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50001 Ready: Disciplined Approach with Data-driven Decisions



50001 Ready: Agenda

Agenda

- ✓ Overview of 50001 systems
- ✓ Implementing best practices with 50001 Ready Navigator



“ISO 50001 helped us focus on the greatest opportunities for savings.

Energy Specialist

1. Voluntary structure for institutionalizing energy performance improvement

2. Driver for Sustained Energy Savings

3. Support Mission & Resiliency of Operations

Continuous Improvement: Reduce Costs and Support Mission



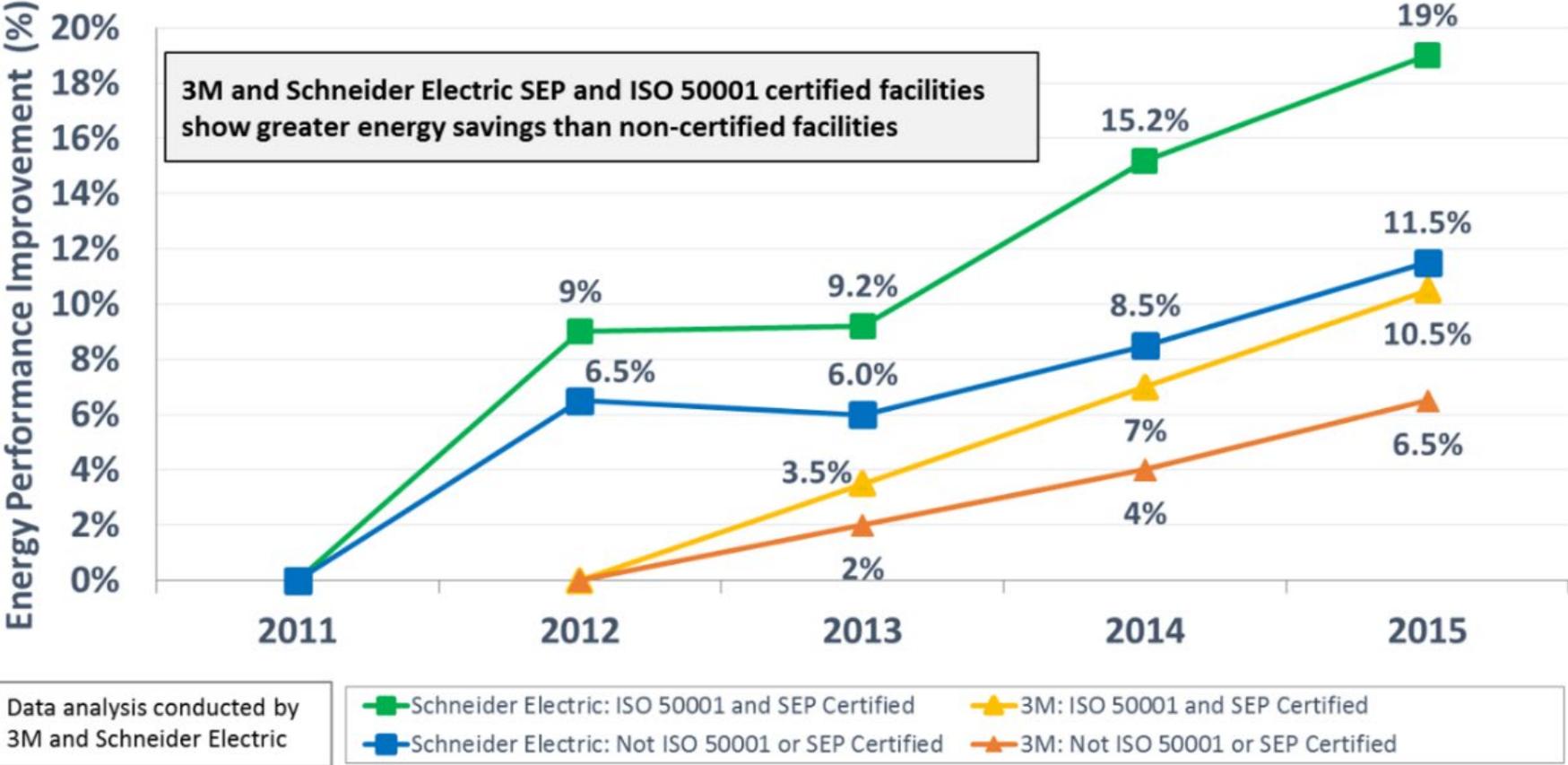
Value

- ✓ Identify and implement high impact energy projects that save money
- ✓ Structure allows for prioritization of resiliency, water, cyber and other energy-related interests



50001: Increased Energy Performance

Comparison of sites at 3M & Schneider-Electric showing a DOUBLING of energy performance improvement with 50001 vs sites without



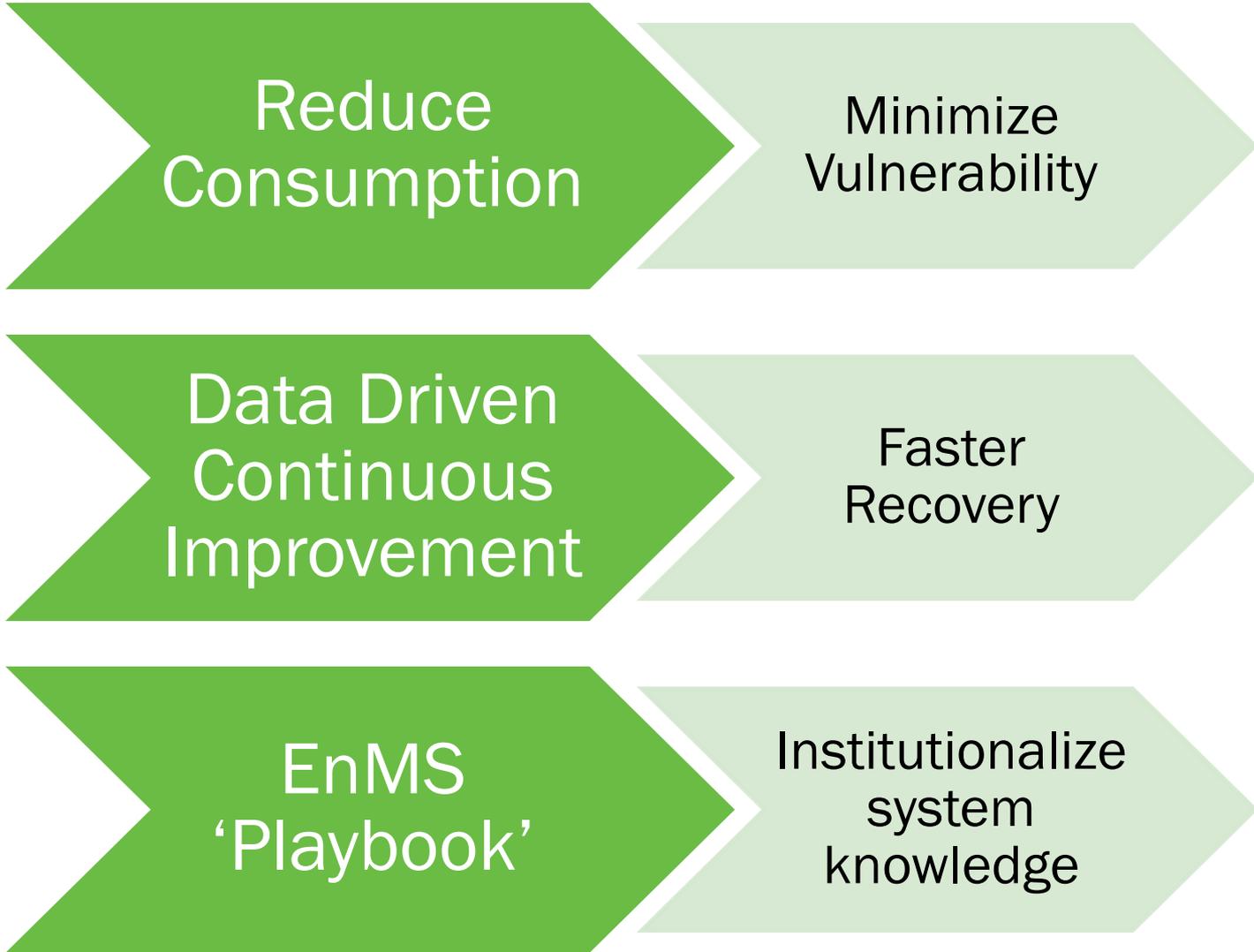
Field Validation of ISO 50001 Savings

- Business-as-Usual ~1% per year
- ISO 50001 facilities ~4% per year
- Enterprise-Wide Approach ~5% per year



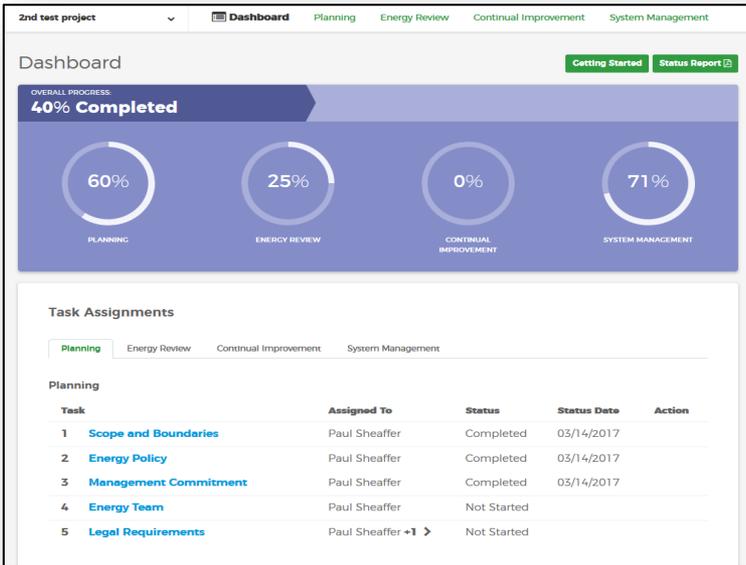
1000+ projects & 500+ accounts
20 utility partners

50001 & Competitiveness: Increased Resiliency



✓ Step-by-step, audit-free approach to ISO 50001

<https://navigator.lbl.gov>



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

Dashboard

Getting Started | Status Report

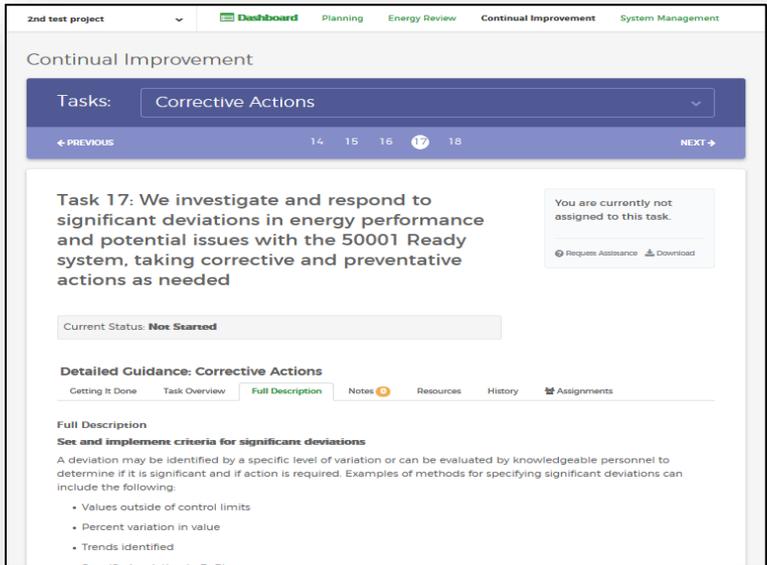
OVERALL PROGRESS
40% Completed

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

Task Assignments

Planning | Energy Review | Continual Improvement | System Management

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



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

Continual Improvement

Tasks: Corrective Actions

← PREVIOUS 14 15 16 17 18 NEXT →

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

You are currently not assigned to this task.

Requires Assistance | Download

Current Status: Not Started

Detailed Guidance: Corrective Actions

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

Full Description

Set and implement criteria for significant deviations

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

- Values outside of control limits
- Percent variation in value
- Trends identified

50001 Ready Recognition

STEP 1
Complete 25 Tasks of 50001 Ready Navigator to Develop Energy Plan



STEP 2
Submit Energy Performance Improvement Data



STEP 3
Self-attestation by Team Leader and Executive



50001 Ready Navigator Steps

Planning

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

Energy Review

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

Continual Improvement

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

System Management

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

Strongly prepared

Partially prepared

STEP 1

Assess gap between current activities and 50001 Ready best practice.

STEP 2

Discuss roles and assign responsibilities for addressing identified gaps.

STEP 3

Document discussions, implemented actions, and plans for verifying success.

The Energy Plan: Documentation in 50001 Ready

Locally stored guide to your EnMS:

- Data management and analysis process
- Procurement and training process documented
- Responsibilities and goals tracked

50001 Ready Playbook: Energy Plan template

✓ Living Document saved on local drive

50001 Ready
U.S. DEPARTMENT OF ENERGY

50001 Ready Navigator Playbook
Planning 2

Task(s): 2-5 Energy Policy, Management Commitment, Energy Team, and Legal Requirements

Date last modified/updated:
Who last modified/updated:

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

1. Created and Approved and Energy Policy
2. Secured Management Commitment
3. Established and Empowered the Energy Team
4. Addressed Legal Requirements

Energy Policy

Our Energy Policy is:

Top Management Approval

Date approved:
 Who approved:

Communicated Across Organization

Date communicated:
 Who communicated:

Hint: the Energy Policy should:

- Be established with help from top management
- Reflect the full nature and extent of the energy use
- Contain a commitment to achieving continual improvement in energy performance
- Commit to providing the resources and information needed to achieve improvement through the use of energy objectives and targets
- Commit to complying with applicable legal and other requirements related to energy use
- Support the purchase of energy efficient products and services
- Be documented and communicated to employees and others working on behalf of the organization (e.g. on-site contractors and suppliers)
- Be regularly reviewed and updated as needed

Management Commitment checklist:

I approve our Scope and Boundaries (as defined in Task 1)

I commit to deploying our Energy Policy (as defined in Task 2) and updating is an needed

I commit to consider Energy Performance as part of design (Task 18) and procurement (Task 22)

I commit to empowering our Energy Team (Task 4)

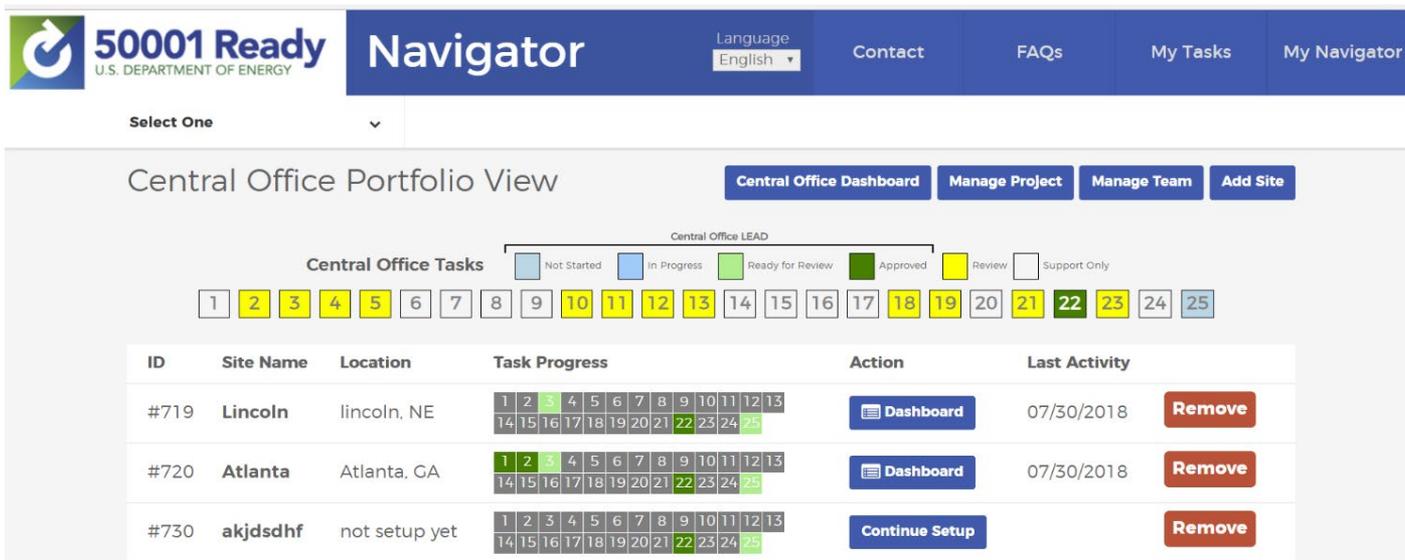
I commit to consider energy performance in strategic planning

I commit to providing resources to set up, operate and improve the EnMS and energy performance as follows:

New Resources: Navigator Multisite and Partner Platform

Multi-site

- ✓ Reduce time & cost of *50001 Ready* across multiple facilities
- ✓ Enter and manage multiple sites in one portal
- ✓ Allows for 'central office' review, communications or completion of tasks



The screenshot shows the '50001 Ready Navigator' interface. At the top, there is a navigation bar with the logo, '50001 Ready U.S. DEPARTMENT OF ENERGY', and the title 'Navigator'. To the right of the title are links for 'Language' (set to English), 'Contact', 'FAQs', 'My Tasks', and 'My Navigator'. Below the navigation bar 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 shows a progress bar for 'Central Office Tasks' with a legend: Not Started (light blue), In Progress (medium blue), Ready for Review (light green), Approved (dark green), Review (yellow), and Support Only (white). Below the legend is a row of 25 numbered boxes representing task progress. The main table displays three sites with their details and task progress indicators.

| ID | Site Name | Location | Task Progress | Action | Last Activity | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|-----------|---------------|--|--------|---------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|----------------|------------|
| #719 | Lincoln | lincoln, NE | <table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td></tr> <tr><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td></td></tr> </table> | 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 | | Dashboard | 07/30/2018 |
| 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 | | | | | | | | | | | | | | | | | | | | |
| #720 | Atlanta | Atlanta, GA | <table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td></tr> <tr><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td></td></tr> </table> | 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 | | Dashboard | 07/30/2018 |
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| 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | | | | | | | | | | | | | | | | | | | | |
| #730 | akjdsdhf | not setup yet | <table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td></tr> <tr><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td></td></tr> </table> | 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 | | Continue Setup | |
| 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 | | | | | | | | | | | | | | | | | | | | |



Testimonial: Tinker Air Base (USAF base)

“The strength of our [ISO 50001] Continuous Energy Improvement program is that we get the people who understand each operation to think about how to do things a little differently – to change their processes in some way to save energy.”

“Energy Improvement is precisely the kind of operational discipline we are good at. We’re just applying that skill in a new way.”

Joseph Cercle
OC-ALC Energy Manager



Credit: U.S. Air Force photo/Greg L. Davis

Visit energy.gov/50001Ready for more info or to get started

QUESTIONS?