

**Energy Savings Opportunities and  
Improving Power Quality  
for Data Centers**



**Lower Energy Usage Costs, Reduce Energy  
Consumption, and Increase Reliability with  
Advanced Metering**

- **Identify Areas Where Energy Savings Can Be Attained**
- **Implement Energy Reduction Programs and Monitor Their Progress**
- **Assure the Reliability of Power to Avoid Downtime and Lost Revenue**
- **Analyze Power Quality to Pinpoint Problems Before They Become Critical**

**Contact EIG at:**

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## ► Identify Areas Where Energy Savings Can Be Attained

EIG's advanced and highly accurate meters and submeters let you identify energy used by specific loads or parts of the data center. You can use this information to see where energy can be saved, and to compare your energy performance against other data centers.



## ► Implement Energy Reduction Programs and Monitor Progress

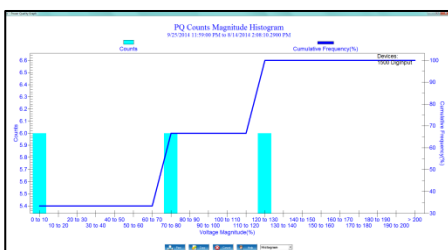


For several years, the U.S. Federal Energy Management Program (FEMP) has issued energy savings guidelines that include the implementation of submetering with energy tracking and reporting, and the formalization of energy goals and processes. Every data center must be engaged to take advantage of energy management and energy efficiency initiatives.

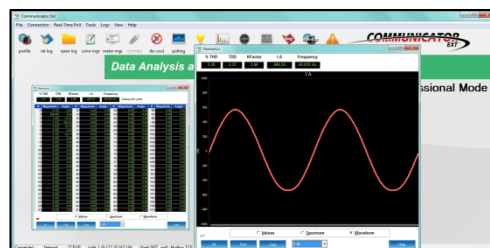
Installing EIG's meters, submeters, and metering software is one of the most cost-effective ways to implement an energy management program. Armed with the knowledge they get from EIG's meters and submeters, energy and facility managers are able to gain the support of management to make decisions that will realize energy savings for everyone.

## ► Assure the Reliability of Power to Avoid Downtime and Lost Revenue

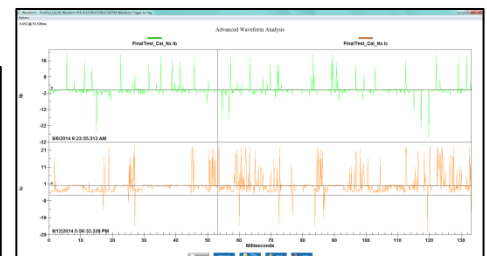
EIG meters let you set alarms or email for multiple conditions – drop in voltage or current, change in phase angles, change in I/O status, flicker, etc. Emails can be sent to multiple users. Having access to this information at the point a problem occurs lets you be proactive in fixing it. And EIG's meters have generous amounts of memory for logging measurements and recording waveforms, which let you perform detailed forensic analysis of any problems that occur.



**Record Power Quality Events**

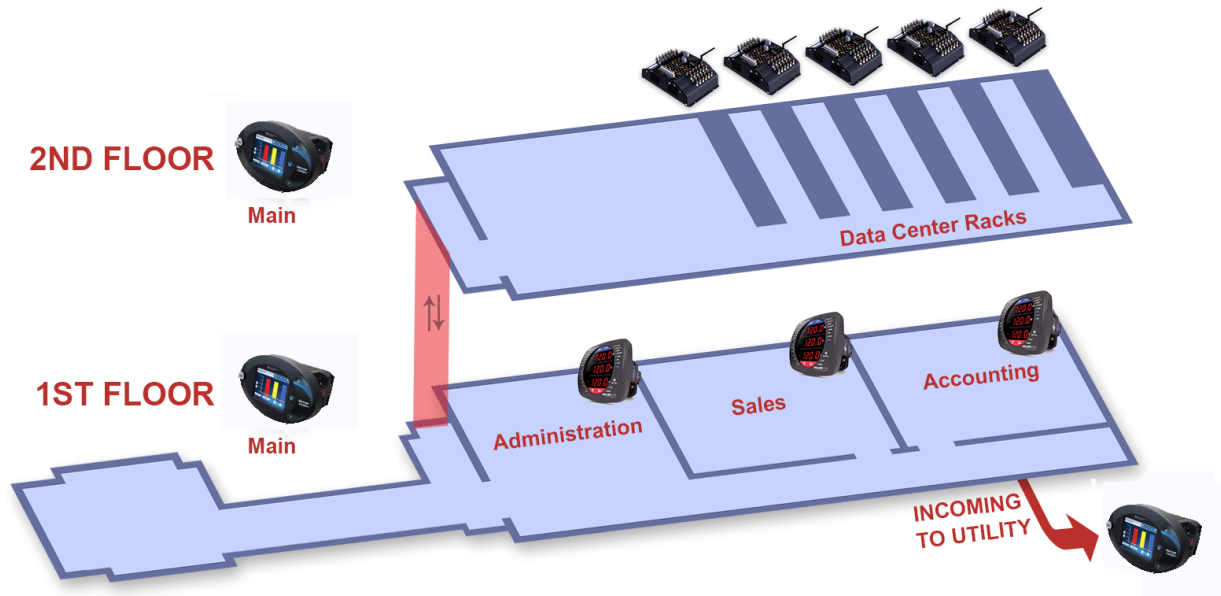


**View Waveform Graphs**



**Trend Voltage Reliability**

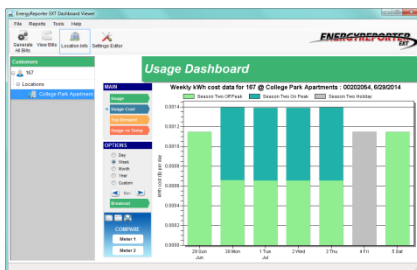
# Helping Data Centers' Energy Usage Become More Efficient, Cost-Effective, and Reliable



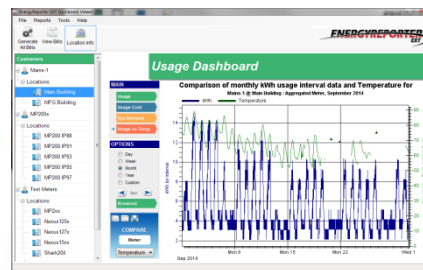
## TYPICAL DATA CENTER LAYOUT

According to the Federal Energy Management Program (FEMP), data centers can use up to 200% more energy than regular office spaces. Since this means that their costs are also up to 200% higher, data centers can benefit from energy reduction programs in order to save money and increase profitability. How to address the high cost of energy and the need to save money? Use advanced power metering to monitor loads throughout the data center to see and address problems before they grow, and to implement a demand reduction plan, reducing load during times of Peak demand.

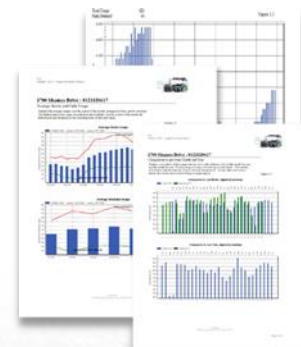
The primary uses of energy in data centers are for cooling equipment, for server load, and for computing operations. These are critical to the functioning of the data center. Insuring the reliability of the power running these systems is essential in preventing costly downtime. Metering can alert you to power quality problems, such as voltage sags or other less than optimal conditions. Then you can take corrective action to insure continuous uptime.



Real Energy Cost by Day



Energy Usage Over Time



Executive Summary Energy Usage Reports

**Reduce Costs by Having Usage Information at Your Fingertips**

# 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



## 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. EIG has on-staff dedicated application engineers to provide comprehensive support and make your project a success.

### Contact EIG at:

Email: [sales@electroind.com](mailto:sales@electroind.com)

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