

# Understanding Energy Management and ISO 50001



Energy Management is a disciplined approach to reducing energy costs throughout your organization. It is a formal, scalable process to monitor energy use, ensure management insight into energy consumption, rationally decide amongst energy saving options, secure management commitment to energy upgrades, and instill energy awareness into the organization's culture.

Energy Management is founded on the realization that, contrary to common practice, energy *IS* a controllable cost. In fact, well-engaged organizations have shown a 10% to 15% reduction in energy use based solely on non-capital changes to processes and habits. Capital projects can add an additional 10% to 15% savings.

ISO 50001 is the new standard for implementing a robust Energy Management System (EnMS).

## Energy Management System Basics

At its core, any Energy Management System requires three components - an *Energy Goal and Policy Statement*, an *Energy Leader*, and an *Energy Monitoring and Tracking Process*.

- The *Energy Goal and Policy Statement* - aligns your organization with the energy goals set by management. More broadly, it ensures that the EnMS is institutionalized and becomes part of the organization's culture, and is not just dependent upon the actions and interests of a single individual who may retire, be promoted, or move on.
- The *Energy Leader* - has the mandate to achieve the organization's goal. The Energy Leader organizes and oversees a cross-functional team to identify energy-saving activities that meet ROI requirements, formulate action plans, and carry out implementations.
- The *Energy Monitoring and Tracking Process* - ensures that all savings are quantified and documented for regular Management Review.

## Additional ISO Requirements

ISO 50001 requires somewhat more technical ability to implement than other ISO programs due to the more technical nature of energy consumption and energy improvement projects. But it has been developed with an eye toward compatibility with other ISO systems.

- *Deming's Plan-Do-Check-Act* is the basis for ISO 50001 activities as it is for ISO 140001 Environmental Management, and ISO 9001 Quality Management;
- *Fully Integrateable with ISO 140001 systems*;
- *Follows the 'Continual Improvement' Framework* that makes Energy Management part of daily operations.

In addition to the Energy Management System Basics above, the ISO standard requires

- *Energy Training* as appropriate to the organization;
- *Documented Procedures and Recordkeeping* to include Energy Team Procedures for choosing projects to implement, Training Records, Energy Consumption Records, Weather Records, Meeting Records, and Records of Decisions;
- *Internal Audits* of your EnMS by uninvolved personnel within the organization to identify ways to continually improve your EnMS;
- *External (Certification) Audits* by a qualified third party.

## Non-energy Benefits

An Energy Management System forms an integral part of an organization's Sustainability Plan. An EnMS insulates the organization's operations from energy price volatility, and enables planning to minimize the impact of service interruptions.

An EnMS also facilitates Greenhouse Gas (GHG) accounting, often reducing an organization's GHG production and generating carbon credits if your organization is covered by a regional carbon market.

An EnMS often reduces water consumption, as well as the costs associated with process water disposal.

As with other 'lean ops' programs, a robust EnMS often brings decreased maintenance costs and an associated increase in productivity.

## Why Go ISO?

While all organizations would benefit from adopting a formal Energy Management System, ISO certification is NOT for everyone. A well-designed EnMS, along with a strongly engaged workforce, will yield substantial energy savings for your organization regardless of certification level. But ISO certification is invaluable if

- You seek recognition from the public of your organization's commitment to wise energy use;
- You need to make a clear statement to higher management of your efforts to reduce energy use and costs;
- You need global recognition up and down your supply chain of your desire to mitigate the risk of energy price volatility;
- You wish to be recognized at a glance as a world-class organization attaining the highest level of energy management certification available.

## Integrated Renewable Energy

We can help you develop and implement your own EnMS and start realizing energy and cost savings immediately. We provide EnMS and ISO 50001 training, consulting support for EnMS development, energy consumption modeling, and Internal Auditor training.

Contact us to see how we can help.

Integrated Renewable Energy  
<http://www.IntegratedRenewableEnergy.com>  
[info@IntegratedRenewableEnergy.com](mailto:info@IntegratedRenewableEnergy.com)  
206-517-2875