The Generator Company

Standby Generator Upgrade for Global Technology Co.

Our client, one of the largest communication technology companies in the world, contacted us to provide a suitable solution for a 1000kVA standby generator upgrade to incorporate some of the site's existing services and associated equipment at one of their UK datacentres.

For this client, using their award-winning networks to connect millions of companies and communities to deliver; interactive entertainment, digital media, the internet and broadband, back-up power at any of their datacentres is imperative. However, their existing standby generator was simply no longer fit for purpose.

Having worked with this client over many years all our regular engineers who have worked at their sites are completely coherent with the very sensitive nature of their business and site sensitivity and it was therefore undeniable that we would offer them a solution that would be completely tailor made to their exact requirements.

Client

Global Technology Co.

Project Specifications

Design and installation of new standby generator upgrade incorporating existing services and facilities.

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We allocated our usual Project Manager with an existing knowledge of the site's current standby generator system set up. He met the Facilities Management team on site to discuss their specific requirements and assess any installation and access restrictions.

Following a thorough site survey our Project Manager put together his design recommendations together with the necessary RAM's and schedule of works, which were subsequently agreed and signed off by the client. The 1000kVA standby generator upgrade would run extremely smoothly with the only a couple of minor challenges we needed to consider for the installation. It was vital that the new generator, once installed, would have the same noise level readings as the current one as it was sited externally to the datacentre. Also the space onsite was very restricted, especially logistically to gain access with a lorry to the location of the generator. Having mastered numerous solutions to combat severe restrictions at plenty of client sites we felt we were becoming specialists in this scenario.

The noise level of the current generator was taken before it could be removed by our in-house rental department, Powerhire, who delivered and installed a temporary super silent generator to site. This would be essential in providing a temporary standby power solution while the new generator could be installed. Once the temporary generator was up and running all the necessary connections from the old generator were disconnected and the existing set was removed from its base.

Before the installation of the 1000kVA standby generator could be carried out the surrounding ground required decontamination. Our Project Manager suggested that as we were doing the ground works to accommodate the new set it would make sense for us to arrange this instead of bringing in a third party. We put together the necessary method statement which the client favoured as a more cost effective solution as well as a way of speeding up the installation and system set up.

Once the site was clean and signed off by an independent environmental specialist and the surrounding fence taken out, the existing concrete base was increased in size to accommodate the new 1000kVA standby generator. Extreme care was taken whilst the base was constructed as the engineers had to navigate around the existing underground services as they needed to remain undisturbed.

Once this was complete our engineers went full steam ahead with the installation of the new containerised generator which had been previously witness tested in the presence of the client at our rental depot in Kent.

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An external compound was set up for the duration of the installation of all the equipment which, from inception to commission, was carried out over an 8 week schedule.

We utilised a 90 tonnes crane on a very minimal footprint, this had to be oversized because we required a longer length boom, the additional height was required to elevate the heavy generator system components into the desired location.

The positioning of the crane had to be extremely accurate as precision engineering was required to manoeuvre the boom under immense load to the required extension without compromising the underground services.

Once all the new equipment was in place; the 1000kVA AMF diesel powered Cummins generator, alternator, radiator, day tank, our bespoke built generator control panel inclusive of a DSE8610 and the generator link box, the final connections were made.

Our engineers and Project Manager connected up all the upgraded parts of the new generator system as well as the existing bulk tank, feeder panel, switchboard and underground services into the final 1000kVA standby generator system upgrade.

Finally the acoustic enclosure, complete with attenuation panels at each end, was manoeuvred into place and the exhaust silencers fitted to its roof.

Once the new fencing, manufactured to meet the existing fencing profile, was replaced new noise levels could be taken and commissioning completed.

Following satisfactory noise levels we commenced the commissioning using the client's onsite loadbank to prove the generator and system set up. In the presence of the client and an independent BMS contractor, the generator was run on site load for the pre-agreed duration, followed by a site integration test which took approximately 8 hours.

Following the successful commissioning process and an extremely happy client, our rental engineers returned to site to remove the temporary standby power solution now the new system was operational.

Generator: System Design Supply Install Hire Service Maintenance

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