



50001 Ready
U.S. DEPARTMENT OF ENERGY

50001 Ready

End User 2-Day

Training Overview

Version 1.0

1. INTRODUCTION

1.1 What is 50001 Ready?

As the global standard for energy management systems, ISO 50001 provides organizations with an internationally recognized framework for implementing an EnMS based on the management system model of continual improvement, also used for other well-known standards such as ISO 9001 or ISO 14001. Grounded in the best practices of continuous improvement foundational to Kaizen and 6 Sigma, ISO 50001 adds a strong data-driven backbone to this familiar “plan-do-check act” approach, making it easier for organizations to integrate energy management into their overall efforts to improve quality and environmental management.

ISO 50001 is designed to collectively engage all levels of an organization from the C-suite to the shop floor and continually improve their energy performance. The shared involvement and responsibility for energy efficiency empowers workers with the knowledge and tools to directly impact energy use and the bottom line. The standard is also complementary to other professional benchmarks and certifications, such as ENERGY STAR or LEED, and to other energy management system definitions, such as CEE’s Minimum Elements. Implementation of an ISO 50001 structure can improve a facility’s performance within other energy commitments or credentials.

The [50001 Ready Program](#) is a voluntary program that aims to help industrial, institutional and commercial facilities achieve conformance to ISO 50001. The program is a no-cost, self-paced approach for facilities to establish an EnMS and self-attest to the structure of ISO 50001, without the cost or third-party audits associated with ISO 50001 certification. Upon completion of the 50001 Ready Navigator, the organization’s energy team will self-attest to their achievement and the facility will be recognized by DOE as 50001 Ready.

The [50001 Ready Navigator](#) is an online guide to assist your customers in putting an energy management system in place. Developed by U.S. Department of Energy (DOE), with support from Lawrence Berkeley National Laboratory and public and private partners, the 50001 Ready Navigator aligns with the structure and requirements of ISO 50001 to ensure that end-users are instituting and maintaining their EnMS to the best practices of the global standard.

50001 Ready offers:

1. A self-paced, no cost, do-it-yourself approach to implement ISO 50001 practices
2. Guidance to identify facility-wide energy use and develop action plans for year on year energy performance improvement
3. Offers customizable software tools and resources, designed to be enhanced by utilities and implementers and offered to end-users
4. A means to quantify and track overall facility energy savings across all fuels, including the ability to separate capital projects from operations and maintenance (O&M) improvements
5. Results in recognition for self-attesting to conformance with ISO 50001, without the requirement of an external audit

1.2 What value does 50001 Ready bring to program administrators and implementers?

Like ISO 50001, DOE's voluntary 50001 Ready program helps companies align energy management with existing corporate business management systems and operating practices, and enables companies to increase their energy productivity while also reducing emissions, and creating processes for energy management that endure staff turnover.

50001 Ready resources are designed to be handed off to program implementers—including utilities, states, municipalities, public benefits administrators, disclosure groups, and other membership organizations—as a direct offering for their customers. 50001 Ready can be structured either as an energy program or as a customer engagement platform for increased customer satisfaction.

Energy Program. 50001 Ready offers implementers the ability to engage customers and build long-term relationships to quantify O&M savings and develop a pipeline of future improvement opportunities. 50001 Ready can also be the springboard for deeper strategic energy management (SEM) programs.

Customer Satisfaction. 50001 Ready offers the ability to provide a service for key customers to build relationships and assist in understanding, planning and managing energy. The implementer can offer the 50001 Ready tools and provide customer support to maintain contact throughout the process.

More details on 50001 Ready and ways it can be used by a Program Administrator can be found on DOE's 50001 Ready website

1.3 What is the 50001 Ready End User 2-Day Training?

The 50001 Ready End User 2-Day Training is a training module developed by DOE for energy efficiency program administrators and implementers to provide to end-users. The purpose of the training is to introduce a small group (5-10) end-users to an Energy Management System (EnMS) that is based on ISO 50001 and that is structured on 50001 Ready tools, such as [50001 Ready Navigator](#), [EnPI Lite](#), and [Energy Footprint](#).

The materials are based on a two-day, face-to-face curriculum with an introductory webinar before the training. The materials walk the end-user through a brief overview of the 50001 Ready tools, provides explanations on all the tasks to develop an EnMS, and offers a series of small group activities to allow participants to work on specific tasks. In addition, the training offers a more in-depth explanation of technical aspects of an EnMS such as:

- Data collection and analysis
- Energy performance indicators and baselines
- Calculating energy savings
- Operational controls

The training materials assume that the individuals providing the training are familiar with energy management systems, 50001 Ready, Navigator, and DOE's 50001 Ready tools (EnPI lite, etc), and that the trainer knows how to facilitate small-group activities. We recommend the training be given by a Certified Practitioner of EnMS (CP EnMS) or someone with equivalent training or experience.

This training assumes that participants will have internet access during the training so they can access Navigator, an on-line tool.

Materials for this training are available on DOE's 50001 Ready website in both source files (MS PowerPoint) and PDFs at this [link](#).

2. 50001 READY: END USER 2-DAY TRAINING MATERIALS

2.1 Training files

The 50001 Ready End User 2-Day Training materials are a set of files that can be downloaded from the DOE site, these files include:

- a. Pre-workshop webinar presentation (PowerPoint document)
- b. Training day 1 presentation (PowerPoint document)
- c. Training day 2 presentation (PowerPoint document)

Although the files include hundreds of slides, not all have to be used. If the program or trainer does not include support or does not have experience with any specific technical aspects in the presentation, those aspects can be taken out and an overview of the task can be given instead.

In addition, the two-day plus pre-training webinar breakdown is an example approach. Program administrators and implementers can break the training down into more days, integrate it into longer-term training, pare it down to a single day, or modify it in any way that fits their program's intended approach. Some sample ways to change the training into four- and six-day trainings are included in section 2.2.

When using any of this content, please credit US DOE with the following statement in one of the introductory slides: “Content originally developed by the US Department of Energy”. We recommend you brand all documents, at least with your logo or company name.

Details on each file:

1. **Pre-workshop training webinar:** this portion of the training is designed to be given from a distance (phone and web) and should last approximately 2 hours. The purpose is to introduce participants to the overall flow and objectives of the training and to help them be prepared for the 2-day face-to-face training.
 - ▶ **File name:** WEBINAR TRAINING - 50001 Ready 2-day training v01.pptx
 - ▶ **Format:** PowerPoint document
 - ▶ **Length:** 21 slides
 - ▶ **Size:** 7.4 MB
 - ▶ **Content:**
 - i. Introduction to the trainers
 - ii. Overview of the purpose of the training and learning objectives.
 - iii. Value of 50001 Ready
 - iv. *Training Agenda
 - v. Overview of Tools
 - vi. Preparation for the training
 - vii. Outcomes
 - viii. *Contact information

Items with an asterisk (*) must be edited to include details that are specific to the training (date, contact information, etc.) prior to presenting to participants.

2. **Day 1 training:** this portion of the training is designed to be given face-to-face in a small group and should last approximately 8 hours, including breaks and lunch. This first full day of training is intended to introduce nearly half of the 25 tasks required to be “50001 Ready”.
 - ▶ **File name:** DAY 1 TRAINING - 50001 Ready 2-day training v01.pptx
 - ▶ **Format:** PowerPoint document
 - ▶ **Length:** 107 slides
 - ▶ **Size:** 9.6 MB
 - ▶ **Content:**

Section #	Topics	Slide #	Length	Total Time
1	Introduction, objectives and logistics	1-8	10 minutes	10
2	Value Proposition for Energy Management	9-18	20 minutes	30
3	Navigator Overview	19-24	15 minutes	45
4	Planning: Tasks 1, 2, 3 Scope and Boundaries, Energy Policy, Management Commitment	25-31	30 minutes	75
5	Planning: Task 4 Energy Team	32-38	20 minutes	95
6	Planning: Task 5 Legal Requirements	39-40	5 minutes	100
7	Energy Review: Tasks 6, 7	41-53	75 minutes	175

	Data Collection, Data Analysis			
8	Energy Review: Task 8 Significant Energy Uses	54-63	45 minutes	220
9	Energy Review: Task 9 Relevant variables	64-74	50 minutes	270
10	Energy Review: Tasks 10, 11 Energy Performance Indicators, Baselines	75-90	50 minutes	320
11	System Management: Task 24 Calculate Energy Savings	91-106	50 minutes	370
12	Day 1 Wrap Up and Logistics for Day 2	107	5 minutes	375

Team Activities:

Activity #	Slide #	Topics	Required materials
1	31	Energy Policy	Laptop with Navigator
2	38	Energy Team	Laptop with Navigator
3	53	Energy Footprint Tool	Laptop with Footprint Tool and Navigator, sample data (downloadable from DOE website or can be provided by instructor)
4	63	Significant Energy Uses	Laptop with Navigator
5	74	Relevant Variables	Laptop with Footprint Tool and Navigator, sample data
6	90	EnPI and Baseline	Laptop with Navigator
7	106	Energy Performance	Laptop with sample data and access to EnPI Lite tool.

Review the activities to make sure you want to include them and if you do, make sure the participants have access to the internet to access Navigator and to download necessary materials.

3. **Day 2 training:** this portion of the training is also designed to be given face-to-face in a small group and should also last approximately 8 hours, including breaks and lunch. This second day of training is intended to introduce the remaining tasks and discuss the next steps a facility should take in becoming “50001 Ready”.

- ▶ **File name:** DAY 2 TRAINING - 50001 Ready 2-day training v01.pptx
- ▶ **Format:** PowerPoint document
- ▶ **Length:** 105 slides
- ▶ **Size:** 11.5 MB
- ▶ **Content:**

Section #	Topics	Slide #	Length	Total Time
1	Review of day 1 and agenda day 2	1-3	10 minutes	10
2	Energy Review: Task 12 Energy Improvement Opportunities	4-12	45	55

3	Energy Review: Task 11 Objectives and Targets	13-22	40	95
4	Energy Review: Task 13 Improvement Projects	23-32	50	145
5	Continual Improvement: Task 16 Operational Control	33-47	45	190
6	Continual Improvement: Tasks 14, 15, 17 Monitoring, Measurement, Corrective Actions	48-58	45	235
7	System Management: Task 20 Communications	59-66	35	270
8	System Management: Task 21 Training	67-73	30	305
9	System Management: Task 22 Procurement	74-75	5	310
10	System Management: Task 19 Documentation and Records	76-80	10	320
11	Continual Improvement: Task 18 Energy Considerations in Design	81-82	5	325
12	System Management: Task 23 Internal Audits	83-93	40	365
13	System Management: Task 25 Management Review	94-101	35	400
14	Next Steps	102-105	10	410

Team Activities:

Activity #	Slide #	Topics	Required materials
1	12	Energy Improvement Opportunities	Laptop with Navigator, Worksheet (downloadable from Navigator Task 12)
2	22	Objectives and Targets	Laptop with Navigator
3	32	Action Plans	Laptop with Navigator, Worksheet (downloadable from Navigator Task 13)*
4	47	Operational Criteria	Worksheet (downloadable from Navigator Task 16)
5	58	Monitoring and Measurement	Worksheet (downloadable from Navigator Task 14) *
6	66	Communication	Laptop with Navigator
7	73	Training	Laptop with Navigator
8	93	Internal Audit	Laptop with Navigator
9	101	Management Review	Laptop with Navigator

Review the activities to make sure you want to include them and if you do, make sure the participants have access to the internet to access Navigator and to download necessary materials. We recommend printing copies of items with an asterisk (*) for the participants.

2.2 Sample agendas for longer training

As mentioned above, the two-day plus pre-training webinar breakdown is an example approach. Program administrators and implementers can break the training down into more days, integrate it into longer-term training, pare it down to a single day, or modify it in any way that fits their program's intended approach and length of time. Below are some examples of how the training could be modified to provide it over a longer duration.

2.2.1 Training provided over a year-long period

The training can be modified to fit a year-long program, provided once a quarter in half-days (four hours per session) over four quarters. To do this, a program can use the existing files, modifying the agenda to provide the content in the following way:

1. Pre-training webinar: as is (with modifications to the pages describing the agenda)
2. Day 1: Use the Day 1 training file and present sections 1-7
3. Day 2: Use the Day 1 training file and present sections 8-12
4. Day 3: Use the Day 2 training file and present sections 1-5
5. Day 4: Use the Day 2 training file and present sections 6-14

2.2.2 Training provided over a six-quarter period

The training can also be modified to fit a six-quarter program, provided once a quarter in 2.5-hour sessions. To do this, a program can use the existing files, modifying the agenda to provide the content in the following way:

1. Pre-training webinar: as is (with modifications to the pages describing the agenda)
2. Day 1: Day 1 training sections 1-6
3. Day 2: Day 1 training sections 7-8
4. Day 3: Day 1 training sections 9-11
5. Day 4: Day 2 sections 2-4
6. Day 5: Day 2 sections 5-7
7. Day 6: Day 2 sections 8-13