Section: Improvement

Task 25: We have a 50001 Ready energy management system and continually improve its processes and interactions. We continually improve the suitability, adequacy and effectiveness of our energy management system. We achieve and demonstrate continual energy performance improvement.

Getting It Done

1. Check that processes are in place for reviewing and updating specific parts of the energy management system (EnMS) on a regular basis and that the relevant decisions on "how," "when," and "who" are made and implemented.
2. Confirm that the needed connections between the processes of the EnMS and how the organization manages change are present.
3. Review processes for integrating EnMS requirements into the organization's business operations and practices.
4. Confirm that top management promotes continual improvement as part of organizational culture and meets and demonstrates its responsibilities
5. Ensure you have processes in place to continually improve the EnMS and energy performance.

Task Overview

Establishing and implementing the energy management system (EnMS) is only the beginning. Maintaining the EnMS over time and achieving continual improvement for the long term requires that the EnMS keep pace with the goals and changing circumstances of the organization the EnMS supports. It is in this way that the full and complete benefits of the management system and continual improvement can be realized. Long-term, systematic management of energy and continual improvement of energy performance relies on effectively maintaining the EnMS, ensuring interfaces with organizational change management, continually integrating EnMS processes into business operations, and promoting an organizational culture that embraces continual improvement.

The goal of continual improvement is to enhance performance. The Plan-Do-Check-Act model of continual improvement provides the framework to support and sustain energy performance improvement and improvement of the EnMS. To ensure that this framework continues to function effectively and provide value to the organization over the long term, the EnMS must be supported by actions and decisions that ensure the EnMS is *maintained* and the continual improvement processes and their results are *sustained*.

The "mechanics" of continual improvement include the objectives, energy targets, action plans, energy performance indicators (EnPIs), baselines, monitoring and measurement, and other structural components of the EnMS. However, an EnMS capable of achieving and demonstrating continual improvement over the long term necessarily involves embedding processes for:

(cc) BY-SA Licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

- maintaining and updating the system,
- managing change effectively,
- integrating the EnMS into business operations and practices, and
- ongoing leadership by top management to promote continual improvement within organizational culture.

The actions to be undertaken in this task are focused on ensuring that the processes and connections needed for continually improving EnMS effectiveness and energy performance over the long term are firmly established and functioning as intended. If you are interested in recognition for your 50001 Ready EnMS from the U.S. Department of Energy, actions can serve as checks that should be performed prior to self attesting that your organization has completed all 25 tasks in the 50001 Ready Navigator. Outside of U.S. Department of Energy recognition these checks will help you confidently state to top management and interested parties that you have a functional EnMS based upon ISO 50001:2018. Please note however that this process does not necessarily confirm that you are conformant or ready to be audited to ISO 50001:2018.

This task involves, first, checking that processes are in place for reviewing and updating specific parts of the EnMS on a regular basis, and that the relevant decisions on “how,” “when,” and “who” are made and implemented. Next, you must confirm that the needed connections between the EnMS processes and how the organization manages change are present. Then, processes for integrating EnMS requirements into the organization’s business operations and practices must be reviewed. Finally, you must confirm that top management promotes continual improvement as part of organizational culture and meets and demonstrates its responsibilities.

This guidance is relevant to sections 4.4 and 10.2 of the ISO 50001:2018 standard.

Associated Resources Short Description

no resources for this questions

Full Description

Ensure you can update and maintain your 50001 Ready energy management system

Maintaining the energy management system (EnMS) starts with ensuring that the required periodic reviews and updates are performed as planned. As part of the EnMS implementation process, you should have made a series of decisions about processes to ensure the appropriate reviews and updates are happening at planned, determined, or defined intervals. Using the optional Playbook worksheet, confirm that those specific reviews and the processes needed to support them are in place. In general, this means that the “how,” “who,” and “when” have been established within the EnMS. Take appropriate action to implement any reviews and update processes that are not in place.

Ensure the EnMS and the organization’s change management processes are connected

If the EnMS and its continual improvement efforts do not interface with the organization’s processes for

(cc) BY-SA Licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

managing change, they can become irrelevant if they do not reflect or consider changes or new realities affecting the organization.

Implementing the EnMS has involved establishing processes to determine and address major changes affecting the EnMS and energy performance. Ensuring such processes are established is one way in which top management demonstrates leadership and commitment to continual improvement of energy performance and the effectiveness of the EnMS (see Task 4 Management Commitment). At this time, you should review how changes are addressed in your organization's EnMS and confirm that the processes for managing changes that affect the EnMS are implemented and working properly.

In addition to ensuring that the EnMS stays current and aligned with the organization, processes to identify and address changes affecting the EnMS and energy performance are also relevant to this task. Recall, for example, the following:

- The energy review must be updated at defined intervals, but also in response to major changes in sites, equipment, systems, and energy-using processes as noted in Task 8 Energy Data Collection and Analysis, Task 9 Significant Energy Uses (SEUs), and Task 10 Improvement Opportunities
- EnPIs are revised when there are changes in static factors as outlined in Task 11 Energy Performance Indicators and Energy Baselines
- Changes to documented information must be controlled as in Task 16 Documenting the EnMS
- Planned changes must be controlled as relevant to operational planning and control, and the consequences of *unplanned changes* must be reviewed as in Task 17 Operational Controls
- Any changes to the EnMS needed as part of corrective action must be implemented as in Task 24 Corrective Actions
- Changes in external and internal issues and associated risks and opportunities are required inputs to management review as in Task 23 Management Review Outputs from management review include decisions related to any need for changes to the EnMS as in Task 23 Management Review.

Effective management of change typically relies on robust and inclusive communication processes that ensure the relevant functions and personnel are informed so appropriate action can be taken. Changes that affect the EnMS and energy performance can be of any kind—organizational, technical, legal, competitive, etc.

Ensure ongoing integration of the EnMS into your organization's business processes and practices

Integration of energy management into business processes and practices is key to positioning your organization for continual improvement of energy management and energy performance over the long term. It ensures that the EnMS continues to be relevant and provide value, supporting alignment of the EnMS with the strategic direction of your organization.

EnMS activities and actions to achieve continual improvement are intended to be proactive. Integration of EnMS processes into business practices helps ensure that energy management does not become an afterthought or an add-on activity. As your business practices adjust to changing circumstances, how the EnMS processes are integrated within those practices can change or perhaps even be compromised. It is important that at this time you review and confirm that processes for considering and accomplishing

(cc) BY-SA Licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

integration are established within your EnMS. There are several ways in which processes for integration should already be addressed:

- Top management's demonstration of leadership and commitment to continual improvement of energy performance and the effectiveness of the EnMS must ensure the integration of EnMS requirements into your organization's business processes. Typically, this is addressed in the management review process, wherein decisions related to continual improvement, including opportunities to improve integration with business processes, are among the required outputs in Task 4 Management Commitment and Task 23 Management Review.
- In planning the actions to address risks and opportunities as part of Task 7 Risks to EnMS Success, your organization sets plans for how to implement and integrate those actions into the EnMS and energy performance processes. Depending on the type of actions to be taken, this could include integrating the actions into objectives, energy targets, action plans, communication processes, operational controls, design plans, monitoring and measurement activities, etc.
- Similarly, consideration should be given to how your actions to achieve objectives and energy targets can be integrated into the organization's business processes (see Task 13 Action Plans for Continual Improvement). Depending on the actions to be taken, this could mean integrating the actions with strategic planning or budgeting processes, competency or training requirements, procurement activities, development of documented information, etc.

Ensure that top management promotes continual improvement

Top management commitment and support is typically cited as the number one factor for the long-term success of continual improvement initiatives, including implementation of a management system. Leadership must behave in ways that demonstrates their commitment and support for continual improvement of the EnMS and energy performance, while also behaving in a way that models how they want employees to engage with the system. Simple actions such as turning off lights and equipment when leaving an office or participating in the EnMS suggestion process provide examples for employees to emulate.

In short, leadership must "walk the talk" in ways that are visible to employees. Culture change can be a slow and challenging process, but with a consistent, unwavering focus on continual improvement, behaviors and expectations can be adjusted over time. Culture change is facilitated by top management meeting its responsibilities to promote continual improvement of energy performance and the EnMS, communicating the importance of energy management, directing and supporting personnel to contribute to energy performance improvement, and supporting the demonstration of energy leadership by relevant management in their areas of responsibility.

Leadership commitment is critical to continual improvement and the success of the EnMS. The action to be taken here is to check that top management can demonstrate its leadership and commitment to continual improvement of energy performance and the effectiveness of the EnMS through the management review process and by meeting all their responsibilities as set out in Task 4 Management Commitment.

(cc) BY-SA Licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

Ensure continually improvement of the EnMS

Task 13 Action Plans for Continual Improvement points out the need to continually improve the suitability, adequacy, and effectiveness of the EnMS. Regardless of whether such planned improvements have or do not have action plans associated with them, it is important that processes are in place to identify and implement opportunities and capture the results. Analysis and evaluation of those results helps determine the effectiveness of the EnMS, as discussed in Task 20 Monitoring and Measurement of the EnMS.

Recall that improvement opportunities are required inputs to management review, including opportunities related to competence, awareness, communication, and integration of EnMS processes into your organization's business practices. Although improvements can be made in any and all processes of the EnMS, initial efforts should focus on the opportunities considered and decided on in management review.

Act to review and confirm that processes to identify and implement improvement opportunities related to the management system and its processes are in place. Processes to monitor, measure, and evaluate the results are also needed. Sometimes in the initial implementation of the EnMS, establishing these processes is overlooked because continual improvement of the EnMS is viewed as going from no EnMS in place to a fully implemented EnMS. However, once the EnMS is fully implemented, your organization needs to pursue continual improvement of the EnMS processes and their interactions, just as you have pursued and achieved continual improvement in energy performance.

Ensure you can demonstrate continual energy performance improvement

Task 21 Monitoring and Measurement of Energy Performance Improvement addresses the evaluation of energy performance, and it is in that task that you determined whether energy performance improvement has been achieved. Those results should have been communicated to top management as part of the management review process.

Decarbonization

This task provides guidance for ensuring that the processes and connections needed for continually improving EnMS effectiveness, energy performance, and the reduction of energy-related GHG emissions over the long term are firmly established and functioning as intended.

Establishing a new EnMS prioritizing decarbonization

If you do not have an existing 50001 Ready-based EnMS and want to build one that also helps your organization manage energy-related GHG emissions, you should follow the guidance in the "Full Description" tab keeping the following in mind:

1. Make sure that you have included GHG emissions in all previous tasks. The process for continual improvement should not be affected.

(cc) BY-SA Licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

Adapting an existing EnMS to prioritize decarbonization

If you have an existing 50001 Ready-based EnMS and want to adapt it to manage energy-related GHG emissions, you should:

1. Follow the guidance in this task. If you have updated all your tasks to include GHG emissions, the process for continual improvement should not change.

Commercial Emissions Reduction Planning Framework

The guidance for this task is from the following sections from the ERP Framework: ERP Framework Milestone 5.

The purpose of this task is to ensure the organization's commitment to developing and implementing an ERP will be successful. This task starts with alignment on the GHG inventory management plan (IMP), GHG emissions reduction targets, and ERP scope of work. (Milestone 1) The plan will be updated periodically based on changing external trends and technologies and is intended to be utilized as a living document to guide decarbonization. (Milestone 5)

Upon completing the ERP, define how often the plan will be assessed and updated as conditions change in the organization and as technology costs and savings change.

(cc) BY-SA Licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.



Ongoing Implementation

Execute emissions reduction plan and update implementation strategies over time

Industrial Emissions Reduction Planning Framework

Just as the energy management system and energy performance, the emissions reduction plan and the actual reduction in GHG emissions will need to be continually evaluated.

The guidance for Task 25 is found within the following section of the ERP Industrial Framework:

(cc) BY-SA Licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

Ongoing Implementation:

Continuous evaluation of circumstances and revision of ERP – The ERP should be updated every 3-5 years to account for changing factors like the constant development of technologies, new policies and incentives, changes in fuel costs, changes to the grid mix, updated portfolio growth models, or new business models and strategies. Periodic revision ensures that ERPs continue to meet organizational needs and goals; however, constant (e.g., annual), complete revision is likely unnecessary and can waste organizational resources (personnel, capital) on excessive planning rather than actual implementation.

(cc) BY-SA Licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.