Case Study 28845 – Radio Broadcasting Station - Telecoms



Customer: **Oriental Pearl Radio and TV Co. Ltd, – For Cuban Radio Station**

Background: Being the first cultural company in stock market, Shanghai Oriental Pearl (Group) Co., Ltd.(OPG) has 23 subsidiary companies, its recent major business including touring, radio and TV transmission service, media investments & advertising operation, real estate investment etc., strategically setting touring as basis and media as goal. By June 2003, OPG has registered a capital of 0.963 billion RMB, with a total assets of 4.417 billion RMB and net assets of 2.974 billion RMB. It also has been listed as one of the 50 pivotal large-scale enterprises by Shanghai government, and one of the 50 most potential listed company in Chinese stock market.

The Oriental Pearl Radio & TV Tower, one of OPG's subsidiary, is the tallest Radio & TV tower in Asia and the 3rd tallest in the world. With the height of 468m, the tower is now the most recognizable landmark of Shanghai.

Problem: Cuba's local power grid suffers from constant voltage fluctuation; power outages; high-range harmonic distortion; with high risk of lightning strikes. This environment made reliable radio transmission very difficult. Many of the older style radio stations constantly needed to repair damaged circuits and equipment. Cuba relies heavily on its radio broadcasting system as a direct means of providing information to its citizens. It was imperative that this new Radio Broadcasting Station did not suffer from the same historic problems and was able to provide a consistent and reliable service at minimum operating costs.

Solution: **IP22 80KVA PropSava 3 Phase Power Optimisation Electro-Servo System** – Y/Y0 1:1 Isolation Transformer, regulated input voltage 415V ± 20%, with output regulated at 380V ± 3%; C-level anti-surge lightning suppressors; EMC anti-high-frequency interference filters; automatic power-on; over and under-voltage protection; phase sequence protection; over current protection with automatic by-pass system.

Effect of installation: Safe isolation with effective suppression of high-frequency interference; elimination of resultant damage from lightning strikes; with delivery of constant voltage has contributed to one of the most reliable and cost effective transmitting Radio Stations in Cuba.

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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 ±5%. However, factors like weather, high demand and others can cause the utility voltage to fall within a ±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

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