Purpose - SiteWatch is an Energy Monitoring, Data Analytics and Engineering Support system providing an advanced IoT solution, designed to help achieve Sustainability, Reliability and Operational Efficiency.

SiteWatch offers a Fully Integrated, Customizable, and Scalable monitoring solution for quick and simple real-time monitoring of electricity, natural gas, and water in commercial buildings. Other parameters that can be monitored include space temperature and humidity, fan filter loads (through differential pressure), leak detection, and many others

Hardware - SiteWatch energy sensors are wireless, snap-on, and self-powered, selected based on the monitored load. Other sensor types are selected based on installation requirements, are typically battery powered (with long-life, replaceable batteries), and transmit wirelessly to gateways



Energy Wireless, self-powered CTs clamp to machine or panel wires





meters, temp sensors, or other measurement devices



Water Flow

Potable water, hot water, chilled water, or other fluid directly from pipe connected meter (NPT)

How is Data Acquired and Collected?

Through wireless sensors, self- or battery-powered, data is collected on key parameters: electric current on machines or panels, flow on water and gas, other sensors to LoRaWAN to a cloud-connected gateway, then transmitted to online servers and presented on **SiteWatch 360**



LoRaWAN Gateway

Links sensors to cloud-based server using Wi-Fi, wired LAN, or cellular



Dashboard View data, schedule reports, create alerts, add users



SiteWatch 360 Tools - Access a site or account level dashboard, use Plotting to map data and visualize energy usage against other parameters, create modular and custom reports and tables, and set alerts based on site-specific parameters



Account Level Dashboards - Energy usage is summarized for a group of sites for the year and previous week. Identify high energy cost days and react in real-time to unintended usage





Site-Level Dashboards - High-level summary of a site's energy use for recent periods or historically. Quickly review a site's operating parameters, the number of measurement points, and usage data - electrical, water, natural gas. See today's usage or demand vs. typical usage or demand from previous days and vs. a historical average

Electricity, natural gas, water consumption, can all be highlighted on the dashboard depending on which data is most critical.





Demand Mapping - By site, by zone, by usage category, etc., demand mapping uses color intensity to indicate relative demand throughout a reporting period, with the more intense (red) color indicating hours with the highest energy demand (as shown below). These graphics allow a user to easily understand when energy use is highest (and lowest) throughout the day. These 'maps' can be compared to peak demand periods, when energy costs are highest, and when the overall energy use can affect energy prices through the year.









How does this report provide value? By reducing the time needed to understand when energy is used by visually mapping information. Knowing if unexpected energy use is taking place or where and how peak (highest) energy use occurs helps manage costs, both on the consumption side (kWh and kW costs) and on the supply side (better utility contracts)



Comparing Energy Costs and EUI by Area - Comparing sites within an account requires energy use to be normalized, by cost or by area. A building with half the area of a similar building on the same campus may use less or the same, or even more, energy. Normalizing energy use by dividing by service area allows a metric such as kWh per square foot to compare buildings at different sites



How does this report provide value? Normalizing usage between sites can be time consuming and may be limited to monthly utility bills for a whole site. Without more incremental measurement, such as for tenants, a site cannot generate this performance indicator at all. With submeter data, a floor, zone, building, etc., occupied by the customer can be separated from the rest of the building



What is included in a SiteWatch monitoring project:

- Hardware energy, temperature, pressure, signals, tank level sensors, gateways for communication to the cloud
- Platform access with unlimited user seats
- **Support** including engineering reviews, ad-hoc custom reporting, scoping and system design

What is SiteWatch Support?

- · Defining measurable objectives
- Scoping for short- and long-term goals
- Software and bridge configuration, and remote installation support
- Design reports, alerts, and analytics to align objectives with monitoring
- · Training on software system including visualizations, alerts, and reports
- Unlimited user seats for the software
- · Free perpetual software updates
- · Warranty on all hardware
- · On-going strategy consulting and engineering support as needed
- · Periodic data reviews

Contact and Pricing

- $\hfill\square$ An example scope with pricing can be provided on request
- Scoping is highly site-specific. Assistance with developing a full (or partial) project scope is included in the quotation process



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