

CASE STUDY

Project:	Sollatek Automatic Voltage Regulator (AVR) for GSM Providers
Country:	Ghana
Project value:	US\$3m
Year:	2007 - ongoing
Product:	AVR Including Isolating Transformer



Sollatek™



Ghana mobile phone users enjoy upgraded reception from major GSM operator MTN powered by Sollatek.

Called in to address a specific power issue, Sollatek designers and engineers often additionally identify other ways to help the client. This multi-solution approach is made possible through a mix of leading technologies and an ethos of listening carefully to the client.



When MTN (Ghana's major GSM operator) decided to enhance the quality and smooth running of its mobile phone network for its customers, the company came to Sollatek. MTN's main aim was to protect its equipment from erratic electricity supply and also to achieve full-time running with minimum use of costly backup diesel generators.

The Sollatek electronic AVR has no motor and no moving parts

- a feature putting the company ahead of the competition and translating into two benefits for MTN. Firstly, the absence in the AVR of a motor means savings in maintenance costs and time. Secondly, the Sollatek solid state technology is designed and manufactured to withstand extremes of high humidity, dry weather and dust. These features make the AVR highly reliable and ideal for the company's operations in Ghana.

As work progressed, the three-day training session in Accra revealed

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further ways to fine-tune a system already being enhanced by Sollatek technology as MTN engineers discussed with Sollatek engineers:

- a common loss of one phase due to overhead cables being broken or due to connection damage. This meant frequent use of back-up diesel generators – with all their disadvantages – while electrical companies took several weeks to repair the cables,
- malfunction of the air conditioning systems during change over between generator to grid power.

In the first case, the solution was a modification to the AVR (and training for the engineers) to power the equipment from two phases, thereby keeping the sites running on grid power as much as possible. Similarly, some sites are supplied with only one phase and neutral so a similar modification to the AVR was offered to run the site on single phase. To combat the air conditioner problems a Sollatek Freoguard30 was provided.



The Sollatek Freoguard 30

Sollatek's high performance systems are rugged, highly reliable, affordable and the ideal solution for MTN and other companies operating in demanding environments such as Ghana. A bonus to MTN is the peace of mind of good local support readily available at the Sollatek office and workshop in the Ghanaian capital Accra.

MTN is now considering Sollatek's solar power systems as a viable alternative for powering their sites in the northern part of the country where the electricity supply is especially poor and generators are used for weeks on end.



Internal view of a Sollatek Outdoor Isolating AVR.



Voltright™

The Sollatek AVR Range

The Sollatek range of Automatic Voltage Regulators covers single and three phase applications. From small domestic (250 watt) to large industrial 500kVA applications, single and three phase applications, the Sollatek range of voltage regulators is your solution in the most erratic of power conditions.



AVR single phase

AVR three phase

AVR three phase OI