Mission-critical users depend on continuous, high-quality power to keep operations going—no surges, spikes, brownouts, or interruptions.

UPS units ensure clean, consistent power by switching to battery power instantly, if needed.

Batteries provide the backup power for UPS units. Unfortunately, batteries have a limited life determined by how much they serve as well as by their exposure to high temperatures and other factors.

Processors and firmware, inside each UPS, collect minute-to-minute performance data and send detailed status messages via a WebSNAP card.

Temperature and humidity probe can monitor the environment of the batteries. This data greatly increases the accuracy of battery life predictions.

E-mail server allows the UPS to send daily updates using the Internet via a firewall—safe, one-way (outbound only) communication.

Daily heartbeat data includes minute-to-minute readings of as many as 200 measures, such as load, voltage, frequency, discharge events, time, temperature, and user settings.

Customer Reliability Center is dedicated to collecting, assessing, and responding to data about the status of UPS units globally.

Eaton remote-monitoring servers collect and store data from all UPS units for 3 years. Using secure and redundant servers offers protection and ensures data availability.

eNotify analysis software evaluates the health of each UPS by analyzing current and historical data and enables accurate predictions of UPS status.

Monthly reports summarize UPS status with relative health index score card and other displays.

Analysts at the Customer Reliability Center are on duty 24x7 to respond to alarms.

Alarms may reach an analyst from two different sources. An alarm may come directly from a UPS identifying one or more conditions from a pre-programmed list of nearly 55 events. Or an alarm can be generated by the analysis software when it detects an anomaly.

Responses include:
- Determine that no immediate action is required (false alarm, etc.)
- Guide the on-site customer to resolve the problem (re-set switch, etc.)
- Dispatch technician (replace battery, etc.)

Anomalies are detected whenever data is outside a defined range or when history reveals a trend that predicts future problems.

Alarm events are classified in two groups. Critical events are directed to an analyst for immediate attention. Secondary events trigger instant e-mail updates to customer stakeholders.

Consultants with deep expertise on specific units are on call to advise on unusual problems.

Service coordinators are responsible for all service calls—dispatching technicians and following up with customers.

Technician makes service calls to the customer’s site. Because the nature of the problem is known, dispatchers send a technician with the specific skills and experience needed. The appropriate replacement parts are on the truck.

Customer stakeholders are notified of critical problems instantly via the communication channels that they prefer—e-mail, voice mail, instant messaging, etc.