

ARTICLE

Protecting the South Pacific Games

ABB provides power protection solutions to the South Pacific Games in Papua New Guinea.



01. The South Pacific Games underway at the newly refurbished sports complex.

ABB was proud to deliver its sophisticated power conditioning technology to support the 2015 South Pacific Games in Port Moresby, Papua New Guinea; an international multi-sport event, recognized and endorsed by the International Olympic Committee (IOC). A total of 24 countries from around the South Pacific took part in the event, which was held from 4 – 18 July 2015.

Unreliable grid supply due to voltage sags and surges are typical in a country such as Papua New Guinea and these would have resulted in unacceptable consequences for the stadium and the South Pacific Games, such as flickering lights, air-conditioning trips and malfunctioning time keeping and recording equipment.

ABB installed and commissioned two PCS100 AVC's and two PCS100 RPC systems to regulate utility supply to the stadium (AVC), while minimizing reactive loading of the utility by way of power factor correction (RPC). Two units of the PCS100 AVC active voltage conditioner, 600 kVA each, were installed in the Taurama Aquatic Center & Indoor Sport Complex, one of the main venues where swimming, basketball, volleyball, and a variety of other indoor sports took place. This installation was part of an overall refurbishment of the stadium, in time for the games. The AVC and RPC products helped optimize grid loading, while ensuring a reliable supply for lighting, air conditioning and other services vital to the success of the South Pacific Games.

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02 The Taurama Aquatic Center in Port Moresby, Papua New Guinea.

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03 The PCS100 active voltage conditioner installed within the air-conditioned electrical room.

The PCS100 AVC is an inverter based system that protects sensitive industrial and commercial loads from voltage disturbances. Providing fast, accurate voltage sag and surge correction as well as continuous voltage regulation and load voltage compensation, the PCS100 AVC has been optimally designed to provide equipment immunity from power quality events on the supply network.



The PCS100 AVC requires no batteries, as it draws the additional energy required to make up the correction voltage from the utility supply. With no ongoing maintenance costs typically associated with batteries, the cost of ownership for a PCS100 AVC system is very low.

Based on a unique modular design providing high reliability, the PCS100 RPC will provide such benefits as;

- Preventing costly penalties due to poor power factor or harmonics.
- Ensuring correct operation of 3-phase rectifier loads, extending their lifetime, by correcting for voltage unbalance.
- Lowering maintenance costs by not exposing equipment to poor quality power.
- Eliminating the risk associated with traditional power factor capacitor correction systems such as, overheating caused by harmonic resonance problems.



With the successful completion of this project, ABB's power conditioning solutions are once again obtaining international recognition for their innovative design and unrivalled performance to protect highly sensitive equipment.

To find out more about ABB's power protection solutions:

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