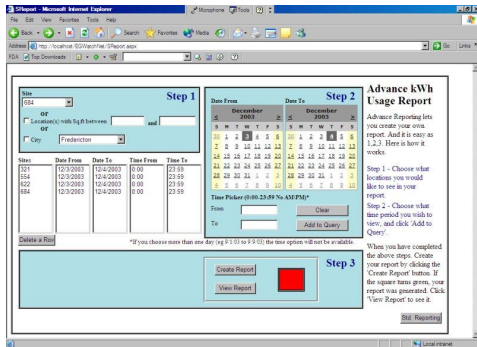


Features



- Energy Usage Reporting for Buildings
- Energy Benchmarking for Buildings
- Demand Control Module (Optional)
- Ethernet Based
- Increases “Employee Energy Awareness”
- Verify Savings from Energy Efficient Equipment
- Predicts Energy Usage for the Next Day
- Web Based Software

THEORY AND APPLICATION

The Energy Surveillance System (**E.S.S**) is a Web Based System capable of monitoring up to 2500 buildings within a network.

E.S.S gathers information from transducers which can measure energy usage on all electrical loads.

Example of loads that can be monitored:

- Air Conditioners
- Heating (oil, natural gas, electric)
- Lighting
- Hot Water Tanks
- Water Pumps
- Street Lighting

ESS sends e-mails to alert the Energy Manager of energy usage and “energy wastage” on the electrical loads.

UNIQUE FEATURE

The **E.S.S** contacts the meteorological station daily to gather weather information such as wind speed, temperature, humidity etc. By compiling this data the **E.S.S** can predict energy usage for the following day. This ensures that the user only receives an email about abnormal energy usage when it is really applicable. **E.S.S** also has a built in “Employee Energy Awareness” algorithm to encourage energy conservation at the building level.

IS IT EXPENSIVE?

E.S.S is economical and payback is usually within 2-3 years.

HOW DOES IT WORK?

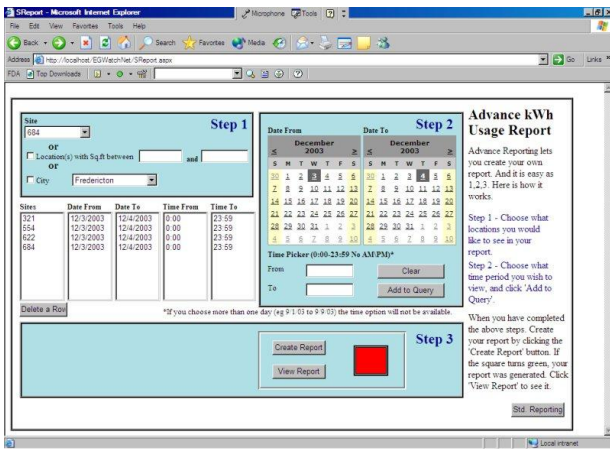
E.S.S is a networked solution that operates over an existing WAN or Corporate Ethernet. A server is installed in the head office and gathers information from the buildings where the ESS is installed. The user contacts the server via the corporate network and retrieves the data as required. Since the server gathers the data 24/7, the customer is assured that the data is always accurate and up to date.

The customer will receive an email from the server when it notices that a load is using more or less energy than usual. **The customer can install a widget on their computer and get energy usage reports for the facilities in less than 3 minutes.**

WHY DO WE NEED ESS?

- Improve energy efficiency of government buildings
- Provide detailed reports to upper management regarding energy saving initiatives
- Verify savings from energy saving equipment that has been purchased
- Its like an accounting system for your energy usage.

USER INTERFACE



SAVINGS FROM MONITORING

| | |
|------------------|---------------------|
| No. of Locations | 1 |
| Energy Charge | \$ 0.08 |
| Energy Cost | \$ 180,000.00 |
| Cost Reduction | 7 % |
| Savings | \$ 12,600.00 |

*Savings are based on calculations of average savings that can be achieved after fixing “energy leaks”. Many times, within the first 24 hours, energy wastage is detected and the customer can quickly fix these problems.

SPECIFICATIONS

PLATFORM – Programmable Logic Controllers (PLC)

COMMUNICATION

Type Ethernet, LAN, Web Browser
Rate: 10Mbps/100Mbps

I/O CONTROL CAPABILITY

Discrete Inputs: 16 x 255 Nodes
Discrete Outputs: 8 X 255 Nodes
Analog Inputs (3 Bits/0-5VDC): 4 X 255 Nodes
Light Level Monitoring: 255 Nodes
Power Consumption Monitoring: 3 X 255 Nodes

SAMPLING NET RATE

I/O Control: continuously
Price Monitoring: continuously

MODES OF OPERATION

- Automatic:
- Demand Control
 - Real Time Pricing
- Manual:
- Energy Monitoring
 - I/O State Monitoring
 - Light Level Monitoring

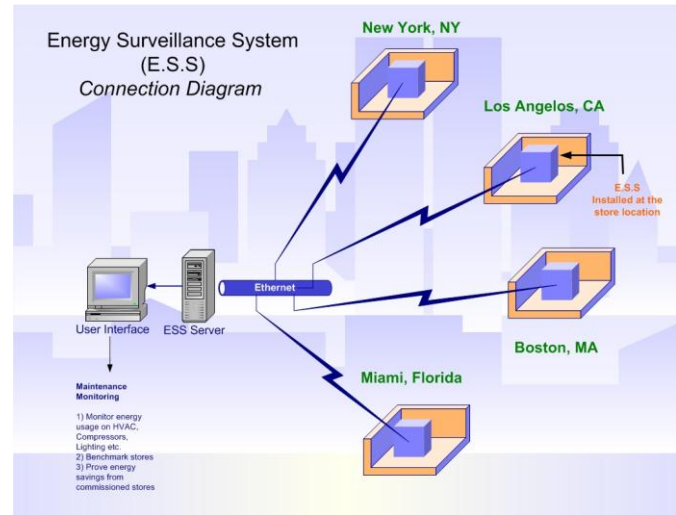
NUMBER OF MONITORED LOADS

Per ESS: 17 (can be customized for the customer)

DIMENSIONS D-6” X W-2” X H-12”

ENCLOSURE Material Steel – NEMA 12

NETWORK DIAGRAM



Contact Information

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Not All Energy Management Systems Were Created Equal.

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VoltMiser Lighting Controller
DemandMiser-Demand Controller
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