

Wilson Engineered Systems, Inc.

10 Year Battery Life Success Case Study

In 2006, we replaced 160 batteries at a major hospital on their critical data center UPS. Battery performance, life and cost are critical to data centers and hospitals. Unmonitored UPS batteries are routinely replaced in data centers based solely upon age, an expensive high risk approach. Expensive due to potential premature purchase of costly batteries and high risk because battery health (hence battery capability) is unknown at any particular time. The hospital has bettered that approach using high quality UPS and incorporating pro-active battery impedance monitoring.

Via VPN we monitor this UPS battery plant along with the redundant UPS system on site. As individual batteries amongst the 160 have weakened or begun to fail we have worked with the hospital and replaced those individual batteries. Promptly doing so extends the overall battery system life. A failing battery can prevent the 39 other batteries in series with it from performing when needed. Furthermore one bad battery can block charging current to the 39 good batteries in series with it. When charging current is blocked, the other 39 batteries accelerate their aging and failing process. In a worst case scenario four bad batteries could remove battery support to the UPS and harm the remaining 156 batteries!

Where the typical battery replacement interval would have been 4 - 5 years, the hospital successfully extended this to 10 years. That may well be a record and done while simultaneously reducing risk. Proactive battery monitoring and service is not the sole reason for this superb performance but it is a key factor. Other factors include a high quality UPS with IGBT technology in the battery charging circuit, high quality batteries and a good localized temperature. All these factors are important to maximize battery life in UPS applications.

Significant end results for the hospital include,

- 1) a more reliable power system for their data center,
- 2) peace of mind that critical components are monitored,
- 3) significant reduction in data center operational costs.

Alternatives toward this approach are available for any critical power site. We offer equipment and field services to replicate this high quality approach. These include both permanent and portable battery impedance testing, battery replacement with high performance batteries and consulting advice.

Equipment in place at the hospital is Toshiba UPS, East Penn batteries and BTECH battery monitoring.

For similar results in your critical power and service needs, please feel free to contact us.

Wilson Engineered System, Inc., 11501 Columbia Park Drive West, Bldg 100, Jacksonville, FL 32258
904-880-0118

www.wilsonengineered.com