Tideway Central Project: London, UK

Customer
FLO JV (Ferrovial Agroman/Laing O’Rourke Joint Venture).

Background
The Thames Tideway Tunnel is London’s new ‘super sewer’ and consists of a 25km tunnel under the River Thames.

The existing London sewer system dates back around 150 years and was originally built for a planned London population growth of nearly four million people. With the London population now nearing the nine million mark, there was a real need for increased capacity.

The new sewer tunnel is being constructed by Tunnel Boring Machines (TBMs) below the River Thames at depths of 30m to 60m and will utilise gravity feeds for the sewage transfer.

With a planned completion date of 2024, the Thames Tideway Tunnel will intercept raw sewage overflows from the existing Victorian era sewer system and transfer this sewage away from the river for treatment.

From an environmental and ecological perspective, the Thames Tideway Tunnel will greatly reduce the amount of sewage that enters the river, resulting in a positive sustainability impact for the inhabitants and the wildlife of London. The new physical structures related to the Thames Tideway Tunnel also have the potential to create new aquatic wildlife habitats.

The Problem
As part of all tunnelling related infrastructure projects, the establishment of emergency back-up power is vital to the safety of personnel during the project’s construction phase.

The Solution
FLO JV was selected to build the central section of the Thames Tideway Tunnel and contracted Ampcontrol to assist with the provision of emergency back-up power.

Ampcontrol provided 1,100 kVA emergency back-up generation capacity to the project, complete with associated cabling.

Due to the time sensitivity of the project, we supplied temporary generators of equal capacity during the manufacturing period of the new units. We also provided onsite pre-commissioning support for the generators to ensure smooth installation and operational readiness.
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The Environment

London councils are actively taking measures to increase the air quality of the city. This is a particular challenge as London experiences high traffic volumes on dense road networks in between buildings that trap pollutants.

In support of the reduction of emissions, Ampcontrol evaluated the requirement for stringent emissions certification. Although the units are only designated for back-up emergency generation with anticipated low run times, we supplied generators that are EU stage IIIA emissions certified, thereby ensuring certified limited emissions while in operation.

Challenges

To ensure limited downtime between the rental unit decommissioning and the commissioning of the new generation units, logistics plans formed an important part of our coordination with the client team and project planning. To streamline the logistics approach, we also coordinated the EU Stage IIIA Emissions Certified Generator arrangements so that the one truck was used for both delivering new units and removing old units, reducing the carbon footprint of the project.

Achievements

Ampcontrol successfully completed the scope of generation capacity supply and support to one of the most significant UK tunnelling projects in the heart of London, within the required timeframe and to the high standard of quality demanded by the UK industry.

This was achieved by following sound engineering principles, providing high quality equipment, being client centric, and recognising the requirements of all stakeholders and the environment.