Section: Support

Task 14: We ensure the competence of personnel whose work affects our energy performance and energy management system. We evaluate the effectiveness of actions taken to acquire competencies. We retain appropriate records of competencies and training.

Getting It Done

1. Determine necessary competencies for personnel and evaluate their current competencies.
2. Identify any gaps in the competencies of personnel whose work affects energy performance and the energy management system (EnMS), and conduct training to address competency gaps.
3. Evaluate the effectiveness of the actions taken.
4. Retain records of competence and related actions.

Task Overview

Personnel performing work that affects your organization's energy performance and energy management system (EnMS) must have the competence to perform that work. Ensuring the competence of these personnel helps minimize potential negative impacts on energy management and energy performance. If there are any competency gaps among the relevant personnel, including on-site contractors or suppliers, then those gaps must be identified and actions taken to ensure that they are brought up to the level required to perform the job. The actions taken must be evaluated to ensure that they were effective, and appropriate records of competence must be retained.

This guidance is relevant to Section 7.2 of the ISO 50001:2018 standard.

Associated Resources	Short Description
no resources for this questions	

Full Description

Identify personnel who affect your energy performance and the EnMS

Personnel working under your control whose work affects your organization's energy performance and energy management system (EnMS) must be competent to perform those tasks. These personnel can include salaried, hourly, part-time, and temporary employees, as well as on-site contractors, suppliers, and consultants.

In identifying persons who affect energy performance and the EnMS, at a minimum, attention should be

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given to the energy team and employees and on-site contractors whose work is associated with the following:

- Significant energy uses
- Objectives, energy targets, and action plans
- Energy performance indicators (EnPIs)
- Actions to address risks and opportunities
- Operation of energized equipment and systems
- Maintenance (sites, equipment, systems, processes)
- Design and installation of sites, equipment, systems and processes
- Purchasing
- Sustaining past energy performance improvements
- Energy and related data collection and analysis

Determine the necessary competencies and evaluate the current competencies for these personnel

Competency is the ability to apply knowledge and skills for an individual to effectively perform the responsibilities their work requires. Competencies vary for different job positions and are defined on the basis of appropriate education, training, skills, or experience.

- **Education:** Knowledge generally acquired through a formal educational program such as a school, technical institute, or university.
- **Training:** Knowledge generally acquired through the teaching of vocational or practical skills and knowledge related to specific useful capabilities. Training typically involves successful completion of a training course or training program or on-the-job training. Examples include boiler operation, electrical system maintenance, or wastewater treatment.
- **Skill:** Talent or ability that can be learned or developed and is subsequently demonstrated. Examples include welding, painting, or software development.
- **Experience:** The accumulation of knowledge or skill that results from direct participation in events, activities, or tasks.

Most organizations have information on the competencies required for various positions. Often, this information is maintained in the Human Resources, Training, or Environmental and Health and Safety (EHS) Departments. The challenge normally is to identify what documentation already exists and where it is located. For example, competency requirements for relevant personnel may be defined in job descriptions, position statements, on-the-job training checklists, contractor or supplier agreements, and the like.

Some questions to consider include the following:

- How does your organization currently determine what individual employees and contractors need to know or need to have in order to perform their specific jobs?
- Who decides competency requirements? Who is involved in this process?
- Is there documented information on this? If so, where is it located? Who controls that information?
- Do these competency requirements include what energy-related information employees need to

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know?

If your organization does not have this information for each position that affects energy performance and the EnMS, or the existing processes is highly informal, the optional Playbook worksheet can be useful for defining competency requirements. It can be completed for each individual working in a specific position. These resources can also be used simply to generate ideas on the types of information your organization may want to include in, for example, an online database for maintaining information on competency requirements for the positions that affect energy performance and the EnMS.

Where there are competency gaps, take appropriate action

Ensuring competence involves determining whether there are any competency gaps among the relevant personnel. If so, then actions need to be taken to address those gaps. For employees, actions could include formal education, training, mentoring, coaching, self-study, professional development activities, and reassignment. For on-site contractors and suppliers, actions could include additional or modified contract provisions or terms of service, contractor/supplier orientation, or other training. In many circumstances, ensuring the competency of on-site contractors and suppliers is a contractual requirement.

Training is a common method of addressing competency gaps, including those related to energy and energy management. Consider whether there are any new or modified competencies needed for specific groups or categories of employees and contractors, such as those performing work related to significant energy uses (SEUs). They need to be aware of and be able to follow correctly any of the following as they relate to their work responsibilities:

- Operational and maintenance controls and criteria associated with the SEUs (see Task 17 Operational Controls)
- Monitoring, measuring, and analysis requirements related to the operation of SEUs (see Task 20 Monitoring and Measurement of the EnMS, Task 21 Monitoring and Measurement of Energy Performance Improvement, and Task 9 Significant Energy Uses (SEUs))
- Energy performance evaluations of procured products, services, and equipment that affect the SEUs (see Task 19 Energy Considerations in Procurement)

Other groups of employees and contractors for which additional competencies related to the EnMS may be needed can include internal auditors and personnel with responsibilities related to data collection, analysis, and evaluation.

The optional Playbook worksheet can help you identify and plan EnMS-related training such as ISO 50001 training for the energy team (Task 6 Energy Team and Resources), general energy awareness training for all personnel (including new employees and on-site contractors) (Task 15 Awareness and Communication), and internal auditor and lead auditor training (Task 22 Internal Audit).

Many larger organizations already have processes in place to evaluate personnel against the competency requirements for their position and to address any needs. Typically, the needs are used to develop a plan to bring the employee up to the desired level of competency. Such processes may be managed by

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Human Resources and/or EHS functions that need to ensure an annual refresher or other training related to EHS regulatory requirements. Establishing similar processes for the EnMS should leverage any existing training processes and resources.

The optional Playbook worksheet can be used to record the evaluation of an individual's education, training, skills, or experience relative to the competency requirements, and to identify gaps.

The optional Playbook worksheet can be used to record the training plan, as well as the completion status. Once developed, the training plan usually is reviewed by the employee, supervisor, and/or training coordinator for relevance to the identified training need(s). An example training plan appears in the optional Playbook worksheet.

For organizations considering technical training on energy systems, training programs focusing on best system practices and software tools are available in most countries - consult with your regional program authority or utility for assistance.

Evaluate the effectiveness of the actions taken

When actions are taken to fill any competency gaps of relevant personnel, it must be determined whether those actions achieved the intended results. How the actions taken are evaluated for effectiveness will vary, depending on the specific actions taken. For example, if the action taken was additional or remedial on-the-job training, effectiveness might be evaluated using supervisor observation and sign-off. For actions such as formal education or training courses, the achievement of a diploma or certificate could demonstrate effectiveness. Other approaches to effectiveness evaluation could be tests and quizzes or, particularly for gaps related to energy management, the use of the EnMS internal audit system. Regardless of the approach used, your organization will want to have confidence that those personnel have attained the desired level of competence.

Retain appropriate records of competency

Retaining records of competency demonstrates that personnel whose work affects energy performance and the EnMS have met your own organization's job requirements. Records of competency could be a variety of different types of documented information, such as resumes, transcripts, diplomas, certificates, completed on-the-job training or other types of completed competency checklists, completed attendance or sign-in sheets, the results of the second party audits of contractors and suppliers, and the like. Be sure this information is controlled under the requirements of Task 16 Documenting the EnMS.

Decarbonization

Personnel performing work that affects your organization's energy performance and energy management system (EnMS) must have the competence to perform that work. When adding energy-related GHG emissions to the EnMS, you must ensure that personnel have the competence to perform the additional work required, if any.

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Attention should be given to employees and on-site contractors whose work is associated with the following:

- Significant energy uses
- Objectives, targets, and action plans
- Energy performance indicators (EnPIs)
- Actions to address risks and opportunities
- Operation of energized equipment and systems
- Maintenance (sites, equipment, systems, processes)
- Design and installation of sites, equipment, systems and processes
- Purchasing and other procurement functions
- Sustaining past energy and energy-related GHG emissions performance improvements
- Energy, energy-related GHG emissions, and related data collection and analysis

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 GHG emissions, you should follow the guidance in the “Full Description” tab keeping the following in mind:

1. **Identify personnel who affect energy performance and the EnMS**. Determine if there are employees or contractors whose competencies are affected because of the focus on energy-related GHG emissions. Make sure you consider employees and contractors whose work is associated with the items listed above and that you consider any competencies that are specific to energy-related GHG emissions.
2. **Update the competency requirements of employees**. As needed, engage with other organizations (e.g. human resources or training departments) to determine the competency requirements based on energy-related GHG emissions-related competencies, and to evaluate the current competencies for these personnel.
3. **Where there are competency gaps, take appropriate action**. Take the appropriate action to ensure any energy-related GHG emissions-related competency gaps among employees or contractors are addressed. This can include formal education, training, mentoring, coaching, self-study, professional development, and reassignment.
4. **Evaluate the effectiveness of the actions taken**. Make sure that any actions taken to fill energy-related GHG emissions-related competency gaps achieve the intended results and that the personnel have attained the desired level of competence.
5. **Retain appropriate records of competency**. Retain records of competency to demonstrate personnel meet the organization’s job requirements.

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. **Review the list of personnel who affect energy performance and the EnMS**. Gather and review any documentation you kept on the competency requirements you determined for your

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EnMS. Determine if there are employees or contractors whose competencies will change because of the added focus on energy-related GHG emissions. Make sure you consider employees and contractors whose work is associated with the items listed above and that you consider any competencies that are specific to energy-related GHG emissions.

2. **Update the competency requirements of employees**. As needed, engage with other organizations (e.g. human resources or training departments) to update the documented competency requirements based on the additional energy-related GHG emissions-related competencies, and to evaluate the current competencies for these personnel.
3. **Where there are competency gaps, take appropriate action**. Take the appropriate action to ensure any energy-related GHG emissions-related competency gaps among employees or contractors are addressed. This can include formal education, training, mentoring, coaching, self-study, professional development, and reassignment.
4. **Evaluate the effectiveness of the actions taken**. Make sure that any actions taken to fill GHG emissions-related competency gaps achieve the intended results and that the personnel have attained the desired level of competence.
5. **Retain appropriate records of competency**. Retain records of competency to demonstrate personnel meet the organization's job requirements.

Commercial Emissions Reduction Planning Framework

The guidance for this task is from the following sections from the ERP Framework: ERP Framework Milestones 3 and 5.

To ensure successful implementation of the ERP provide high-level guidance on policies, requirements, and acceptable technologies (Milestone 5). Ensure that current personnel have ongoing training to maintain and enable further GHG emissions reductions. (Milestone 3)

Industrial Emissions Reduction Planning Framework

Although the topics for Task 14 are touched upon within the following sections of the ERP Industrial Framework (see below), the framework does not explicitly state the competencies and personnel training, implying them indirectly.

Milestone 5:

Review and update existing organizational standards and procedures (e.g., standard operating procedures, procurement practices, project evaluation criteria, and training programs) to align with the selected emissions reduction plan pathway.

Ongoing Implementation:

Key implementation strategies include developing a work plan, setting data collection procedures, knowledge-sharing, and periodic reassessment.

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