



Applications

- EnergiStream software provides a scalable application for complete energy management of all energy loads regardless of location and from a single interface
- Sub metering. Gather and aggregate power information from a variety of different electrical loads or locations
- Capture power usage per minute and energy usage (kWh) over selectable periods of time
- Environmental monitoring
- Energy Load grouping including reporting at all levels within single or multiple locations
- Calculate and allocate costs to power a building, department, campus or whole enterprise

Benefits

- EnergiStream quickly pays for itself by helping you to reduce energy consumption and costs
- Significantly cut energy expenses using energy cost control and technology upgrade ROI planning. Streamline maintenance and implement best practices with more complete information
- Increase uptime, identify the root causes of power quality problems Simplify your energy budgeting /forecasting and capacity planning
- Benchmark buildings and evaluate energy performance to internal and external metrics
- Reduce energy costs by identifying waste areas and applying best practices or equipment and process improvements
- Reduce downtime. EnergiStream® alerts provide pre-emptive notifications of out of band events such as low, high current x2, loss of load, reducing loads where consistency should be, and environmental alarms re high/low temperature or humidity
- Real-time visibility into power usage to operate or manage power assets and more efficiently load shed
- Ability to set a maximum on power usage and threshold alerts to help stay within energy budgets

EnergiStream®.

Advancing Building Energy Efficiency



EnergiStream® is a complete hardware and software solution for monitoring, reporting and managing your building, industrial, corporate or campus energy consumption, cost and carbon footprint, along with their environmental operating conditions.

Monitors the energy consumed by many loads, ranging from HVAC, Lighting, Data Centres, Pumps, Elevators down to ring-main and plug loads.

Has local, regional or international ability to monitor, manage and group electrical loads and consumer groups.

EnergiStream® provides Facilities & Energy Managers with the ability to reduce energy consumption, improve plant uptime, plan and manage power capacity, and provide billing per department, process, location or building.

When energy costs can exceed 30% of your overall operating expenses, knowing when, where and what in your operation consumes energy is vital.

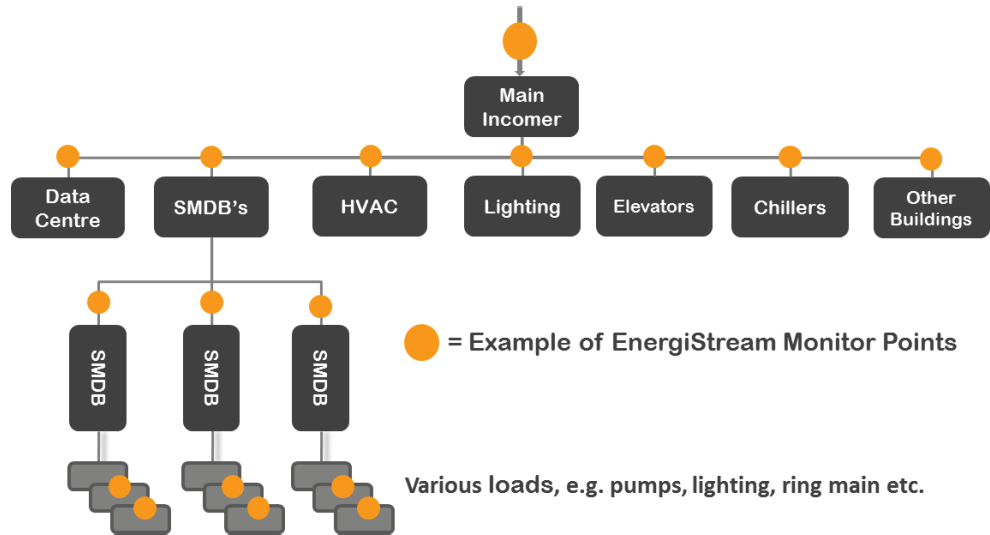
Energy can represent up to 10% or more of corporate earnings for commercial & industrial operations, a significant line item that cannot be ignored. Any problems with the quality of that energy can also have a huge impact on production lines, productivity and output.

Add to this the new focus on sustainable development, legislation and emissions reduction, it seems a monumental set of risks and challenges for any business trying to protect profits and grow.

EnergiStream® provides an integrated, competitively priced energy management platform. Professionals from finance, facilities to engineering will have the level of energy intelligence and control needed to support strategic decisions, capacity planning, establish best practices and reduce operational costs. This without compromising the quality or uptime of your enterprise. EnergiStream® meters monitor key points throughout your power distribution, building and backup systems while enterprise-level software helps you reveal opportunities to increase energy efficiency and reliability with a fast ROI.

EnergiStream[®].

A Building Energy Efficiency System.

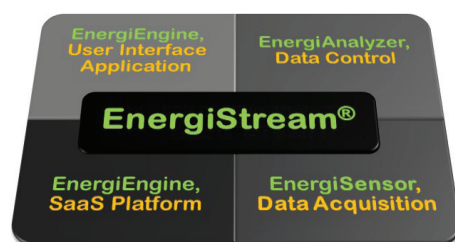


Rising energy costs continue to pressure operators of commercial facilities to leave “no stone unturned” in finding ways to reduce operating expenses. Operators have turned to sub-metering to identify when and where energy is used in order to implement energy conservation measures and programs.

The type of energy data needed by today’s sophisticated facility manager stretches the capability of the Interval data utility meter. Sub-meters provide detailed and an accurate itemized picture of energy use and demand from enterprise level all the way down to a specific circuit or piece of equipment. The use of meters and sub-metering systems provide the energy information necessary for accurate and reliable:

- Load Profiling & Benchmarking
- Tenant Cost Allocation & Billing
- Measurement & Verification
- Energy Conservation & Cost Reduction
- Green Building Initiatives & Legislations
- Capacity Planning

The EnergiStream[®] System.



EnergiStream[®] is a non-invasive, retro-installable Building Energy Management solution.

Its component parts:

- **Software.** EnergiEngine comprises of energy monitoring, metrics reporting, load management & environmental abilities. EnergiEngine operates either in a cloud-computing or on-site appliance architecture.
- **SaaS Platform.** EnergiEngine is a cloud computing based architecture that supports large volumes of Itemized Energy data sent every minute from every channel monitored. Based on a combination of a SQL database and Cloud Platform, EnergiEngine delivers the data you need, when you need it.
- **Hardware.** Depending on the building operators energy efficiency goals & available space a mix of 6, 12, 24 or 48 channel EnergiAnalyzers. The EnergiAnalyzer allows connection of any combination of single or 3-phase loads. EnergiSensors are deployed to measure energy consumption at either MDB, SMDB or load connection and range from 1A to 10,000A per phase.

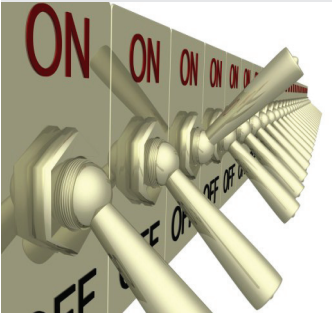
Benchmarking

The well-used saying, “if you can’t measure it, you can’t manage it” is true for energy consumption and efficiency in buildings. EnergiStream[®] allows Managers to measure and benchmark many forms of energy, for example kWh’s, voltage, kw’s, current, power factor and also temperature and humidity.

Industry-standard measurement and verification techniques assure your energy efficiency investments realise maximum payback for the long term.

You can benchmark processes and locations against internal metrics or industry statistics in order to identify improvement projects. Use KPI’s to evaluate progress and identify sustainability enhancing adjustments. EnergiStream[®] can also ensure:

- Accurate “before and after” comparisons in the same view
- Develop energy efficiency initiatives that don’t adversely affect people or productivity
- Evidence based and verified financial benefits
- Building performance metrics are optimised for weather inputs
- Validation of compliance with green building ratings standards such as LEED and Sustainable Building Alliance metrics



Demand Response

EnergiStream® interacts with utilities in real time, which is not only good for the grid, but also for your bottom line.

When a demand response request is received, EnergiStream quickly evaluates the opportunity and automatically responds with the most effective pre-set curtailment strategy.

Instead of manually accessing multiple systems for information, control and agreement, EnergiStream automates the process and provides all curtailment actions and provides management information at a glance.

Based on your regular forecasted conditions and pre-set scripts EnergiStream will decide on the best option, accept or decline the demand response participation request.

Having an Automatic Demand Response plan in place reduces your energy use, and decreases your operational costs.

Why Sub-meter in Office Buildings?

Success in today's commercial property market means maximizing profitability, controlling operating expenses in order to attract and retain top-notch tenants. Whether you are designing a new building or want to reduce energy costs in an existing structure, we have a solution to meet your energy efficiency plan for your office properties. Whether your plan is tenant metering and billing or an advanced energy management solution, EnergiStream® delivers the information and control, you need to achieve your unique goals. It can help you simplify processes, increase occupancy rates, build long-term customer relationships, lower energy costs and manage risk by allowing you to:

Enhance Profits

- Reduce energy spend leading to increased net operating income
- Lower capital expenses with better utilization of your current infrastructure
- Enable best practices and improved operations and maintenance procedures
- Increase power system uptime through root cause analysis of power quality issues

Measure Building Performance

- Measure and track key performance indicators (KPI's), such as watts/sq. foot, occupancy, total/tenant load and common area costs
- Quantify the fiscal impact of efficiency measures that won't adversely impact occupants
- Encourage energy efficient behaviour and measure the success of savings initiatives
- Benchmark efficiency against a database of industry statistics
- Simple installation and easy retrofit provides lower up-front investment
- Accurate tenant billing

**Measurement
& Monitoring
+
Customer
Commitment
=
Sustained
Savings**



Energy efficiency requires a structured approach. Metering, remote monitoring and control provide information that evolves confidence in decision making and helps customers to achieve persistent and sustainable savings.

Improved Uptime

EnergiStream® provides alerts in visual notification, SNMP, email or SMS text, 24x7x365. Out of band energy and environmental events are reported by defined users allowing for process controlled escalation. If power-based assets start to draw excessive current, or start to decrease unexpectedly this could be the 1st sign of asset failure leading to downtime and lost productivity. EnergiStream® provides pre-emptive alerts through an easy to use and configure Management screen.





EnergiStream®.

Which software is right for your project?



Energy Groups

EnergiStream® allows Facilities Managers to create virtual groups of energy data using the highly useful EnergiGroups feature. For example, putting all Lighting energy consumption into one.

EnergiGroup allows real time analysis of the energy consumption and efficiency of all Lighting in one view, allowing instant recognition of your least efficient and most wasteful Lighting circuits regardless of location.

EnergiGroups views provide instant data on most or least efficient loads leading to improved maintenance or controls adjustment to reduce consumption and not efficiency.

EnergiGroups can create combined views to allow energy consumption of offices, retail outlets, HVAC compressors, server farms, data centres, pumps, production lines, or any meaningful group of energy load or human consumers to be monitored together wherever the location.

EnergiStream® features

	Base	Action	Analyse	PowerQ
Energy Monitoring, unlimited channels, locally or globally	✓	–	–	–
Voltage, current, Kw, kWh, PF, VA monitoring of all channels	✓	–	–	–
EnergiGroups & sub groups for load monitoring	✓	–	–	–
Flexi-Phase monitoring per h/w channel	✓	–	–	–
Aggregate loads for overview visualisation	✓	–	–	–
Multi-site, multi-campus, multi-building, multi-country	✓	–	–	–
Multi-country monitoring via users I.P network	✓	–	–	–
Cost, Consumption & Carbon visualisation	✓	–	–	–
Capacity Planning (Real time & Projected) & near capacity alerts	✓	–	–	–
5-year cost, consumption & carbon visualisation	✓	–	–	–
Flexi-Phase monitoring, 1 x 3-phase & single phase per channel	✓	–	–	–
Load Aggregation to provide Shadow Load, e.g. Main Incomer	✓	–	–	–
Voltage monitoring upto 500VAC	✓	–	–	–
Flash Zoom function for detailed data analysis	✓	–	–	–
Customisable calendar/historic views	✓	–	–	–
Copying data to other channels (assumes balanced phases)	✓	–	–	–
Utility-grade logging, every 1, 5, 15, 30 or 60 minutes	✓	–	–	–
Microsoft Office SQL Data Connection (.odc) for reports	✓	–	–	–
Easy to use User Interface	✓	–	–	–
Administrator controlled user login & Password	✓	–	–	–
Cloud & Hosted options	✓	–	–	–
Expandable to many thousand channels	✓	–	–	–
Target setting vs. actual consumption, (via SQL/Excel)	✓	–	–	–
Temperature Monitoring	✓	–	–	–
Monitor pulsed inputs from gas & water meters	✓	–	–	–
Energy period over period analysis, (via SQL/Excel reports)	✓	–	–	–
Energy Alarms & Threshold reports, SNMP, SMS, email & screen	–	✓	–	–
Power capacity user-definable alerts	–	✓	–	–
Peak Demand Management	–	✓	–	–
Load shedding, rules based	–	✓	–	–
Energy Efficiency Metrics, customisable	–	–	✓	–
Data Center PUE Efficiency Metric	–	–	✓	–
Customisable Billing & Time of Use reports	–	–	✓	–
Power Quality monitoring (harmonics and spikes)	–	–	–	✓

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