CLIENT CASE

POWERING A SAFE JOURNEY

INFRASTRUCTURE NETHERLANDS

HITEC Power Protection

AIR WATER GROUP

- UPS type: Dynamic UPS
- Unit type: Powerpro3600
- Power module: 2,885 kVA
- No-break rating: 2,308 kW@ 0.8 pf of net useable power
- Engine rating: Standby rated
- Total install: 2 modules in total Operating voltage: 400 V/50 Hz
- Configuration: Parallel system
- Location: UPS room on top of tunnel

The project is to tunnel an existing section of motorway in the South East area of Amsterdam for the Dutch Ministry of Infrastructure and Water Management. This Ministry is responsible for the main public infrastructure facilities in the Netherlands, including the main road network.

The as well as improving the local environment for residents, purpose of the tunnel is to help the Dutch Government deliver on its mobility policy; that is by 2020, motorists travelling in the rush hour must be able to arrive punctually 95% of the time, despite increased mobility and unexpected congestion.

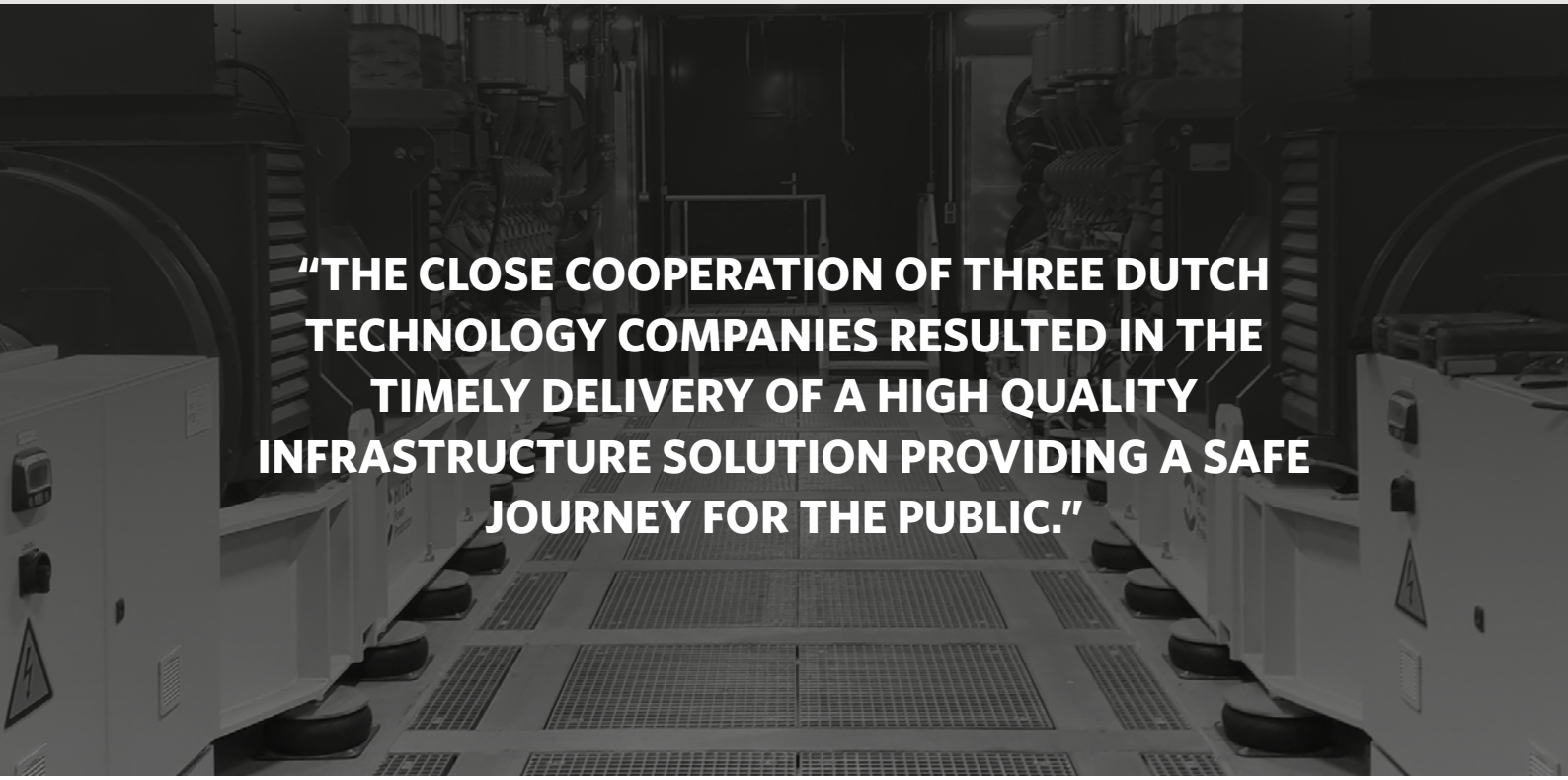
Project Challenge

At present the south-east side of Amsterdam is served by a major highway that has a capacity of 50,000 cars per day. This tunnel project is designed to increase this capacity to 150,000 cars per day and with a length of 3 kilometers to also reduce the environmental impact in the form of noise and particulate matter for the residents of Gaasperdam and De Bijlmer; two neighborhood either side of the esisting highway. The contractor, IXAS, carried out a Reliability, Availability and Maintainability Study that proved that Dynamic UPS technology was the best choice to meet the technological and functional requirements for this project. HITEC Power Protection, in partnership with EATON and TKF, took the full design responsibility for the UPS Power sup-ply system to ensure reliable and safe power conditions for the operation of the tunnel. The HI-TEC system supports controls, ventilation, lighting and other safety critical systems within the 3027 metre long tunnel. Should any of these be out of operation then the tunnel may be closed. This will result in traffic congestion and ultimately loss of revenue for the economy.

Project Solution

The UPS system is a 5770 kVA Medium Voltage Parallel System and consisting of a two 2885 kVA at 10.5kV UPS units equipped with a Medium Voltage Generator. This is the largest single shaft Dynamic UPS Systems installed in the Netherlands. Medium voltage generators are used to minimize the overall footprint of UPS installation.

The design of the Power system is divided over three major facilities; Building West, Building East and the main Building Middle. The Power system is mainly concentrated in the Building Middle and is where the HITEC UPS system is situated. From here, power is distributed to the Buildings East and West. The total tunnel project is planned to be in full service in 2020.



Customer Experience

By selecting the well known brands HITEC, EATON and TKF, Rijkswaterstaat partnered with 3 world-class Dutch companies who have all technical knowhow and experience of building the most reliable electrical infrastructure to limit risk to operation of the critical infrastructure. The Environmental challenge was to deliver the solutions with the cleanest engine available in the Dynamic UPS market today.

HITEC Power Protection

AIR WATER GROUP

CONTINUOUS POWER IN YOUR CONTROL

HITEC Power Protection BV
P.O. Box 65
7600 AB Almelo
The Netherlands

Tel: +31 546 589 589
Web: hitec-ups.com
E-mail: info@hitec-ups.com