



**50001 Ready**™

U.S. DEPARTMENT OF  
**ENERGY**

Energy Efficiency &  
Renewable Energy



50001 Ready  
Utility Network Series  
September 2020

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

## 50001 Ready Navigator Recognition Process:

- Submitting projects for recognition and re-recognition
- Maintaining active recognitions

## DOE's 50001 Ready offerings to support distance learning:

- Michael Stowe of Advanced Energy will share how he is incorporating 50001 Ready tools into AE's existing SEM program offerings to train customers across the country



## 50001 Ready Recognition Requirements

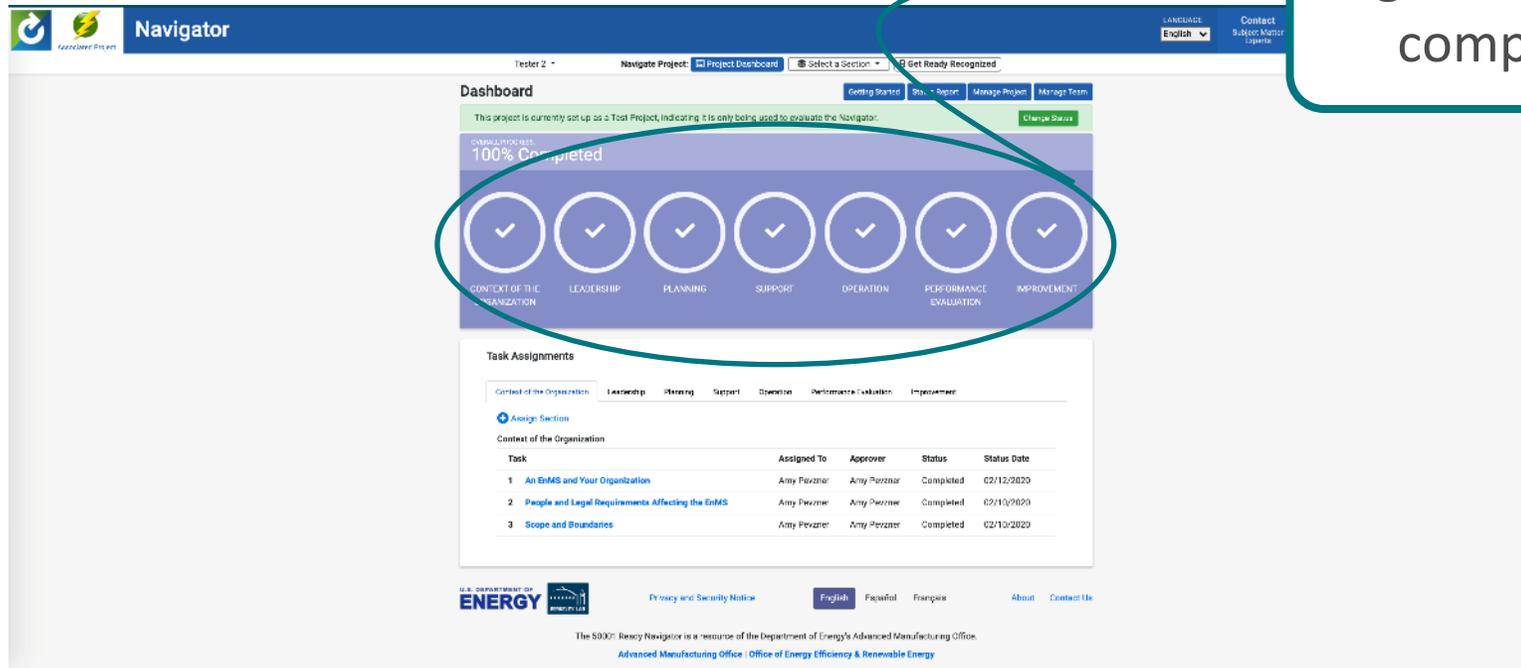
- DOE recognition is available to sites in the United States.
- DOE 50001 Ready recognition is valid for one year. To maintain recognition status, sites should plan to re-attest on an annual basis.
- DOE requires the Self-attestation Form and Energy Performance Improvement Report be completed and uploaded via the 50001 Ready Navigator.
  - Only energy sources contributing to **5% or more** of total site wide energy consumption need to be reported.



First Time Annual Recognitions	Subsequent Annual Recognitions
<ul style="list-style-type: none"> <li>✓ Complete the 25 Navigator Tasks</li> </ul>	<ul style="list-style-type: none"> <li>✓ Complete the 25 Navigator Tasks</li> </ul>
<ul style="list-style-type: none"> <li>✓ Self-attestation Form</li> </ul>	<ul style="list-style-type: none"> <li>✓ Self-attestation Form</li> </ul>
<p>Energy Performance Improvement Report</p> <ul style="list-style-type: none"> <li>✓ Section 1 (Project Information)</li> <li>✓ Section 2 (Energy Consumption)</li> </ul>	<p>Energy Performance Improvement Report</p> <ul style="list-style-type: none"> <li>✓ Section 1 (Project Information)</li> <li>✓ Section 2 (Energy Consumption)</li> <li>✓ <b>Section 3 (Energy Performance Improvement)</b></li> </ul>

# Step 1: Complete the 25 Navigator Tasks

Log into your Navigator project and confirm completion of the 25 Navigator Tasks



Prior to every third year of subsequent annual recognition, the completion status for the 25 Navigator tasks is automatically re-set to “In Progress” and you will need to re-affirm their completion by changing their status in the software.

# Step 2: Sign and Submit an Attestation Form

**50001 Ready self-attestation form** asserts your commitment to:

- ✓ Completing the Navigator tasks
- ✓ Continually improving your EnMS

**The self-attestation form must include:**

- ✓ Your project details
- ✓ Energy team lead signature
- ✓ Senior management representative



The image shows a sample of the 50001 Ready Self-Attestation Form. The form is titled "50001 Ready Self-Attestation Form" and includes the 50001 Ready logo. It contains a "PRIVACY ACT STATEMENT" section with four numbered points: 1. AUTHORITY, 2. PURPOSE(S), 3. ROUTINE USES, and 4. WHETHER DISCLOSURE IS MANDATORY OR VOLUNTARY AND EFFECT ON INDIVIDUAL FOR NOT PROVIDING INFORMATION. The form also includes a signature line for "Wile E. Coyote" and a date of "09/16/2020".

**Note:** For each subsequent year of recognition, a new self-attestation form must be signed.



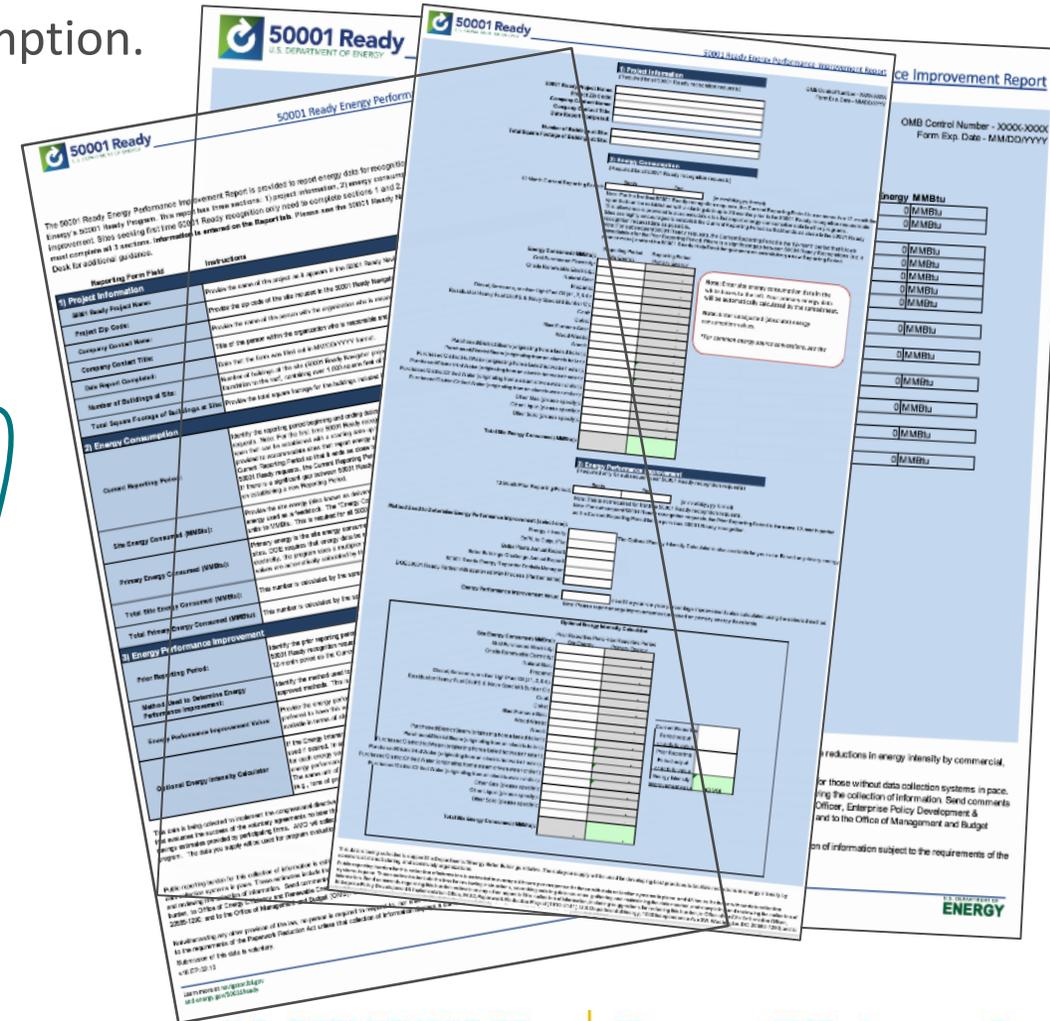
# Step 3: Fill out an Energy Performance Improvement Report

## 50001 Ready Energy Performance Improvement Report (EPIR)

Demonstrates a site-wide understanding of your energy consumption.

The EPIR consists of 3 tabs or sheets:

1. Instructions sheet
2. Report sheet
  - Section 1 (Project Information)
  - Section 2 (Energy Consumption)
  - Section 3 (Energy Performance Improvement)
3. Energy Conversion sheet



Note: Section 3 is only a requirement for projects seeking subsequent annual DOE 50001 Ready recognitions.

# EPIR Instructions and Energy Conversions – Tab 1 and Tab 3


50001 Ready Energy Performance Improvement Report

OMB Control Number - XXXX-XXXX  
Form Exp. Date - MM/DD/YYYY

The 50001 Ready Energy Performance Improvement Report is provided to report energy data for recognition through the U.S. Department of Energy's 50001 Ready Program. This report has three sections: 1) project information, 2) energy consumption, and 3) energy performance improvement. Sites seeking first time 50001 Ready recognition only need to complete sections 1 and 2. Sites seeking subsequent recognition must complete all 3 sections. **Information is entered on the Report tab. Please see the 50001 Ready Navigator or contact the 50001 Ready Help Desk for additional guidance.**

Reporting Form Field	Instructions
<b>1) Project Information</b>	
50001 Ready Project Name:	Provide the name of the project as it appears in the 50001 Ready Navigator.
Project Zip Code:	Provide the zip code of the site included in the 50001 Ready Navigator project.
Company Contact Name:	Provide the name of the person with the organization who is responsible and knowledgeable of this information.
Company Contact Title:	Title of the person within the organization who is responsible and knowledgeable of this information.
Date Report Completed:	Date that the form was filed out in MM/DD/YYYY format.
Number of Buildings at Site:	Number of buildings at the site (50001 Ready Navigator project). A building is a structure totally enclosed by walls extending from the foundation to the roof, containing over 1,000 square feet of floorspace. (source CBECs terminology)
Total Square Footage of Buildings at Site:	Provide the total square footage for the buildings included in the, "Number of Buildings at Site," value.
<b>2) Energy Consumption</b>	
Current Reporting Period:	Identify the reporting period beginning and ending dates in the MM/DD/YYYY format. This is required for all 50001 Ready recognition requests. Note: For the first time 50001 Ready recognition requests, the Current Reporting Period is a consecutive 12-month time span that can be established with a starting date up to 25 months prior to the 50001 Ready recognition request date. This allowance is provided to accommodate sites that report energy consumption data to other programs. Sites are highly encouraged to establish the Current Reporting Period so that it ends as close to the 50001 Ready recognition request date as possible. Note: For subsequent 50001 Ready requests, the Current Reporting Period is the 12-month period that follows immediately after the Prior Reporting Period. If there is a significant gap between 50001 Ready Recognitions (e.g. a year or more) contact the 50001 Ready Help Desk for guidance on establishing a new Reporting Period.
Site Energy Consumed (MMBtu):	Provide the site energy (also known as delivered energy) consumed, by fuel type for the baseline and reporting periods. Exclude energy used as a feedstock. The "Energy Conversion" tab provides multiplier values and a built in calculator to convert typical energy units to MMBtu. This is required for all 50001 Ready recognition requests.
Primary Energy Consumed (MMBtu):	Primary energy is the site energy consumed plus the energy required to produce and deliver the energy products to the company's sites. DOE requires that energy data be reported in terms of primary energy for electricity and imported derived energy sources. For electricity, the program uses a multiplier of 3.0 for conversion from site to primary energy consumption. Primary Energy Consumed values are automatically calculated by the spreadsheet.
Total Site Energy Consumed (MMBtu):	This number is calculated by the spreadsheet.
Total Primary Energy Consumed (MMBtu):	This number is calculated by the spreadsheet.
<b>3) Energy Performance Improvement</b>	
Prior Reporting Period:	Identify the prior reporting period beginning and ending dates in the MM/DD/YYYY format. Note: This is not required for first time 50001 Ready recognition requests. Note: For subsequent 50001 Ready recognition requests, The Prior Reporting Period is the same 12-month period as the Current Reporting Period for the previous 50001 Ready recognition.
Method Used to Determine Energy Performance Improvement:	Identify the method used to determine energy performance improvement. See the 50001 Ready Navigator for additional details on the approved methods. This is not required for first time 50001 Ready recognition requests.
Energy Performance Improvement Value:	Provide the energy performance improvement value as a percentage of current reporting period energy consumption. While it is preferred to have this value reported in terms of primary energy consumption if an energy performance improvement value is only available in terms of site energy please use that. This is not required for first time 50001 Ready recognition requests.
Optional Energy Intensity Calculator	If the Energy Intensity method is used to report energy performance improvement the Optional Energy Intensity Calculator may be used if desired. In addition to Current Reporting Period energy consumption, please enter Prior Reporting Period energy consumption for each energy source. Enter units of output or activity values for the Current and Prior Reporting Periods to auto calculate an energy performance improvement value. Examples of units of output or activity include building square footage and production volume. The same unit of output or activity value must be used for the Current and Prior Reporting Periods. The unit of output or activity (e.g., tons of product, number of occupants) does not need to be indicated to protect proprietary data.

Note: Energy data will need to be reported in MMBtu's, please refer to sheet 3 (Energy Conversions) of the EPIR.


50001 Ready Energy Performance Improvement Report

OMB Control Number - XXXX-XXXX  
Form Exp. Date - MM/DD/YYYY

Conversions of common energy units to MMBtu

Original Unit	Enter Energy Value	Multiply by	Resulting Energy MMBtu
Electricity	kWh	0.003412	0 MMBtu
	MWh	3.412	0 MMBtu
Natural Gas	therm	0.1	0 MMBtu
	decatherm	1.000	0 MMBtu
	Ccf (1 cf)	0.001	0 MMBtu
	Ccf (100 cu ft)	0.103	0 MMBtu
	Mcf (1000 cu ft)	1.027	0 MMBtu
Gasoline	gallons	0.114	0 MMBtu
Diesel	gallons	0.137	0 MMBtu
Coal	short ton	19.27	0 MMBtu
Coke	short ton	25.370	0 MMBtu
Blast Furnace Gas	Ccf (10 cu ft)	0.0093	0 MMBtu
	kBtu to MMBtu	0.0010	0 MMBtu

Reporting metric used in Energy Star Portfolio Manager

## EPIR Report tab - Section 1 (Project Information)

Fill out your project information and include:

- ✓ Number of buildings at your site
- ✓ Total square footage of buildings at your site



50001 Ready Energy Performance Improvement Report

### 1) Project Information

(Required for all 50001 Ready recognition requests)

OMB Control Number - XXXX-XXXX

Form Exp. Date - MM/DD/YYYY

50001 Ready Project Name:

Project Zip Code:

Company Contact Name:

Company Contact Title:

Date Report Completed:

Number of Buildings at Site:

Total Square Footage of Buildings at Site:

## Section 2 (Energy Consumption)

### 12 Month Current Reporting Period:

✓ For first time annual recognitions: Consecutive 12-month span can be established with a starting date up to 25 months prior to the 50001 Ready recognition request date.

✓ For subsequent annual recognitions: Consecutive 12-month period that follows immediately after the Prior Reporting Period.

### Energy Consumed (MMBtus):

✓ Report Site Energy by fuel source: Populate the white cells only, and the Primary Energy (grey cells) will auto-populate

✓ Note: Energy data will need to be reported in MMBtu's, please refer to tab 3 (Energy Conversions) of the EPIR.

### 2) Energy Consumption

(Required for all 50001 Ready recognition requests)

12 Month Current Reporting Period:

Begin	End

(in mm/dd/yyyy format)

**Note:** For the first time 50001 Ready recognition requests, the Current Reporting Period is a consecutive 12-month time span that can be established with a starting date up to 25 months prior to the 50001 Ready recognition request date. This allowance is provided to accommodate sites that report energy consumption data to other programs. Sites are highly encouraged to establish the Current Reporting Period so that it ends as close to the 50001 Ready recognition request date as possible.  
**Note:** For subsequent 50001 Ready requests, the Current Reporting Period is the 12-month period that follows immediately after the Prior Reporting Period. If there is a significant gap between 50001 Ready Recognitions (e.g. a year or more) contact the 50001 Ready Help Desk for guidance on establishing a new Reporting Period.

Energy Consumed (MMBtu):	Reporting Period	Reporting Period
	Site Energy	Primary Energy
Grid Purchased Electricity:		
Onsite Renewable Electricity:		
Natural Gas:		
Propane:		
Gasoline, or other Light Fuel Oil (#1, 2, & 4):		
Heavy Fuel Oil (# 5, 6, Navy Special & Bunker C):		
Coal:		
Coke:		
Blast Furnace Gas:		
Wood Waste:		
Wood:		
Steam (originating from a fueled boiler):		
Steam (originating from an electric boiler):		
Steam (originating from a fueled hot water heater):		
Steam (originating from an electric hot water heater):		
Steam (originating from a steam driven water chiller):		
Steam (originating from an electric water chiller):		
Other Gas (please specify):		
Other Liquid (please specify):		
Other Solid (please specify):		
<b>Total Site Energy Consumed, (MMBtu):</b>		

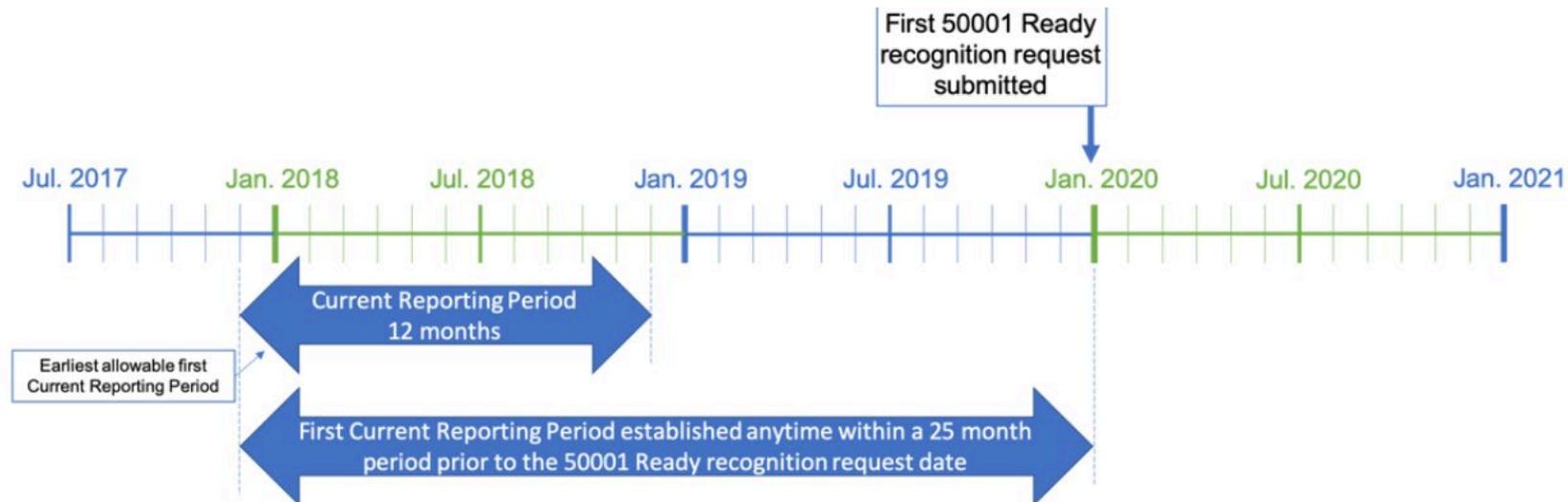
**Note:** Enter site energy consumption data in the white boxes to the left. Your primary energy data will be automatically calculated by the spreadsheet.

**Note:** Enter unadjusted (absolute) energy consumption values.

*\*For common energy source conversions, see the **Energy Conversions** tab of this reporting document.*

## Section 2 (Energy Consumption) - 12 Month Current Reporting Period Example:

**First time annual recognition requests:** Based on a first time 50001 Ready recognition request date of January 1, 2020. With the first time 50001 Ready recognition request date of January 1 the Current Reporting Period could start anywhere beginning December 1, 2017 to January 1, 2019.



**Subsequent annual recognition requests:** The Current Reporting Period is the 12-month period that follows immediately after the Prior Reporting Period. If there is a significant gap between 50001 Ready Recognitions (e.g. a year or more) contact the 50001 Ready Help Desk for guidance on establishing a new Reporting Period.

## Section 3 (Energy Performance Improvement)

### 12 Month Prior Reporting Period:

- ✓ For subsequent annual recognitions: Same 12-month period as the previous recognition's Current Reporting Period.

### Method for determining Energy Performance Improvement:

- ✓ Select one option: Select the method used to determine energy performance improvement values from the list
- ✓ Energy Performance Improvement Value: Enter the percentage improvement value calculated using the method you have selected from the options above.

### 3) Energy Performance Improvement

(Required only for subsequent year 50001 Ready recognition requests)

12 Month Prior Reporting Period:  Begin  End  (in mm/dd/yyyy format)

Note: This is not required for first time 50001 Ready recognition requests.  
 Note: For subsequent 50001 Ready recognition requests, the Prior Reporting Period is the same 12-month period as the Current Reporting Period for the previous 50001 Ready recognition.

**Method Used to Determine Energy Performance Improvement (select one):**

Energy Intensity:  The Optional Energy Intensity Calculator is also available for your use. Based on primary energy.

Site Output File:

Better Plants Annual Report:

Better Buildings Challenge Annual Report:

50001 Ready Energy Report for Portfolio Manager:

DOE 50001 Ready Partner with approved M&V Process (Partner name):

**Energy Performance Improvement Value:**  Insert the year-on-year percentage improvement value calculated using the selected method.  
 Note: Please report energy improvement value based on primary energy if available.

	Optional Energy Intensity Calculator	
	Prior Reporting Period	Prior Reporting Period
Site Energy Consumed (MMBtu):	Site Energy	Primary Energy
Grid Purchased Electricity:	-	-
Onsite Renewable Electricity:	-	-
Natural Gas:	-	-
Propane:	-	-
Diesel, Kerosene, or other Light Fuel Oil (#1, 2, & 4):	-	-
Residual or Heavy Fuel Oil (# 5, 6, Navy Special & Bunker C):	-	-
Coal:	-	-
Coke:	-	-
Blast Furnace Gas:	-	-
Wood Waste:	-	-
Wood:	-	-
Purchased/District Steam (originating from a fueled boiler):	-	-
Purchased/District Steam (originating from an electric boiler):	-	-
Purchased/District Hot Water (originating from a fueled hot water heater):	-	-
Purchased/District Hot Water (originating from an electric hot water heater):	-	-
Purchased/District Chilled Water (originating from a steam driven water chiller):	-	-
Purchased/District Chilled Water (originating from an electric water chiller):	-	-
Other Gas (please specify):	-	-
Other Liquid (please specify):	-	-
Other Solid (please specify):	-	-

Current Reporting Period output or activity value	
Prior Reporting Period output or activity value	
Energy Intensity Improvement value	#DIV/0!

*ve. Please report your negative energy performance*

## Section 3 (Energy Performance Improvement) - 12 Month Prior Reporting Period Example:

**First time annual recognition requests:** No Prior Reporting Period will exist.



**Subsequent annual recognition requests:** The Prior Reporting Period is the same 12-month period as the Current Reporting Period for the previous 50001 Ready recognition.

*Note: Small overlaps or gaps between the new Current and Prior Reporting Periods due to new 50001 Ready recognition requests being submitted slightly before or after the 12-month expiration date of the prior recognition period may occur and are acceptable. If a gap of more than 6 months develops, contact the 50001 Ready Help Desk for guidance on establishing a new Current Reporting Period and a Prior Reporting Period to use.*

## Section 3 (Energy Performance Improvement)

### Optional Energy Intensity Calculator:

- ✓ If the Energy Intensity method is used to report energy performance improvement the Optional Energy Intensity Calculator may be used if desired.
- ✓ In addition to Current Reporting Period energy consumption, please enter Prior Reporting Period energy consumption for each energy source.
- ✓ Enter units of output or activity values for the Current and Prior Reporting Periods to auto calculate an energy performance improvement value.
- ✓ Examples of units of output or activity include building square footage and production volume. The same unit of output or activity value must be used for the Current and Prior Reporting Periods. The unit of output or activity (e.g., tons of product, number of occupants) does not need to be indicated to protect proprietary data.

### 3) Energy Performance Improvement

(Required only for subsequent year 50001 Ready recognition requests)

12 Month Prior Reporting Period:   (in mm/dd/yyyy format)

Note: This is not required for first time 50001 Ready recognition requests.  
Note: For subsequent 50001 Ready recognition requests, the Prior Reporting Period is the same 12-month period as the Current Reporting Period for the previous 50001 Ready recognition.

Method Used to Determine Energy Performance Improvement (select one):

Energy Intensity:  The Optional Energy Intensity Calculator is also available for your use. Based on primary energy.

EnPI Lite Output File:

Better Plants Annual Report:

Better Buildings Challenge Annual Report:

50001 Ready Energy Report for Portfolio Manager:

DOE 50001 Ready Partner with approved M&V Process (Partner name):

Energy Performance Improvement Value:  Insert the year-on-year percentage improvement value calculated using the selected method.

Note: Please report energy improvement value based on primary energy if available.

#### Optional Energy Intensity Calculator

	Prior Reporting Period	
	Site Energy	Primary Energy
<b>Site Energy Consumed (MMBtu):</b>		
Grid Purchased Electricity:	-	-
Onsite Renewable Electricity:	-	-
Natural Gas:	-	-
Propane:	-	-
Diesel, Kerosene, or other Light Fuel Oil (#1, 2, & 4):	-	-
Residual or Heavy Fuel Oil (# 5, 6, Navy Special & Bunker C):	-	-
Coal:	-	-
Coke:	-	-
Blast Furnace Gas:	-	-
Wood Waste:	-	-
Wood:	-	-
Purchased/District Steam (originating from a fueled boiler):	-	-
Purchased/District Steam (originating from an electric boiler):	-	-
Purchased/District Hot Water (originating from a fueled hot water heater):	-	-
Purchased/District Hot Water (originating from an electric hot water heater):	-	-
Purchased/District Chilled Water (originating from a steam driven water chiller):	-	-
Purchased/District Chilled Water (originating from an electric water chiller):	-	-
Other Gas (please specify):	-	-
Other Liquid (please specify):	-	-
Other Solid (please specify):	-	-
<b>Total Site Energy Consumed, (MMBtu):</b>	-	-

Current Reporting Period output or activity value	
Prior Reporting Period output or activity value	
Energy Intensity Improvement value	#DIV/0!



Energy Efficiency & Renewable Energy

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## Determining Site Wide Energy Performance Improvement:

**If your project is seeking 50001 Ready recognition, then your process should conform to one of the approved methods listed below:**

- Energy Intensity
  - Better Plants Energy Intensity Baseline and Tracking Guidance Document
  - Energy Performance Improvement Report (Excel)
  - EnPI Tool (Excel)
- Linear regression model
  - EnPI Lite Tool
  - EnPI Tool

*Participants of the programs listed below may also use the energy performance improvement value determined as part of the program to complete the 50001 Ready Energy Performance Report.*

- Partners in the DOE Better Plants program
- Participants of the DOE Better Buildings Challenge
- EPA ENERGY STAR Portfolio Manager users
- EPA ENERGY STAR Challenge for Industry
- Select utility energy efficiency programs associated with a DOE 50001 Ready Partner that have a (M&V) process approved by DOE for use with the 50001 Ready program.



# DOE 50001 Ready: Virtual Cohorts

Wednesday, September 16, 2020

12:00 -1:00 p.m. EDT

DOE 50001 Ready Utility Network Series

# Today's Topics

- Advanced Energy's (AE) Approach to 50001 Ready
  - Our level of engagement
  - The cohort method – 100% Remote
  - Steps 1, 2, 3 for teaching 50001 Ready
- Recent 50001 Ready Work
  - FEMP Work
  - NC Work
- Lessons Learned



# AE's Approach: Deeply Engaged



- Business Decision
- Multiple ISO 50001 Certifications
- 50001 EnMS Qualified Instructor
- 50001 CP EnMS Scheme Committee Member
- IEnMP Board of Directors
- ISO US Technical Assistance Group (TAG) TC 30
- ISO 50001 certification consulting
- *50001 Ready* consulting
- Wide variety of training delivery



# AE's Approach: Co-Branded

Active Partner Referral | Advanced Energy

[more information](#)

[cancel referral](#)



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Partnering with:

**advanced  
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 23,000+ facilities worldwide benefiting from an energy management system!

### About the Navigator

**Tell Me More**

The 50001 Ready Navigator is an online guide for establishing an energy management system to plan, identify, prioritize, and implement projects that will improve your facility's energy performance. Completion of the 50001 Ready Navigator prepares facilities to pursue certification to the international best practice for energy management systems, ISO 50001.

**What is Energy Management?**

Energy management is a culture for continuous improvement of energy performance and efficiency that's integrated within an organization's everyday business practices. Organizations with an energy management system achieve energy and cost savings through informed decision-making and the implementation of energy saving practices for facilities, processes, equipment and operations. ISO 50001 is the international standard for establishing and maintaining energy management systems.

**Why is Energy Management important?**

Energy is a critical component to your organization's operations. It's important to realize that energy can be managed and controlled. It's not a fixed overhead cost. Energy management helps to reduce your organization's energy costs through improved performance and optimized use of energy sources and energy related assets. No matter how large or small your organization, implementing some form of energy management can be a key step to save energy, cut costs, and stay competitive and safe for ISO 50001 certified facilities.

**Why should I use the 50001 Ready Navigator?**

The 50001 Ready Navigator has been developed by the U.S. Department of Energy to align with the energy management system best practices outlined in ISO 50001. Use of the Navigator ensures that your organization shares a consistent definition of energy management systems and facilitates a team-based approach to its implementation. The Navigator is designed to help your organization build towards all parts of ISO 50001, so that you can self-assess to being "50001 Ready" or pursue ISO 50001 or Superior Energy Performance (SEP) certification.

**What is 50001 Ready?**

50001 Ready is a U.S. Department of Energy designation 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 recognized, organizations are responsible for

### Explore the Navigator

**Dashboard**

DOE Recognition Requested on 05/04/2017. The DOE should respond shortly to your request.

100% Completed

Energy Review    Critical Improvement    System Management

**Task Assignments**

Task	Assigned To	Status	Status Date	Action
1. Scope and Boundaries	First Name Last Name	Completed		
2. Energy Policy	First Name Last Name	Completed		
3. Management Commitment	First Name Last Name	Completed		
4. Energy Team	First Name Last Name	Completed		
5. Legal Requirements	First Name Last Name	Completed		

Create an Account *or*  
Log-in to Get Started

EMAIL ADDRESS

ENTER PASSWORD

Log In

[Forgot password?](#)

# The Cohort Method – 100% Remote

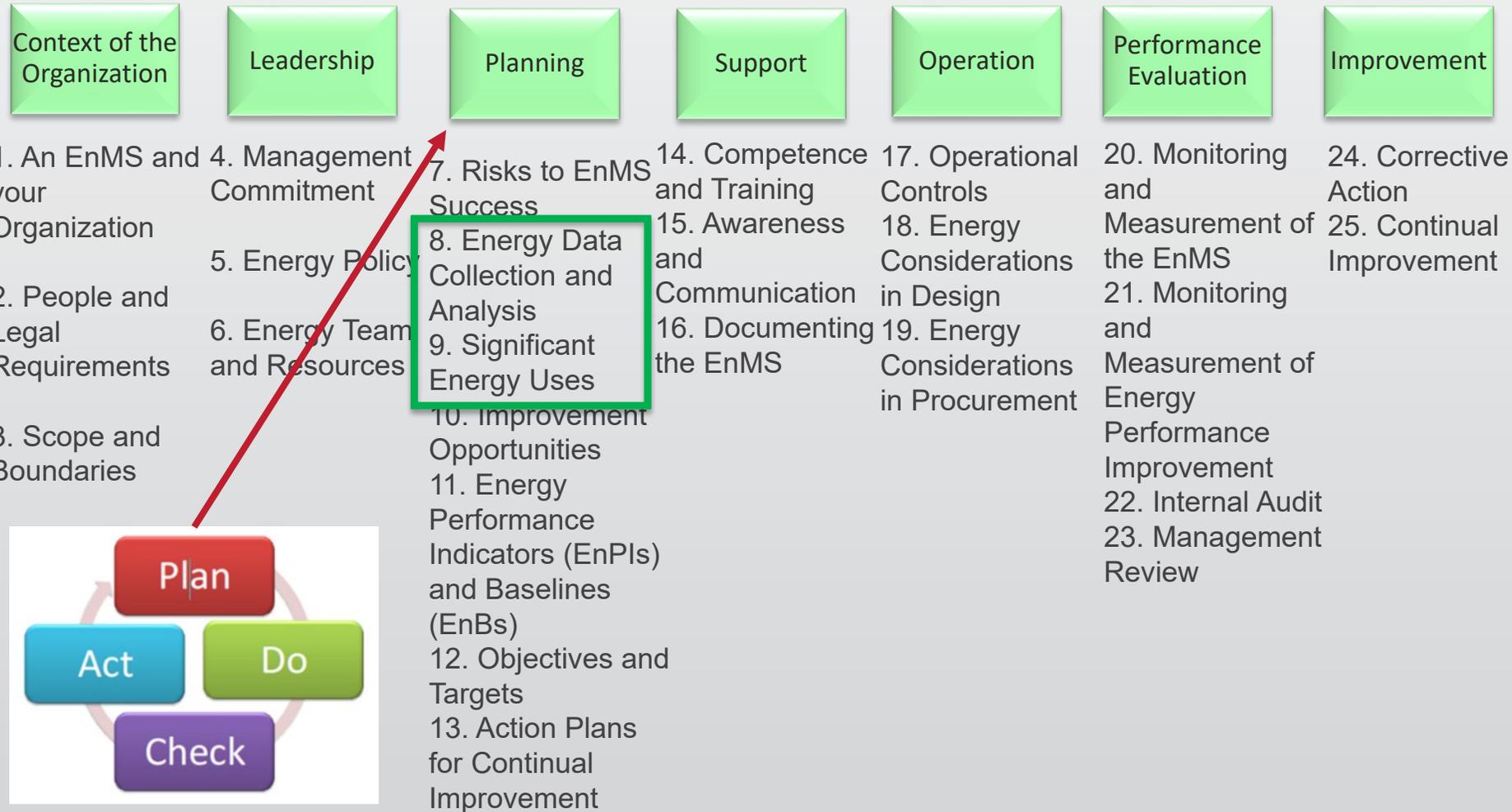
- Five to seven companies with similar SEM goals and experience levels
- Ideally, non-competing companies
- Willing to openly share info and best practices
- **STRONG** management commitment is essential
  - Allow time for participation
  - Allow time for homework
  - Provide resources needed to succeed
  - Provide resources for travel to trainings
- Good self-motivation needed for remote success



# Teaching 50001 Ready Remotely

- Intro
- Three Steps:
  - PPT slides
  - Go into the 50001 Ready Navigator
    - Show the task and features
  - Teach to the Playbook:
    - Frequent questions on HOW to use/fill out the playbook
    - Examples of playbooks are extremely valuable!
- Wrap Up and Next Steps

# Typical Intro Slide



# 1. PPT Slide Deck

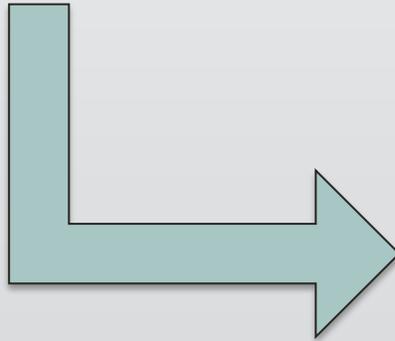
To introduce the task, we start out every task section with a slide that quotes the navigator exactly. The slide notes contain the “Getting it Done” info.

Task 9: We determine our significant energy uses (SEUs), identify and monitor their relevant variables and energy performance, and identify the persons that affect the SEUs. We have a process to review and update SEU data and related information, including our methods and criteria to determine that an energy use should be an SEU.

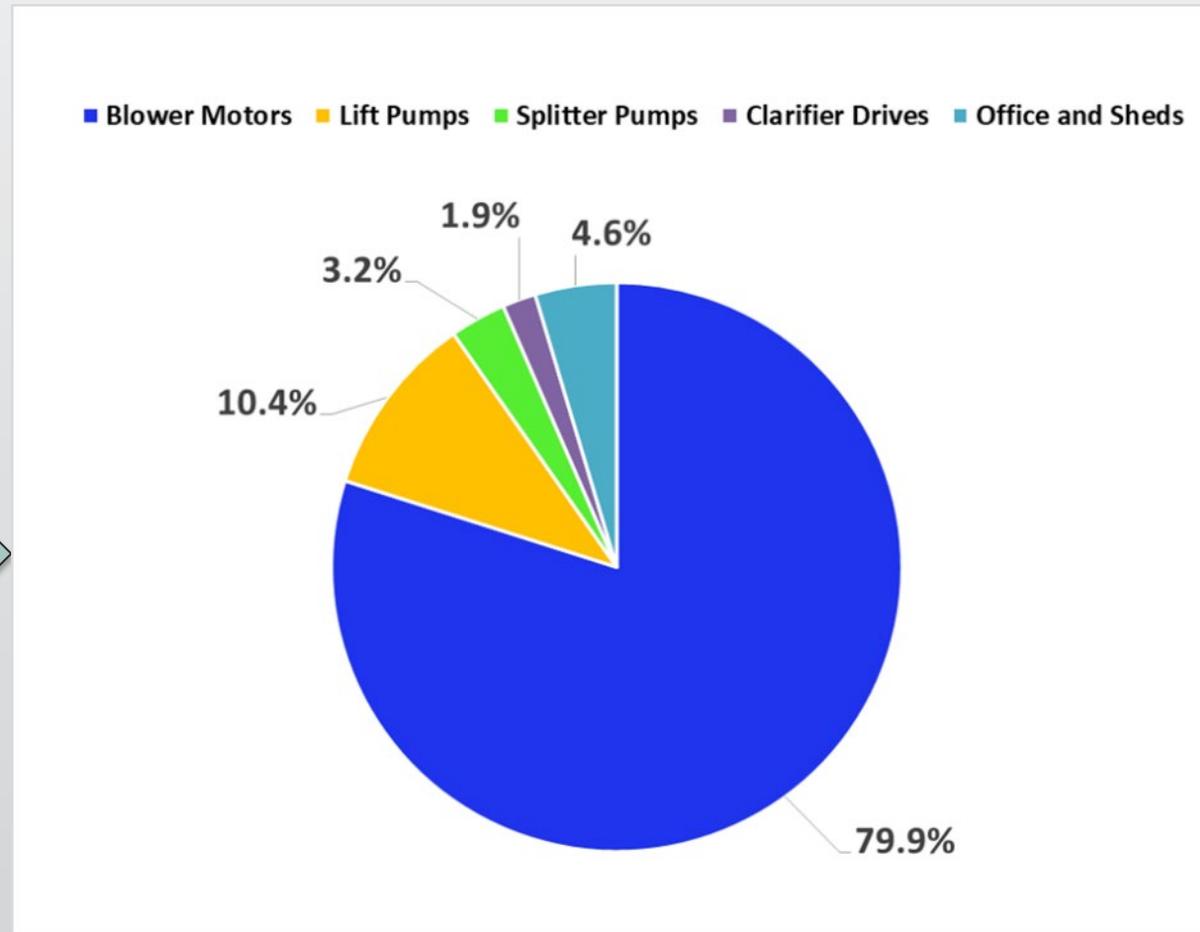


# 1. PPT Slide Deck (cont.)

- Significance is determined by your organization



SEUs can be facilities, systems, processes, or equipment.



Each section has a few slides relevant to the task at hand to explain and discuss the purpose of the task and relate it to the ISO 50001 standard.

# 1. PPT Slide Deck (cont.)

- Look at Task 9 in 50001 Ready
- Look at the Task 9 Playbook

Activity

We end every task section with a slide that refers to looking at the navigator and the playbook.

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## 50001 Ready Navigator Playbook

### Task 9: Significant Energy Uses (SEUs)

**Date last modified/updated:** [Click here to enter a date.](#)      **Internal audit:** [Click here to enter a date.](#)  
**Who last modified/updated:** [Click here to enter text.](#)      **Management review:** [Click here to enter a date.](#)

This part of the Navigator Playbook is completed when you have:

1. Identified the energy uses that consume the most energy within your boundaries.
2. Identified factors and persons that affect the energy consumption of identified energy uses.
3. Established selection criteria for identifying which of these energy uses should be a significant energy use (SEU).
4. Determine SEU energy performance based upon energy consumption and relevant variables as appropriate.
5. Review the SEU selection criteria as part of the SEU update process.

1. Identify the energy uses that consume the most energy within your boundaries.
2. Identify factors and persons that affect the energy consumption of identified energy uses.

## 2. Enter the Navigator

- Have the 50001 Ready navigator tool open and ready to use
- Open to the task at hand and show features of the page relative to the task
- “Getting it Done” is a great source for seeing what must be done to complete the task!

The screenshot displays the 'Planning' interface. At the top, there are navigation links: 'Back to Project Dashboard', 'Manage Project', and 'Manage Team'. Below this is a 'Task Status (click to jump):' row with numbered buttons from 1 to 25, where button 9 is highlighted. A 'Tasks:' dropdown menu is set to 'Significant Energy Uses (SEUs)'. Below the dropdown is a navigation bar with '← Previous', a row of numbers (7, 8, 9, 10, 11, 12, 13), and 'NEXT →'. The main content area features a task description for 'Task 9: We determine our significant energy uses (SEUs), identify and monitor their relevant variables and energy performance, and identify the persons that affect the SEUs. We have a process to review and update SEU data and related information, including our methods and criteria to determine that an energy use should be an SEU.' To the right of the description is a 'Get Help' box containing 'Contact NC 50001 Ready Cohort' and '50001 Ready Help Desk' buttons. Below the description is a 'Current Status: Not Started' box and a note: 'You are currently not assigned to this task.' A 'Partner Task Guidance From: NC 50001 Ready Cohort' box contains the text 'no specific tip for this task'. At the bottom, there is a 'Detailed Guidance: Significant Energy Uses (SEUs)' section with tabs for 'Getting It Done', 'Task Overview', 'Full Description', 'Notes', 'Playbook', 'History', and 'Assignments'. The 'Getting It Done' tab is active, showing a numbered list of five steps for identifying and managing SEUs.

# 3. Use the Playbook

- Open the actual playbook associated with the task at hand and go through the example, in some detail, depending on the task

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U.S. DEPARTMENT OF ENERGY

## 50001 Ready Navigator Playbook

### Task 9: Significant Energy Uses (SEUs)

**Date last modified/updated:** [Click here to enter a date.](#)      **Internal audit:** [Click here to enter a date.](#)  
**Who last modified/updated:** [Click here to enter text.](#)      **Management review:** [Click here to enter a date.](#)

This part of the Navigator Playbook is completed when you have:

1. Identified the energy uses that consume the most energy within your boundaries.
2. Identified factors and persons that affect the energy consumption of identified energy uses.
3. Established selection criteria for identifying which of these energy uses should be a significant energy use (SEU).
4. Determine SEU energy performance based upon energy consumption and relevant variables as appropriate.
5. Review the SEU selection criteria as part of the SEU update process.

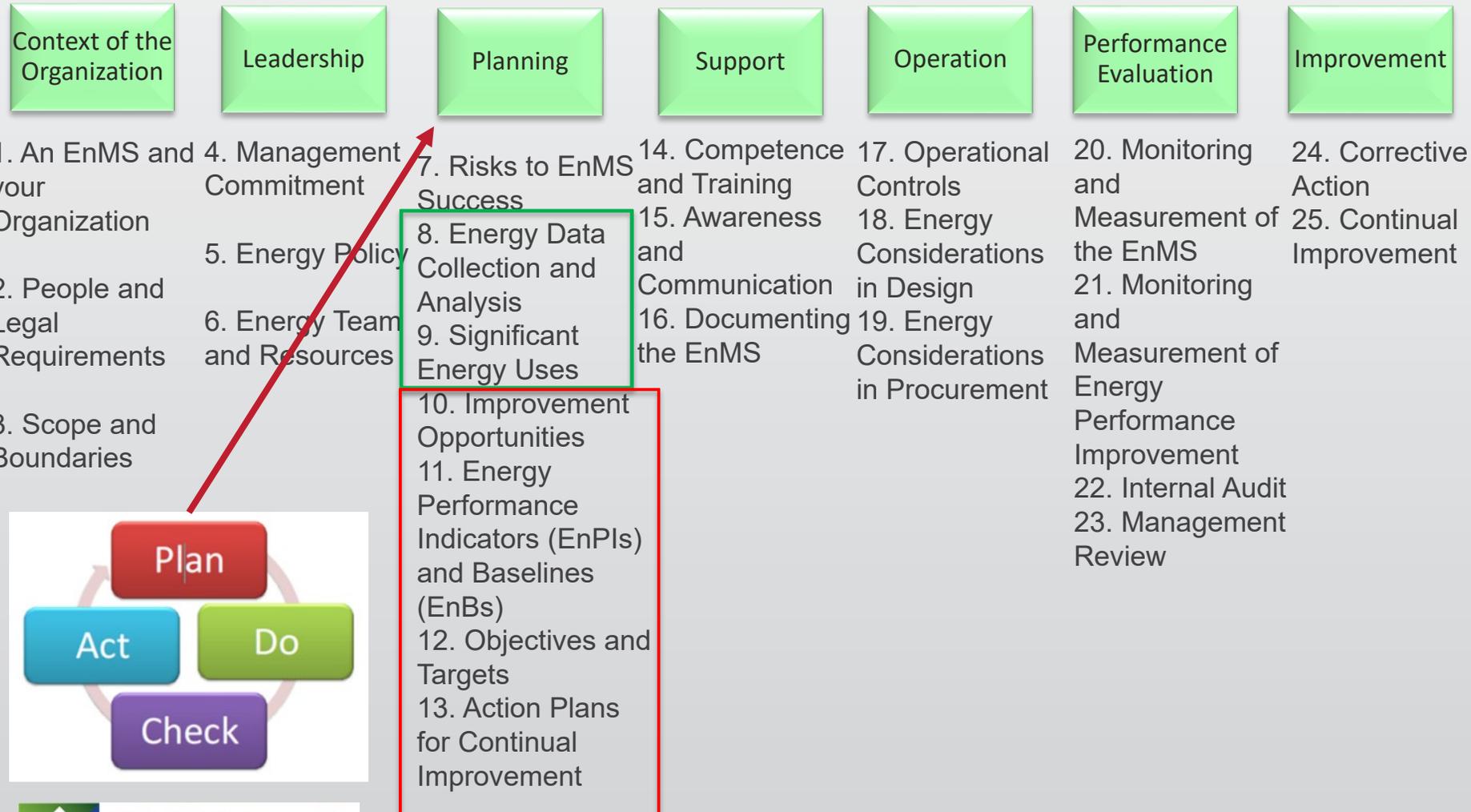
1. Identify the energy uses that consume the most energy within your boundaries.
2. Identify factors and persons that affect the energy consumption of identified energy uses.  
 Complete columns 3 and 4 in the Energy Use table in the 50001 Ready Navigator Playbook **Worksheet 8** - Energy Data Collection and Analysis.
3. Establish selection criteria for identifying which of these energy uses should be a significant energy use (SEU).  
 We have established criteria for determining SEUs.  
Detail criteria below (notes on why one may consider these metrics for targeting efforts):  
  - Uses at least 25% of the energy consumed by a given function. (appropriate)
  - Presents at least 2 realistic opportunities for improvement upon initial review (realistic)
  - Top Management sign off (leadership support)
  - Engagement from users (use social network to help spread awareness)

We have established methods for determining SEUs

Detail methods below:

1. Review equipment records maintained by facilities to find main energy users by nameplate capacity
2. Cross check with building meters to do 'sanity check'
3. Conduct informational interview with equipment 'owner' about opportunities and norms for use

# Typical Wrap Up Slide



# Typical Homework Slide

## Things to Work On

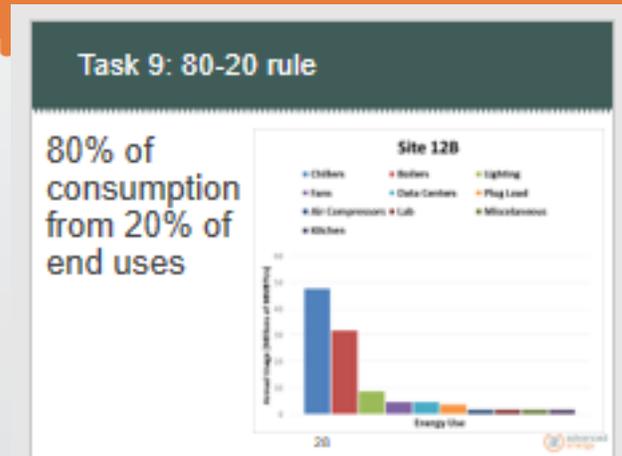
- Purchase and download the ISO 50001: 2018 standard
- Set up your 50001 Ready account
- Download 50001 Ready playbooks for tasks 1-9 and began working on these.
  - Bring any questions to the next office hours meeting
- Prepare for Webinar #4:
  - Review tasks 10-13 in 50001 Ready, download the playbooks
  - What are your site energy goals and objectives(Task 12).
  - What would you plan to use as an Energy Performance Indicator (EnPI)? (Task 11)
  - Do you have action plans for implementing energy improvement projects (Tasks 10 & 13)



# Three Steps to Teach 50001 Ready - Review

## Intro

### 1. PPT Slides



### 2. Enter the Navigator

### 3. Show the Playbook

50001 Ready U.S. DEPARTMENT OF ENERGY 50001 Ready Navigator Playbook

Task 9: Significant Energy Uses (SEUs)

Date last modified/updated: Internal audit: Who last modified/updated: Management review:

This part of the Navigator Playbook is completed when you have:

- Identified the energy uses that consume the most energy within your boundaries.
- Identified factors and persons that affect the energy consumption of identified energy uses.
- Established selection criteria for identifying which of these energy uses should be a significant energy use (SEU).
- Determined SEU energy performance based upon energy consumption and relevant variables as appropriate.
- Reviewed the SEU selection criteria as part of the SEU update process.

1. Identify the energy uses that consume the most energy within your boundaries.  
2. Identify factors and persons that affect the energy consumption of identified energy uses.  
3. Establish selection criteria for identifying which of these energy uses should be a significant energy use (SEU).  
4. Complete columns 3 and 4 in the Energy Use table in the 50001 Ready Navigator Playbook **Worksheet 1 - Energy Data Collection and Analysis**.

3. Establish selection criteria for identifying which of these energy uses should be a significant energy use (SEU).  
 We have established criteria for determining SEUs.  
Detail criteria below (notes on why one may consider these metrics for targeting efforts):  
Uses at least 25% of the energy consumed by a given function. (appropriate)  
Presents at least 2 realistic opportunities for improvement upon initial review (realistic)  
Top Management sign off (leadership support)  
Engagement from users (use social network to help spread awareness)

We have established methods for determining SEUs.  
Detail methods below:  
1. Review equipment records maintained by facilities to find main energy users by nameplate capacity.  
2. Cross check with building meters to do "sanity check".  
3. Conduct informational interview with equipment "owner" about opportunities and norms for use.

Planning

Task Status (click to jump): 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

Tasks: Significant Energy Uses (SEUs)

Task 9: We determine our significant energy uses (SEUs), identify and monitor their relevant variables and energy performance, and identify the persons that affect the SEUs. We have a process to review and update SEU data and related information, including our methods and criteria to determine that an energy use should be an SEU.

Current Status: Not Started

You are currently not assigned to this task.

Partner Task Guidance From: NC 50001 Ready Cohort

no specific tip for this task

Detailed Guidance: Significant Energy Uses (SEUs)

Getting It Done Task Overview Full Description Notes Playbook History Assignments

Getting It Done

- Identify the energy uses that consume the most energy within your boundaries.
- Identify factors and persons that affect the energy consumption of identified energy uses.
- Establish a selection criteria for identifying which of these energy uses should be a significant energy use (SEU).
- Determine SEU energy performance based upon energy consumption and relevant variables as appropriate.
- Review the SEU selection criteria as part of the SEU update process.

## Wrap Up

# Recent & Ongoing 50001 Ready Work



- Fort Bragg
- NASA Cohort, 14 sites, plus HQ
- DOJ Cohort, 5 sites (2 FBI & 3 ATF), plus HQ
- NC Cohort, 16 organizations, 18 sites
  - Industrial, 9
  - Colleges and Universities, 3
  - Government, 3
  - Utility, 1
- DTNA, 10 sites, 8 manufacturing, 2 HQs



# Lessons Learned

- Leave room for improvement
  - You do not need to start out perfect
- Teach to the navigator and its playbooks
  - More time on these two and less time on PPT slide deck
  - Teach “what do I have to do to complete the task?” (i.e. getting it done)
  - Have good relevant and applicable playbook examples for the audience
- Leverage existing management systems, especially ISO 14001
  - There is excellent overlap of work, e.g. policy, scope, legal requirements, awareness, competence, documentation operational controls, internal audit, management review...
  - No need to redo for 50001, incorporate together
- The playbooks are in MS Word for a reason
  - You can tailor these to your site needs and do so, if needed
- Pick SEUs wisely and try to only pick 2 or 3 to get started
  - There is significant downstream work for SEUs

## Other Ideas:

- Virtual Hosts
- Office Hours
- Playbook Exchange

# Survey Says.....

- 4 out of 5 energy consultants surveyed\* recommend



**50001 Ready**  
U.S. DEPARTMENT OF ENERGY

- To prevent this from happening to your Energy Team



\*No actual survey was taken. This is just used to make a point.

# Questions



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## Thank You



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1. 50001 Ready Navigator Training Materials
2. Update to ISO's High-Level Structure
  - Alignment of the Playbook and 25 Tasks
  - Change from four to seven sections - visible on dashboard
3. Multi-Site capability
4. Partner Platform
5. Showcases and Case Studies

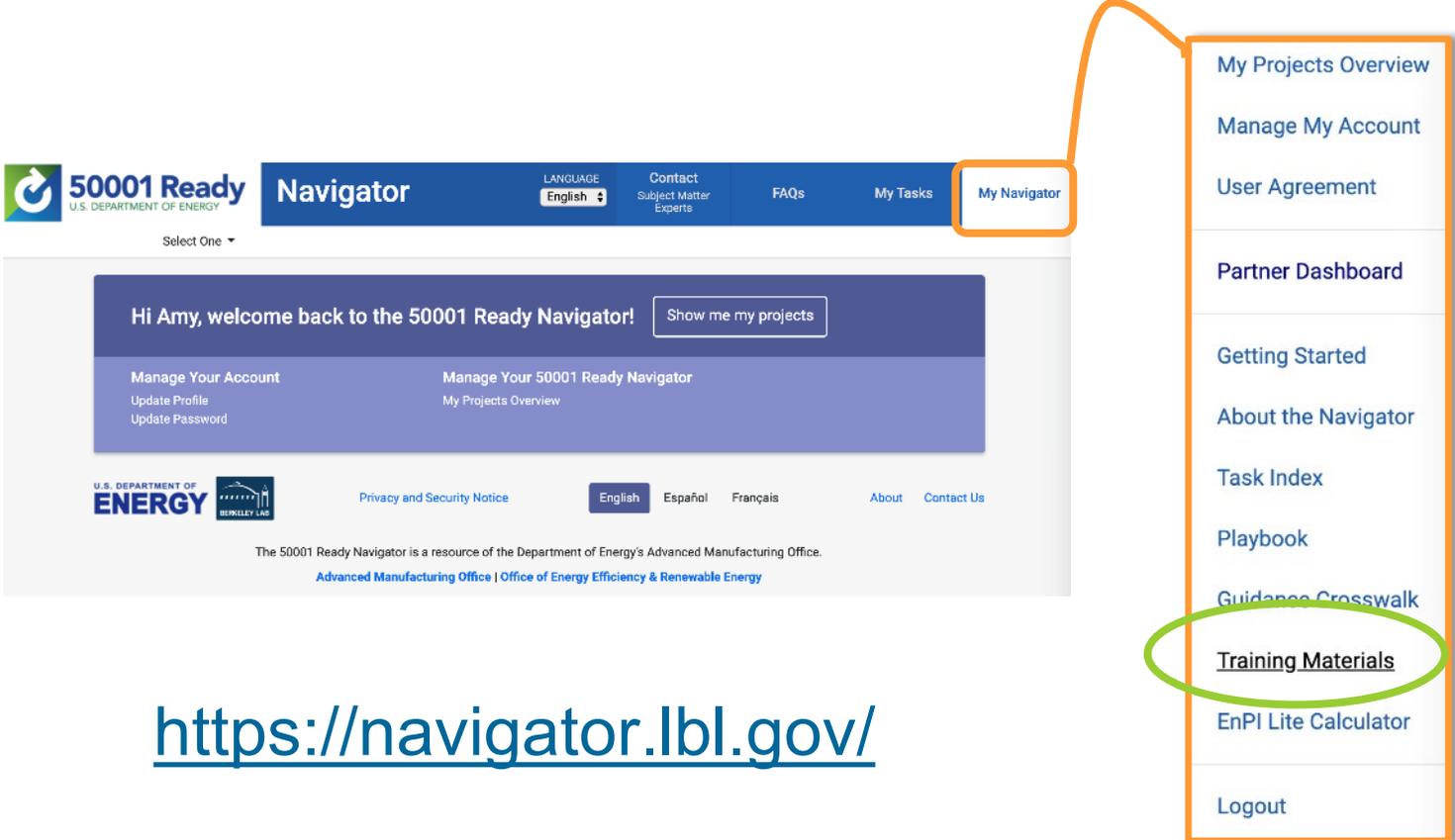
## Access Training Materials from the 'My Navigator' menu bar

### Targeted training for:

- Energy managers and teams
- Utility efficiency program administrators
- General and U.S. federal sectors

### Topics include:

- Energy management system and 50001 Ready introductions
- 50001 Ready task education
- 50001 Ready implementation



The screenshot shows the 50001 Ready Navigator website. The top navigation bar includes the 50001 Ready logo, the word 'Navigator', a language dropdown set to 'English', and links for 'Contact Subject Matter Experts', 'FAQs', 'My Tasks', and 'My Navigator'. The 'My Navigator' link is highlighted with an orange box. Below the navigation bar, a user greeting reads 'Hi Amy, welcome back to the 50001 Ready Navigator!' with a 'Show me my projects' button. There are sections for 'Manage Your Account' (Update Profile, Update Password) and 'Manage Your 50001 Ready Navigator' (My Projects Overview). The footer includes the U.S. Department of Energy logo, a privacy notice, and language options (English, Español, Français). A dropdown menu on the right side of the page lists: 'My Projects Overview', 'Manage My Account', 'User Agreement', 'Partner Dashboard', 'Getting Started', 'About the Navigator', 'Task Index', 'Playbook', 'Guidance Crosswalk', 'Training Materials' (circled in green), 'EnPI Lite Calculator', and 'Logout'. An orange line connects the 'My Navigator' box to the dropdown menu.

<https://navigator.lbl.gov/>

## Energy Management System and 50001 Ready Introduction Materials

50001 Ready Brief Introduction for End-Users

50001 Ready General Introduction for End-Users

Energy Management System Informative Training

Energy Management System Informative Training for Utility Program Administrators

50001 Ready Multi-Site Implementation Distance Learning for Central-Office Staff

## 50001 Ready Task Education Materials

50001 Ready Training for Utility Energy Efficiency Staff

50001 Ready In-plant Training for Manufacturers

## 50001 Ready Implementation Materials

50001 Ready Distance Learning Series for All Organizations

50001 Ready Distance Learning Series for Federal Organizations

## Training Portfolio

- Developed for and used by trainers and energy efficiency program staff
- Teaches the fundamental concepts of 50001 Ready and ISO 50001

## 50001 Training Categories

- Material Introduction
- Task Education
- EnMS Implementation

*The 50001 Ready Navigator is updated to reflect the changes made to the latest version of the ISO 50001 Energy Management System Standard – ISO 50001:2018*

## KEY CHANGES:

- **Introduction of the “High-Level Structure”, (HLS):** Provides common ISO structure, terms and definitions.
  - Increased compatibility across various ISO management system standards (including ISO 14001 and ISO 9001).
- **Emphasis on business objectives:** Incorporates an organization’s strategic direction.
  - Clarity of roles in top management and an increased integration with management practices.
- **Normalization of energy performance improvement:** Accounts for changes in energy variables
  - Employs an “apples to apples” comparison of energy improvement when calculating weather, production, and occupancy.

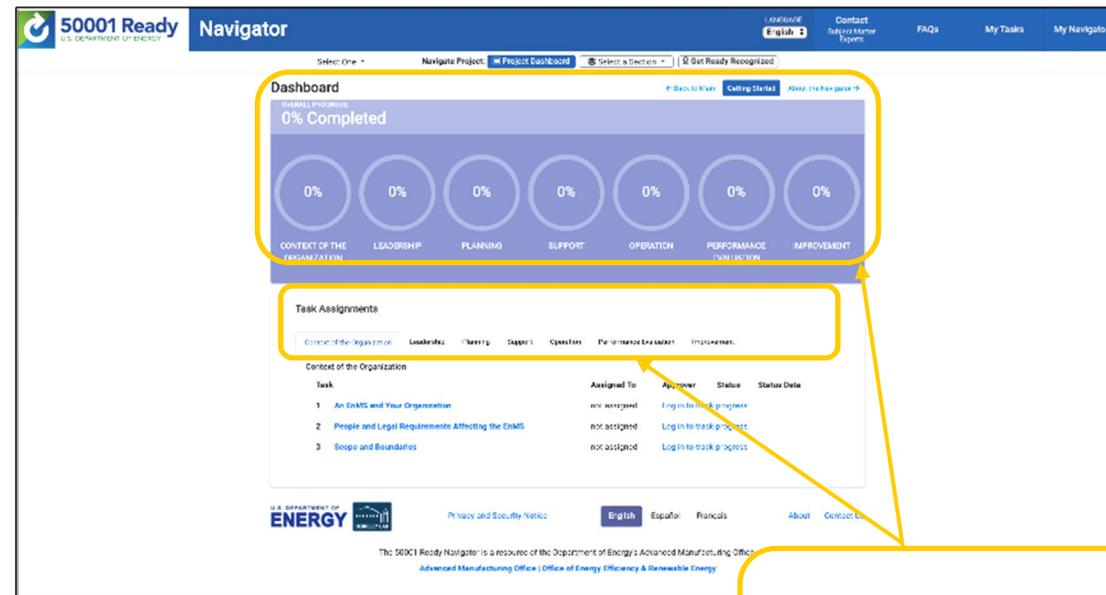
The 50001 Ready Navigator still has 25 tasks, but they have been realigned to conform ISO's High Level Structure (HLS)

- ✓ Refer to the Navigator's Guidance Transfer Crosswalk for details!
- ✓ Search either by the tasks in the 2011 guidance or by the 2018 guidance

Guidance Transfer Crosswalk		
New 50001:2018 from Old 50001:2011	Old 50001:2011 to New 50001:2018	
NEW 50001:2018 Tasks	Old 50001:2011 Tasks	Transfer Notes
1   An EnMS and Your Organization	<i>new 50001:2018 task</i>	
2   People and Legal Requirements Affecting the EnMS	<= 5   Legal Requirements	• Direct Transfer
3   Scope and Boundaries	<= 1   Scope and Boundaries	• Direct Transfer
4   Management Commitment	<= 3   Management Commitment	• Direct Transfer
5   Energy Policy	<= 2   Energy Policy	• Direct Transfer
6   Energy Team and Resources	<= 4   Energy Team	• Direct Transfer
7   Risks to EnMS Success	<i>new 50001:2018 task</i>	
8   Energy Data Collection and Analysis	<= 6   Data Collection 7   Data Analysis	• Merge Assignments
9   Significant Energy Uses (SEUs)	<= 8   Significant Energy Uses (SEUs) 9   Relevant Variables	• Merge Assignments • Task 9 Shared
10   Improvement Opportunities	<= 12   Improvement Opportunities	• Direct Transfer
11   Energy Performance Indicators (EnPIs) and Baselines (EnBs)	9   Relevant Variables <= 10   Performance Indicators (EnPIs) 11   Baselines, Objectives and Targets	• Merge Assignments • Task 9 Shared • Task 11 Shared
12   Objectives and Targets	<= 11   Baselines, Objectives and Targets	• Direct Transfer • Task 11 Shared
13   Action Plans for Continual Improvement	<= 13   Improvement Projects	• Direct Transfer
14   Competence and Training	<= 21   Training	• Direct Transfer
15   Awareness and Communication	<= 20   Communications	• Direct Transfer
16   Documenting the EnMS	<= 19   Documentation and Records	• Direct Transfer
17   Operational Controls	<= 16   Operational Controls	• Direct Transfer
18   Energy Considerations in Design	<= 18   Energy Consideration in Design	• Direct Transfer
19   Energy Considerations in Procurement	<= 22   Procurement	• Direct Transfer
20   Monitoring and Measurement of the EnMS	14   Monitoring <= 15   Measurement	• Merge Assignments
21   Monitoring and Measurement of Energy Performance Improvement	<= 24   Calculate Energy Savings	• Direct Transfer
22   Internal Audit	<= 23   Internal Audit	• Direct Transfer
23   Management Review	<= 25   Management Review	• Direct Transfer
24   Corrective Actions	<= 17   Corrective Actions	• Direct Transfer
25   Continual Improvement	<i>new 50001:2018 task</i>	

The 25 tasks are grouped by the **seven** sections of the ISO 50001:2018 standard:

- ✓ Context of the Organization (tasks 1-3)
- ✓ Leadership (tasks 4-6)
- ✓ Planning (tasks 7-13)
- ✓ Support (tasks 14-16)
- ✓ Operation (tasks 17-19)
- ✓ Performance Evaluation (tasks 20-23)
- ✓ Improvement (tasks 24-25)



The screenshot shows the '50001 Ready Navigator' interface. At the top, there's a navigation bar with '50001 Ready U.S. DEPARTMENT OF ENERGY' and 'Navigator'. Below this, a 'Dashboard' section displays '0% Completed' progress for seven categories: Context of the Organization, Leadership, Planning, Support, Operation, Performance Evaluation, and Improvement. Each category has a circular progress indicator. Below the dashboard is a 'Task Assignments' table with columns for Task, Assigned To, Approver, Status, and Status Date. The table lists three tasks under 'Context of the Organization'.

Task	Assigned To	Approver	Status	Status Date
1. An EMS and Your Organization	not assigned	Log in to track progress		
2. People and Legal Requirements Affecting the EMS	not assigned	Log in to track progress		
3. Scope and Boundaries	not assigned	Log in to track progress		

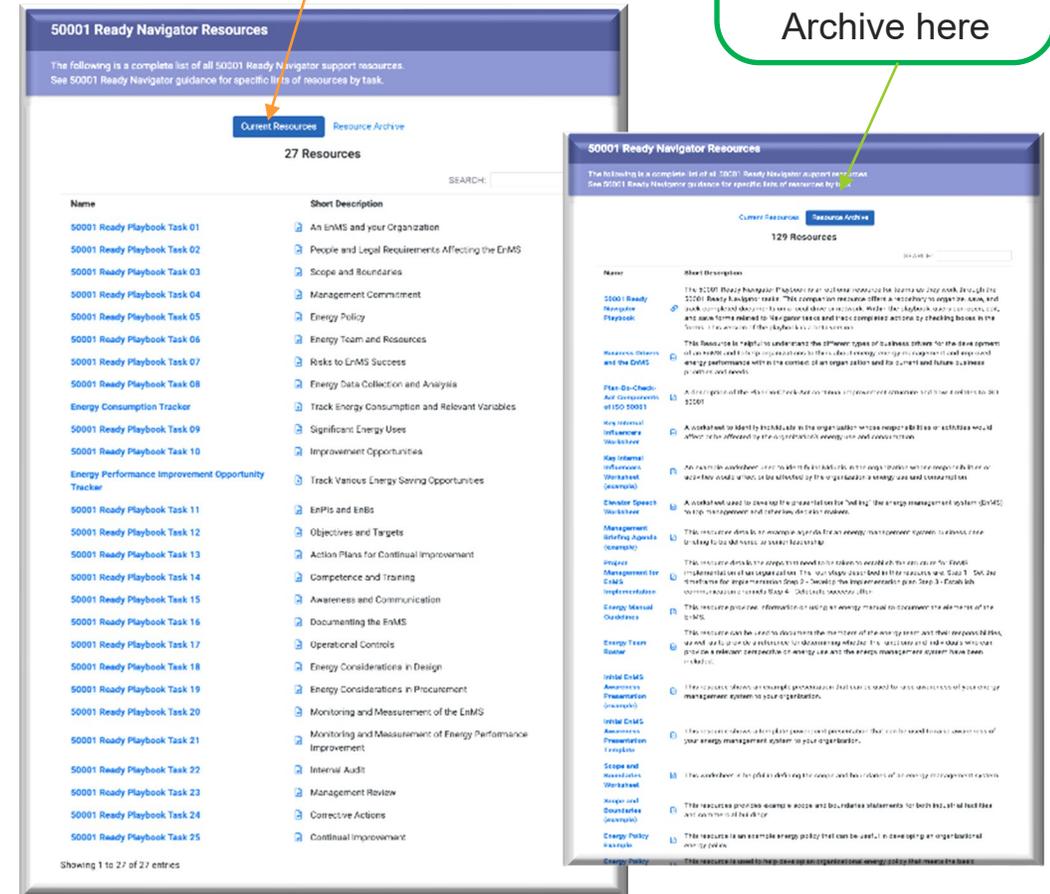
Track each section's progress right from your dashboard

# Resource Review: Navigator resource updates

- 25 resource worksheets (plus two trackers) have been created to accompany each of the 25 tasks.
  - The multiple resources have been streamlined and realigned to the revised 2018 structure.
- We've done the editing for you
  - No more wading through 129 resources to determine which may or may not best support your needs, the most impactful resources are right where you need them.
- In the middle of a project in the older version or looking for a specific resource you used before?
  - Not yet ready to let go of the older resources?
    - Log in with your credentials to access all 129 of the old resource documents from the Resource Index page
    - Keep in mind: The old resources will not match up in content or structure!

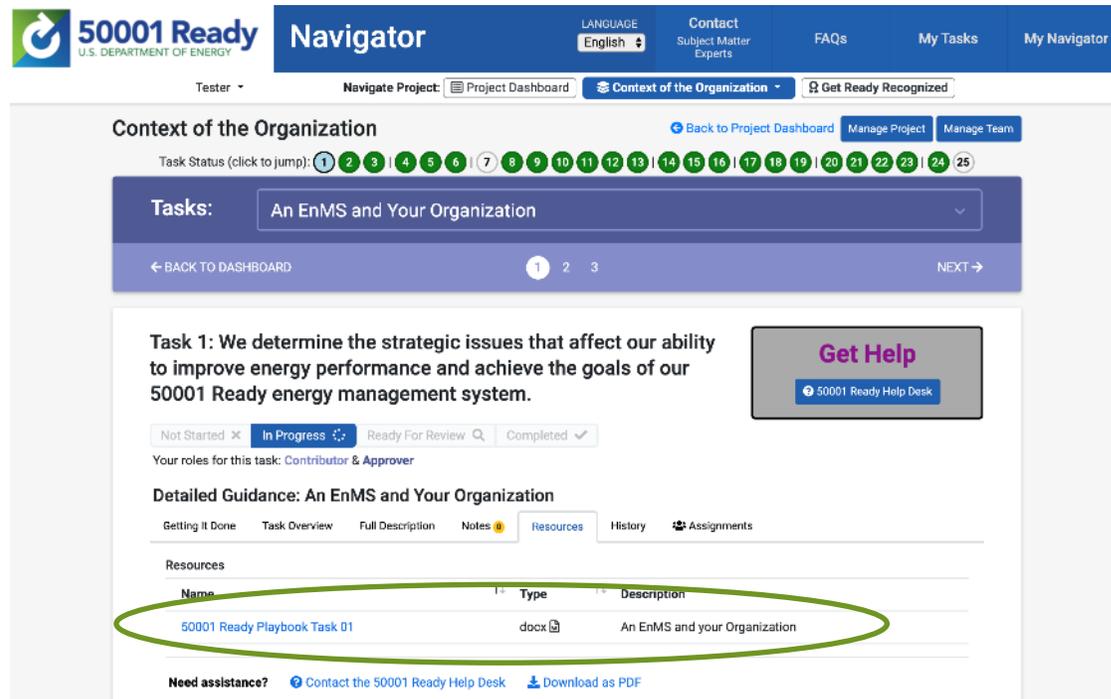
New resources are available on the Resource page!

If needed, the old resources can be found on the Resource Archive here

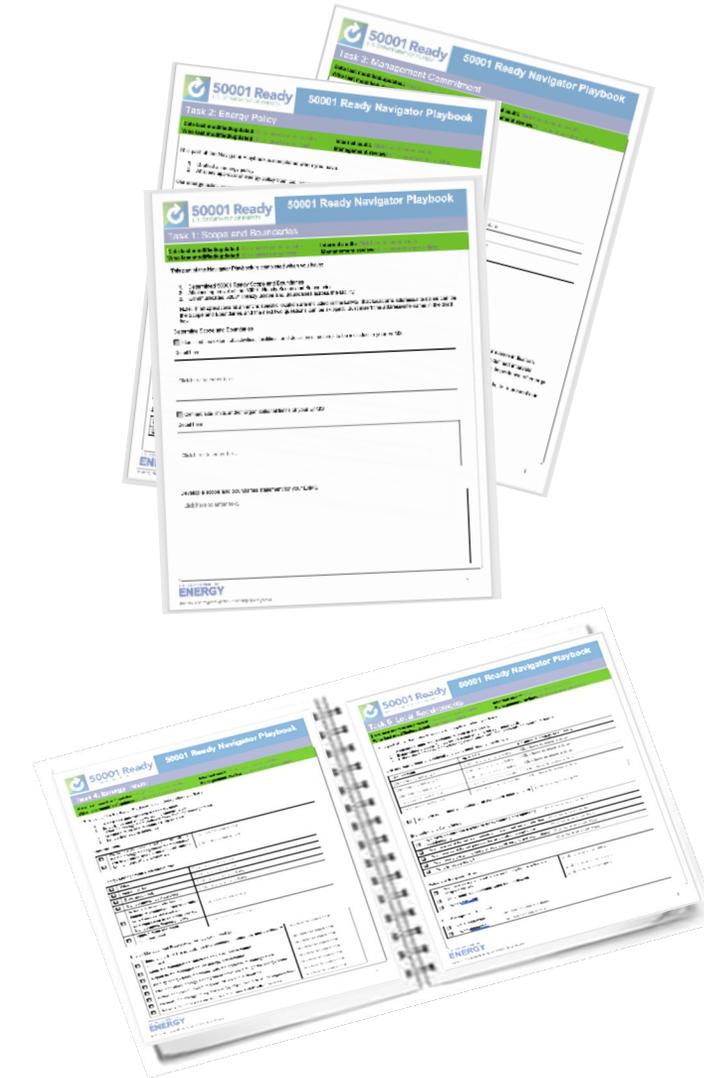


# Resource Review: Navigator Playbook updates

- Each *optional* task worksheet functions on its own, but all put together forms a living system and record of an organization's EnMS
  - Multiple resources for each task have been streamlined to help you build your EnMS program one step at a time.

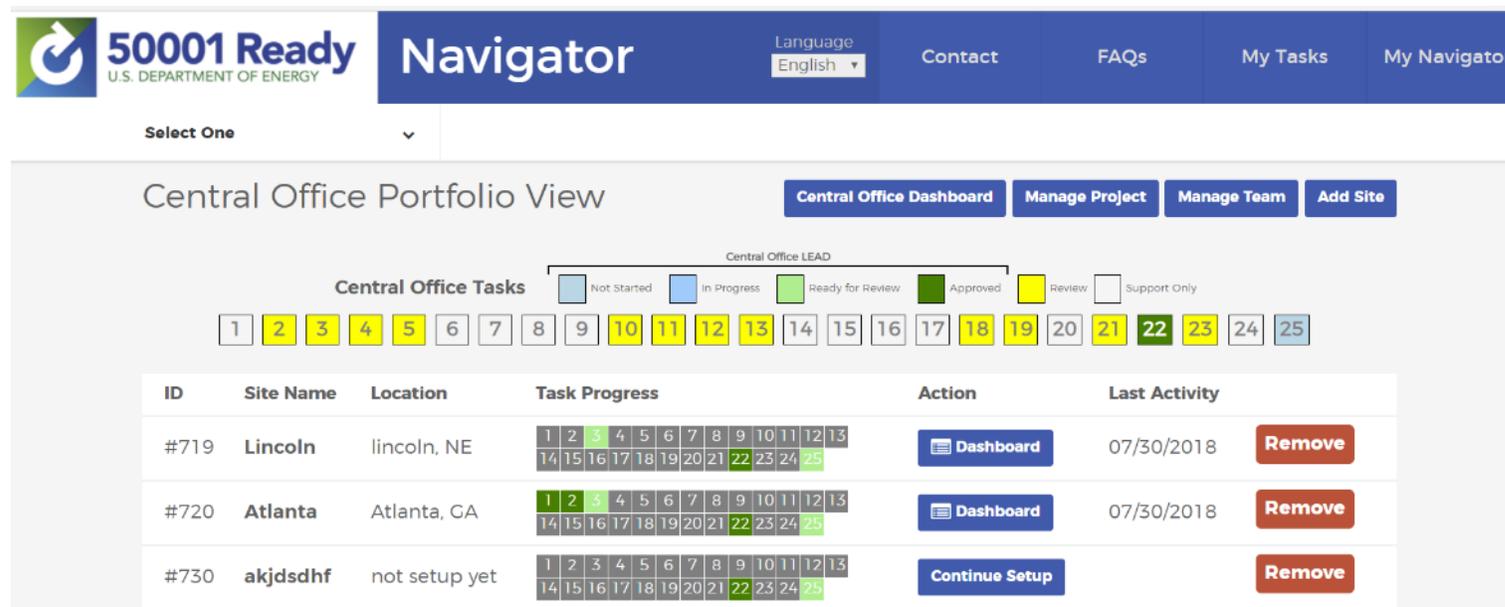


Name	Type	Description
50001 Ready Playbook Task 01	docx	An EnMS and your Organization



# Resource Review: Navigator Multisite

- ✓ Reduce time & cost of implementing *50001 Ready* across multiple facilities
- ✓ Enter and manage multiple sites in one portal
- ✓ Allows for ‘central office’ review, communications or completion of tasks
- ✓ Usable by agencies, sites, utilities, ESCOs etc.

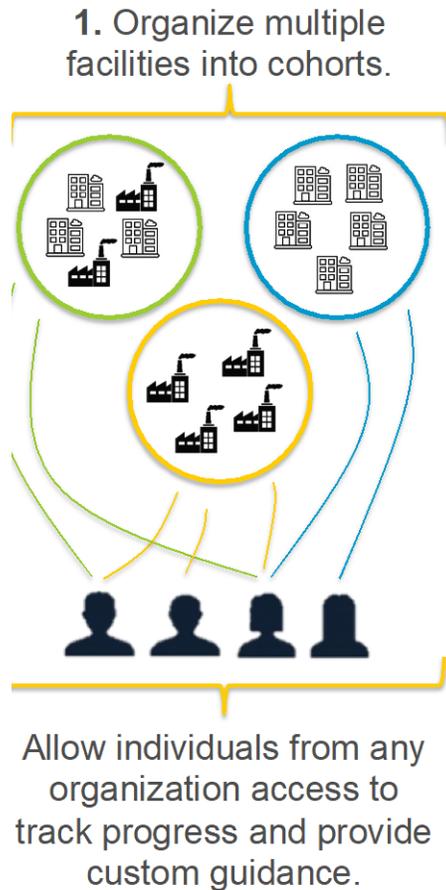


The screenshot shows the '50001 Ready Navigator' interface. At the top, there is a navigation bar with the logo, 'Language English', and links for 'Contact', 'FAQs', 'My Tasks', and 'My Navigator'. Below this is a 'Select One' dropdown menu. The main content area is titled 'Central Office Portfolio View' and includes buttons for 'Central Office Dashboard', 'Manage Project', 'Manage Team', and 'Add Site'. A 'Central Office LEAD' section contains a legend for task statuses: Not Started (light blue), In Progress (medium blue), Ready for Review (green), Approved (dark green), Review (yellow), and Support Only (white). Below the legend is a row of 25 numbered task cards, with cards 2 through 5 highlighted in yellow. The main table displays task details for three sites:

ID	Site Name	Location	Task Progress	Action	Last Activity
#719	Lincoln	lincoln, NE		<a href="#">Dashboard</a>	07/30/2018 <a href="#">Remove</a>
#720	Atlanta	Atlanta, GA		<a href="#">Dashboard</a>	07/30/2018 <a href="#">Remove</a>
#730	akjdsdhf	not setup yet		<a href="#">Continue Setup</a>	<a href="#">Remove</a>

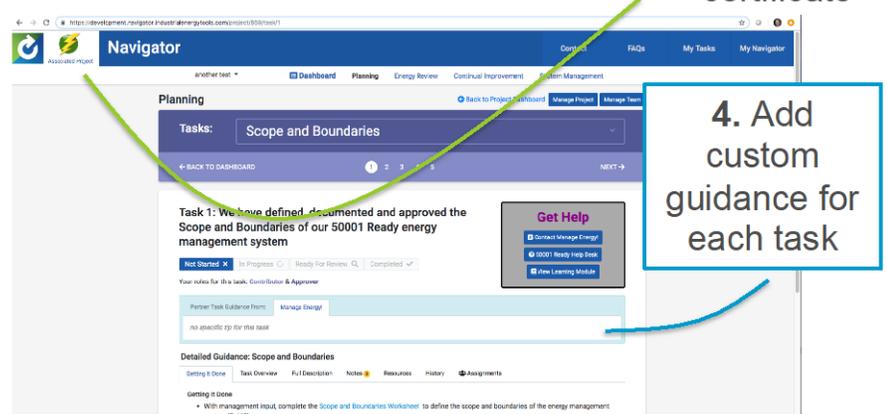
## What can you do with the partner platform?

- ✓ Support, observe, and report on multiple projects
- ✓ No direct controls over projects
- ✓ Legal use of DOE 50001 Ready logos and Co-branded Navigator & recognition
- ✓ Usable by agencies, sites, utilities, ESCOs etc.
- ✓ Partner platform supports individual projects in both the 2011 and 2018 version of the Navigator.



2. Use 50001 Ready logo on your website and materials

3. Your logo on Navigator and recognition certificate



4. Add custom guidance for each task

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## DOE will help you promote your 50001 Ready success!

### 50001 Ready Partners and Facilities receive:

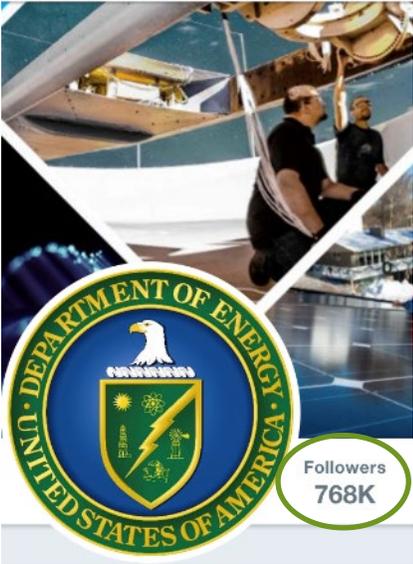
- ✓ DOE facility certificates of recognition
- ✓ Promotional package tailored to your needs:
  - ✓ Your company logo featured on DOE 50001 Ready sites
  - ✓ Project showcase to highlight your achievements
  - ✓ Access to customizable press material and resources



Your logo here!



- Through 50001 Recognition, increase attention, reach, and recognition for participating utilities and implementer programs
- When facilities self attest to the completion of 50001 Ready, DOE helps to promote the success of the facility, implementer, and utility through project showcases and implementer case studies.

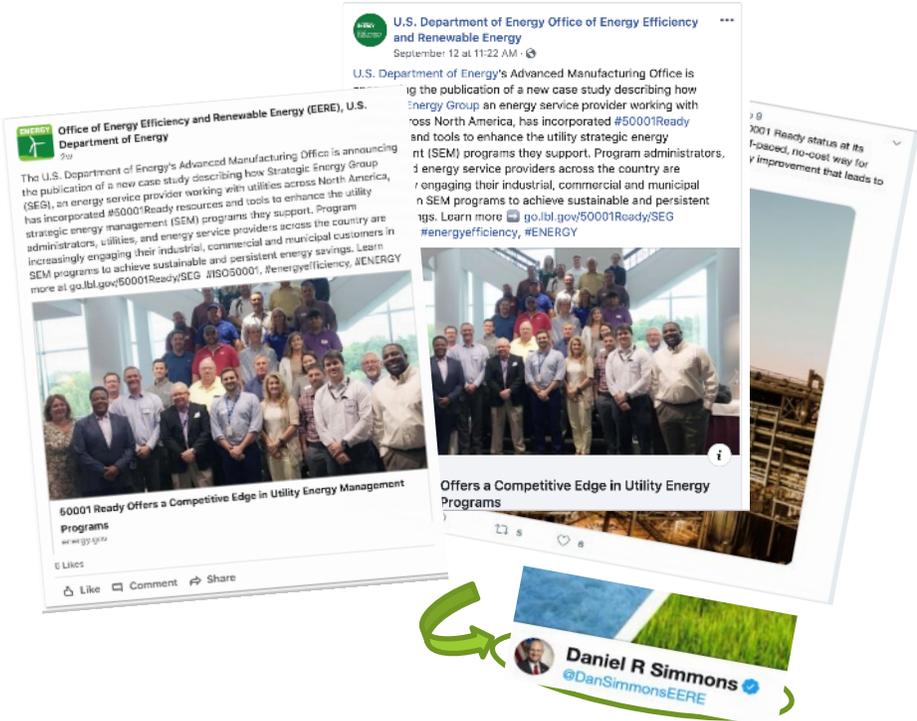


Followers  
768K



Links to latest Project Showcases and Case Studies

- [go.lbl.gov/50001Ready/SEG](https://go.lbl.gov/50001Ready/SEG)
- [go.lbl.gov/50001Ready/Tronox](https://go.lbl.gov/50001Ready/Tronox)
- [go.lbl.gov/50001Ready/ArcelorMittal](https://go.lbl.gov/50001Ready/ArcelorMittal)



## How do energy efficiency program administrators use 50001 Ready?

- ✓ Private and public organizations are incorporating the continual improvement practices from the 50001 Ready Navigator into their business-to-business and utility program offerings.
- ✓ DOE is seeking to partner with U.S.-based organizations to expand the use and increase end-user benefits of 50001 Ready assets.

### Utilities and Partners already engaged with 50001 Ready:



## Interested in making global impact to the further advancement of energy management?

The **US Technical Advisory Group (TAG) to ISO Technical Committee (TC) 301** is the official ANSI TAG responsible for representing US positions on energy management, efficiency, and savings standards being developed internationally.

### Why Join the US TAG to ISO TC 301?

Gain a better understanding of, and influence over, new and upcoming energy-related standards:

- ✓ **Technical Influence** - Represent the US position in working groups developing ISO standards in TC 301
- ✓ **Early Access** – Provide input to evolving standards
- ✓ **Professional Development** - Interact and learn from other technical experts, create a personal network, and hear global perspectives on important issues.
- ✓ **Leadership** - Develop experience in teamwork and in the art of consensus building.

To learn more contact Deann Desai, TAG Administrator, at [deann.desai@innovate.gatech.edu](mailto:deann.desai@innovate.gatech.edu)



ISO Technical Committee 301, 2019 Plenary Meeting, Vienna, Austria

*\*US TAG to ISO TC 301 is not a DOE program, but a professional membership offered on a fee-based structure with multiple levels of entry options available.*



Visit the 50001 Ready website at [energy.gov/50001Ready](https://energy.gov/50001Ready)

- Download sample utility partner profiles and program implementation guides
- Find links to the Navigator and EnPI Lite

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Stay informed

- CONTACT [ethan.rogers @ee.doe.gov](mailto:ethan.rogers@ee.doe.gov) to add others to this utility network distribution list



- Sign up at [energy.gov/50001Ready](https://energy.gov/50001Ready) for email updates about ISO 50001 and related DOE programs

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Questions?