

Batteries and the Health Care Environment

By Anderson Hungria | November, 2015

Is your health care organization looking to reduce its dependency on batteries in your electrical infrastructure? You're not alone. Batteries are used to back up all manner of health care equipment - from imaging machines to data centers. In some cases they are absolutely necessary, but if you could reduce your dependency on chemical batteries while positively impacting your ability to provide quality patient care and run your business, wouldn't you want to consider the alternatives?

Health care facilities focus on reliability and consistency when it comes to patient care. They simply cannot afford for diagnostic, imaging, or data storage systems to be unavailable when they are most needed. With that in mind, why are health care facilities still so dependent on batteries – with all of their inherent challenges – for their most critical power-protection needs? It is time to challenge the notion that batteries are a necessary evil.

Historically health care facilities have relied on valve-regulated lead acid (VRLA) batteries to back-up critical electrical components because they:

- **Produce high amounts of current on short notice**
- **Have a relatively long runtime – typically 5 to 15 minutes**
- **Have a relatively low initial cost**

But VRLA batteries come with a host of disadvantages that organizations and facility managers around the world have learned to accept:

- **Unpredictable reliability**
- **Short lifespan**
- **High maintenance, replacement and disposal costs**
- **Large footprint and weight**
- **Need for special air conditioned and well ventilated rooms**
- **Need for battery monitoring systems**
- **Need for spill containment**
- **Exposure to hazardous gases and toxic contents**

A Better Approach

Flywheel energy storage has disrupted the health and safety market and is actively reducing the health care industry's dependence on VRLA batteries. Uninterruptible power supply (UPS) systems with integrated flywheel energy storage are enabling this revolution. In general, flywheels are safer, more reliable and less expensive to operate than batteries. They are an alternative to batteries, with a smaller footprint, longer life-span, and lower overall total cost of ownership than any battery on the market.

Flywheel energy storage solutions meet the power protection needs in health care facilities and come with tangible performance and economic advantages:

- **High reliability**
- **High predictability**
- **More space efficient**
- **Free from hazardous or toxic elements**
- **Lower maintenance requirements – leading to much lower maintenance costs**
- **Does not require special ventilated rooms**
- **20 year life expectancy with no degradation in service**

Flywheels are capable of handling the energy storage requirements at a health care facility – carrying the electrical load for the time required for a generator to kick into action. They also allow healthcare facilities looking to reduce their carbon footprint to become more compliant with environmental regulations, on their way to LEED or alternative green certifications.

Are you ready to reduce your dependency on batteries? Active Power's CleanSource® UPS and PowerHouse™ modular power systems can help with that. If you've experienced the downfalls of chemical batteries in your facility, it's time to discover the advantages of a cost effective flywheel alternative.