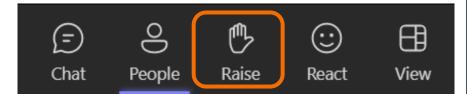
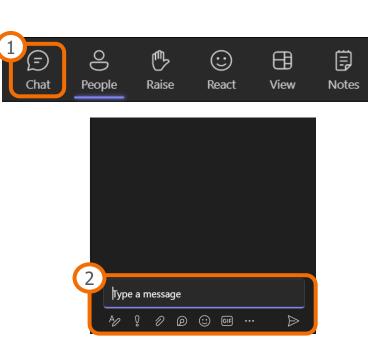
Participate in the discussion!

Raise hand or use the chat to comment or ask questions.



To lower your hand, press the "Raise" button again.





**NOVEMBER 21, 2023** 

# The Road to ISO 50001

Andrew Knox Senior Manager, Consulting Services Goldfin Consulting



# What ISO 50001 Can Look Like for You



Support Tools for Building Energy Management Systems

### Paths to ISO 50001 Certification



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# Follow along in your workbook

#### Have the workbook open or printed out

We will be using the Participant Workbook to summarize and reinforce key points and record your key take-aways.

#### Where to find the workbook

- Workshop reminder email from earlier this week
- In the chat

Watch for this icon the solution of the soluti		Pg. 1
SAVE O DECREME ENERGY PARTICLE	]	
THE ROAD TO ISO 50001		
PARTICIPANT HANDOUT		
ISO 50001 is the international standard for good energy management practices. The North Star. It leads to greater and longer-lasting energy savings and improves the resilience and persistence of your efforts. But achieving ISO 50001 certification can appear quite onerous and costly.		
Understand what is involved in achieving ISO 50001 certification, if it is right for you, and how you can work towards 50001 to take advantage of the benefits without becoming overwhelmed.		
IN THIS WORKSHOP, PARTICIPANTS WILL:		
Learn what is involved in ISO 50001 including best practices and what commitments are required.     Evaluate whether ISO 50001 certification is right for their organization.     Develop a plan to work towards ISO 500001 in a wey that makes service for them.		
This workshop will be hold on we Monooft Teams.		



troubleshooting, please see the last page of this bandout

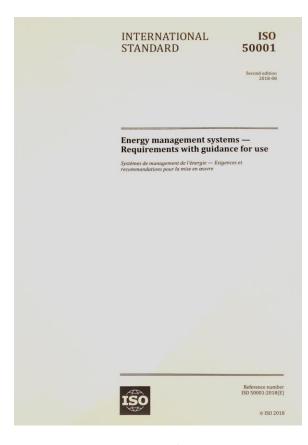


# What is ISO 50001?

ISO 50001 is a standard that establishes requirements for an ISO-certifiable energy management system (EnMS)

# What is an EnMS?

A system that includes targets, action plans and processes in pursuit of goals established in a formal energy policy.





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#### What ISO 50001 Includes







Energy Management Good Practices **PDCA** Plan-Do-Check-Act Third-party Recognition



#### **Energy Management Practices**

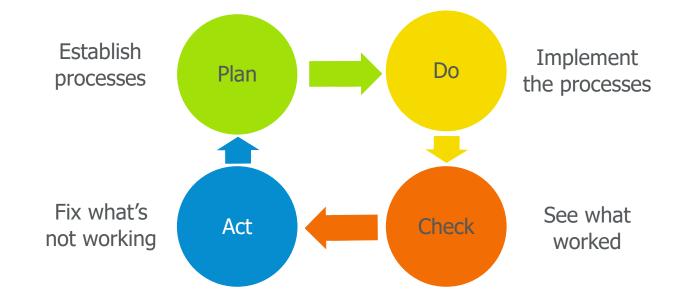
Energy management good practices support the achievement and persistence of energy performance improvements.





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#### ISO 50001 is Based on the Plan-Do-Check-Act Cycle





# Energy Management System Drivers



Good Practices	PDCA	Third-Party Recognition
<ul> <li>Reduce energy costs</li> <li>Improve energy reporting</li> <li>Reduce GHG emissions</li> <li>Establish a plan to achieve targets</li> </ul>	<ul> <li>Improve adherence to energy management practices</li> <li>Enhance persistence of energy savings</li> <li>More actively pursue continuous improvement</li> <li>Increase internal awareness of energy management</li> </ul>	<ul> <li>Comply with regulatory requirements</li> <li>Meet customer requirements</li> <li>Enhance brand</li> <li>Access funding programs</li> </ul>





# Your Drivers and 50001 Components

		Act Plan Check Do	CERTIFIED ISO 50001:2018 COMPANY
	Good Practice	PDCA	Recognition
Energy savings	$\checkmark$	$\checkmark$	$\checkmark$
Deeper, persistent savings		$\checkmark$	$\checkmark$
Third-party recognition			$\checkmark$



# **Breakout Group Instructions**

Pg. 2

In your breakout groups share:

What is motivating you to consider ISO 50001 or a similar energy management system?

#### To join to breakout session

Click Join room to join breakout room. Alternatively, you'll be moved to your assigned room automatically 10 seconds after rooms are opened.

	(=) Chat	People	Raise	(::) React	) View	More
e'll m cond		i to your a	ssigned r	room in 1	0 ×	





**Breakout Group Debrief** 

# What did you discuss as motivations for adoption of an energy management system?



### There are Degrees of Formality in Energy Management





**Good Practices** 

#### ISO 50001 Compliance



# **50001 Ready**<sup>™</sup> Self-attested



Certified



# Which End Goal is Right For You?



	End Goals				
	Energy Management Good Practices	ISO 50001 Compliant	50001 Ready	ISO 50001 Certified	
Energy savings	<ul> <li></li> </ul>	$\checkmark$	$\checkmark$	<ul> <li>✓</li> </ul>	
Deeper, persistent savings		$\checkmark$	$\checkmark$	<ul> <li>✓</li> </ul>	
Third-party recognition			$\checkmark$		
Resource Intensity	*	***	***	****	



The 50001 Ready Recognition Process

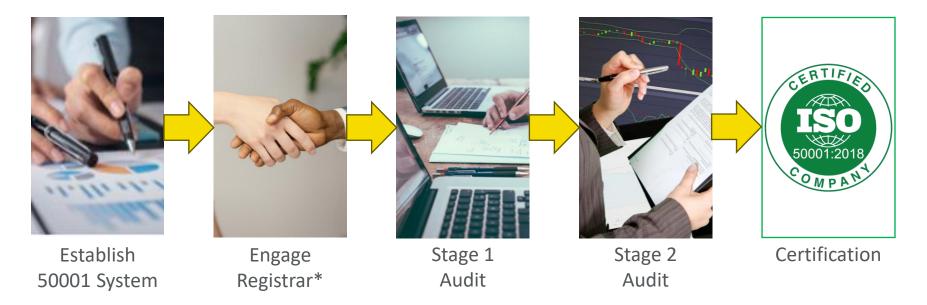




Add project to *Ready Tool*  Complete the 25 tasks Submit Application Yearly Recognition Renewal



### What Does Certification Involve?



\*If you use a third-party consultant for implementation of your energy management system, that consultant cannot act as your registrar.



### Re-registration is Required Every Three Years



Negotiate frequency of surveillance audits with your registrar during the hiring process.



# There are Many Roads to ISO 50001

No two journeys to 50001 certification are the same. The following case studies vary in terms of their intended endpoints, methods and timelines.





# Maple Leaf: Early Steps Towards Possible Certification

#### Taking Next Big Step Toward Formalization of Systems

- Publicly declared strong commitments to sustainability
- Engaged in energy management for years, with many projects
- Built a large energy team
- Has now engaged consultant to begin a 50001 gap analysis process





# City of Mississauga's ISO 50001 Self-Certification

#### A Slow Build to a Record Certification

- Spent many years increasing commitment to energy management
- Established senior management trust
- Built a large energy team
- Certified without support from an external implementation consultant
- Earned first ISO 50001 certification for a municipal building in Canada





# General Dynamics Land Systems' 50001 Journey

#### **Implementing a Clear Rapid-Certification Mandate**



- Leadership provided direction for rapid certification
- GDLS participated in London Hydro SEM program
- Third-party implementer was engaged
- The London facility was 50001 certified in December 2020 (10-month process)



# What Does Your Road to ISO 50001 look like?





#### What is your end point?



What is your timeline?



What support will you use?





#### Internal vs. External Resources

#### Internal



#### External







Pg. 5

#### Support Resources Available





ISO 50001 Training Courses

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Task Assignments	Leadenhip	Planning Suppor	rt Operation	Performance Eve	Austion Imp	oversent	
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#### 50001 Ready Navigator



Strategic Energy Management Program



### 50001 Ready Navigator



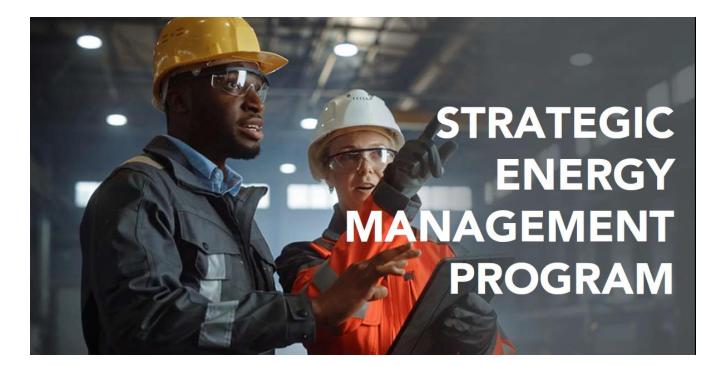
#### Task Assignments

Context	of the Organization Leadership Planning Support Operation Performance Evaluation Improvement
Task	Assigned To Approver Status Status Date
7	Risks to EnMS Success
8	Energy Data Collection and Analysis
9	Significant Energy Uses (SEUs)
10	Improvement Opportunities
11	Energy Performance Indicators and Energy Baselines
12	Objectives and Targets
13	Action Plans for Continual Improvement



# Strategic Energy Management (SEM)









# A Gap Analysis is Good Place to Start





#### **Gap Analysis Resources**

- Third-party facilitation
- Strategic Energy Management EMA or 50001 Assessment
- 50001 Checklist
- 50001-Ready EMA tool
- SEM Hub EMA tool



### **Q&A with Paul Mellecke**





### 50001 Ready Playbooks

#### 50001 Ready Navigator Playbook

#### Fask 10: Improvement Opportunities

This part of the Navigstor Playbook is completed when you have:	Date last modified/updated: Who last modified/updated:	
update "energy performance improvement Opportunities         Applicable capital processes take place.         Applicable capital processes take place.         Develop and document a methodology and orderia for how your organization will identify, prioritize, and update energy estimates         Very place take take takes the place.         Develop and document a methodology and orderia for how your organization will identify, prioritize, and update energy estimates         Very place takes the place.         Develop and document a methodology and orderia for how your organization will identify, prioritize, and update         and update takes the place.         Very have developed a prioritization method that is both systematic and continual, and have detailed below:         Click here to enter text:         The energy objectives and targets that have been established         The energy objectives and targets that have been established         The energy objectives and targets that have been established         The energy objectives and targets that have been established         The energy objectives and targets that have been established         The energy objectives and targets that have been established         The energy objectives and targets that have been established         The energy objectives and targets that have been established         The energy objectives and targets that have been established         The energy objectives and targets that have been established         The energy objectives and targets that have been established         The energy objectives and targets that have been established         The energy objectives and targets that have been established         The energy objectives and targets that have been established         The energy objectives and targets that have been established         The energy objectives and targets that have been established         The energy objectives and targets that have been established         The energy objectives and targets that have been e	This part of the Navigator Playbook is complete	d when you have:
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#### 50001 Ready Navigator Playbook

#### sk 10: Improvement Opportunities

#### Checklist of Other Methods to Identify Energy Saving Opportunities

Purpose	Provide a listing of methods (other than assessments) for identifying energy saving opportunities, with a
checklist	t feature for recording the methods used by the organization

METHOD	CONTACT	EXPECTED OUTCOMES FROM APPYLING THE METHOD	WAS THIS METHOD USED? (y/n)	WHEN WAS IT USED? (date)	NEXT PROPOSED USAGE (date)
Employee	Contact employees through	Improvements in process	Click here	Click here	Click here to
Suggestions	the suggestion system, survey form or annual	energy efficiency; energy waste reduction opportunities;	to enter	to enter	enter text.
	performance reviews.	and, proposed operating efficiency improvements	text.	text.	
Utility Account	Contact utility to locate the	Information on available utility	Click here	Click here	Click here to
Representative	assigned representative.	rates and incentives; new technologies promoted by the	to enter	to enter	enter text.
		utility; and fuel switching opportunities	text.	text.	
Process and	Technician contact	Operating and maintenance	Click here	Click here	Click here to
Energy Equipment	information is available from contracted service provider	recommendations from service provider	to enter	to enter	enter text.
Service Technicians	or equipment vendor service department.	and the provider	text.	text.	
Equipment	Contact the equipment	Recommendations on most	Click here	Click here	Click here to
Vendors Technical	manufacturer to access their technical support.	efficient operating conditions and maintenance practices to	to enter	to enter	enter text.
Support	accuración adaptore.	maximize and sustain operating efficiency	text.	text.	
Trade association	Trade association	EnPI, general plant operating	Click here	Click here	Click here t
and/or operating standards for		conditions	to enter	to enter	enter text.
industrial sector			text.	text.	
Equipment	Equipment vendor trade	Efficient equipment operating	Click here	Click here	Click here to
Standards	association, user group	conditions and maintenance practices	to enter	to enter	enter text.
	records	practices	text.	text.	
Value Stream	Lean training seminars,	Add energy to value stream	Click here	Click here	Click here to
Mapping	corporate lean manufacturing specialists	mapping and identify approaches to reduce energy	to enter	to enter	enter text.
	menaneous ny specielous	waste and/or improve operating efficiency	text.	text.	
Six Sigma	Six sigma websites and	Project comparison and	Click here	Click here	Click here to
	blogs, Six sigma training	selection.	to enter	to enter	enter text.
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#### 50001 Ready Navigator Playbook

#### Task 10: Improvement Opportunities

METHOD	CONTACT	EXPECTED OUTCOMES FROM APPYLING THE METHOD	WAS THIS METHOD USED? (y/n)	WHEN WAS IT USED? (date)	NEXT PROPOSED USAGE (date)
			Click here	Click here	Click here to
			to enter	to enter	enter text.
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Benchmarking	Industrial Energy Analysis:	Spreadsheet tools for use by	Click here	Click here	Click here to
	http://industrial-	industries to benchmark a plant's energy intensity to	to enter	to enter	enter text.
	energy.lbl.govinode/100	"best practice" and to identify energy-efficiency options that can be implemented.	text.	text.	
Examine Energy	U.S. DOE-Industrial	Listing of ESA	Click here	Click here	Click here to
Saving Assessments	Assistance and Projects Databases	recommendations developed during system assessments	to enter	to enter	enter text.
(ESA) results for	http://www.com/com/		text.	text.	
like industries	http://www.energy.gov/eere/ amo/industrial-assistance- and-projects-databases				

PREPARED BY:	DATE:
Click here to enter text.	Click here to enter text.
	UPDATED:
	Click here to enter text.

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