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PROJECTS

WB Power Services (WBPS) was first established in 1983 and since then we have grown significantly in size and service capability. Today, we provide critical power services to some of the UK's most important businesses and organisations, ensuring essential services are protected. We are proud to retain our family values on a national scale as we strive to be the biggest and the best power generation company in the UK.

CASE STUDY

3MVA INSTALLATION AT SOUTH WEST HOSPITAL

WB Power Services were approached by a third party building services contractor to scope, design, install and commission a critical power solution for a large Hospital in the South West of England, which would provide valuable back-up power for the hospital in the event of a power failure.

PROJECT OVERVIEW

OVER 3000kVA

GENERATOR INSTALLATION
2 x 1650kVA Kohler-SDMO generating sets installed on-site

121,600 LITRES

FUEL MANAGEMENT SOLUTION
Four fuel tanks were installed as part of an intricate fuel management solution

EQUIPMENT REMOVAL
Responsible for the removal and 'disposal' of the incumbent generating set and additional ancillary equipment

PLANT ROOM INSTALLATION
The generating sets were installed in an existing plant room with limited space

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PROJECT OVERVIEW

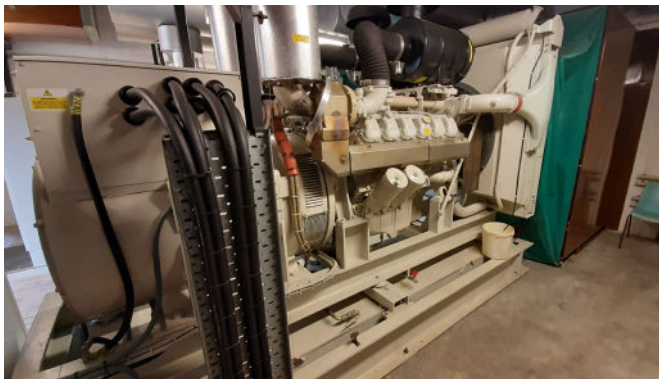
An incredibly diverse and bespoke project for the WB Power team, the installed solution comprised of incumbent equipment removal, civil works and the installation of 2 x 1650 kVA Kohler-SDMO generating sets in an existing plant room. The generating sets were installed along with accompanying ancillary equipment such as a fuel management solution, plant room attenuation equipment, exhaust systems and full commissioning/testing.

EQUIPMENT REMOVAL

The initial stage of the project involved the removal and 'disposal' of the sites incumbent generating set, and it's accompanying ancillary equipment. Removed equipment included:

- 2 X GENERATING SETS
- LV SWITCHBOARD
- FUEL TANKS
- ATTENUATION EQUIPMENT
- EXHAUST SILENCER AND FLUE

Due to WB Power's operations in the used generator market, a buy back price for each incumbent generating set was included in the project quote, with the agreed price being deducted off the total project cost. WB Power also provided a price to clean and de-gas the existing bulk fuel tanks prior to removal, ensuring they would be efficient if utilised in the future.



One of the hospitals incumbent generator sets in position, prior to removal by the WB Power Projects team

As part of the installation, the incumbent plant room had all its equipment removed and some remedial civil works were then completed prior to the new installation commencing.

GENERATING SETS

Following a detailed analysis of the hospitals power requirements, WB Power proposed the installation of 2 x 1650kVA Kohler-SDMO, three phase, prime rated generating sets. Utilising the ComAp IGNTC-BB synchronising control panel, the sets were installed with additional bespoke work, which included:

- AUTOMATIC LUBRICATING OIL REPLENISHMENT SYSTEM
- FUSIBLE LINK RELEASED FIRE VALVE
- ENCLOSED SPRING ANTI-VIBRATION MOUNTINGS
- OPTIMA RED TOP (AMG) BATTERIES (DUTY/STANDBY)

The proposed generating sets were carefully selected by the WB Power estimating team, following a detailed analysis of the Hospitals requirements. WB Power were able to strike a careful balance of fuel efficiency, upfront costs and ongoing service requirements.

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FUEL MANAGEMENT SOLUTION

The generating sets were configured to be fed fuel from two 3,200 litre bunded day tanks, which were installed within a durasteel enclosure. These tanks would act as an immediate fuel source and were installed below the air inlet attenuators, within a concrete wall, offering additional support and protection.

The days tanks were fed fuel by two 56,000 litre bunded bulk fuel storage tanks, which came complete with:

- TANK MOUNTED DUTY/STANDBY FUEL TRANSFER PUMPS
- TANK MOUNTED FUEL POLISHING SYSTEM
- DUPLEX FUEL STRAINERS AND DIFFERENTIAL PRESSURE INDICATORS
- C2020 CONTENTS GAUGE
- BALANCE CONNECTIONS AND VALVES

These tanks were installed with a tank access ladder with a platform between, ensuring engineers could easily access to the manways and level switches.

The 56,000 storage tanks arrive on-site and are lifted into position

ACOUSTIC EQUIPMENT

The generating set was installed with both inlet and outlet attenuators, which were designed to achieve a sound level of 72dBA @ 1m per set. The attenuators were finished in enhanced paint and were supplied with weather louvres and motorised inlet/gravity outlet louvres.

The outlet attenuators are moved into positioned into the plant room

EXHAUST SYSTEM

WB Power provided a twin-wall exhaust flue for each new generating set. The flues were designed and installed to exit the room adjacent to the discharge attenuators. They then rose up a mast to a height of 15m. Due to incoming emergency aircraft on the hospital grounds, the flue included three aircraft warning lights and lightening protection.

The exhaust flues are craned into position and installed on-site at the hospital

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