



## Teraco tackles load shedding, efficiency and management issues with Power Xpert 9395 UPS

**Location:**

South Africa

**Segment:**

Data Center

**Problem:**

Ensuring consistent power quality in an environment where the electrical grid is under serious strain

**Solution:**

Isando, 2 x Power Xpert 9395 1100kVA in TEM1, 4 x Power Xpert 9395 550kVA in TEM2, 2 x Power Xpert 9395 550kVA and 2 x Power Xpert 9395 275kVA in TEM 3 with an additional 2 x 550kVA's planned for TEM 3 in Q1 2016.

Cape Town, 2 x Power Xpert 9395 550kVA in CT1, 2 x Power Xpert 9395 550kVA and 2 x Power Xpert 9395 275kVA in CT2.

**Background**

Teraco was formed to take advantage of large scale deregulation of the telecommunications sector in South Africa, and has grown at an exponential rate, validating their business model; a large proportion of the large enterprises in South Africa rely on Teraco for interconnection services.

The deregulation nurtured a more open market and offered significant choice for consumers. Teraco nowadays offers vendor-neutral data center model, producing colocation, guaranteed power and environmental support, and physical security to customers, who are responsible for their own storage, soft security and networking. Teraco trades on its vendor-neutral status: competitors still sell bandwidth and storage, as well as other

*“Load shedding is a fact of life in South Africa”*

*Brendan Dysel, Head of Facilities at Teraco*

services, but Teraco continues to offer pure neutral colocation space. And that makes the provision of the services it provides absolutely mission critical to its ability to do business.

**Challenges**

South Africa may have deregulated its telecoms market – but the same can't be said for its local electrical grids, which are still firmly in state hands. The same growth that has helped Teraco onwards and upwards has, however, also put significant strain on the country's electrical grids. Indeed, the company places significant emphasis on choosing sites which are

located in grids that are not prone to load shedding.

“Where in, say, European Union markets, an outage might be a one in 20 year event worthy of description as a catastrophe, load shedding is a fact of life in South Africa,” says Brendan Dysel, Head of Facilities at Teraco. “Local grids simply haven't been able to keep pace with the rising demand for electricity, and they're under serious strain. To meet our service level agreements on the power side of things, we need to ensure that generators and UPS devices run, and continue to run, in the event of load shedding.”



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### Solution

Clearly Teraco has to keep on ticking when the power's out – and it's out more often for them than is usual for a top flight data center operation. In this situation, it's not just hardware that has to be up to the job – quick, efficient, effective and, above all, trustworthy support from suppliers is indispensable.

*"Things like increased maintenance regimes, fuel quality and back to back agreements with vendors are important to us," says Dysel. "But just as important is our relationship with suppliers. We need to know that we can pick up the phone on a Sunday morning and have someone on site and solving a problem within 40 minutes."*

Teraco specified products on a 'speeds and feeds' basis, evaluating all of the vendors and eliminating those products or companies that weren't up to the task in hand. But then it took into account the relationships it already had with suppliers, proximity of service organisations and levels of responsiveness, too.

The specification was deceptively simple: Teraco offers TEMs (Teraco Energy Modules) rated to 1100kVA per LEG, typically calling for two 550kVA UPS with n+1 redundancy. By going for two UPS units, it was able to add phases as each facility grew.

But with Eaton's Variable Module Management System in place, Teraco was able to secure further benefits, too.

When Teraco settled on Eaton or its first, second and third TEMs, across its facilities in Cape Town and Isando, it picked Power Xpert 9395 UPS. As a colocation provider, it also benefited from the Power Xpert 9395's modular nature, switching on 275kVA units as its Isando facility grew. Power Xpert. This avoided unnecessary CAPEX and OPEX, and reduced unnecessary costs. As load fluctuates, loads can be transferred to the optimum number of modules, and Eaton's solution can kick in extra modules as needed.

### Results

The results speak for themselves: Teraco continues to dominate the large enterprise vendor neutral colocation space in South Africa. Furthermore, as a real estate business, the more efficient the energy supply is, the more efficient the business model is. As with other data center providers, the company has PUE target that it must hit for its business model to be successful – and with Eaton, it's doing exactly that. Not bad for a system that regularly has to deal with local grids shedding load.

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