Implementing Energy Management Systems

Tuesday, May 16
3:45 - 5:00 p.m.
Panelists

- Steve Schultz, 3M Energy Management
- Wade Willatt, Nissan
- Greg Baker, Efficiency Vermont
- Pete Langlois, U.S. DOE Advanced Manufacturing Office
ISO 50001 – Energy Management System (EnMS)

International standard that draws from best practices around the world. Developed with input from 56 countries, many countries now adopting it as a national standard.

ISO 50001 specifies guidelines for establishing, implementing, maintaining and improving an EnMS

Extending __________ Management principles to Energy

- Financial
- Personnel
- Compliance
- Inventory
- Production
- Quality
- Environmental
- Health & Safety
- ...

Light blue text represents new data-driven sections in ISO 50001 that are not in ISO 9001 & ISO 14001
ISO 50001 in the U.S.

Examples of companies already using ISO 50001 in America

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

Typical energy savings in an industrial setting (from low- and no-cost measures):

- 5-7% annual improvement is common
- 30% over 3-4 years is not unheard of

ISO 50001 requires continual energy performance improvement. It does not include prescriptive energy performance improvement goals. It provides a framework through which organizations set and pursue goals for improving energy performance.
Why ISO 50001?

Known – Still large potential for industrial/commercial energy savings, historic improvement focus has been on ad hoc projects, low hanging fruit

We believe - Best way to achieve the fullest EE potential is to adopt programs & policies that improve energy performance on a continuing basis

- An EnMS (Energy Management System) is best way to accomplish this
- ISO 50001 is best available - internationally consistent / proven / recognized

**Conclusion**

Broad market acceptance and implementation of ISO 50001 in the U.S. will significantly improve EE and reduce GHG in the industrial and commercial marketplace

Savings at certified facilities greater on average compared to non-certified facilities:
- 3M: 62% greater over 3 years: 18 ISO 50001 sites across 7 countries; 2 US SEP, 1 Korea SEP certified; 257 non-ISO 50001
- Schneider Electric: 65% greater over 4 years: 20 ISO 50001 in North America; 16 US SEP certified; 30 non-ISO 50001
DOE Support for ISO 50001

U.S. Recognition Options for ISO 50001

- **Program Name**
  - 50001 Ready
  - Superior Energy Performance® (SEP™)

- **U.S. Government Supported Approach**
  - Program to self-attest ISO 50001 structure
  - Program for ISO 50001 certification

- **Energy Savings Validation Approach**
  - 50001 Ready Measurement & Verification (M&V) Protocol
  - SEP M&V Protocol

- **Market Actors & Drivers**
  - Market Allies recognized by U.S. DOE
  - Accredited certification bodies recognized by U.S. DOE
Steve Schultz

3M Energy Management
3M Experience Implementing ISO 50001 and Superior Energy Performance®

Steve Schultz, Corporate Energy Manager
3M Energy Management
Driving Progress Around the World

- $30 Billion Sales
  - 60% International
- 5 Business Groups, 26 Business Units
- Operations in 29 States and 70 Countries
- Sales in 200 Countries
- 89,000 + Employees
Our fundamental strengths are the foundation of 3M’s performance

Leveraging these assets creates value; strengthening them ensures our future

**Technology**
Ability to share and combine elements of 3M’s broad technology portfolio to produce unique, differentiated products, translating to premium margins.

**Manufacturing**
Utilization of 3M manufacturing footprint and technology, including process trade secrets, leading to higher-performing products and lower unit cost.

**Global capabilities**
Subsidiary front- and back-office footprint that allows for effective development, adaptation and commercialization of products.

**Brand**
Brand equity in the 3M brand and in authority brands that are shared across business groups.
## Our 2025 Sustainability Goals

### Raw Materials
- Invest to develop more sustainable materials and products to help our customers reach their environmental goals
- Reduce manufacturing waste by an additional 10%, indexed to sales
- Achieve “zero landfill” status at more than 30% of manufacturing sites
- Drive supply chain sustainability through targeted raw material traceability and supplier performance assurance

### Water
- Reduce global water use by an additional 10%, indexed to sales
- Engage 100% of water-stressed/scarcé communities where 3M manufactures on community-wide approaches to water management

### Energy & Climate
- Improve energy efficiency indexed to net sales by 30%
- Increase renewable energy to 25% of total electricity use
- Ensure GHG emissions at least 50% below our 2002 baseline, while growing our business
- Help our customers reduce their GHGs by 250 million tons of CO₂ equivalent emissions through use of 3M products

### Health & Safety
- Provide training to 5 million people globally on worker and patient safety

### Education & Development
- Invest cash and products for education, community and environmental programs
- 100% participation in employee development programs to advance individual and organizational capabilities
- Double the pipeline of diverse talent in management to build a diverse workforce
**Our 2025 Sustainability Goals**

**Energy & Climate**
- Improve energy efficiency indexed to net sales by 30%
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**Raw Materials**
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**Energy**
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Strategies to Achieve 2025 Goals

Short-term
• Treasure Hunts
• Shutdown procedures
• LED replacement
• Waste reduction
• Process energy optimization
• HVAC recommissioning

Long-term
• ISO 50001 / Superior Energy Performance
• Combined heat and power
• Oven optimization
• Design and install new capital equipment to be high efficiency
• Product reformulation
• Process energy monitoring
Strategic Energy Management Continuum

**Project Focus**
- A loosely organized project-by-project approach.
- Supports facilities of any size that are beginning to manage their energy.

**ENERGY STAR Energy Management Guidelines**
- A systematic approach in preparation for ISO 50001 implementation.
- Supports medium and large companies with prior energy management activities.
- No ISO management system experience is necessary.

**ISO 50001**
- A structured EnMS following ISO plan-do-check-act framework.
- Supports industries with prior ISO system or energy management experience.
- Allows for third party certification of conformance to the standard.

**Superior Energy Performance**
- Implement ISO 50001 EnMS
- Establish additional robust energy data tracking and measurement system.
- Obtain ANSI-ANAB accredited 3rd party energy performance verification.
Structured Approach to Energy Management

Source: Kahlenborn et al. (2012), based on Lackner & Holanek (2007)
3M Enterprise-wide Certification

Benefits

- Five additional sites certified
- One previously certified site brought into enterprise
- 7.3% improvement in energy performance
- $3.6 million energy cost savings
  - Nearly 70% from operational changes

- $23,600 saved on implementations costs, PLUS
- One+ FTE, PLUS
- Accelerated implementation timeline, PLUS
- System in place for additional implementations
3M Enterprise-wide Certification

Keys to Success

- Corporate Energy Management Department
- Corporate Energy Policy
- Corporate Corrective Action System
- Corporate Energy Review and Planning Tool
- Plant Energy Performance Review Tool
- Corporate Top Management Committee
Barriers and Challenges

- Informing them of what ISO 50001 / SEP is and why certification provides value
- Internal resources to guide locations through the certification process
  - Utilize external resources whenever possible
  - Group locations into cohorts
- Language and cultural issues when expanding internationally
- Determining a Top Management Structure in our matrix organization
# Top Management, Plant Management, Annual Cycle

## Q1

<table>
<thead>
<tr>
<th>Central Office</th>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual update of tools - Review &amp; Planning Tool/Management Review Workbook, etc. Training on updated tools provided to plants.</td>
<td>External Stage I audits</td>
<td>External Stage II audits or Surveillance audits</td>
<td>New plants to join enterprise</td>
<td>Top Management Review</td>
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</table>

## Q2

| Plants | | | | | |
|--------| | | | | |

| Central Office | Internal audits completed | | Participate in PEPRs as appropriate | Schedule internal/external audits for upcoming year - Plant, Corporate, DEKRA | Top Management Review |

## Q3

| Plants | Internal audits completed | | PEPRs take place. PEPR Workbook and Review & Planning Tool saved and uploaded to SharePoint. EnPI updated for Energy Dashboards | | |

## Q4

| Central Office | Internal audits completed | | | | |
|----------------|--------------------------|| | | |

| Plants | Internal audits completed | | PEPRs take place. PEPR Workbook and Review & Planning Tool saved and uploaded to SharePoint. Schedule internal/external audits for upcoming year - Plant, Corporate, DEKRA | | |

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3M Facilities Implementing ISO 50001 and SEP

### 2017
- **3M Enterprise-wide ISO 50001 certification**
- Twenty-seven locations in eight countries certified or being certified
- Five plants implemented as a group of cohorts
- Three plants in three countries implementing as cohorts in North American Pilot

<table>
<thead>
<tr>
<th>Country</th>
<th>Site</th>
<th>Latest Action</th>
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Thank you

3M.com/Sustainability
#Improvinglives
More than **22,000** employees in the U.S.
• Celebrated more than 30 years of U.S. Automotive Manufacturing since 1983
• $11 billion manufacturing investment since 1981
• U.S. production has increased by more than 88% since 2010
• More than 300 suppliers in 30 states provide parts and materials to Nissan
• $14 billion in U.S. parts and materials purchases in 2016
• 15 million vehicles, 10 million engines and 90,000 lithium ion battery packs proudly manufactured in the U.S.
U.S. MANUFACTURING

NISSAN GROUP
OF NORTH AMERICA

MISSISSIPPI
CANTON VEHICLE ASSEMBLY PLANT

TENNESSEE
SMYRNA VEHICLE ASSEMBLY PLANT

Franklin,
TN
Americas
HQs

Smyrna, TN
Vehicles

Decherd, TN
Engines

Canton, MS
Vehicles

ALTIMA
MY PASSANGER
MY CANTON
FRONTIER
## ENERGY COMMITMENTS

<table>
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<th>Cost Reduction On Energy Spend</th>
<th>Nissan Green Program</th>
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<tr>
<td>ENERGY STAR® Certification</td>
<td>DOE Better Plants / Superior Energy Performance®</td>
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</table>
NISSAN GREEN PROGRAM

- Penetration of Zero-Emission Vehicles
  - 1.5 mil.

- Wider Application of Fuel Efficient Vehicles
  - 35% FE improvement

- Minimize Corporate Carbon Footprint
  - 20% reduction

- Minimize the use of New Natural Resources
  - 25% recycled resource usage
Certification/Recognition Opportunities

NNA Corp-Wide

Smyrna = Central Office (Mother Region) for ISO 50001
Each Site = SEP Certification (local)

Canton Decherd Smyrna

Enterprise-wide

Sustained Excellence

Certification/Recognition Opportunities

Smyrna/ Canton EPI

Decherd/ Stamping & Fascia Shops
NNA-Smyrna received ISO 50001 and Superior Energy Performance (SEP) Certifications in 2012.

- Became the first passenger-vehicle manufacturing facility to attain ISO 50001 and SEP certifications.
- Within 3 years of establishing baseline, the Smyrna plant improved energy performance by 7%.
CONTINUOUS IMPROVEMENT

Normalized Facility Energy Consumption (source energy)

Nissan – Smyrna, TN facility

Baseline Period (12 months)
2009

1st Certification
2012

2nd Certification
2015

7%
18%
24%
• **Corporate Goals** and Customer Expectations
  - SEP Supports global CO₂ reduction targets
  - TdC reduction and supply chain cost savings.

• **Overall Opinion** (OaO) & Brand Strengthening
  - OaO is a key performance indicator
  - External recognition improves perception of environmental performance

• **Structure** ISO 50001 & SEP Harmonize EnMS across U.S. Sites
  - Smyrna plant serves as “Central Office”
  - Standardization (audits, project tracking, EnPIs)
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Nissan Environmental and Energy Management Systems
Integration with EMS
ISO Principles

Say what you do
Do what you say
Prove it

Improve it
EnMS Structure

Corporate ISO 50001/SEP Leadership

- Corporate Level
- Nissan North America Energy Team
- Central Office (Smyrna)
  - Internal Auditors
  - Energy Engineers (SMEs)
  - Environmental and Energy Engineering Manager
  - Director/Plant Manager
- Facility Level
  - Other Site Energy Team Members
  - ISO Coordinator
  - Energy Engineer

* Nissan North America’s Energy Team is a cross-functional group of personnel from every level of management and several departments across the organization.

EnMS Functions of Nissan Central Office
1. Planning, Audits
2. Develop EnMS Procedures
3. Technical Support, Guidance

EnMS Functions of Nissan Sites
1. Implement EnMS Procedures
2. Energy Review & Planning
Enterprise EnMS IMPLEMENTATION

- Utilized existing EnMS from Smyrna
  - Smyrna serves as Central Office
  - Modified all procedures so they are not Smyrna centric
- Most of the effort was spent on sites implementing the required practices
  - Developed a task list
- SEP adds rigor, analysis, and disciplined structure
  - Improved the consistency between sites making regional reporting easier
- EnMS prompts NNA to consider energy impacts of new design projects and facility/equipment modifications
Canton SEP Achievement

- Superior Energy Performance Indicator (SEnPI)
  - Platinum Performance Level
  - 20.9% verified improvement in 3 years
Decherd SEP Achievement

- Superior Energy Performance Indicator (SEnPI)
  - Silver Performance Level
  - 8% verified improvement in 3 years
• Easier best practice and resource sharing amongst sites
  – EnMS maintenance is distributed across multiple sites
  – Met our Better Plants Challenge (25% reduction) target 5 years early
• Not every site is externally audited each year
  – Reduced costs and resource requirements
• Corporate Sustainability Report – 3rd Party Audit of CO₂/GHG reporting

“ISO 50001 and SEP are worth the effort as it brings structure and discipline to the program. Nissan values third-party validation and the external recognition for being an environmentally friendly manufacturer.”
—Mike Clemmer, Director - Manufacturing Engineering
LESSONS LEARNED

• Experience is key
  – Use 1 site as pilot to ease changes during development
  – Ensure you have a mix of team members with ISO and energy backgrounds
  – SEP training from DOE helps bring energy and ISO experts up to speed
• Mature ISO 14001 program helps ISO 50001 adaptation
• Simplification – Merged Energy & Environmental Policies and Procedures
• SEP Best Practice/Scorecard points are value-add and worth doing
• EnPI Tool is very powerful in conveying performance
  – Japanese energy managers like the DOE EnPI tool
Energy Reduction Resources

FREE Energy Assessments by Industrial Assessment Centers

Available Industries for EPI Tool
- Automobile Assembly
- Cement Manufacturing
- Commercial Bread & Roll Bakery
- Container Glass Manufacturing
- Cookie and Cracker Bakery
- Flat Glass Manufacturing
- Frozen Fried Potato Processing
- Integrated Paper and Paperboard Manufacturing
- Juice Processing
- Pharmaceutical Manufacturing
- Pulp Mill
- Wet Corn Milling

ENERGY STAR Portfolio Manager can help benchmark your performance against other similar plants

Tips available regarding taking the next step in Energy Management

www.energystar.gov

http://energy.gov/eere/amo/locations-industrial-assessment-centers
THANK YOU!
Greg Baker

Efficiency Vermont
Redefining relationships by focusing on Energy Management

☑ Non-incentive, non-project value-add
☑ Holistic approach to managing energy
☑ Barriers to energy management
☑ Energy use visible to everyone in the company, from top management down.
☑ Energy as a standard operating procedure, similar to Safety, Quality and Production.
Efficiency Vermont’s Program

✓ Large C&I customers
✓ Cohort Engagement – Peer to Peer
✓ Promoting energy management
  • Customer commitment
  • Energy Management Planning & Implementation
  • System for Monitoring, Tracking & Reporting Performance
# Program Components

**Continuous Energy Improvement (CEI) Memorandum of Understanding and Collaboration Agreement**

**Process Step** | **Category** | **Milestone**  
--- | --- | ---  
**Commitment** | Corporate Sponsor Identified |  
**Energy Management** | Energy Management Defined |  
**Resources** | Resources Allocated |  
**Policy** | Culture Adopted |  
**Procedures** | Policy Written |  
**Defined** | Procedures Defined |  
**Commitments** | Commitments Designated |  
**Selected** | Energy Champion Selected |  
**Authority** | Authority Granted |  
**Initiated** | Reporting Initiated |  

**Plan** |  
**Energy review** | Energy Usage |  
**Results** | Results Obtained |  
**Targets** | Targets Set |  
**Revised** | Results Revised |  
**Action** | Action Plan Developed |  
**Perform** | Performance Evaluated |  
**Evaluate** | Evaluate Performance |  

**Do** |  
**Implementation** | Milestone Met |  
**Measure** | Measure Energy |  
**Monitor** | Monitor Energy |  
**Maintain** | Maintain Energy |  

**Employee Engagement** |  
**Staff** | Staff Involved |  
**Training** | Training Provided |  
**Operator** | Operator Involved |  
**Manage** | Manage Energy |  
**Monitor** | Monitor Energy |  

**Check** |  
**Monitoring, measurement and analysis** | Targets Established |  
**Measurement Checked** | Measurement Checked |  
**Audit** | Audit Performed |  
**Issues Resolved** | Issues Resolved |  

**Act** |  
**Management Review** | Review Performance |  
**Records Made** | Records Made |  

**Energy Performance**

**Baseline Period** | **Improved Performance** | **“Business-as-Usual” Performance**

**Behavioral Savings** | **Cost Avoidance** | **Internal Savings**

**Efficiency Vermont**
Program - **Successes**

- Most valued program element - **Peer-to-Peer Interaction**

- Success with implementing **CEE minimum elements**
  - ✔ Customer commitment
  - ✔ Planning and implementation
  - ✔ Systems for measuring and reporting

- Communication and **partnership with Efficiency Vermont**
Program - Challenges

• **Finding time**—both as energy champion and in engaging employees

• Creating and **maintaining cross-functional team**; agreeing on priorities across departments

• Gaining and maintaining corporate level **commitment**

• Time and **distance required for workshop** attendance

• Making business case for sub-metering, **competing priorities**, identifying appropriate variables
SEM Cohort 1 Savings Results

SEM Cohort 1 Savings = 3% (captured via regression analysis)
Cohort 2: SEM with a focus
### SEM Cohort 2 Savings Results

<table>
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<tr>
<th>Site</th>
<th>% Total</th>
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<tbody>
<tr>
<td>A</td>
<td>3.3%</td>
</tr>
<tr>
<td>B</td>
<td>8.1%</td>
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<tr>
<td>C</td>
<td>16.1%</td>
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<tr>
<td>D</td>
<td>11.4%</td>
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<td>F</td>
<td>6.0%</td>
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<tr>
<td>G</td>
<td>5.4%</td>
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</table>

**Average**: 7.0%

### Low Cost Opportunities

- Low Cost in Progress: $112K
- Low Cost Completed: $73K
- Capital Evaluating: $112K
- Capital Completed: $12K
- Potential Reduction: 7%

---

**Efficiency Vermont**
Cohort 3: SEM with another focus

Hospitals with large chilled water
Energy Management Progression

**DOE Strategic Energy Management Continuum**

- **Foundational Energy Management** (e.g., ENERGY STAR For Buildings & Plants)
  - Fundamental approach to developing a systematic energy management program based on industry best practices and benchmarking tools

- **ISO 50001**
  - Standard Energy Management System (EnMS) framework for global industrial operations
  - Receive ISO 50001 certification
  - Achieve ISO 50001 EnMS
  - Management reviews
  - Conduct internal EnMS audit
  - Formally document EnMS

- **SEP**
  - Verified energy performance
  - Receive SEP certification (includes ISO 50001 certification)
  - Obtain third-party verification
  - Achieve energy performance improvement targets
  - Conduct rigorous measurement & verification of energy performance

ISO 50001 used as baseline for eGuide v2.0 design

Steps in EnMS Progression

Efficiency Vermont
Building Momentum toward SEP

Same tasks with different levels of effort, documentation, and recognition

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Engage Management</strong></td>
<td><strong>Plan for Energy Management</strong></td>
<td><strong>Implement Energy Management</strong></td>
</tr>
<tr>
<td><strong>Superior Energy Performance® Program</strong></td>
<td><strong>Superior Energy Performance® Program</strong></td>
<td><strong>Superior Energy Performance® Program</strong></td>
</tr>
</tbody>
</table>

**CEI participation**

**50001 Ready**

**ISO 50001 Certified**

**Superior Energy Performance**
### 50001 Ready Navigator

**Dashboard**

**OVERALL PROGRESS:**

4% **Completed**

- **Planning:** 20%
- **Energy Review:** 0%
- **Continual Improvement:** 0%
- **System Management:** 0%

### Task Assignments

**Planning**

<table>
<thead>
<tr>
<th>Task</th>
<th>Assigned To</th>
<th>Approver</th>
<th>Status</th>
<th>Status Date</th>
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</thead>
<tbody>
<tr>
<td>1 Scope and Boundaries</td>
<td>Michael Socks</td>
<td>Greg Baker</td>
<td>Completed</td>
<td>03/30/2017</td>
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<tr>
<td>2 Energy Policy</td>
<td>Michael Socks</td>
<td>Michael Socks</td>
<td>Not Started</td>
<td></td>
</tr>
<tr>
<td>3 Management Commitment</td>
<td>Greg Baker</td>
<td>Michael Socks</td>
<td>Ready For Review</td>
<td>03/30/2017</td>
</tr>
<tr>
<td>4 Energy Team</td>
<td>Michael Socks</td>
<td>Michael Socks</td>
<td>Not Started</td>
<td></td>
</tr>
<tr>
<td>5 Legal Requirements</td>
<td>Michael Socks</td>
<td>Michael Socks</td>
<td>Not Started</td>
<td></td>
</tr>
</tbody>
</table>
Thank you

Greg Baker
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Resources and recognition to accelerate (EnMS) use in the U.S.

- Help organizations in ISO 50001 preparedness
- Free software tools and DOE recognition for being “50001 Ready”
- The next step in EERE’s multi-year effort to spur energy management best practices
- An Enabler that helps organizations lower energy costs, reinvest in research and personnel, progress towards their sustainability goals related to energy, improve their EPA Energy Star scores, achieve their Better Plants and Better Buildings energy goals, …
- Recognition: Individual facilities / buildings will be recognized (if they wish) by the DOE as being “50001 Ready” after implementing an energy management system using the online 50001 Ready Navigator guidance resource

Energy.gov/50001ready
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

Better Buildings
U.S. DEPARTMENT OF ENERGY
50001 Ready Navigator

- 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
Navigator Highlights

- Guidance broken into straightforward 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
  - 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
- DOE 50001 Ready Recognition!
EnPI Lite

EnPI Lite is a web based calculator that estimates **energy savings** relative to relevant variables, like production levels and weather, using linear regression.

**EnPI Lite Steps:**

1. **Input Energy Consumption and Relevant Variable Data**
   - **Input Options:**
     - Energy Footprint Tool
     - ENERGY STAR Portfolio Manager

2. **Regression Analysis (automatic)**

3. **Adjust Data / Models as needed**

4. **Download Results**

*Note:* Provides the same fundamental analysis as the other DOE EnPI tools with similar options.
What 50001 Ready Is… and Is Not

**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 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
**Key Actions in 50001 Ready**

- Set an Energy Policy
- Have management commitment
- Empower an energy team
- Identify where energy is used
- Create plans to improve energy use
- Management approval of plans
- Track progress and reassess energy action plans

**Key Takeaways on 50001 Ready**

- Designed to be DIY
- No cost for resources
- ‘Light Duty’ TurboTax structure
- Can support customers
- Allows for internal and external experts
- Consistent practice across facilities
- Recognition by US Dept. of Energy

[Energy.gov/50001ready](http://Energy.gov/50001ready)

pete.langlois@ee.doe.gov

202-586-0984
Here’s how you can find out more about 50001 Ready at the Summit:

✓ Attend the *Implementing Energy Management Systems* session

• Follow up with your TAM

• Chat with the 50001 Ready experts at the Ask-an-Expert Pavilion
  • Prakash Rao, Lawrence Berkeley National Laboratory
  • Pete Langlois, DOE

• Visit the 50001 Ready website at [Energy.gov/50001ready](http://Energy.gov/50001ready)
  • Download info sheets and FAQs
  • Links to explore the Navigator and EnPI Lite tools
Thank You

Provide feedback on this session in the new Summit App!

Download the app to your mobile device or go to bbssummit.pathable.com