TABLE OF CONTENTS

Overview 3
Recognition using SEP 50001 Scorecard 4
Scorecard Credit Details 6

Energy Performance Improvement (EP) 8
- EP 1: Energy Performance Improvement 8

Energy Management System (EnMS) 12

Energy Data, Monitoring and Measurement (DM) 12
- DM 1: Availability of Energy Review 13
- DM 2: SEnPI Quarterly Updating 14
- DM 3: Cost Centers 15

Significant Energy Uses (SU) 16
- SU 1: Energy Balance 17
- SU 2: Designation of Significant Energy Uses 18
- SU 4: Maintenance System includes Energy Performance Guidelines 20
- SU 5: Monthly Tracking of EnPI Values for Significant Energy Uses 21

Management of Energy Opportunities (EO) 22
- EO 1: Energy Assessment of Energy Use(s) 23
- EO 3: Dedicated Capital or Operating Budgets for Energy Projects 25

Organizational Sustainability (OS) 26
- OS 1: Resources: Energy Management Team 27
- OS 2: Awards or Incentive Program for Energy 28
- OS 3: Energy Professional Certifications 29
- OS 4: Strategic Planning 31
- OS 5: Include Procurement Personnel on Energy Team 32
- OS 6: Share SEP 50001 Experience and Data 33

Certification, Partnership and Reporting (CR) 35
- CR 1: External Certification and Recognition Programs 36
- CR 2: Corporate Reporting Systems 37
- CR 3: Promotion of ISO 50001 38
- CR 4: Third Party Energy Efficiency Program Participation 39
- CR 5: Superior Performance with Benchmarks 40

Advanced Technologies (AT) 41
- AT 1: Submeters and Smart Sensors and Controls 42
- AT 2: Other Advanced Technologies 44

Advanced Energy Supply (AS) 46
- AS 1: Combined Heat and Power 47
- AS 2: Use of On-Site Renewable and Recovered Energy 50

ANNEX A: Revision History 53
ANNEX B: Success Story Intent Form 54
ANNEX C: Stakeholder Affirmation on ISO 50001 Promotion 55

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Overview
Organizations that achieve sustained excellence in their use of energy management systems (EnMS) may earn certification to the Superior Energy Performance 50001™ (SEP 50001™) program and gain elevated recognition using the SEP 50001 Scorecard (Scorecard). The SEP 50001 Program Administrator (Administrator) in the United States is the U.S. Department of Energy (US DOE).

To become certified, an organization implements an energy management system that meets the ISO 50001 and SEP 50001 (ANSI/MSE 50028-1:2019) standards. A third-party certification body conducts an audit to verify achievements. Entities that exceed certification requirements can use the Scorecard to achieve a higher recognition level (Silver, Gold, or Platinum). Figure 1 outlines the recognition levels available in the United States.

US DOE will recognize organizations that become certified and those that achieve a higher level of recognition. Government agencies in other countries may create similar recognition and award programs specific to their country, but US DOE does not administer SEP 50001 recognition to organizations located outside of the United States.

Figure 1 – SEP 50001 program certification is required before organizations seek additional SEP 50001 recognition by US DOE

The Superior Energy Performance 50001 Program Certification Protocol

The Superior Energy Performance 50001 Program Certification Protocol:2019 sets forth the requirements for achieving certification as well as the processes and timeframes for applying and certifying to the 2019 version of SEP 50001 program.
Recognition using SEP 50001 Scorecard

Entities that exceed SEP 50001 program certification requirements can use the Scorecard to achieve a higher recognition level. Organizations use the Scorecard to earn points to qualify for Silver, Gold, or Platinum, and submit the SEP 50001 Scorecard Declaration (Declaration) to the Administrator. The Administrator will review the Declaration and respond to confirm the recognition level achieved.

Most Scorecard credits involve implementation of an action, process, procedure, or advanced technology. The credit will specify the timeframe of implementation, e.g., immediately prior to SEP 50001 recognition, or during the SEP 50001 program certification reporting or achievement period, or previous one year or three years relative to the SEP 50001 recognition. Each credit will also specify the number of points that organizations can claim. For organizations seeking multi-site SEP 50001 program certification and recognition using a central function EnMS, see the “Scorecard Credit Details” section of this document.

Scorecard Declaration: The Declaration is an Excel spreadsheet that organizations download, populate, and submit to the Administrator. The spreadsheet allows organizations to indicate how many points it claims for each credit and provide justification for the points claimed. The Declaration will calculate the organization’s SEP 50001 recognition score. On the Declaration, two representatives verify and attest to the Scorecard points achieved: a top management representative from the organization and a 50001 Certified Practitioner in Energy Management Systems (50001 CP EnMS). The 50001 CP EnMS can be an internal organization staff member or an external consultant. To find a 50001 CP EnMS, visit the online listing maintained by the Institute of Energy Management Professionals (IEnMP). If the 50001 CP EnMS was not involved with the ISO 50001 implementation, an onsite review is required. The Declaration is available on the SEP 50001 website.

Declaration Review by Administrator and Spot-Checks: US DOE will review the Declaration for accuracy and may request a telephone call or webinar with the energy team leader, top management representative, and the 50001 CP EnMS who attested to the Scorecard credits to spot check the data. The call is anticipated to last around 30 minutes and will only address content related to the Declaration. During the call or webinar, the organization may be asked to share evidence in support of the credits claimed.

Certificate of SEP 50001 Recognition: Upon approval of the Declaration, US DOE will issue a certificate to the organization indicating its recognition level and add the organization to the SEP 50001 website.

Timeframe: It is anticipated that most organizations applying for a higher level of recognition will do so within three months of achieving SEP 50001 program certification or recertification (i.e., at the beginning of the next three-year certification cycle). Administrator recognition will be valid for a period to extend three months beyond the expiration of the SEP 50001 program certification. Therefore, a new declaration for Administrator recognition must be submitted for recertification. The Scorecard points earned are good for the entire SEP 50001 recognition period (up to three years, three months) and do not need to be audited.
prior to the next certification. Once the organization has been recertified, all Scorecard points must be checked and submitted anew.

**Upgrading Recognition Level:** Organizations may choose to increase the number of points earned and upgrade their recognition level at 12 and/or 24 months after SEP 50001 program certification within the three-year certification cycle. Scorecard points may be added, and existing points remain valid and are not re-checked. Changes to Scorecard points and recognition level occur under the following scenarios:

1. Increase EP 1 credit points: Organizations can change the EP 1 points earned by recertifying early to SEP 50001 to obtain a new verified SEP 50001 Energy Performance Indicator (SEnPI) value, or have a certified SEP Performance Verifier verify a new SEnPI value\(^1\), and thus increase the EP 1 point level.
2. Increases to other Scorecard credit points: All Scorecard credit points (other than EP 1) may be upgraded and points will either be maintained or increased; organization will not lose points.

\(^1\) The organization may use an internal or external certified SEP Performance Verifier. Typically, verification by an external SEP Performance Verifier will incur a cost for the service.
Scorecard Credit Details

This *Superior Energy Performance 50001 Scorecard* defines the credits and associated points for improvements in energy performance and implementing actions, processes, procedures, or advanced technologies beyond the requirements for ISO 50001 and the 2019 version of the SEP 50001 program. An organization submits the *SEP 50001 Scorecard Declaration* to the Administrator to claim Scorecard credits for SEP 50001 recognition. Credits are grouped into the following credit categories with maximum points:

- Energy Performance Improvement (EP) with 33 points
- Energy Management System (EnMS) with 44 points
- Certification, Partnership, and Reporting (CR) with 23 points
- Advanced Technologies (AT) with 8 extra bonus points
- Advanced Energy Supply (AS) with 20 extra bonus points

Table 1 lists the credits and associated points achievable as categorized in the credit categories. A total potential of 128 points are available.

Notes:

- Use of the Scorecard is not required for SEP 50001 program certification.
- SEP 50001 program certification and use of the Scorecard are required to achieve higher levels of recognition (Silver, Gold, and Platinum).

The descriptions of each credit provide the following details:

1. **Points**: The number of points available for the credit.
2. **Intent**: Description of the credit’s purpose.
3. **Credit statement**: Summary of what the organization must demonstrate to receive points.
4. **Measurement and verification criteria for recognition**: Defines the evidence evaluated to determine the number of points awarded.

If an organization is seeking multi-site SEP 50001 program certification and SEP 50001 recognition using a central function EnMS, the following credits can be claimed for all sites if the claim is met at the central function:

- OS 2 – Awards or incentive program for energy
- OS 3 – Energy professional certifications
- OS 4 – Strategic planning
- OS 5 – Include procurement personnel on energy team
- CR 2 – Corporate reporting systems
- CR 3 – Promotion of ISO 50001

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Learn more at: [www.energy.gov/SEP50001](http://www.energy.gov/SEP50001)
TABLE 1: SCORECARD CREDITS

<table>
<thead>
<tr>
<th>Credits Categorized into Credit Categories</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Performance Improvement (EP)</td>
<td></td>
</tr>
<tr>
<td>EP 1 Energy Performance Improvement</td>
<td>1-33</td>
</tr>
<tr>
<td>Energy Management System (EnMS)</td>
<td>44</td>
</tr>
<tr>
<td>Energy Data, Monitoring and Measurement (DM)</td>
<td></td>
</tr>
<tr>
<td>DM 1 Availability of energy review</td>
<td>1</td>
</tr>
<tr>
<td>DM 2 SEnPI quarterly updating</td>
<td>2</td>
</tr>
<tr>
<td>DM 3 Cost centers</td>
<td>2 to 3</td>
</tr>
<tr>
<td>Significant Energy Uses (SU)</td>
<td>12</td>
</tr>
<tr>
<td>SU 1 Energy balance</td>
<td>2</td>
</tr>
<tr>
<td>SU 2 Designation of significant energy uses</td>
<td>1 to 3</td>
</tr>
<tr>
<td>SU 3 Energy performance and life cycle costing in equipment repair and replacement policy</td>
<td>2 to 4</td>
</tr>
<tr>
<td>SU 4 Maintenance system includes energy performance guidelines</td>
<td>1</td>
</tr>
<tr>
<td>SU 5 Quarterly tracking of EnPI values for significant energy uses</td>
<td>2</td>
</tr>
<tr>
<td>Management of Energy Opportunities (EO)</td>
<td>11</td>
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<tr>
<td>EO 1 Energy assessment of energy use(s)</td>
<td>2 to 4</td>
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<tr>
<td>EO 2 Life cycle costing in evaluating energy performance capital improvements</td>
<td>3</td>
</tr>
<tr>
<td>EO 3 Dedicated capital or operating budgets for energy projects</td>
<td>1 to 4</td>
</tr>
<tr>
<td>Organizational Sustainability (OS)</td>
<td>15</td>
</tr>
<tr>
<td>OS 1 Resources: energy management team</td>
<td>2</td>
</tr>
<tr>
<td>OS 2 Awards or incentive program for energy</td>
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<td>OS 3 Energy professional certifications</td>
<td>2 to 4</td>
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<tr>
<td>OS 4 Strategic planning</td>
<td>2</td>
</tr>
<tr>
<td>OS 5 Include procurement personnel on energy team</td>
<td>1</td>
</tr>
<tr>
<td>OS 6 Share SEP 50001 experience and data</td>
<td>1 to 4</td>
</tr>
<tr>
<td>Certification, Partnership, and Reporting (CR)</td>
<td>23</td>
</tr>
<tr>
<td>CR 1 External certification and recognition programs</td>
<td>1 to 4</td>
</tr>
<tr>
<td>CR 2 Corporate reporting systems</td>
<td>1 to 5</td>
</tr>
<tr>
<td>CR 3 Promotion of ISO 50001</td>
<td>1 to 6</td>
</tr>
<tr>
<td>CR 4 Third party energy efficiency program participation</td>
<td>1 to 4</td>
</tr>
<tr>
<td>CR 5 Superior performance with benchmarks</td>
<td>2 to 4</td>
</tr>
<tr>
<td>Advanced Energy Technologies (AT)</td>
<td>8</td>
</tr>
<tr>
<td>AT 1 Submeters and Smart Sensors and Controls</td>
<td>1 to 4</td>
</tr>
<tr>
<td>AT 2 Other advanced technologies</td>
<td>1 to 4</td>
</tr>
<tr>
<td>Advanced Energy Supply (AS)</td>
<td>20</td>
</tr>
<tr>
<td>AS 1 Combined heat and power</td>
<td>1 to 10</td>
</tr>
<tr>
<td>AS 2 Use of onsite renewable energy and recovered energy</td>
<td>1 to 10</td>
</tr>
</tbody>
</table>

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**Energy Performance Improvement (EP)**

The EP category differs from the rest of the Scorecard in that points are based on the SEP 50001 program verification audit and the third-party verified SEP 50001 Energy Performance Indicator (SEnPI) value. The other difference is that the only way to upgrade EP points during the SEP 50001 recognition cycle is to seek an early recertification to SEP 50001 to obtain a new verified SEnPI value, as opposed to resubmitting an updated Scorecard for the other credit categories.

**EP 1: Energy Performance Improvement**

**POINTS**

1-33

**INTENT**

- To encourage additional improvement in energy performance above and beyond the basic ISO 50001 requirement of continuous improvement.

**CREDIT STATEMENT**

Positive energy performance improvement, SEnPI (greater than 0.0% over the SEP 50001 achievement period, rounded to the nearest tenth of a percent), has been achieved per SEP 50001 program certification using the *SEP 50001 Program Measurement and Verification (M&V) Protocol*. The *M&V Protocol* sets forth the verifiable methodology for determining and demonstrating achievement of the energy performance improvement percentage claimed by an organization for a defined facility. The determination and demonstration of energy performance improvement is based upon the comparison of top-down and bottom-up approaches to calculate energy performance improvement.

**MEASUREMENT AND VERIFICATION CRITERIA**

The following is required to determine if the organization satisfies this credit:

- An accredited SEP 50001 Verification Body external to the organization must use an SEP Performance Verifier to verify positive improvement in energy performance using the processes defined by SEP 50001 program certification. The Verification Body reports the verified energy performance improvement percentage and achievement period (in months) to the Administrator via the *SEP 50001 Energy Performance Improvement Report*.

- Points are awarded as follows:
  
  The verified energy performance improvement percentage from the SEP 50001 program certification is “annualized” by dividing the percentage by the number of months in the SEP 50001 achievement period(s), and then multiplying by 12.

  Annualized verified energy performance improvement percentage improvement (AEPI):
\( (AEPI) = \frac{\text{verified energy performance improvement (\%)}}{\text{achievement period(s) (months)}} \times 12 \)

A maximum of 33 points is awarded for this credit. Points achieved are rounded to the nearest whole number.

For example, the calculation to annualize a 9% improvement over 3 years: \((9\%/36 \text{ months}) \times 12 = 3\% \).

To calculate the AEPI for 5% improvement over a 2-year SEP 50001 achievement period: \((5.0\%/24 \text{ months}) \times 12 = 2.5\% \).

**Points awarded for verified SEP 50001 energy performance improvement:**

The EP1 points are determined by the AEPI value and factors EI, A, B and C as follows:

\[
\text{EP1 credit points} = AEPI \times EI \times (4 + A + B + C)
\]

The factor EI is determined by the sector the facility is within and is defined as:

\[
EI = 3 \text{ if the facility is within an energy-intensive industrial sector: Wet corn milling, Sugar, Wood Products, Paper, Petroleum, Chemicals, Non-Metallic Minerals and Primary Metals [NAICS 3-digits: 311221, 31131, 321, 322, 324, 325, 327 & 331]; otherwise EI= 1}
\]

The factor A relates to a facility’s ENERGY STAR certification or the facility’s corporation’s or organization’s being a partner in good standing (including reporting energy data annually) with the DOE Better Buildings or Better Plants program and is defined as:

\[
A = 3 \text{ if the facility has a current ENERGY STAR EPI Benchmark certification (industrial) or ENERGY STAR certification (commercial building) at the time of the SEP 50001 program certification date or the facility contributes to a corporation or organization’s portfolio of facilities that annually report energy intensity through the US DOE Better Plants program; otherwise A=0.}
\]
The factor B relates to the facility’s prior 10 year energy performance improvement and is defined as:

B= 5 if the facility is being **certified to SEP 50001 for the first time** and the energy performance improvement in the past 10 years relative to their SEP 50001 reporting period has improved:

- > 2 % per year, on average, for non-energy intensive facilities
- > 1% per year, on average, for energy intensive facilities, or
- The facility has been ENERGY STAR Challenge for Industry recognized in the most recent one to three years. This recognition involves improving energy intensity by 10% or more over 5 years.
- The facility’s organization has successfully met their Better Buildings or Better Plants commitment and are part of a new energy saving commitment.

If none of the above applies, and the facility has been certified to SEP 50001 more than once, then B=0.

Note 1 for B: The 10 year energy performance improvement may be based on simple energy intensity (e.g., energy per manufacturing production, etc.) or normalized energy performance improvement based on a statistically valid regression model.

Note 2 for B: The 10 year look back on energy performance improvement is from the SEP 50001 reporting year. For example, if the SEP 50001 reporting year was 2018 then the 10 year improvement period would be from 2008 to 2018, with 2008 being the baseline year.

Note 3 for B: The energy intensity or normalized energy performance improvement could be quantified and demonstrated through the use of US DOE’s Energy Footprint or EnPI (Excel or online) tools, EPA Portfolio Manager or other equivalent tool.

The factor C relates to the number of SEP 50001 program certifications and is defined as:

C=3 if the facility has 1 prior SEP 50001 program certification; C=6 if the facility has 2 prior SEP 50001 program certifications; and C=9 if the facility has 3 or more prior SEP 50001 program certifications; otherwise C= 0

Example 1: General Pulp Mill, a facility within the Paper Manufacturing sector, NAICS 322, achieved SEP 50001 program certification for the first time. Their verified energy performance improvement was 1.5% over the 3-year achievement period, 2015 to 2017; a 36-month
achievement period. They have also analyzed their energy performance improvement from 2007 to 2017 to be 12% over 10 years (1.2% per year). They are currently ENERGY STAR EPI Benchmark certified (2017).

General Pulp Mill may apply the factors of EI, A, B and C as EI=3, A= 3, B= 5 and C=0: they are within an energy intensive sector (EI=3), they are ENERGY STAR EPI Benchmark certified (A=3), and have 1.2% (12% / 10 years) annualized energy performance improvement over a 10 year period looking back from their SEP 50001 reporting period (>1.0 per year over 10 years) (B=5). Since this is the first SEP 50001 program certification, no points for C are awarded (C=0).

EP1 credit points = \([(1.5 / 36) * 12] * 3 * (4+ 3 + 5 + 0) = 18\) points

Example 2: High Tech Manufacturing achieved SEP 50001 program certification for the third time (i.e., second recertification). Their verified energy performance improvement over the most recent achievement was 1.5% over 3 years. They are in the Primary Metals sector, NAICS 331. They are not ENERGY STAR EPI Benchmark certified.

EI = 3 since they are in an energy intensive sector, A=0 (not ENERGY STAR certified), B=0 (not first SEP 50001 program certification) and C=6 (third SEP 50001 program certification; two prior SEP 50001 program certifications).

EP1 credit points are calculated based on the verified energy performance improvement from their most recent SEP 50001 program certification:

EP1 credit points = \([(1.5% / 36 months) * 12 * 3 * (4 + 0 + 0 + 6) = 15.4\) points. After rounding to the nearest whole number, this facility is awarded 15 points.
Energy Management System (EnMS)
The energy management system (EnMS) credit category is divided into four subcategories:

- Energy Data, Monitoring and Measurement (DM)
- Significant Energy Uses (SU)
- Management of Energy Opportunities (EO)
- Organizational Sustainability (OS)

Energy Data, Monitoring and Measurement (DM)
ISO 50001 develops a culture of energy awareness, ownership, and management. An organization cannot effectively manage energy if it lacks the proper and actionable energy data. Monitoring and measuring is the primary means to understand the organization’s level of energy consumption and to control and ultimately reduce energy consumption. Energy consumption data are also useful to evaluate equipment and systems prior to purchase and installation so that the optimal option can be acquired to minimize operating expenses. To ensure that equipment continues to operate at peak performance levels, energy consumption must be monitored, collected, and analyzed during operation. Deteriorating energy performance can often signal a need for adjustments or other maintenance activities necessary to restore equipment to peak operating performance. In addition, energy data monitoring can be a critical component in proper process operation when process parameters have changed, indicating detrimental results on energy consumption. Energy consumption data are also necessary to evaluate the results of process or equipment changes implemented.

Data monitoring and measurement is only the first step in the effective use of energy information. Once energy data are collected, data analyses are required to determine the performance of the organization’s equipment and systems. Organizations can use the analyses to make decisions regarding process changes, process or equipment improvements, or the need for equipment maintenance. Analysis is also necessary to determine the root cause of any deterioration in efficiency. Data are critical to defining and improving performance through the SEP 50001 program.
DM 1: Availability of Energy Review

POINTS
1

INTENT
To ensure that effective personnel have access to energy data and information from the energy review.

CREDIT STATEMENT
The energy review shall be available and readily accessible in electronic form to effective personnel. Effective personnel are person(s) who work for or on behalf of the organization and whose activities have been identified as having an impact on energy.

MEASUREMENT AND VERIFICATION CRITERIA
The following is required to determine if the organization satisfies this credit:

► Evidence of availability and accessibility of the electronic energy review to effective personnel.

► The organization shall show records related to this credit during the reporting year or most recent year, whichever applies.
DM 2: SEnPI Quarterly Updating

POINTS

2

INTENT

To update and monitor the SEP 50001 Energy Performance Indicator (SEnPI) at least on a quarterly basis.

Note: This credit is different than credit SU 5, Monthly Tracking of EnPI Values for Significant Energy Uses.

CREDIT STATEMENT

The organization shall update and monitor the SEnPI at least quarterly to assess improvement in energy performance across the entire facility and EnMS scope.

MEASUREMENT AND VERIFICATION CRITERIA

The following is required to determine if the organization satisfies this credit:

- Evidence that SEnPI value is updated at least quarterly. The organization shall have records related to this credit during the reporting year or most recent year, whichever applies.
DM 3: Cost Centers

POINTS
2 to 3

INTENT
To report energy consumption and cost to organizational departments to encourage accountability for energy consumption.

CREDIT STATEMENT
Reports shall be made to departmental managers on the energy costs incurred by the activities associated with their cost center, and those costs shall be based on the energy consumption measured by those activities. Reports of departmental costs that include energy costs shall be prepared and distributed to departmental managers at least quarterly.

MEASUREMENT AND VERIFICATION CRITERIA
The following is required to determine if the organization satisfies this credit:

- Evidence of the tracking of energy consumption on a quarterly basis, with estimates through energy submetering measurement and/or engineering calculations for energy type or types utilized by a cost center.

- Evidence of charges associated with measured and/or calculated energy consumption for respective cost centers against each cost center.

- Evidence of quarterly reports and communication of energy charges to cost center managers.

- The organization shall show records related to this credit during the reporting year or most recent year, whichever applies.

- 2 points are awarded if all aforementioned M&V criteria are met and account for more than 30% of facility’s total site energy consumption; and 3 points for more than 60% of facility’s total site energy consumption.
**Significant Energy Uses (SU)**

Significant energy uses are the equipment, processes, applications, or activities identified as being chief components of the organization’s energy consumption and providing the largest improvement opportunities. In addition, these SEUs also pose the largest risk if they are not managed effectively.

Management of the SEUs entails a combination of activities. It is essential that SEUs are monitored, controlled, and maintained as appropriate to ensure continued or improved energy performance. In addition, energy considerations should be examined when purchasing new equipment or systems that are associated with the SEUs.

Without the proper management of SEUs, energy consumption can quickly increase due to the magnitude of energy consumption by these uses. Poor purchasing decisions or improper operation of related equipment can drastically impact an organization’s energy consumption. Large fluctuations in consumption could diminish performance improvements made in other areas of the organization. Maintenance is another key component: even the most energy-efficient equipment can become inefficient if unchecked, resulting in increased energy consumption.
SU 1: Energy Balance

POINTS

2

INTENT

To encourage a better understanding of the relative energy consumption of processes, equipment, and systems.

CREDIT STATEMENT

The organization shall document the method for an energy balance detailing the energy consumption of the systems and equipment, energy consumption data sources, and all SEUs. The energy consumption data sources, when combined, must account for at least 90% of the total site energy consumption within the facility at the time the energy balance was performed. The method shall address how changes to the facilities, processes, or equipment are included. The energy balance shall be recorded, updated, and maintained as a part of the energy planning process.

MEASUREMENT AND VERIFICATION CRITERIA

The following is required to determine if the organization satisfies this credit:

▶ Evidence of a documented energy balance process detailing the energy consumption of processes, systems, and equipment.

▶ The energy balance shall include all SEUs.

▶ Evidence that the energy consumption detailed in the energy balance record is at least 90% of the total site energy consumption for the scope of the facility seeking SEP 50001 recognition at the time the energy balance was performed.

▶ The organization shall show records related to this credit during the reporting year or most recent year, whichever applies.
SU 2: Designation of Significant Energy Uses

AVAILABLE POINTS
1 to 3

INTENT
To encourage organizations to continually broaden the scope of the equipment, systems, and processes that are designated as significant energy uses.

CREDIT STATEMENT
The combined energy consumption of SEUs shall be 30% or more of the total site energy consumption of the scope for the facility seeking SEP 50001 recognition for the reporting year. Equipment, systems, or processes designated as SEUs must be managed as defined in ISO 50001.

MEASUREMENT AND VERIFICATION CRITERIA
The following is required to determine if the organization satisfies this credit:

► Evidence of the percentage of site energy consumption utilized by all of the significant energy uses combined. Points are awarded based on the percentage of the site’s energy consumption shown in the following table.

<table>
<thead>
<tr>
<th>SEUs % of total site energy consumption for the reporting year</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>30% to 50%</td>
<td>1</td>
</tr>
<tr>
<td>50% to 70%</td>
<td>2</td>
</tr>
<tr>
<td>≥ 70%</td>
<td>3</td>
</tr>
</tbody>
</table>

► The organization shall show records related to this credit during the reporting year or most recent year, whichever applies.
SU 3: Energy Performance & Life Cycle Costing in Equipment Repair and Replacement Policy

POINTS
2-4

INTENT
To encourage a systematic, life cycle costing policy for replacement and repair of equipment.

CREDIT STATEMENT
A repair and replacement policy shall be documented that defines how energy performance and life cycle costing are factored into decision-making on repair and replacements of equipment and systems within all significant energy uses.

MEASUREMENT AND VERIFICATION CRITERIA
The following, using Approach 1 or 2, is required to determine if the organization satisfies the credit:

► Approach 1: Evidence that a repair and replacement policy has been implemented for equipment and systems that account for over 25% of the facility’s total site energy consumption and that the policy defines how energy performance and life cycle costing are taken into account.

► Approach 2: Implementation, maintenance, or certification to ISO 55001 Asset management -- Management systems – Requirements, that account for over 25% of the facility’s total site energy consumption, may be used to meet this credit if energy performance and life cycle costing are taken into account in the asset management processes.

► The organization shall show records related to this credit during the reporting year or most recent year, whichever applies.

► Points will be awarded for percentage of the facility’s total site energy as follows: 2 points for over 25%; 3 points for over 50%; and 4 points for over 75%
SU 4: Maintenance System includes Energy Performance Guidelines

POINTS
1

INTENT
To encourage the use of preventive and predictive maintenance programs that account for energy performance of equipment, systems, and processes associated with all significant energy uses.

CREDIT STATEMENT
The organization shall identify preventive and predictive maintenance activities that improve the energy-efficient operation of the equipment, systems, and processes associated with significant energy uses. Maintenance activities influencing energy performance shall be included in the maintenance system, and be completed as scheduled.

MEASUREMENT AND VERIFICATION CRITERIA
The following is required to determine if the organization satisfies this credit:

► Evidence that preventive and predictive maintenance activities that account for energy performance of the equipment, systems and processes associated with all significant energy use has been identified.

► Evidence that the maintenance system includes these preventive and predictive maintenance activities influencing energy performance.

► Evidence that these preventive and predictive maintenance activities influencing energy performance are completed as scheduled.

► The organization shall show records related to this credit during the reporting year or most recent year, whichever applies.
SU 5: Monthly Tracking of EnPI Values for Significant Energy Uses

POINTS
- 2

INTENT
To encourage a better understanding of operations and variability in significant energy uses.

CREDIT STATEMENT
Energy performance indicators (EnPI(s)) shall be developed for each significant energy use based on metered data or measurements. Values for these EnPIs shall be tracked on at least a monthly basis.

Note: This credit is different than credit DM 2, SEnPI Quarterly Updating.

MEASUREMENT AND VERIFICATION CRITERIA
The following is required to determine if the organization satisfies this credit:

- Evidence that EnPIs are developed for each significant energy use based on metered data or measurements (i.e., not based on engineering model calculations).

- Evidence that values of EnPIs for significant energy uses are tracked on at least on a monthly basis.

- The organization shall show records related to this credit during the reporting year or most recent year.
Management of Energy Opportunities (EO)

The concept of management of energy opportunities is intentionally broad and incorporates many types of activities including purchasing, operational control, maintenance practices, and traditional capital improvement, among others. Organizations implement many action plans within their organization that have multiple benefits including energy savings. In some cases, energy savings may not be the primary goal.

Management of energy opportunities is a technical category that refers to the activities associated with identifying, planning, prioritizing, and implementing opportunities for energy performance improvement. Several key concepts in the ISO 50001 standard concerning this topic are:

- Implementing energy improvement opportunities is a means for achieving objectives and targets. Prioritizing these opportunities should result from careful planning that is influenced by an organization’s energy policy, legal requirements, and its financial and business objectives.

- Action plans are documents that show the details required to implement energy performance opportunities.

- Action plans should be implemented as planned, including the post-installation measurement and verification of energy performance improvement.

- Changes resulting from improvements in energy performance should be incorporated into the management system.

- Action plans must be evaluated to ensure that they are effective.
EO 1: Energy Assessment of Energy Use(s)

AVAILABLE POINTS

2 to 4

INTENT

To ensure that opportunities for energy performance improvement related to SEUs and other energy uses are continually incorporated into the energy management system.

CREDIT STATEMENT

Energy assessment(s) are conducted on SEU(s) and other energy uses (non-SEU(s)) at least once during the last three years, and the energy assessment contains a final report with recommendations. Examples of energy assessment protocols or approaches include the American Society of Mechanical Engineers (ASME) EA-series of standards, American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Level 2 or 3 audits, or US DOE Industrial Assessment Center (IAC) audit report formats.

MEASUREMENT AND VERIFICATION CRITERIA

The following is required to determine if the organization satisfies this credit:

- Evidence that an energy assessment has been completed on an SEU or non-SEU or for parts of the facility that account for minimum percentage of total site energy consumption anytime during the last three years. A maximum of 4 points for this credit is possible, as shown in the following table.

<table>
<thead>
<tr>
<th>SEUs or % total site energy consumption</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 SEU or 50% of total site energy consumption</td>
<td>2</td>
</tr>
<tr>
<td>2 SEUs or 70% of total site energy consumption</td>
<td>3</td>
</tr>
<tr>
<td>3 SEUs or 90% of total site energy consumption</td>
<td>4</td>
</tr>
</tbody>
</table>

The organization shall show records related to this credit during the last three years, including the energy assessment report(s). If points were previously awarded for an SEU/non-SEU, then an updated energy assessment and energy assessment report must have been completed within the last three years.

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2 Small- and medium-sized manufacturers may be eligible to receive a no-cost assessment provided by the US DOE IACs. Teams located at universities around the country conduct the energy audits to identify opportunities to improve productivity, reduce waste, and save energy.

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EO 2: Life Cycle Costing in Evaluating Energy Performance Capital Improvements

POINTS
3

INTENT
To consistently incorporate the techniques of life cycle costing into the evaluation of energy performance capital improvement opportunities.

CREDIT STATEMENT
As part of the ISO 50001 energy review process, energy performance improvement opportunities and new designs for equipment, systems and processes shall be consistently evaluated and prioritized using the results of life cycle costing (LCC) analysis on new capital equipment, system, and process designs associated with significant energy uses.

MEASUREMENT AND VERIFICATION CRITERIA
The following is required to determine if the organization satisfies the requirements of this credit:

▶ Evidence of LCC analysis for energy performance capital improvement opportunities and designs associated with significant energy uses.

▶ Evidence that energy performance capital improvement opportunities were prioritized based on or partly based on LCC analysis that was used as part of the organization’s capital allocation approval process. The LCC analysis would be used in place of using traditional simple payback analysis.

▶ The organization shall show records related to this credit during the reporting year or most recent year, whichever applies.
EO 3: Dedicated Capital or Operating Budgets for Energy Projects

AVAILABLE POINTS
1 to 4

INTENT
To encourage a separate capital and/or operating budget for implementing energy performance improvement opportunities included in the energy management action plans.

CREDIT STATEMENT
The organization shall establish a separate budget and/or operating budget for capital expenditures for energy performance improvement opportunities and shall utilize a financial hurdle rate that is at least the same or less stringent than hurdle rates for other capital projects in the organization.

MEASUREMENT AND VERIFICATION CRITERIA
The following is required to determine if the organization satisfies the requirements of this credit:

- Evidence of an amount of capital budget and/or operating budget that is slated and spent for energy performance capital improvement opportunities within any fiscal year that represents six or more months of the last three years.
- Three (3) points are awarded for a capital budget and/or operating budget at least 1% of total annual energy bill in any fiscal year within the last three years.
- One (1) point is awarded for evidence of a financial hurdle rate that is less stringent than hurdle rates for other capital projects in the organization.

The capital or operating budgets for the energy projects may reside at various levels within the organization, including at the enterprise level.
Organizational Sustainability (OS)

Everyone within the organization uses energy and therefore bears some responsibility to manage energy with the guidance and support of the energy management team.

“System sustainability” is the term describing how the activities of the energy management system:

▶ Move into the everyday practices of the organization.
▶ Are addressed through roles, responsibilities, and authorities that are dispersed through every part and at every level within the organization.
▶ Address the energy-related activities of stakeholders (e.g., employees, suppliers, contractors).
▶ Promote transparency of energy policy and objectives of the organization.
▶ Promote informed decision-making related to energy.
▶ Are prioritized and resourced by management and demonstrated through effectiveness of the management system.
OS 1: Resources: Energy Management Team

POINTER

2

INTENT

To promote the active participation and involvement of top management in the organization’s energy management system.

Having a top manager on the energy management team helps to achieve consistent top management support.

CREDIT STATEMENT

The organization’s energy team shall include a member of top management.

Note: A member of top management is a person (or one who works directly for a person) that commits themselves to adopting an EnMS and does any of the following:

- Commits the organization to defining, establishing, implementing, and maintaining the energy policy.
- Appoints the management representative for, and approves the formation of, an energy management team.
- Provides resources needed to establish, implement, maintain, and improve the EnMS and the resulting energy performance.

MEASUREMENT AND VERIFICATION CRITERIA

The following is required to determine if the organization satisfies the requirements of this credit:

- Evidence that a member of top management is on the energy team.
- Evidence that this member participates consistently in energy team meetings and activities.
- The organization shall show records related to this credit during the last year.
OS 2: Awards or Incentive Program for Energy

POINTS
1-2

INTENT
The purpose of this credit is to encourage the active participation and involvement of employees from across the organization in energy management and energy performance improvements.

CREDIT STATEMENT
The organization shall establish, implement, and maintain an ongoing internal awards or incentive program(s) for energy that recognizes and rewards employee accomplishments in energy management and/or energy performance improvements.

Note: This credit can be claimed for all sites that are part of a multi-site SEP 50001 program certification and SEP 50001 recognition if the central function meets this credit.

MEASUREMENT AND VERIFICATION CRITERIA
The following is required to determine if the organization satisfies the requirements of this credit:

- Evidence of an awards or incentive program that recognizes and/or rewards five or more employee’s accomplishments in energy management and/or energy performance improvements. One (1) point is awarded if the program rewards five or more employees’ accomplishments; two (2) points are awarded if the program rewards ten or more employees’ accomplishments.

  NOTE: Award and incentive programs may reside at various levels within the organization, including at the SEP 50001 enterprise level.

- The organization shall show records related to this credit during the last year.
OS 3: Energy Professional Certifications

AVAILABLE POINTS
2 to 4

INTENT
To promote the organization’s investment in energy management competence that meets a recognized standard.

CREDIT STATEMENT
During the last three years, the organization shall have invested in the education and training or in the hiring of one or more certified professionals in the field of energy management. This education shall also include ongoing training required to retain certification. The certified professionals shall have responsibilities for and be active in the energy management activities of the organization. This credit recognizes professional certifications\(^3\) accredited to ANSI 17024 and related to the practice of energy management:

- Certified Energy Manager, CEM [Association of Energy Engineers (AEE)]
- Building Commissioning Professional, BCxP [ASHRAE]
- Building Energy Assessment Professional, BEAP [ASHRAE]
- Building Energy Modeling Professional, BEMP, [ASHRAE]
- High-Performance Building Design Professional, HBDP [ASHRAE]
- 50001 Certified Practitioner in Energy Management Systems, 50001 CP EnMS [Institute for Energy Management Professionals (IEnMP\(^4\))]
- SEP Performance Verifier [IEnMP]
- EPI ISO 50001 Lead Auditor [IEnMP]
- Other energy related and energy management professional credentials that are ISO 17024 accredited and approved by the Administrator

Note: This credit can be claimed for all sites that are part of a multi-site SEP 50001 program certification and SEP 50001 recognition if the credit is met at the central function.

The following is required to determine if the organization satisfies the requirements of this credit:

---

\(^3\) Accredited per ANSI/ISO/IEC 17024

\(^4\) [www.iemmp.org](http://www.iemmp.org)

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Learn more at: [www.energy.gov/SEP50001](http://www.energy.gov/SEP50001)
Evidence that the organization has employees with responsibilities in energy management that maintain professional certifications listed in the credit statement. Points will be awarded per the following table.

<table>
<thead>
<tr>
<th>Number of certified personnel to any of the credentials listed in the OS 3 credit statement</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 employee</td>
<td>2</td>
</tr>
<tr>
<td>3 employees</td>
<td>3</td>
</tr>
<tr>
<td>5 employees</td>
<td>4</td>
</tr>
</tbody>
</table>

Note: If the facility is part of a multi-site SEP 50001 program certification under a central function EnMS, then a central function employee’s professional credential may count toward the number of certified personnel of the facility seeking SEP 50001 recognition.

Evidence that the organization has invested in the education and training required for employees to obtain or maintain this certification, or evidence that the organization hired one or more certified professionals in the field of energy management, in the last three years.

NOTE: Professional certifications may reside at various levels within the organization, provided they support the site. A certified person located at a corporate level may support more than one site.

Evidence of management commitment to sustain investment in energy management competence when personnel changes occur, such as acquiring certified personnel, adding resources, or acting to certify other personnel on staff.

The organization shall show records related to this credit during the last three years.
OS 4: Strategic Planning

POINTS
2

INTENT
To ensure that priorities related to energy management needs, opportunities, and expectations are aligned with and incorporated into an organization’s strategic priorities.

CREDIT STATEMENT
Organizational strategic plans shall establish and address energy management priorities and shall allocate resources consistent with those priorities.

MEASUREMENT AND VERIFICATION CRITERIA
The following is required to determine if the organization satisfies the requirements of this credit:

► Evidence that the organizational strategic plans address energy management priorities and provide resources consistent with priorities.

   NOTE: Examples of this evidence could include, but are not limited to:

   o Energy performance improvement goals.
   o Capital planning and budget allocations that include funding for energy projects.
   o Definition of how the energy management program and its objectives are integrated within various organization departments, such as engineering, operations, maintenance, procurement, public relations, environmental safety and health, etc.

► The organization shall show records—and facility, business unit, enterprise or corporate plans—relevant to this credit during the year.

Note: This credit can be claimed for all sites that are part of a multi-site SEP 50001 program certification and SEP 50001 recognition if the claim is met at the central function.
OS 5: Include Procurement Personnel on Energy Team

POINTS
1

INTENT
To enhance communication and interaction between the energy team and personnel that procure energy and significant energy-related equipment, systems and processes.

CREDIT STATEMENT
Personnel responsible for procurement activities of energy, and/or procurement of significant energy-related equipment, systems and processes shall:

a) Participate at least quarterly in energy team meetings,
b) Receive scheduled awareness training on energy, or significant energy-related equipment, system and process, related to current or future procurement bids and contracts from one or more member of the energy team, and
c) Act as liaison to facilitate communication between energy and energy-related equipment, system and process procurement personnel and the energy team.

Note: This credit can be claimed for all sites that are part of a multi-site SEP 50001 program certification and SEP 50001 recognition if the credit is met at the central function.

MEASUREMENT AND VERIFICATION CRITERIA
The following is required to determine if the organization satisfies the requirements of this credit:

- Evidence of energy team meetings that include personnel with procurement responsibility at least quarterly.
- Evidence that at least one energy team member has trained procurement personnel on energy, energy-related equipment, systems and processes, related to current or future procurement bids and contracts.
- The organization shall show records related to this credit during the reporting year or most recent year, whichever applies.
OS 6: Share SEP 50001 Experience and Data

AVAILABLE POINTS

1 to 4

INTENT

To encourage the organization to publicize their SEP 50001 experience by completing the SEP 50001 Voluntary Cost/Benefit Form, providing additional data demonstrating the benefits and cost for the SEP 50001 program, and agreeing to share their success story on the SEP 50001 website.

CREDIT STATEMENT

The organization shall complete and submit the SEP 50001 Voluntary Cost/Benefit Form to the Administrator after achieving SEP 50001 program certification but prior to submitting the SEP 50001 Scorecard Declaration (Declaration). The organization shall retain documentation from the Administrator that confirms acceptance of the form.

The organization shall submit the top-down regression model and associated energy data, as well as, the Register of Implemented Energy Performance Improvement Actions (“Register”) for the bottom-up comparison that was used to quantify and verify the SEnPI. The organization shall submit these materials after achieving SEP 50001 program certification but prior to submitting the Declaration. The organization shall retain documentation from the Administrator that confirms acceptance of top-down regression model, the associated energy data, and the Register.

The organization participates in the development of a SEP 50001 success story based on completion of the Success Story Form (Annex B) and a brief phone interview (~1 hour or less) prior to submitting the Declaration. The organization shall retain documentation from the Administrator confirming acceptance of the Success Story Form.

MEASUREMENT AND VERIFICATION CRITERIA

The following is required to determine if the organization satisfies this credit:

- Two (2) points for evidence that the Administrator accepted the organization’s SEP 50001 Voluntary Cost/Benefit Form via email or other notification from the most recent SEP 50001 program certification.

- One (1) point for evidence that the Administrator has accepted the organization’s latest top-down regression model and associated energy data and Register of Implemented Energy Performance Improvement Actions electronic files from the most recent SEP 50001 program certification.
• One (1) point for evidence that the Administrator has accepted the organization’s Success Story Form from the most recent SEP 50001 program certification.
Certification, Partnership and Reporting (CR)
External programs and partnerships assist the facility to accelerate energy performance improvement and to increase corporate commitment to the principles of continuous energy improvement. To these ends, facility energy teams and top management may seek any of the following external facility certifications:

- Receive public recognition (e.g., ENERGY STAR building or industrial plant certification);
- Report to global environmental reporting system(s);
- Promote and assist other organizations to implement and achieve 50001 Ready recognition, ISO 50001 or SEP 50001 program certification;
- Partner with a local, third party utility or energy efficiency program to support the facility’s 50001 Ready, ISO 50001 and SEP 50001 implementation and maintaining such recognition and/or certification; and
- Demonstrate superior energy performance through its ranking with a recognized external benchmark system.
CR 1: External Certification and Recognition Programs

AVAILABLE POINTS
1 to 4

INTENT
To provide credit for:

- Facilities that have certifications from nationally-recognized energy efficiency facility/building certification programs, or
- Facilities whose corporation publicly reports energy performance improvement to an energy efficiency recognition program.

CREDIT STATEMENT
During the past 12 months, the facility shall be certified to any of the following certifications:

- ENERGY STAR building or industrial plant certification
- Leadership in Energy and Environmental Design (LEED) new construction or LEED existing building, operation and maintenance certification
- Other certification approved by the Administrator

During the past 12 months, the facility or facility’s corporation shall have been recognized or submitted reports related to any of the following recognition programs:

- 50001 Ready recognized building, campus complex, or industrial plant
- Facility seeking SEP 50001 recognition is part of a corporation or organization that is a Better Buildings or Better Plants Partner and reports its organization’s energy performance improvement
- Other facility or corporate/organization recognition program approved by the Administrator

MEASUREMENT AND VERIFICATION CRITERIA
The following is required to determine if the organization satisfies this credit:

- Evidence of facility energy efficiency certifications, and/or facility and/or corporation recognition and/or reporting programs, specified above, that were valid any time during the reporting year or most recent year, whichever applies (1 point for each certification, recognition, or reporting program—with a maximum of 4 points).
CR 2: Corporate Reporting Systems

AVAILABLE POINTS

1 to 5

INTENT

To provide credit for facilities whose corporation has reported to a global environmental reporting system(s) and/or those whose SEP 50001 program certification is reported in the corporation’s annual report or sustainability report.

CREDIT STATEMENT

During the last year, the organization shall have reported to any of the following corporate environmental reporting systems including the reporting of the facility’s approved SEP 50001 Scorecard Declaration or achievement of SEP 50001 program certification of the facility:

- Carbon Disclosure Project (CDP)
- Global Reporting Initiative (GRI)
- Dow Jones Sustainability Index (DJSI)
- Others approved by the Administrator

and/or

The organization’s annual report or sustainability report during the last year shall mention the facility’s SEP 50001 recognition or SEP 50001 program certification.

Note: This credit can be claimed for all sites that are part of a multi-site SEP 50001 program certification and SEP 50001 recognition if the credit is met at the central function.

MEASUREMENT AND VERIFICATION CRITERIA

The following is required to determine if the organization satisfies this credit:

- One (1) to three (3) points for evidence that the facility’s corporation has reported to any of the global environmental reporting systems listed in the credit statement during the last year, including evidence that the facility’s Administrator-approved SEP 50001 Scorecard Declaration was included in the reporting. One point will be awarded for each reporting system with a maximum of 3 points.

- Two (2) points for evidence that the corporation reported the facility’s SEP 50001 program certification and/or SEP 50001 recognition within their annual report or sustainability report during the last year.
CR 3: Promotion of ISO 50001

AVAILABLE POINTS
1 to 6

INTENT
To provide credit for an organization that promotes or requires ISO 50001 conformance or certification from its stakeholders, including suppliers, vendors, service providers, customers, or other business affiliates.

CREDIT STATEMENT
The organization shall demonstrate its engagement on ISO 50001 with suppliers, vendors, service providers, customers, or other business affiliates: specifically by promoting or requiring conformance or certification to ISO 50001, or certification to SEP 50001.

MEASUREMENT AND VERIFICATION CRITERIA
The following is required to determine if the organization satisfies the requirements of this credit:

► 1 point for each of the organization’s stakeholders that adopts 50001 Ready, or achieves certification to ISO 50001 or SEP 50001 during the last two years as a result of the organization’s influence, up to 6 points.

► Evidence that the facility seeking SEP 50001 recognition influenced the stakeholder’s adoption of ISO 50001 or certification to SEP 50001 during the last two years. The facility shall complete the “Stakeholder Affirmation on ISO 50001 Promotion” form (Annex C), which will be available on the SEP 50001 website.

Note: This credit can be claimed for all sites that are part of a multi-site SEP 50001 program certification or SEP 50001 recognition if the credit is met at the central function.
CR 4: Third Party Energy Efficiency Program Participation

AVAILABLE POINTS
1 to 4

INTENT
To provide credit for an organization that—as part of its ISO 50001 implementation and maintenance—is engaging an external, third-party energy efficiency program.

CREDIT STATEMENT
The organization shall demonstrate that its ISO 50001 implementation and maintenance involves engagement with a third-party energy efficiency program implementer, which can include a utility, state, municipality, Energy Service Performance Contract (ESPC), or Utility Energy Service Contract (UESC for Federal agency).

MEASUREMENT AND VERIFICATION CRITERIA
The following is required to determine if the organization satisfies the requirements of this credit:

- Evidence of partnering with one or more external, third-party energy efficiency program to improve the facility’s implementation and maintenance of ISO 50001.
- Evidence that the facility applying for SEP 50001 recognition or its organization has shared an ISO 50001 or SEP 50001 case study with other end users in cooperation with a third-party energy efficiency program implementer through means such as a presentation at a workshop, training, webinar, or venue.
- Evidence that ISO 50001 or SEP 50001 is deployed as part of a state/regional program that serves the organization and facility applying for SEP 50001 recognition.

Points will be awarded per the table below for activity conducted during the last three years:

| Facility staff participation in an ISO 50001 training or technical assistance sponsored by an external, third-party energy efficiency program | 2 |
| Third party energy efficiency program implementer promotion of the facility’s ISO 50001 or SEP 50001 case study results to other end users (e.g., workshop, training, webinar, etc.) | 1 |
| Incentives or financial payments of $25,000 or greater that are applied directly to the implementation or maintenance of the facility’s ISO 50001 or SEP 50001 program certification and not applied to capital improvements. | 1 |

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CR 5: Superior Performance with Benchmarks

AVAILABLE POINTS
2 to 4

INTENT
To permit organizations to demonstrate superior energy performance through its ranking within a recognized external benchmark system.

CREDIT STATEMENT
An organization shall demonstrate a ranking within the top levels of a nationally/internationally recognized external energy efficiency benchmark system.

This credit addresses the organization’s energy performance relative to the external benchmark. Claiming credit for CR 1 through ENERGY STAR building or plant certification can also qualify for this credit in terms of the ENERGY STAR EPI benchmarking score. A recognized external benchmark system is typically developed by credible organizations such as industry associations, government entities, or industry consulting groups.

Sector benchmarking for greenhouse gas emissions can be substantiated as a surrogate to a sector’s energy performance benchmark if the sector’s energy consumption attributes to greater than 90% of the sector’s greenhouse gas emissions.

MEASUREMENT AND VERIFICATION CRITERIA
The following is required to determine if the organization satisfies the requirements of this credit:

- Evidence that the organization demonstrates a ranking within the top levels of a recognized external benchmark system as listed in the credit statement. Points shall be awarded per the following table:

<table>
<thead>
<tr>
<th>Organization’s Position Relative to Benchmark System Levels</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top 25%</td>
<td>2</td>
</tr>
<tr>
<td>Top 10%</td>
<td>3</td>
</tr>
<tr>
<td>Top 5%</td>
<td>4</td>
</tr>
</tbody>
</table>

- The organization must demonstrate this credit using 12 months of energy data from the last three years.
Advanced Technologies (AT)

Advanced technologies produce long-term impact on energy performance and support ISO 50001 and SEP 50001. These advanced technologies broadly fall into two categories: submeters and sensors, and advanced energy technologies. Facilities using any of these technologies can significantly improve their SEnPI value.

- Submeters and sensors include submetering, sensors, controls, and other technologies that inform or optimize energy usage and system performance.

- Advanced energy technologies include those that a facility pilots or installs to achieve improvement in the energy performance of the SEUs. Given the evolving nature of energy efficiency and energy performance technology development, SEP 50001 will award points to facilities that pilot or install advanced technologies (other than those specifically mentioned in this Scorecard) that have a positive impact on energy performance of the SEUs.
AT 1: Submeters and Smart Sensors and Controls

AVAILABLE POINTS

1 to 4

INTENT

To improve energy performance by enhancing data collection through submetering and/or smart sensors and controls that automate and manage the energy used within the facility’s SEUs.

CREDIT STATEMENT

Two options are available to receive points for this credit, and both may be claimed.

The organization shall receive points for demonstrated submetering of the facility’s SEUs. Data from permanent submeters shall be analyzed at least monthly and shall be included in the energy review and the measurement plan.

Additional points will be awarded if a facility installs and uses smart sensors and control systems to more effectively manage energy, improve operational control procedures, and improve facility-wide energy performance improvement. Smart sensors and control systems include wireless or web-enabled systems that provide a service or function above traditional sensors or controls and have been measured to improve overall SEU energy performance by 5% or greater.

The submeters and smart sensors and controls need to be in place at least 6 months of the 12-month SEP 50001 program certification reporting period. For the purposes of this credit:

- A submeter is defined as a fixed instrument or meter that continuously collects energy data.
- A smart sensor is an instrument that detects or measures one or more physical properties that can improve operational control procedures.
- A smart control is an instrument that can automatically react and adjust operation to signals from smart sensors to optimize energy performance.
- Smart sensors and control systems are wireless or web-enabled systems.

MEASUREMENT AND VERIFICATION CRITERIA

The following will determine if the organization satisfies the requirements of this credit:

- Evidence that the facility uses submeters for collecting energy consumption data at least monthly and includes them in the energy review and measurement plan. One (1) point shall be awarded if submeters are installed on 1 SEU and measure that SEU’s total energy consumption. Two (2)
points shall be awarded if submeters are installed on 2 SEUs and measure those SEUs’ total energy consumption.

- Evidence the wireless or web-enabled smart sensors and are installed and impacting SEU energy performance by 5% or greater. One (1) point shall be award if smart sensors and controls are installed on 1 SEU, and two (2) points on 2 SEUs.

- The organization shall show records related to this credit indicating the submeters and/or smart sensors or controls are in place during at least 6 months of the reporting period or most recent year, whichever applies.

- A facility may seek up to 4 points through this credit.
AT 2: Other Advanced Technologies

AVAILABLE POINTS
1 to 4

INTENT
To give credit for using advanced energy technologies. Given the evolving nature of energy efficiency and energy performance technology development, SEP 50001 will award points to facilities that pilot or install advanced technologies (other than those specifically mentioned in this Scorecard) that have a positive impact on energy performance of the SEUs.

CREDIT STATEMENT
The organization shall achieve energy performance improvement by implementing emerging technologies and processes that are innovative and beyond the “business as usual” state of other sites in their industry sector (based on their two digit NAICS code). These technologies and processes cannot be addressed through other SEP 50001 Scorecard credits.

In the organization’s SEP 50001 Scorecard Declaration, the following information shall be submitted for each innovative action for which this credit is requested:

- Description of the emerging technology.
- Intent of the emerging technology action.
- Metric utilized to determine improvement.
- Energy performance improvement achieved.
- Justification for credit acceptance.

Credit for emerging technology shall be approved by the Administrator. One to four points shall be awarded for each documented and accepted innovative action. The amount of points to be awarded will be determined by the Administrator.

MEASUREMENT AND VERIFICATION CRITERIA
The evidence is required to determine if the organization satisfies the requirements of this credit.

- Evidence of written approval by the Administrator for measurement and verification criteria and potential points to be awarded.
- Evidence of description and intent of the emerging technology.
- Evidence of reported energy performance improvement.
- Evidence of performance improvement metric including data, collection frequency, and trends.
- Evidence that the facility deployed the advanced technology or strategy.
Advanced Energy Supply (AS)

Advanced energy generation and supply technologies have a long-term impact on energy performance and support implementation of ISO 50001 and SEP 50001. These advanced on-site energy generation technologies include combined heat and power and technologies that use renewable energy, improve source energy efficiency, and reduce greenhouse gas emissions.
AS 1: Combined Heat and Power

AVAILABLE POINTS
1 to 10

INTENT
To promote utilization of combined heat and power (CHP) that support a facility's energy reliability, energy security, energy efficiency, overall cost reductions of operations, and energy utilization of existing fuel sources.

CREDIT STATEMENT
The two means of gaining points within this credit include 1) pre-installation CHP Potential analysis or 2) Operation CHP. A facility may only claim points from one of the two categories.

CHP Potential. Operations with simultaneous electricity (or shaft power) and thermal energy use shall have completed an analysis of CHP potential. A Qualification Screening is a high level economic analysis (often performed by the DOE CHP Technical Assistance Partnerships (TAPs)\(^5\)) taking into account energy use and prices. A CHP feasibility study is a detailed engineering analysis that includes proposed size of the CHP system, prime mover employed, heat recovery method and application, system efficiency, avoided cost, and expected investment.

Evidence of a CHP qualification screening or feasibility study completed during the last three years. One (1) to two (2) points shall be awarded per the following table:

<table>
<thead>
<tr>
<th>CHP Potential Points</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualification Screening for CHP</td>
<td>1</td>
</tr>
<tr>
<td>Feasibility Study for CHP</td>
<td>2</td>
</tr>
</tbody>
</table>

Operating CHP. Points are awarded for an installed CHP system based on its operating hours and total system efficiency. To receive points for CHP total system efficiency, the CHP system must operate for a minimum of 2,000 hours in the last year. The following table lists the points as awarded for CHP operating hours:

\(^5\) See energy.gov/CHP. CHP Technical Assistance Partnerships (CHP TAPs) perform qualification screening and provide engineering support on the screening, design support, and bid review of CHP. CHP TAPs work with sites to screen for CHP opportunities as well as provide advanced services to maximize the economic impact and reduce the risk of CHP from initial CHP screening to installation.

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Learn more at: www.energy.gov/SEP50001
<table>
<thead>
<tr>
<th>Installed CHP Operating Hours in the Last Year</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,000 to 4,000 hours</td>
<td>2</td>
</tr>
<tr>
<td>4,000 to 6,000 hours</td>
<td>3</td>
</tr>
<tr>
<td>More than 6,000 hours</td>
<td>4</td>
</tr>
</tbody>
</table>

To receive points for total system efficiency, a facility must calculate the minimum CHP efficiency using the following equation:

CHP Efficiency (%) =

\[
100 \frac{\text{Electrical/Mechanical Output (BTU)} + \text{Useful Thermal Output (BTU)}}{\text{CHP Fuel Input (BTU)}}
\]

Note: The fuel energy input shall be based on the higher heating value of the fuel.

And

<table>
<thead>
<tr>
<th>Installed CHP Total System Efficiency</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;60%</td>
<td>2</td>
</tr>
<tr>
<td>&gt;70%</td>
<td>4</td>
</tr>
<tr>
<td>&gt;80%</td>
<td>6</td>
</tr>
</tbody>
</table>

MEASUREMENT AND VERIFICATION CRITERIA

The following is required to determine if the organization satisfies the requirements of this credit.

**Only one of these options can be claimed for this credit.** That means an organization cannot receive points for both the CHP study and operating the CHP system. A maximum of 10 points is available:

**CHP Potential.** A Qualification Screening is a high level economic analysis (often performed by the DOE CHP Technical Assistance Partnerships (TAPs)\(^6\)) taking into account energy use and prices. A CHP feasibility study is a detailed engineering analysis that includes proposed size of the CHP

---

\(^6\) See energy.gov/CHP. CHP Technical Assistance Partnerships (CHP TAPs) perform qualification screening and provide engineering support on the screening, design support, and bid review of CHP. CHP TAPs work with sites to screen for CHP opportunities as well as provide advanced services to maximize the economic impact and reduce the risk of CHP from initial CHP screening to installation.

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system, prime mover employed, heat recovery method and application, system efficiency, avoided cost, and expected investment. The screening/study must be completed since the last SEP 50001 recognition.

Operating CHP. Points are awarded for an installed CHP system based on its operating hours and total system efficiency. Points as awarded per the two tables above. The tables should be applied for operation of the last 12 months.
AS 2: Use of On-Site Renewable and Recovered Energy

AVAILABLE POINTS

1 to 10

INTENT

To promote the installation of energy technologies that produce useful energy from renewable or recovered energy sources. These technologies lead to greater energy security, reliability, and improved economics in addition to other on-site benefits. While the SEnPI measures the actual energy output of these energy technologies, this credit examines the capacity of the installed system as a percentage of the facility’s average energy consumption rate.

CREDIT STATEMENT

A facility may only claim points from one of two categories: pre-installation (Renewable Potential) or operation (Installed Renewable and/or Recovered Energy Systems).

Renewable Potential. Facility conducts analysis of the potential for renewable or recovered energy systems. A qualification screening is a high level economic analysis that accounts for energy use and prices. A feasibility study is a detailed engineering analysis that includes proposed size of the system, technology employed, system efficiency, avoided cost, and expected investment. The qualification screening and/or feasibility study shall have been conducted during the last three years.

Installed Renewable and/or Recovered Energy Systems.

Renewable and recovered energy types include: biomass, geothermal, solar, wind, bio-gas, municipal solid waste, waste fuels, waste gases, and any fuel or gas recovered from within the Scope of the EnMS that are consumed to supply heat and/or power within the boundaries of the EnMS. The facility may seek approval from the Administrator for any renewable and/or recovered energy sources not on this list.

A facility calculates its Renewable and Recovered Fuels/Gases Capacity Factor as follows:

\[
\text{Renewable and Recovered Fuels/Gases Capacity Factor} = \frac{A}{B} \times 100 \% \\
A = \text{Total nameplate power capacity of renewable and recovered fuel/gas systems (MMBTU per hour)}
\]
B = Average facility source energy consumption rate (MMBTU per hour)

A (MMBTU per hour) =

\[
\left[ \text{sum of all renewable electrical nameplate capacity (kW) } \times 3412 \text{ (Btu/kW) } \div 10^6 \text{ (million Btus/MMBTU)} \right] + \\
\left[ \text{sum of all renewable non-electrical nameplate capacity (MMBTU per Hour)} \right] + \\
\left[ \text{sum of all recover fuels and gases (MMBTU per Hour)} \right]
\]

B (MMBTU per hour) =

\[
\frac{\text{[SEP 50001 program certification reporting year period primary (source) energy consumption of all purchased and onsite renewable generated energy (MMBTU)}^2 }{\text{total annual hours of site operation}^1}
\]

Note 1: Site maximum hours are 8,760 hours per year. Some sites operate less than 24 hours per day, 365 days per year.

Note 2: The SEP 50001 Verification Body verifies and reports this number and to the Administrator on the SEP 50001 Energy Performance Improvement Report.

Note 3: This credit requires the actual consumption of the renewable and/or recovered energy on-site. An organization-owned off-site renewable facility can be included in the SEP 50001 scope and boundary. Purchases of renewable or recovered energy credits do not qualify.

MEASUREMENT AND VERIFICATION CRITERIA

Evidence is required to determine if the organization satisfies the requirements of this credit. **Only one option can be claimed for this credit.** That means an organization cannot receive points for both the renewable potential study and the qualifying system.

A maximum of 10 points is available for this credit with the following evidence:

Renewable Potential: Evidence of a qualification screening for renewable and/or recovered energy and renewable and/or recovered energy feasibility study completed within the last three years. The feasibility study will include details such as proposed size of the system, energy resource recovered, proposed energy equipment used, system efficiency, avoided cost, expected investment and potential investment cost off-sets, and tax points available. One (1) to three (3) points are available if the organization conducted one or both of the following analyses.
of the potential for renewables during the last three years. Points are awarded per the following table:

<table>
<thead>
<tr>
<th>Renewable &amp; Recovered Potential Points</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualification Screening</td>
<td>1</td>
</tr>
<tr>
<td>Feasibility Study</td>
<td>2</td>
</tr>
</tbody>
</table>

- Installed Renewable and/or Recovered Energy Systems: Evidence of installed renewable and/or recovered energy systems meeting the criteria in the credit statement during the last year.

Six (6) to ten 10 points are available based on the capacity factor of the installed renewable or recovered energy system(s) during the last year, as calculated per the credit statement. Points will be awarded (maximum of 10 points) per the following table:

<table>
<thead>
<tr>
<th>Renewable and Recovered Fuels/Gases Capacity Factor (%)</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 to 10%</td>
<td>6</td>
</tr>
<tr>
<td>10 to 20%</td>
<td>7</td>
</tr>
<tr>
<td>20 to 30%</td>
<td>8</td>
</tr>
<tr>
<td>30 to 40%</td>
<td>9</td>
</tr>
<tr>
<td>&gt;40%</td>
<td>10</td>
</tr>
</tbody>
</table>
### ANNEX A: Revision History

<table>
<thead>
<tr>
<th>Title</th>
<th>Date</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Superior Energy Performance 50001™ Scorecard</td>
<td>30 April 2019</td>
<td>4.0</td>
</tr>
<tr>
<td>Superior Energy Performance® Scorecard</td>
<td>11 July 2016 (R1)</td>
<td>3.0</td>
</tr>
<tr>
<td>Superior Energy Performance™ Industrial Best Practices Scorecard</td>
<td>5 December 2012</td>
<td>2.0</td>
</tr>
<tr>
<td>Superior Energy Performance™ Industrial Best Practices Scorecard</td>
<td>9 November 2011</td>
<td>1.0</td>
</tr>
</tbody>
</table>
ANNEX B: Success Story Intent Form

☐ I agree to work with the SEP 50001 Administrator to share the organization’s success story.

Facility Name: Click here to enter text.
Contact Name: Click here to enter text.
Contact Email: Click here to enter text.

Organizations participating in the development of a SEP 5001 success story will use this form to pursue the credit, **OS 6: Share SEP 50001 Experience and Data, listed in the SEP 50001 Scorecard**. The success story will appear on the SEP 5001 website and will highlight key achievements drawn from a brief phone interview (~one hour or less) and any additional information the organization wishes to share. The success story will cover ISO 50001 and SEP 50001 implementation and certification as well as SEP 50001 recognition, and will include photos provided by the organization (e.g., photo of energy team, the site, facility personnel working on energy management efforts).

The organization will have opportunity to review, provide feedback, and approve the success story before the SEP 50001 Program Administrator publishes the content on the website.

------------------------------------------------------------------------------------------------------------------

The brief phone interview will include questions such as the following:

- What are some of the biggest benefits from implementing ISO 50001 and SEP 50001 at your organization?
- Did ISO 50001/SEP 50001 help you meet other goals (e.g., corporate, municipal, ENERGY STAR, etc.)?
- To encourage other organizations in your sector to implement ISO 50001/SEP 50001, what would you emphasize?
  - What benefits are particularly relevant to your sector and why?
  - What challenges unique to your sector does ISO 50001/SEP 50001 help to address?
- Could you obtain a quote from a person at your organization as an insightful testimonial?

Other optional questions if time permits:

- How long did it take to implement ISO 50001 and SEP 50001 and then gain certification?
- Were their positive impacts on organizational culture or intra-facility working relationships?
- How is your organization planning to promote this achievement? (e.g., sharing news with employees and customers, notifying appropriate department for sustainability reporting, etc.)
- How have your operations improved? What are some key factors leading to operational improvements? Any unexpected benefits?
- Did you encounter any key challenges/issues regarding the certification process?
- Where might additional assistance/guidance be needed or welcome?
- What did you find particularly helpful in implementing the EnMS or certification process (e.g., other ISO certifications, DOE or EPA partnership programs, tools, training, team members, management support, data resources, etc.)?
ANNEX C: Stakeholder Affirmation on ISO 50001 Promotion

Introduction

Organizations seeking higher SEP 50001 recognition levels may earn points under Certification, Partnership and Reporting (CR) Credit 3 in the SEP 50001 Scorecard for promoting or requiring ISO 50001 conformance or certification from its stakeholders. Stakeholders may include suppliers, vendors, service providers, customers, or other business affiliates that achieved 50001 Ready recognition, SEP 50001 program certification, and/or ISO 50001 certification. To earn points under this credit, organizations will request each relevant stakeholder to complete this form as an “affirming entity.” Completion of this affirmation provides evidence that the “influencing organization” positively impacted its stakeholders on ISO 50001.

Guidance for Affirming Entities

The SEP 50001 Program Administrator welcomes your affirmation that another organization positively influenced your decision to achieve US DOE’s 50001 Ready recognition, SEP 50001 program certification, and/or ISO 50001 certification. The influencing organization will earn points from the SEP 50001 Scorecard toward achieving a Silver, Gold, or Platinum recognition level. The influencing organization will provide a copy of this form to the SEP 50001 Program Administrator as evidence of its ISO 50001 promotion. To learn more about US DOE energy management programs, visit: www.energy.gov/SEP50001.

Once you complete and sign this form, please return it to the organization that requested it from you.

Affirmation

Influencing Organization’s name:  Click here to enter text.
Facility name (if applicable):   Click here to enter text.

As a representative of the affirming entity, the abovementioned organization was instrumental in my organization’s ISO 50001 achievement within the last two years. Had the influencing organization not promoted, provided technical assistance, and/or trained our staff, we may not have otherwise achieved the following designation (check one).

- 50001 Ready recognition
- ISO 50001 certification
- SEP 50001 program certification

Affirming entity:

Organization name:    Click here to enter text.
Facility name (if applicable):   Click here to enter text.
Name of representative:  Click here to enter text.
Title of representative:    Click here to enter text.
Email of representative:    Click here to enter text.

Signature of representative from affirming entity: ____________________________________________
Date: _________________________

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