

The economic benefits of deploying Energy Management Systems

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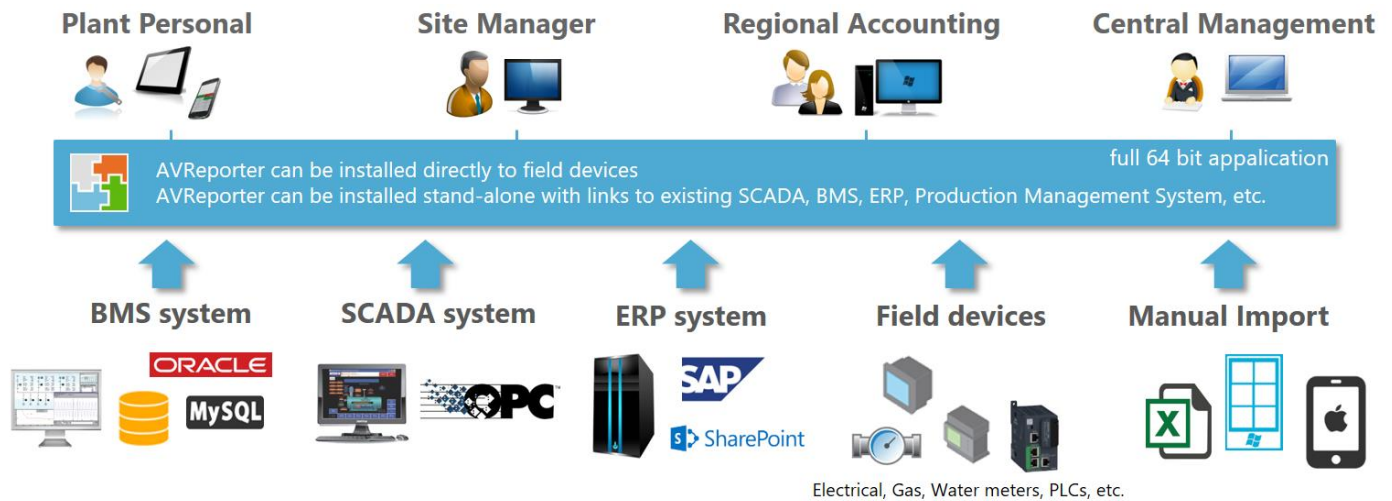
The most important step is implementing an energy management system in order to increase energy efficiency and savings, as energy management system provides all the necessary information and data for the analysis. The energy management system can be deployed on different levels, (production, facilities, data centres and municipalities) hence the differences in the priorities of the expected results. The benefits of the energy management systems could be divided into two main areas. The first area is the direct economic benefit (e.g. by the performance optimization, enabling to predict the exact percentage of the savings on energy bills), the second one is the indirect economic benefit (e.g. in the case of a car manufacturer company, using green technology improves the brand's image and its values.)

Find few of the economic and financial benefits of the energy management systems listed below:

- Savings on administration and human resources at corporate level.
- Savings by operational safety.
- Cost savings from service contract and energy recovery optimization.
- Savings by maintenance support and optimisation.
- Being aware of the information provided by the energy management system, the cost saving opportunities could be identified and interpreted via the optimisation of the production and operational processes.
- Studying the data provided by the energy management system, costs can be saved by the exclusion of the ineffective consumers.
- The measurement data and analyses, can lead managers to plan any technology investments to improve the energy efficiency carefully and with no or very little wastage.
- The energy management system provides economic benefit in the allocation of the energy costs and the place of consumption (e.g. energy consumption by one product, what gives market advantage in the pricing process).
- The energy efficiency and green solutions increase the brand image and corporate social responsibility commitments of the company and elevate the product.
- Implementing energy management systems on national economic levels is also highly important. Improving the energy efficiency and utilising capacity correctly the unnecessary power plant investments can be avoided
- Energy management projects can help to reduce the greenhouse gas emission and this way the global warming can be reduced resulting in decreasing economic damages.

The steps of implementing an energy management system:

The steps of implementing an energy management system are described by the ISO 50001 standard, providing an on-going guideline on running plant operations efficiently. During the installation of the system, it is recommended to plan around the measurement devices of the major consumers in order to determine the consumption of the production and cost allocation places. Integration of systems, like the SAP and the production management system are highly important, allowing defining the unit volumes. When planning the system one of the main pointers shall be how user-friendly and easy-to-handle this system needs to be, including the accessibility of the data. It is also important to consider the user hierarchy. For example it is recommended to provide dashboards supporting the management in the decision making process. On the other hand, the work of the engineers also needs to be flawless when performing analyses, evaluations and modelling.



The operating energy management system by the ISO 50001 standard:

