



SUCCESSFUL SOLUTION

YC Power Systems Provides Security with Generac Emergency Standby Power Solution

When a large Southern California high security detention facility encountered issues meeting the state mandated requirements of their emergency backup power system, they needed a quick reliable expert solution, and turned to YC Power Systems.



3 Mega Watt (6 x 500kw) - Gemini installation

Application Background: Built in the early 1990s, this facility was originally equipped with 3-750 kW diesel engine generators using traditional paralleling switchgear. The facility critical load of 1400 kW, required at least two of the units to be paralleled within 10 seconds to meet the state mandated requirements. Over the years the system became unable to accomplish this task sometime taking up to 20 seconds to get the first units paralleled on line. After working for years upgrading the engine generator controls and the traditional switchgear controls with no success the decision was made to replace the system with Generac' Modular Power Solution (MPS).

Solution: 6 - 500 kW package generator sets were purchased in Generac's Gemini configuration, which is 2-500 kw packages in a single sound attenuated, weatherproof enclosure. The three Gemini packages were installed with factory built base fuel tanks that are tied to a 20,000 gallon main storage tank. The fuel supply from the main storage tank is controlled by a Pryco fuel management system. Electrically the six generator breakers are feeding a 4,000 amp emergency source breaker which then feeds a 480v-12kV transformer. From there the transformer then feeds into a 1200 Amp / 12kV auto transfer switch which distributes the power to the facility. Generator paralleling is accomplished with the use of unit mounted paralleling contactors and Generac's "Powermanager" control system for a fully integrated approach that simplifies generator paralleling while providing unsurpassed reliability and cost effectiveness.

Benefit: Critical loads for the facility would have required at least three generators on line but with the new Generac System we have been able to parallel all six generators in less than 10 seconds.. The facility now meets the State mandated requirements.

