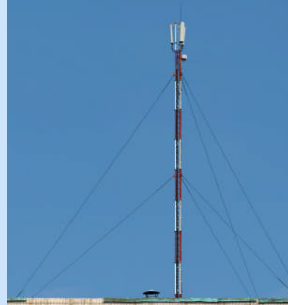




Case Study 37241 – 6 Stations for Mobile, Radio, Broadband and Television Broadcasting - Telecoms



Customer: Huawei, China – Installation for Starcomms, Nigeria, Africa.

Background: Huawei is a leading global telecommunications solutions provider with long-term partnerships with operators around the world.

Huawei's global R&D centres are located in Silicon Valley and Dallas in USA, Stockholm in Sweden, Moscow in Russia and Bangalore in India in addition to those in Beijing, Shanghai, Nanjing, Shenzhen, Hangzhou and Chengdu in China.

Today, Huawei's products and solutions are deployed in over 100 countries and serve 36 of the world's top 50 operators.

Problem: Due to local electricity shortage and poor power quality supply from the grid, there was substantial 3 phase imbalance; voltage fluctuations and frequent power outages. This unreliable voltage supply created repeated equipment failure for 6 separate base stations delivering, mobile, radio, broadband and television service. This resulted in poor service to subscribers and high repair and maintenance costs to the Operators. Frequent electrical surge damaged equipment and caused substantial downtime in transmission and connections. The failure of the base stations led to ever increasing loss of subscribers and income to the operators.

Solution: External Cased IP43 **15 KVA PropSava 3 Phase Power Optimisation SCR System** – $\Delta / Y0$ 1:1 Isolation Transformer, regulate Input Voltage $400V \pm 30\%$, with output regulated at $380V \pm 5\%$; fitted with an isolation transformer; B-level anti-surge suppressors; automatic power-on; over and under-voltage protection; phase sequence protection; over current protection with automatic by-pass system.

Effect of installation: Equipment failure due to low voltage and poor power quality, with resultant loss of service, has virtually been eliminated. Continuity of service is highest in 4 years; and maintenance costs for Base Station is 21% less than pre 2005 with no loss of service to subscribers for the last 22 months (excluding grid power cuts). Subscribers to the Radio and Television station have steadily increased over the last 2 years ahead of its rivals.



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Power Optimisation - Reduced Maintenance and Longer Life for all your Equipment:

By allowing electrical equipment to operate at a higher than manufacturer specification of voltage leads to significantly higher energy consumption, increased heat losses and a reduced life span.

Whatever the value of the incoming voltage into your site, whether it is **over** or **under** voltage, the **PropSava Power Optimisation System** will always tightly control the output voltage. It is this powerful and rapid regulation of voltage, coupled with high quality components and build that delivers the significant protection to site equipment; with power and cost savings; and reduction in CO2 emissions.

The Reason for Ever Increasing Changes in Voltage Levels:

Over and under voltage is generally a chronic problem aggravated by a number of factors beyond the end user's control. Electric utilities try to maintain voltage levels delivered to customers at $\pm 5\%$. However, factors like weather, high demand and others can cause the utility voltage to fall within a $\pm 10\%$ range. Even under ideal conditions, most customers will see a drop in utility voltage levels over the course of the day.

Distribution system characteristics can also contribute to chronically low voltage situations. For example, customers at the end of a long distribution line may be subject to a permanent voltage drop due to line losses on top of the utility voltage variations.

Protection

All **PropSava single and 3 Phase Power Optimisation Systems** have a surge arrestor fitted as standard. Surges are short-duration peak voltages – i.e. transient voltages – existing for only milliseconds; but can measure thousands of volts.

In the commercial sector, lightning or power surges cause 45% of electrical equipment damage. Overall, 28 out of 100 cases of damage to electronic equipment are caused by surges. Surges are by far the most frequent cause of damage.

Lifecycle and Warranty

All **PropSava Power Optimisation Systems** are built for 20 – 40 year lifecycle, and warranted against failure for up to 10 years.

Find Out More – <http://www.vanguardspower.com>

If your company wants to:

- Reduce your power and electricity costs;
- Increase the life cycle of your electrical equipment;
- Reduce the cost of equipment maintenance and repairs;
- Reduce you CO2 footprint

Call us today for a quotation or the name of your nearest Distributor