“A RELIABLE SOLAR HYBRID SYSTEM, WITH BATTERY BACKUP, WAS REQUIRED TO POWER DIAMOND BANK’S ATMS THROUGHOUT THE DAY, AS WELL AS OPERATE THE LOW-VOLTAGE DEVICES REQUIRED AT NIGHT.”

EDWIN C. ENWEGBARA  EAUXWELL NIGERIA, LTD.

LOCATION  Challenge  Solution  Outcome
Victoria Island, Nigeria  To provide reliable power supply for ATMs.  Solar hybrid system with Trojan deep-cycle batteries for energy storage.  Reliable and consistent access to banking for area businesses and residents.

16 SOLAR PREMIUM BATTERIES
24 HOURS OF POWER EACH DAY
365 DAYS PER YEAR
**LOCATION**

Serving as the main business and financial center of Nigeria, Victoria Island’s business district has expanded rapidly over the past 25 years. Today, Victoria Island is one of Nigeria’s busiest centers of banking and commerce, with most major Nigerian and international corporations headquartered on the island.

**CHALLENGE**

The implementation of a “cashless policy” by the Nigerian government resulted in the rapid deployment of many ATMs to ensure bank customers had access to their accounts at all times. However, the country’s electric grid regularly went down six to eight hours at a time, and often, up to 24 hours.

**SOLUTION**

Diamond Bank worked with Eauxwell Nigeria, Ltd. and systems integrator The Solar Shop Ltd. to develop a hybrid solar power solution using Trojan’s deep-cycle battery technology to provide reliable energy storage. Trojan’s Solar Premium line was selected because the batteries are specifically designed for deep-cycle use and optimized for deep discharge and recharge characteristic of renewable energy systems. In addition, Trojan batteries were selected due to their excellent cycle life performance and optimum functionality in tropical regions, such as Victoria Island.

**SYSTEM SPECIFICATIONS**

- Batteries: (16) Trojan SPRE 06 415* Deep-Cycle, Flooded Batteries
- Solar Modules: (20) 3.5kWp SolarWorld AG Solar Modules
- Inverter: SMA Sunny Island 5048-US
- Charge Controllers: (2) Steca TAROM 4401
- Monitoring System: (1) SMAWebbox
- System Integrator: Eauxwell Nigeria Limited

*The Solar Premium SPRE 06 415 battery was previously known as the L16RE-B battery.

**OUTCOME**

Residents and businesses of Victoria Island now have reliable and consistent access to their bank accounts 365 days a year. The backup power system also operates low-voltage devices at night, including surveillance cameras, security cameras, and alarm systems.

**BATTERY SOLUTION**

> Outstanding Performance
> Exceptional Quality
> Rugged and Durable

**PARTNER**

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Trojan batteries are available worldwide and backed by outstanding technical support provided by full-time application engineers.

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