



Superior Energy Performance 50001™ (SEP 50001™)

Superior Energy Performance 50001™ Program Certification Protocol: 2019

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1 Introduction

The Superior Energy Performance 50001™ (SEP 50001™) program recognizes excellence in energy management systems (EnMS) by certification of a facility's implementation of the ISO 50001 EnMS and additional SEP 50001 program requirements. Organizations that achieve ISO 50001 and SEP 50001 program certifications receive certificates from third-party certification bodies indicating ISO 50001 and SEP 50001 program requirements have been achieved, under the ANAB-accredited ISO 50001 and SEP 50001 designations. In the United States, the SEP 50001 Program Administrator (Administrator) is the US Department of Energy (US DOE).

1.1 The Superior Energy Performance 50001 Program Certification Protocol

This document, the *SEP 50001 Program Certification Protocol: 2019* sets forth the requirements for achieving certification to the SEP 50001 (2019) program, including the processes and time frames for applying and certifying to the SEP 50001 program. For the remainder of this document, "SEP 50001" refers to the SEP 50001 (2019) version of the program.

1.2 Overview of Requirements

SEP 50001 program certification requires third-party certification to *ISO 50001 Energy management systems - Requirements with guidance for use (ISO 50001)* and *ANSI/MSE 50028-1:2019 Superior Energy Performance 50001 - Additional Requirements for Energy Management Systems (ANSI/MSE 50028-1:2019)*. Certification must be assessed by an accredited SEP 50001 Verification Body—external to the organization—and using a Lead Auditor for SEP 50001 and a SEP Performance Verifier on the audit team.

1.3 Additional Recognition from SEP 50001 Program Administrator beyond Certification

SEP 50001-certified facilities that exceed certification requirements can use the *SEP 50001 Scorecard (Scorecard)* to achieve a higher recognition level (Silver, Gold, or Platinum). Use of the *Scorecard* is not required for SEP 50001 program certification. US DOE describes its recognition of SEP 50001-certified facilities in the United States on the SEP 50001 website (www.energy.gov/SEP50001). 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.

2 Scope and Boundaries

Based upon the *ANSI/MSE 50028-1:2019* definition of "facility," an organization shall establish the boundaries of one or more facilities for participation in the SEP 50001 program. The scope and

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boundaries of the organization's *ISO 50001* EnMS shall encompass the scope and boundaries of the facilities for which SEP 50001 program certification is being sought.

SEP 50001 uses the same technical areas as *ISO 50001*. All technical areas are eligible for SEP 50001.

3 Terminology

Definitions of terminology used in this document can be found in *ANSI/MSE 50028-1:2019*.

4 Standards, Normative References, and Forms

4.1 Standards

Facilities seeking SEP 50001 program certification must conform to the following standards:

1. ***ISO 50001***, which is an international standard that provides a flexible framework for implementing an EnMS. SEP 50001 requires that participating facilities meet the requirements of *ISO 50001*, demonstrating the establishment of the systems and processes needed to continually improve both energy performance and the performance of the EnMS.
2. ***ANSI/MSE 50028-1:2019***, which defines the EnMS requirements of the SEP 50001 program beyond those of *ISO 50001*.

4.2 Normative References

Facilities seeking SEP 50001 program certification must follow the additional requirements in the normative references for *ANSI/MSE 50028-1:2018*.¹ The normative references are:

1. The ***SEP 50001 Program Certification Protocol: 2019*** (this document), which describes the requirements related to energy performance improvements and time frames, along with the processes for applying for and becoming certified to the SEP 50001 program.
2. The ***SEP 50001 Program Measurement and Verification Protocol: 2019 (M&V Protocol)***, which sets forth the verifiable methodology for determining and demonstrating the energy performance improvement 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.

¹ Normative references can be downloaded free of charge from the SEP 50001 website: www.energy.gov/SEP50001

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4.3 Forms and Data Submission

4.3.1 Required Forms

Organizations wishing to participate in the SEP 50001 program must submit a completed *SEP 50001 Application* to the Administrator^{2,3} and the *Register of Implemented Energy Performance Improvement Actions* to the SEP 50001 Verification Body that conducts the audit.

1. The ***SEP 50001 Application: 2019 (Application)*** gathers basic facility and contact information for a facility or an organization with multiple facilities intending to seek SEP 50001 program certification. The *Application* also gathers additional information regarding energy consumption adjustment models, the contact information for the Verification Body the applicant has selected, and other pertinent information to the certification of a facility.
2. The ***Register of Implemented Energy Performance Improvement Actions (the Register)*** helps a facility organize and track its implemented energy performance improvement actions. *The Register* is required as part of the bottom-up comparison detailed in the *M&V Protocol*. A SEP 50001 applicant must submit the *Register* to the Verification Body as part of the SEP 50001 program audit. Submission of the *Register* to the Administrator is optional, but doing so may help to support its energy performance improvement claim for additional recognition.

4.3.2 Voluntary Forms and Data Submission

Organizations may submit the following items to the Administrator on a voluntary basis. The Administrator uses responses to identify improvements for the certification program. In addition, organizations may submit these forms to qualify for additional Administrator recognition beyond certification.

1. The ***Voluntary Cost/Benefit Form*** may be voluntarily submitted by the SEP 50001-certified facility to the Administrator. This spreadsheet-based form collects information on the level of investment in implementing the energy management system (effort and costs) for SEP 50001, and a breakdown of energy performance improvement actions at the facility level. The Administrator compiles responses to understand the benefits of the SEP 50001 program and identify opportunities for future improvements.
2. The ***Top-down regression model and associated energy data***, as well as, the ***Register***, may be voluntarily submitted to the Administrator. The Administrator uses these data to research and subsequently simplify M&V approaches for the SEP 50001 program.

² The *SEP 50001 Application* is available free of charge from the SEP 50001 website: <https://betterbuildingssolutioncenter.energy.gov/resources/sep-50001-application>.

³ These forms collect energy information in British Thermal Units (BTU). Organizations that use international units may be required to convert them to BTU when filling out these forms.

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4.4 Standards for SEP 50001 Verification Bodies

SEP 50001 Verification Bodies follow the requirements in each of the following standards:

- *ANSI/MSE 50028-2:2018 Superior Energy Performance 50001 - Requirements for verification bodies for use in accreditation or other forms of recognition*
- *ISO/IEC 17021-1 – Conformity assessment for bodies providing audit and certification of management systems*
- *ISO 50003 – Requirements for bodies providing audit and certification of energy management systems*

ANSI/MSE 50028-2:2018 builds on the requirements of *ISO/IEC 17021-1* and *ISO 50003*. Meeting the requirements of these standards ensures that SEP 50001 Verification Bodies use competent personnel to conduct EnMS certification and energy performance verification audits in a consistent and impartial manner.

4.5 SEP 50001 Energy Performance Improvement Report

After the Verification Body confers SEP 50001 program certification on a facility, the Verification Body submits a *SEP 50001 Energy Performance Improvement Report* to the Administrator. This report summarizes information regarding the level of energy performance improvement, how it was achieved, and how energy consumption adjustment models were applied from the *M&V Protocol*. *ANSI/MSE 50028-1:2018* provides additional details on the use of this report and certification of multiple facilities under one central function. Information from this report is also one of the inputs to determine a facility's eligibility for additional recognition from the Administrator.

The *SEP 50001 Energy Performance Improvement Report* collects energy information in British thermal units (BTUs). SEP 50001 Verification Bodies may be required to convert international units to BTU before submitting this report to the Administrator.

5 SEP 50001 (2019) Program Audit and Certification Process

5.1 General Process Auditing and Certification

The following steps describe the process for achieving SEP 50001 program certification.

1. The process of seeking certification begins with the *Application*. No fees are required and no commitment is assumed or obligated when submitting the *Application*. The Administrator will acknowledge when the *Application* has been reviewed and is accepted.

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The **Application** is submitted to the Administrator when the facility (or organization with multiple facilities) feels that it will be ready within the next six (6) to seven (7) months. The facility's *Application* does not need to provide the value of the SEnPI at the time of the application.

The Administrator uses this information to understand the basic approaches the facility has used and to review any pre-approvals for any alternative approaches requested by the applicant. If the facility uses an alternative approach to modeling or data gathering/assessment as specified in the *M&V Protocol*, then the facility must submit the request for approval with the *Application*, and receive approval by the Administrator. Organizations choosing to recertify must also complete the *Application*. The *Application* is sent to the Administrator six to seven months prior to recertification.

The organization (now referred to as a SEP 50001 Applicant) will be notified when the Administrator approves the *Application* and any requests for approvals as complete. The Administrator will provide the application package and relevant evaluation criteria to both the organization and the Verification Body selected by the applicant.

For recertification, timely submission of the *Application* can help to avoid a lapse in certification. If the *Application* is submitted in a shorter time frame, the Verification Body may lack the time to schedule and complete the recertification audit before the expiration of the certification. If certification expires, a new stage 1 and stage 2 audit⁴ will be required.

2. After the Administrator accepts the *Application*, the organization must choose and contract with an accredited Verification Body to conduct the certification audit. Alternatively, the applicant may choose a Verification Body that has applied for, but not yet completed their accreditation process for SEP 50001. If the applicant chooses an Applicant Verification Body, then an accreditation body assessment witness team may be present during the certification audit. Certifications by Applicant Verification Bodies are valid only upon the Verification Body achieving accreditation.
3. Upon receipt of the application package from the Administrator, the Verification Body will send a Lead Auditor for SEP 50001 and a SEP Performance Verifier to conduct an audit to confirm conformity to SEP 50001 program requirements. See section 5.2 for multi-site SEP 50001 program certification.

SEP 50001 program certification can occur under four different circumstances⁵:

⁴ For information detailing the stage 1 and stage 2 audits, see Annex D.

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- A. **Initial certification to both ISO 50001 and SEP 50001:** For initial certification to both *ISO 50001* and *SEP 50001*, a stage 1 review is conducted to confirm whether the facility is prepared for the stage 2 audit.
 - B. **Recertification after 3 years:** For recertification, a stage 1 audit shall be required if either of the following situations apply:
 - i. Major changes have occurred to energy-using facilities, equipment, systems, or processes.
 - ii. The applicant modifies the *SEP 50001* Energy Performance Indicator (SEnPI) model such that Administrator approval is required.
 - C. **Early recertification to SEP 50001:** An organization can recertify one (with a required one year achievement period) or two years (with a required two-year achievement period) after the last certification/recertification. See Section 5.3.
 - D. **Scope extension from ISO 50001 to SEP 50001:** A scope extension to *SEP 50001* is typically conducted during the three-year recertification audit for *ISO 50001*. A stage 1 review is required.
4. Upon satisfactory completion of the verification audit, the Verification Body will issue appropriate certificates to the organization. The *SEP 50001* (2019) program certification is awarded for an interval of three years.
 5. The Verification Body then provides the *SEP 50001 Energy Performance Improvement Report* along with other relevant information to the Administrator. Annex D of this document describes how *SEP 50001 Energy Performance Improvement Reports* are submitted to the Administrator for a certification across multiple sites. The Administrator provides the organization with appropriate recognition once the *SEP 50001*-certified facility has applied for such recognition.
 6. An organization may apply for an early recertification to the Administrator to seek the following:
 - a) an advance to higher *SEP 50001* Program Administrator recognition level;
 - b) Update SEnPI energy performance improvement, and thus *Scorecard* points, to better position themselves for national annual award program; or
 - c) provide ability to verify year-on-year energy performance improvement should third parties (e.g., utilities) provide annual incentives.

5.2 Certification Requirements Across Multiple Sites and Facilities

Organizations may elect to coordinate multiple site and facilities to gain cost efficiencies in *ISO 50001* and *SEP 50001* implementation. *SEP 50001* program certification across multiple sites allows two approaches:

1. Including multiple sites within close geographic proximity as one facility with a common *ISO 50001* EnMS.
2. Multiple facilities under one central function, per *ISO 50003*, Annex B.

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5.2.1 Single Certification for Non-contiguous, Multiple Sites within Close Geographic Proximity

Organizations may elect to aggregate multiple sites that are non-contiguous, but within close geographic proximity, as part of one facility and under a common ISO 50001 EnMS and SEP 50001 scope. A single SEP 50001 program certification can be considered if the aggregated sites as a single facility meet the requirements within *ANSI/MSE 50028-1:2019*, Annex A.1.1. Issues related to geographic proximity are discussed in the definition of “facility” in *ANSI/MSE 50028-1:2019*.

5.2.2 Certification of Multiple Facilities Under One Central Function

Organizations may elect to have multiple facilities certified on one certificate through a defined process of sampling facility conformance to SEP 50001 program requirements. Each facility is eligible for additional recognition from the Administrator. See *ANSI/MSE 50028-1:2019* for additional details on certification of multiple facilities under one central function.

The organization should contact its Verification Body for additional information on multi-site certification. The Verification Body will define requirements for various certification scenarios, including:

- Combining sites to form a multiple site SEP 50001 program certificate.
- Adding one or more sites to an existing multiple site SEP 50001 program certificate.

5.3 Key Performance Requirements and Timelines

The following table identifies key performance requirements and timelines relevant to SEP 50001 program certification.

	Initial Certification	Recertification
Energy Performance Improvement Percentage	Greater than 0.0 percent (rounded to the nearest tenth of a percent)	Greater than 0.0 percent (rounded to the nearest tenth of a percent)
Achievement Period	1, 2, or 3 years	Facilities will typically recertify at 3 years (36 months) and use a 3-year achievement period. However, facilities may recertify early using a shorter achievement period of 12 or 24 months.

6 Suspension or Revocation of SEP 50001 Program Certification

Accredited SEP 50001 Verification Bodies have documented procedures for suspension and revocation of certifications. Certificates may be suspended when a surveillance audit finds that substantial structural breakdowns in SEP 50001 program requirements have occurred at a facility or the organization has failed to implement elements of SEP 50001 (2019)—and there is no credible commitment to take appropriate

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corrective action. The corrective action must be completed and accepted within six months, which is the maximum interval for a suspended certificate. The suspended certificate can be re-established following verification of an acceptable corrective action.

The Verification Body will revoke certificates when the facility encounters substantial issues in which structural *ISO 50001* or SEP 50001 program requirements have not been met, and it is apparent that conformance cannot be reestablished in a reasonable time frame. If an organization loses its *ISO 50001* certification, it also loses its SEP 50001 program certification.

The Verification Body shall communicate information on certificates that have been suspended or revoked to the Administrator.

7 Confidentiality

The US DOE, as the SEP 50001 Program Administrator within the United States, maintains the confidentiality of proprietary energy and production related data as proprietary that is submitted to the SEP 50001 program by SEP 50001-certified facilities, to the fullest extent of US federal law. Data included within the *SEP 50001 Application*, the *Register of Implemented Energy Performance Improvement Actions*, *SEP 50001 Energy Performance Improvement Report*, *SEP 50001 Voluntary Cost/Benefit Form*, and any other forms or data shared with the US DOE will not be released publicly. The US DOE will publicly report the following information about each SEP 50001-certified facility:

1. Facility name
2. Facility location (city, state)
3. Verified energy performance improvement
 - a. This is optional. The SEP 50001-certified facility can elect if energy performance improvement is reported publicly, or not. A facility also has the option to report energy performance improvement as an absolute value of energy savings (BTU), a percentage value as compared to the energy baseline (SEnPI), or both.
4. Verified achievement period length
5. Certification date (month/year)

Confidentiality requirements for SEP 50001 Program Administrator recognition is outlined on the SEP 50001 website.

US DOE will, from time-to-time, publicly share aggregate, program-wide metrics, such as the number of SEP 50001-certified facilities, and annual and cumulative SEP 50001 program energy savings without revealing data or analysis that could lead to the identification of specific facilities.

US DOE may use data to study the effectiveness and impact of the SEP 50001 program. Results from such analysis will be made public only if participating organization anonymity can be ensured. The

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participating organization may be asked if they wish to voluntarily participate in the formation of case studies and other activities regarding the SEP 50001 program.

All data provided to US DOE is subject to the Freedom of Information Act (FOIA); however, US DOE will notify the SEP 50001-certified facility if a FOIA request has been submitted for which their data might be responsive. US DOE will consult with the SEP 50001-certified facility and ensure the facility has an opportunity to inform US DOE what data they view is proprietary. US DOE will review the SEP 50001-certified facility's suggestions and will not release to the public any data US DOE deems proprietary.

Individual Verification Bodies have established and implemented procedures for ensuring confidentiality. These procedures address both the Verification Body as well as the individual auditor/verifier. Subcontracted or outsourced activities are subject to the same requirements.

8 Use of SEP 50001 Logo and Materials

The US DOE is the current SEP 50001 Program Administrator within the United States and maintains the SEP 50001 program and certification mark, which bears the SEP 50001 logo. US DOE will define and provide SEP 50001-certified facilities with guidelines on appropriate use of the certification mark.

Public reference to SEP 50001 program certification and use of the related logos must be in accordance with Administrator guidelines for publicizing certification as well as those of the individual Verification Body. Specific references to SEP 50001 program certification must clearly indicate the part of the organization that has been certified and must not infer that other parts of the organization, or products produced, are also certified.

Use of the certification mark outside of the guidelines must be reviewed and approved by US DOE prior to use.

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Annex A – Certified Professionals (Informative)

The Institute for Energy Management Professionals provides personnel certification and qualification services in support of the following ISO 50001 and SEP 50001 professionals.

A.1 Required Members of the SEP 50001 Program Audit Team

The **Lead Auditor for SEP 50001** is a certified Energy Professionals International (EPI) *ISO 50001* Lead Auditor (see Section A.2 of this annex) with additional required training on the SEP 50001 program. The Lead Auditor for SEP 50001 conducts all of the following roles:

- 1) Leads and manages an SEP 50001 program audit team effectively to ensure the audit objectives are met
- 2) Assesses the conformance of the energy management system to SEP 50001 (2019) program requirements, and
- 3) Uses *ANSI/MSE 50028-2:2019* to plan and conduct the SEP 50001 (2019) program audits and report the organization's implementation of *ISO 50001* and *ANSI/MSE 50028-1:2019* and associated normative documents.

A **SEP Performance Verifier (Performance Verifier)** conducts the following roles:

- 1) Reviews and evaluates calculations supporting a client's use of the *M&V Protocol*
- 2) Verifies the input data on which the client's energy performance improvement are based
- 3) Evaluates the client's energy performance claims
- 4) Works with the audit team to communicate and justify the audit findings related to energy improvement calculations.

A prerequisite for SEP Performance Verifier certification is to obtain the 50001 Certified Practitioner in Energy Management Systems (50001 CP EnMS) (see Section A.2 of this annex).

A.2 Supporting Professional Certifications for SEP 50001

The following professional certifications support SEP 50001 implementation and auditing:

The **Certified Energy Professionals International (EPI) ISO 50001 Lead Auditor** has the competency to conduct all of the following:

- 1) Plan, lead and manage an *ISO 50001* audit team effectively to ensure the audit objectives are met,
- 2) Conduct the *ISO 50001* audit in conformance with *ISO 50003* requirements
- 3) Conduct the SEP 50001 (2019) audit in conformance with *ANSI/MSE 50028-2*
- 4) Assess conformance to *ISO 50001*, which includes confirming continual improvement of energy performance and any additional organizational requirements

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- 5) Document and report audit findings based upon objective evidence
- 6) Effectively manage the relationship with the client and the auditee
- 7) Communicate, justify, and take responsibility for the audit results both verbally and in a written report to the client.

To qualify as a Lead Auditor for SEP 50001, a certified EPI ISO 50001 Lead Auditor must take additional online training about the SEP 50001 (2019) program requirements.

A **50001 Certified Practitioner in Energy Management Systems (50001 CP EnMS)** has the following competencies:

- 1) Supports facilities in assessing energy efficiency opportunities and implementing an EnMS that conforms to *ISO 50001*
- 2) Prepares facilities for SEP 50001 program certification
- 3) Scores and attests to the *SEP 50001 Scorecard* for SEP 50001-certified facilities seeking additional SEP 50001 Program Administrator recognition

50001 CP EnMS professionals typically include facility personnel, consulting professionals, or service providers with the appropriate competence and technical experience in energy systems. An organization may apply for SEP 50001 program certification without engaging a 50001 CP EnMS. However, using a competent individual adds a level of assurance for the facility that the standards and protocols will be properly applied.

Annex B – Scenarios for ISO 50001 Scope Extension under Accredited and Non-Accredited Bodies for SEP 50001 (Informative)

A SEP 50001 Applicant that obtains *ISO 50001* certification from a non-SEP 50001 Verification Body may seek a scope extension from *ISO 50001* to SEP 50001. The facility will request the transition from the Administrator and complete the steps outlined in either Scenarios 1, 2 or 3.

Scenario 1: The organization remains with its current Certification Body, which is seeking to become an accredited SEP 50001 Verification Body. The Certification Body must apply to the Accreditation Body to become an accredited SEP 50001 Verification Body.

1. The applicant Verification Body conducts a stage 1 audit in accordance with *ANSI/MSE 50028-2:2019*.
2. The applicant Verification Body conducts an audit of the existing the *ISO 50001* EnMS against the SEP 50001 program requirements as set forth in *ANSI/MSE 50028-1:2019* at either the next scheduled surveillance or recertification audit. This audit will include the Performance Verification

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using the *M&V Protocol*. Note: The audit could be the site of the accreditation body witness audit for accrediting the applicant Verification Body.

3. The SEP 50001 program certification is released when the Certification Body has become fully accredited as a SEP 50001 Verification Body.
4. The dates for the *ISO 50001* certificate are not impacted by this scope extension, therefore, the expiration dates may not align.
5. If the next scheduled audit is a surveillance audit, the SEP 50001 Applicant will have a choice to:
 - a. Maintain different certification dates for *ISO 50001* and SEP 50001 program certifications; or
 - b. Undergo a full *ISO 50001* audit to align the ongoing recertification dates

Scenario 2: The ISO 50001 certification was awarded by a Certification Body that *is not* a candidate for SEP 50001 Verification Body accreditation, and the ISO 50001 certification is transferred to an accredited SEP 50001 Verification Body. Under this scenario:

1. The organization transfers its existing *ISO 50001* certification to an accredited SEP 50001 Verification Body following the defined Accreditation Body process for the transfer of management system certifications.
2. The SEP 50001 Verification Body conducts stage 1 audit in accordance with *ANSI/MSE 50028-2:2019*.
3. The SEP 50001 Verification Body conducts an audit of the existing *ISO 50001* EnMS and SEP 50001 program requirements as set forth in *ANSI/MSE 50028-1:2019* at either a next scheduled surveillance or recertification audit. This audit will include the Performance Verification using the *M&V Protocol*.
4. Following successful completion of steps 2 and 3 above, a SEP 50001 certificate may be issued.
5. The SEP 50001 (2019) program audit (step 3) will be conducted at the next scheduled audit or as a special audit at the request of the client. If the next scheduled audit is a surveillance audit, the SEP 50001 Applicant will have a choice to:
 - a. Maintain different certification dates for *ISO 50001* and SEP 50001 program certifications; or
 - or
 - b. Have a full *ISO 50001* audit to align the ongoing recertification dates.

The additional time to be added to the next scheduled audit for the SEP 50001 (2019) program audit is defined in *ANSI/MSE 50028-2:2019*.

Scenario 3: The ISO 50001 certification was awarded by a Certification Body that *is not* a candidate for SEP 50001 Verification Body accreditation, the ISO 50001 certification remains at this Certification Body, and the SEP 50001 program certification is certified by a separate SEP 50001 Verification Body. Under this scenario:

1. The organization keeps its existing *ISO 50001* certification at the Certification Body.

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2. The SEP 50001 Verification Body conducts stage 1 audit in accordance with *ANSI/MSE 50028-2:2019*.
3. The SEP 50001 Verification Body conducts an audit of the existing *ISO 50001* EnMS against the SEP 50001 program requirements as set forth in *ANSI/MSE 50028-1:2019* at any time while their ISO 50001 certification is valid. This audit will include the Performance Verification using the *M&V Protocol*.
4. Following successful completion of steps 2 and 3 above, a SEP 50001 certificate may be issued.
5. The next ISO 50001 and SEP 50001 program audits will be conducted at the next scheduled audit for each. The SEP 50001 Applicant can maintain different certification dates for *ISO 50001* and SEP 50001 program certification.

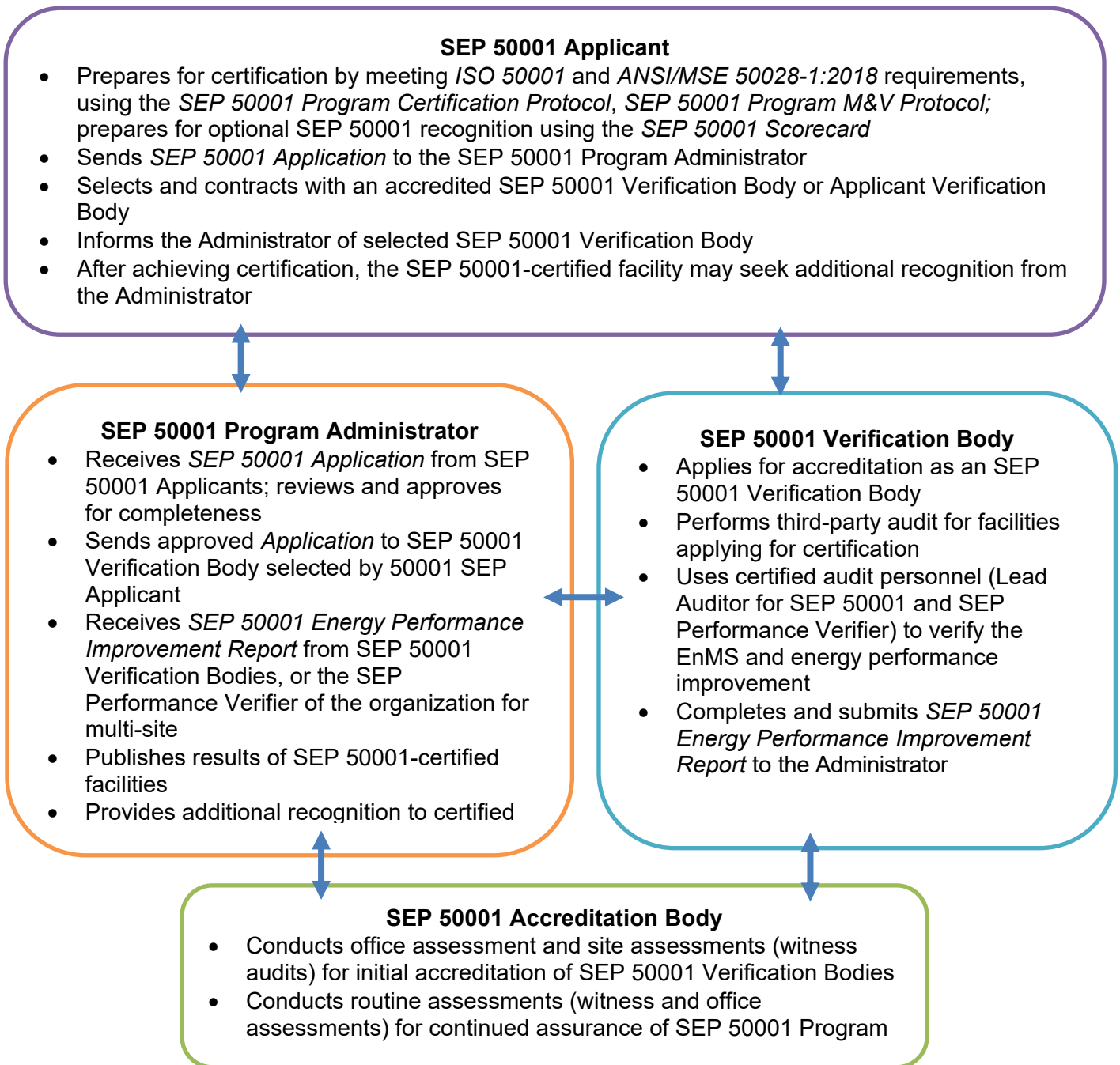
The additional time to be added to the next scheduled audit for the SEP 50001 (2019) program audit is defined in *ANSI/MSE 50028-2:2019*.

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Annex C – Relationship Between Various SEP 50001 Parties (Informative)



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Annex D – Stage 1 and Stage 2 Audits (Informative)

The following summary from *ANSI/MSE 50028-2:2019* details the stage 1 and stage 2 audits as part of the SEP 50001 (2019) program audit process:

Stage 1

An organization may choose to include an SEP Performance Verifier at Stage 1, though it is not required. The Verification Body will receive any necessary SEP 50001 Program Administrator approvals prior to the Stage 1 audit. The Stage 1 audit may be performed on-site or remotely. For recertification, a Stage 1 audit shall be required if there are major changes to energy-using facilities, equipment, systems or processes.

The Verification Body performs the Stage 1 audit to:

- collect necessary information regarding the scope and boundaries;
- review the applicant's status regarding the requirements of *ANSI/MSE 50028-1*;
- review energy types to ensure no exclusions,
- review data to confirm it is not more than 11 months old,
- ensure the availability of the *Register of Implemented Energy Performance Improvement Actions* and that the SENPI is available and meets the threshold requirements of the p-value, F-test value and R² value as set forth in the *M&V Protocol*;
- review the client's status regarding SEP PA approvals, as applicable; and
- evaluate whether internal audits and management reviews include SEP 50001 (2019) program requirements and are being planned and performed.

The Verification Body is required to provide the following outputs from the Stage 1 audit:

- confirmation that the Administrator's pre-approval(s) have been received, as applicable;
- confirmation that the *Register of Implemented Energy Performance Improvement Actions* for the Bottom-Up Comparison has been filled out; and
- review of a facility site plan or layout or graphical or narrative description of the facility.

The two outcomes possible from Stage 1 are:

- ready, and
- not ready.

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If the Stage 1 outcome is that the organization is "not ready" for the Stage 2 audit, then the organization will submit the required information to attain a "ready" conclusion. The Verification Body will document when the "ready" conclusion is achieved. Upon achieving a "ready" conclusion, the organization and Verification Body will make arrangements for the Stage 2 audit.

Stage 2 Audit

During the Stage 2 audit, the Verification Body verifies the data and calculations used to provide the energy performance claim and assesses the SEnPI performance improvement with the requirements of the *M&V Protocol*, taking into account:

- definition of the scope and boundaries,
- designated baseline year and achievement period,
- the modeling method from the SEP M&V Protocol,
- energy performance improvement, and
- the Bottom Up Comparison and the related *Register of Implemented Energy Performance Improvement Actions*.

The Performance Verifier checks the following:

- Approvals from the Administrator have been implemented, if applicable
- Energy and related data and other variables used in the analysis are appropriate and representative:
 - the source of the data is from calibrated or revenue meters or billing information, and
 - verification may be performed through sampling of data points, but shall include sampling within all energy types.
- Energy models were developed within the requirements of the *M&V Protocol* and that:
 - variables used in the models can reasonably be expected to be significant drivers of the energy type being modeled,
 - variables not used in the models which could reasonably expect to be significant drivers have been examined for inclusion in the models, and
 - equation coefficients used in the model meet the validity test specified in the *M&V Protocol*.
- Conditions of the facility and its operations existing in the reporting year are consistent with those that existed in the baseline year. If the conditions are not consistent, the Performance Verifier confirms that changes to the energy performance models were made properly and adequately account for any changes in conditions that are found to invalidate the historic baseline model.
- The selected baseline year satisfies the requirements of the *M&V Protocol*.
- The SEnPI for the baseline and reporting years are properly calculated using verifiable data in accordance with the *M&V Protocol* and are accurate representations of energy performance.
- Energy performance improvement has been calculated in accordance with the *M&V Protocol*.

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- Bottom-Up Comparison of projects and other energy performance improvements are in accordance with the *M&V Protocol* to verify that the energy performance improvement is greater than 0.0% after taking the Reconciliation Factor (RF) into consideration.

For a single site, the Performance Verifier completes and submits the *SEP 50001 Energy Performance Improvement Report* in accordance with the Verification Body's procedures.

For a multi-site audit, the organization's Performance Verifier completes a *SEP 50001 Energy Performance Improvement Reports* for each site not sampled. The Verification Body's Performance Verifier checks the non-sampled *SEP 50001 Energy Performance Improvement Reports* for the p-values, F-test, R^2 and RF factor per the *M&V Protocol*. The Verification Body's Performance Verifier also confirms that a certified Performance Verifier has completed an *SEP 50001 Energy Performance Improvement Report* for each site and submits the reports in accordance with the procedures of the Verification Body. The organization submits the *SEP 50001 Energy Performance Improvement Reports* for the sites not included in the sample to the Administrator.

The Stage 2 certification and recertification audit may be paused for a maximum period of 30 days if, during the assessment, it is determined that the organization needs to seek and obtain approvals from the Administrator. The pause enables the organization to apply for and obtain the needed approvals.

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