

## Professional, turnkey integration to a single system.

Turnkey integration provides a single monitoring and management solution that ties all of your complex systems and devices together and can build intelligence in or around them. You need a provider with the experience to deliver a turnkey, integrated solution from project initiation through hand-off, and beyond. Eaton's power system automation engineers are experienced and qualified to assist in the design, customization and implementation of your new Foreseer electrical power monitoring system. Our engineers work with you to understand your unique needs and are adept at the design and turnkey implementation of many monitoring, automation and control systems. Trust Eaton to provide the system and services that meet your needs and give you a competitive edge.

To find out how you can get started or to request a demo visit [www.eaton.com/foreseer](http://www.eaton.com/foreseer)

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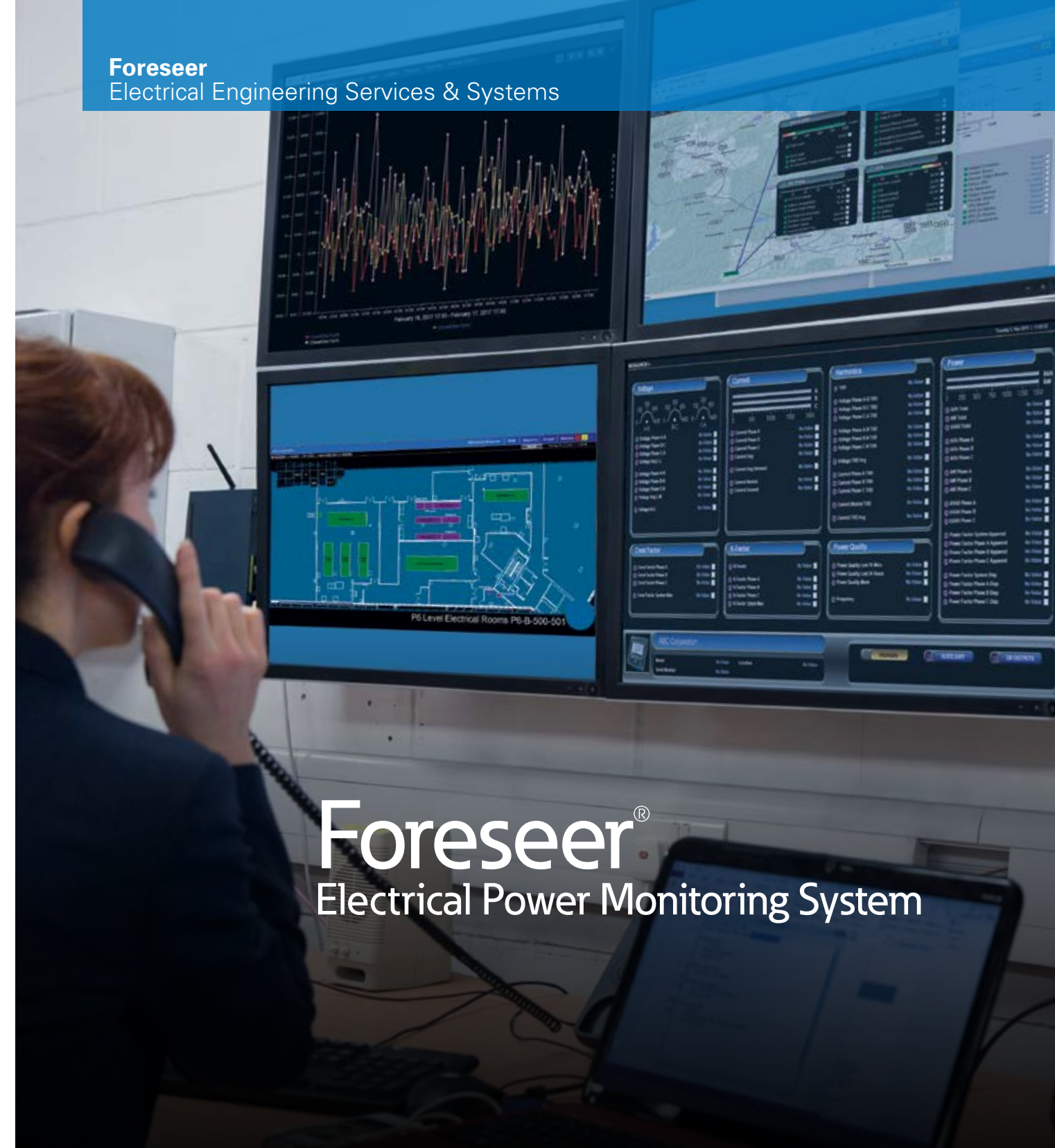
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**Foreseer**  
Electrical Engineering Services & Systems



**Foreseer**<sup>®</sup>  
Electrical Power Monitoring System



# Reduce cost through management of your power and energy infrastructure.



Foreseer® is an electrical power monitoring system (EPMS) that connects your operation's vast array of devices, giving them the ability to be monitored—regardless of manufacturer or model—to help you reduce energy consumption and help avoid unplanned downtime due to the failure of critical systems.

## Vendor-independent device support.

Foreseer supports thousands of devices, connections, device parameters and data logging. It is vendor-neutral and supports most third-party devices using their native communication protocol, a standard protocol or a protocol gateway. During its almost three-decade long experience with system integration, Eaton has worked with most major hardware manufacturers to build a device driver database that supports over 1,600 device variants, with new drivers and versions added frequently and the ability to create custom drivers, including waveform capturing.

## Fully scalable, monitoring an array of devices.

Foreseer is fully scalable to support a single data center, facility or campus or multiple facilities no matter where they are in the world. It facilitates real-time monitoring of power, environmental and sub systems including power and environmental systems and sub-systems. In addition, Foreseer can grow as you do without stranding hardware or excessive software costs.

Foreseer is fully scalable to support your single facility.

As you grow into multiple facilities, it helps ease growing pains and maximize operational efficiencies through full visibility from one location.

When expanding to multiple locations around the US or around the world, Eaton's team is here to help you continue to reap the value of one system for all your locations' power monitoring, all from one place.





Foreseer can be viewed from anywhere, on multiple devices.

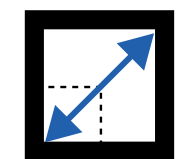
Use your PC, Mac, iPad or tablet to keep abreast of what's happening in your facilities. Compatible with browsers such as Google Chrome, Safari, Internet Explorer and more, you can feel secure that you can use your existing device investment to view the states of your world-wide facilities, receive/view alarms and take action.

Desktop. Laptop. Tablet.  
Where there's a browser, you're connected.



**Text alarm notifications**  
Receive alarm notifications right to your smart phone so you can take action quickly and efficiently.

Unique solutions set  
Foreseer software apart.



**Scalable to Meet Your Needs**  
Foreseer software is scalable from the smallest systems to very large applications. Foreseer can meet your existing and future needs. Available in a variety of classes, capable of handling up to 500,000 channels, you can be assured of the best fit for various integration environments and the right solution at the right price.



**Redundant, Worldwide Monitoring**  
With the Manager of Managers (MOM) option, data from one server can be monitored alongside data from other servers, enabling you to aggregate multiple Foreseer sites into a single system. What's more, redundant servers can provide a fail-safe system if communications are lost with one of the systems.



**24/7 Data Gathering, Acquisition and Storage**  
Foreseer's proactive algorithm gathers power usage data 24/7, enabling you to sample an unprecedented number of data points from thousands of devices—every second. Historical data is used to support proactive equipment management. All analog readings are stored in the database every minute and digital points are stored on a change of state. Foreseer acquires key data from your equipment's intelligent output via a wide range of communication protocols.



**User Defined Formulas**  
Information from multiple sources and systems can be inserted into sophisticated user-defined formulas, turning complex data into valuable knowledge for informed decision making.



**Extensive Device Driver Library**  
With a library of software drivers for most all communication interfaces and protocols, Foreseer enables the full-scale integration of third-party systems (e.g., building management systems, via OPC, Modbus/TCP or BACnet/IP), regardless of size or manufacturer.



**Custom User Interfaces**  
Foreseer gives you the big picture with custom, mimic graphics and custom dashboards.

# Wherever there's a need for power, Foreseer will monitor and help manage it better.

We understand the specific needs and nuances of your infrastructure.

Different kinds of environments typically require very specific types of solutions. Over the last several decades Eaton has encountered virtually all types of facilities and systems, and understands the applications necessary for each of them. Business sectors, such as financial institutions, healthcare, education, telecom, industrial and government for example, must all be addressed appropriately according to industry guidelines, best practices, as well as local laws and regulations. The ability to cater to these needs with years of experience, along with field-proven hardware and software sets Eaton's Foreseer services apart.

## Monitor your facility basement to rooftop and beyond.

Energy produced by renewable energy

Roof top unit energy usage

Servers, UPS, PDU, BCM, CRAC, Environmental (Temperature and Humidity Sensors)

Energy usage in general building areas or interface to Building Automation System (BAS)

Digital input points using Foreseer® Universal Input Enclosure

Power Distribution-Switchgear, Protection, Power Meters

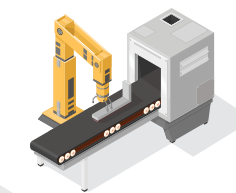
Backup Generators, Fuel Storage

Foreseer® Central Building Monitoring with alarms set points and email notification

Main incoming power

Water usage of sprinkler systems

Pulse meters for WAGES applications



### Predict developing situations

Project events, energy usage, environmental and safety, among others trends based on current patterns 180 days into the future. With trending data in hand, you're able to define thresholds that will alert you to developing issues well before an actual alarm condition is reached.

### Data and trend analysis

Cause analysis, impact analysis, capacity planning, preventive maintenance assessments and trending can now be achieved with ease.

### Growth planning, plan with the electrical capacity planning tool

Plan for long lead time electrical upgrades and/or changes to your power chain to support changing load patterns by tracking kW and kVA over time, and knowing peak levels and future demands based on past usage.

### Power density, pinpoint hot spots

Identify overloaded racks and incorrect power drains due to device failure, through power density management by device, for a single rack, floor or entire building.

### Message management and alarm notifications

Assign up to four alarm thresholds—from routine maintenance alerts to system failure—plus handling instructions and escalation procedures for each thus reducing downtime.

### Prevent unbalanced loads

Take the necessary steps to re-distribute a load before a catastrophic problem occurs through Foreseer's visual illustration of the load balance of a device or system in real-time; you'll see the current state, the worst-case scenario and the proper load.

### Optional energy management reports

Track how efficiently your facility is running and improve effectiveness utilizing industry standards, like Power Usage Effectiveness (PUE) or motor efficiency.