generac and knew that as our customers' demands grew, our MPS system would need to grow as well"*

# Power For One, Power For All

Have you ever wondered who provides back up for back up system providers? As is true for most companies, complex computer systems keep offices running smoothly. However, anytime unforeseen circumstances occur, such as a fire or a widespread power outage, these computer systems are often shut down and critical files or data is inaccessible.

This is where Computer Alternative Processing Sites (CAPS) steps in. CAPS, Shelton, Conn., provides clients with a single source for the IT total solutions needed for continuous operations, data backup and business continuity needs. CAPS clientsrely on its flexible, custom solutions, attentive customer service and deep professional experience in technology, networking, operations, disaster recovery and business continuity to eliminate pain and reduce costs. CAPS is responsible for keeping clients up and running, no matter the circumstances. But when it comes to backing up its own critical systems in the event of a power outage, CAPS turns to Generac® Industrial Power for its own business continuity needs.

Situated on 25,000 square feet, the CAPS facility features a full suite of IT infrastructure, disaster recovery and business continuity services. A total of 5,000 square feet are dedicated solely to its Co-Location and Backup Data Centers; the rest of the space is dedicated to housing business continuity, which includes workstations, a data recovery center, communication recovery, mobile recovery solutions,quick-ship services, conference space and anyother needs a business would require in order to run seamlessly from a remote location.

**Building with Room to Grow**

In 2004, when CAPS expanded into a second location in Connecticut, it called upon Huntington Power, a Generac Industrial Power dealer, also located in Shelton, to help CAPS rebuild some of its infrastructure including its existing data center. Bob Colum, vice president and director of technical services, Huntington Power, recalls, "CAPS knew that it was eventually going to expand, but wasn't sure what its needs would be as clientele expanded. We suggested the state-of-the-art MPS (Modular Power System) from Generac since it has the capabilities to not only grow with a company, but can be installed as the need presents itself, and CAPS agreed that it would be the best option."

In the past, the high cost of switchgear made the multiple unit arrangement feasible only for expensive, high-end applications. Traditional approaches to paralleling three or more generators would typically require 14 to 20 controllers from five different manufacturers. In contrast, the Generac MPS Power Manager control technology, designed with advanced high-speed, 32-bit electronic microprocessors, utilizes one digital control per generator to control all generator functions: speed governing, voltage regulation, genset alarm and monitoring, synchronizing, load sharing and protection. Advanced, digital electronics are built into the MPS controllers, providing modular, IEEE-compliant paralleling capability and reducing equipment, maintenance and

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installation costs. In addition to a host of other features, the controllers constantly monitor power flow, control transfer switch functions and manage the operation of all connected generators. The system also allows end-users to quickly and easily add units as additional power is needed, a key benefit for CAPS.

CAPS began building its MPS system with one 400 kilowatt (kW) standby generator and a single transfer switch. "In 2004, we were just getting started on the new facility," says Bob Ferguson, director of operations, CAPS. "We needed a reliable system like Generac and knew that as our customers' demands grew, our MPS system would need to grow as well."

**Client Growth Leads to MPS Expansion**

Over time, as CAPS expanded its services and its clientele grew, so did the need for additional standby power. By 2007, due to the advancements in technology and the growth of its client base, CAPS was in need of a standby upgrade so it could offer clients an increased sense of security and safety. Huntington Power suggested a second 400 kW MPS generator in order to meet customer needs. "Some of our clients had grown so large that they now required n + 1 (need plus one) capabilities," says Ferguson. "The MPS system from Generac was up for the task and within a few weeks, we were ready to meet the demands of all of our clients. The MPS system gave us the redundancy our clients needed and gave us the comfort in knowing that should an outage occur, our clients would be able to continue to operate as if nothing had happened.

"Since the installation of the second genset, CAPS has experienced a few brief outages, one due to lightening and the others have been either rolling or scheduled outages. Regardless of the reason, each time the MPS system has worked flawlessly and our clients were able to continue working, uninterrupted," says Ferguson.

CAPS credits its uninterrupted work stations to the Generac MPS system which allows each genset to back up the others in the system so critical loads receive redundant protection, in addition to providing all the benefits of parallel generation in a simple, single-source system. When the gensets are started in response to an outage or command, the first unit to reach proper voltage and frequency connects to the generator bus. As the other gensets come up to proper speed, they are paralleled to the generator bus, adding their output. Depending upon the configuration and number of transfer switches, the load can be transferred incrementally or all at once. The generators proportionately share the load, while acting as a single unit. Fast forward to 2009 and CAPS is ready for the next wave of needs from its existing clients as well as any new clients. "We have an additional 5,000 square feet that we are currently building out as data center space," says Ferguson. He explains that the MPS gensets are small enough to fit into spaces that can't accommodate large units and are light enough for rooftop applications without having to utilize high-capacity cranes. Another bonus to the MPS is that it provides the ability to implement n + 1 or greater redundancy at a much lower acquisition cost, providing greater reliability and coverage during maintenance. The modularity of the system also allows end-users to quickly and easily add units as additional power is needed.

"Our intention is to install the two additional gensets ranging between 400 and 600 kW, all depending on the needs of our customers. Huntington Power laid the groundwork to ensure our clients are supported in case of an outage and, with the short lead time of 12 to 14 weeks on MPS systems, we'll be able to better protect our clients in less time. It's our job to make sure our clients' production and backup recovery systems are always on and available and that's what Huntington Power and our Generac MPS ensures for them."