Superior Energy Performance 50001™
U.S. DEPARTMENT OF ENERGY

Superior Energy Performance 50001™ 2019 Program

Paul Scheihing
U.S. Department of Energy
Advanced Manufacturing Office

Deann Desai
Georgia Tech

June 6, 2019

U.S. DEPARTMENT OF ENERGY

Outline

- DOE ISO 50001 Offerings
- Superior Energy Performance 50001™
- Simplification to Certification, and Enhanced DOE Recognition
- Multiple Site Certification Options
- DOE Recognition for SEP 50001 and the *SEP 50001 Scorecard*
- Transition
- Trainings
- Questions and Answers

Early Adoption of ISO 50001 is yielding results

Based on US DOE findings, a structured EnMS yields greater, more cost-effective, and more sustainable energy savings than a more traditional, project-based energy efficiency program.

Findings on typical US energy savings over time.

- Business-as-Usual [EIA] ~1% per year
- Industry Leaders [DOE] ~ 2.5% per year
- **ISO 50001 facilities** [DOE] **~4.6% per year**

75% of energy savings from no/low cost operational improvements

Companies with North American facilities adopting ISO 50001

- 3M
- Aflac
- BAE Systems
- BMW
- Bosch Rexroth
- Bridgestone
- Cargill
- Fiat Chrysler Auto
- Cummins
- Detroit Diesel
- Google
- Hilton Worldwide
- IBM
- Intertape Polymer Group
- Johnson Controls
- Mack Trucks
- Marriott International, Inc.
- MedImmune
- Nissan North America
- Samsung
- Schneider Electric
- Titan America
- Volkswagen
- Volvo Trucks

Updating to *ISO 50001:2018*

ISO 50001:2011 to 2018 Transition Guide now available.

- Practical guidance on what users need to do to "upgrade" their existing management system
- Section-by-section comparison of the 2011 and 2018 versions
- Updates to processes and documentation necessary to meet 2018 requirements
- Link to ***ISO 50001:2011 to 2018 Transition Guide***:

https://betterbuildingssolutioncenter.energy.gov/sites/default/files/attachments/50001_2018_Transition_Guide_2019.03.25.pdf

- "Update on ISO 50001:2018" training course offered by Georgia Tech:

https://pe.gatech.edu/courses/update-iso-500012018

Update to 50001 Ready Navigator to support ISO 50001:2018 structure

- Scheduled release December 2019

New ISO 50001 Resource for Supply Chains

- "How-to" ISO 50001 implementation guide for manufacturers and their suppliers.
- Step-by-step guidance starting within the boundaries of the organization, progressing toward a natural expansion in the supply chain.
- Featured resources:
  - Case studies from ISO 50001 and SEP-certified companies.
  - U.S. DOE ISO 50001 software tools and training approach as part of proven, comprehensive implementation.
- Developed by the Commission for Environmental Cooperation with guidance from U.S. DOE and the energy agencies of Mexico and Canada

http://www3.cec.org/islandora/en/item/11823-supply-chain-energy-efficiency-through-iso-50001-how-guide-your-company-en.pdf

DOE's Spectrum Approach to ISO 50001 Adoption

DOE has developed an energy management continuum that begins with market-driven business culture and culminates in verified savings.

50001 Ready:
Recognition for ISO 50001 conformance using guidance in DOE's 50001 Ready Navigator tool

ISO 50001 Certification

Superior Energy Performance 50001™ (SEP 50001™):
Recognition for ISO 50001 certification and 3rd party verification of energy performance improvements

50001 Ready
U.S. DEPARTMENT OF ENERGY

Superior Energy Performance 50001™
U.S. DEPARTMENT OF ENERGY

16 facilities with 50001 Ready recognition

200-300 (est.) facilities ISO 50001-certified

57 facilities SEP-certified

Verified Results in using ISO 50001

Through Superior Energy Performance…

- Achieving up to $1 million in annual savings
- Significant savings from operational improvements with no capital investment
- Reducing carbon emissions, with third-party verified energy performance improvement
- Savings found to be almost double compared to other corporate leaders

Verification of ISO 50001 through Superior Energy Performance 50001™ Certification

- A voluntary continual energy performance improvement certification program recognizing excellence in organizational energy management practices.
- SEP 50001™ certification based upon third-party verification of:
  - Energy management system (ISO 50001) and
  - Energy performance improvement (ANSI/MSE 50028-1)
- ANAB-accredited program

Superior Energy Performance 50001™
U.S. DEPARTMENT OF ENERGY

=

ISO International Organization for Standardization

Energy Management System

+

Verified Energy Performance Improvement over time

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

Program Status

Version History:

- SEP 2012 and SEP 2017 remain available through transition period
- SEP 50001 (2019) launched

57 Active Certifications

Company (2 or More Certifications)	Certificates #	SEP Enterprise	Countries
Schneider Electric	20	yes	USA, Canada, Mexico
3M Company & 3M Canada	13	yes	USA, Canada
Cummins	8	yes	USA, Mexico
Nissan	2	yes	USA
Hilton	3	--	USA
Volvo Trucks	3	--	USA

Certified Facilities
Bosch Rexroth Corporation
Bridgestone
Des Moines Water Works
Detroit Diesel Corporation
HARBEC, Inc.
Ingersoll Rand
JW Marriott Hotel
MedImmune, LLC

Superior Energy Performance 50001™:
Program Updates & Enhancements

Updated Program Name

Introducing Superior Energy Performance 50001™!
SEP 50001™

- Name aligns with ISO 50001 and 50001 Ready
- Applies to both certification and recognition
- Version: SEP 50001 (2019)

Superior Energy Performance 50001™
U.S. DEPARTMENT OF ENERGY

- New website: *energy.gov/SEP50001*
- SEP 50001 Program Administrator: SEP50001@ee.doe.gov

Key Enhancements

Update	Benefit
Offers multiple-site certification	• Economies of scale
Offers facility within close geographic proximity certified as single site	• Greater flexibility
Uses greater than zero energy performance improvement	• Diversifies sector participation; greater appeal to energy-intensive end users • Reduces perceived barrier to entry to achieve high SEnPIs • Reduces risk of ability to achieve re-certification • Consistent with ISO 50001
ISO 50001 and SEP 50001 audits may be conducted by the same or different certification bodies	• Increases flexibility for facilities • Increases business opportunities for SEP 50001 Verification Bodies
Scorecard is no longer audited for certification; Silver/Gold/Platinum is now separate DOE recognition	• Greater SEP 50001 ownership by certified facilities & desire to scale SEP 50001 across their enterprise. • Increases business opportunities for Verification Bodies: • Allows certified facilities to upgrade recognition levels by recertifying early or obtaining new SEnPI from an SEP Performance Verifier.

Access to SEP 50001 Documents

All SEP 50001 (2019) Program Documents are online:

https://betterbuildingssolutioncenter.energy.gov/iso-50001/sep-50001/certify-and-get-recognized

Links to SEP 2012 and SEP 2017 documents remain available from this page.

ANSI/MSE 50028-1 and ANSI/MSE 50028-2 standards on the ANSI WebStore site:

https://webstore.ansi.org/Search/Find?in=1&st=ANSI+MSE

Simplification to Certification Process and Enhanced DOE Recognition

Simplified Certification; Added DOE Recognition

ANAB-Accredited ISO 50001 and SEP 50001 Program Certification

Achievement period: 1, 2, or 3 years

Organization meets requirements

- ISO 50001 EnMS
- SEP 50001 Verification
  - ANSI/MSE 50028-1
  - Energy Performance Improvement: SEnPI > 0.0%

SEP 50001 Verification Body

- Conducts audit
- Issues SEP 50001 program certificate
- Submits *Energy Performance Improvement Report* to SEP 50001 Program Administrator*

* In multiple site certification, organization completes the reports for non-sampled sites, not Verification Body

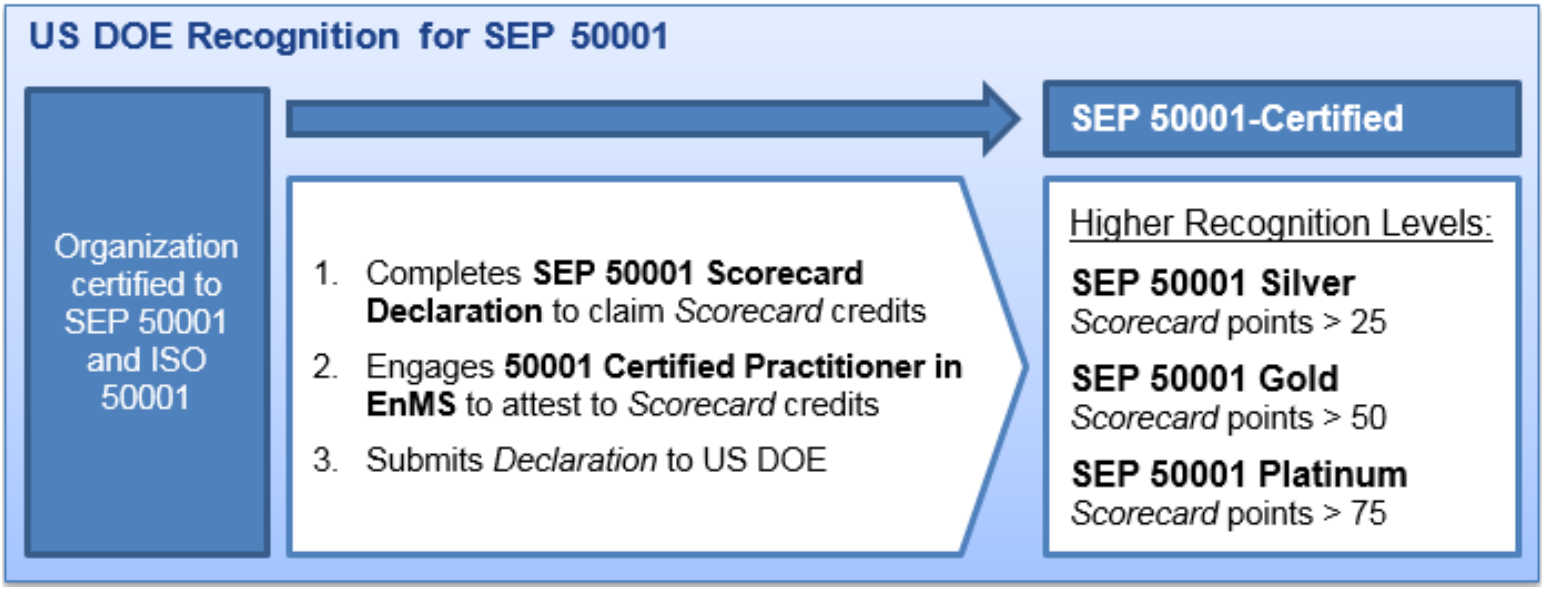
SEP 50001-certified

Aligns with ISO 50001 energy performance improvement requirement

DOE recognition for Silver, Gold, Platinum offered to certified facilities separately.

ANAB-Accredited certification by SEP 50001 Verification Body required for DOE recognition

DOE Recognition for SEP 50001



- DOE recognizes all SEP 50001-certified facilities.
- Silver, Gold, or Platinum designation are higher levels of recognition earned by SEP 50001-certified entities that exceed certification requirements using the *SEP 50001 Scorecard*.
  - SEnPI verified under SEP 2012 or SEP 2017 cannot be used for higher levels of SEP 50001 recognition.
- *SEP 50001 Scorecard*
  - Describes how organizations achieve DOE recognition for Silver, Gold, or Platinum levels for SEP 50001.
  - No longer a normative reference for the ANSI/MSE Standards
  - SEP 50001 program verification audit no longer covers the *Scorecard*

Multiple Site Option Available in SEP 50001 (2019)

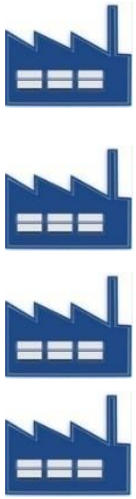
Certification Across Multiple Sites

SEP 50001 program certification of multiple facilities under one central function with EnMS and performance sampling

Central function

ISO 50001 certification audit at enterprise-wide level

and facilities

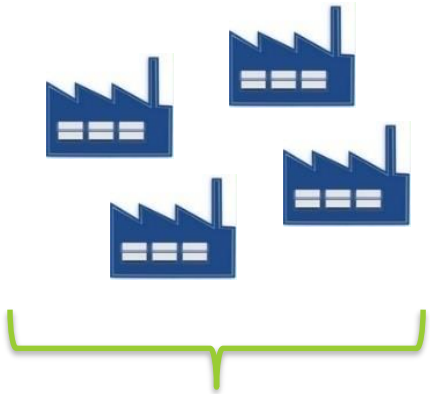


ISO 50001 EnMS and MSE 50028-1 conformance and energy performance improvement sampled at facility level

Reduces overall auditing costs

Single SEP 50001 program certification for non-contiguous, multiple sites within close geographic proximity

Facilities



Multiple sites that are non-contiguous, but within close geographic proximity can be aggregated together as part of one facility and under a common ISO 50001 EnMS and SEP 50001 scope.

Certification of Multiple Sites Under Central Function

SEP 50001 program certification of multiple facilities under one central function with EnMS and performance sampling

Central function

ISO 50001 certification audit at enterprise-wide level

Conducted by Lead Auditor for SEP 50001

and facilities

ISO 50001 EnMS and ANSI/MSE 50028-1 conformance and energy performance improvement sampled at facility level

Energy Performance Improvement Report

Sampled sites:
Conducted by SEP Performance Verifier
Verification Body completes and submits report to Administrator

Non-Sampled sites:
The organization's certified SEP Performance Verifier completes report for each site not sampled.

The Verification Body's Performance Verifier checks reports for p-values, F-test, R^2, RF; confirms that a certified SEP Performance Verifier completed report for each site.

Enterprise Example: Determining Audit Sample

- SEP 50001 uses the sampling methodology as defined in ISO 50003 Annex B.3.
- Example: An organization has 9 sites in its SEP 50001 enterprise. The sample is calculated as follows:

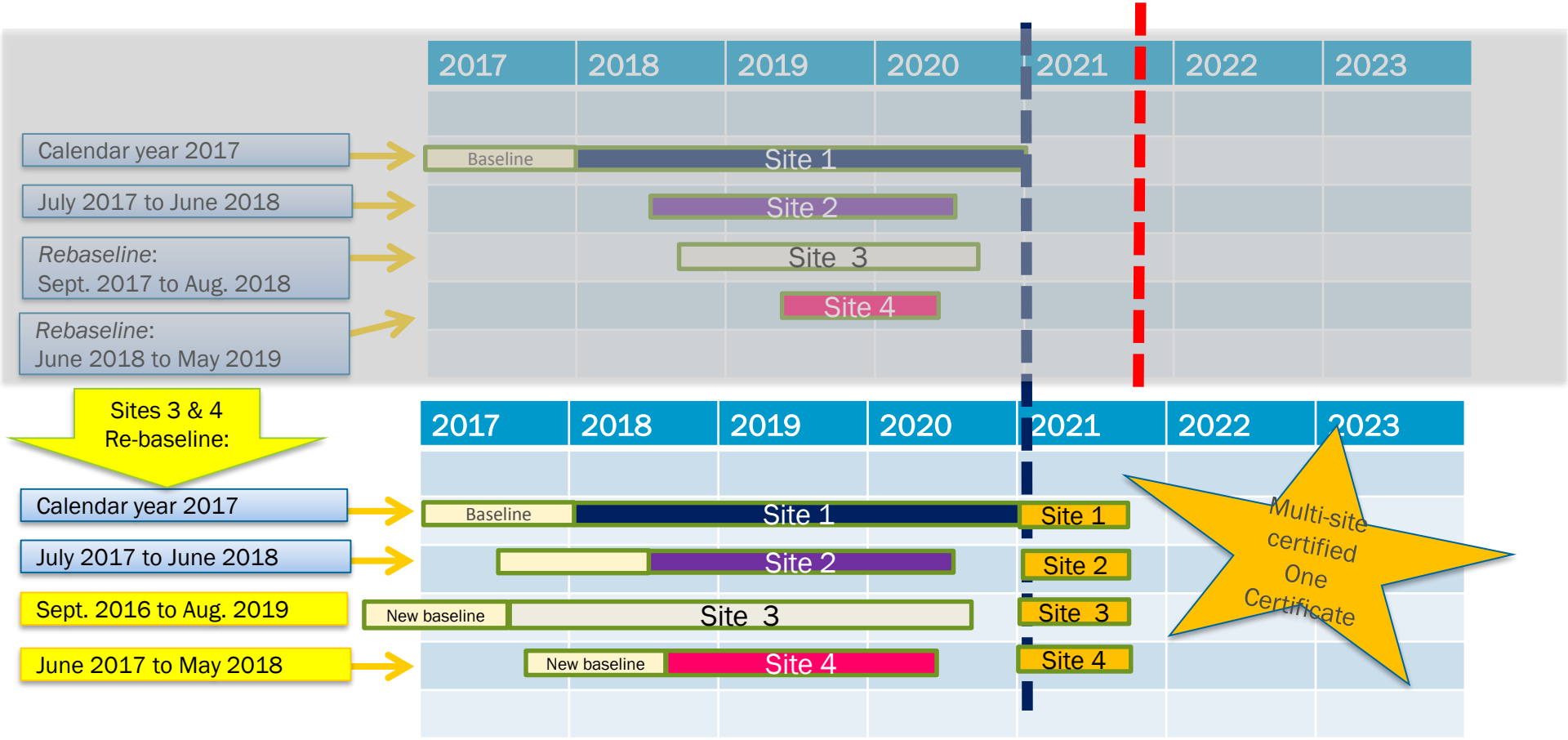
Type of audit	Example calculation of representative sample size
Initial certification	$\sqrt{9}$ = 3 facilities
Surveillance	0.6 $\sqrt{9}$ = 1.8 which rounds to 2 facilities
Recertification	0.8 $\sqrt{9}$ = 2.4 which is 3 facilities

Multi-Site Approach

- Key benefits of multi-sites on single certificate for SEP 50001 (2019):
  - Audit sampling used for both EnMS and energy performance improvement.
  - All sites on same certification schedule
- For initial certification and recertification to SEP 50001, each site:
  - Can choose to use an achievement period of 12, 24, or 36 months
  - Must have valid model that meets the SEP 50001 Program M&V requirements
  - Must have an SEnPI > 0.0
- For a multi-site, the applicant organization's internal SEP Performance Verifier will:
  - Complete an *SEP 50001 Energy Performance Improvement Report* for each site. Provide this to SEP 50001 Verification Body for review
  - Submit these reports to the SEP 50001 Program Administrator
- The SEP VB will only submit reports for the sites sampled.

Example: Combining Certified Sites onto single SEP 50001 Multi-Site Certificate

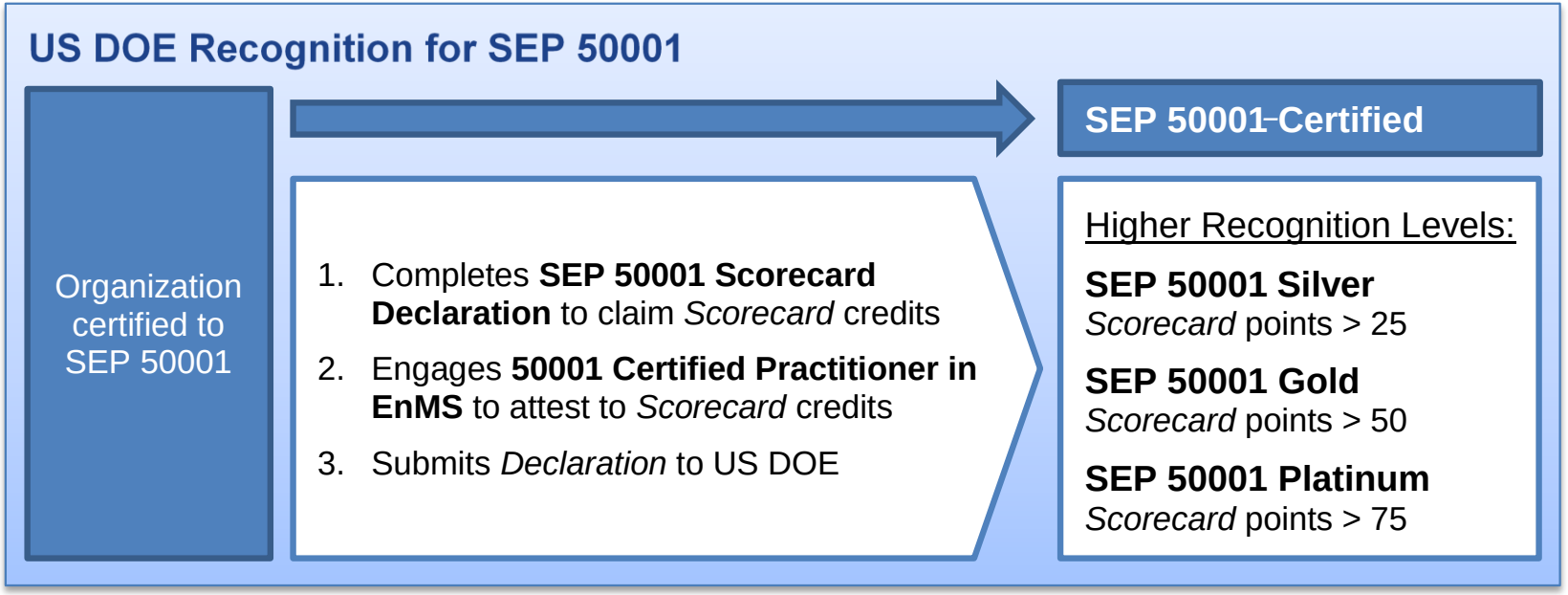
- If a baseline adjustment is needed to produce a valid model:
  - Administrator approval is required. This can be done per site. All sites still need:
    - Achievement period of 12, 24, or 36 months
    - Valid models that meet the SEP 50001 Program M&V requirements
    - An SEnPI > 0.0



DOE Recognition for SEP 50001:

Qualifying for Silver, Gold, and Platinum levels using the *Scorecard*

DOE Recognition for SEP 50001



- DOE recognizes all SEP 50001-certified facilities.
- Silver, Gold, or Platinum designation are higher levels of recognition earned by SEP 50001-certified entities that exceed certification requirements using the *SEP 50001 Scorecard*.
  - SEnPI verified under SEP 2012 or SEP 2017 cannot be used for higher levels of SEP 50001 recognition.
- *SEP 50001 Scorecard*
  - Describes how organizations achieve DOE recognition for Silver, Gold, or Platinum levels for SEP 50001.
  - No longer a normative reference for the ANSI/MSE Standards
  - SEP 50001 program verification audit no longer covers the *Scorecard*

Notable *Scorecard* Enhancements

The *SEP 50001 Scorecard* encourages energy management best practices and advanced technologies. Key changes:

- No longer included in ANAB-accredited certification, not required to be audited by SEP 50001 Verification Bodies, and no longer a normative reference for ANSI/MSE standards.
- Designed to fairly recognize diverse best practices of varied sectors, size of facilities, and length of time participating in SEP 50001.
- New Features
  - Flexibility: Recognition levels achieved through energy performance and other credit categories.
  - Energy performance improvement bonus factors:
    - Past high level of improvement prior to first SEP 50001 program certification
    - Facility within energy-intensive sector
    - ENERGY STAR-certified facility, or corporation within DOE Better Plants
    - SEP 50001 program recertification

Scorecard Credits: 128 Total Points

Credit Categories			Points
Energy Performance Improvement (EP)			**33**
	EP 1	Energy Performance Improvement	**1-33**
Energy Management System (EnMS)			**44**
Energy Data, Monitoring and Measurement (DM)			**6**
	DM 1	Availability of energy review	1
	DM 2	SEnPI quarterly updating	2
	DM 3	Cost centers	2 to 3
Significant Energy Uses (SU)			**12**
	SU 1	Energy balance	2
	SU 2	Designation of significant energy uses	1 to 3
	SU 3	Energy Performance and Life Cycle Costing in Equipment Repair and Replacement Policy	2 to 4
	SU 4	Maintenance system includes energy performance guidelines	1
	SU 5	Monthly Tracking of EnPI Values for Significant Energy Uses	2
Management of Energy Opportunities (EO)			**11**
	EO 1	Energy assessment of energy use(s)	2 to 4
	EO 2	Life cycle costing in evaluating energy performance capital improvements	3
	EO 3	Dedicated capital or operating budgets for energy projects	1 to 4
Organizational Sustainability (OS)			**15**
	OS 1	Resources: energy management team	2
	OS 2	Awards or incentive program for energy	1-2
	OS 3	Energy professional certifications	2 to 4
	OS 4	Strategic planning	2
	OS 5	Include procurement personnel on energy team	1
	OS 6	Share SEP 50001 experience and data	1 to 4

New:

- Points for Energy Performance Improvement
- Advanced Energy Technologies
- Advanced Energy Supply

Credit Categories (continued)			**Points**
Certification, Partnership, and Reporting (CR)			**23**
	CR 1	External Certification and Recognition Programs	2
	CR 2	Corporate Reporting Systems	1 to 2
	CR 3	Promotion of ISO 50001	2 to 4
	CR 4	Third Party Energy Efficiency Program Participation	2
	CR 5	Superior Performance with Benchmarks	1
	CR 6	Share SEP 50001 experience and data	1 to 4
Advanced Energy Technologies (AT)			**8**
	AT 1	Submeters and Smart Sensors and Controls	1 to 4
	AT 2	Other advanced technologies	1 to 4
Advanced Energy Supply (AS)			**20**
	AS 1	Combined heat and power	1 to 10
	AS 2	Use of onsite renewable energy and recovered energy	1 to 10

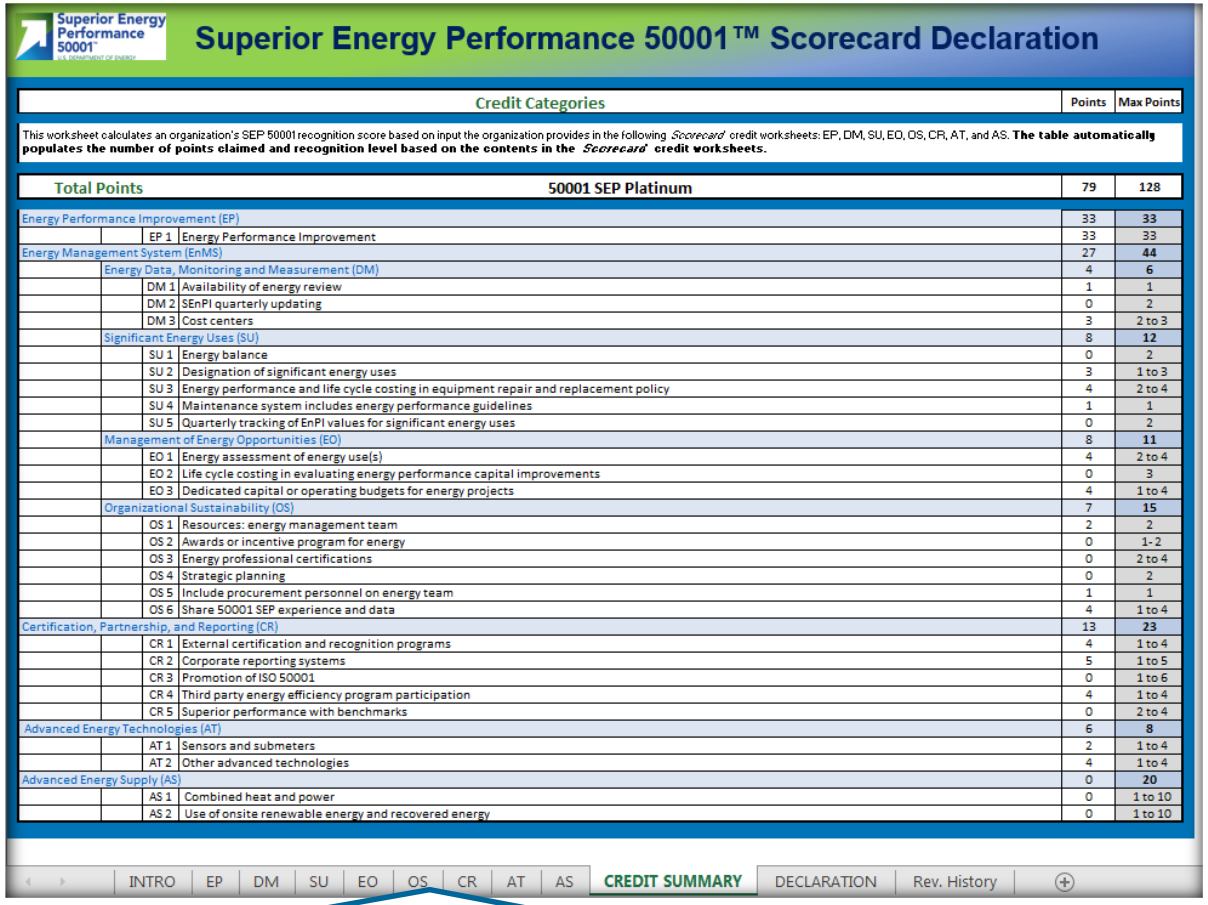
DOE Recognition: Declaration Process

- SEP 50001-certified **facility*** completes a *SEP 50001 Scorecard Declaration* to claim credit points and provide justification.
  - Organization has 50001 CP EnMS (internal or external) attest to total *Scorecard* points achieved for accuracy.
  - 50001 CP EnMS and organization's top management sign the *Declaration.*
- Organization submits *Declaration* to DOE any time during their SEP 50001 certification cycle.
  - DOE spot-checks applications and may arrange phone call with organization to review evidence supporting credits claimed.
- Upon approval, DOE recognizes organization.
  - Recognition lasts until 6 months after the SEP 50001 certificate expiration date.
  - All certified organizations recognized on DOE website and other SEP 50001 promotions.
  - Additional DOE recognition certificates only for higher recognition levels: SEP 50001 Silver, Gold, or Platinum.

* Can be within a multi-site SEP 50001 enterprise

Scorecard Declaration

The *Scorecard Declaration* is the Excel file companion to the *Scorecard* PDF. Organizations certified to SEP 50001 (2019) submit the *Declaration* to seek DOE recognition. Example:



Superior Energy Performance 50001™ Scorecard Declaration

Credit Categories				Points	Max Points
This worksheet calculates an organization's SEP 50001 recognition score based on input the organization provides in the following *Scorecard* credit worksheets: EP, DM, SU, EO, OS, CR, AT, and AS. **The table automatically populates the number of points claimed and recognition level based on the contents in the *Scorecard* credit worksheets.**					
Total Points			**50001 SEP Platinum**	**79**	**128**
Energy Performance Improvement (EP)				33	33
		EP 1	Energy Performance Improvement	33	33
Energy Management System (EnMS)				27	44
	Energy Data, Monitoring and Measurement (DM)			4	6
		DM 1	Availability of energy review	1	1
		DM 2	SEnPI quarterly updating	0	2
		DM 3	Cost centers	3	2 to 3
	Significant Energy Uses (SU)			8	12
		SU 1	Energy balance	0	2
		SU 2	Designation of significant energy uses	3	1 to 3
		SU 3	Energy performance and life cycle costing in equipment repair and replacement policy	4	2 to 4
		SU 4	Maintenance system includes energy performance guidelines	1	1
		SU 5	Quarterly tracking of EnPI values for significant energy uses	0	2
	Management of Energy Opportunities (EO)			8	11
		EO 1	Energy assessment of energy use(s)	4	2 to 4
		EO 2	Life cycle costing in evaluating energy performance capital improvements	0	3
		EO 3	Dedicated capital or operating budgets for energy projects	4	1 to 4
	Organizational Sustainability (OS)			7	15
		OS 1	Resources: energy management team	2	2
		OS 2	Awards or incentive program for energy	0	1-2
		OS 3	Energy professional certifications	0	2 to 4
		OS 4	Strategic planning	0	2
		OS 5	Include procurement personnel on energy team	1	1
		OS 6	Share 50001 SEP experience and data	4	1 to 4
Certification, Partnership, and Reporting (CR)				13	23
		CR 1	External certification and recognition programs	4	1 to 4
		CR 2	Corporate reporting systems	5	1 to 5
		CR 3	Promotion of ISO 50001	0	1 to 6
		CR 4	Third party energy efficiency program participation	4	1 to 4
		CR 5	Superior performance with benchmarks	0	2 to 4
Advanced Energy Technologies (AT)				6	8
		AT 1	Sensors and submeters	2	1 to 4
		AT 2	Other advanced technologies	4	1 to 4
Advanced Energy Supply (AS)				0	20
		AS 1	Combined heat and power	0	1 to 10
		AS 2	Use of onsite renewable energy and recovered energy	0	1 to 10

INTRO | EP | DM | SU | EO | OS | CR | AT | AS | CREDIT SUMMARY | DECLARATION | Rev. History

Contains worksheets to claim credits and specify how facility met credit criteria.

- Credit Summary worksheet (shown) indicates which credits and how many points are claimed
- Calculates SEP 50001 recognition score based on input from credit worksheets
- Declaration tab collects attestations from a top mgmt. rep and the 50001 CP EnMS.

Upgrading DOE Recognition

- Organizations may choose to increase the number of *Scorecard* points earned to upgrade their DOE recognition level.
  - Points may be added; existing points remain valid and are not re-checked.
  - Upgrades allowed only at 12 and/or 24 months after SEP 50001 program certification within three-year certification cycle.
- Scenarios allowing changes to *Scorecard* points:
  - New SEnPI obtained:
    - Early recertification to SEP 50001, or
    - Verification by a certified SEP Performance Verifier (internal or external)
  - Upgrades to other *Scorecard* credits.
- Upgrading recognition levels allows organization to:
  - Provide ability to verify year-on-year energy performance improvement for third-party annual incentives (e.g., utilities).
  - Update SEnPI energy performance improvement to better position themselves for national annual award programs.

SEP 50001 (2019) Transition

SEP 50001 (2019) Transition Guide

- Plan your transition from earlier SEP program versions (2012 or 2017).
- Learn about program enhancements/changes and benefits, transition resources, and transition timing.
- Includes chart of program documents used in each program version with links to each document.
- Provides information for certified personnel and verification bodies.

Available online:

https://betterbuildingssolutioncenter.energy.gov/iso-50001/sep-50001/resources/sep-50001-2019-transition-guide

Transition Timing and Options

SEP 50001 transition is aligned with ISO 50001:2018 transition timeline. Organizations must be fully transitioned by **August 21, 2021**.

ISO 50001	SEP 50001
August 21, 2018: ISO 50001:2018 published; ISO 50001 transition begins	**May 6, 2019**: SEP 50001 (2019) program standards published; SEP 50001 transition begins
February 21, 2019: Accreditation Bodies ready to carry out transition assessments for Certification Bodies.	**August 21, 2019**: Accreditation Bodies ready to carry out transition assessments for Certification Bodies
February 21, 2020: Certification Bodies complete transition with Accreditation Bodies for ISO 50001:2018	**October 1, 2020**: Certification Bodies complete transition with Accreditation Bodies for SEP 50001 (2019) program
February 21, 2020: As of this date, no audits (initial, surveillance, recertification, or transfer) shall be conducted to ISO 50001:2011	**December 6, 2020**: As of this date, no audits (initial, surveillance, recertification, or transfer) shall be conducted to SEP 2012 and SEP 2017.
August 21, 2021: By this date, organizations must be fully transitioned to ISO 50001:2018; certificates to ISO 50001:2011 will be withdrawn	**August 21, 2021**: By this date, organizations must be fully transitioned to SEP 50001 (2019); certificates to SEP 2017 and SEP 2012 will be withdrawn.

Transitioning earlier is recommended.

Trainings

New Trainings Available!

ISO 50001:2018 Update Training

Learn about the recent changes to ISO 50001.
https://pe.gatech.edu/courses/update-iso-500012018

SEP 50001 Specialist Training for 2019

Gain an understanding of 2019 version of the SEP 50001
https://pe.gatech.edu/courses/sep-50001-specialist-training-for-2019

- Trainings recommended for all end users participating in ISO 50001 or SEP 50001
- Trainings required for certified professionals to maintain credential:
  - 50001 CP EnMS*
  - Lead Auditor for SEP 50001
  - SEP Performance Verifier (external)
  - An organization's SEP Performance Verifier (internal) for multi-site certification
- *More details on following slides.*

*Note on 50001 CP EnMS: The SEP 50001 training recommended, but not required. However, 50001 CP EnMS that sign an organization's *Scorecard Declaration* must also take the SEP 50001 Specialist Training for 2019 training.

50001 CP EnMS

CP EnMS renamed, now called “50001 CP EnMS”

Requirements:

50001 CP EnMS Certification	ISO 50001:2018 Update Training
Help organizations implement an EnMS ienmp.org/certifications/cp-enms/	(Once 50001 CP EnMS exam is updated, new entrants will not need this training.)

- The training is required to support organizations using ISO 50001:2018
- 50001 CP EnMS that sign an organization’s *Scorecard Declaration* must also take the SEP 50001 Specialist Training for 2019 training.

Questions?

More Information

Online resources:

energy.gov/50001Ready

energy.gov/SEP50001

energy.gov/ISO50001

- Download infosheets and FAQs
- Find links to the Navigator, EnPI Tool, and EnPI Lite
- Read case studies about certified facilities
- Find M&V guides
- Find reports and studies on energy impact of certification

Contact:

SEP50001@ee.doe.gov

Backup Slides

ISO 50001:2018 Revision

Updates clarify expectations for organizations committed to ISO 50001!

- **Top management**: expanded role and description of responsibilities
- **Continual energy performance improvement**: strengthened demonstration and emphasis on measurable benefits.
- **Types of energy** within the defined scope and boundaries cannot be excluded.
- **Topics with new clarifying details**:
  - Energy review
  - Energy performance indicators and associated energy baselines
  - Energy data collection plan, previously energy management plan
  - Normalization for variables that affect performance.
- **Reorganized content and user friendliness**
  - Adopts ISO's new "high-level structure" that aligns all management system standards for consistency and greater cross-discipline integration

How 50001 Ready Works

1. Implement ISO 50001 principles

Complete 25 Tasks in US DOE's 50001 Ready Navigator free, self-guided online tool

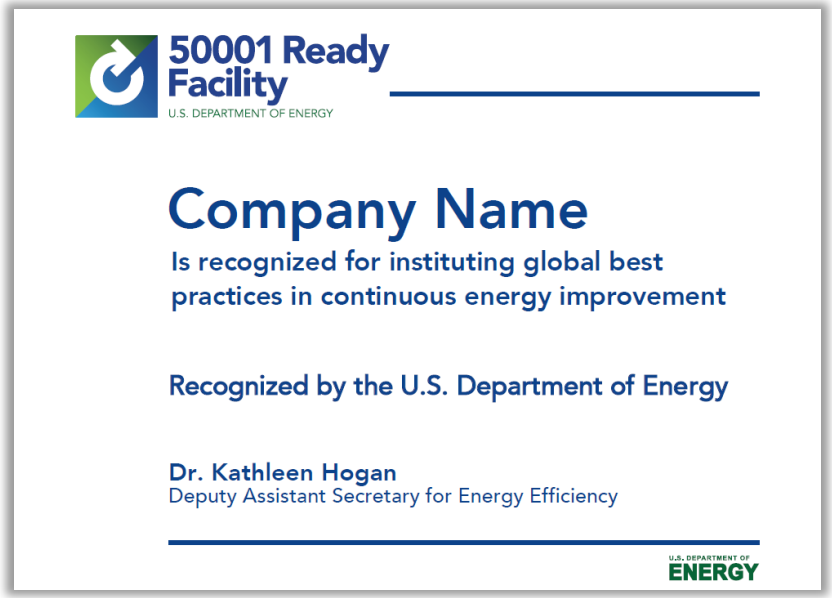
2. Present energy performance

Submit energy performance data. May use EPA's Portfolio Manager, DOE's EnPI Lite or FEMP/OMB energy reporting data

3. Self-attest to 50001 Ready

Sign-off by management of **50001 Ready** implementation and commitment

energy.gov/50001Ready



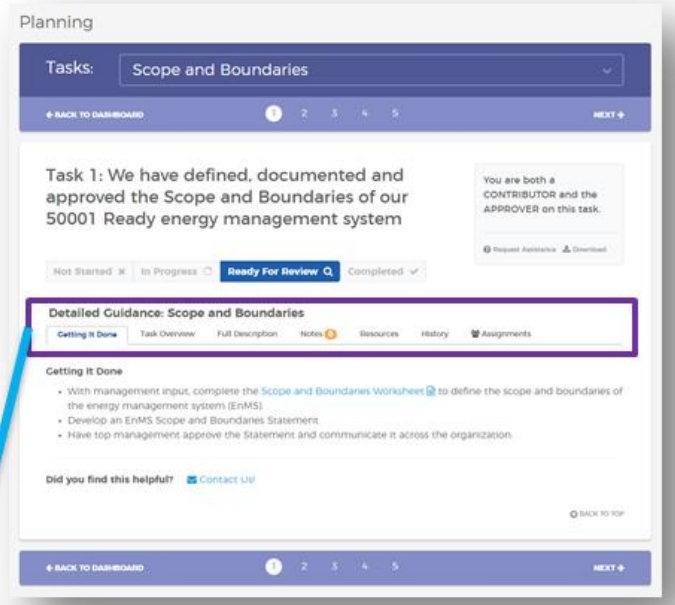
DOE and others recognize 50001 Ready achievement

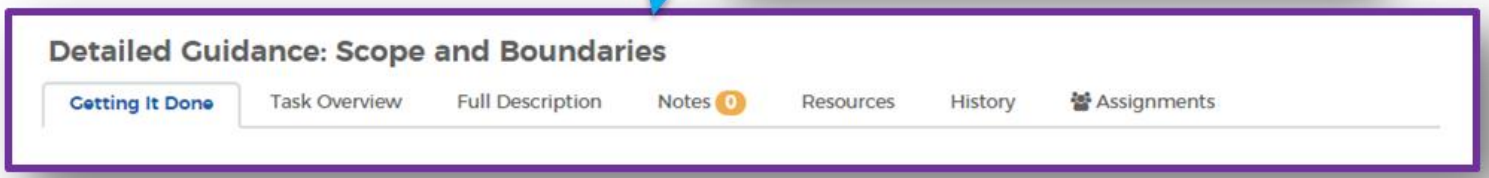
50001 Ready Navigator

- Free online 'Turbo Tax-like' tool, with step-by-step approach to ISO 50001 implementation
- Guidance broken into straight forward sections, including:
  - Getting It Done – what specifically needs to be accomplished
  - Task Overview – how does this task connect with ISO 50001
  - Full Guidance – comprehensive guidance about the task
  - Transition Tips – from other ISO management systems or ENERGY STAR
- Form teams and assign tasks
- Download guidance
- Create multiple projects
- Access over 100 related resources
- Available in English, Spanish, and French

1,350+ users and growing!

navigator.lbl.gov





U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

50001 Ready Navigator, continued

50001 Ready
U.S. DEPARTMENT OF ENERGY

New features!

navigator.lbl.gov

- Multi-Site Platform
  - Currently beta-testing with end users and utilities
  - Central function involvement to coordinate and support activities at multiple linked facilities
  - Reduces time and effort to implement 50001 Ready across multiple facilities
  - Standardizes 50001 Ready system across facilities
  - Centralized repository
- Companion Playbook with task worksheets!
  - Fill out the worksheets for each Task
  - Living document (spreadsheet) that contains the energy data and system
  - Step-by-step guide to establishing and improving energy use
  - On boarding tool for new energy personnel (management or staff)
  - Will contain sample completed forms to show end product example

SEP 50001 (2019) Program Documents

SEP 50001 (2019) Version	SEP 2017 Version	SEP 2012 Version
ISO 50001:2018	ISO 50001:2011	ISO 50001:2011
ANSI/MSE 50028-1:2019	ANSI/MSE 50021-2016	ANSI/MSE 50021-2013
SEP 50001 Program Certification Protocol: 2019	SEP Certification Protocol 2016	SEP Certification Protocol 2012
SEP 50001 Program M&V Protocol: 2019	SEP M&V Protocol 2017	SEP M&V Protocol 2012
	SEP Scorecard 2016	SEP Industrial Facility Best Practice Scorecard 2012
	GTESS Interpretations on SEP Documents	GTESS Interpretations on SEP Documents
		Policy Notification for Commercial Buildings
ANSI/MSE 50028-2:2019 (for SEP VBs)	ANSI/MSE 50028-2016 (for SEP VBs)	ANSI/MSE 50028-2012 (for SEP VBs)

Certification Bodies, Verification Bodies

Facilities certified to ISO 50001 by a non-SEP 50001 Verification Body may now work with an SEP 50001 Verification Body more easily.

- **Scenario 1**: Certification Body for ISO 50001 applies to become a SEP 50001 Verification Body.
- **Scenario 2**: Certification Body transfers ISO 50001 certificate to SEP Verification Body.
- **NEW: Scenario 3***: Certification Body issues ISO 50001 certificate. SEP 50001 Verification Body issues SEP 50001 (2019) Program certificate.
  - Facilities with a valid ISO 50001 certificate may add SEP 50001 via scope extension, typically during recertification audit.
  - End users can maintain different certification dates for ISO 50001 and SEP 50001.
  - SEP 50001 Verification Bodies have access to wider customer pool of ISO 50001-certified facilities; end users no longer restricted to Scenarios 1&2.

* Only if SEP 50001 Verification Body allows for this option

SEP Performance Verifiers

Credential name remains the same

SEP Performance Verifier Certification
Verify energy performance ienmp.org/certifications/sep-performance-verifier/ Prerequisite: 50001 CP EnMS certification

Existing SEP Performance Verifiers: to transition credential to SEP 50001 (2019), take the following trainings with knowledge checks and achieve an 80% passing score

- ISO 50001:2018 Update Training
- SEP 50001 Specialist Training for 2019

Lead Auditor for SEP 50001

- The SEP Lead Auditor credential will be sunsetted on date that audits no longer allowed for SEP 2012 and SEP 2017; to be replaced by the **Lead Auditor for SEP 50001.**
- For this Lead Auditor for SEP 50001, an auditor's certification body verifies the auditor has achieved the following:
  - Certification to Energy Professionals International ISO 50001 Lead Auditor credential

EPI ISO 50001 Lead Auditor Certification
Dual focus on EnMS development and data-driven improvements in energy performance https://ienmp.org/certifications/epi-iso-50001-lead-auditor/

  - Completed the trainings with knowledge checks and achieve an 80% passing score
    - ISO 50001:2018 Update Training
    - SEP 50001 Specialist Training for 2019

How to Earn Energy Performance (EP) Points

EP1 Credit Points = AEPI x EI x (4 + A + B + C)

Maximum of 33

AEPI $(AEPI) = \frac{\text{verified energy performance improvement (\%)}}{\text{achievement period(s) (months)}} x\ 12$

Factor EI: For facilities within energy-intensive sectors:

Wet corn milling, sugar, wood products, paper, petroleum, chemicals, non-metallic minerals, and primary metals

Factor A: For current, relevant ENERGY STAR certifications or contribution to organization's US DOE Better Plants.

Factor B: Related to facility's prior 10-year energy performance improvement—for first-time, initial certification.

Factor C: For prior SEP 50001 program certifications

***Scorecard* defines each factor and specifies points allowed in more detail.**

Example of EP1 Credit Calculation

A steel mill achieves first SEP 50001 program certification in Dec. 2019

- SEnPI is 1.5% over 3-year period
- Currently ENERGY STAR certified within top quartile of benchmarked sector
- Prior energy efficiency improvement = 12% in the 10 years immediately preceding SEP 50001 baseline period

- AEPI = 0.5 for annualized SEnPI
- EI=3 as the defined credit multiplier for energy-intensive sectors
- A=3 for its current ENERGY STAR certification
- B=5. defined credit multiplier for prior 10-year energy efficiency improvements exceeding 10%
- C=0 for first SEP 50001 program certification

EP1 Credit Points = AEPI x EI x (4 + A + B + C)

Maximum of 33

Steel Mill's EP1 Credit Points = 0.5 x 3 x (4 + 3 + 5 + 0) = 18