

Energy Management

Lowering energy prices by managing supply and demand

The ABB Energy Management helps customers in all industries monitor, manage and optimize their energy usage for maximum efficiency and cost savings. It addresses the business side of energy management by producing accurate energy demand plans and taking advantage of them in energy supply planning and optimization. Being able to accurately plan the energy requirements a day-ahead provides significant financial advantages, especially in the open electricity market, and ultimately lowers energy costs.

Energy Manager also includes reporting and analysis tools that evaluate the energy use patterns of all processes and pinpoint areas for improvement.

A key element in any company's energy management program, Energy Manager offers dramatic cost savings for customers in all industries, especially for processes that are particularly energy-intensive. Opportunities for cost reduction are greatest when both electricity consumption and prices vary over time, which is common in the process industries and in the open electricity market environment. Energy Manager clearly indicates the cost of electricity and provides support to schedule electricity consumption for off-peak hours. It coordinates electricity purchases and sales with its own generation capacity, then schedules this generation during on-peak hours, when purchased electricity is most expensive, to provide additional cost savings.

ABB Energy Manager has been assessed by UL DQS for ISO 50001:2011 conformity. ISO 50001:2011 is an International Standard for Energy Management Systems and can reliably present the results of the software's proper use to support their conformity with elements 4.4 and 4.61 of the ISO 50001:2011 standard. Organizations that choose to seek certification to management system standards other than the ISO 50001 standard may also use this software along with continual improvement processes similar to *Plan, Do, Check, and Act* to demonstrate *Best Practices*."

Typically, the ABB Energy Manager can help customers achieve overall cost reductions of 2 to 5 per cent of their total electricity cost. For some process manufacturers, this can translate into millions of dollars saved annually.

Energy Manager is completely scalable; this modular solution can start with basic energy monitoring and reporting at a single facility, and later expand to include multiple sites, or be implemented throughout the entire company to optimize energy use and manage energy supply costs. A key component of this strategy is to tie in to sources of energy consumption, many of which are already captured in a plant level historian, others which require an OPC connection.

Energy Manager includes planning and scheduling tools to optimize energy use and supply, energy balance management tools to support the real-time monitoring and control of the energy balance, and reporting tools to evaluate and report energy consumption, costs, efficiency and other energy-related information.

Key features include:

- Manage electricity purchase and sales transactions, monitor and control peak loads, energy balance and efficiency
- Identify energy requirements using sophisticated planning tools for planning electricity and steam demand and planning energy use
- Meet energy needs at minimum cost with resource optimization and production scheduling
- Support electricity sales and purchase in the open market, including timing and pricing transactions
- Avoid peak tariffs through load planning, tie line monitoring and load shedding
- Enhance awareness of energy generation, use and purchases for improved cost effectiveness
- Support decision making with simulation and “what-if” analysis capabilities