



50001 Ready
U.S. DEPARTMENT OF ENERGY

U.S. DEPARTMENT OF
ENERGY

Energy Efficiency &
Renewable Energy



50001 Ready Program

FOR PROGRAM ADMINISTRATORS AND IMPLEMENTERS

U.S. Department of Energy
Technical Partnerships
Advanced Manufacturing Office

Department of Energy (DOE) Priorities:

✓ Utility, State, Local Support

- Provide support, not supplant or interfere
- Develop resources to quantify/validate energy savings
- Work on non-energy benefits (e.g., reliability)
- Grid interoperability and smart technologies
- Create recognition for energy accomplishment (Better Plants)

✓ Specific Program Attention (Technical Partnerships)

- Supporting small and medium sized manufacturers (assessments)
- Assist water utilities, especially wastewater (move to energy producing)
- Combined Heat and Power (energy security, reliability, energy savings)
- Energy Continuous Improvement (developing the SEM culture)

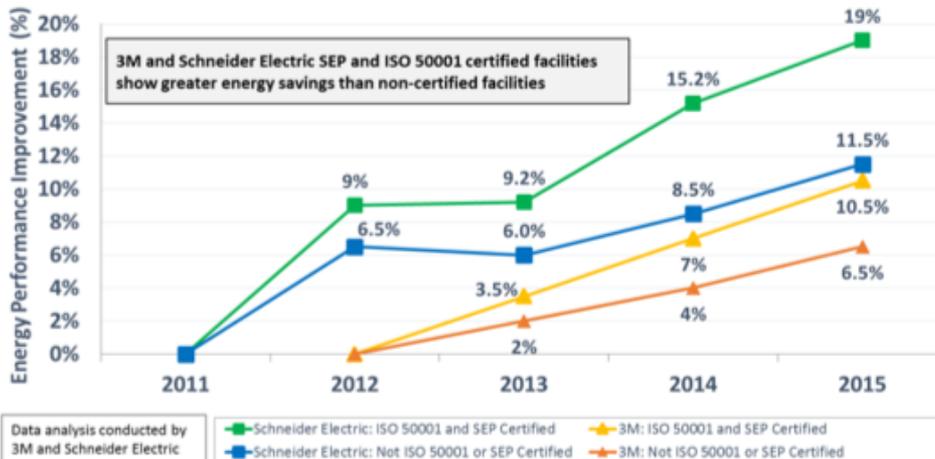
ISO 50001 – Energy Management Systems Standard

- **ISO 50001 is an EnMS (Energy Management System)**

- Culture. ‘Change management’ process engaging facility personnel with leadership
- Practice. Management practice to promote continuous improvement

- **Key Components**

- Commitment. Leadership committed and empowering energy management
- Data. Collection and analysis of energy performance in facility and large energy users
- Value. Incorporating energy decisions into overall operations



Companies adopting ISO 50001

- 3M
- Aflac
- American Axle & Manufacturing
- BAE Systems
- BMW
- Bosch Rexroth
- Bridgestone
- Cargill
- Chrysler
- Coca-Cola
- Cummins
- Curtiss-Wright EMD
- Detroit Diesel
- Google
- HARBEK Inc.
- Hilton Worldwide
- IBM
- Intertape Polymer Group
- Land O'Lakes
- Johnson Controls
- Mack Trucks
- Marriott International, Inc.
- MedImmune
- NewGold
- Nissan North America
- Samsung
- Schneider Electric
- Titan America
- Volkswagen
- Volvo

50001 Ready as DOE Tool to Drive ISO 50001

The Objective

- Create a readily adoptable, easily transferable, cross-sectoral platform for creating, maintaining and quantifying a continuous energy improvement culture in the US

50001 Ready is

- Recognition for self-attesting to conformance with ISO 50001
- Process with no certification requirement from third parties
- Open source software tools, designed to be adopted by implementers
- Suite of resources to support continuous improvement in institutional, commercial and industrial facilities
- Ability to support 'enterprise' or multi-facility adoption
- Resources for utility program design and EM&V needs

What “50001 Ready” Is and Is Not

50001 Ready Is Not...

A standalone DOE program

- 50001 Ready is designed to be branded & customized by the utility, state, etc.
- DOE willing to co-brand 50001 Ready recognition
- DOE is not ‘claiming’ savings

Designed to replace current Utility SEM programs or offerings

- 50001 Ready can be used to jump start into SEM or integrated into advanced SEM program
- Requires minimal effort to integrate with existing SEM programs

A certification program

- 50001 Ready builds infrastructure toward certification (if desired)
- Provides recognition for self-declared conformance to the principles of ISO 50001

50001 Ready Is...

A promoter of consistent energy management principles and energy performance improvement

- Provides guidance based on the ISO 50001 standard used across the globe
- Consistent output across sectors, geography, service territories

A program that does not require formal certification

- Self-declared performance to ready a facility for ISO 50001/SEP certification

A set of resources available for rebranding/repurposing

- The program and its tools may be ‘owned’ by service companies, utilities, states, and other implementer organizations.

The provider of user-friendly tools to establish an energy management system

- Should not require ‘certified’ professionals to implement; but may leverage existing program support staff or CP EnMS professionals

50001 Ready Recognition

Three Steps to Becoming 50001 Ready

STEP 1

Start Implementation of ISO 50001 principles

Use the 50001 Ready Navigator Online Tool

- ✓ The Navigator walks you through the process of implementing an energy management system and prepares you to be 50001 Ready.

STEP 2

Analysis of energy reductions

Adopt Valid Tool to Present Energy Performance

- ✓ DOE offers the EnPI Lite calculator for 50001 Ready.
- ✓ EPA's Portfolio Manager can also be used
- ✓ Other tools can be approved by DOE

STEP 3

File for 50001 Ready recognition

Submit information to DOE for Review

- ✓ Self-attestation of completion of Navigator, executed by team leader and executive
- ✓ Submit energy performance data



DOE recognizes
50001 Ready
achievement

50001 Ready Navigator

50001 Ready
U.S. DEPARTMENT OF ENERGY

Welcome to the 50001 Ready Navigator!

The 50001 Ready Navigator is an online application that provides step-by-step guidance for implementing and maintaining an energy management system in conformance with the ISO 50001 Energy Management System Standard. Join the 12,000+ facilities worldwide benefitting from an energy management system!

[Tell Me More](#) | [Explore the Navigator](#) | [Create an account or Log-in to Get Started](#)

EMAIL ADDRESS:

ENTER PASSWORD:

[Log In](#)

[Forgot password?](#)

- ✓ 'Turbo Tax' for self-guided 50001 conformance
- ✓ Online tool, with simple, step-by-step approach to ISO 50001 implementation
- ✓ 25 tasks divided into 4 sections
- ✓ Ability to assign tasks to team members
- ✓ Extensive guidance available in each module

2nd test project | Dashboard | Planning | Energy Review | Continual Improvement | System Management

Dashboard

Getting Started | Status Report

OVERALL PROGRESS: **40% Completed**

60% PLANNING | 25% ENERGY REVIEW | 0% CONTINUAL IMPROVEMENT | 71% SYSTEM MANAGEMENT

Task Assignments

Planning | Energy Review | Continual Improvement | System Management

Task	Assigned To	Status	Status Date	Action
1 Scope and Boundaries	Paul Sheaffer	Completed	03/14/2017	
2 Energy Policy	Paul Sheaffer	Completed	03/14/2017	
3 Management Commitment	Paul Sheaffer	Completed	03/14/2017	
4 Energy Team	Paul Sheaffer	Not Started		
5 Legal Requirements	Paul Sheaffer +1	Not Started		

2nd test project | Dashboard | Planning | Energy Review | Continual Improvement | System Management

Continual Improvement

Tasks: Corrective Actions

← PREVIOUS | 14 | 15 | 16 | 17 | 18 | NEXT →

Task 17: We investigate and respond to significant deviations in energy performance and potential issues with the 50001 Ready system, taking corrective and preventative actions as needed

You are currently not assigned to this task.

Request Assistance | Download

Current Status: **Not Started**

Detailed Guidance: Corrective Actions

Getting It Done | Task Overview | Full Description | Notes | Resources | History | Assignments

Full Description

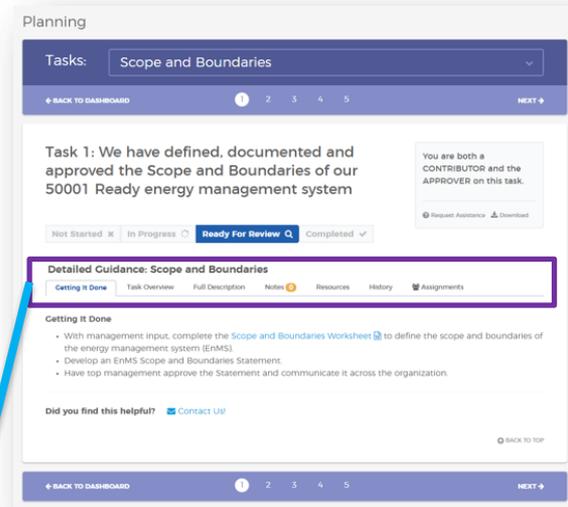
See and implement criteria for significant deviations

A deviation may be identified by a specific level of variation or can be evaluated by knowledgeable personnel to determine if it is significant and if action is required. Examples of methods for specifying significant deviations can include the following:

- Values outside of control limits
- Percent variation in value
- Trends identified
- Specified variation in EnPs
- Specified variation in SEU performance
- Level of variance between expected and actual performance

50001 Ready Navigator - highlights

- Guidance broken into straight forward sections, including:
 - Getting It Done – what specifically needs to be accomplished
 - Task Overview – how does this task connect with ISO50001
 - Full Guidance – comprehensive guidance about the task
 - *Optional* Transition Tips – from other ISO management systems or ENERGY STAR
- Track and update task progress
- Form teams and assign tasks
- Download guidance
- Create multiple projects
- Access over 100 related resources



Detailed Guidance: Scope and Boundaries

Getting It Done

Task Overview

Full Description

Notes 0

Resources

History

Assignments

50001 Ready Links to Energy Management

Planning

1. Scope and Boundaries
2. Energy Policy
3. Management Commitment
4. Energy Team
5. Legal Requirements

Energy Review

6. Data Collection
7. Data Analysis
8. Performance Indicators (EnPIs)
9. Significant Energy Uses (SEUs)
10. Relevant Variables
11. Baselines, Objectives and Targets
12. Improvement Opportunities
13. Improvement Projects

Continual Improvement

14. Monitoring
15. Measurement
16. Operational Controls
17. Corrective Actions
18. Energy Consideration in Design

System Management

19. Documentation and Records
20. Communications
21. Training
22. Procurement
23. Internal Audit
24. Calculate Energy Savings
25. Management Review

Strong link to SEM
Partial link to SEM

50001 Ready Prime Customers

- ✓ 50001 is not just Industrial!
- ✓ Prime Candidates include:
 - Government facilities
 - Water/Wastewater facilities
 - K-12 School Districts as an Enterprise
 - Universities
 - Data Centers
 - Distilleries, wineries, breweries
 - Multi-family
- ✓ How can program administrators get started?
 - Pilot 50001 Ready in own facilities
 - Partner on a regional *50001 Ready* pilot to share data/successes

Utility 'Ownership' of 50001 Ready

- 50001 Ready is low risk for customers: no cost, self-paced, non-certifying
- DOE has developed the platform, training and resources
- Utilities can support 50001 Ready in two ways:
 1. **Customer engagement/customer support.** *Provide support to customers as a value add of customer. Create long term energy partnership.*
 2. **EE Program.** *Utility provides resources, portal, support to customers and claims the identified savings.*
- Level of Engagement Options:
 1. **DOE Owned.** Utility recruits and directs their Members to DOE
 - ✓ DOE maintains the tools, help desk and recognition and reports savings to utilities
 - ✓ Utilities recruits members to 50001 Ready, can provide technical assistance or other resources
 2. **Utility Owned.** DOE transfers Tool and Resources to Utility
 - ✓ DOE maintains the core tool (pushes updates), cross-branded recognition
 - ✓ Utility recruits, hosts Navigator, provide tech assist, report participation to DOE

Sample: Crossbranded Navigator

YourCompany

50001 Ready
Navigator

Log In

Contact

FAQs

Explore



Open text can
be customized

Welcome to the 50001 Ready Navigator!

The 50001 Ready Navigator is an online application that provides step-by-step guidance for implementing and maintaining an energy management system in conformance with the ISO 50001 Energy Management System Standard. Join the 12,000+ facilities worldwide benefiting from an energy management system!

About the Navigator

About the 50001 Ready Navigator

The 50001 Ready Navigator is an online guide for implementing an energy management system to meet, identify, prioritize, and implement energy goals and improve your facility energy performance. Consistent with the 50001 Ready Navigator's mission to reduce carbon footprint, the application has been designed for energy management systems, ISO 50001.

What is Energy Management?
Energy management is a culture for continual improvement of energy performance and efficiency that's integrated within an organization's existing business practices. Organizations use an energy management system to reduce energy and cost savings through reduced business making and the implementation of energy saving practices for facilities, already equipped and operating. ISO 50001 is the international standard for implementing and maintaining energy management systems.

Why is Energy Management Important?
Energy is a critical component to your organization's operations. To improve to reduce the energy cost be managed and controlled by use of a fuel-efficient use. Energy management helps to reduce your organization's energy costs through improved energy performance and operational use of energy resources and energy related assets. The better knowledge of your organization, implementing some form of energy management can be a key step to save energy, cut costs, and improve compliance and set the ISO 50001 ISO 50001 standard.

Why should I use the 50001 Ready Navigator?
The 50001 Ready Navigator has been developed by the U.S. Department of Energy to help with the energy management system that already exist in ISO 50001. One of the Navigator's goals was to provide organizations with a consistent address of energy management systems, and facilitate a more robust approach to its implementation. The Navigator is designed to help your organization meet needs of your ISO 50001, so that you can set and use the 50001 Ready in your ISO 50001 or Super Energy Performance ISO 50001.

What is 50001 Ready?
50001 Ready is a U.S. Department of Energy application for facilities and organizations that have implemented an ISO 50001-based energy management system using the guidance in the 50001 Ready Navigator, and that have demonstrated energy performance improvements. To be 50001 Ready requires organizations are implementing the 50001 Ready Navigator tasks, self-assessing their compliance, and measuring and reporting energy performance over time. Use of the Navigator can reduce their risk for 50001 Ready recognition energy management. For more information, please visit the [Contact Us](#) page.

Explore the Navigator

Dashboard

90% Completed

Task Assignments

Task	Assigned To	Approver	Status	Issue Date
Energy Policy	Michael B. Miller	Michael B. Miller	Completed	6/27/2017
Energy Strategy	Michael B. Miller	Michael B. Miller	Completed	6/27/2017
Energy Plan	Michael B. Miller	Michael B. Miller	Completed	6/27/2017
Legal Requirements	Michael B. Miller	Michael B. Miller	Completed	6/27/2017

Create an account or
Log-in to Get Started

EMAIL ADDRESS

ENTER PASSWORD

Log In

Forgot password?

About

Contact Us



DEMONSTRATION SITE ONLY.



Energy Efficiency &
Renewable Energy

Sample: Crossbranded Navigator

The screenshot shows a web application interface for '50001 Ready Navigator'. The top navigation bar is red and contains the logo 'YourCompany' and '50001 Ready Navigator', along with links for 'Log In', 'Contact', 'FAQs', and 'Explore'. Below this is a grey navigation bar with 'Franklin Plant' (with a dropdown arrow), 'Dashboard', 'Planning' (highlighted), 'Energy Review', 'Continual Improvement', and 'System Management'. The main content area is titled 'Planning' and features a 'Tasks:' section with a search box containing 'Energy Policy'. Below the search box is a progress indicator with five steps, where step 2 is active. A yellow callout box with red text 'Can add special guidance' has a green arrow pointing to the 'Energy Policy' search box. The main task description reads: 'Task 2: We have developed an energy policy statement, which has been approved by top management'. To the right of this text is a light blue box with the text 'Looking for more guidance to complete this task?' and a red icon followed by 'Ask the EnMS experts at the 50001 Ready Help Desk'. Below the task description is a filter bar with buttons for 'Not Started x', 'In Progress', 'Ready For Review Q', and 'Completed ✓'. Underneath, it says 'Your roles for this task: Contributor & Approver'. A green arrow points from the 'Completed' button to the 'Contributor & Approver' text. Below this is a section titled 'Detailed Guidance : Energy Policy' with tabs for 'Getting It Done', 'Task Overview', 'Full Description', 'Notes 0', 'Resources', 'History', and 'Assignments'. The 'Getting It Done' tab is active and contains a list of instructions: 'Use the Energy Policy Worksheets to draft your energy policy statement.' and 'Have top management approve, issue, and communicate the energy policy statement across the organization and'.

Sample: Crossbranded Navigator

YourCompany | 50001 Ready Navigator

[Log In](#)
[Contact](#)
[FAQs](#)
[Explore](#)

Select One ▼

50001 Ready Navigator Admin Section

Note: Test projects are not counted for general metrics

	Users	Projects	Completed Tasks
Total
New in Past 30 days
Current

Recognition: 0 ready for review *counted once per project

project					All Tracked Events	Task Notes	Test Projects
Requests	Returned	Cancelled	Resubmitted	Approved			
...
...

view detailed Event Metrics

	Users	Active	New
Last 24 hours
Last 7 days
Last 30 days
Last 90 days

	Last Updated
Tasks (25) Update Tasks	...
Resources (129) Update Resources	...
All Guidance PDF Download 	...
Rebuild ALL Guidance PDF <small>*will take 1+ minutes</small>	✓ Up to Date
FAQs (35) Update FAQs	...

Sector	#
Industrial	...
Commercial	...
Institutional	...
Not Specified	...

Association	#
Better Plants	...
Better Buildings	...
FEMP	...
Not Specified	...

Support Links

Download Data

List of Event Types

List of Email Trigger

Preview Forms

Track total participation

Can track recognition status

Cross-branded Recognition



[Member Company]

Is recognized for instituting global best practices in continuous energy improvement across its [facility name] in [location]

UNDER THE LEADERSHIP OF

Executive Leadership
Vice President of Sustainability

Energy Management Lead
Director of Facilities

*Add call-out
and signature
to Recognition*

Recognized by the U.S. Department of Energy and YourCompany
December 13, 2017



Dr. Kathleen Hogan
Deputy Assistant Secretary for Energy Efficiency
U.S. Department of Energy



John Hancock
Chief Executive Officer
YourCompany

For Illustration Purposes Only



Alignment with SEM Program: Planning Tasks

Task	Progress	Next Steps to Achieve 50001 Ready
1. Scope and Boundaries	Strong	The SEM pledge includes all of the partner's manufacturing operations within the U.S. Consider if there are any non-manufacturing operations (e.g., office space, warehouses) that should be included in your 50001 Ready EnMS.
2. Energy Policy	Strong	Adopting the SEM pledge as part of your energy policy should satisfy most of this task. Review additional requirements around legal guidelines and energy efficiency in procurement and design.
3. Management Commitment	Strong	Participating in SEM and 50001 Ready represents management commitment, and should satisfy most of this task. Additional discussions with top management specific to the EnMS may be necessary.
4. Energy Team	Partial	The Management Representative can be the person at the facility reporting progress towards SEM to corporate leadership. To satisfy this task, remaining members of the Energy Team will still need to be identified.
5. Legal Requirements	Minimal	Though not a SEM requirement, most facilities are aware of legal requirements around their energy performance. Ensure that these are codified, reviewed and updated on an ongoing basis to satisfy this task.

Alignment with SEM Program: Energy Review

Task	Progress	Next Steps to Achieve 50001 Ready
6. Data Collection	Strong	SEM partners should have basic information collected to satisfy this task.
7. Data Analysis	Strong	Preparing a SEM annual report will likely satisfy most elements of this task. The facility may also need to list of energy-using equipment /systems.
8. Significant Energy Uses (SEUs)	Partial	SEM facilities will likely have strong understanding of their significant energy uses. To satisfy this task, codify this knowledge and create processes to quantify, review, track, and update this understanding.
9. Relevant Variables	Strong	SEM partners should have reviewed relevant variables with their TAM, and satisfied this task.
10. Performance Indicators (EnPIs)	Strong	SEM partners will have at least one facility-level relevant variable established. As needed, develop additional EnPIs at the sub-facility level.
11. Baselines, Objectives and Targets	Strong	The SEM pledge adopted at the facility-level will satisfy this task. Sub-facility level baselines, objectives or targets should also be reviewed.
12. Improvement Opportunities	Strong	SEM facilities have likely progressed in this task, possibly through In-Plant trainings and/or assessments from DOE's Industrial Assessment Centers. This tasks helps organize and prioritize these opportunities.
13. Improvement Projects	Partial	Its likely that improvement projects have been implemented, but these need to be completed under an Action Plan framework to satisfy this task.

Alignment with SEM Program: Continual Improvement

Task	Progress	Next Steps to Achieve 50001 Ready
14. Monitoring	Strong	SEM partners will have satisfied most of this task. Review tracking and updating of SEUs and action plans.
15. Measurement	Strong	SEM partners will have satisfied this task
16. Operational Controls	Partial	While many partners are likely to be monitoring and tracking the energy use of certain systems, 50001 Ready introduces a more robust strategy to ensure SEUs are operating efficiently and improvement projects are delivering results.
17. Corrective Actions	Partial	Through annual reporting requirements, SEM facilities are aware if/when energy performance worsens. For this task, formalize a process to call attention to deviations in energy performance at the sub-facility level and establish protocols to correct and prevent these deviations.
18. Energy Consideration in Design	Partial	Many SEM partners already consider energy efficiency when designing new systems and facilities. Formalize this process within the continual improvement context to satisfy this task.

Alignment with SEM Program: System Management

Task	Progress	Next Steps to Achieve 50001 Ready
19. Documentation and Records	Minimal	New for facilities without a formal continual improvement-based EnMS.
20. Communications	Partial	SEM partners will have met requirements for external communications, but will need to review requirements and practices related to internal communication.
21. Training	Minimal	SEM facilities may require additional EnMS-specific training for their staff.
22. Procurement	Partial	SEM partners may have already satisfied this task as part of their approach to meeting their pledge goal.
23. Internal Audit	Minimal	New for facilities without a formal continual improvement-based EnMS.
24. Calculate Energy Savings	Strong	SEM partners will have satisfied this task through annual reporting.
25. Management Review	Minimal	New for facilities without a formal continual improvement-based EnMS.