

AI Driven Energy Management for Shopping Malls

Reduce **Costs** and Improve **Energy Efficiency**

Application Guide



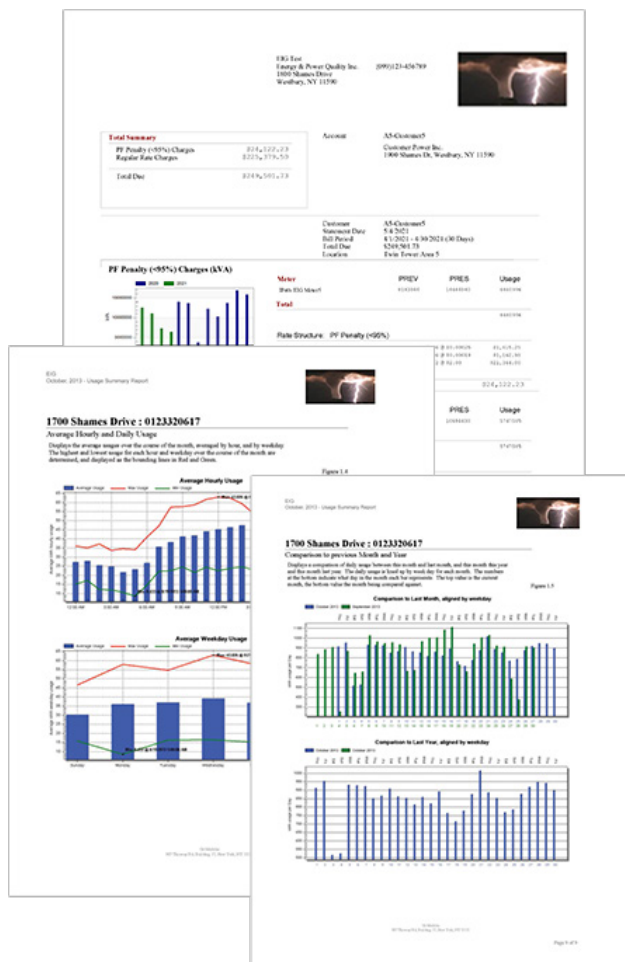
- Drive Energy Conservation Behavior from Tenants
- Automatically Bill Tenants for Their Energy Usage
- Reduce Costs with AI-based Predictions
- Identify the Most Energy Wasteful Buildings and Circuits to Maximize Energy Efficiency Improvements
- Manage All Commodity Usage

Drive Energy Conservation Behavior from Tenants

Submetering of tenants is one of the first recommendations for reducing shopping mall energy costs. This action alone has been shown to result in energy savings of up to 18%. Change tenant mindset using EIG meters and the EnergyPQA.com® energy management system to provide energy usage awareness.

- Bill tenants for their actual energy usage rather than relying on square footage billing.
- Ensure fairness in billing and reward energy conservation.
- Automatically generate tenant billing and executive summary reports.

When tenants see how their usage directly affects their bills, they have motivation to reduce their energy use. This results in both immediate and long-term savings.

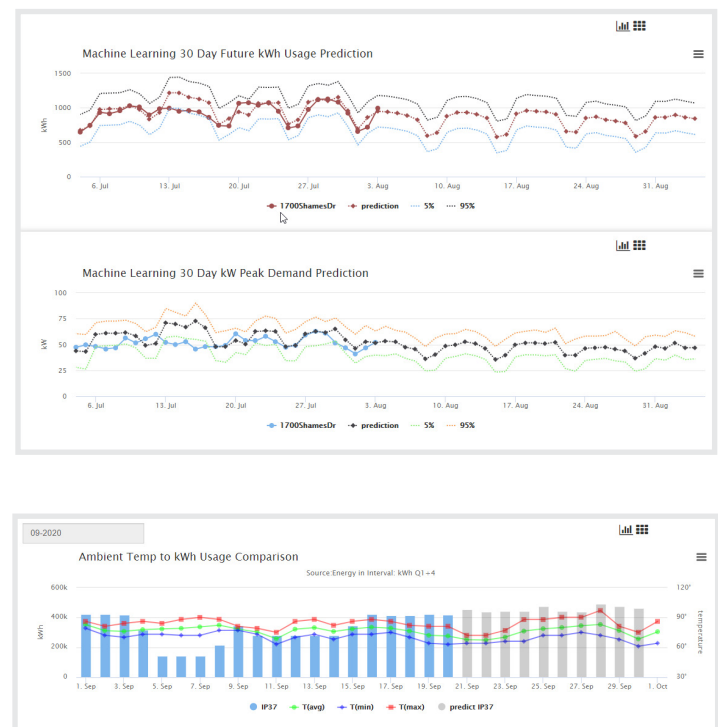


Reduce Costs with AI-based Predictions

The EnergyPQA.com® energy management system's AI-based energy predictions provide insights into building energy trends into the future. By looking at future predictions, a shopping mall 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 peak demand predictions in advance of penalty.
- View energy dashboards that detail energy usage and demand across shopping mall areas and provide insightful predictive analysis.

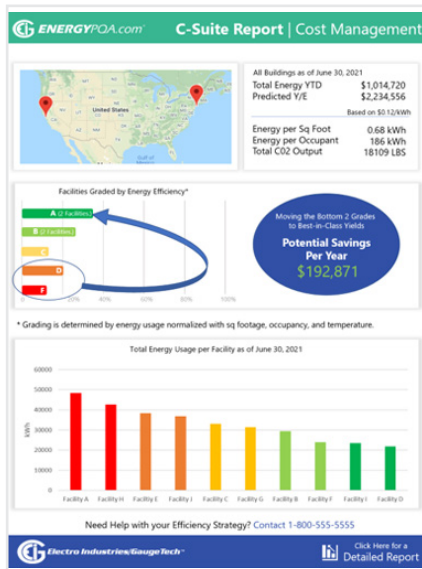
The system emails notifications of new predicted peak demand up to three days in advance. Since demand charges can be as high as 50% of a facility's actual energy bill, this information can yield significant savings. Use the EnergyPQA.com® energy management system's predictive energy usage dashboards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



Use Artificial Intelligence to Predict Energy Usage into the Future

Identify Wasteful Buildings and Circuits to Improve Energy Efficiency

Shopping malls are major energy consumers due to their huge lighting load, large number of shoppers, and long operating hours. Areas often noted to be energy inefficient are common areas, such as entry ways and public restrooms, HVAC systems, and food courts. Since poorly performing buildings use up to seven times more energy than highly energy efficient buildings, increasing energy efficiency is not only beneficial for a shopping mall's bottom line, it also helps to reduce its carbon footprint.



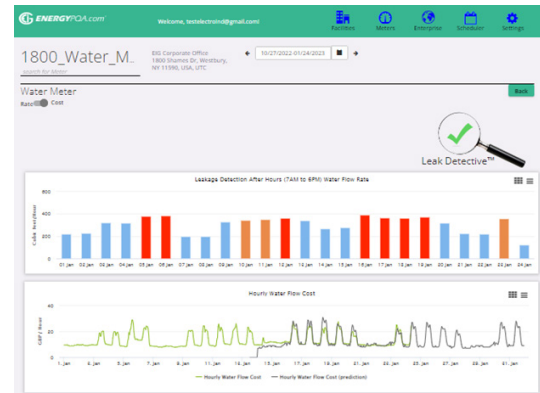
View Buildings Graded for Energy Efficiency

- Focus on building circuits most in need of improvement.
- Determine and compare common area energy usage and examine ways to reduce it.

Since energy efficient buildings can consume up to 85% less power, identifying poorly performing buildings and circuits is essential to reduce energy use and costs.

Manage All Commodity Usage

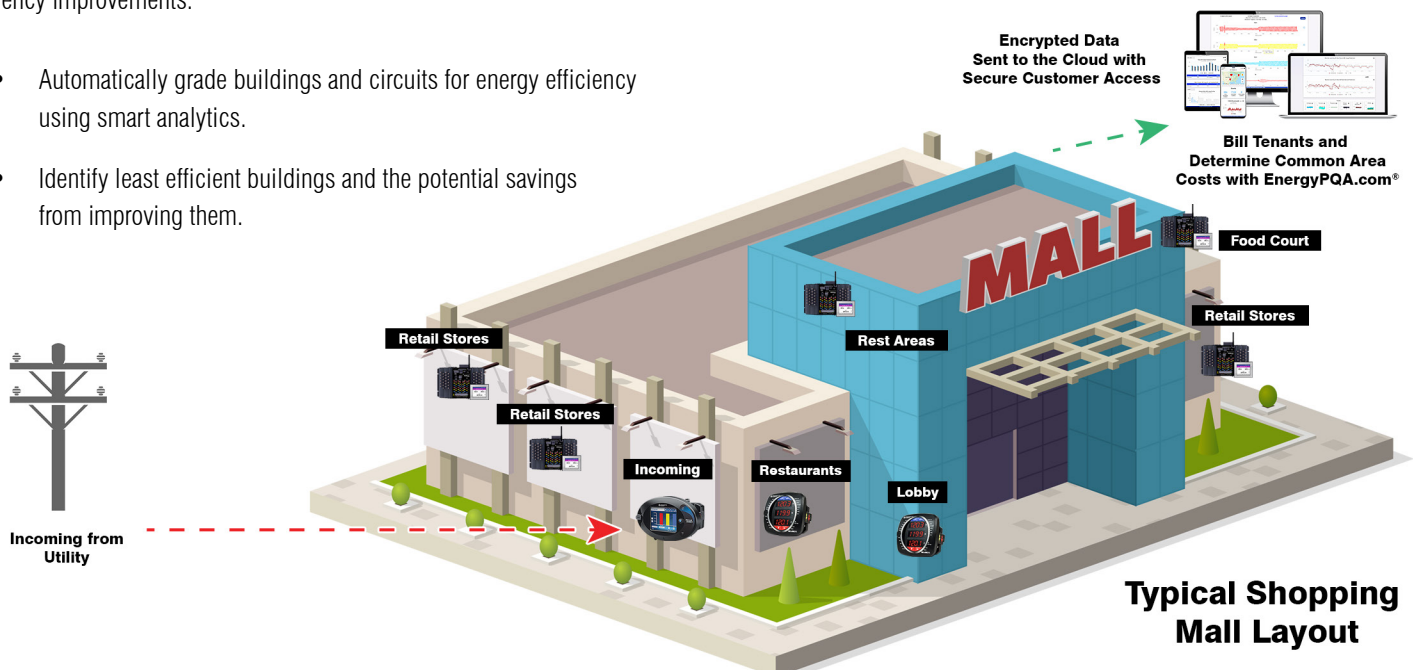
The EnergyPQA.com® system allows you to track all commodity usage in one place, eliminating the need for discrete systems for water, air, gas, electric, and steam (W.A.G.E.S.) usage. View detailed usage and commodity cost dashboards. Trend commodity usage within a building and compare use between buildings. 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

EnergyPQA.com® transforms traditional energy management by identifying the most energy wasteful buildings and circuits to maximize energy efficiency improvements.

- Automatically grade buildings and circuits for energy efficiency using smart analytics.
- Identify least efficient buildings and the potential savings from improving them.



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/>



Facility Incoming from Utility

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/>



BACnet Capable Meter

Shark® 100B - Power and Energy Meter with Native BACnet/IP

Example Installation: Providing energy data to existing building management systems

Ordering Part #: **Shark100B-60-10-D2-X**

Learn More: <https://www.electroind.com/products/shark-100b-bacnet-ip-power-meter/>



Smaller Loads (200 A or more)

MP200™ Multipoint Metering System - 8 Three Phase Input Meters

Example Installation: Smaller Panel Boards, High-density Circuits

Ordering Part #: **MP200-Y-60-10-V2-WIFI-MDSN**

Learn More: <https://www.electroind.com/products/shark-mp200-multi-point-energy-meter/>



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

Telephone: 516-334-0870

Website: www.electroind.com

Application page link:

www.electroind.com/energy-management-for-shopping-malls/

