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NILSEN

PROJECT FACT SHEET

Customer: Sungard Data Centre

Project: 340 Findon Road - Data Centre Upgrade

Project Profile:

Nilsen were appointed as Main Contractor in May 2013 to carry out the upgrade of the Electrical and Mechanical Services within the existing data centre at 340 Findon Road for Sungard Ltd.

The design of the services upgrade was carried out by NDY, Adelaide. As the data centre was occupied by active tenants/stakeholders of IBM, Hostworks, IGC and Data Action, it was a requirement for the electrical power and air conditioning to be maintained at all times as no break in power was permissible.

Each operation to cut over to new items of electrical switchgear/equipment and chiller plant/pumps required detailed programming and method statements accompanied by critical work plan and very detailed switching operations. Due to the complexity coupled with the number of stakeholders involved, these plans sometimes took up to two months to achieve final agreement and sign off by all parties.

The electrical works consisted of the supply and installation of 2 of 3MVA standby generators, fuel tanks, 1MVA load bank and interconnecting cabling. The generators are wired to a new EPG switchboard as manufactured by Nilsen Switchboards which is complete with full synchronizing capability. The installation of the new standby generators allowed for the decommissioning and eventual removal of the existing unreliable 750kVA generator. The new EPG switchboard is connected to the existing generator switchboard and the new chiller plant MSB via 4000amp busduct.

The existing 3 of 1MVA 11kV/433v transformers have been reinforced by 2 of new 2MVA 11kV/433v pad mount transformers. These new transformers feed a new low voltage MSB which serves the new chiller plant MSB together with a number of new data pod distribution boards.

The project also included the replacement of the 3 of existing piller rotary UPS's with 3 of Emerson 800kW static UPS's. One of these Emerson UPS was used for 12 months as a temporary replacement after the complete failure of the piller system which had to the end of its 25 year life span. The 3 of Emerson UPS's were eventually synchronized and connected to the existing UPS reticulation switchboard via a new UPS output switchboard, again manufactured by Nilsen Switchboards. The new Emerson UZPS system included completely new battery back up power and battery monitoring system.

The final connection of the new UPS's to the existing UPS reticulation was carried out over a continuous 108 hour period including 9 of 12 hours shifts involving an average of 24 technical and skilled technicians per shift. This was due to the complexity of the switching due to the differing requirements of the existing tenants/stakeholders.

The mechanical services included the supply and installation of 3 of new 1100kW evaporative air cooled roof mounted chillers and pipework which was connected into the existing cooling plant CRAC units within the data centre. Each chiller plant was connected to pump sets with variable speed drives and active harmonic filters. The UPS switchroom was fitted with 2 of new air handling units.