"Power Xpert Software Foreseer Class gives the individuals who are in charge of monitoring their power usage the ability to see their consumption as well as usage trends."

Eaton's Power Xpert®: Enables Manufacturing Facility To Monitor Power Usage And Reduce Costs

Location:

United States

Segment:

Manufacturing

Problem:

Determining potential for energy savings

Solution:

Power Xpert Software, Foreseer Class

Results:

Ability to track energy savings

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Background

To manage the power distribution system in its 400,000 square-foot manufacturing operation, a long time Eaton customer used Eaton's meters and PowerNet™ software. However, the company recognized that achieving further power usage reductions would require a system capable of managing and monitoring usage as well as transforming data into information for management decisions and cost projections.

Challenge

The company's goal was to identify the exact of amount of power that each plant operation used. It also wanted a system that would enable it to determine if installing new equipment would provide substantial energy savings. In addition, it saw the need for a system that would provide trending with time-specific documentation of power anomalies.

After learning the specific objectives of the customer's power monitoring and reduction initiative, Eaton proposed that the company become a site for its Power Xpert Software, Foreseer Class product.

A company spokesperson explains, "We recognized how Power Xpert would enable us to meet our objectives. However, our IT department was concerned that the software's addition might impact the performance of the network. After the Eaton team told us that Power Xpert could be installed on a separate server, we began implementation."

Solution

The spokesperson reports, "Since Power Xpert is Web-based, only one software installation was required. With the flexibility of having only one IP address, any authorized employee, from shift facilitators and team leaders to plant floor personnel, can access the information. It gives the individuals who are in charge of monitoring their power usage the ability to see their consumption as well as usage trends."

The software automatically recognizes Eaton equipment and accesses Web pages. Once it

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is installed and the network is established, there is no additional set up. The software pregenerates any graphics the user needs to access information.

Since Power Xpert has an intuitive graphical interface that can easily be customized to reflect a facility's floor plan and equipment arrangement, the customer was able to tailor the systems' visual presentation to meet its needs.

The spokesperson notes, "Using Power Xpert, I was able to create a home page depicting the plant layout and our ten substations as well as the pertinent lines that are tied to each substation. It has also been an advantage to be able to modify graphics and views without interrupting monitoring functions.

"Since the system shows us our power factor, it is an opportunity to save some money if we have a poor power factor. We can monitor our voltage on a daily, five-minute basis if we want to. It gives us a greater awareness of our electrical infrastructure, which is invaluable in achieving cost savings."

Results

In the two years that Power Xpert has been operational at the plant, it has helped the company determine if the addition of new equipment into its system will provide substantial power savings. For example, it enabled the company to determine that installing a new air filtration system would provide a reduction of 40 kilowatts per hour.

The spokesperson reports, "Without the Power Xpert we would not be able to track the energy savings in our chiller plant. We can monitor the changes, which are influenced by which chiller is running as well as weather conditions. We are also able to monitor load on the entire electrical infrastructure, which is essential when adding production lines."
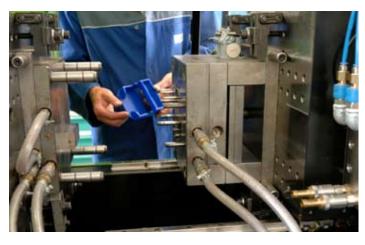
"Using the system, we have documented power bumps, blips, sags and swells, and then shared the information with the utility so it can take corrective action. Once the utility recognized that we had an accurate method of capturing these anomalies, it became far more cognizant of the quality of the power it was providing to us."

"Not only is the software simple to use, but it can also be used with our installed base of meters as well as any new meters we may add in the future."

"The Power Xpert system is an exceptional tool and once it's up and running, it's maintenance free. It enables individuals to monitor and manage their power usage because they get all the information all at once, quickly and easily."

"From my experience and the results we've seen, I believe there is a tremendous opportunity for other facilities to better manage and monitor their power consumption and achieve significant power cost savings. Our next step will be to use the system to begin e-billing so that each plant operation will be responsible for its power costs."

"With Power Xpert, we have the ability to see what is happening in real time as well as access historical information regarding power usage. That has given us the ability to make the decisions and take the steps required to reduce our power usage and achieve cost savings."

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