

Emergency Generator Replacement

Thompson Hood Veterans Center – Wilmore, KY

Owner: Kentucky Finance Cabinet - DECA

User Agency: Veterans Affairs

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Building Area: NA

Construction Cost: \$ 628,000

Project Status: Completed 2019

Project No.: C8VK

Project Description:

Project included the replacement of one 750 KW diesel generator, underground fuel tank, load bank, and transfer switches with two new 400 KW natural gas generators and new automatic transfer switches.



Engineering Highlights:

Thompson Hood Veterans Center is a continuous care skilled nursing facility that must meet stringent state and federal regulations for its inhabitants. It cannot be left without emergency power longer than four planned hours, so a temporary generator was planned for use during the switch out from existing generator to new generator set.

Four generator options were reviewed – single and parallel diesel units and single and parallel natural gas units. Due to the close proximity to an existing utility owned gas main and the history of minimal natural gas system downtime in the area, it was determined that the gas system met the requirements for a reliable power source. Previously, the single generator system offered no redundancy. In order to meet regulations, facility staff rented a portable generator unit in times that the single diesel unit was under maintenance. A parallel system would eliminate the need for expensive rental equipment and ensure that power was available even if one unit is offline. Thus, natural gas parallel units were selected as the system design.

All four automatic transfer switches were replaced with new switches containing network monitoring capability between the switches and generator. To increasing the system reliability even further the four switches are capable of automatic load shedding with Life Safety loads taking first priority.

The facility is now equipped with a redundant and reliable emergency generator system that will allow the facility to safely operate and serve its inhabitants for years to come.