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- Contact
- Library

- International
- Partners
- Company
- Support
- Services
- Products
- Solutions

[Home](#) > [Solutions](#) > [Case Studies & Articles](#)

North American Automaker Saves Energy Far and Wide

Summary

The chief engineer at a major automaker running several plants realized that carefully managing energy at each one could save thousands, or millions, of dollars. He hatched an ambitious plan: identify and track all energy requirements, then optimize power quality and efficiency across more than 30 facilities, and give users easy access to up-to-the-minute power system information — for an individual plant or for the entire organization.

Power Measurement filled this tall order by delivering an impressive energy management (EEM) system, employing approximately 75 ION® power and energy meters at each facility. System features are accessible through a standard web browser and are fully supported 24 hours a day.

System

- [ION® 7350 Meters](#)
- [ION® 7330 Meters](#)
- [ION® 7700 Meters](#)
- [ION Enterprise® Software](#)

Benefits

- Quick and easy aggregate reports
- Accurate billing & cost allocation
- Smart energy buying

The EEM system's power quality monitoring ability helps protect against unexpected outages which damage expensive equipment and idle thousands of employees. Powerful analysis software lets managers reduce peak demands, make informed buying decisions, and take advantage of real-time purchasing, demand response, and load curtailment programs.

- Reduced downtime
- Increased plant efficiency
- Information security

The company now has a clear, dynamic picture of its overall energy requirements, and the type of micro information necessary to evaluate power quality, control energy costs, and assess loads across all facilities. With savings piling up quickly in so many areas, the ROI for this EEM system is truly impressive.

Full Case Study

If you're a major automaker running multiple facilities across North America, you'd be right to think that carefully managing energy at each one could save you thousands, or millions, of dollars.

The chief engineer at one such a company recognized this and hatched an ambitious plan: identify and track all energy requirements, then optimize power quality and efficiency across more than 30 facilities. Users had to be able to log onto the company's internal Energy Management web site from any PC on the network, and see up-to-the-minute power system information - for an individual plant or for the entire organization.

It was a tall order, but Power Measurement delivered an impressive solution by custom-designing an enterprise energy management (EEM) system, employing approximately 75 ION® power and energy meters at each facility. Because the company already tracked a number of energy parameters with a mixed bag of metering equipment, the system incorporated some existing devices as well.

The ION® meters connect directly to the LAN over Ethernet. Using the existing fiber backbone available in each plant minimized communication costs.

To ensure security and reliability, and to accommodate system upgrades or expansion, the primary application software runs in the corporation's main data center. Its features are accessible through a standard web browser and are fully supported 24 hours a day.

When everyone knows, everyone saves

Metering doesn't stop at the main substation or the medium voltage gear, but goes right into the unit and 480-volt substations. This gives everyone in the plant a better view of energy use throughout each facility. It also enables precise cost-allocation across the entire plant, and shows the effects of local conservation efforts.

As per the chief engineer's request, Power Measurement made the EEM system highly accessible and as easy as possible to operate - so that many employees could participate and work together to maximize efficiency.

Monitor power quality to avoid downtime

Some procedures are particularly sensitive to unexpected outages, which can damage expensive equipment and idle as many as 3,500 production employees, causing a huge financial impact. The EEM system's power quality monitoring ability offers considerable protection against this unpleasant possibility.

The system has dramatically reduced the amount of time required to aggregate reports, and it prevents downtime by detecting power quality problems inside or outside the facility.

The EEM system's powerful analysis software soon pinpointed heavy loads, and let managers reschedule them to avoid peak demands. For example, instead of an expected load decrease during the lunch period, one plant's demand would seriously increase. It transpired that all the forklift operators were recharging their trucks every day at noon - the drivers were simply asked to stagger recharge times, but identifying the cause in the first place was key, thanks to the EEM system.

Smart buying power

For manufacturers in areas that have a deregulated electrical market, an EEM system enables the user to make informed buying decisions, negotiate the best rates available, and take advantage of real-time purchasing, demand response, and load curtailment programs.

The company now has a clear, dynamic picture of its overall energy requirements, and the type of micro information necessary to evaluate power quality, control energy costs, and assess loads across all facilities. With savings piling up quickly in so many areas, the ROI for this EEM system is truly impressive.

drive energy performance™

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