

# AI Driven Energy Management for Hospitals and Healthcare Facilities

Monitor *Power Quality*, Improve *Electrical Reliability*, and Lower *Energy Costs*

## Application Guide



- Identify the Least Reliable Facilities and Circuits to Improve Power Quality
- Respond Proactively to Power Quality Problems Before They Become Critical
- Identify the Most Energy Wasteful Facilities and Circuits to Maximize Energy Efficiency Improvements
- Reduce Costs with AI-based Predictions
- Manage All Commodity Usage

## Identify the Least Reliable Facilities and Circuits to Improve Power Quality

Power quality is a critical need for hospitals and healthcare facilities. Areas such as operating rooms, nuclear medicine, and emergency rooms must have reliable power. A power outage can be dangerous and costly in both time and resources. Studies show that 50% of mission critical power outages are due to power quality issues and that 80% of these issues originate within the facility. In addition to outages, power quality events such as voltage fluctuations can cause disruptions and damage sensitive, expensive hospital equipment. Prevent downtime by identifying the highest risk facilities and circuits with the worst power quality using EIG's AI-driven EnergyPQA.com® cloud-based energy management system and power quality meters.

- Automatically grade facilities on best-to-worst power quality risk.
- Identify specific circuits in the worst facilities to provide simple meaningful actions that improve reliability and safety of the power system.
- Gain deep insights into all aspects of the hospital's voltage reliability and power quality with extensive dashboards and customizable reporting.

## Respond Proactively to Power Quality Problems Before They Become Critical

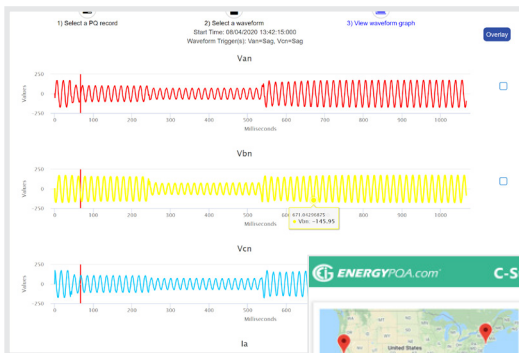
To remain operational, hospitals must respond to power quality events before they escalate. EIG's power quality meters and EnergyPQA.com® energy management system send email alerts for programmed alarm limits and for all power quality events.

- Send email alerts to multiple recipients.
- Emails contain a link to the event details in the EnergyPQA.com® system.
- Take remedial action before problems have escalated to the point of power or equipment failure.

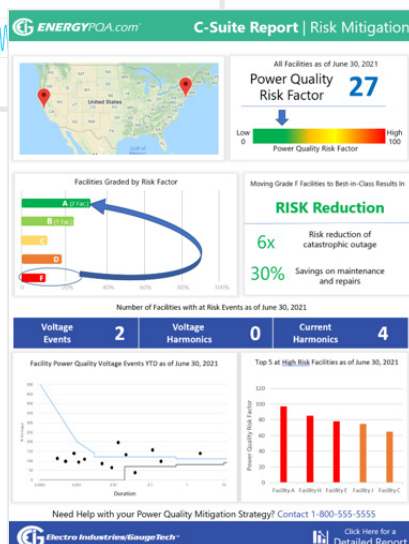
## Identify Wasteful Facilities and Circuits to Improve Energy Efficiency

According to ENERGY STAR®, a U.S. government-backed energy savings program, U.S. healthcare facilities spend over \$6.5 billion on energy each year. Manage healthcare facility energy resources and lower your energy costs with the EnergyPQA.com® energy management system's smart analytics, which transforms traditional energy management by identifying the most energy wasteful facilities and circuits to maximize energy efficiency improvements.

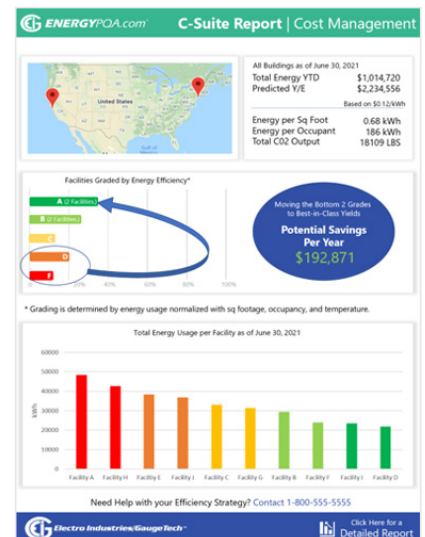
- Automatically grade facilities for energy efficiency.
- Identify potential savings by improving least efficient facilities and circuits.
- Perform simple meaningful actions to save energy and costs by focusing on the most inefficient circuits.



View Waveforms of Power Quality Events



View Power Quality Risk Factors for All Facilities

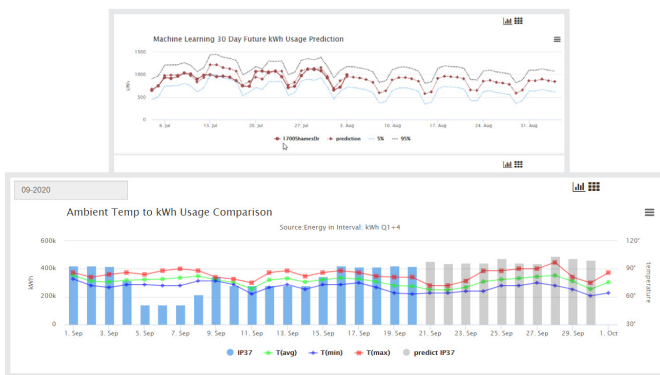


View Facility and Circuit Grading with Potential Cost Savings

## Reduce Costs with AI-based Predictions

The EnergyPQA.com® system's AI-based energy predictions provide insights into healthcare facilities' energy trends into the future. By looking at future predictions, a facility manager can then be proactive to make sure that energy reduction programs are successful. The system uses historical energy readings and future weather forecasts to provide usage and demand before they occur, at all metered points.

- Accurately predict demand and energy usage into the future with advanced AI and machine learning.
- Take action on predicted peak demand in advance of penalty.
- View energy dashboards that detail energy usage and demand across facility areas and provide insightful predictive analysis.

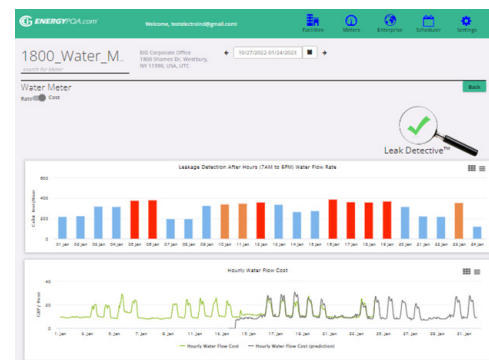


Use Artificial Intelligence to Predict Energy Usage into the Future

The system emails notifications of new predicted peak demand up to three days in advance. Since demand charges can be as high as 50% of a facility's actual energy bill, this information can yield significant savings. Use the EnergyPQA.com® system's predictive energy usage dashboards to judge the success of demand mitigation efforts.

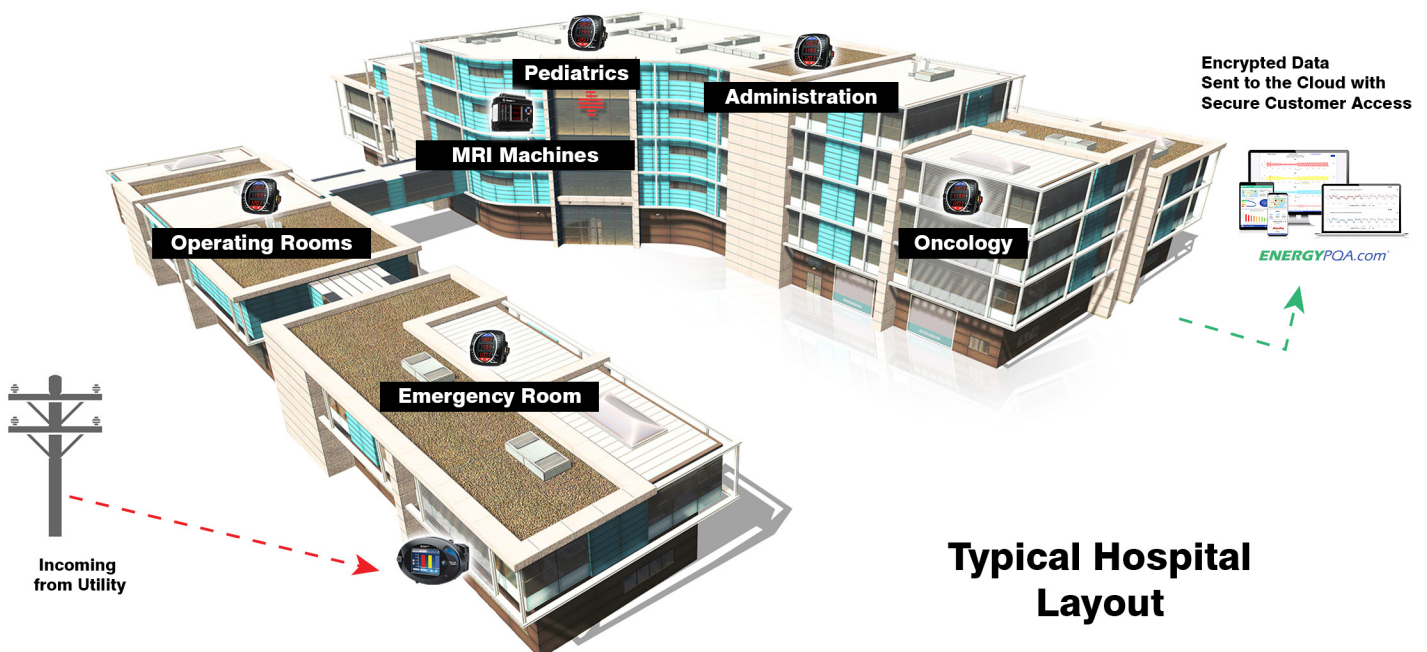
## Manage All Commodity Usage

The EnergyPQA.com® system allows you to track all commodity usage in one place, eliminating the need for discrete systems for water, air, gas, electric, and steam (W.A.G.E.S.) usage. View detailed usage and commodity cost dashboards. Trend commodity usage within a building and compare use between hospital buildings. With the unique Leak Detective™ feature, be alerted to air and water leaks, allowing timely action to save resources and money. Generate reports for all W.A.G.E.S. commodity usage.



W.A.G.E.S. Dashboard

## Making Hospital Energy Usage More Reliable, Efficient, and Cost-Effective



Typical Hospital Layout



# Typical Bill of Materials

## Cloud-Based Energy Management Solution

**EnergyPQA.com®** - AI Driven Energy Management System, providing energy analytics and predictions, reducing costs, and improving power system reliability

**Ordering Part #:** **ENERGYPQA-1Y**

**Learn More:** <https://www.electroind.com/products/energypqa-com-energy-management-system/>



## Critical Load Point

**Nexus® 1500+** - Advanced Power Quality Meter

Example Installation: Utility Entry Points, Critical Loads, High Power Sensitivity Points

**Ordering Part #:** **Nexus1500+-D2-60-20-V3-X-X-X-X**

**Learn More:**

<https://www.electroind.com/products/nexus-1500-power-quality-meter-with-phasor-measurement-unit/>



## Large Loads (400 A or more)

**Shark® 250** - Cyber Secure Power and Energy Meter

Example Installation: Typical Building Loads, Substations, Control Panels

**Ordering Part #:** **Shark250-60-10-V2-D2-INP100S-X-X**

**Learn More:** <https://www.electroind.com/products/shark-250-power-meter/>



## Machine Level Monitoring

**ST40** - Compact DIN Rail Mounted Energy and Power Quality Meter

Example Installation: Medical Equipment Monitoring

**Ordering Part #:** **ST40-60-10-V5-INP10**

**Learn More:** <https://www.electroind.com/products/st40-compact-din-rail-energy-meter-with-power-quality/>



## Engineering Services

Contact EIG's highly experienced engineers, with a variety of skills in the fields of electrical engineering, software engineering, and meter engineering, to assist in the design, commissioning, start-up verification, and certification of installations. Our team will help you get your project up and running, and ensure its success.



**Contact EIG at:**

Email: [sales@electroind.com](mailto:sales@electroind.com)

Telephone: 516-334-0870

Website: [www.electroind.com](http://www.electroind.com)

**Application page link:**

[www.electroind.com/energy-management-for-hospitals/](http://www.electroind.com/energy-management-for-hospitals/)

