

GIBB greens No 5 Silo building further

Consulting engineering firm GIBB has improved the energy efficiency of the No 5 Silo building located at the Silo Precinct at Cape Town's V&A Waterfront.



The project's electrical and related construction costs were in the region of R21m. GIBB's role in the project entailed electrical engineering for the building as well as its anchor tenants. The scope of work included designs for Green Star points such as electricity sub-metering systems and energy efficient lighting, with a high percentage of the luminaires using LED light sources. In addition, electrical engineering solutions including lighting control system designs for daylight saving, occupancy sensors and timers were implemented.

"This is a four-star Green Star building comprising a gross construction area of 16,600m², over seven levels, with multiple anchor tenants. One of our roles was to ensure that our work complemented the overall green qualities of the building," said Dennis Forster, technical executive at GIBB.

Reduce wasted light

The firm had to work on the management of light pollution, in particular externally, to reduce wasted light, such as upward shining light. Other elements included design specification and tender documentation for a photovoltaic installation on the roof of the building to generate electricity from sunlight and deliver the electricity safely to the rest of the building.

“We designed a bank of three parallel connected diesel standby generators that deliver essential power to not only No 5 Silo, but also to several other properties in the Silo precinct, during times of power failures,” added Forster.

This was engineered so that only a minimum number of generators will be required to run to meet the electricity demand, thus improving the efficiency of the generator operation. This necessitates a high level of coordination and safety interlocks to ensure that power is safely delivered where it is required.

The generator installations are tier three for emissions control, with special acoustic measures applied to reduce the noise produced by the generators during operation.

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