

EnergiEngine®.

Energy Analysis & Management Software.

Eleceenergy has created a comprehensive suite of energy consumption visualization and analysis tools to support a wide range of itemized energy data applications. The EnergiEngine software suite provides visualization of energy consumption, cost & carbon data.

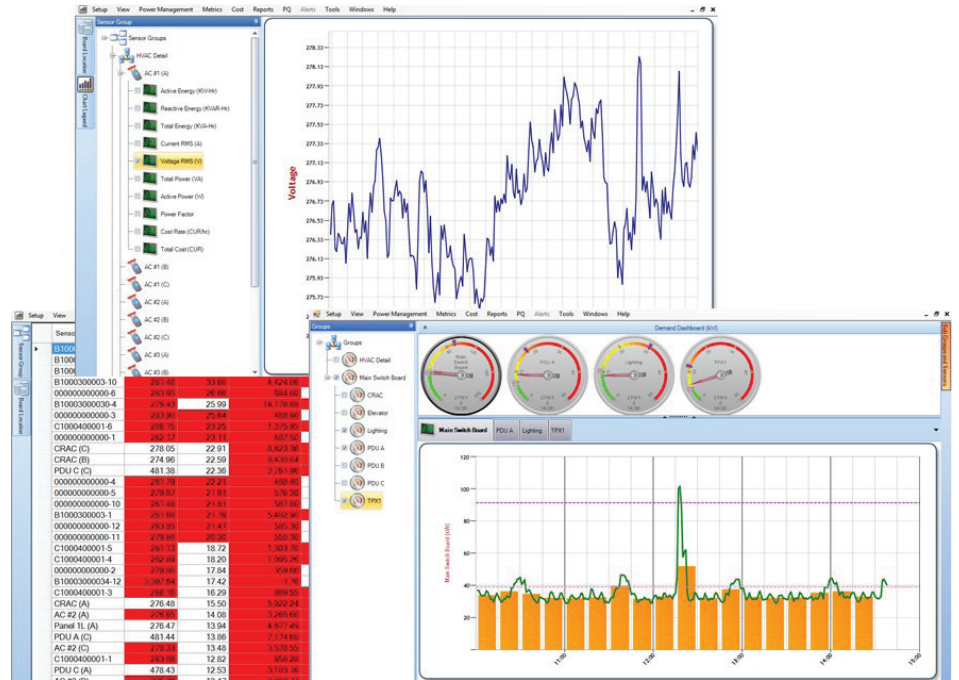
Introduction

Eleceenergy's EnergiEngine enterprise and cloud based software exceeds the traditional boundaries of energy management software by uniting business and energy strategies across your entire enterprise. Stakeholders from management to operations are empowered by actionable energy intelligence. This intelligence provides true accountability to energy cost centres, revealing energy efficiency opportunities, isolates waste areas then help drive cost and risk reduction strategies.

KPI's and advanced analytics help you manage energy in financial, consumption & carbon terms.

EnergiEngine software makes energy-related emissions a manageable variable, helping you achieve "green" environmental initiatives by tracking emissions, isolating each contributor, and supporting reporting requirements for mandatory or voluntary Government or Corporate programs. EnergiEngine software also helps you gain unique insight into the impacts of power quality on your business and it's energy assets.

EnergiEngine applications range from entry level single EnergiAnalyzer reporting, through monitoring distributed energy assets, mixing energy & related environmental data, upto analyzing key metrics. EnergiAlerts report on out of bound energy load conditions. EnergiAnalyzer data is automatically acquired, analyzed and warehoused. Personalized dashboards and innovative visualization and modeling tools help you accurately monitor, validate, predict and ultimately reduce energy consumption, costs and risks to reliability and productivity.



EnergiEngine Benefits

- Reduce energy costs & consumption
- Improve power quality, reliability & asset uptime
- Reduce the enterprise carbon footprint
- Improve data centre & production process energy efficiency
- Reduce energy asset downtime & associated lost enterprise & staff productivity

Applications

- Analysis of efficiency, losses & capacity
- Bill verification, cost allocation & sub-metering
- Problem alerts & diagnosis
- Load & Power Factor management
- Phase Monitoring of energy loads & generators

Benchmarking

The well used saying, "if you can't measure it, you can't manage it" is especially true for energy consumption and efficiency. EnergiEngine® allows operators to measure and benchmark many forms of energy, for example, kWh's, voltage, kw's, current, power factor and also temperature.



Comprehensive Cloud or Enterprise based energy-management software delivering ultimate usability.

- > SME or Single Building applications that provides fully featured energy monitoring functionality.
- > Large or Multi-site applications that provide analysis of many hundreds of loads
- > A full range of features that add metric, reporting, billing or power quality ability.
- > Cloud or Enterprise version available dependent on the application or I.T strategy

EnergiEngine 12 Pack is designed for small single site applications or acts as the Base Layer for multi-site, multi-load projects. EnergiEngine 12 Pack allows users to intuitively manage single-site energy use. EnergiEngine provides high value energy monitoring with a low cost ticket. Upgrades and expansion for increased channel capacity are easily achieved in minutes.

EnergiEngine Expansion-Pack is a full featured energy monitoring application that provides unlimited capacity of electrical load monitoring in Packs of 12 channels. EnergiEngine allows users to track real-time power consumption & costs by remotely monitoring of electrical equipment / installations at key points across electrical networks.

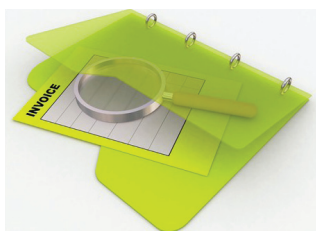
EnergiEngine uses logged values to reveal energy waste, unused capacity & historical trends. Costs can be allocated to departments or processes. Reports can publish in Microsoft Excel for easy data access & customizing, allowing users to create reports with ease. EnergiEngine is an important step towards a comprehensive energy intelligence strategy.

Power capacity planning & load outages/overages are reported, breached pre-set limits are reported via SMS, email or SNMP.

Energy Cost Reporting & Chargebacks

With the capability to manage your energy as an asset, you have the ability to manage costs. By knowing how, when and where energy is used, you can not only reduce energy costs, but you can allocate energy costs back to the dept.'s, loads or customers that use them.

Traditionally, in data centres energy costs are shared across customers regardless of their infrastructure and space requirements. EnergiEngine now provides the ability to charge per rack, pod, row or individual racks.



Energy Groups

EnergiEngine® allows users to create “Virtual Distribution Boards “ of energy data using the really useful Energy Groups feature. For example putting all HVAC Chillers into one Energy Group allows real time analysis of the energy consumption and efficiency of all chiller units in one view.



Groups views provides instant comparison of inefficient loads compared to more efficient ones. This analysis can lead to improved maintenance or controls adjustment to reduce consumption. Energy Groups creates views to allow energy benchmark departments, processes, similar load types, elevators, I.T Rooms, lighting, in fact any meaningful group of energy consumers.

Environmental data plays an enormous role in power consumption, EnergiEngine allows users to compare power consumption in relation to time-matched environmental conditions enabling optimization of set-point controls. EnergiEngine also displays pulsed inputs from 3rd party meters or loggers incorporating gas, water and oil consumption.

Other Key Features add to the functionality of EnergiEngine by providing energy user-defined **Efficiency metrics** such as PUE for data centres & also external alerts for out-of-bounds load conditions. **Billing** is available that allows Time of Use to be allocated along with night and day tariffs. Adding **Power Quality (PQ)** monitoring and analysis option to EnergiEngine provides the ability to constantly monitor each channel for harmonic distortion and power surges/spikes. PQ feature reports harmonic disturbances along with waveform images via email, screen or text.

Which EnergiEngine Application is right for you?

Which Software Pack?

	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)	–	–	–	√

How to plan your software deployment.

Ongoing Annual, Monthly and Day-After Assessment & Guidance reports per meter - 12 month term. Billed Annually. MSW-ESA

Ongoing Annual, Monthly and Day-After Assessment & Guidance reports per meter - 12 month term. Billed Quarterly MSW-ESQ

EnergiStream Monitoring, Management & Analysis software, Cloud Service, annual subscription package

EnergiEngine Base Pack "Subscription" Service - up to 12 channels - includes cloud support. Annually renewable MSW-CBP

EnergiEngine Expansion Pack "Subscription" Service, 12 channels - includes cloud support. Annually renewable MSW-CBE

EnergiStream Monitoring, Management & Analysis software, Enterprise Service

EnergiEngine Enterprise Software Pack, 48 channel License MSW-EES

EnergiEngine Enterprise Expansion Pack Software, 48 channel License MSW-EEX

EnergiEngine Enterprise Maintenance Pack, inc all upgrades, bug fixes and Email support MSW-EEM

EnergiEngine Enterprise Expansion Maintenance Pack, inc all upgrades, bug fixes and Email support MSW-EXM

Workstation spec for Enterprise Version

Processor: Intel Core 2 Quad

Memory: 8GB

Disc: Raid 1, 300GB, 7200rpm

Network: 2 x Ethernet ports, 10/100Mbps

OS: Windows 7 Professional, 64bit

Database SQL Server 2008 R2 Express, 64 bit

Server spec for Enterprise Version

Processor: Intel Xeon, 4MB cache

Memory: 8GB

Disc: Raid 5, 300GB each disc

Network: 2 x Ethernet ports, 10/100Mbps

OS: Windows 2008 Server R2, Standard, 64 bit

Database SQL Server 2008 R2 Express, 64 bit