

## Energy Saving Opportunities and Lowering Costs for Multi Use Commercial Buildings



**E-SINE**  
Engineering Solutions



### ***Lower Energy Usage Costs and Reduce Energy Consumption with Advanced Metering***

- **Increase Awareness of Energy Consumption Profiles through Submetering**
- **Identify Areas Where Energy Savings Can Be Attained**
- **Implement Energy Reduction Programs and Monitor Their Progress**

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## ► Increase Awareness of Energy Consumption Through Submetering

**Submeters** are a critical element for measuring energy consumption. The installation of **submeters** has been shown to foster energy savings simply through the awareness of energy consumption they provide, which **promotes the conscientious use of energy and yields savings of up to 15%**. Gain the support of your tenants in reducing energy usage with the information you receive through submetering. And the Shark® 100B submeter has native BACnet/IP which lets it fit seamlessly into any existing BACnet application you are using to manage your building.



## ► Identify Areas Where Energy Savings Can Be Attained



Submeters provide key energy data that allows building owners, property owners, facility engineers and financial managers to identify areas within the building that are energy inefficient and that may need improvement. Areas often noted to be inefficient are: common areas, such as lobbies and hallways; HVAC systems; tenants with high electric consumption; unoccupied floors; retail tenants and more.

E-Sine's submeters let you identify energy used by specific loads or individual tenants. And E-Sine's EnergyReporter EXT application allows you to fairly bill tenants directly for their energy use, and to create detailed usage reports for building areas and timeframes.

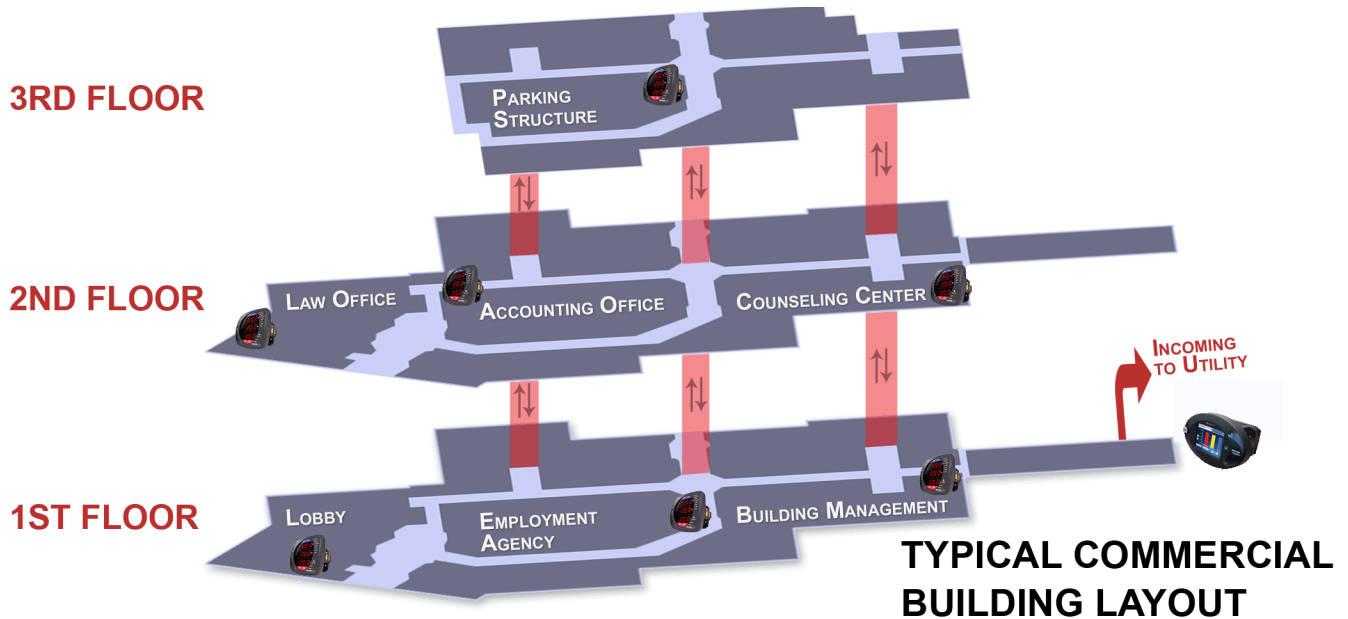
## ► Implement Energy Reduction Programs and Monitor Progress



For several years, the U.S. Federal Energy Management Program (FEMP) has issued energy savings guidelines that include the implementation of submetering with energy tracking and reporting, and the formalization of energy goals and processes. Every commercial building owner, every tenant and tenants with multiple floors or significant square footage, must be engaged to take advantage of energy management and energy efficiency initiatives.

Installing E-Sine's meters, submeters, and metering and billing software is one of the most cost-effective ways to implement an energy management program. Installing submeters is also a smart way to fight competition from other building owners. Commercial building owners who do not take advantage of the simple use of submetering run the risk of failing to keep the best of tenants. Armed with the knowledge you get from E-Sine's meters and submeters, energy and facility managers are able to help tenants make decisions that will realize energy savings for everyone.

# Helping Multi-Use Commercial Buildings' Energy Usage Become More Efficient and Cost-Effective

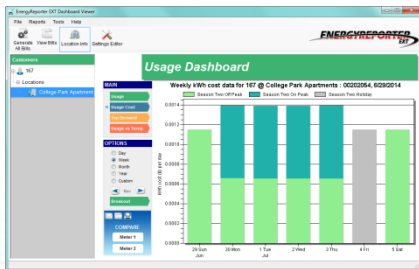


The U.S Department of Energy estimates that 20% of the energy consumed in the United States is used by commercial buildings, but that energy inefficiency means that probably 20% of that energy is wasted. These days no one can afford to be paying for energy that is not being used. Increasing efficiency is not only good for a building's bottom line, it also has a positive impact on the environment, by helping to reduce a building's carbon footprint.

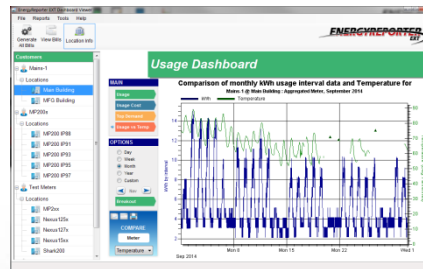
## How to address the high cost of energy and the need to conserve?

Start with establishing an Energy Tracking system, which can be as simple as installing submeters. Submeters are a critical element for understanding energy consumption within any multi-use commercial building.

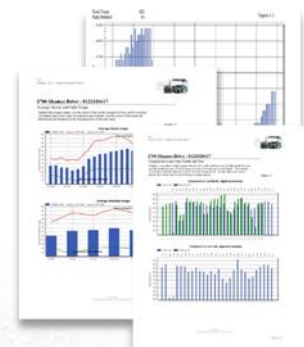
Utilizing submeters lets the building owner, property manager or the building engineer measure consumption for the entire building, and for multiple floors, individual tenants and common loads, including HVAC. Since submeters provide the information on where and what processes within a commercial building consume energy, they make it easy to identify cost savings opportunities. In addition, billing tenants for their actual usage rather than square footage billing gives them an impetus to join the energy saving effort.



**Real Energy Cost by Day**



**Energy Usage Over Time**



**Executive Summary Energy Usage Reports**

# TYPICAL BILL OF MATERIALS:

## Critical Load Point

### Nexus® 1500+ - Advanced Power Quality Analyzer and Energy Meter

Example Installation: Utility Entry Points, Critical Loads, High Power Sensitivity Points

Ordering Part #: Nexus1500+-D2-60Hz-20-V3-X-X-X-X



## Large Loads (400 Amps or more)

### Shark® 200 - Data-Logging Energy Meter for Load Profiling

Example Installation: Typical Building Loads, Substations, Control Panels

Ordering Part #: Shark200-60-10-V2-D2-INP100S-X-X



## BACnet Capable Meter

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

Example Installation: To fit an existing BACnet application

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



## Smaller Loads (200 Amps or less, high-density)

### MP200 Metering System - 8 Three Phase Input Meters

Example Installation: Smaller Panel Boards, High-density Circuits

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



## Base Data Collection Software

**Communicator EXT™ 4.0 Software for configuring meters, automatically collecting data, and studying power quality**

Ordering Part #: COMEXT4P

## Energy Dashboard and Billing Software

**EnergyReporter EXT 4.0 Software for energy dashboarding, generating usage reports and automated submeter billing**

Ordering Part #: EREXT4

# ENGINEERING ASSISTANCE:

Contact us for conformance specifications and engineering design assistance. E-Sine has on-staff dedicated application engineers to provide comprehensive support and make your project a success.

Contact E-Sine at:

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