



# Energize Denver & LBNL: ISO 50001 Ready

February 27, 2024

# Agenda

- Introduction
- 2024 Programming for Manufacturing, Agricultural, and Industrial (MAI) Buildings
- ISO 50001 Ready Presentation
- Q & A

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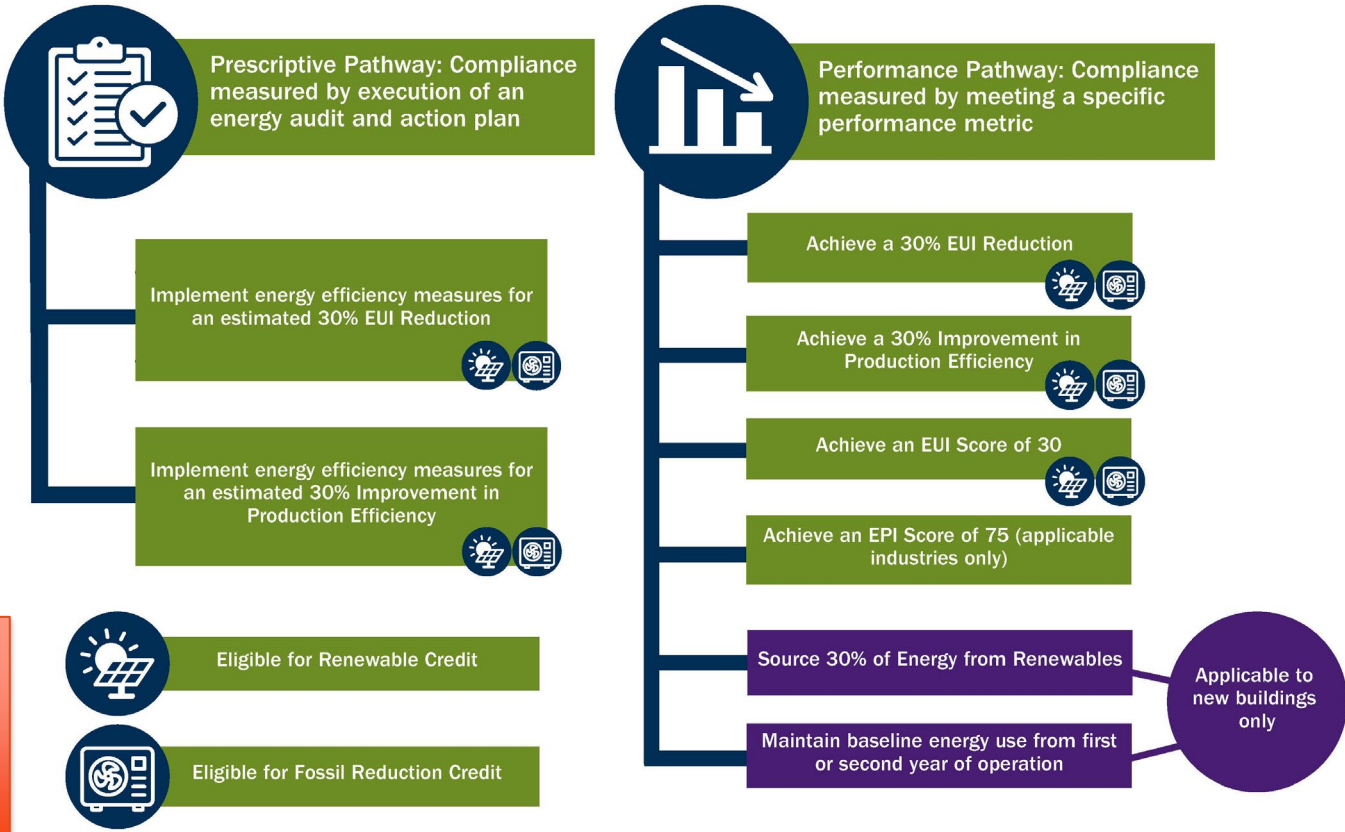
# Energize Denver MAI Alternate Compliance Option 2024 Deadlines

# Benchmarking MAI Buildings

- Starting in 2023, MAI buildings were required to start benchmarking their annual site energy usage through Energy Star Portfolio Manager (ESPM). This year's benchmarking season begins March 1<sup>st</sup> and the annual deadline is June 1<sup>st</sup>.
- MAI buildings pursuing certain performance metrics may be required to submit additional data with their benchmarking reports (e.g., production data).
- Third-party data verification is due in performance years (e.g., 2026 and 2030).

# Performance Requirements for the MAI Alternate Compliance Option (ACO)


Note: These are all 2030 goals. 2026 is the interim target year (get halfway to your 2030 goal).



# MAI Alternate Compliance Option Application

The MAI Alternate Compliance Option Application for existing MAI buildings is due by December 1, 2024.

MAI buildings that do not apply will be assigned a 30% Site EUI Reduction target, as compared to their 2022 baseline.



## Energize Denver: Manufacturing, Agricultural, and Industrial Building Alternate Compliance Option Application

This Alternate Compliance Option application is for buildings with an official Manufacturing, Agricultural, and Industrial (MAI) Building designation. Upon receiving MAI designation from CASR's Industrial Administrator, via the MAI designation forms, the MAI building must then apply to the MAI Alternate Compliance Option with their chosen compliance pathway and metric and any additional required information and documentation.

# Want specialized assistance and training?

ISO 50001 Ready can help covered buildings plan for their performance requirements. If you want to set up your building for success, this program could be the right fit for you!

# 50001 Ready Information Session

City of Denver

February 2024





# Introductions - LBNL



**Graziella Siciliano**  
Senior Advisor,  
Energy Management  
in Industry



**Arian Aghajanzedeh**  
Senior Technical Advisor

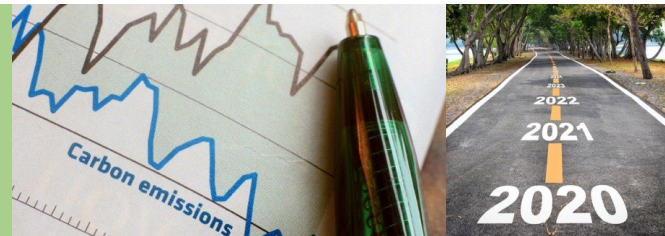
# *WHY ISO 50001?*



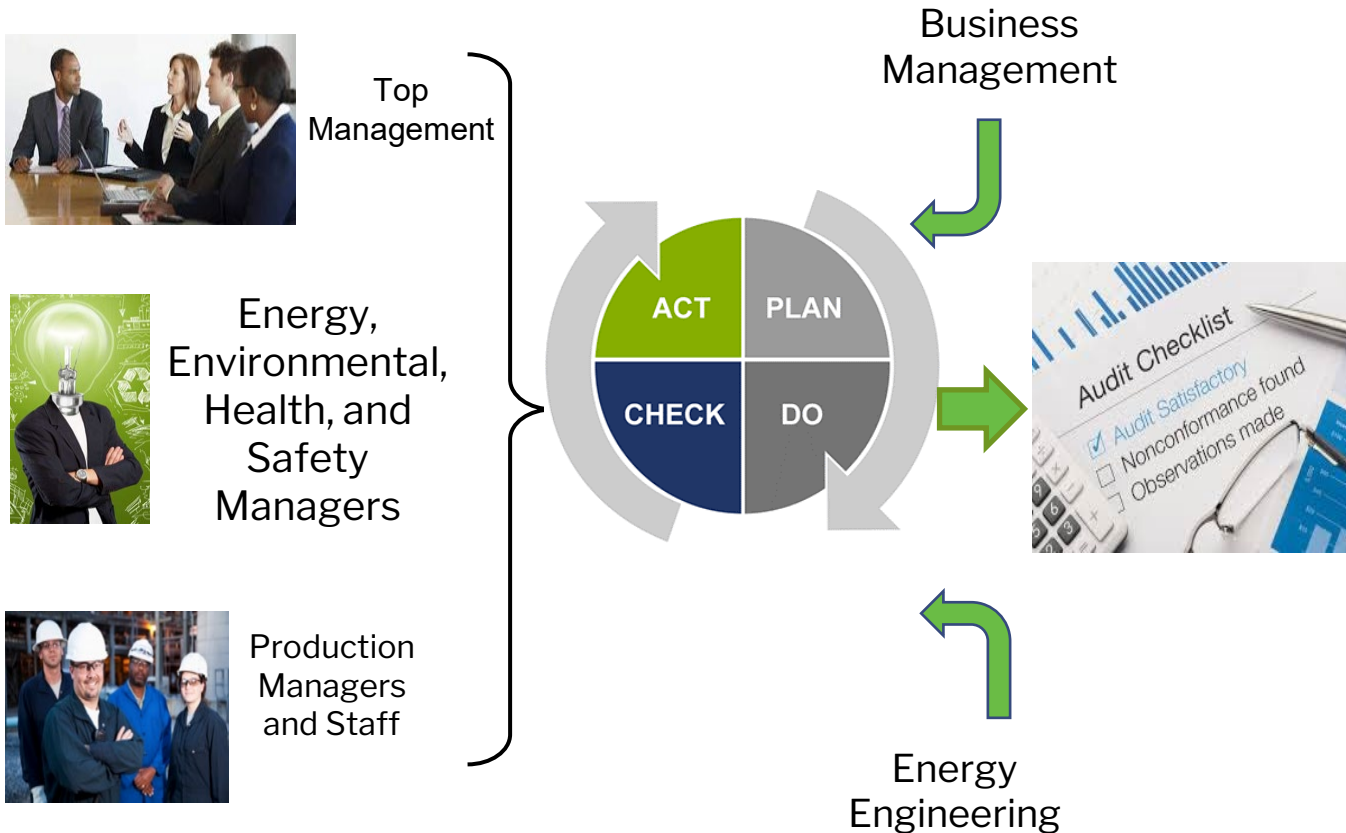
# The ISO 50001 business practice is:

- **A framework** for continual improvement of energy and carbon performance
- **A global standard** developed by 56 countries with US leadership
- **A flexible roadmap** used by over 50,000 sites

50001's data-driven, flexible design helps organizations of all kinds and sizes to achieve persistent energy and cost savings over the long term



# Energy Management Systems – Connecting people and technical solutions



# Energize Denver + 50001 Ready

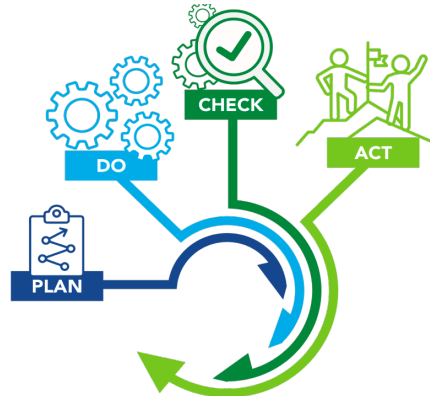
Adopting **50001 Ready energy business process** will help you create a company wide strategy to achieve and maintain **BPS** compliance.

## Do

Take action to implement projects and improve operations to reduce emissions in line with your goals.

## Plan

Guidance to address Energize Denver requirements. Process will align leadership and departments to achieve compliance.



## Check

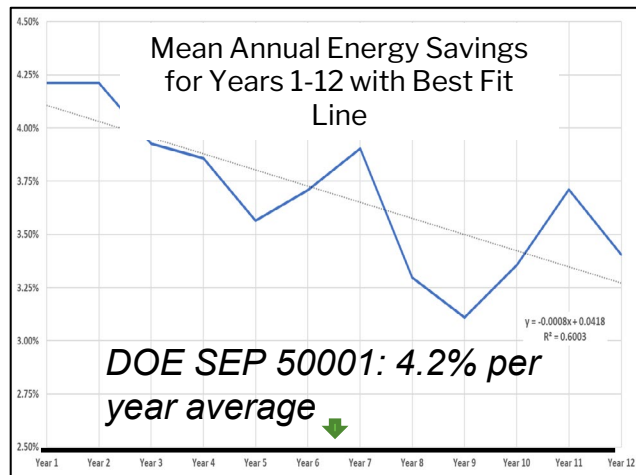
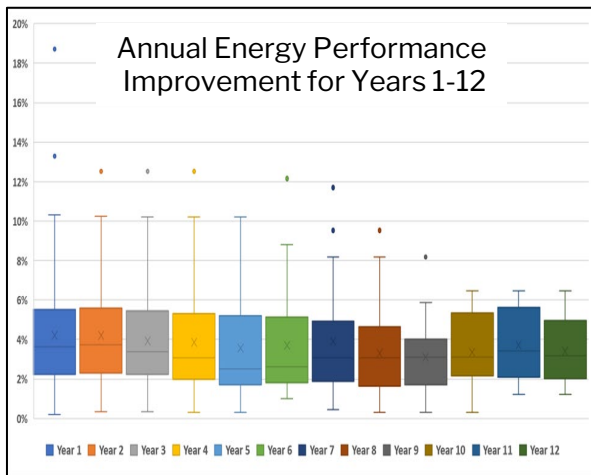
Ensure that goals are achieved and that investments, systems, processes are operating as intended.

## Act

Identify and address challenges to enable continual improvement to build on success and meet future goals.

# Research Findings: Energy Management Saves More Energy

- Analysis of eleven years of DOE's SEP 50001 program participants' energy savings shows **a 4.2% improvement** across all facilities in the first year.
- By the 11th year, the facilities are still achieving a **3.4% year on year improvement** in energy performance.
- Far exceeds the average improvement in energy intensity across all of industry
  - (0.5%/year per EIA Annual Energy Outlook).

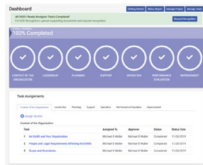


# *DOE Programs to Support ISO 50001*

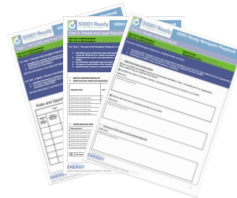


# What is 50001 Ready?

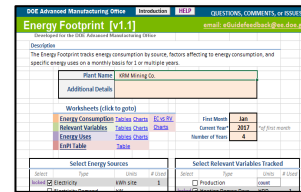
- A self-paced, step-by-step framework to implement a world class energy management system based on ISO 50001.
- Includes a suite of resources to support continuous improvement in institutional, commercial, and industrial facilities.
- Supports ‘enterprise’ or multi-facility adoption.



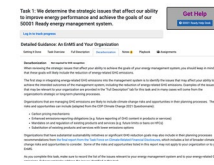
**50001 Ready  
Navigator**



**Navigator Task  
Worksheets**



**Energy Footprint  
Tool**



**Decarbonization  
Guidance**



# Approaches to ISO 50001 Adoption

DOE supports a continuum that begins with business culture and culminates in verified savings.



## SELF ATTEST



## CERTIFY



## VERIFY

Purpose & Recognition	Implement and self-attest to ISO 50001 Benefit from its cultural value	Establish a rigorous energy management system, audited by a 3rd party certification body	Verify energy savings from ISO 50001, using 3rd party SEP verification body
	Earn recognition from DOE for ISO 50001 conformance	Certify to globally recognized ISO standard	Recognition for ISO 50001 certification and verified energy performance improvement
Steps	<ol style="list-style-type: none"> <li>1. Complete 25 steps in Navigator</li> <li>2. Self-attest to completion</li> <li>3. Report energy performance</li> </ol>	<ol style="list-style-type: none"> <li>1. ANAB-accredited audit</li> </ol>	<ol style="list-style-type: none"> <li>1. ISO 50001 certification</li> <li>2. 3<sup>rd</sup> party SEP Performance Verification audit</li> </ol>
Target Facilities	Good approach for any organization, particularly for facilities with a moderate energy bill	Ideal for organizations with prior ISO management system experience	Ideal for facilities seeking deep, sustained energy savings
Tools & References	ISO 50001 Standard		
	50001 Ready M&V Protocol		SEP M&V Protocol
	50001 Ready Navigator – Developed for 50001 Ready, provides full guidance in line with ISO 50001 and SEP Energy Performance Indicator (EnPI) Tools – Lite version designed for 50001 Ready; Full version designed for SEP		

# 50001 Ready Cohorts - Technical Assistance Program



## 50001 Ready Cohort Program Basics

- Provides 6-12 months of support to groups, or “cohorts” of sites from one or more organizations
- Available to any U.S.-based industrial, commercial, and institutional site
- Participating sites commit to complete the program, implement ISO 50001, and then apply for 50001 Ready recognition

# 50001 Ready Cohorts: Key Program Stages

## 1. Participation Agreements

Participating sites are asked to sign agreements in order to set clear expectation for program participation. Participation agreements also help site level staff get the leadership buy-in and support they need to successfully implement their EnMS.

## 2. Pre-Program Assessments

50001 Ready coaches collect data pre-program to assess site priorities, needs and progress as many sites have been investing in EE for years and have tools that can be leveraged and integrated into their new EnMS.

## 3. Group Trainings

50001 Ready Coaches train participants on how to implement each of the 25 steps needed to build a systematic energy management approach using the 50001 Ready Navigator.

## 4. Site-level Homework

Participants work to complete assigned tasks in the 50001 Ready Navigator using 50001 Ready Playbook Worksheets.

## 5. 1-on-1 Coaching

Site level participants bring questions and challenges faced for 1-on-1 discussions with 50001 Ready Coaches.

## 6. Post-Program Assessments

50001 Ready coaches will collect data post-program to assess how far sites have come in the program, how far they still need to go to reach Ready status, and what additional support they may need to get there.

## 7. 50001 Ready Recognition

The goal of the program is that all sites become “50001 Ready recognized” within 6 months of completing the cohort program.

# 50001 Ready Cohort Schedule - Example

- = (1) Pre-Program Assessment and orientation period
- = (7) 2-hr Group Training Sessions – 4th week of the month
- = (6) Coaching Calls – Scheduled two weeks after training
- = (1) Post-Program Assessment Call(s)
- = Ongoing Homework and Site Implementation

Month 1							Month 2							Month 3							Month 4						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
					1	2	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6			
3	4	5	6	7	8	9	7	8	9	10	11	12	13	7	8	9	10	11	12	13	4	5	6	7	8	9	10
10	11	12	13	14	15	16	14	15	16	17	18	19	20	14	15	16	17	18	19	20	11	12	13	14	15	16	17
17	18	19	20	21	22	23	21	22	23	24	25	26	27	21	22	23	24	25	26	27	18	19	20	21	22	23	24
24	25	26	27	28	29	30	28							28	29	30	31				25	26	27	28	29	30	
31																											
Month 5							Month 6							Month 7							Month 8						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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2	3	4	5	6	7	8	6	7	8	9	10	11	12	4	5	6	7	8	9	10	8	9	10	11	12	13	14
9	10	11	12	13	14	15	13	14	15	16	17	18	19	11	12	13	14	15	16	17	15	16	17	18	19	20	21
16	17	18	19	20	21	22	20	21	22	23	24	25	26	18	19	20	21	22	23	24	22	23	24	25	26	27	28
23	24	25	26	27	28	29	27	28	29	30				25	26	27	28	29	30	31	29	30	31				
30	31																										

# 50001 Ready Cohorts: Program Technical Content

**Cohort participants will be trained to use the 50001 Ready Navigator -**

**DOE's free, online tool that provides a simple, step-by-step approach to ISO 50001 implementation**

50001 Ready Steps	50001 Ready Navigator Tasks
1. Context of the Organization	Tasks 1-3
2. Leadership	Tasks 4-6
3. Planning	Tasks 7-13
4. Support	Tasks 14-16
5. Operations	Tasks 17-19
6. Performance Evaluation	Tasks 20-23
7. Continual Improvement	Tasks 24-25

# Get Started with the 50001 Ready Navigator

[navigator.lbl.gov](https://navigator.lbl.gov)

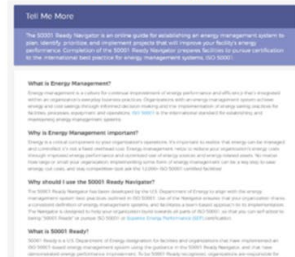


## Welcome to the 50001 Ready Navigator!

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+ sites worldwide benefiting from an energy management system!

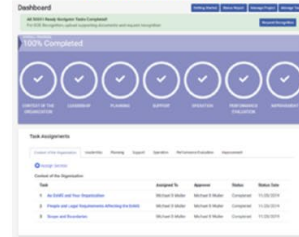
The 50001 Ready Navigator has been updated to reflect the changes made to the ISO 50001 standard in 2018.

### About the Navigator



- or -

### Explore the Navigator



- or -

[Create an Account](#) or  
[Log-in to Get Started](#)

EMAIL ADDRESS

ENTER PASSWORD

Log In

[Forgot password?](#)

# Get Started: Take the 50001 Ready Assessment!

**Interested to understand how you can improve your energy management practices?** Use the [50001 Ready Energy Management Assessment \(EMA\) tool](#) to compare your practices to international energy management standard ISO 50001 and identify new opportunities to improve your energy and carbon performance!



**SCHEDULE** an  
**EMA Results**  
**Consultation**  
**with DOE**



# Questions?





# Next Steps

- We will be following up to get your feedback on today's session.
- In the meantime, feel free to explore 50001 Ready resources on your own!
  - Explore guidance and resources available on the **50001 Ready Navigator - [Navigator.LBL.Gov](https://www.navigatord.gov)**
  - Take the **50001 Ready Energy Management Assessment - [industrialapplications.lbl.gov/energy-management](https://www.industrialapplications.lbl.gov/energy-management)**

# Resources

Energize Denver Help Desk for general support and questions:

[denvergov.org/energizedenver](https://denvergov.org/energizedenver)

[energizedenver@denvergov.org](mailto:energizedenver@denvergov.org)

or 844-536-4528

[daniel.raynor@denvergov.org](mailto:daniel.raynor@denvergov.org)

[calendly.com/danielraynor/mai-office-hours](https://calendly.com/danielraynor/mai-office-hours)

[MAI training](#)

[MAI webpage with application links](#)