California SEM Program Design Guide
Core SEM and Graduate Pathway

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SERGIODIAS CONSULTING LLC

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OVERVIEW

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1. Introduction

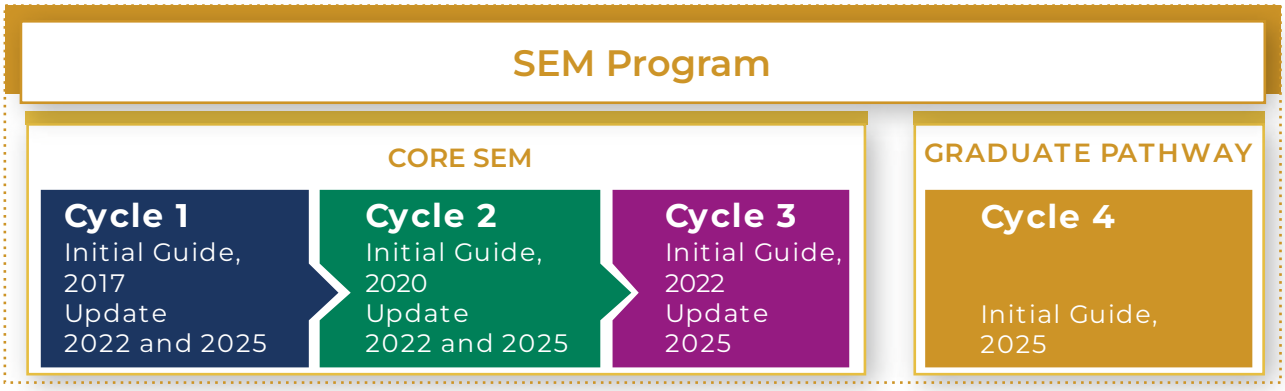
1.1 Program Overview

1.1.1 Background

California's Investor-Owned Utilities (IOUs), San Diego Gas and Electric (SDG&E), Pacific Gas and Electric Company (PG&E), Southern California Gas Company (SCG), and Southern California Edison (SCE), as well as Marin Clean Energy (MCE) began administering Strategic Energy Management (SEM) programs as part of their respective industrial energy efficiency program portfolios as early as 2017. These SEM programs are regulated by the Energy Division (ED) of the California Public Utilities Commission (CPUC).

The programs were originally launched using a common design guide for the first two-year engagement, with an envisioned total of six years of engagement divided into three two-year "cycles." The initial California Industrial SEM Design Guide[1], commissioned by the aforementioned IOUs in 2017, focused on the first of these three cycles. A second guide developed the second two-year cycle in 2020, while in 2022 a new version of the guide developed the third cycle, updated the previous two cycles, and combined all three into one document. In this version of the Guide those three initial cycles are called Core SEM.

This current update to the guide has two purposes: **1)** To develop concepts for a fourth cycle that can be used with customers that complete the initial three Core SEM cycles, and **2)** To update the concepts and requirements of the previous guide in order ensure the program's success as it expands beyond the industrial sector. This version of the guide supersedes past versions.



This document was developed with input from CPUC staff and evaluation contractors, SEM program administrators, and SEM program implementation contractors. It incorporates concepts and recommendations derived from evaluations and studies conducted by the CPUC and California SEM program administrators.

1.1.2 Core SEM Objectives

The Core SEM cycles are designed to be delivered to a customer through a progression of educational modules and site-specific activities that take place over each of the two-year cycles. The progression of educational modules and site-specific activities build upon each other within and between the cycles.

This long-term, six-year approach gives the program the ability to continually develop the customers' understanding, skills, and capabilities relative to energy while consistently delivering energy savings. The six-year duration also allows the program to elevate activities generally provided by other SEM programs (e.g. treasure hunts, energy maps, employee awareness) into well established and defined business practices that can be continued by the customer without program support once their SEM Program engagement has ended. This approach means that the ability of a customer to manage their energy by the end

[1]California Industrial SEM Design Guide Version 1.0, 2017, Sergio Dias Consulting

of the program's sixth year should be much improved from their ability to manage energy at beginning of the first year.

The primary objectives of the Core SEM design, looked through the six-year lens, are:

1. Acquiring cost-effective, measurable energy efficiency savings **by,**
2. Helping customers develop a systematic approach to managing energy **while,**
3. Ensuring the customer can manage the system they have developed and continue saving energy after program completion.

An additional consideration is that for many customers, "managing energy" will not necessarily mean only managing "energy efficiency", or energy consumption. Customers, especially as they mature through Core SEM, can and should use their energy management business practices as a means to manage all the energy-related objectives that might be important to them, such as energy consumption reduction, energy demand reduction, the time at which energy is consumed, and energy-related Greenhouse Gas (GHG) emissions reductions, among others. This broader view of energy management will become important as both customers and program administrators look to meet broader energy-related objectives, such as the CPUC's Total System Benefits approach, Integrated Demand Side Management (IDSM) concepts, zero net-energy targets, GHG reduction targets, peak load reduction, etc. Hence, a secondary objective of the Core SEM design, through required education and optional activities and as part of their energy management practices, is:

> **1.** Ensuring customers have the ability to integrate a wide-variety of energy-related opportunities into their energy management decisions.

1.1.3 Graduate Pathway Objectives

The Graduate Pathway is a continuation of the SEM Program for organizations that have completed the Core SEM cycles. It supports participants in moving beyond the Core SEM objectives and is structured around three objectives:

1. Supporting the continued execution of energy management business practices and the implementation of previously defined opportunities.
2. Creating new advanced and long-term energy opportunities.
3. Facilitating community-level networking and sharing.

All participants completing the Core SEM cycles may join the Graduate Pathway as long as they meet the entry requirements.

Although the Graduate Pathway currently includes one cycle, future updates to the design may add cycles.

1.1.4 How to Use this Document

This document is divided into four sections.

1. The first section provides an overview of the document as well as an overview of the elements that make up the design and context for why and how they are used.
2. The second section provides the details (objectives, targets, sequence, requirements, etc.) for Core SEM.
3. The third section provides the details for the Graduate Pathway.
4. The fourth section provides details on supporting documents or content that complete the design.

The guide is intended to be used by all program stakeholders, including CPUC staff and evaluation contractors, SEM program administrators, and all SEM program implementation contractors so that there is a consistent application of the SEM program requirements. It is assumed that all stakeholders have experience with, and understanding of, SEM programs. Although this design leverages best practices from other SEM programs throughout North America, it integrates multiple concepts that are not common in other SEM programs, such as the intentional progression of business practices and education on Integrated Demand Side Management (IDSM) and greenhouse gas (GHG) reductions, in a unique six-year approach. The guide should be read in its entirety prior to implementing Cycle 1 to ensure that the program theory and its application are well understood.

The Design Guide provides requirements for when education or site-specific activities should be introduced. PAs or their implementation contractors may wish to provide some activities earlier than required based on customer needs or capabilities, SEM Coach expertise, or SEM Coach recommendations. However, care should be taken to ensure that the sequencing of the education and site-specific activities are considered and moved together and that the Cycle or Phase into which these education or site-specific activities are moved to has a balance between the activities and the time to implement those activities.

This guide is not intended to be a customer-facing document. The program administrator and/or implementation contractor must ensure that the content, language, presentation, and format of any activities presented to customers are uniquely relevant and meaningful to each customer and the understanding of those attending the activity. For example, the language used at a kick-off meeting with the site manager at a large pulp and paper facility would vary significantly from the language used at an employee training activity at a hospital.

This document is intended to be used with the companion California SEM M&V Guide (M&V Guide) Version 4.0 or newer. The M&V Guide contains details on program reporting requirements that are referenced in this guide.

1.2 Design Overview

1.2.1 Key Concepts Included in the Core SEM Design

1.2.1.1 Core SEM Three Cycle Approach

The approach introduced in the Core SEM section of the design guide can be thought of as a six-year curriculum broken down into three, two-year cycles. The three-cycle approach is intended to be a customer journey of six years with three discreet steps that lead a customer from a basic level of ability to manage energy in Cycle 1, to a moderate level of ability in Cycle 2, to an advanced level in Cycle 3. Each of the cycles builds upon the knowledge and experience gained in the last cycle, with the end goal of the third cycle being a customer that can manage and save energy with limited or no program support.

The two-year cycles are meant to provide both the customer and the program the ability to answer two questions before committing to another two-year cycle:

1. Is the customer fulfilling the program's requirements and engaging in a way that justifies the program's continued investment in that customer?

2. Is the customer a good fit for the requirements of the upcoming Cycle?

For a variety of reasons, not all customers will be able to complete all three cycles while others may be able to progress more quickly. More details on the three-cycle structure can be found in section 1.2.1.1. Core SEM Three Cycle Approach.

1.2.1.2 SEM Business Practices

1.2.1.2.1 "Business practices" and "management systems"

Whether formal or not, documented or not, all businesses follow business practices to achieve intended outcomes. As an example, in the industrial sector quality is one of the highest priority outcomes and one for which business practices or processes are typically developed. A site might have business practices for what types of inspections there should be, practices for where inspections should be placed, practices for what data to collect and how to analyze it, and practices for how to ensure inspectors are trained to conduct inspections, among many others. Those practices, when considered together, make up that site's "quality management system". This "system" may have been consciously designed and documented or may be the result, over time, of various reactions to quality issues or customer requirements that were implemented solely based on institutional knowledge (e.g., without documenting the practices or "system"). The rigor, effectiveness, and repeatability of the quality management system can vary greatly from company to company and site to site.

For energy, all facilities have some energy-related business practices, which can be as simple as paying energy bills or as complex as an ISO 50001-certified approach. However, beyond tracking energy consumption at some level, the vast majority of US companies have not consciously developed a more holistic "system" to manage energy, as energy is typically not one of the expenses they understand they can manage. The SEM program introduces customers to the concept that, like quality or customer satisfaction, energy is something that can be managed through business practices and that, similar to quality, those business practices can be consciously developed to create a system.

> In this guide, we use the term "business practice" or "energy management business practice" to describe one specific practice such as "identifying and prioritizing improvement opportunities." We use the term "energy management system" to describe the purposeful development and grouping of business practices to create a systematic approach to managing energy with a stated objective.

The design objective, relative to energy management, is to progress the customer's ability to manage their energy through the three, two-year cycles. Through this progression, each cycle introduces different business practices. The goal for defining the energy management system (EnMS) at each cycle is to provide clarity for all the SEM program stakeholders on the business practices that should be adopted by customers at the end of the cycle.

One thing to keep in mind is that although the EnMS can be used to manage any energy objectives (e.g., energy generation or storage), the primary goal of the program is cost-effective energy efficiency savings and these savings should be the primary, though not sole, focus of program implementation.

1.2.1.2.2 EnMS Structure

Starting in the 2020 update, the California SEM program used the EnMS structure provided by the US Department of Energy (US DOE) through its 50001 Navigator (Navigator) as the base for the business practices taught to customers. Navigator is used as the base structure for the EnMS for the following reasons:

1. It is publicly available and maintained,
2. It is provided at no cost,[2]
3. It provides a defined structure for a complete EnMS, and
4. It is based on the internationally recognized and accepted ISO 50001:2018 standard.

It is important to not confuse the fact that the design uses the Navigator "structure" and does not "require" that customers adhere to all the Navigator guidance. The full implementation of Navigator, US DOE's 50001 Ready program recognition, or certification to ISO 50001:2018 is not mandated in any way as part of the California SEM program design.

> 50001 Navigator is a US DOE developed tool, presented through a website, that separates concepts from the ISO 50001 standard into 25 tasks, which are further divided into 114 "getting it done" actions or sub-tasks. The website explains how to complete each of those actions, provides templates for documenting the tasks and actions, and allows a customer to manage their progress through the site. A customer that completes the 25 tasks and their accompanying actions can optionally self-attest and get "recognized" by US DOE. That site would be "ready" to pursue an ISO 50001 certification with limited additional work if they choose to seek one.

50001 Navigator translates the requirements of the ISO 50001 standard into guidance and organizes the materials into manageable tasks and suggested actions. However, at this time, it does not:

1. Group a subset of the tasks into simpler or partial energy management systems that can be used to progress an organization through a multi-year SEM program.
2. Prioritize the tasks or order them in a logical sequence for SEM program implementation.
3. Provide guidance for developing the energy management system over time.
4. Provide guidance for using the tasks in program activities.

The SEM Program Design addresses the above items by: **1)** Grouping the tasks into simpler management system definitions for each of the three 2-year Cycles, **2)** Prioritizing the tasks so that they are presented in an order that fits the energy management system defined at each Cycle, **3)** Providing an overall view of the desired energy management system, and **4)** Providing sequenced activities for completing the tasks in each cycle.

At a high level, the goal of the energy management system at each cycle is described below:

Cycle 1
Operational Energy Management

Engage a core set of employees to learn the basics of an EnMS and achieve quick initial savings.

Cycle 2
Practical Energy Management

Engage a broader base of employees to further develop the EnMS and implement more complex projects that achieve deeper, more sustainable savings.

Cycle 3
Energy Management System

Engage top management and a broad base of employees to develop processes that lock in the EnMS and continuously save energy.

[2]Navigator guidance is held in perpetuity in the public domain under a no cost creative commons license and is available at https://navigator.lbl.gov.

To achieve each Cycle's goal, tasks are sequenced, introduced, and implemented through both educational and site-specific activities. All educational modules and site-specific activities reference the Navigator tasks that they are based on.

1.2.1.3 Customer Ability to Self-Manage

One of the objectives of the SEM Program is that customers have the ability to manage their energy management business practices after program completion. This does not mean that customers have to "do" all the elements of their business practices, but rather that they are able to "manage" those elements.

All Core SEM activities should be used as an opportunity to further the customer's ability to manage the associated business practice and not be thought of as tasks to be completed by the implementation contractor. This is important for all tasks in all Cycles.

This version of the Design Guide introduces the concept of a customer's ability to self-manage and introduces a "target" within each Cycle to rate the customer's ability to manage each business practice introduced in that Cycle.

1.2.1.4 IDSM

Integrated Demand Side Management, or IDSM, has been a high priority for the CPUC and energy efficiency program administrators (PAs) for many years. IDSM was included in the CPUC's 2008 and 2011 Strategic Plans, with the 2011 plan stating the IDSM vision as:

> "Energy efficiency, energy conservation, demand response, advanced metering, and distributed generation technologies are offered as elements of an integrated solution that supports energy and carbon reduction goals immediately, and eventually water and other resource conservation goals in the future."[3]

A March 2013 CPUC fact sheet[4] defined IDSM Customer Strategies and Impacts as:

> "Ultimately, customers do not think in terms of regulatory proceedings. When it comes to energy, they think in terms of energy savings, cost reductions, operational improvements, greenhouse gas reductions and return on investment. IDSM offerings can lead to a smoother decision making process for customers, allowing customers to lower their costs, maximize incentives, and optimize their return on investment. IDSM is an important strategy for utility customers and utilities alike.
>
> Integration can be accomplished through marketing and delivery of the right combinations of programs and messaging at the right time to the right customer. Implementation of integrated projects is driven by the customer who understands and values a holistic program approach to energy savings. Ultimately, it is important to educate customers, regulators, program designers, and implementers on integrated economics, approaches, successes, and drivers."

[3]The 2011 Strategic Plan is available at https://www.cpuc.ca.gov/-/media/cpuc-website/files/legacyfiles/c/5303-caenergyefficiencystrategicplan-jan2011.pdf
[4]https://www.cpuc.ca.gov/-/media/cpuc-website/files/legacyfiles/2/5417-2013-14-idsm-program-fact-sheet.pdf

CPUC decision 12-11-015 clarified that PAs can "utilize appropriate EE funds as "backstop" funding of IDSM tools to ensure that they provide customers with information that supports all demand-side resources (such as marketing, emerging technologies, integrated audits, piloting of integrated projects, etc.), consistent with IDSM objectives." Additionally, an Assigned Commissioner's Ruling (ACR) issue on October of 2008 identified "priorities for implementation of IDSM activities:

1. *comprehensive and coordinated marketing, packaging and delivery including outreach and education of customers and presentation of program options in a unified fashion to customers,*

2. *operational improvements including offering integrated audits and recommendations, combining EE, DR, DG, and other applicable incentives in the same project,*

3. *optimization including equipment that enables multiple DSM options (EE, DR, etc.) and provide synergy across DSM program types" (p.7).*

Although the term "IDSM" is commonly used to refer to specific offerings that combine different demand side technologies (e.g., energy efficiency, demand response, on-site generation, energy storage, etc.), the SEM program focuses on ensuring that education on energy management business practices includes a view that is broader than only energy efficiency. The objective is to provide customers with education on why and how to integrate IDSM concepts into their energy management business practices and to ensure that all activities support IDSM concepts.

The key is for customers to manage all their energy-related objectives and opportunities in an integrated manner, considering the various economic and business impacts of their actions relative to each other.

The guidance for each cycle includes details on how IDSM concepts should be introduced through the educational modules and outlines options for the PAs to provide technical support through site-specific activities. Although IDSM is optional for site-specific activities, it is highly encouraged by CPUC Staff that PA's provide them as an option to their customers.

1.2.1.5 GHG

For nearly 20 years, the state of California has had aggressive GHG reduction goals. One early source of these goals was the California Global Warming Solutions Act of 2006 (Assembly Bill 32). The 2011 update to the California Energy Efficiency Strategic Plan referenced that bill and recognized the importance of energy efficiency in meeting those GHG goals. The plan stated that, according to the California Air Resources Board, energy efficiency could be the second largest component in meeting the state's emissions reduction goals.[5] The reason for this is that in California, the consumption of energy is the biggest source of GHG emissions, accounting for nearly 80% of all emissions.

In California, transportation is the biggest source of all emissions, accounting for nearly 40%, followed by the industrial sector (nearly 23%, including process emissions) and the electricity sector (16%). The commercial and residential sectors combined account for nearly 14% of emissions.[6] Except for a few subsectors (refineries, oil and gas, cement, agriculture), the majority of California's economy's primary source of emissions is through its consumption of energy.

[5] https://www.cpuc.ca.gov/-/media/cpuc-website/files/legacyfiles/c/5303-caenergyefficiencystrategicplan-jan2011.pdf
[6] California Air Resources Board "*California Greenhouse Gas Emissions for 2000 to 2019, Trends of Emissions and Other Indicators*"

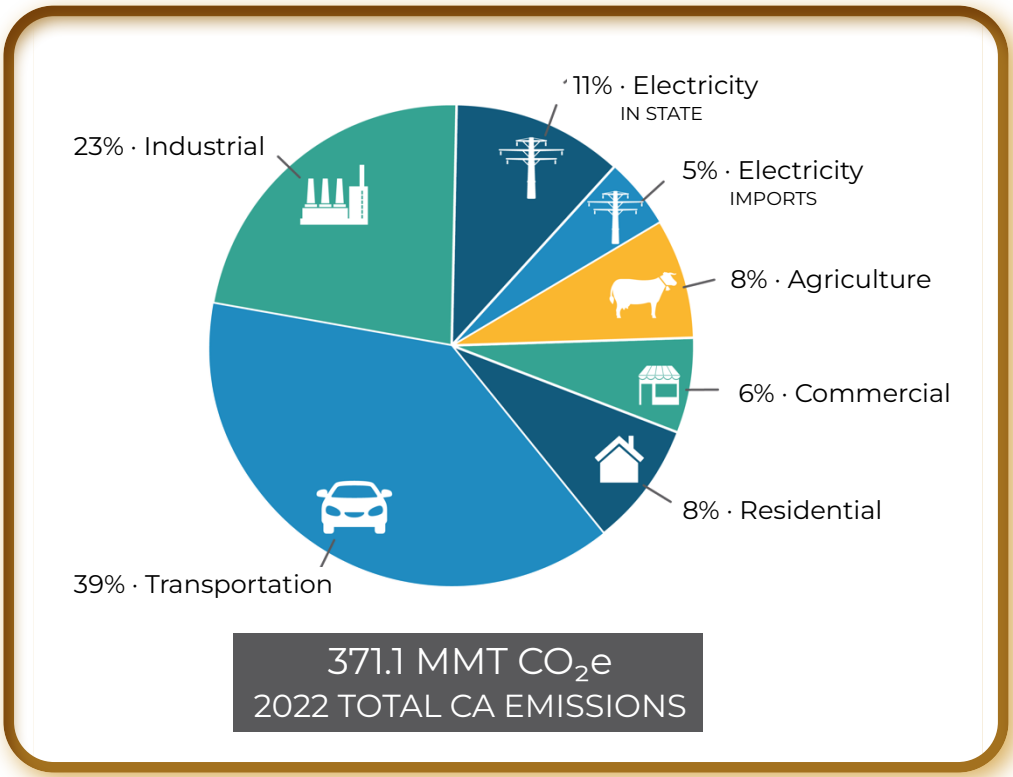


Figure 1- California 2022 GHG Emissions[7]

Currently, any company in California that emits over 10,000 metric tons of CO2 equivalent (CO2e) annually falls under the mandatory reporting of GHG emissions required by AB 32 and overseen by California Air Resources Board (CARB). In addition, CARB also manages an emissions trading program for companies that emit over 25,000 metric tons of CO2e (about 450 entities) that started in 2013 and decreases allowable emission levels by each year.[8]

Companies that fall under either of CARBs GHG schemes as well as companies that have internal GHG reduction goals are likely interested in understanding how the SEM program aligns with their GHG emissions reduction efforts. In addition, companies that may not have GHG emissions reductions as a key objective today are likely to be considering them or are likely concerned about when they will have to include GHG emissions reductions as an objective.

The SEM program's GHG emissions objective, similar to that of IDSM, is to provide customers education on why and how to integrate GHG concepts into their energy management business practices.

Similar to IDSM, each cycle includes details on how GHG emissions concepts should be introduced through the educational modules and outlines options for the PA to provide technical support through site-specific activities for the implementation of those concepts. Also similar to IDSM, it is highly encouraged by CPUC Staff that PA's provide GHG reduction site-specific activities to their customers as an option.

1.2.2 Key Activities Included in the Core SEM Design

1.2.2.1 Educational Modules

Educational modules provide the structure for the knowledge and understanding the customer should achieve through an educational activity. The modules are structured with four sets of learning objectives based on the topic, which is usually includes one or more tasks from Navigator. The objec-

[7] California Air Resources Board https://ww2.arb.ca.gov/ghg-inventory-graphs
[8] https://ww2.arb.ca.gov/our-work/programs/cap-and-trade-program/about

tives are described as questions which the customer should be able to answer after completing the in the educational activity. Educational modules include four sets of learning objectives:

1. *Program related objectives.*

These objectives help the customer understand the program related context for the topic or task.

2. *EnMS related objectives.*

These objectives relate to business practices are based on a Navigator task or tasks.

3. *IDSM related objectives.*

These objectives help the customer understand how to apply the learning on the topic or task to broad energy-related objectives.

4. *GHG related objectives.*

These objectives help the customer understand how to apply the learning on the topic or task to energy-related GHG emissions.

These learning objectives are detailed in the Educational Modules section of each Cycle. The sequence for the educational modules and site-specific activities are outlined at the beginning of each cycle.

Turning the educational module guidance into educational activities will be up to the Program Administrator and implementation contractor staff. This includes the format (i.e., on-line or face-to-face), the delivery (e.g., pre-recorded, live, interactive, mix), the participants (i.e., one-on-one or cohort or mix), the number of activities (e.g., one session or multiple sessions), and the length of each educational activity. This allows the implementer flexibility in tailoring the educational activities to different sectors and type or number of attendees.

Educational modules should follow the sequence specified provided within each Cycle. If changes are made to the sequence, the changes shall consider the effect to both educational modules and site-specific activities. Examples or cases where a change in the sequence could be considered include highly seasonal participants (e.g., food processors or schools), or a participant experiencing a dramatic event (e.g., temporary extreme weather shut down).

1.2.2.2 Site-Specific Activities

Site-Specific Activities are activities that are implemented individually with one site. The majority of these activities help the site apply what they have learned in an Educational Module to their specific situation and needs. This support can vary significantly from participant to participant and may depend on a variety of factors, including the customer's objectives, priorities, expertise, infrastructure, and available resources, as well as the implementation contractor's expertise, priorities, available resources, etc.

Each cycle outlines the required sequence for each activity. As mentioned earlier, changes to the sequence are allowed in special cases and, if allowed, shall be approved by the PA. If changes are made, the changes shall consider the effect to both educational modules and site-specific activities. There is no requirement for the Site-Specific Activities to be held in person or on-line. If needed, Site-Specific Activities can be repeated throughout a cycle or in following cycles.

Optional steps provided within the site-specific activities are to be provided at the discretion of the PA. These steps should not be offered to a customer unless the PA has explicitly made a decision to provide them.

1.2.3 Key Concepts included in the Graduate Pathway Design

The Graduate Pathway builds on the Core SEM design. It emphasizes continued action by customers, sharing of experience and knowledge between the wider community of customers, and the development of long-term energy-related plans. Below are the key concepts that underpin the design of the Graduate Pathway.

1.2.3.1 Eligibility Requirements

Although any customer that completes the Core SEM three cycles can be considered for the Graduate Pathway, only customers that demonstrate the ability to manage their energy efforts are eligible to participate. This ability is measured through an assessment of the customer's implemented energy management business practices and a separate assessment of their ability to manage those practices. Details on the assessments and the eligibility requirements can be found in section 3.1.1.4 Cycle 4 Eligibility Requirements

1.2.3.2 Shift from Development of an EnMS to Management of the EnMS

While Core SEM focuses on helping customers develop a comprehensive energy management system that can lead to significan energy savings, the Graduate Pathway focuses on helping customers continue to manage and implement that comprehensive system so they can realize the full savings potential. Key activities help customers maintain their ability to manage energy and continue to identify and implement energy performance improvement actions. These activities are summarized below in section 1.2.4.1. Core SEM Continuity Support.

1.2.3.3 Long-Term Planning

The Graduate Pathway also introduces activities to help organizations create actionable plans that align their SEM activities with long-term organizational objectives. These activities provide customers guidance and support in developing the energy-related plans that support organizational objectives such as long-term GHG reductions or long-term capital planning. These activities are summarized below in section 1.2.4.2. Advanced Energy Support.

1.2.3.4 Community Development

The Graduate Pathway introduces activities to help organizations learn from each other, share lessons, and stay ahead of industry and state trends, not as individual companies or small cohorts but as a larger community of SEM practitioners with similar needs or interests. Key activities help customers connect with each other, learn from each other, and learn from experts. These activities are summarized below in section 1.2.4.3. SEM Community Development.

1.2.4 Key Activities included in the Graduate Pathway Design

There are three key activities included in the Graduate Pathway Design.

1.2.4.1 Core SEM Continuity Support

Core SEM Continuity Support are a set of activities that help customers continue to manage their energy and continue to implement energy performance improvement opportunities, ensuring continuity from the Core SEM Cycles. The SEM Coach and implementation contractor staff check-in with the customer on at least a quarterly basis to help the customer with any questions or issues regarding their business practices, their energy performance, or their energy performance improvement opportunities and to assess whether the customer is likely to meet any customer or programmatic targets. If new opportunities are needed, the implementation contractor also provides a Treasure Hunt to help identify those opportunities. Details on these activities can be found in section 3.1.2. Core SEM Continuity Activities.

1.2.4.2 Advanced Energy Support

Advanced Energy Support are a set of activities that help customers create long-term energy plans that align with the organization's long-term GHG reduction, capital planning, or other key long-term objectives. These activities help customers create long-term plans, such as an electrification or GHG emission roadmaps or plans, as well as providing support to take action on the short-term tactics that will move that plan forward, such as GHG or electrification-focused Treasure Hunts. Details on these activities can be found in section 3.1.3. Advanced Energy Activities.

1.2.4.3 SEM Community Development

SEM Community Development are a set of activities that help connect customers with each other and learn as a larger community of SEM practitioners. These activities include facilitated networking and learning sessions that are provided at least twice per year and give customers an opportunity to learn in groups based on interest or need (e.g. by sector such as hospitals, by technology such as industrial heat pumps, or issue such as building performance standards). Customers are also given an opportunity to share learnings with participants that are not yet in the Graduate Pathway. Details on these activities can be found in section 3.1.4. SEM Community Sessions.

1.2.5 Key Roles

The following roles are referenced throughout this document in both Core SEM and the Graduate Pathway designs.

1.2.5.1 SEM Program Roles

Program Administrator

The SEM Program Administrator (PA) ensures that the SEM program is delivered by the implementation contractor as expected. The PA oversees all aspects of the SEM program and has the following key roles:

1. Coordinates activity between the sponsoring utility's staff (e.g., account executives) and contractors and the implementation contractor.
2. Is responsible for ensuring the proper review, approval, and analysis of reports and key documents ensure program progress, influence, and quality is properly documented.
3. Is responsible for ensuring customer issues and implementation contractor issues are resolved.
4. Decides whether or not the SEM program will offer optional activities.
5. Is responsible for ensuring implementation schedules and commitments are kept.

The PA should ensure any relevant utility staff are involved where needed.

Utility Account Executive

One important utility role, where applicable, is the Utility Account Executive. A Utility Account Executive works on behalf of a utility to help commercial, industrial, or institutional customers identify and implement energy-saving opportunities. They serve as the primary point of contact for customers participating in energy efficiency programs, providing guidance on available incentives, coordinating technical assessments, and supporting project implementation. The Utility Account Executive can support the SEM Program by: a) Helping manage customer expectations for the SEM program participation including (but not limited to) recruitment, commitment (e.g., signing of any MOUs) and continued participation, b) Helping provision of customer data including interval data, site level access for audits and treasure hunts, etc., c) Supporting any optional activities such as analysis for time of use (TOU) rates, peak/net peak demand considerations, IDSM or GHG reduction opportunities, and participation in other programs (e.g., Building Electrification, Transportation Electrification, Demand Response, TOU, PSPS, Resiliency, etc.).

SEM Coach

The implementation contractor is responsible for ensuring participants meet the SEM program objectives, all progress and projects are properly documented, and energy savings are properly modeled and documented. Although the implementation contractor may have a team that consists of multiple individuals supporting participants, the expectation is that there is one customer-facing individual responsible for supporting participants and communicating progress with the PA. This individual, called the SEM Coach, will:

1. Be responsible for the success and progress of the SEM Program with the customer.
2. Maintain regular communication with the PA regarding participant progress and issues.
3. Maintain regular one-on-one communication with participants, including performing site visits as necessary, to ensure all program expectations are met.
4. Develop and review with the PA all educational and activity material and content.
5. Ensure educational and site-level activities are properly facilitated and meet program requirements, including any learning objectives.
6. Ensure proper technical support is provided during any Treasure Hunt and for any resulting projects.
7. Ensure all energy consumption models and M&V documentation is delivered on-time and to the requirements of the M&V Guide.
8. Ensure all program data, documentation, and contact information meets program requirements.
9. Coordinate, monitor, and manage communication between implementer contacts (e.g. engineers) and customer.

1.2.5.2 Customer

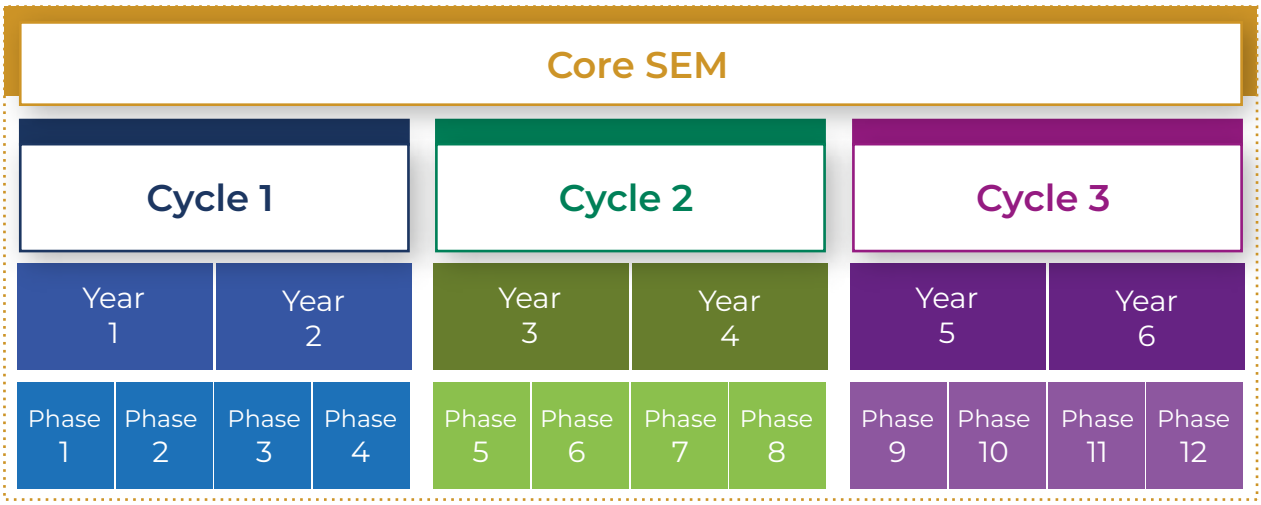
The customer must designate a member of staff for each of these roles:

1. **Executive Sponsor.** The Executive Sponsor should be the highest-level manager available at the site (typically the site or facility manager) and is responsible for ensuring the Energy Team has the resources it needs to succeed during the SEM program.
2. **Energy Team.** The Energy Team is composed of at least two individuals and is typically a cross-functional team (i.e. management, production, procurement, maintenance, HR) that meets regularly to manage and develop any energy management-related business practices and activities. The Data Lead does not need to be part of the energy team.
3. **Energy Team Lead.** The Energy Team Lead is responsible for the success of the SEM program at the site. This individual is responsible for coordinating both with the SEM Coach and internally with any site staff, including the Energy Team, Data Lead, and Executive Sponsor.
4. **Data Lead.** The Data Lead is responsible for ensuring that a plan is created for collecting energy data and relevant variable data, that the plan is followed, and that data is properly screened and documented.

1.3 Design Overview

1.3.1 Core SEM Cycles

The Core SEM design breaks down each cycle into two years and four six-month "phases," with the years and phases numbered sequentially through all three cycles.



Activities, both educational and site-specific are presented in a phase and meant to be completed within the six-month window for that phase and in the sequence outlined. Changing the sequence or timing of educational or site-specific activities is not recommended but it is ultimately the responsibility of the program administrator to approve and document any suggested changes in any special cases. Examples or cases where a change in sequence could be considered include highly seasonal participants (e.g., food processors or schools), or a participant experiencing a dramatic event (e.g., temporary site shut down due to weather events). Acceleration of specific activities or tasks (e.g., EMIS, employee awareness, operational controls) that may be of special interest to the PA or SEM Coach, either within a cycle or between cycles, is allowed but care should be taken to understand the impact to the overall design.

Each cycle contains details for educational activities and site-specific activities. To avoid duplication of requirements, M&V and reporting requirements are discussed in the M&V Guide and are generally not included in this guide.

Each of the cycles builds on the previous cycle's educational and site-specific activities to progress the customer's ability to manage energy, to manage their business practices, and to identify, plan and implement energy saving projects. At a high level, each cycle has the following focus:

1. **Cycle 1** focuses on building basic energy management business practices and creating savings quickly. The focus is on developing technical (e.g., planning and project-focused) business practices. Activities are meant to be hands-on, with a somewhat short-term view of saving energy. Energy saving focus is on identifying and implementing quick, low- or no-cost, and easy-to-implement opportunities.

2. **Cycle 2** focuses on more deeply engaging employees and on increasing energy savings. It builds on the experience developed in Cycle 1 to expand beyond the initial core of employees targeted in Cycle 1. Cycle 2 helps customers work with top management, purchasing, and design and ensures there is management commitment, employee awareness and operator competence. Energy saving focus is on identifying and implementing more complex opportunities that may require more investment of resources (financial or human) and involvement from employees outside the energy team.

3. **Cycle 3** focuses on developing business practices that allow the customer to systematically and continuously improve energy performance beyond their engagement with the SEM program while continuing to save energy. In this cycle, the customer builds on their experience in Cycle 2 to ensure their management, energy team, and the site's staff have the processes to continually manage and improve the energy management system's performance.

Progression of a specific customer from cycle to cycle must be at the discretion of the PA with input from the SEM Coach. The PA shall make the final decision on whether a customer advances to the next cycle. Each cycle includes an activity to develop a brief transition plan, either to help the customer advance to the next cycle, or to help the customer exit the SEM program.

1.3.2 Graduate Pathway Cycles

The Graduate Pathway is a continuation of the SEM Program for organizations that have completed the three Core SEM cycles and meet key entry criteria. Details of the criteria for entering the Graduate Pathway can be found in section 3.1.1.4. Cycle 4 Eligibility Requirements Similar to the Core SEM design, the Graduate Pathway design continues the sequential numbering of years and phases. Although at this time there is only one Graduate Pathway cycle, an additional cycle (Cycle 5) could be added in the future. Entry requirements for the potential Cycle 5 can be found in section 3.1.1.5. Potential Requirements to Continue Beyond Cycle 4.

Similar to Core SEM, activities in the Graduate Pathway are presented in each phase and are meant to be completed in that phase unless there is a special case that is approved by the PA. M&V reporting should continue to follow the requirements of the M&V Guide.

Because customers participating in the Graduate Pathway should have minimum level of proficiency managing energy, Cycle 4 focuses on: **1)** Ensuring customers continue to manage and save energy, **2)** Helping customers create longer-term energy plans, and **3)** Helping customers connect to the broader SEM community. Activities are structured around those three concepts.

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CYCLE 1

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2. Core SEM Guidance

2.1 Cycle 1

2.1.1 Cycle 1 Overview

Cycle 1 is critical in that it sets the customer's expectations and understanding of the SEM Program as well as their experience with an energy management system, not only for this first Cycle, but for the customer's entire potential six-year engagement in Core SEM. Cycle 1 sets the technical, educational, and inspirational foundation that the other cycles will rely on.

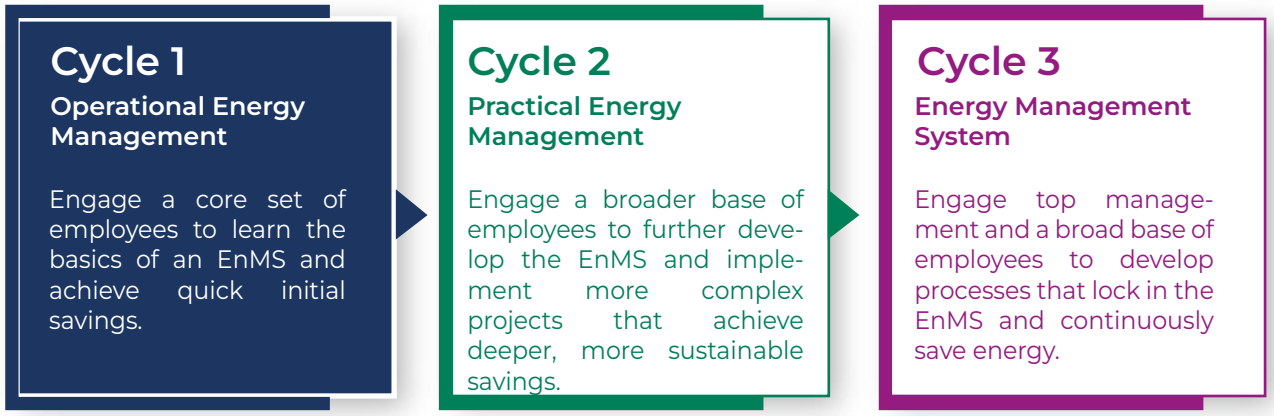
As mentioned earlier, it is important that the sequence in Cycle 1 be followed as the design is meant to ensure that, early in the program, customers:

1. Both at the executive and energy-team level, understand and commit to the program and Cycle 1 structure, approach, goals, targets, and expectations. This includes an understanding of the objectives of each of the three cycles as well as an understanding of the requirements to continue on to the Graduate Pathway.
2. Gain practical experience in developing and managing business practices that set the foundation for this and future Cycles.
3. Realize low-effort and low-cost savings so that the customer's commitment is positively reinforced with cost-effective savings while identifying projects for future implementation.

Phase 1 begins the participants' journey with the SEM program and starts to build the relationship between the participant and the program staff as well as between the various participants in the cohort (if being implemented in a cohort delivery approach). During this phase expectations, roles, and timing should be clearly defined and any potential issues (e.g., planned changes to major systems, planned staffing changes) should be identified.

2.1.1.1 Cycle 1 Goals and Objectives

The goal for Cycle 1 is that the participant has business practices that allow them to practice "operational energy management." This means that a core set of employees (i.e., the energy team) learn some of the key business practices of an energy management system, implement those business practices, and are able to achieve quick initial savings through the implementation of these business practices.



In practice this means that the objective is for the participant to:

1. Understand the organizational context that pertains to and influences their energy management efforts (Task 1- An EnMS and Your Organization, and Task 3- Scope and Boundary)
2. Have a defined team that has the resources to work on improving their energy performance (Task 6- Energy Team and Resources).
3. Understand how energy is used and consumed in their organization (Task 8- Data Collection and Analysis, and Task 9- Significant Energy Uses).
4. Understand opportunities to save energy and how to prioritize and implement those opportunities (Task 10- Improvement Opportunities, and Task 13- Action Plans for Continual Improvement).
5. Set objectives and targets and develop indicators to ensure progress towards their targets (Task 11- Energy Performance Indicators and Energy Baselines, and Task 12- Objectives and Targets).
6. Monitor their energy performance (Task 21- Monitoring and Measurement of Energy Performance Improvement).

It also means that by the end of the Cycle the participant will be able to manage these business practices with limited program support. In other words, the program is not doing these tasks for the customer, but rather helping the customer understand how to update and maintain them and giving them opportunities to do so.

2.1.1.2 Cycle 1 Sequence

Changing the sequence of educational or site-specific activities is not recommended but it is ultimately the responsibility of the program administrator to approve any suggested changes. As mentioned earlier, specific cases may call for changes in either the timing or sequence of activities. The sequence presented below should be followed in order. This means, for example, that Site-Specific Activity #1 is completed before Educational Modules #1, #2, and #3.

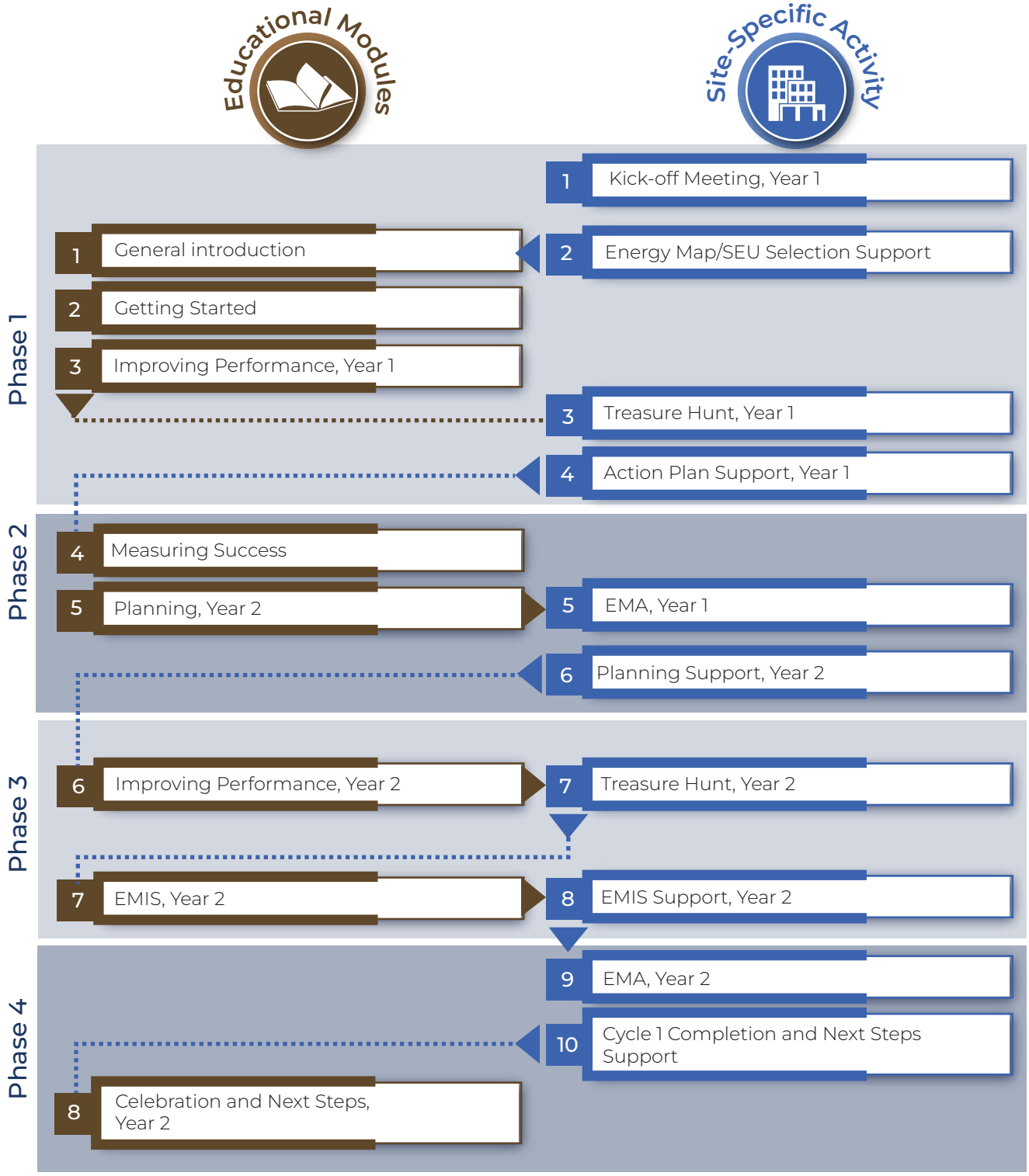


Table 1 - Cycle 1 Sequence

2.1.1.3 Cycle 1 Targets

As mentioned earlier, the Objective for Cycle 1 is that the participant has business practices that allow them to practice "operational energy management." In practice, this means that by the end of the Cycle, participants should have implemented the Tasks introduced through the educational and site-specific activities to a recommended level while also achieving a recommended ability to manage those business practices. It is recommended, but not required, that participants be able to score a "3" on all tasks and subtasks introduced on both the 50001 Ready Energy Management Assessment (EMA) Excel Tool and the 50001 Ready Self-Management Assessment (SMA) Excel Tool.

Navigator Task #	Navigator Task Name	EMA Score	SMA Score
#1	An EnMS and Your Organization	●●●○	●●●○
#3	Scope and Boundaries	●●●○	●●●○
#6	Energy Team and Resources	●●●○	●●●○
#8	Energy Data Collection and Analysis	●●●○	●●●○
#9	Significant Energy Uses (SEUs)	●●●○	●●●○
#10	Improvement Opportunities	●●●○	●●●○
#11	EnPIs and Energy Baselines	●●●○	●●●○
#12	Objectives and Targets	●●●○	●●●○
#13	Action Plans for Continual Improvement	●●●○	●●●○
#21	Monitoring and Measurement of Energy Performance	●●●○	●●●○

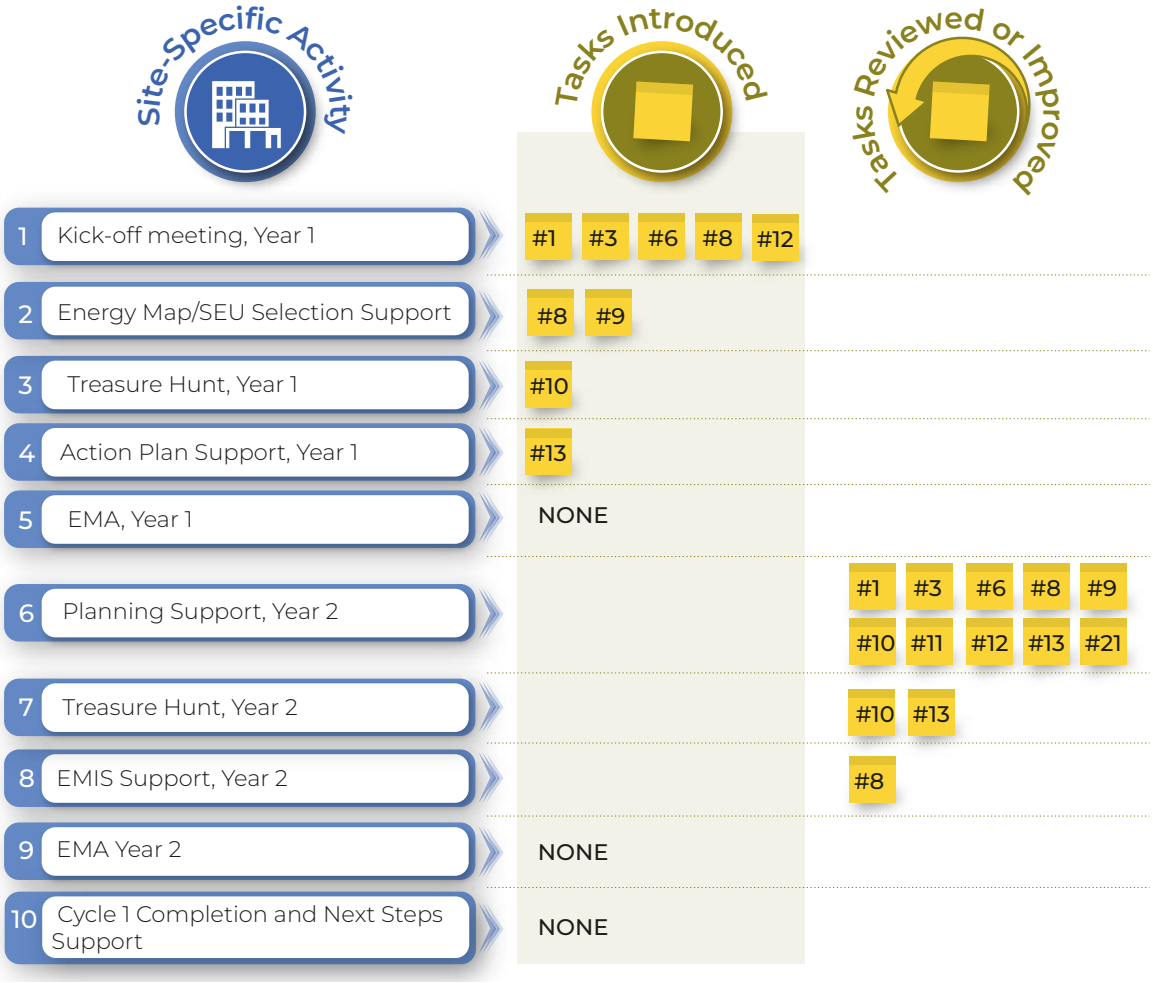
2.1.2 Cycle 1 Site-Specific Activities

2.1.2.1 Overview of Site-Specific Activities

As described before, Site-Specific Activities are activities that are implemented with an individual site. Site-Specific Activities labeled as "support" can vary significantly from participant to participant and may depend on a variety of factors, including the site's objectives, priorities, expertise, infrastructure, available resources, etc. An overview of each activity is provided along with the objectives and targets, requirements, and optional steps for that activity.

References to Navigator tasks are provided for context. It is not a requirement to show the customer the details of the task or of the Navigator tool itself but the details of the tasks should be taken into consideration when designing the activities.

537 *Connection of Site-Specific Activity and tasks:*



2.1.2.2 Site-Specific **Activity #1:** Kick-off Meeting, Year 1

The Kick-off Meeting is the SEM Program's initial site-specific engagement with the site and gives the SEM Coach, Energy Champion, and key facility stakeholders the opportunity to align on program goals, roles, and the approach for the cycle. It sets expectations and lays the foundation for the facility's effective participation in the SEM program.

The Kick-off Meeting begins a site's engagement with the SEM program and introduces the SEM Coach to the site's team. This meeting has multiple goals:

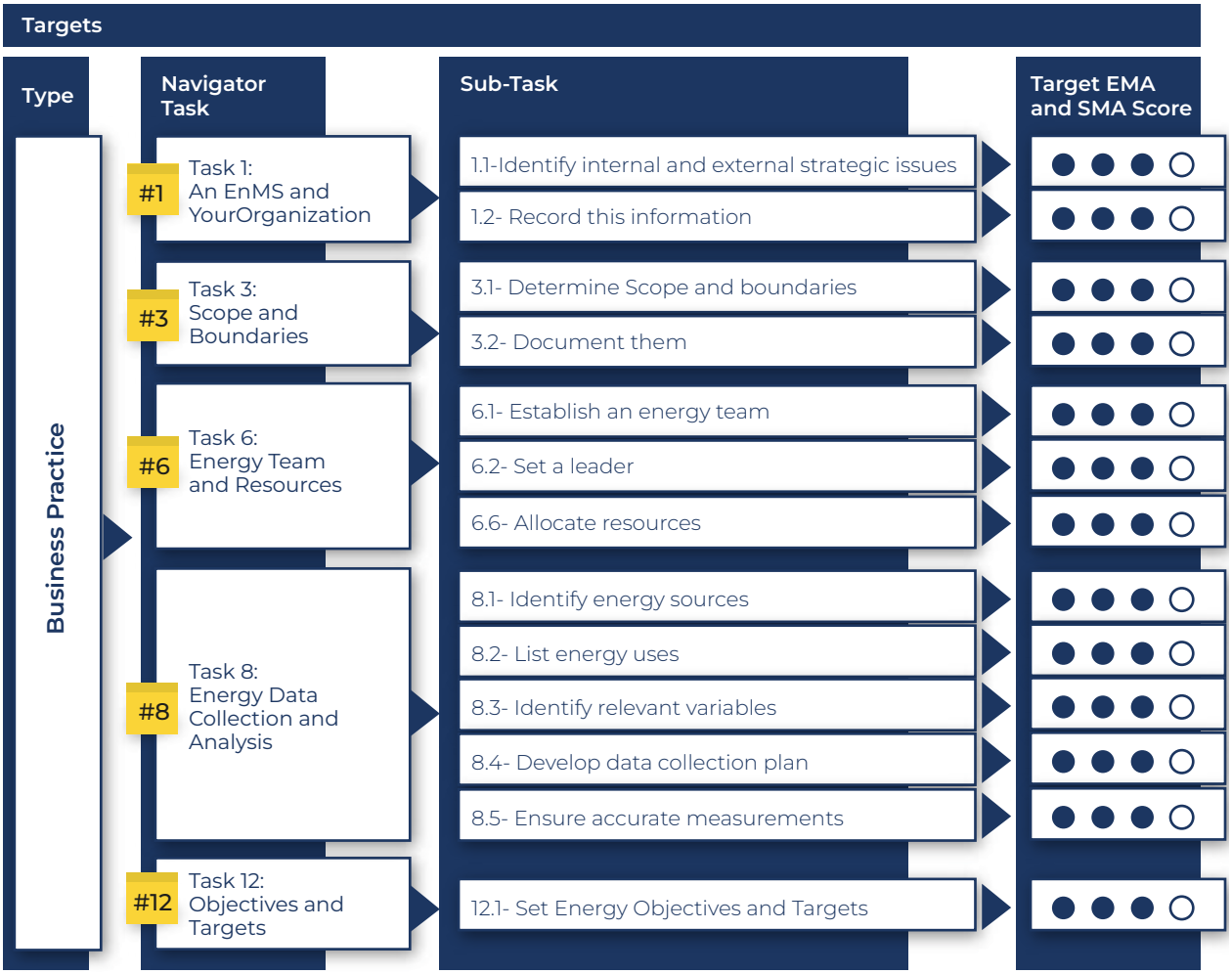
1. Ensuring the Executive Sponsor and Energy Team Lead understand the general approach and requirements of the program.
2. Ensuring that there is a connection between the site's high-level strategies and the SEM program.
3. Developing a plan to collect data.
4. Documenting the customer's existing energy efficiency project plans.

As with the other site-specific activities, the Kick-off Meeting is meant to be held with an individual site and not in a group or cohort environment.

2.1.2.2.1 Objectives and Targets

Type	Objectives
Programmatic	**Executive Sponsor and Energy Team Lead understand:** **1.** The Core SEM 3-cycle approach and the general goals for each cycle. **2.** The Cycle 1 goals, expectations, roles, and requirements for their site's involvement in the SEM program. **3.** The roles of the SEM Coach, PA, and Account Executive. **4.** Agreement to the program's Cycle 1 requirements, including any follow-up meeting with the Executive Sponsor.
	Energy Team Lead and SEM Coach: **5.** Develop a list of existing planned capital projects and a plan for estimating savings from those projects.
Business Practice	**1. Executive Sponsor articulates or confirms:** **a.** The resources (human and capital) available to support their SEM efforts. **b.** Any existing or desired site objectives or targets the program should try to meet, including Cycle 1 EnMS and savings objectives and targets. **2. Data Owner and SEM Coach:** **a.** Develop a plan for gathering and providing data for relevant energy drivers. This should include expectations for data transfer (responsibili ty, minimum data requirements, general format guidelines, process for transferring data, etc.), data quality, data frequency, etc.

The targets below relate to EMA and SMA scores. Although the customer may not be able to meet these targets after the Kick-off meeting, the targets should be considered so that progress can be made towards meeting them.



2.1.2.2.2 Optional Steps

Although these steps are optional, it is highly encouraged that they be included as a standard offering to all customers in Core SEM, especially if the customer will continue to the Graduate Pathway.

1. **IDSM Data Collection Plan Addendum:** At the program administrator's discretion and based on customer needs, the program may provide additional support for customers that want to track energy performance metrics beyond energy consumption (e.g., energy generated and/or stored, energy demand, time of use of energy, etc.) by helping them develop an expanded Energy Data Collection plan that includes data for those metrics. As an extension of the Energy Data Collection Plan, the IDSM Data Collection Plan is an agreement between the Data Owner and the SEM Coach on what IDSM-related data is necessary to collect and the expectations (e.g. responsibility, frequency, process for transferring data, etc.) for data transfer.

2. GHG Data Collection Plan Addendum: At the program administrator's discretion, the program may provide additional support for customers that want to track their energy-related GHG emissions by helping them develop a GHG data collection plan. As an extension of the Energy Data Collection Plan, the GHG Data Collection Plan is an agreement between the Data Owner and the SEM Coach on what GHG-related data is necessary to collect and the expectations (e.g. responsibility, frequency, process for transferring data, etc.) for data transfer. The PA and SEM Coach shall determine which sources of energy are in-scope for this activity.

2.1.2.2.3 Requirements

- 1. The Kick-off Meeting, Year 1 shall be held prior to any other educational or site-specific activities.
- 2. The meeting shall include at least:
  - **a. From the Program:** The SEM Coach. The Account Executive is optional but highly recommended.
  - **b. From the Customer:** The Executive Sponsor, Energy Team Lead, and Data Owner. Other members of the energy team are optional.
- 3. The meeting can be held in multiple parts, for example one meeting with the Executive Sponsor and the Energy Team Lead to discuss high-level activities and another with the Data Owner and the Energy Team Lead to discuss data needs and timing.
- 4. The meeting shall be held with only one organization (i.e. not with other facilities from different companies in the same cohort). Multiple participants from the same organization are allowed if they can benefit from a single meeting.
- 5. Where possible, the meeting(s) shall be held in person.
- 6. The SEM Coach shall ensure the meeting(s) meets the listed objectives.
- 7. If offered, optional steps (IDSM and GHG- Data Collection Plan Addendums) shall be introduced in this meeting.
- 8. This activity must be documented per the requirements below:
  - **General Information:** Including the location, the date, and the attendees of the Kick-off Meeting.
  - **Agenda:** Include the agenda of the meeting and any notes (e.g., any topics that were not discussed or additional topics that were covered, any issues that were highlighted, etc.).
  - **Energy Efficiency History and Plans:** This section is the highest priority in the Scoping Summary. It shall describe any project activity and history (details for these may need to be provided by the PA or the customer), pending projects, planned major capital projects. Also, any measures the SEM Coach recommend be included or excluded, existing plans with the utility or 3rd parties. Any pending and planned energy efficiency projects must be documented in the Opportunity Register in accordance with requirements outlined in the M&V Guide.
  - **Recommended Next Steps:** If any, recommendations on next steps the program should take with this customer.
- 9. If offered, optional steps shall be documented per the requirements below:
  - **Process:** A brief overview of the process followed for each optional step offered, including any modifications made and how the addendum was documented in the data collection plan.

2.1.2.3 Site-Specific **Activity #2:** Energy Map/SEU Selection Support

Energy Map and SEU Selection Support helps the site visualize how and where energy is used across the site. It identifies where energy is used help the site focus their energy improvement efforts.

The Energy Map and SEU Definition Support activity helps the customer continue to develop Task 8 Data Collection and Analysis, and begin work on Task 9 Significant Energy Uses (SEUs). There are two related but separate steps to this activity:

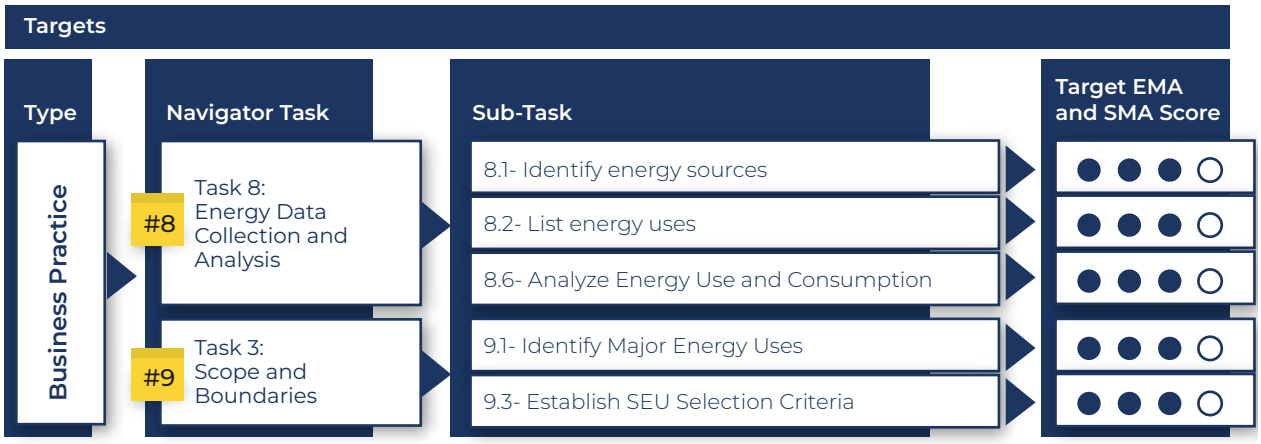
1. **Energy Map:** The energy map is akin to an energy end-use breakdown chart. The goal of the Energy Map is to help the Energy Team visualize the relative scale of energy use for different locations and/or systems in their site. It provides a snapshot of energy use that will be reviewed in future activities. Energy Map requirements are provided in the M&V Guide.
2. **SEU Selection:** SEU Selection is based on the Energy Map. The goal is to document a decision of which energy uses the site will focus its efforts on. At this point in the SEM program, the selection of SEUs may be informal and simply based on the largest energy-consuming systems or areas. Or it may be based on multiple criteria (e.g., energy consumption, energy costs, and savings potential). The SEU Selection activity helps the Energy Team make decisions on where to focus limited resources. This selection will be reviewed in future activities.

Either the SEM Coach or the Energy Team may develop the Energy Map, using a tool provided by the program, to the customer's preferred level of detail. If the Energy Team develops the Energy Map, the SEM Coach shall be available to assist the customer in both developing the energy map and choosing criteria for selecting the SEUs.

2.1.2.3.1 Objectives and Targets

Type	Objectives
Business Practice	**The Energy Team and SEM Coach:** **1.** Document and quantify the site's current energy uses **2.** Establish criteria to prioritize the site's SEUs and select SEUs

Targets are for EMA and SMA scores for Tasks and sub-tasks that this activity supports and that the customer should meet after completing this activity and any associated educational modules. Although the SEM Coach does not have to conduct either an EMA or SMA at this point, we recommend updating both as the customer completes this activity and associated educational modules.



2.1.2.3.2 Optional Steps

Although the optional steps are not required, it is highly encouraged that they be included as a standard offering to all customers in Core SEM, especially if the customer will continue to the Graduate Pathway.

1. **IDSM Energy Map Addendum (Task 8):** At the program administrator's discretion, the program may provide a tool and support for customers that want to "map" energy beyond consumption. This tool would include elements such as self-generation, demand, time of use, etc. Similar to the Energy Map, the IDSM Map should help the Energy Team visualize these different elements for different locations and/or systems. Customers that develop an IDSM Map should consider using IDSM metrics as one of the criteria for selecting SEUs.

2. **GHG Energy Map Addendum (Task 8):** At the program administrator's discretion, the program may provide both a tool and support for customers that want to "map" their energy-related GHG emissions. Similar to the Energy Map, the GHG Map should help the Energy Team visualize the scale of GHG emissions for different locations and/or systems. Customers that develop a GHG Map should consider using GHG emissions as one of the criteria for selecting SEUs.

2.1.2.3.3 Requirements

- 1. The Energy Map/SEU Selection Support shall be completed after Educational Module #3- Improving Performance and prior to the Treasure Hunt.
- 2. The SEM Coach must provide a tool to facilitate the development of the Energy Map and the SEU definition (see M&V Guide for requirements).
- 3. Energy Map development and SEU Selection shall be supported by the Energy Team Lead and any appropriate Energy Team members and site staff.
- 4. The Energy Map/SEU Selection results shall be documented (see M&V Guide for requirements). A notation of the SEUs selected and the criteria used shall be made on the Energy Map (see the M&V Guide for details).

- **5.** The SEM Coach shall ensure this activity meets the listed objectives.
- **6.** This activity must be documented per the requirements below:
  - **General Information:** Including the location, the time, and the date, and the attendees, for any meeting or meetings supporting this activity.
  - **Summary of the activity:** Including a summary of the type of activity (e.g., workshop, on-line webinar, etc.), attendance, presenters, agenda, key activities, materials provided to the customer.
- **7.** If offered, optional steps shall be documented per the requirements below:
  - **Process:** A brief overview of the process followed for each optional step offered, including both any modifications made and how the optional steps were documented in the energy map.

2.1.2.4 Site-Specific **Activity #3:** Treasure Hunt, Year 1

The Treasure Hunt is a walkthrough of the facility with the Energy Team, and any other staff that can benefit from the activity, to identify energy performance improvement opportunities, ensuring there are enough opportunities to meet the facility's targets for the year, the Cycle, and future years.

The goal of any Treasure Hunt is to identify energy waste and energy saving opportunities so that participants can make changes that save energy, which supports Task 10- Improvement Opportunities. A successful outcome of the Treasure Hunt, in year 1, is the identification of opportunities to at least meet Cycle 1 objectives. A primary focus of this first Treasure Hunt is to identify simpler low- or no-cost opportunities with the identification of other opportunities being a secondary focus but also encouraged.

The intent of the Treasure Hunts over the Core SEM six years is to build a comprehensive, facility-wide view of energy-saving opportunities from a full systems perspective. While each individual Treasure Hunt does not need to address every aspect, together multiple Treasure Hunts across the six-year engagement, should encompass a comprehensive list of all customer opportunities related to system set points, operating practices and processes, process controls, maintenance procedures, equipment upgrades, and more. In addition, IDSM (e.g., distributed generation, storage, demand response, time-of-use, peak demand reduction, etc.) opportunities and GHG reduction opportunities should be included even if the customer does not plan to implement them. (See IDSM and GHG Steps below). Treasure Hunt activities should ensure the customer has a comprehensive view of all their energy performance improvement opportunities.

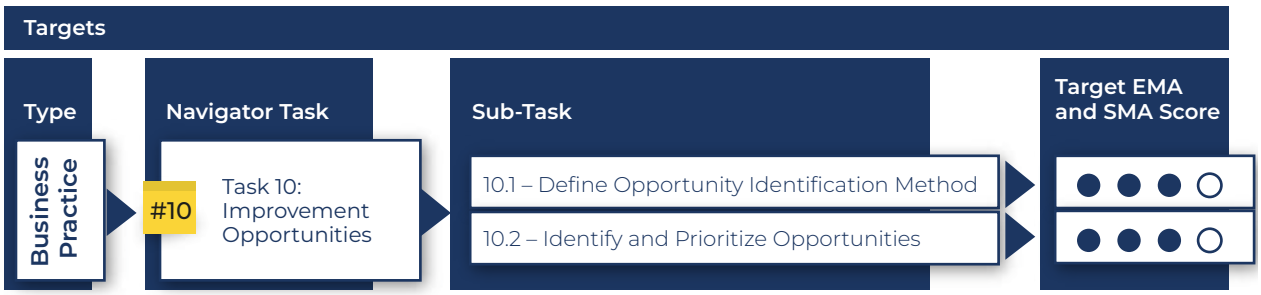
The SEM Coach must plan and facilitate this event in coordination with the Energy Champion. The SEM Coach must work with the Energy Champion in advance to determine the scope of the Treasure Hunt. Generally, the entire site is the focus rather than individual systems. This can be adapted and narrowed as needed in specific situations and should be done using the Energy Map and SEU Selection. Although rare, some sites are so large that the Treasure Hunt must be focused on a single system or a specific engagement boundary, rather than being all-encompassing.

To strengthen customer engagement and participation, all Treasure Hunts are strongly recommended to be conducted in-person and should be held on-site wherever possible.

2.1.2.4.1 Objectives and Targets

Type	Objectives
Business Practice	**The Energy Team and SEM Coach:** **1.** Identify energy savings opportunities, focusing on simpler low or no-cost opportunities, but not necessarily excluding other opportunities. **2.** Quantify potential savings for each opportunity. **3.** Document the site's opportunities using the Opportunity Register. **4.** Prioritize the identified opportunities.

Targets are for EMA and SMA scores for Tasks and sub-tasks related to the Treasure Hunt and that the customer should meet after completing this activity. Although the SEM Coach does not have to conduct either an EMA or SMA at this point, we recommend updating both as the customer completes this activity.



2.1.2.4.2 IDSM and GHG Related Steps

These steps should be included at some point during the Core SEM program (years 1 –6) Treasure Hunt activities, though customers are not required to implement these measures. Inclusion of these opportunities at a high level will prepare the customer for consideration of deeper energy and GHG reducing projects, especially for those customers who will continue to the Graduate Pathway; Should the customer wish to proceed with IDSM and GHG measures, the Graduate Pathway should provide the customer with more detailed and actionable steps to implement these measures and support them if they do go forward. This detailed information will be included in the customer's Graduate Pathway Treasure Hunt.

1. **IDSM Calculation for Opportunities:** The program will provide additional support for customers that want to estimate IDSM-related calculations for each energy saving opportunity and use that value as part of the prioritization exercise. This could be either a numerical value (e.g. estimates on demand reduction for each opportunity) or a relative ranking (e.g. high impact on demand). If provided, the IDSM calculations should be integrated into the Treasure Hunt prioritization activities and in the Opportunity Register.

2. **IDSM Treasure Hunt:** The program will provide additional support for customers that want to identify IDSM-related opportunities beyond energy efficiency (e.g., distributed generation, storage, demand response, time-of-use, peak demand reduction, etc.) and include those opportunities as well as the consideration of IDSM-related data in the prioritization exercise. The scope and responsibilities (e.g. use of other resources) for the IDSM Treasure Hunt should be defined by the program administrator and SEM Coach prior to the event.

3. **GHG Calculation for Opportunities:** The program will provide additional support for customers who want to calculate GHG emissions for each energy saving opportunity and use that value as part of the prioritization exercise. If provided, the GHG emissions calculations should be integrated into the Treasure Hunt opportunity prioritization activities and in the Opportunity Register.

4. GHG Treasure Hunt: The program will provide additional support for customers who want to identify energy-related GHG emissions opportunities beyond energy efficiency (e.g. electrification of propane forklift trucks) and include those opportunities as well as the consideration of GHG emissions reductions in the prioritization exercise. The scope and responsibilities of the GHG Treasure Hunt should be defined by the program administrator and SEM Coach prior to the event.

2.1.2.4.3 Requirements

- 1. Treasure Hunt, Year 1 shall take place after completion of the Energy Map.
- 2. Treasure Hunt, Year 1 shall be attended by the Energy Team Lead and any appropriate Energy Team members and site staff.
- 3. The SEM Coach shall ensure the Treasure Hunt meets the listed objectives.
- 4. The SEM Coach must ensure that capital projects identified in the Treasure Hunt are documented in accordance with any additional PA requirements, which may require documentation outside of the opportunity register. Opportunity register requirements are provided in the M&V Guide.
- 5. The *Energy Star Treasure Hunt Guide*[9] or a similar guide shall provide additional guidance for conducting a Treasure Hunt.
- 6. All opportunities resulting from the Treasure Hunt must be documented in the Opportunity Register.
- 7. The Treasure Hunt must be documented per the requirements below:
  - **General Information:** Including the location, the date, and the attendees.
  - **Attendees:** Including all participants in the Treasure Hunt (including any guests and implementation contractor technical support).
  - **Process:** A summary of the process followed during the Treasure Hunt, including how IDSM and GHG emissions steps were implemented.
  - **Next Steps:** This section will highlight next steps relative to the Treasure Hunt. For example, if another Treasure Hunt is necessary in order to identify projects to meet the cycle's goals, or if the customer will need support developing action plans.

2.1.2.5 Site-Specific **Activity #4:** Action Plan Support, Year 1

Action Plan Support is a guided activity where the SEM Coach helps the site develop or refine actions for implementing energy-saving opportunities. It helps the customer define details for implementing those opportunities such as responsibilities, timelines, and persistence strategies.

[9] https://www.energystar.gov/industrial_plants/treasure_hunt

After identifying and prioritizing opportunities, the Energy Team will need to select and implement projects. The goal of this activity is to ensure the Energy Team selects the opportunities they are going to implement and creates action plans to get them implemented.

To be useful, an action plan should contain:

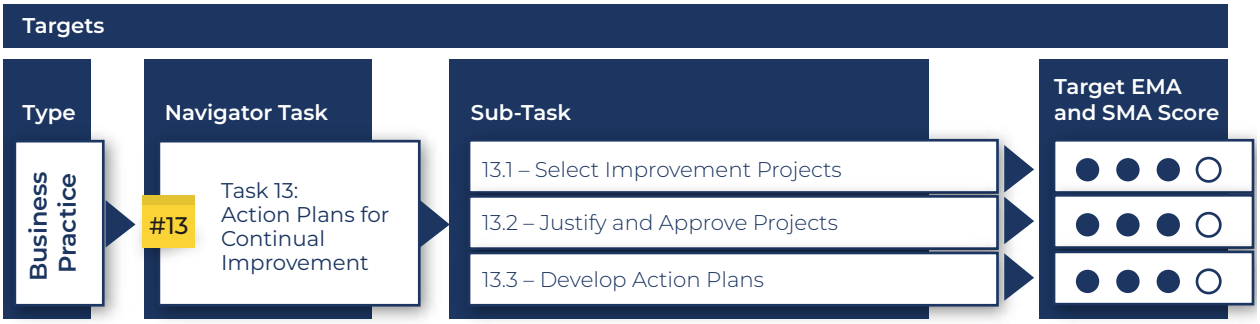
- The activities to be completed to implement the project and achieve energy performance improvement
- The resources needed to complete the activities
- The time frame for completing the activities
- The person or persons responsible for completing the activities
- A description of the method for verifying project results
- A description of the method for verifying the energy performance improvement

Some simpler projects may not need all these elements. See Navigator Task 13, Action Plans for Continual Improvement for further details and templates for developing action plans.

2.1.2.5.1 Objectives and Targets

Type	Objectives
Business Practice	**The Energy Team:** **1.** Selects opportunities to implement through Cycle 1. **2.** Develops action plans and receives approval to implement, where appropriate. **3.** Shares action plans with the program.

Targets are for EMA and SMA scores for Tasks and sub-tasks that this activity supports and that the customer should meet after completing this activity and any associated educational modules. Although the SEM Coach does not have to conduct either an EMA or SMA at this point, we recommend updating both as the customer completes this activity and associated educational modules.



2.1.2.5.2 Optional Steps

There are **no optional steps** for this task.

2.1.2.5.3 Requirements

- 1. Action Plan Support shall take place during or after the Treasure Hunt.
- 2. Action Plan development shall be supported by the Energy Team Lead and any appropriate Energy Team members and site staff.
- 3. The SEM Coach shall ensure the Action Plan Support meets the listed objectives.

- 4. This activity must be documented per the requirements below.

  - **General Information:** Including the location, the time, and the date, and the attendees, for any meeting or meetings supporting this activity.
  - **Summary of the Activity:** Including a summary of the type of activity (e.g., workshop, on-line webinar, etc.), attendance, presenters, agenda, key activities, materials provided to the customer.

2.1.2.6 Site-Specific **Activity #5:** EMA, Year 1

The Energy Management Assessment is a structured evaluation of the site's current energy management practices. It reflects the SEM Coach's perspective on how the customer's business practices align with program targets.

The goal of the Energy Management Assessment (EMA), Year 1 is to provide a baseline of the site's energy management practices relative to the business practices that were introduced in Year 1. The EMA consists of an assessment using the 50001 Ready Energy Management Assessment[10] for the tasks listed below. Other tasks are optional.

- **Task 1** An EnMS and Your Organization
- **Task 3** Scope and Boundaries
- **Task 6** Energy Team and Resources
- **Task 8** Energy Data Collection and Analysis
- **Task 9** Significant Energy Uses (SEUs)
- **Task 10** Improvement Opportunities
- **Task 11** EnPIs and Energy Baselines
- **Task 12** Objectives and Targets
- **Task 13** Action Plans for Continual Improvement
- **Task 21** Monitoring and Measurement of Energy Performance

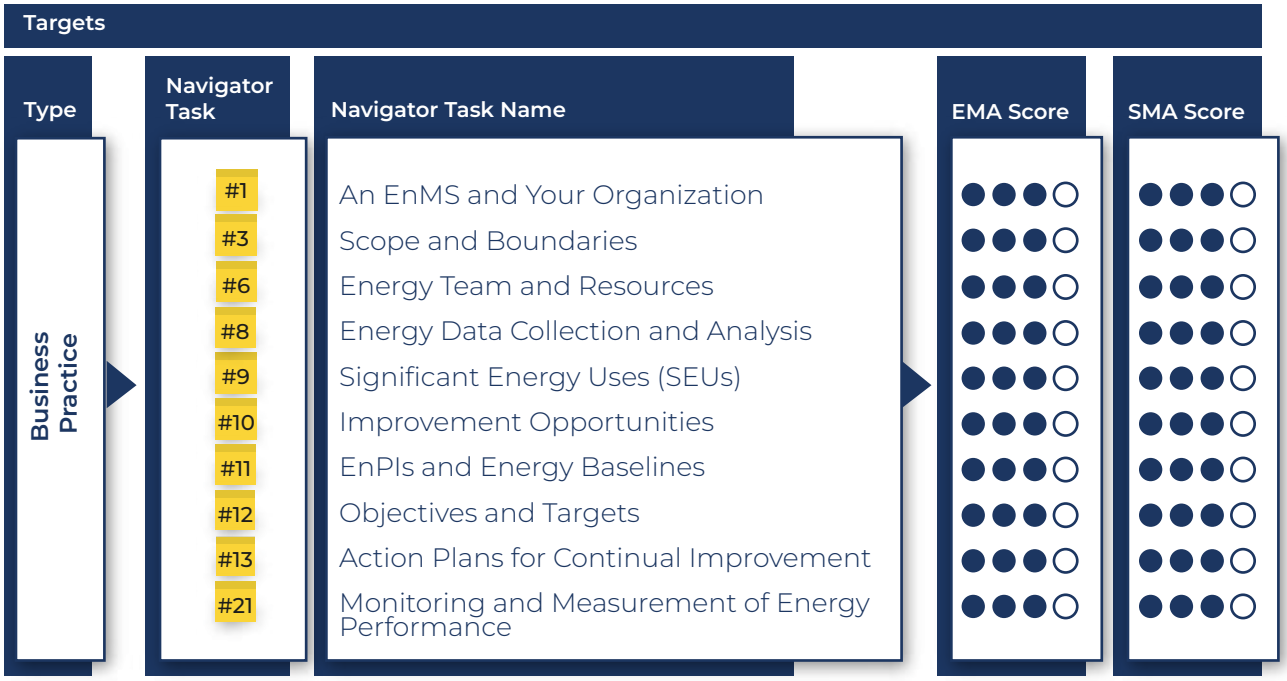
The EMA is not intended to be a customer-facing assessment, the primary purpose is to document the customer's existing capabilities and to be able to assess, for the program, their EnMS progress through Cycle 1. A customer-facing EMA is listed in the optional steps, as at this point the EMA is used for program purposes. The SEM Coach shall fill out the EMA. The SEM Coach can optionally work with the Energy Team Lead or the Energy Team to fill out the EMA and can optionally share the EMA summary with the Energy Team Lead or the Energy Team.

2.1.2.6.1 Objectives and Targets

Type	Objectives
Programmatic	**SEM Coach, and optionally Energy Team Lead:** **1.** Document the customer's existing energy management practices relative to the Navigator tasks to be introduced in Cycle 1.

[10] The 50001 Ready Energy Management Assessment is available at https://industrialapplications.lbl.gov/energy-management

The EMA should document the customer's progress towards meeting the expected (not required) EMA score. These targets relate to EMA and SMA scores for Tasks that have been introduced thus far in Core SEM. Although an SMA is not required, conducting one for the Tasks listed would help the SEM Coach understand the customer's progress towards the SMA targets.



2.1.2.6.2 Optional Steps:

Although the SMA is optional, it is highly encouraged that it be included as a standard offering to all customers in Core SEM, especially if the customer will continue to the Graduate Pathway.

1. **Self-Management Assessment (SMA):** The SMA is an assessment of the site's ability to manage business practices without the SEM program's support. It is an assessment that helps the program understand if the customer is taking steps towards the Cycle's SMA targets. Although not required in Cycle 1, an SMA is required for entry into the Graduate Pathway's Cycle 4 and it is highly recommended that the SEM Coach conduct the SMA on an annual basis, both to understand the customer's progress as well as to make the SMA at the end of Year 6 less onerous. If the SMA is completed, US DOE's 50001 Ready Self-Management Assessment shall be used.

2. **Customer-Facing EMA and/or SMA:** At the program administrator's and implementation contractor's discretion, the program may provide a customer-facing, facilitated EMA and/or SMA at any time during this Cycle. It is recommended, but not required, that the customer-facing EMA and/or SMA closely match the structure of the Navigator EMA and/or SMA.

2.1.2.6.3 Requirements

- 1. Energy Management System Assessment (EMA), Year 1 shall be held before Site-Specific Activity #6- Planning Support Year 2.
- 2. The completion of the EMA shall include at least the SEM Coach. The Energy Team Lead and Energy Team are optional.

- 3. The EMA shall consist of questions or statements that assess the site's current practices regarding the Navigator tasks introduced in Cycle 1 using US DOE's 50001 Ready Energy Management Assessment.

- 4. The EMA results shall be documented in the EMA Summary per the requirements below:

  - **General Information.** Including:

    - the site and organization name,
    - the date completed, and
    - the name and title of the person leading or conducting the EMA.

  - **EMA Scores.** Including:

    - The score for each subtask in the required tasks.
    - The score for each task, which shall be an average of all subtasks in that task.
    - The overall score, which shall be an average of all subtasks for required tasks.

- 5. If offered, optional steps shall be documented per the requirements below:

  - **General Information:** Including the date and individuals leading and participating in the optional EMA and/or SMA.
  - **Process**: A brief overview of the process followed for each optional step offered, including any modifications made.

2.1.2.7 Site-Specific **Activity #6:** Planning Support, Year 2

Planning for Year 2 prepares the site for continued success in Year 2 of the SEM Program. It helps the Energy Team and SEM Coach review Year 1 progress and shortfalls and compare them with Year 2 targets and objectives to create a plan of action for Year 2.

The goal of this activity is to review key business practices that might affect the site's approach for SEM Program Year 2 and make any necessary changes or updates. The Energy Team should review their year 1 actions and business practices (e.g., implemented projects, energy savings, objectives, performance indicators, SEUs, and data collected) and determine if any significant changes need to be made for SEM Program Year 2, based on the Navigator Tasks discussed in Educational Module #5- Planning, Year 2. This includes adjusting any objectives and targets, making any changes to EnPIs or the Data Collection Plan, making sure the Energy Map and selected SEUs are still relevant, and ensuring opportunities and action plans will meet objectives and where they do not, making the appropriate plans.

This activity creates an experience and expectation for annual planning that will be repeated and expanded through the remaining four years of the program. Although the Energy Team should eventually lead their own planning, in this initial planning session the SEM Coach should provide significant support and help the Energy Team set up their process for annual planning.

The SEM Coach and Energy Team should use this planning session to determine if another Treasure Hunt is needed or not to identify opportunities to meet the Cycle's objectives.

2.1.2.7.1 Objectives and Targets

Type	Objectives
Business Practice	**The Energy Team:** **1.** Reviews SEM Program Year 1 progress (implemented projects, saved energy, data collected, indicators, focus areas or SEUs), significant site changes, and any key issues to evaluate their progress versus site and program objectives and expectations. **2.** Reviews or sets year objectives for SEM Program Year 2 and beyond **3.** Updates any business practices or documents (e.g., SEUs, Energy Map, Energy Data Collection Plan, etc) as needed, focusing on tasks that did not meet the EMA, Year 1 targets. **4.** Sets a plan for SEM Program Year 2 and subsequent years, including selection of opportunities, development of action plans, and any necessary improvements in data collection or selection of indicators. **5.** With the SEM Coach, determines whether the Treasure Hunt, Year 2 is necessary based on the site's objectives and remaining opportunities.

There are **no targets** for this activity. However, the SEM Coach should ensure that, if targets were not met for any Task in EMA, Year 1, there is a plan to review the business practices related to those Tasks.

2.1.2.7.2 Optional Steps

There are **no optional steps** for this activity.

2.1.2.7.3 Requirements

- 1. Planning for Year 2 shall take place after Educational Activity #5- Planning for Year 2.
- 2. Planning for Year 2 shall be supported by the Energy Team Lead and any appropriate Energy Team members and site staff.
- 3. The SEM Coach and Energy Champion shall determine whether Treasure Hunt Year 2 is necessary.
- 4. The SEM Coach shall ensure this activity meets the listed objectives.
- 5. This activity must be documented per the requirements below.
  - **General Information:** Including the location, the time, and the date, and the attendees, for any meeting or meetings supporting this activity.
  - **Summary of the Activity:** Including a summary of the type of activity (e.g., workshop, on-line webinar, etc.), attendance, presenters, agenda, key activities, materials provided to the customer.

2.1.2.8 Site-Specific **Activity #7:** Treasure Hunt, Year 2

The Treasure Hunt, Year 2, expands the opportunity-finding process. It helps customer uncover new energy-saving actions by going deeper into energy-consuming systems covered in the Year 1 or by expanding into systems that have not been covered and ensures there are enough opportunities to meet the facility's targets for the year, the Cycle, and future years.

As previously stated, the goal of any Treasure Hunt is to identify energy saving opportunities so that participants can make changes that save energy, which is an element of Task 10- Improvement Opportunities. A successful outcome of this Treasure Hunt is the identification and prioritization of opportunities to meet SEM Program Year 2 and beyond (e.g. Year 3 and 4) objectives. A primary focus of this Treasure Hunt is to identify more complex or resource (capital or human) intensive opportunities that, because of capital expenditure or scheduling reasons, may or may not be implemented in this cycle.

The intent of the Treasure Hunts over the Core SEM six years is to build a comprehensive, facility-wide view of energy-saving opportunities from a full systems perspective. While each individual Treasure Hunt does not need to address every aspect, together over time they should encompass opportunities related to system set points, operating practices and processes, process controls, maintenance procedures, equipment upgrades, and more. In addition, IDSM (e.g., distributed generation, storage, demand response, time-of-use, peak demand reduction, etc.) opportunities and GHG reduction opportunities should be included where possible (even if additional resources are not available, see Optional Steps) in all Treasure Hunt activities to ensure the customer has a broad view of their energy performance improvement opportunities.

This Treasure Hunt, is optional only if energy performance improvement opportunities have been identified and documented in the opportunity register that meet or exceed energy performance targets for the next two years.

To strengthen customer engagement and participation, all Treasure Hunts are strongly recommended to be conducted in-person and should be held on-site wherever possible.

2.1.2.8.1 Objectives and Targets

Type	Objectives
Business Practice	**The Energy Team:** **1.** With the SEM Coach, identify energy savings opportunities, focusing on more complex opportunities (e.g., retro-commissioning, control systems, capital projects) than those identified in the Treasure Hunt Year 1 and quantify potential savings for each opportunity. **2.** With the SEM Coach, document the site's additional opportunities using the Opportunity Register. **3.** Prioritizes their identified opportunities and selects opportunities to implement in year 2 and subsequent years (e.g., years 3 and 4). **4.** Develops action plans, where appropriate.

There are **no targets** for this activity. However, the SEM Coach should ensure that, if targets were not met for Task 10 in EMA, Year 1, there is a plan to use this Treasure Hunt to review and improve the business practices related to that Task.

2.1.2.8.2 IDSM and GHG Related Steps

As mentioned in Treasure Hunt 1, these steps should be included, though customers are not required to implement these measures. This allows customers to consider all their energy-related opportunities, especially if continuing on to the Graduate Pathway.

1. **IDSM calculation for Opportunities:** The program will provide additional support for customers that want to estimate IDSM-related calculations for each energy saving opportunity and use that value as part of the prioritization exercise. This could be either a numerical value (e.g. estimates on demand reduction for each opportunity) or a relative ranking (e.g. high impact on demand). If provided, the IDSM calculations should be integrated into the Treasure Hunt prioritization activities and in the Opportunity Register.

2. **IDSM Treasure Hunt:** The program will provide additional support for customers that want to identify IDSM-related opportunities beyond energy efficiency (e.g., distributed generation, storage, demand response, time-of-use, peak demand reduction, etc.) and include those opportunities as well as the consideration of IDSM-related data in the prioritization exercise. The scope and responsibilities (e.g. use of other resources) for the IDSM Treasure Hunt should be defined by the program administrator and SEM Coach prior to the event.

3. **GHG Calculation for opportunities:** The program will provide additional support for customers who want to calculate GHG emissions for each energy saving opportunity and use that value as part of the prioritization exercise. If provided, the GHG emissions calculations should be integrated into the Treasure Hunt opportunity prioritization activities and in the Opportunity Register.

4. **GHG Treasure Hunt:** The program will provide additional support for customers who want to identify energy-related GHG emissions opportunities beyond energy efficiency (e.g. electrification of propane forklift trucks) and include those opportunities as well as the consideration of GHG emissions reductions in the prioritization exercise. The scope and responsibilities of the GHG Treasure Hunt should be defined by the program administrator and SEM Coach prior to the event.

2.1.2.8.3 Requirements

- 1. The Treasure Hunt, Year 2 shall take place after the Site-Specific Activity Planning, Year 2 and after Educational Module #6- Improving Performance, Year 2.
- 2. The SEM Coach shall make the decision on whether this Treasure Hunt is necessary based on the outcomes of Year 2 Planning and if there are enough opportunities to meet the organization's targets for at least two years.
- 3. The Treasure Hunt shall be attended by the appropriate members of the Energy Team and site staff.
- 4. The SEM Coach shall ensure the Treasure Hunt meets the listed objectives.
- 5. The *Energy Star Treasure Hunt Guide*[11] or a similar guide shall provide additional guidance for conducting a Treasure Hunt.

[11] https://www.energystar.gov/industrial_plants/treasure_hunt

- 6. If Treasure Hunt Year 2 is held, all opportunities identified shall be recorded in the Opportunity Register. The Coach must ensure that capital projects identified be documented in accordance with any additional PA requirements, which may require documentation outside of the opportunity register. Opportunity Register requirements are provided in the M&V Guide.

- 7. If the Treasure Hunt is held, the Treasure Hunt shall be summarized per the requirements below.

  - **General Information:** Including the location, the date, and the attendees.
  - **Attendees:** Including all participants in the Treasure Hunt (including any guests and implementation contractor technical support).
  - **Process:** A summary of the process followed during the Treasure Hunt, including how IDSM and GHG emissions steps were implemented.
  - **Next Steps:** This section will highlight next steps relative to the Treasure Hunt. For example, if another Treasure Hunt is necessary in order to identify projects to meet the cycle's goals, or if the customer will need support developing action plans.

2.1.2.9 Site-Specific **Activity #8:** EMIS Support, Year 2

EMIS (Energy Management Information System) Support introduces or strengthens the use of software and tools to collect, monitor, and analyze energy data. It supports informed decision-making and continuous improvement.

The goal of this activity is to help the customer look for simple ways to enhance how energy data is shared and used. In this activity, the SEM Coach will assist the customer in analyzing how existing data, data processes, and data systems can be used to right-size and prioritize where energy data can be integrated into existing control and reporting systems. Future EMIS activities will look at potentially more complex enhancements to data processes and systems.

2.1.2.9.1 Objectives and Targets

Type	Objectives
Business Practice	**The Energy Team and SEM Coach:** **1.** Identify opportunities to use existing data and/or hardware to visualize and report energy data for the appropriate staff and Energy Team. **2.** Identify opportunities to improve data collection, hardware, or software to improve their EMIS. **3.** Develop a plan for implementing recommendations for improving their EMIS.

There are **no targets** for this activity. However, the SEM Coach should ensure that, if targets were not met for Task 8 in EMA, Year 1, there is a plan to use this activity to review and improve the business practices related to that Task.

2.1.2.9.2 Optional Steps

Although not required, it is highly encouraged that IDSM and GHG Emissions optional steps be included as a standard offering to all customers in Core SEM, especially if the customer will continue to the Graduate Pathway.

1. **EMIS Audit:** At the program administrator's discretion, the program may provide additional resources to develop a more formal "EMIS Audit" using Natural Resources Canada's EMIS audit process or a similar process[12]. An alternative process may be used with the program's administrator's approval. The objective is to have a clear business plan for implementing a complete EMIS solution.

2. **IDSM EMIS Support:** At the program administrator's discretion, the program may provide additional support for customers that want to visualize IDSM-related data (e.g. demand, time of use, self-generation and/or storage, etc.) as part of their EMIS activity. The program administrator and SEM Coach should define the scope and responsibilities of this activity prior to the activity.

3. **GHG Emissions EMIS Support:** At the program administrator's discretion, the program may provide additional support for customers that want to visualize energy-related GHG emissions as part of their EMIS activity. This can be as simple as converting energy data to GHG data using conversion factors or more complex depending on the customer's needs and abilities. The program administrator and SEM Coach should define the scope and responsibilities of this activity prior to the activity taking place.

2.1.2.9.3 Requirements

- 1. EMIS Support Year 2 shall take place after Educational Module #7- EMIS, Year 2.
- 2. EMIS definition and implementation shall be supported by the Energy Team Lead and any appropriate Energy Team members and site staff.
- 3. The SEM Coach shall ensure the support meets the listed objectives.
- 4. This activity must be documented per the requirements below.
  - **General Information:** Including the location, the time, and the date, and the attendees, for any meeting or meetings supporting this activity.
  - **Summary of the Activity:** Including a summary of the type of activity (e.g., workshop, on-line webinar, etc.), attendance, presenters, agenda, key activities, materials provided to the customer.
- 5. If offered, optional steps shall be documented per the requirements below:
  - **Process:** A brief overview of the process followed for each optional step offered, including any modifications made.

[12] https://www.nrcan.gc.ca/energy/efficiency/energy-efficiency-industry/energy-management-industry/energy-management-information-systems/20403

2.1.2.10 Site-Specific **Activity #9:** EMA, Year 2

The Energy Management Assessment provides an evaluation of the site's energy management practices at the end of Cycle 1. It provides a measure of the customer's progress on their business practices, from the SEM Coach's perspective, compared to program targets.

The goal of the Energy Management Assessment (EMA), Year 2 is to provide the program an end-of-cycle assessment of the site's energy management practices relative to the business practices that were introduced in Cycle 1. The EMA shall consist of questions from the 50001 Ready Energy Management Assessment for the tasks listed below:[13]

- **Task 1** An EnMS and Your Organization
- **Task 3** Scope and Boundaries
- **Task 6** Energy Team and Resources
- **Task 8** Energy Data Collection and Analysis
- **Task 9** Significant Energy Uses (SEUs)
- **Task 10** Improvement Opportunities
- **Task 11** EnPIs and Energy Baselines
- **Task 12** Objectives and Targets
- **Task 13** Action Plans for Continual Improvement
- **Task 21** Monitoring and Measurement of Energy Performance

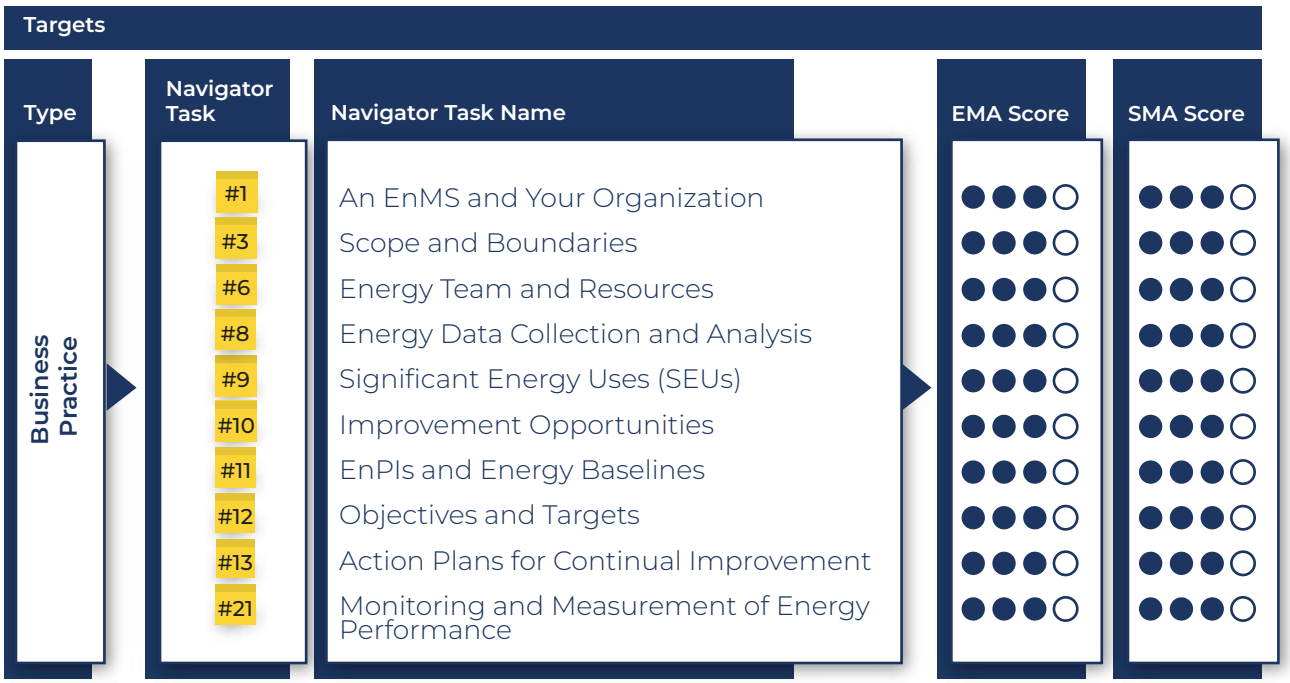
Similar to EMA, Year 1, the EMA, Year 2 is not intended to be customer-facing processes, the primary purpose is to document the customer's EnMS progress through Cycle 1. The SEM Coach should have been working closely with the Energy Team Lead and Energy Team on these business practices and should have the knowledge to complete the EMA without their input. Optionally, the SEM Coach can engage with the Energy Team Lead and/or Energy Team to complete the EMA. The results of the EMA can optionally be shared with the Energy Champion and Energy Team.

2.1.2.10.1 Objectives and Targets

Type	Objectives
Programmatic	**SEM Coach:** **1.** Identifies the site's progress with respect to EnMS practices introduced in Cycle 1. **2.** Optionally, if the EMA is done as a customer-facing activity the Energy Team understands the site's progress relative to the Navigator tasks introduced in Cycle 1.

The EMA should document the customer's progress towards meeting the expected (not required) EMA score at the end of Cycle 1. These targets relate to EMA and SMA scores for Tasks that have been introduced in this Cycle. Although an SMA is not required, conducting one for the Tasks listed would help the SEM Coach understand the customer's progress towards the SMA targets at the end of Cycle 1.

[13] The 50001 Ready Energy Management Assessment is available at https://industrialapplications.lbl.gov/energy-management



2.1.2.10.2 Optional Steps

Although the SMA is optional, it is highly encouraged that it be included as a standard offering to all customers in Core SEM, especially if the customer will continue to the Graduate Pathway.

1. **Self-management assessment (SMA):** The SMA is an assessment of the site's ability to manage business practices without the SEM program's support. It is an assessment that helps the program understand if the customer is taking steps towards the Cycle's SMA targets. Although not required in Cycle 1, an SMA is required for entry into the Graduate Pathway's Cycle 4 and it is highly recommended that the SEM Coach conduct the SMA on an annual basis, both to understand the customer's progress as well as to make the SMA at the end of Year 6 less onerous. If the SMA is completed, US DOE's 50001 Ready Self-Management Assessment shall be used.

2. **Customer-Facing EMA and/or SMA:** At the program administrator's and implementation contractor's discretion, the program may provide a customer-facing, facilitated EMA and/or SMA at any time during this Cycle. It is recommended, but not required, that the customer-facing EMA and SMA use questions that closely match the structure of the required EMA and SMA.

2.1.2.10.3 Requirements

- 1. EMA, Year 2 shall be completed before Site-Specific Activity #10- Cycle 1 Completion and Next Steps Support.

- 2. The EMA, Year 2 shall consist of questions that assess the site's existing practices relative to the Navigator tasks introduced in Cycle 1 using US DOE's 50001 Ready Energy Management Assessment and 50001 Ready Self-Management Assessment. The SEM Coach shall answer these questions and can optionally engage with the Energy Team or Energy Team Lead to answer the questions.

- 3. The SEM Coach shall ensure the EMA meets the listed objectives.
- 4. The EMA, Year 2 results shall be documented in the EMA Summary per the requirements below:
  - **General Information:** Including the date, and the individuals answering the questions of the EMA.
  - **Task and Subtask Score:** The score for each task and subtask included in the EMA and the scores and dates for that task and subtask in past EMAs.
  - **Overall Average Percentage Score:** The average score for all tasks included in the EMA and the average scores on past EMAs.
- 5. If offered, optional steps shall be documented per the requirements below:
  - **General Information:** Including the date and individuals leading and participating in the optional EMA and/or SMA.
  - **Process:** A brief overview of the process followed for each optional step offered, including any modifications made.

2.1.2.11 Site-Specific **Activity #10:** Cycle 1 Completion and Next Steps Support

Cycle 1 Completion and Next Steps Support helps the customer review their progress, successes, and challenges from participating in Cycle 1. It helps the facility decide whether to continue to Cycle 2.

This activity has two goals: **1)** Help the site understand and summarize their achievements and issues throughout their involvement in Cycle 1, and **2)** Help the site decide whether or not to advance to Cycle 2. Achievements and issues should be presented to the Executive Sponsor. The Executive Sponsor and Energy Team Lead shall decide whether or not the site will to continue to Cycle 2.

Based on that decision, the Energy Team Lead and SEM Coach will document a transition plan to document anything the customer should address, either as they exit the SEM program or as conditions to entering Cycle 2. The SEM Coach can optionally request the Executive Sponsor's and Energy Champion's commitment to address any key issues before Cycle 2 begins.

2.1.2.11.1 Objectives and Targets

Type	Objectives
Programmatic	**1.** The Energy Team and Energy Coach understand and summarize the site's achievements and issues for both EnMS and energy performance. **2.** The Executive Sponsor understands the site's achievements. **3.** The Energy Team, Energy Champion, and Executive Sponsor understand Cycle 2 objectives and requirements. **4.** The Energy Champion and Executive Sponsor decide whether or not to continue to Cycle 2. **5.** The Energy Champion and SEM Coach create a plan for the site, either for continuing to Cycle 2 or for exiting SEM.

There are **no targets** for this activity. However, the SEM Coach should ensure that, if targets were not met for any Task in EMA, Year 2, those Tasks be summarized as issues for the customer to address, especially if they are planning on participating in the Graduate Pathway in the future.

2.1.2.11.2 Optional Steps

There are **no optional steps** for this activity.

2.1.2.11.3 Requirements

- 1. Cycle 1 Completion and Next Steps Support shall be completed after EMA Year 2 and before Educational Activity #8- Cycle 1 Celebration and Next Steps.
- 2. The Energy Coach and Energy Team Lead shall summarize the site's achievements and issues in Cycle 1 and meet with the Executive Sponsor to present the site's achievements.
- 3. The Energy Team Lead and Executive Sponsor shall decide whether or not to continue to Cycle 2. The Energy Coach shall document the decision.
- 4. The SEM Coach shall ensure this activity meets the listed objectives.
- 5. The Energy Coach shall document this activity per the requirements below.
  - **General Information:** Including the location, the time, and the date, and the attendees.
  - **Cycle Decision:** The site's decision on whether to continue with the next cycle of the SEM program, who made or communicated the decision and key reasons for that decision.
  - **Conditions to Advancing:** If the customer is continuing to the next cycle, the conditions, if any, the program (SEM Coach or PA) is putting on the customer's continuation in the program (e.g., attendance to a percentage of educational activities, etc.)
  - **Key Issues:** Any key issues the Energy Team and SEM Coach identified that could affect the site's ability to manage energy, whether or not the site is advancing to the next cycle.
  - **Next Steps:** For facilities that are not continuing on the SEM program:
    - **Improvement Opportunities:** A summary of what will happen with the major improvement opportunities that have not yet been implemented, the resources or programs that will support the site, etc.
    - **EnMS:** A summary of what the site plans to do with their EnMS (e.g. maintain with internal resources, not maintain, hire external resources to help improve, seek ISO 50001 certification, etc.)

2.1.3 Cycle 1 Educational Modules

Educational modules provide the necessary information that must be conveyed to the customer in the educational activities. These activities can be provided in a variety of ways, including face-to-face, on-line, or a combination of the two. Cycle 1 includes eight modules. References to Navigator tasks are included to provide context for the PA and SEM Coach; customers are not expected to understand the specific tasks or the Navigator itself. For a complete explanation of what educational modules are and how they are structured, refer to Section 1.2.2.1 Educational Modules.

Connection of educational modules and tasks:

2.1.3.1 Requirements for All Educational Modules

Requirements for all educational modules are:

- 1. Educational modules shall follow the sequence provided within each Cycle. Changes to the sequence are allowed only in special cases and shall be approved by the PA.
- 2. Educational Modules shall be introduced and completed within the Phase specified in the sequence provided within each Cycle. Modules or elements of the module can be repeated through any of the Cycles but shall be introduced at least once in the required Phase.
- 3. The Energy Team Lead or an appropriate Energy Team representative shall attend each module. It is recommended that any site staff who are affected by the content covered in each module attend that module. The SEM Coach shall make a recommendation on which Energy Team members and/or site staff are recommended to attend each module.
- 4. Feedback shall be gathered from the participants and a summary of the module and feedback must be documented as outlined in this document.

- 5. The objectives of the modules can be met through the implementation of multiple educational activities. Those activities can be either on-line or in person, live or pre-recorded/ on-demand, individual or cohort, or a mix of any of these. There is no requirement for a minimum or maximum duration for the educational activities.

- 6. Educational activities shall meet the objectives for the educational module they are supporting.

- 7. Educational module targets are provided as a reference and are not required to be met.

- 8. All educational modules must be documented per the requirements below.

Educational Module Summary.

- **General Information:** Including the name, the location, the time, and the date of the activity and which module it supports.
- **Attendees:** All attendees, separated by customer attendees, utility attendees, implementation contractor attendees, and other attendees (such as presenters).
- **Summary of the Activity:** Including a summary of the type of activity (e.g., workshop, on-line webinar, pre-recorded class, etc.), attendance, presenters, agenda, key activities, materials provided to the customers.
- **Presentations:** Including a summary of the presentations given and key questions asked.
- **Group Activities:** Including a summary of any group activities conducted during the activity and the outcome of the activities.
- **Conclusion:** Including a summary of any prizes, incentive payments, or awards handed out during the activity. Also, including any homework or next steps assigned to customers.
- **Feedback:** A summary of the evaluation of the activity provided by customers, including any specific feedback given. The form must have the activity name on it, the date, and an optional name field for the customer to fill out. Unless a different approach has been agreed to by the PA, the feedback form shall include a rating from 1-5 (five being the best rating) on:

  - Whether the activity met expectations for gaining new information on the topic.
  - Whether the coaches presented information in an effective way.
  - If a workbook was provided, whether the workbook for the session is something the customer will refer to in working with their energy team.
  - Whether the preparation homework for the session helped the customer prepare for the activity and apply new principles at their site.
  - Whether the customer left the activity with specific ideas for how to improve their approach to the SEM program.
  - How the customer would rate their overall experience in the activity.
  - The feedback shall also include an area for the customer to comment on any item that rated three or lower, to comment on anything they would have liked to have spent more time on, and to provide any comments they would like to add. Providing the feedback form to customers is mandatory. Every effort should be taken to collect feedback although some customers may choose to not submit it.

2.1.3.2 Educational **Module #1:** General Introduction

The goal of this educational module is to give customers an introduction in four general topics:

1. **Programmatic.** The program itself and its structure through the three Core SEM cycles and Graduate Pathway. Expectations in Cycle 1, the scope of what is included and not included, and the resources the program does and does not provide now and in future Cycles.
2. **Business Practices.** The concept of an EnMS, what it is, why it is important, and how it will be developed in this first cycle and in future Cycles.
3. **IDSM.** What managing energy can mean in a broader sense (beyond energy efficiency), metrics that can be managed through the EnMS (e.g., demand response, time of use, etc.), and what the SEM program does or does not support in relation to these other metrics.
4. **GHG Emissions.** What GHG emissions are, why they are important, why they have a connection to energy and the EnMS, and how the SEM program does or does not support GHG emission reduction efforts.

These are the four areas that are part of every educational module and it is important that participants understand why they are being discussed and how they relate to both the program and the EnMS.

2.1.3.2.1 Objectives and Targets

Topic	EnMS Related Objectives	GHG Related Objectives	IDSM Related Objectives	Program Related Objectives
General Overview	What is an EnMS? What are business practices? What is a “system”? Why is it important? How will it be developed in this Cycle?	What are GHG emissions? How are they calculated? Why are they important globally? To the site? To the PA? What is their connection to energy and the EnMS? How does the program support GHG emissions reductions?	What does "managing energy" mean? How do we define "energy performance"? What metrics beyond consumption can be managed through the EnMS? How does the program support these other metrics?	What is "SEM"? Why are there three cycles? What is the Graduate Pathway? What are the program expectations? What is included in the program? What is not included? What resources does the program provide? Why is the focus on energy efficiency?

There are **no business practice related targets** for this educational module as the intent is to introduce the customer to the overall structure and approach of the SEM Program and Cycle 1.

2.1.3.3 Educational **Module #2:** Getting Started

The objective of this educational module is to provide customers practical guidance in establishing an EnMS. For some participants, an EnMS and continuous improvement in general, will be new. This module provides an opportunity to begin laying the foundational pieces of the EnMS. In this module, participants will begin to connect their corporate or site's high-level goals to the EnMS, develop their energy team, set the scope of their activities, and review the goals and direction established by their Executive Sponsor in the Kick-off Meeting.

In addition, this module continues to expand the two topics introduced in the previous module that extend beyond energy efficiency:

1. The connection between GHG emissions and the energy management system.
2. The broad range of energy performance objectives that can be integrated into the EnMS and how those can help support strategic corporate or site objectives.

This module can be held in multiple events and either on-line or in person.

Navigator Tasks introduced in this module are:

- **Task 1**- An EMS and Your Organization
- **Task 3**- Scope and Boundaries
- **Task 6**- Energy Team and Resources
- **Task 12**- Objectives and Targets

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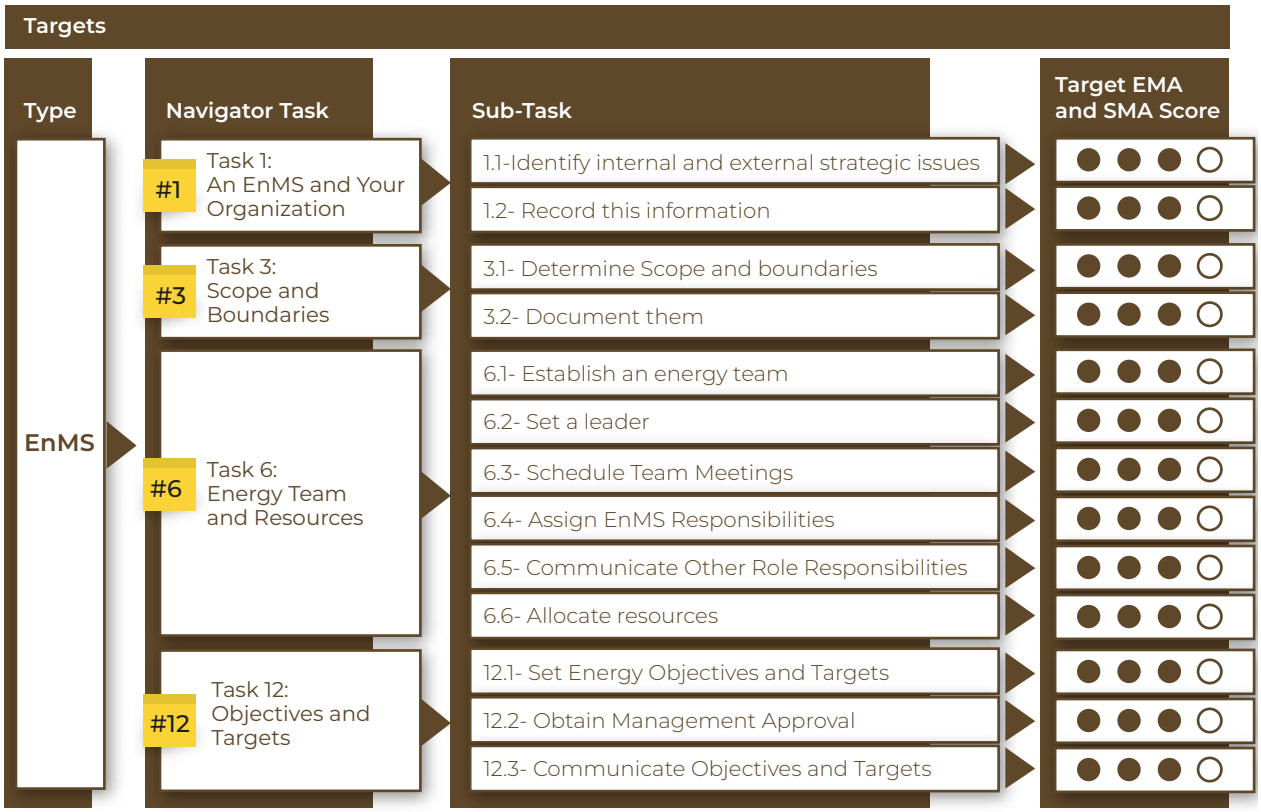
2.1.3.3.1 Objectives and Targets

Topic	EnMS Related Objectives	GHG Related Objectives	IDSM Related Objectives	Program Related Objectives
#1 Task 1: An EnMS and Your Organization	What objectives does our organization have that can be supported by managing energy? What can impact our EnMS?	Is managing GHG emissions important to our organization? Do we have objectives or requirements that we are trying to meet?	Do we have other objectives that will affect our approach to SEM beyond energy consumption? Are there related (sustainability, resilience, etc.) high-level objectives or strategies that managing energy could support?	How do we currently manage energy? What energy-related plans do we have underway? What is an EMA and why are we doing them?
#3 Task 3: Scope and Boundaries	What processes, systems, or areas should we include as we manage our energy? What should we exclude?	Which GHG emissions will we manage? Does managing GHG emissions change our scope or boundary?	If we have various energy-related objectives, do they affect our scope or boundary?	What will the program help us with? What is in-scope and out-of-scope for the program?
#6 Task 6: Energy Team and Resources	What makes an energy team successful? Who will be on ours? What are our roles? How often do we meet?	Does the Energy Team have sufficient understanding of GHG emissions and GHG reporting to meet our objectives?	Do we need someone on our team that understands other energy concepts beyond efficiency (e.g., demand reduction, renewable energy, demand response?	What roles does the program expect us to fulfill and who is responsible? What additional training might the sponsoring utility provide outside the SEM program?
#12 Task 12: Objectives and Targets	Do we have objectives and targets we're trying to reach? If not, how do we set them?	Do we have internal or external GHG reduction targets for year 1? If we don't and we want them, how do we set them?	Do we have internal or external objectives that relate to energy (beyond efficiency)? If we don't and we want them, how do we set them?	How will the program help us set or achieve our objectives and targets? How might competing targets be addressed?

Targets are for EMA and SMA scores for the Tasks and sub-tasks that this module covers. Although the customer should be able to meet these scores after completing this module, the targets are not a requirement. The SEM Coach does not have to conduct either an EMA or SMA at this point, but it is highly recommended that both are updated as the customer completes any module and associated activities.



2.1.3.4 Educational **Module #3:** Improving Performance, Year 1

The objective of this educational module is to provide customers guidance for visualizing how their site uses energy, understanding how they can prioritize or focus efforts, and understanding the actions they can take to save energy. The module focuses on giving participants the knowledge and skills needed to identify and implement energy-saving projects as early as possible. The Energy Map Tool, ideas for no- and low-cost energy saving opportunities, and the Opportunity Register are delivered and explained during this module. The three Site-Specific Activities that follow this module, the Energy Map/SEU Selection Support, Treasure Hunt, and Action Plan Support, should be explained. If available, sub-system energy efficiency training should be provided based on the customer's needs.

Identifying and implementing quick wins is critical to building momentum and enthusiasm for the SEM program. The agenda should include training that will enable near-term identification and implementation of technical opportunities through straight-forward concepts, processes and tools.

Related Navigator Tasks introduced in this module are:

- **Task 8**- Data Collection and Analysis
- **Task 9**- Significant Energy Uses
- **Task 10**- Improvement Opportunities
- **Task 13**- Action Plans for Continual Improvement

Any educational activity that discusses IDSM opportunities should emphasize the economics and cost effectiveness of energy efficiency in general as a foundation for IDSM opportunities. For the purposes of education in the SEM programs, IDSM opportunities are defined as the multitude of energy solutions available to a customer. Below is a general order of cost effectiveness of IDSM options, often referred to as a "loading order." The first item would typically be the most cost effective.

1. Energy conservation
2. Energy efficiency, including Water/Energy Nexus[14]
3. Time of use (TOU) management and pricing
4. Demand response
5. Self-generation and energy storage

The definitive definition of IDSM opportunities and the grid-based "loading order" should come from the CPUC or CPUC approved sources and should be updated as policy dictates.

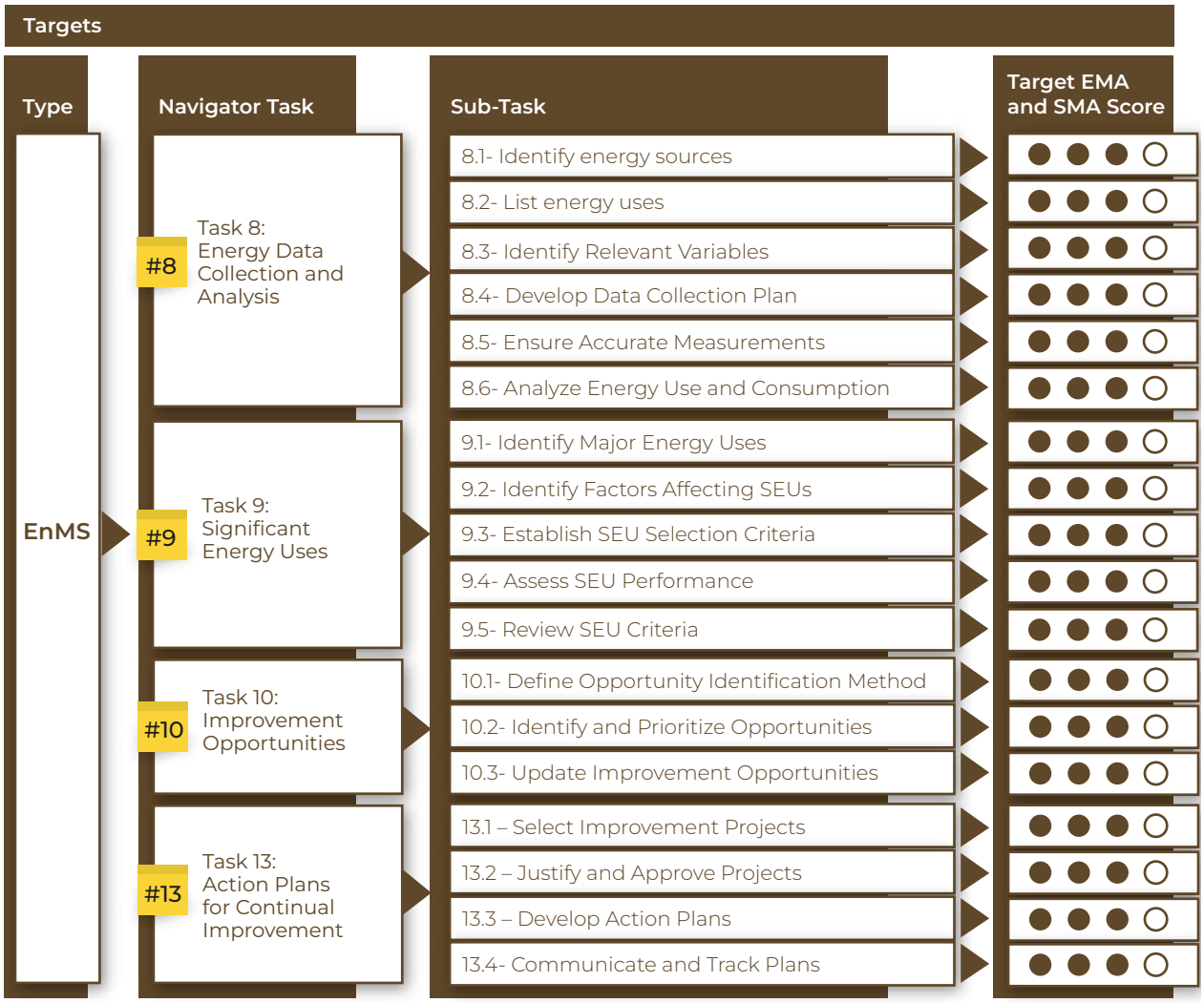
Any IDSM education activity should include a discussion on what the different IDSM opportunities are, how they interact, and how to select among them in a way that promotes the customer's cost-effectiveness and any other criteria that are used for selecting projects to implement.

1281

2.1.3.4.1 Objectives and Targets

Topic	EnMS Related Objectives	GHG Related Objectives	IDSM Related Objectives	Program Related Objectives
#8 Task 8: Data Collection and Analysis	What types of energy do we consume? Where is our energy consumed? What consumes the most energy? What might affect our energy consumption? How will we collect and analyze our energy and other data?	Is there GHG-specific data we need to consider, collect, and/or analyze? Where do we most emit energy-related GHG emissions?	Is there other energy performance data we need to consider beyond energy consumption (e.g., demand reduction)?	What data does the program need from the site? At what frequency? What data does the program collect directly? What resources does the program have to help "map" energy?
#9 Task 9: Significant Energy Uses	What equipment or process has the most potential for energy performance improvement? How do we determine which equipment or processes we focus on?	What equipment or processes generate the most GHG emissions? Which has the most potential for GHG emissions reductions?	What equipment or processes have the most potential to reduce other energy-related objectives? Do we prioritize our efforts by other energy-related performance objectives?	What role does the program play helping us focus on improving our critical energy using infrastructure?
#10 Task 10: Improvement Opportunities	How do we identify and prioritize opportunities to improve our energy performance? How often do we look for opportunities? What opportunities do we focus on now? What are no- and low-cost opportunities that we can implement quickly? What is the Treasure Hunt? What criteria do we use to select projects?	Are there GHG opportunities beyond energy efficiency that we should identify? How do we identify them? Do we prioritize opportunities by GHG emissions?	What other non-energy-efficiency opportunities should we identify? How do we identify them? How do we prioritize them? What is a "typical" loading order? How do we prioritize between different types of opportunities (e.g., efficiency, demand, self-generation, storage, electrification, etc.). ? How do we determine the economics of different opportunities?	What role does the program play with helping us find or prioritize opportunities? Can the program help find opportunities other than energy efficiency? Are there incentives for implementing opportunities? What is the opportunity register?
#13 Task 13: Action Plans	How do we select projects for implementation? Will those projects meet our goals? How do we manage the implementation of those projects? Do we need to plan for measuring the performance of those actions?			What resources does the program have to help us manage or implement projects? What role does the program play with the different types of projects? Which projects need a persistence strategy?

Targets are for EMA and SMA scores for the Tasks and sub-tasks that this module covers. Although the customer should be able to meet these scores after completing this module, the targets are not a requirement. The SEM Coach does not have to conduct either an EMA or SMA at this point, but it is highly recommended that both are updated as the customer completes any module and associated activities.



2.1.3.5 Educational **Module #4:** Measuring Success

The objective of this educational module is to provide participants guidance for how to track their energy performance. Participants will have just completed their energy map, SEU Selection, Treasure Hunt, and action plans and should have a good sense of the opportunities they plan to implement.

In this module, they will review the data they are collecting, review the metrics and baselines that they can use to track energy performance, and review options for determining their energy performance. In this module the SEM Coach should share the energy model with the customer and give them an

opportunity to understand how the model was developed and why it is used. The customer should understand what their role is in developing and maintaining the model and how the program will use its results. The Energy Data and Performance Tracking Tool should be shared with customers.

Related Navigator Tasks introduced in this module are:

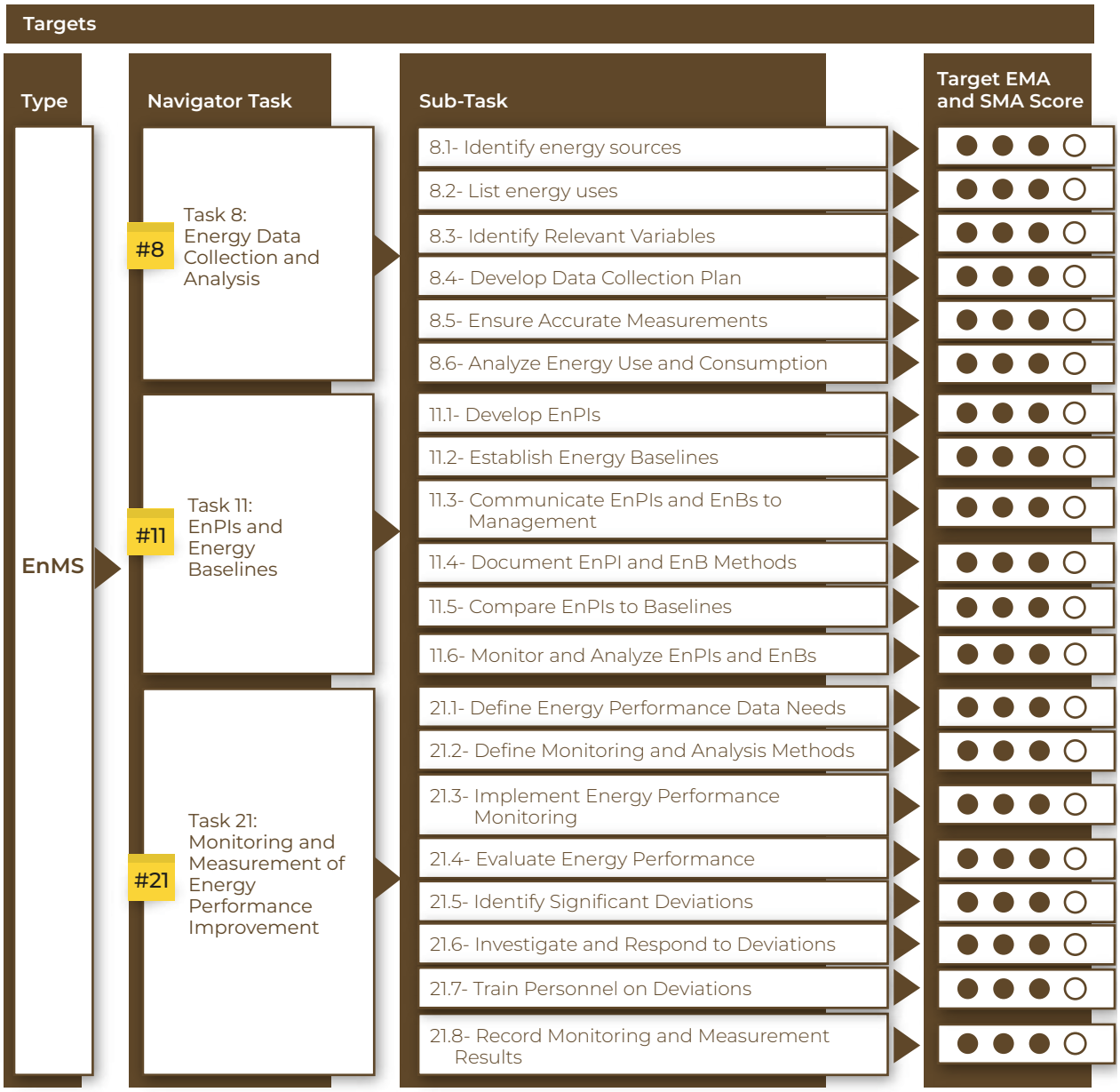
- **Task 8**- Data Collection and Analysis
- **Task 11**- EnPIs and Baselines
- **Task 21**- Monitoring and Measurement of Energy Performance Improvement

2.1.3.5.1 Objectives and Targets

Topic	EnMS Related Objectives	GHG Related Objectives	IDSM Related Objectives	Program Related Objectives
#8 Task 8: Data Collection	What data have we collected? Are we missing any data sources? Is the data accurate?	Is the data being captured resulting in the correct GHG emissions analysis for our site?	Do we need to capture data other than energy consumption?	Does the data we have meet the program's needs? Is the data quality acceptable? What is an Energy Data Collection Plan? What is our role in collecting data?
#11 Task 11: EnPIs and Baselines	What metrics do we need to set to track our energy performance? What should our baseline be? How often do we compare our metrics to the baseline?	What metrics do we need to set to track our GHG emissions? Are GHG metrics required by external parties? Do we have a GHG baseline?	Are there metrics beyond energy consumption that we want to track? Do we have baselines for those metrics?	What are the program's metrics and baselines? How often are they measured? What does the program do with those metrics?
#21 Task 21: Monitoring and Measurement	How do we determine our energy performance? What metrics should we use? What happens if our performance deviates significantly?	Do we need to report GHG emissions internally or externally? If so, what needs to be reported?	Does our energy performance analysis include metrics beyond consumption?	How does the program determine our energy performance? What is an energy model and what do we do with it? What happens if we do not meet the program's expected improvement?

[14] One of the California's largest end uses of electricity is in the treatment, heating, and conveyance of water. This is known as the "Water/Energy Nexus." For more information on the water/ energy nexus see: https://www.cpuc.ca.gov/nexus_calculator/

Targets are for EMA and SMA scores for the Tasks and sub-tasks that this module covers. Although the customer should be able to meet these scores after completing this module, the targets are not a requirement. The SEM Coach does not have to conduct either an EMA or SMA at this point, but it is highly recommended that both are updated as the customer completes any module and associated activities.



2.1.3.6 Educational **Module #5:** Planning, Year 2

The objective of this educational module is for each customer to develop a plan of action for SEM Program Year 2. The customer should reflect on their SEM program experience thus far, as they have engaged in the program for nearly a year at this point. With an eye on the future, they will consider

what has worked, what has not, what needs to be changed, and where they want to go from here, both with their EnMS and their energy saving opportunities. Customers should learn how to review their progress as well as ensure that they are on track to meet SEM Program Year 2 objectives.

Related Navigator Tasks discussed in this module are:

- **Task 8**- Data Collection and Analysis
- **Task 9**- Significant Energy Uses
- **Task 10**- Improvement Opportunities
- **Task 11-** EnPIs and Baselines
- **Task 12**- Objectives and Targets
- **Task 13**- Action Plans for Continual Improvement

2.1.3.6.1 Objectives and Targets

Topic	EnMS Related Objectives	GHG Related Objectives	IDSM Related Objectives	Program Related Objectives
#8 Task 8: Data Collection and Analysis	Are we collecting the right data at the right time? Do we need to modify the data we collect or the approach we take? Are there changes that affect our Data Collection Plan, Energy Map, or SEUs?	Are there any changes in GHG reporting that affect the data we collect?	Are we collecting the data we need in order to track our energy performance (beyond energy efficiency)?	Are we meeting the program's data collection needs?
#9 Task 9: SEUs	Are there changes that affect how we select our SEUs? Do our current SEUs apply to SEM Program Year 2? Do we need to change them?			
#10 Task 10: Improvement Opportunities	Do we have enough opportunities to meet our objectives for year 2 and beyond? Do we need to identify more? What opportunities do we focus on this year?			When do projects have to be implemented to receive incentives in Cycle 1? Are our implemented projects well documented in the Opportunity Register?
#11 Task 11: EnPIs and Baselines	Have we compared our metrics to their baselines in year 1? Should any metrics be changed or added for year 2?	Are there any changes in internal or external GHG reporting needs that might affect our EnPIs or Baselines?	Are there changes that might affect other energy metrics (e.g., peak demand, TOU, etc.)	Are there any changes in how the program tracks our metrics or EnPIs?

#12 Task 12: Objectives and Targets	What are our objectives and targets for year 2 and beyond? How do they compare with year 1?	Do we have internal or external GHG reduction targets for year 2 and beyond? Have they changed from year 1?	Do we have internal or external objectives that relate to energy (beyond efficiency) for SEM Program Year 2 and beyond? Have they changed from year 1?	How will the program help us set or achieve our objectives and targets? How might competing targets be addressed?
#13 Task 13: Action Plans	In year 1, did we implement the projects we planned on implementing? Do our approved projects for year 2 meet our objectives? Should we develop action plans for any opportunities? How do we make sure the actions we implement last?			

There are **no targets** for this educational module, as new business practices are not introduced. However, the SEM Coach should ensure that customers understand that business practices introduced in Year 1 will be reviewed in the site-specific activity related to this educational module.

2.1.3.7 Educational **Module #6:** Improving Performance, Year 2

The objective of this educational module is for customers to be able to identify more advanced, complex, or resource (capital or human) intensive energy improvement opportunities. Participants will learn how to improve on elements learned in Module 3 and applied through the first year of the SEM engagement.

In this module, customers should learn how to identify and implement more advanced energy savings projects and better estimate the energy savings potential of those projects. Customers should also learn best practices for creating action plans for these more complex projects.

The technical content of this module will depend on the systems and processes present at the customer's site as well as on the needs of the customer.

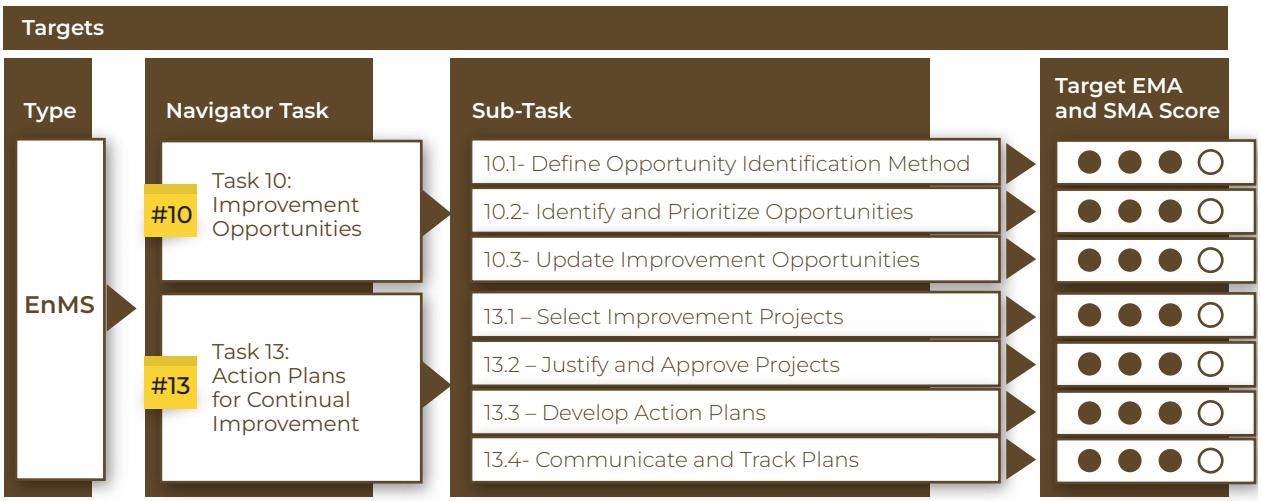
Related Navigator Tasks discussed in this module are:

- **Task 10**- Improvement Opportunities
- **Task 13**- Action Plans for Continual Improvement

2.1.3.7.1 Objectives and Targets

Topic	EnMS Related Objectives	GHG Related Objectives	IDSM Related Objectives	Program Related Objectives
#10 Task 10: Improvement Opportunities	Do we have enough opportunities to meet our objectives? Are there additional opportunities that we can identify? How do we identify projects that are more complex?	Are there GHG opportunities that we should identify? Are there resources that we should use to identify them?	Are there other non-energy efficiency opportunities we should look for? Are there resources that we should use to identify them?	How do we better estimate savings? Are there opportunities we should identify that the program cannot help us with?
#13 Task 13: Action Plans	Do we need to select and get approval for additional opportunities? Should we add persistence strategies to our action plans?			None

There are **no targets** for this educational module. However, the SEM Coach should ensure, if targets have not been met by participants for Tasks 10 and 13, that this educational module provides further assistance in reaching the Cycle targets for these tasks.



2.1.3.8 Educational **Module #7:** EMIS, Year 2

This module gives participants tools and methods for understanding and tracking energy performance at a deeper level using the concept of an Energy Management Information System (EMIS). In this context, an Energy Management Information System is not any specific hardware or software solutions but it is the proper integration and visualization of energy information so that multiple levels of employees and management within an organization are able to take actions and make decisions that save energy and maintain energy savings.

The objective of this module is to help participants understand how they can leverage existing data points and process and enhance them. Customers should understand that no matter how they are currently tracking key site and energy data, improvements designed to fit their situation can help drive better decisions within and across facilities. In this module, customers should explore how to right-size and prioritize where an EMIS approach can have an impact, how it can be integrated into existing control and reporting systems, and how an EMIS approach can be implemented to supplement their SEM program.

Future EMIS activities will look at potential improvements to data processes.

Related Navigator Tasks discussed in this module are:

- **Task 8**- Data Collection and Analysis

2.1.3.8.1 Objectives and Targets

There are **no targets** for this educational module. However, the SEM Coach should ensure, if targets have not been met by participants for Task 8, that this educational module provides further assistance in reaching the Cycle targets for this task.

2.1.3.9 Educational **Module #8:** Celebration and Next Steps, Year 2

The objective of this module is to recognize the customers' accomplishments and generate enthusiasm for continuing engagement in the SEM program. Customers have worked hard for two years; this module provides a forum for their peers to recognize the work they have done and hear what they have planned for the future.

The SEM Coach must work with each Energy Champion ahead of time to prepare a brief presentation explaining the story and outcomes through their engagement with the SEM program. This should be a similar presentation as that given to their Executive Sponsor. Customers should receive a certificate of accomplishment.

2.1.3.9.1 Objectives and Targets

Topic	EnMS Related Objectives	GHG Related Objectives	IDSM Related Objectives	Program Related Objectives
Review of past two years	What have we achieved the past two years? How do we present our progress to top management and to others? What do we want to improve on or achieve in the next year or Cycle?			What does Cycle 2 look like? Will we continue with the SEM program? What do we do if we want to continue? If we do not?

There are **no targets** for this educational module. However, the SEM Coach should ensure that customers understand that business practices introduced in Cycle 1 will be reviewed in the site-specific activity related to this educational module.

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CYCLE 2

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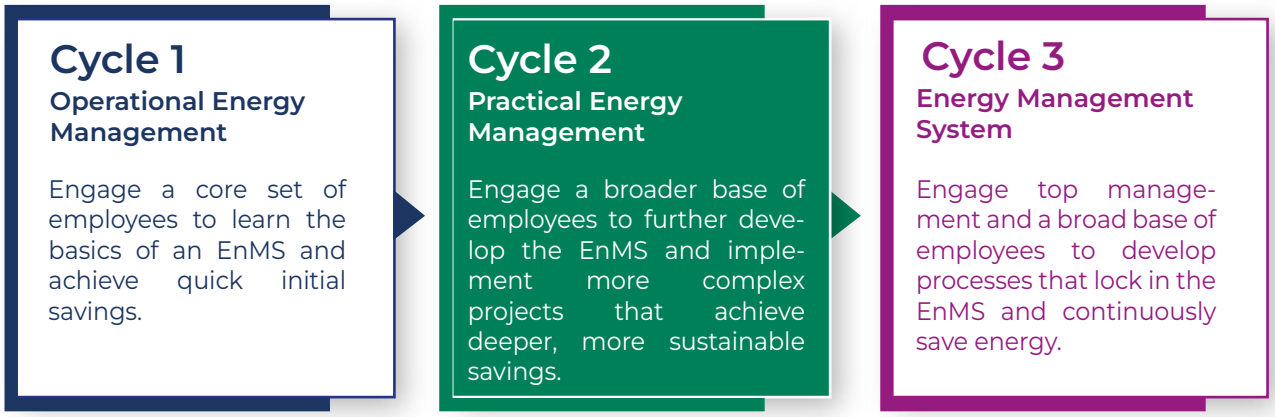
2.2 Cycle 2

2.2.1 Cycle 2 Overview

Cycle 2 focuses on deepening savings and engaging a broader circle of employees. It builds on the experience developed in Cycle 1 to expand beyond the initial core of employees. This cycle helps ensure there is management commitment, employee awareness and staff competence to meet the organization's targets. Processes continue to get defined and documented so they can be repeated and energy savings focus on expanding to more complex opportunities that require more resources (financial or human) and broader involvement from employees outside the energy team. A deeper level of management commitment is critical to ensure the resources are available to meet the organization's objectives.

2.2.1.1 Cycle 2 Goals and Objectives



The goal for Cycle 2 is that the participant has business practices that allow them to practice "practical energy management." This means that business practices expand to include a broader range of employees, that the organization is able to take on more complex projects, and that management is engaged and supportive of the program's efforts.

In practice, this means that the participant:

1. Has a management team that is committed to the SEM program and understands their responsibilities (Task 4- Management Commitment).
2. Has documented and communicated the intention of the energy management activities (Task 5- Energy Policy).
3. Ensures personnel who affect energy performance have the competence they need to meet the organization's objectives (Task 14- Competence and Training).
4. Ensures key personnel and contractors are aware of their role supporting the energy management activities (Task 15- Awareness and Communication).
5. Plans and controls the processes that can affect energy performance (Task 17- Operational Controls).
6. Considers the impact of key design activities on energy performance (Task 18- Energy Considerations in Design).
7. Considers the impact of key procurement activities on energy performance (Task 19- Energy Considerations in Procurement).

It also means that by the end of the Cycle the participant will be able to manage these business practices with limited program support. In other words, the program is not doing these tasks for the customer, but rather helping the customer understand how to update and maintain them.

2.2.1.2 Cycle 2 Sequence

Changing the sequence of educational modules or site-specific activities is not recommended but it is ultimately the responsibility of the program administrator to approve any changes. As mentioned earlier, specific cases may call for changes in either the timing or sequence of activities. Similar to Cycle 1, the sequence presented in the table below should be followed in order. This means, for example, that Site-Specific Activity #1 is completed before Educational Modules #1, and #2.

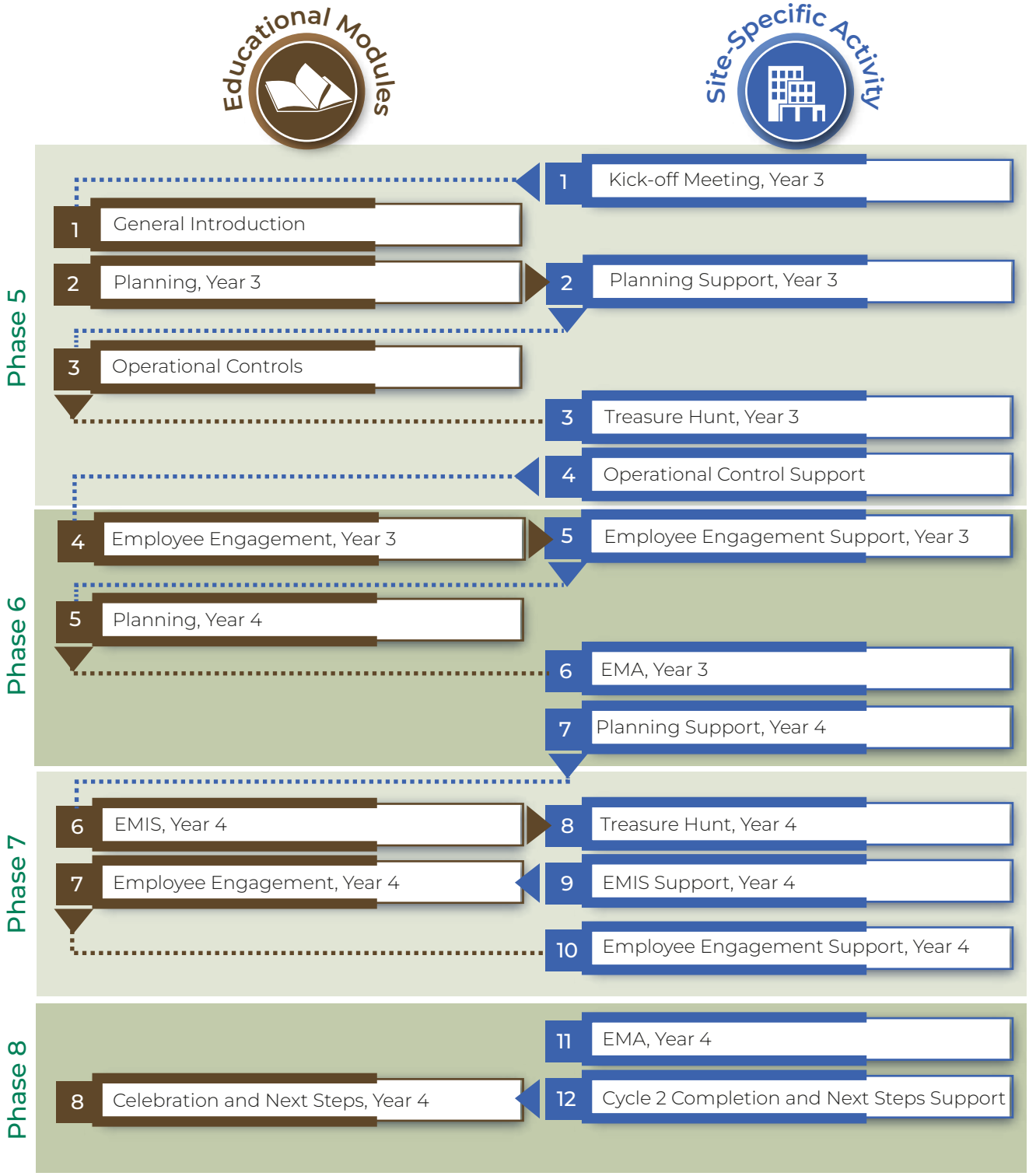


Table 4 - Cycle 2 Sequence

2.2.1.3 Cycle 2 Targets

As mentioned earlier, the goal for Cycle 2 is that the participant has business practices that allow them to practice a broader "practical energy management" approach. In practice, this means that by the end of the Cycle, participants should have maintained or improved the business practices introduced in Cycle 1 and should have developed the business practices introduced in Cycle 2. It is recommended, but not required, that participants be able to score a "3" on all tasks and subtasks introduced in Cycle 1 and 2 on both the 50001 Ready Energy Management Assessment (EMA) Excel Tool and the 50001 Ready Self-Management Assessment (SMA) Excel Tool.

Cycle	Navigator Task #	Navigator Task Name	EMA Score	SMA Score
Cycle 1	#1	An EnMS and Your Organization	●●●○	●●●○
	#3	Scope and Boundaries	●●●○	●●●○
	#6	Energy Team and Resources	●●●○	●●●○
	#8	Energy Data Collection and Analysis	●●●○	●●●○
	#9	Significant Energy Uses (SEUs)	●●●○	●●●○
	#10	Improvement Opportunities	●●●○	●●●○
	#11	EnPIs and Energy Baselines	●●●○	●●●○
	#12	Objectives and Targets	●●●○	●●●○
	#13	Action Plans for Continual Improvement	●●●○	●●●○
	#21	Monitoring and Measurement of Energy Performance	●●●○	●●●○
Cycle 2	#4	Management Commitment	●●●○	●●●○
	#5	Energy Policy	●●●○	●●●○
	#14	Competence and Training	●●●○	●●●○
	#15	Awareness and Communication	●●●○	●●●○
	#17	Operational Controls	●●●○	●●●○
	#18	Considerations in Design	●●●○	●●●○
	#19	Considerations in Procurement	●●●○	●●●○

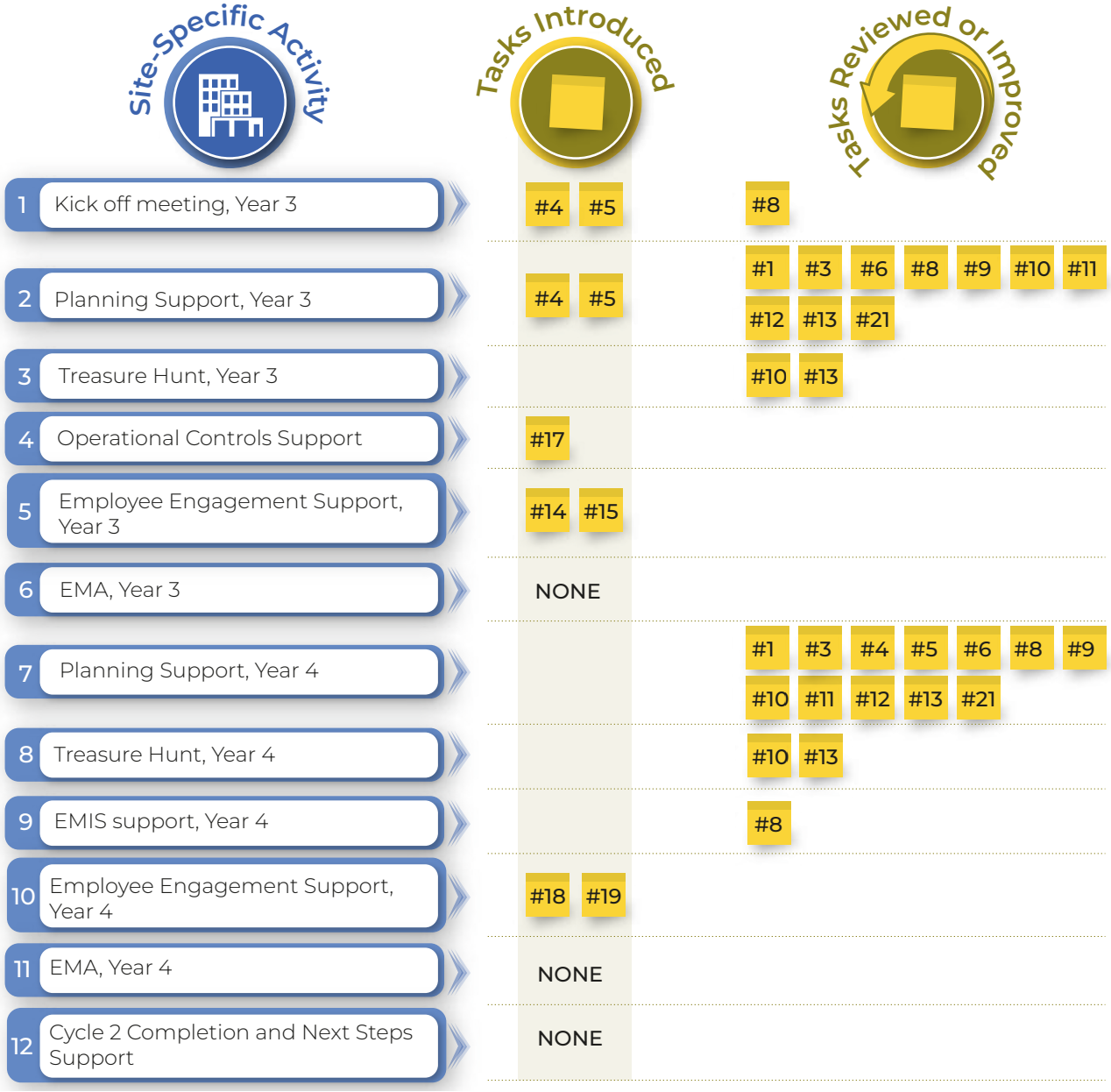
2.2.2 Cycle 2 Site-Specific Activities

2.2.2.1 Overview of Site-Specific Activities

Site-Specific Activities are activities that are implemented with an individual site. Site-Specific Activities can vary significantly from participant to participant and may depend on a variety of factors, including the site's objectives, priorities, expertise, infrastructure, available resources, etc. An overview of each activity is provided along with the objectives and targets, optional steps, and requirements for that activity.

References to Navigator tasks are provided for context. It is not a requirement to show the customer the details of the task nor the Navigator tool itself.

Connection of Site-Specific Activity and tasks:



2.2.2.2 Site-Specific **Activity #1:** Kick-off Meeting, Year 3

The Kick-off Meeting gives the SEM Coach, Energy Champion, and key facility stakeholders, the opportunity to review the past Cycle and discuss this Cycle's goals, roles, and approach. It sets expectations and lays the foundation for the facility's effective participation in Cycle 2.

The Kick-off Meeting begins the customer's engagement with the SEM program in Cycle 2. This meeting has multiple purposes:

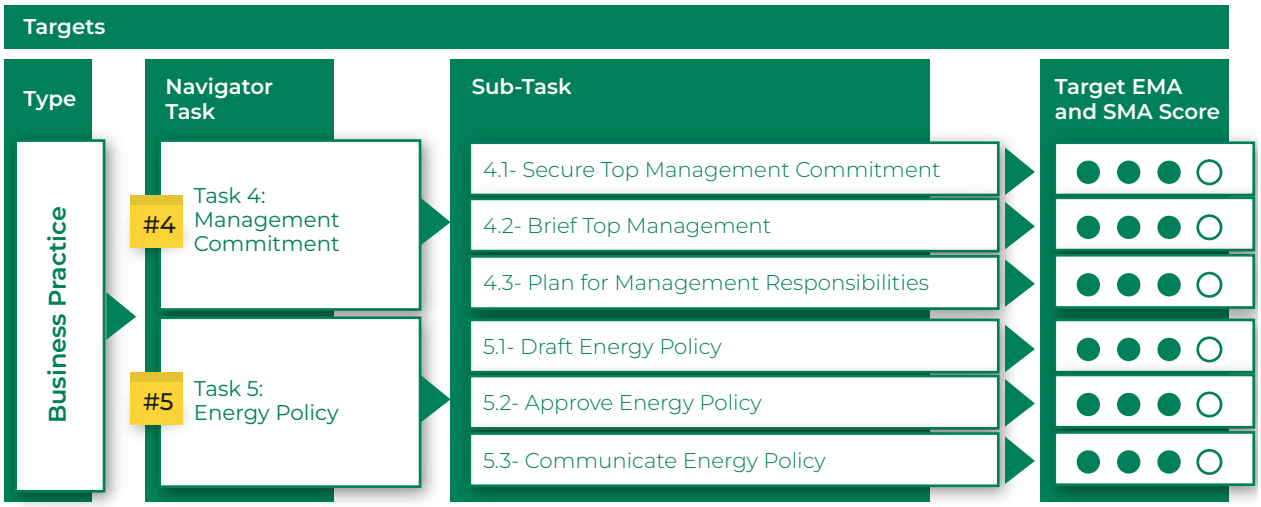
1. Introducing the Executive Sponsor and Energy Champion to the requirements and objectives of Cycle 2, including energy saving and EnMS goals, and ensuring they understand the differences between Cycle 1 and Cycle 2.
2. Ensuring the Executive Sponsor understands the role and requirements of top management in Cycle 2, including Task 4- Management Commitment and Task 5- Energy Policy. Specifically, the Executive Sponsor is responsible for ensuring the objectives and targets (Task 12), resources (Task 6), and energy policy (Task 5) in this cycle reflect the organization's needs.
3. Articulating the customer's commitment to the SEM program, including resources and targets necessary for meeting this cycle's objectives.
4. Discussing with the Data Lead any changes needed in the Energy Data Collection Plan (Task 8).

As with the other site-specific activities, the Kick-off Meeting is meant to be held with an individual site and not in a group or cohort environment.

1450 ### 2.2.2.2.1 Objectives and Targets

Type	Objectives
Programmatic	**1. Executive Sponsor and Energy Champion understand:** **a.** The SEM program's 3-cycle approach and the general vision and goals for each remaining cycle. **b.** The Cycle 2 goals, expectations, roles, and requirements for their site's involvement in the SEM program. **c.** The Executive Sponsor's role and responsibilities in Cycle 2. **d.** Any changes in the roles and responsibilities of the Energy Champion, Data Owner, Executive Sponsor, and Energy Team. **e.** Any changes in the roles of the SEM Coach, PA, and Account Executive. **f.** Any changes in how the SEM program can help support key corporate and site objectives and strategies.
Business Practice	**2. Executive Sponsor articulates or confirms:** **a.** The resources (human and capital) available to support the program. **b.** Any existing or desired objectives or targets the program should try to meet, including Cycle 2 EnMS and savings objectives and targets. **c.** Agreement to a draft of the Executive Sponsor's role and responsibilities. **d.** A draft energy policy.
	3. Data Lead and SEM Coach: **a.** Review and make any necessary changes to the Energy Data Collection Plan. This should include any changes in roles and responsibilities, processes, or analysis methods.

1451 The targets below relate to EMA and SMA scores. Although the customer may not be able to meet
1452 these targets after the Kick-off meeting, the targets should be considered so that progress can be
1453 made towards meeting them by the end of the Cycle.



2.2.2.2.2 Optional Steps

Although these steps are optional, it is highly encouraged that they be included as a standard offering to all customers in Core SEM, especially if the customer will continue to the Graduate Pathway.

1. **IDSM Data Collection Plan Addendum:** At the program administrator's discretion and based on customer needs, the program may provide additional support for customers that want to track energy performance metrics beyond energy consumption (e.g. energy generated and/or stored, demand, time of use) by helping them develop an expanded data collection plan that includes data for those metrics. As an extension to the energy data plan, the IDSM Data Plan Addendum is an agreement between the Data Owner and the SEM Coach on what data is necessary to collect and expectations (e.g. responsibility, frequency, process for transferring data, etc.) for data transfer.

2. **GHG Data Collection Plan Addendum:** At the program administrator's discretion, the program may provide additional support for customers that want to track their energy-related GHG emissions by helping them develop a GHG data collection plan. As an extension to the energy data plan, the GHG Data Collection Plan Addendum is an agreement between the Data Owner and the SEM Coach on what data is necessary to collect and expectations (e.g. responsibility, frequency, process for transferring data, etc.) for data transfer. The PA and SEM Coach shall determine which sources of energy are in-scope for this activity.

2.2.2.2.3 Requirements

- 1. The Kickoff Meeting shall be held prior to any other educational or site-specific activities.
- 2. The meeting shall include at least:
  - **a. From the Program:** The SEM Coach. The Account Executive is optional but highly recommended.
  - **b. From the Customer:** The Executive Sponsor, Energy Team Lead, Data Lead, and any relevant Energy Team members.
- 3. The meeting can be held in multiple parts, for example one meeting with the Executive Sponsor and the Energy Team Lead to discuss high-level activities and another with the Data Lead and the Energy Team Lead to discuss data needs and timing.
- 4. The meeting shall be held with only one organization (i.e. not with other facilities from different companies in the same cohort). Multiple participants from the same organization are allowed if they can benefit from a single meeting.
- 5. Where possible, the meeting(s) shall be held in person.
- 6. The SEM Coach shall ensure the meeting(s) meets the listed objectives and targets.
- 7. If offered, optional steps (IDSM and GHG- Data Collection Plan Addendums) shall be introduced in this meeting.
- 8. This activity must be documented per the requirements below:
  - **General Information:** Including the location, the date, and the attendees of the Kick-off Meeting.
  - **Agenda:** Include the agenda of the meeting and any notes (e.g., any topics that were not discussed or additional topics that were covered, any issues that were highlighted, etc.).

- **Energy Efficiency History and Plans:** Any pending and planned energy efficiency projects must be documented in the Opportunity Register in accordance with requirements outlined in the M&V Guide.
- **Recommended Next Steps:** If any, recommendations on next steps the program should take with this customer.

◆ 9. If offered, optional steps shall be documented per the requirements below:

- **Process:** A brief overview of the process followed for each optional step offered, including any modifications made and how the addendum was documented in the data collection plan.

2.2.2.3 Site-Specific **Activity #2:** Planning Support, Year 3

Planning for Year 3 prepares the site for continued success in Year 3 of the SEM Program. It helps the Energy Team and SEM Coach review Year 2 progress and shortfalls and compare them with Year 3 targets and objectives to create a plan of action for Year 3.

The goal of this activity is to review key items that might affect the site's approach for Cycle 2 and make any necessary changes to existing business practices. A second goal is to help the participant further develop the business practices introduced in the Kick-off Meeting and educational module #2. The Energy Team should review their Cycle 1 actions (e.g., implemented projects, energy savings, objectives, performance indicators, SEUs, energy map, etc.) and determine if any significant changes need to be made for Cycle 2 based on the Navigator Tasks discussed in Educational Module #2- Planning, Year 3.

This activity repeats the experience and expectation set up in Cycle 1 for reviewing objectives for the cycle and for annual planning that will be repeated and expanded on through this cycle and Cycle 3. Although the Energy Team should eventually lead their own planning sessions and develop the processes to support them, in this second planning session the SEM Coach may still provide significant support while helping the Energy Team lead enhance their processes and ability to lead their annual planning.

The SEM Coach and Energy Team should use this planning session to determine if a Treasure Hunt is needed, or not, to identify opportunities to meet the Cycle's objectives.

2.2.2.3.1 Objectives and Targets

Type	Objectives
Business Practice	**The Energy Team:** **1.** Reviews Cycle 1 actions (implemented projects, saved energy, data collected, indicators, focus areas or SEUs) and any past issues to evaluate their progress versus program and site expectations. **2.** Reviews the Tasks discussed in Educational Module #2- Planning for Cycle 2 to develop EnMS and savings targets and makes any necessary changes for Cycle 2. **3.** Updates any business practices or documents (e.g., SEUs, Energy Map, Energy Data Collection Plan, etc.) as needed **4.** Sets a plan for Cycle 2 and subsequent years, including selection of opportunities, development of action plans, and any necessary improvements in data collection or selection of indicators. **5.** With the SEM Coach, determine whether or not the Treasure Hunt- Year 3 is necessary based on the site's objectives and remaining opportunities. **6.** Develops a plan for engaging top management. **7.** Drafts a policy statement for approval.

There are **no targets** for this activity. However, the SEM Coach should ensure that, if targets were not met for any Task in EMA, Year 2, there is a plan to review the business practices related to those Tasks. In addition, if targets were not yet met for Task 4: Management Commitment and Task 5: Energy Policy, this activity should be structured to help the customer meet those targets.

2.2.2.3.2 Optional Steps

There are **no optional steps** for this activity at this time.

2.2.2.3.3 Requirements

- 1. Planning Support, Year 3 shall take place after Educational Module #2- Planning, Year 3.
- 2. Planning Support, Year 3 shall be attended by any appropriate Energy Team members and site staff.
- 3. The SEM Coach and Energy Team shall determine whether Treasure Hunt, Year 3 is necessary.
- 4. The SEM Coach shall ensure the support meets the listed objectives.
- 5. This activity must be documented per the requirements below:
  - **General Information:** Including the location, the time, and the date, and the attendees, for any meeting or meetings supporting this activity.
  - **Summary of the activity:** Including a summary of the type of activity (e.g., workshop, on-line webinar, etc.), attendance, presenters, agenda, key activities, materials provided to the customer.

2.2.2.4 Site-Specific **Activity #3:** Treasure Hunt, Year 3

Similar to the past Treasure Hunt, Treasure Hunt, Year 3 continues to expand the opportunity-finding process. It helps customer define energy-saving actions by going deeper into energy-consuming systems covered in previous Treasure Hunts or by expanding into systems that have not been covered and ensures there are enough opportunities to meet the facility's targets for the year, this Cycle, and for future years.

As previously stated, the goal of any Treasure Hunt is to identify energy waste and energy saving opportunities so that participants can make changes to meet their objectives and targets, which is an element of Task 10- Improvement Opportunities. A successful outcome of this Treasure Hunt is the identification and prioritization of opportunities to meet Cycle 2 and beyond (e.g., Cycle 3) objectives.

The intent of the Treasure Hunts over the Core SEM six years is to build a comprehensive, facility-wide view of energy-saving opportunities from a full systems perspective. While each individual Treasure Hunt does not need to address every aspect, together over time they should encompass opportunities related to system set points, operating practices and processes, process controls, maintenance procedures, equipment upgrades, and more. In addition, IDSM (e.g., distributed generation, storage, demand response, time-of-use, peak demand reduction, etc.) opportunities and GHG reduction opportunities should be included where possible (even if additional resources are not available, see Optional Steps) in all Treasure Hunt activities to ensure the customer has a broad view of their energy performance improvement opportunities.

To strengthen customer engagement and participation, all Treasure Hunts are strongly recommended to be conducted in-person and should be held on-site wherever possible.

2.2.2.4.1 Objectives and Targets

Type	Objectives
Business Practice	**The Energy Team:** **1.** With the SEM Coach, identify any additional energy savings opportunities, including operational control opportunities, needed to meet Year 3, 4 and subsequent year (i.e. years 5, 6, 7 and 8) objectives and targets. **2.** With the SEM Coach, document the site's additional opportunities using the Opportunity Register and quantify potential savings for each opportunity. **3.** Prioritizes their identified opportunities and selects opportunities to implement in year 3 and 4 and subsequent years. **4.** Develops action plans, where appropriate.

There are **no targets** for this activity. However, the SEM Coach should ensure that, if targets were not met for Task 10 in EMA, Year 2, there is a plan to use this Treasure Hunt to review and improve the business practices related to that Task.

2.2.2.4.2 IDSM and GHG Related Steps

As mentioned in Treasure Hunt 1, these steps should be included, though customers are not required to implement these measures. This allows customers to consider all their energy-related opportunities, especially if continuing on to the Graduate Pathway.

1. **IDSM calculation for opportunities:** The program will provide additional support for customers that want to estimate IDSM-related calculations for each energy saving opportunity and use that value as part of the prioritization exercise. This could be either a numerical value (e.g. estimates on demand reduction for each opportunity) or a relative ranking (e.g. high impact on demand). If provided, this should be integrated into the Treasure Hunt activities.

2. **IDSM Treasure Hunt:** The program will provide additional support for customers that want to identify IDSM-related opportunities beyond energy efficiency (e.g., distributed generation, storage, demand response, time-of-use, peak demand reduction, etc.) and include those opportunities as well as the consideration of IDSM-related data in the prioritization exercise. The scope and responsibilities (e.g. use of other resources) for the IDSM Treasure Hunt should be defined by the program administrator and SEM Coach prior to the event.

3. **GHG Calculation for Opportunities:** The program will provide additional support for customers that want to calculate GHG emissions for each energy saving opportunity and use that value as part of the prioritization exercise. If provided, the GHG emissions calculations should be integrated into the Treasure Hunt opportunity prioritization activities and in the Opportunity Register.

4. **GHG Treasure Hunt:** The program will provide additional support for customers who want to identify energy-related GHG emissions opportunities beyond energy efficiency (e.g. electrification of propane forklift trucks) and include those opportunities as well as the consideration of GHG emissions reductions in the prioritization exercise. The scope and responsibilities of the GHG Treasure Hunt should be defined by the PA and SEM Coach prior to the event.

2.2.2.4.3 Requirements

- 1. The Treasure Hunt, Year 3 shall take place after completion of Educational Module #3-Operational Controls.
- 2. The Treasure Hunt shall be attended by the appropriate members of the Energy Team and site staff.
- 3. The SEM Coach shall ensure the Treasure Hunt meets the listed objectives.
- 4. All opportunities identified shall be recorded in the Opportunity Register. The Coach must ensure that capital projects identified be documented in accordance with any additional PA requirements, which may require documentation outside of the opportunity register. Opportunity Register requirements are provided in the M&V Guide.
- 5. The *Energy Star Treasure Hunt Guide*[15] or a similar guide shall provide additional guidance for conducting a Treasure Hunt.

[15] https://www.energystar.gov/industrial_plants/treasure_hunt

- 6. The Treasure Hunt shall be summarized per the requirements below:

  - **General Information:** Including the location, the date, and the attendees.
  - **Attendees:** Including all participants in the Treasure Hunt (including any guests and implementation contractor technical support).
  - **Process:** A summary of the process followed during the Treasure Hunt, including how IDSM and GHG emissions steps were implemented.
  - **Next Steps:** This section will highlight next steps relative to the Treasure Hunt. For example, if another Treasure Hunt is necessary in order to identify projects to meet the cycle's goals, or if the customer will need support developing action plans.

2.2.2.5 Site-Specific **Activity #4:** Operational Controls Support

Operational Controls Support helps the site identify and improve procedures that ensure energy-using systems run efficiently and consistently. It focuses on Significant Energy Users (SEUs) and supports analysis of set points, maintenance practices, control systems, and optimization opportunities.

Operational controls are a key component in both saving energy and maintaining energy savings as they can help a site set and maintain optimum running conditions and maintenance practices. Operational control support should focus on the processes or equipment that consume a significant amount of energy (Significant Energy Users) and have a risk of significant deviation in energy performance and support the concepts taught in Educational Module #3- Operational Controls.

Support can include activities such as:

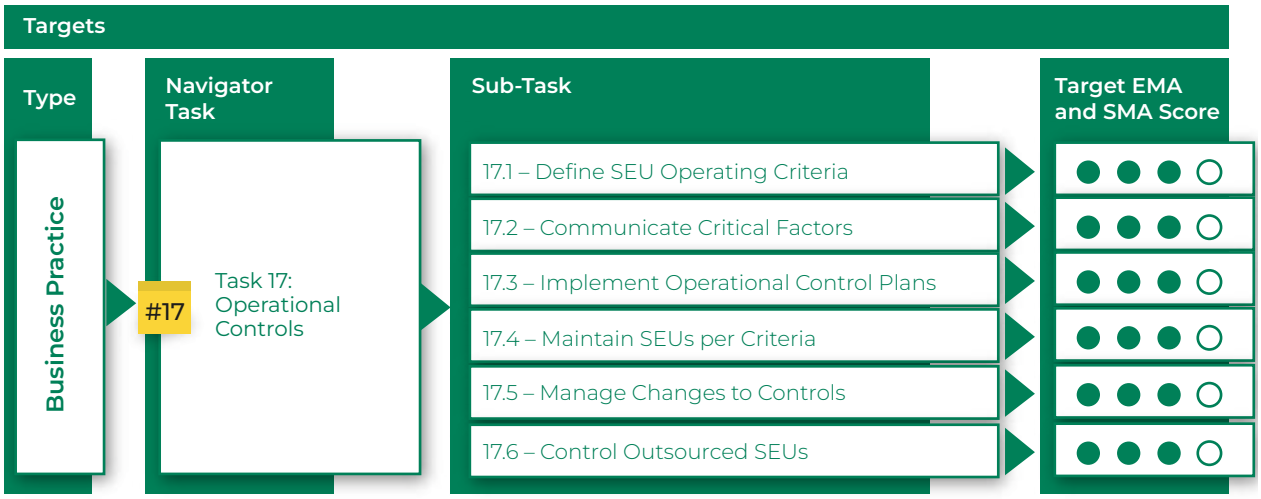
1. Assistance in analyzing and prioritizing the equipment or processes to target in the identification of operational control opportunities.
2. Analysis of existing operating set points and operational procedures.
3. Analysis of maintenance criteria, controls, and procedures.
4. Consideration of optimization and tradeoffs between various IDSM programs.

Participants should include operational controls as either independent energy improvement opportunities or as a component of other existing energy improvement opportunities. Operational controls can be supported by a well-defined and implemented EMIS and some operational control opportunities may need to be implemented after EMIS implementation (if the participant is implementing an EMIS).

2.2.2.5.1 Objectives and Targets

Type	Objectives
Business Practice	**1.** The Energy Team and SEM Coach identify, prioritize, and select operational controls opportunities, focusing on SEUs. **2.** The Energy Team and SEM Coach document operational controls opportunities in the Opportunity Register, either as independent energy improvement opportunities or as a component of other existing energy improvement opportunities.

Targets are for EMA and SMA scores for Tasks and sub-tasks that this activity supports and that the customer should meet after completing this activity and the associated educational module. Although the SEM Coach does not have to conduct either an EMA or SMA at this point, it is recommended that both be updated as the customer completes this activity and associated educational modules.



2.2.2.5.2 Optional Steps

There are **no optional steps** for this activity at this time.

2.2.2.5.3 Requirements

- 1. Operational Controls Support shall take place after Educational Module #3- Operational Controls and Treasure Hunt, Year 3.
- 2. Operational controls opportunities shall be identified and documented in the Opportunity Register, either as independent opportunities or as components of other existing opportunities.
- 3. This activity shall be documented per the requirements below:
  - **General Information:** Including the location, the date, and the attendees.
  - **Attendees:** Including all participants (including any guests and implementation contractor technical support).
  - **Process:** A summary of the process followed.
  - **Next Steps:** Next steps relative to the Activity. For example, if follow-up actions are needed.

2.2.2.6 Site-Specific **Activity #5:** Employee Engagement Support, Year 3

This activity supports engagement strategies that increase energy awareness and participation across departments and roles, giving the necessary tools for the customer to do so.

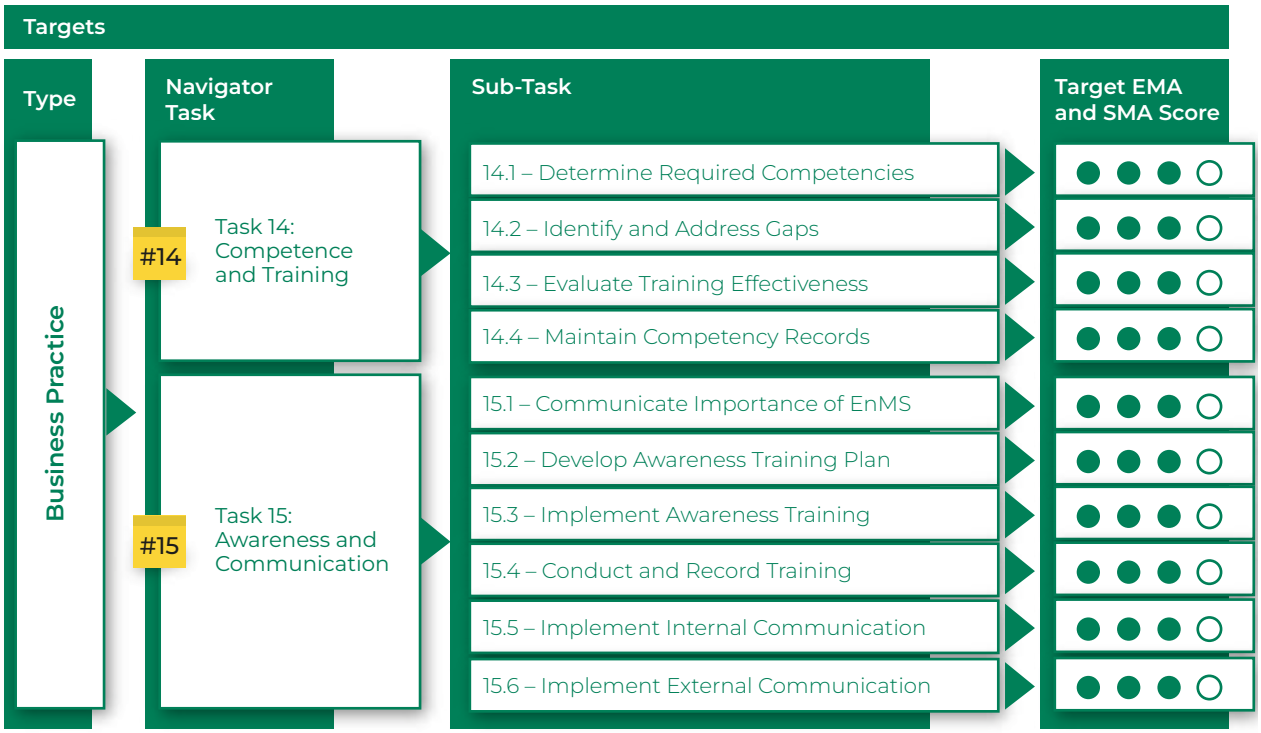
This activity is one of the most important in Cycle 2 as it helps ensure that staff throughout the site have the awareness and competence to support the objectives and targets of the energy management system. The objectives of this activity are to help the customer: **1)** Develop and deliver a plan to communicate the objectives of the EnMS, and **2)** Identify employees who might need training and develop a plan for that training. Through this activity, the SEM Coach will play a key role in helping find or develop competence and training actions, such as existing or customized training courses, that might help fill competency gaps.

Whether or not to provide additional resources or funding, such as bringing in equipment or process experts or providing customized courses for one or a group of participants, is at the PA's discretion.

2.2.2.6.1 Objectives and Targets

Type	Objectives
Business Practice	**The Energy Team:** **1.** Determine which employees need to be aware of the energy program and policy. **2.** Develop employee awareness training for those employees. **3.** Determine which employees that operate SEUs may have gaps in their competence to operate those processes. **4.** Develop plans for addressing Those competency gaps.

Targets are for EMA and SMA scores for Tasks and sub-tasks that this activity supports and that the customer should meet after completing this activity and the associated educational modules. Although the SEM Coach does not have to conduct either an EMA or SMA at this point, it is recommended that both be updated as the customer completes this activity and associated educational modules.



2.2.2.6.2 Optional Steps

There are **no optional steps** for this activity at this time.

2.2.2.6.3 Requirements

- 1. Employee Engagement Support, Year 3 shall take place after Educational Module #4- Employee Engagement, Year 3.
- 2. Employee Engagement Support, Year 3 shall be supported by the Energy Champion and any appropriate Energy Team members and site staff.
- 3. The SEM Coach shall ensure this activity meets the listed objectives.
- 4. This activity shall be documented per the requirements below:
  - **General Information:** Including the location, the date, and the attendees.
  - **Attendees:** Including all participants (including any guests and implementation contractor technical support).
  - **Process:** A summary of the process followed.
  - **Next Steps:** Next steps relative to the Activity. For example, if follow-up actions are needed.

2.2.2.7 Site-Specific **Activity #6:** EMA, Year 3

The Energy Management Assessment provides an evaluation of the site's energy management practices at the end of Year 3. It provides a measure of the customer's progress on their business practices, from the SEM Coach's perspective, compared to program targets.

The goal of this EMA activity is to document the site's energy management practices relative to the topics that have been introduced thus far in Cycle 1 and Cycle 2. The EMA and SMA shall consist of an assessment of the tasks listed below using the 50001 Ready Energy Management Assessment and 50001 Ready Self-Management Assessment[16]. These are the Tasks introduced in Year 3:

- **Task 4** Management Commitment
- **Task 5** Energy Policy
- **Task 14** Competence and Training
- **Task 15** Awareness and Communication
- **Task 17** Operational Controls

Tasks 18 and 19 will be introduced later in this Cycle and are not required in this EMA.

Tasks assessed in the Year 2 EMA do not need to be assessed again unless the SEM Coach knows there is a change. Those tasks should be included in the EMA score and are listed below:

- **Task 1** An EnMS and Your Organization
- **Task 3** Scope and Boundaries
- **Task 6** Energy Team and Resources
- **Task 8** Energy Data Collection and Analysis
- **Task 9** Significant Energy Uses (SEUs)
- **Task 10** Improvement Opportunities
- **Task 11** EnPIs and Energy Baselines
- **Task 12** Objectives and Targets
- **Task 13** Action Plans for Continual Improvement
- **Task 21** Monitoring and Measurement of Energy Performance

The EMA is not intended to be a customer-facing processes, the purpose is to document the customer's existing capabilities and to be able to assess their EnMS progress mid-way through Cycle 2. The SEM Coach should have been working closely with the Energy Team on these business practices and should have the knowledge to complete the EMA without the Energy Team's input. Optionally, the SEM Coach can engage with the Energy Team to complete the EMA. The results of the EMA can optionally be shared with the Energy Team.

[16] The 50001 Ready Energy Management Assessment is available at https://industrialapplications.lbl.gov/energy-management

2.2.2.7.1 Objectives and Targets

Type	Objectives
Business Practice	**1.** The SEM Coach identifies the site's progress with respect to EnMS practices introduced in Cycle 1 and Cycle 2, Year 3. **2.** Optionally, the SEM Coach can use the EMA as a customer-facing activity, engaging the Energy Team to complete the EMA and sharing results with them.

The EMA should document the customer's progress towards meeting the expected (not required) EMA score at the end of Year 3. These targets relate to EMA and SMA scores for Tasks that have been introduced in Cycle 1 and Year 3. Although an SMA is not required, conducting one for the Tasks listed would help the SEM Coach understand the customer's progress towards the SMA targets at the end of Year 3.

2.2.2.7.2 Optional Steps

Although the SMA is optional, it is highly encouraged that it be included as a standard offering to all customers in Core SEM, especially if the customer will continue to the Graduate Pathway.

1. **Self-Management Assessment (SMA):** The SMA is an assessment of the site's ability to manage business practices without the SEM program's support. It is an assessment that helps the program understand if the customer is taking steps towards the Cycle's SMA targets. Although not required in Cycle 1, an SMA is required for entry into the Graduate Pathway's Cycle 4 and it is highly recommended that the SEM Coach conduct the SMA on an annual basis, both to understand the customer's progress as well as to make the SMA at the end of Year 6 less onerous. If the SMA is completed, US DOE's 50001 Ready Self-Management Assessment shall be used.

2. **Customer-Facing EMA and/or SMA:** At the program administrator's and implementation contractor's discretion, the program may provide a customer-facing, facilitated EMA and/or SMA at any time during this Cycle. It is recommended, but not required, that the customer-facing EMA and/or SMA closely match the structure of the required EMA and/or SMA.

2.2.2.7.3 Requirements

- 1. EMA, Year 3 shall be held before Site-Specific Activity #7- Planning Support Year 4.
- 2. EMA, Year 3 shall consist of an assessment of the site's existing practices relative to the Navigator tasks introduced thus far in Cycle 1 and Cycle 2 using US DOE's 50001 Ready Energy Management Assessment.
- 3. The SEM Coach shall complete the EMA and can optionally engage with the Energy Team to complete the assessments.
- 4. The SEM Coach shall ensure this activity meets the listed objectives.
- 5. This activity shall be documented per the requirements below.
  - **General Information:** Including the date, and the individuals leading and participating in the EMA.
  - **Task and Subtask Score:** The score for each task and subtask included in the EMA and the scores and dates for that task and subtask in past EMAs.
  - **Overall Average Percentage Score:** The average score for all tasks included in the EMA and the average scores on past EMAs.
- 6. If offered, optional steps shall be documented per the requirements below:
  - **General Information:** Including the date, and the individuals leading and participating in the EMA and/or SMA.
  - **Process:** A brief overview of the process followed (e.g., in-person or on-line, consensus, etc.), including any modifications made.

2.2.2.8 Site-Specific **Activity #7:** Planning Support, Year 4

Planning for Year 4 prepares the site for continued success in Year 4 of the SEM Program. It helps the Energy Team and SEM Coach review Year 3 progress and shortfalls and compare them with Year 4 targets and objectives to create a plan of action for Year 4.

The goal of this activity is to review key items that might affect the site's energy management approach for year 4 and make the appropriate changes. The Energy Team should review their Year 3 actions taken (e.g., implemented projects, energy savings, objectives, performance indicators, SEUs, data collected, business priorities, etc.) and determine if any changes to business practices need to be made for year 4 based on the Navigator Tasks discussed in Educational Module #5- Planning, Year 4.

This activity repeats the experience and expectation set up in Years 2 and 3 for annual planning. In this planning session, the Energy Coach should focus their support on helping the energy team begin to document their processes related to annual planning so that in Cycle 3 the Energy Team can repeat this process with minimal support. The tasks related to this planning session are all the Tasks introduced in Cycle 1 and 2 thus far, which include:

- **Task 1** An EnMS and Your Organization
- **Task 3** Scope and Boundary
- **Task 4** Management Commitment
- **Task 5** Energy Policy
- **Task 6** Energy Team and Resources
- **Task 8** Energy Data Collection and Analysis
- **Task 9** Significant Energy Uses (SEUs)
- **Task 10** Improvement Opportunities
- **Task 11** EnPIs and Energy Baselines
- **Task 12** Objectives and Targets
- **Task 13** Action Plans for Continual Improvement
- **Task 21** Monitoring and Measurement of Energy Performance

The SEM Coach and Energy Team should use this planning session to determine if a Treasure Hunt is needed or not to identify opportunities to meet the Cycle's objectives.

2.2.2.8.1 Objectives and Targets

Type	Objectives
Business Practice	**The Energy Team:** **1.** Reviews the Tasks discussed in Educational Module #5- Planning for Year 4. **2.** Reviews or sets year objectives and targets for year 4 and subsequent years (i.e. years 5 and 6). **3.** Makes any needed changes for year 4 and plans any needed activities, such as identification of opportunities, development of action plans, improvements in data collection, etc. **4.** With the SEM Coach, determine whether or not the Treasure Hunt, Year 4 is necessary based on the site's objectives and remaining opportunities.

There are **no targets** for this activity. However, the SEM Coach should ensure that, if targets were not met for any Task in EMA, Year 3, there is a plan to review the business practices related to those Tasks.

2.2.2.8.2 Optional Steps

There are **no optional steps** for this activity at this time.

2.2.2.8.3 Requirements

- 1. Planning Support, Year 4 shall take place after Educational Module #5- Planning, Year 4, and after Site-Specific Activity #6: EMA, Year 3.
- 2. Planning Support, Year 4 shall be attended by any appropriate Energy Team members and site staff.
- 3. The Energy Team shall determine whether Treasure Hunt, Year 4 is necessary.
- 4. The SEM Coach shall ensure this activity meets the listed objectives.
- 5. This activity shall be documented per the requirements below:
  - **General Information:** Including the location, the date, and the attendees.
  - **Attendees:** Including all participants (including any guests and implementation contractor technical support).
  - **Process:** A summary of the process followed.
  - **Next Steps:** Next steps relative to the Activity. For example, if follow-up actions are needed.

2.2.2.9 Site-Specific **Activity #8:** Treasure Hunt, Year 4

Similar to the past Treasure Hunt, Treasure Hunt, Year 4 continues to expand the opportunity-finding process. It helps customer define energy-saving actions by going deeper into energy-consuming systems covered in previous Treasure Hunts or by expanding into systems that have not been covered and ensures there are enough opportunities to meet the facility's targets for the year, this Cycle, and for future years.

As previously stated, the objective of any Treasure Hunt is to identify energy waste and energy saving opportunities so that participants can make changes that save energy, which is an element of Task 10- Improvement Opportunities. A successful outcome of this Treasure Hunt is the identification and prioritization of opportunities to meet Year 4 and beyond (e.g. Cycle 3) objectives.

The intent of the Treasure Hunts over the Core SEM six years is to build a comprehensive, facility-wide view of energy-saving opportunities from a full systems perspective. While each individual Treasure Hunt does not need to address every aspect, together over time they should encompass opportunities related to system set points, operating practices and processes, process controls, maintenance procedures, equipment upgrades, and more. In addition, IDSM (e.g., distributed generation, storage, demand response, time-of-use, peak demand reduction, etc.) opportunities and GHG reduction opportunities should be included where possible (even if additional resources are not available, see Optional Steps) in all Treasure Hunt activities to ensure the customer has a broad view of their energy performance improvement opportunities.

This Treasure Hunt, is optional only if energy performance improvement opportunities have been identified and documented in the opportunity register that meet or exceed energy performance targets for the next two years.

To strengthen customer engagement and participation, all Treasure Hunts are strongly recommended to be conducted in-person and should be held on-site wherever possible.

2.2.2.9.1 Objectives and Targets

Type	Objectives
Business Practice	**The Energy Team:** **1.** With the SEM Coach, identify any additional energy savings opportunities, including operational control opportunities, needed to meet Year 4 and subsequent years (i.e. years 5 and 6) objectives and targets and quantify potential savings for each opportunity. **2.** With the SEM Coach, document the site's additional opportunities using the Opportunity Register. **3.** Prioritizes their identified opportunities and selects opportunities to implement in year 4 and subsequent years (e.g., years 5 and 6). **4.** Develops action plans, where appropriate

There are **no targets** for this activity. However, the SEM Coach should ensure that, if targets were not met for Task 10 in EMA, Year 3, there is a plan to use this Treasure Hunt to review and improve the business practices related to that Task.

2.2.2.9.2 IDSM and GHG Related Steps

As mentioned in Treasure Hunt 1, these steps should be included, though customers are not required to implement these measures. This allows customers to consider all their energy-related opportunities, especially if continuing on to the Graduate Pathway.

1. **IDSM Calculation of Opportunities:** The program will provide additional support for customers that want to estimate IDSM-related calculations for each energy saving opportunity and use that value as part of the prioritization exercise. This could be either a numerical value (e.g. estimates on demand reduction for each opportunity) or a relative ranking (e.g. high impact on demand). If provided, this should be integrated into the Treasure Hunt activities.

2. **IDSM Treasure Hunt:** The program will provide additional support for customers that want to identify IDSM-related opportunities beyond energy efficiency (e.g., distributed generation, storage, demand response, time-of-use, peak demand reduction, etc.) and include those opportunities as well as the consideration of IDSM-related data in the prioritization exercise. The scope and responsibilities (e.g. use of other resources) for the IDSM Treasure Hunt should be defined by the program administrator and SEM Coach prior to the event.

3. **GHG Calculation for Opportunities:** The program will provide additional support for customers that want to calculate GHG emissions for each energy saving opportunity and use that value as part of the prioritization exercise. If provided, the GHG emissions calculations should be integrated into the Treasure Hunt opportunity prioritization activities and in the Opportunity Register.

4. **GHG Treasure Hunt:** The program will provide additional support for customers who want to identify energy-related GHG emissions opportunities beyond energy efficiency (e.g. electrification of propane forklift trucks) and include those opportunities as well as the consideration of GHG emissions reductions in the prioritization exercise. The scope and responsibilities of the GHG Treasure Hunt should be defined by the PA and SEM Coach prior to the event.

2.2.2.9.3 Requirements

- 1. The Treasure Hunt, Year 4 shall take place after completion of Educational Module #4- Planning for Year 4.
- 2. The SEM Coach shall make the decision on whether this Treasure Hunt is necessary based on the outcomes of Year 4 Planning and if there are enough opportunities to meet the organization's targets for at least two years.
- 3. The Treasure Hunt shall be attended by any appropriate Energy Team members and site staff.
- 4. The SEM Coach shall ensure the Treasure Hunt meets the listed objectives.
- 5. If this Treasure Hunt is held, all opportunities identified shall be recorded in the Opportunity Register. The Coach must ensure that capital projects identified be documented in accordance with any additional PA requirements, which may require documentation outside of the opportunity register. Opportunity Register requirements are provided in the M&V Guide.
- 6. The *Energy Star Treasure Hunt Guide*[17] or a similar guide shall provide additional guidance for conducting a Treasure Hunt.
- 7. If the Treasure Hunt is held, the Treasure Hunt shall be summarized per the requirements below.
  - **General Information:** Including the location, the date, and the attendees.
  - **Attendees:** Including all participants in the Treasure Hunt (including any guests and implementation contractor technical support).
  - **Process:** A summary of the process followed during the Treasure Hunt, including how IDSM and GHG emissions steps were implemented.
  - **Next Steps:** This section will highlight next steps relative to the Treasure Hunt. For example, if another Treasure Hunt is necessary in order to identify projects to meet the cycle's goals, or if the customer will need support developing action plans.

2.2.2.10 Site-Specific **Activity #9:** EMIS Support, Year 4

EMIS (Energy Management Information System) Support, Year 4 helps the customer strengthen the use of software and tools to collect, monitor, analyze and share energy data. It supports informed decision-making for energy-related business practices.

The goal of this activity is to help the customer apply the principles introduced in Educational Module #6- EMIS, Year 4 in looking at ways to implement best practices to enhance and visualize energy data. In this activity, the SEM Coach will assist the customer in analyzing how data, data processes, and data systems can potentially be used to support a more complete EMIS solution at the site.

[17] https://www.energystar.gov/industrial_plants/treasure_hunt

2.2.2.10.1 Objectives and Targets

Type	Objectives
Business Practice	**The Energy Team and SEM Coach:** **1.** Identify opportunities to use existing data, hardware, and software to visualize and report energy data for the appropriate staff and Energy Team. **2.** Identify opportunities to improve data collection, hardware, or software to improve their EMIS. **3.** Develop an action plan for implementing recommendations for improving their EMIS.

There are **no targets** for this activity. However, the SEM Coach should ensure that, if targets were not met for Task 8 in EMA, Year 3, there is a plan to use this activity to review and improve the business practices related to that Task.

2.2.2.10.2 Optional Steps

Although not required, it is highly encouraged that IDSM and GHG Emissions optional steps be included as a standard offering to all customers in Core SEM, especially if the customer will continue to the Graduate Pathway.

1. **EMIS Audit:** At the program administrator's discretion, the program may provide additional resources to develop a more formal "EMIS Audit" using Natural Resources Canada's EMIS audit process[18]. An alternative process may be used with the program's administrator's approval. The objective is to have a clear business plan for implementing a complete EMIS solution.

2. **IDSM EMIS Support:** At the program administrator's discretion, the program may provide additional support for customers that want to help visualize IDSM-related data (e.g. demand, time of use, self-generation and/or storage, etc.) as part of their EMIS activity. The program administrator and SEM Coach should define the scope and responsibilities of this activity prior to the activity.

3. **GHG EMIS Support:** At the program administrator's discretion, the program may provide additional support for customers that want to help visualize energy-related GHG emissions as part of their EMIS activity. This can be as simple as converting energy data to GHG data using conversion factors or more complex depending on the customer's needs and abilities. The program administrator and SEM Coach should define the scope and responsibilities of this activity prior to the activity.

2.2.2.10.3 Requirements

- 1. EMIS Support, Year 4 shall take place after Educational Module #6- EMIS, Year 4.
- 2. EMIS definition and implementation shall be supported by the Energy Champion and any appropriate Energy Team members and site staff.
- 3. The SEM Coach shall ensure this activity meets the listed objectives.

[18] https://www.nrcan.gc.ca/energy/efficiency/energy-efficiency-industry/energy-management-industry/energy-management-information-systems/20403

- 4. This activity must be documented per the requirements below.
  - **General Information:** Including the location, the time, and the date, and the attendees, for any meeting or meetings supporting this activity.
  - **Summary of the Activity:** Including a summary of the type of activity (e.g., workshop, on-line webinar, etc.), attendance, presenters, agenda, key activities, materials provided to the customer, etc.
- 5. If offered, optional steps shall be documented per the requirements below:
  - **Process:** A brief overview of the process followed for each optional step offered, including any modifications made.

2.2.2.11 Site-Specific **Activity #10:** Employee Engagement Support, Year 4

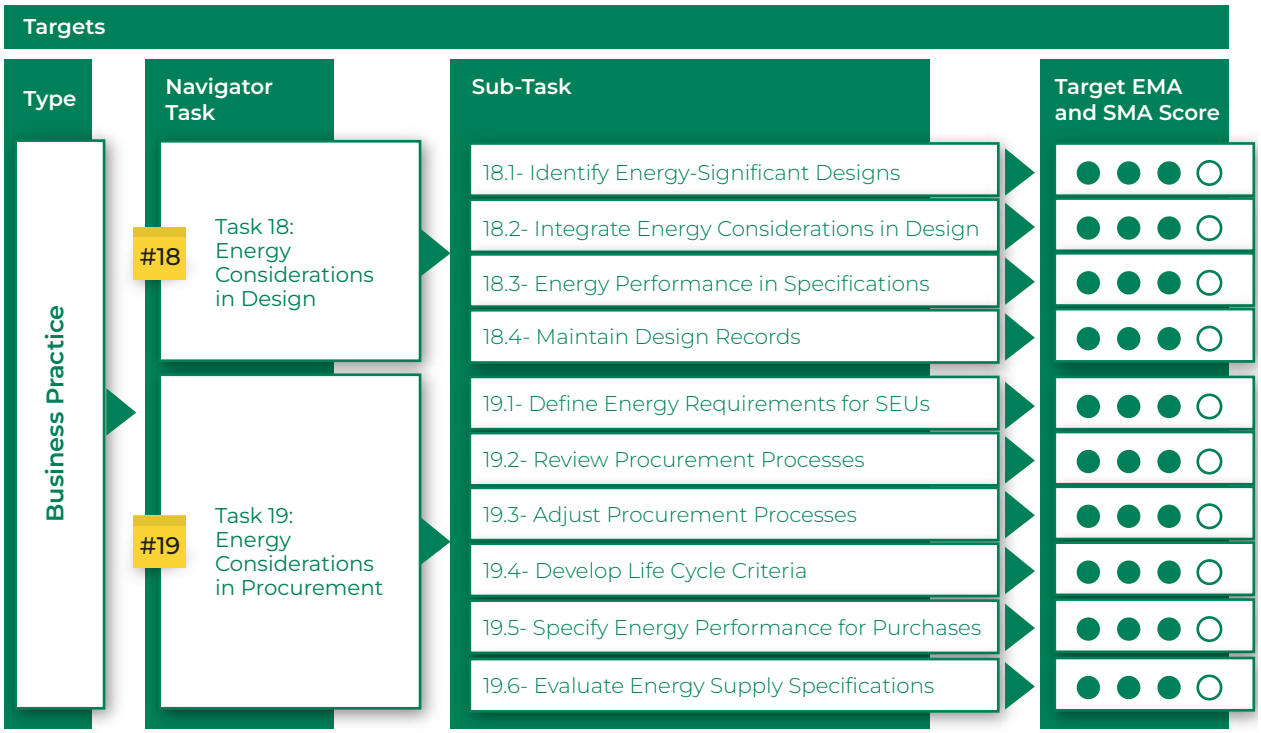
This activity reinforces and expands efforts to engage staff, ensuring sustained energy awareness and involvement in SEM goals.

The objective of this activity is to help the customer define the design and procurement processes that may affect energy performance and begin discussions with the staff responsible for them. The SEM Coach should assist the customer as needed in identifying the staff responsible and suggesting strategies to encourage them to include energy performance considerations in their work.

2.2.2.11.1 Objectives and Targets

Type	Objectives
Business Practice	**The Energy Team:** **1.** Identifies the staff responsible for design and create a plan for encouraging those responsible to consider energy performance improvements, operational controls, and energy performance considerations in their work. **2.** Identifies the staff responsible for procurement and creates a plan for encouraging those responsible to consider energy performance improvements, operational controls, and energy performance considerations in their work.

Targets are for EMA and SMA scores for Tasks and sub-tasks that this activity supports and that the customer should meet after completing this activity and any associated educational modules. Although the SEM Coach does not have to conduct either an EMA or SMA at this point, we recommend updating both as the customer completes this activity and associated educational modules.



2.2.2.11.2 Optional Steps

There are **no optional steps** for this activity at this time.

2.2.2.11.3 Requirements

- 1. Employee Engagement Support, Year 4 shall take place before EMA, Year 4.
- 2. Employee Engagement Support, Year 4 shall be supported by any appropriate Energy Team members and site staff.
- 3. The SEM Coach shall ensure this activity meets the required objectives.
- 4. This activity must be documented per the requirements below.
  - **General Information:** Including the location, the date, and the attendees.
  - **Process:** A summary of the process followed.
  - **Next Steps:** Next steps relative to the Activity. For example, if follow-up actions are needed.

2.2.2.12 Site-Specific **Activity #11:** EMA, Year 4

The Energy Management Assessment provides an evaluation of the site's current energy management practices. It provides a measure of the customer's progress on their business practices, from the SEM Coach's perspective, compared to program targets.

The goal of this EMA activity is to provide the program a final assessment of the site's energy management practices relative to the business practices that were introduced in Cycle 1 and 2. The EMA shall consist of an assessment of the tasks listed below using the 50001 Ready Energy Management Assessment and 50001 Ready Self-Management Assessment:[19]

- **Task 18** Considerations in Design
- **Task 19** Considerations in Procurement

Tasks reviewed in the Year 3 EMA do not need to be reviewed again unless the SEM Coach knows there is a change or they were not included in previous EMAs. Those tasks should be included in the EMA score and are listed below:

- **Task 1** An EnMS and Your Organization
- **Task 3** Scope and Boundaries
- **Task 4** Management Commitment
- **Task 5** Energy Policy
- **Task 6** Energy Team and Resources
- **Task 8** Energy Data Collection and Analysis
- **Task 9** Significant Energy Uses (SEUs)
- **Task 10** Improvement Opportunities
- **Task 11** EnPIs and Energy Baselines
- **Task 12** Objectives and Targets
- **Task 13** Action Plans for Continual Improvement
- **Task 14** Competence and Training
- **Task 15** Awareness and Communication
- **Task 17** Operational Controls
- **Task 21** Monitoring and Measurement of Energy Performance

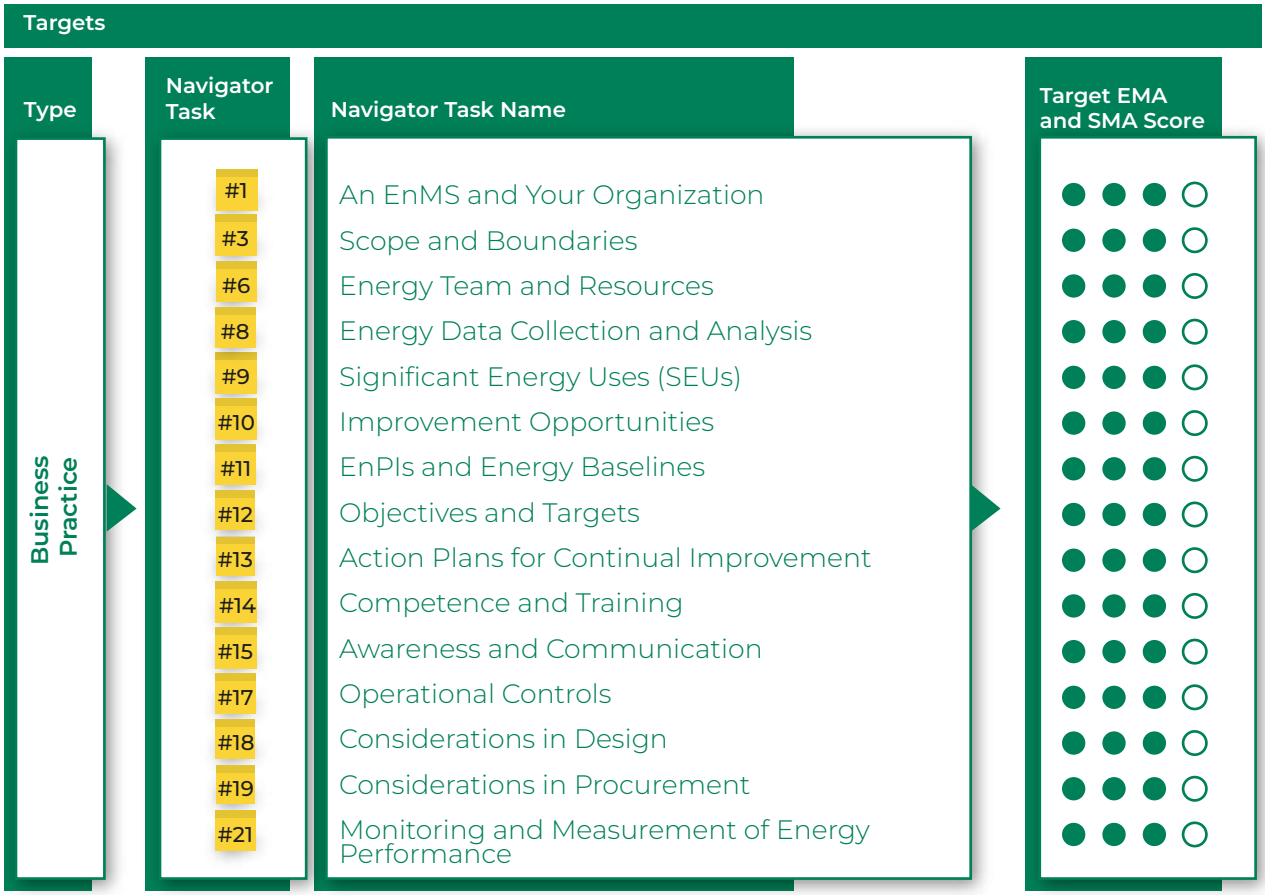
Similar to EMA, Year 3, this EMA assessment is not intended to be a customer-facing process, the primary purpose is to document the customer's EnMS progress through Cycle 2. The SEM Coach should have been working closely with the Energy Team on these business practices and should have the knowledge to complete the EMA without their input. Optionally, the SEM Coach can engage with the Energy Team to complete the EMA, with the results shared with the Energy Team.

[19] The 50001 Ready Energy Management Assessment is available at https://industrialapplications.lbl.gov/energy-management

2.2.2.12.1 Objectives and Targets

Type	Objectives
Business Practice	**1.** The SEM Coach identifies the site's progress with respect to EnMS practices introduced in Cycle 1 and Cycle 2. **2.** Optionally, the SEM Coach can use the EMA as a customer-facing process to complete the EMA and share findings with the Energy Team.

The EMA should document the customer's progress towards meeting the expected (not required) EMA score at the end of Year 4. These targets relate to EMA and SMA scores for Tasks that have been introduced in this Cycle. Although an SMA is not required, conducting one for the Tasks listed would help the SEM Coach understand the customer's progress towards the SMA targets at the end of Year 4.



2.2.2.12.2 Optional Steps

Although the SMA is optional, it is highly encouraged that it be included as a standard offering to all customers in Core SEM, especially if the customer will continue to the Graduate Pathway.

1. Self-Management Assessment (SMA): The SMA is an assessment of the site's ability to manage business practices without the SEM program's support. It is an assessment that helps the program understand if the customer is taking steps towards the Cycle's SMA targets. Although not required in Cycle 1, an SMA is required for entry into the Graduate Pathway's Cycle 4 and it is highly recommended that the SEM Coach conduct the SMA on an annual basis, both to understand the customer's progress as well as to make the SMA at the end of Year 6 less onerous. If the SMA is completed, US DOE's 50001 Ready Self-Management Assessment shall be used.

2. Customer-Facing EMA and/or SMA: At the program administrator's and implementation contractor's discretion, the program may provide a customer-facing, facilitated EMA and/or SMA at any time during this Cycle. It is recommended, but not required, that the customer-facing EMA and/or SMA closely match the structure of the required EMA and/or SMA.

2.2.2.12.3 Requirements

- 1. EMA, Year 4 shall be completed before Site-Specific Activity #12- Cycle 2 Completion and Next Steps Support.
- 2. EMA, Year 4 shall consist of an assessment of the site's existing practices relative to the Navigator tasks introduced in Cycle 1 and Cycle 2 using US DOE's 50001 Ready Energy Management Assessment and 50001 Ready Self-Management Assessment.
- 3. The SEM Coach shall complete the EMA and can optionally engage with the Energy Team.
- 4. This activity shall be documented per the requirements below:
  - **General Information:** Including the date, and the individuals leading and participating in the EMA.
  - **Task and Subtask Score:** The score for each task and subtask included in the EMA and the scores and dates for that task and subtask in past EMAs.
  - **Overall Average Score:** The average score for all tasks included in the EMA and the average scores on past EMAs.
- 5. If offered, optional steps shall be documented per the requirements below.
  - **General Information:** Including the date, and the individuals leading and participating in the EMA and/or SMA.
  - **Process:** A brief overview of the process followed (e.g., in-person or on-line, consensus, EMA or SMA used, etc.), including any modifications made.

2.2.2.13 Site-Specific **Activity #12:** Cycle 2 Completion and Next Steps Support

Cycle 1 Completion and Next Steps Support helps the customer review their progress, successes, and challenges from participating in Cycle 1. It helps the facility decide what whether to continue to Cycle 2.

This activity has two objectives: **1)** To help the site understand and summarize their achievements and issues in Cycle 2, and **2)** Help the site decide whether or not to advance to Cycle 3. Achievements and issues should be presented to the Executive Sponsor. The Executive Sponsor and Energy Champion shall decide whether or not the site would like to continue to Cycle 3.

Whether or not the customer decides to continue, the Energy Champion and SEM Coach shall document a transition plan to address anything the customer should address, either as they exit the SEM program or as conditions to entering Cycle 3. The SEM Coach can optionally request the Executive Sponsor's and Energy Champion's commitment to address any key issues before Cycle 3 begins.

2.2.2.13.1 Objectives and Targets

Type	Objectives
Business Practice	**1.** The Energy Team and Energy Coach understand and summarize the site's achievements for both EnMS and energy performance. **2.** The Executive Sponsor understands the site's achievements. **3.** The Energy Team, Energy Champion, and Executive Sponsor understand Cycle 3 objectives and requirements. **4.** The Energy Champion and Executive Sponsor decide whether or not to continue to Cycle 3. **5.** The Energy Champion and SEM Coach create a plan for the site, either for continuing to Cycle 3 or for exiting SEM.

There are **no targets** for this activity. However, the SEM Coach should ensure that, if targets were not met for any Task in EMA, Year 4, those Tasks be summarized as issues for the customer to address, especially if they are planning on participating in the Graduate Pathway in the future.

2.2.2.13.2 Optional Steps

There are **no optional steps** for this activity at this time.

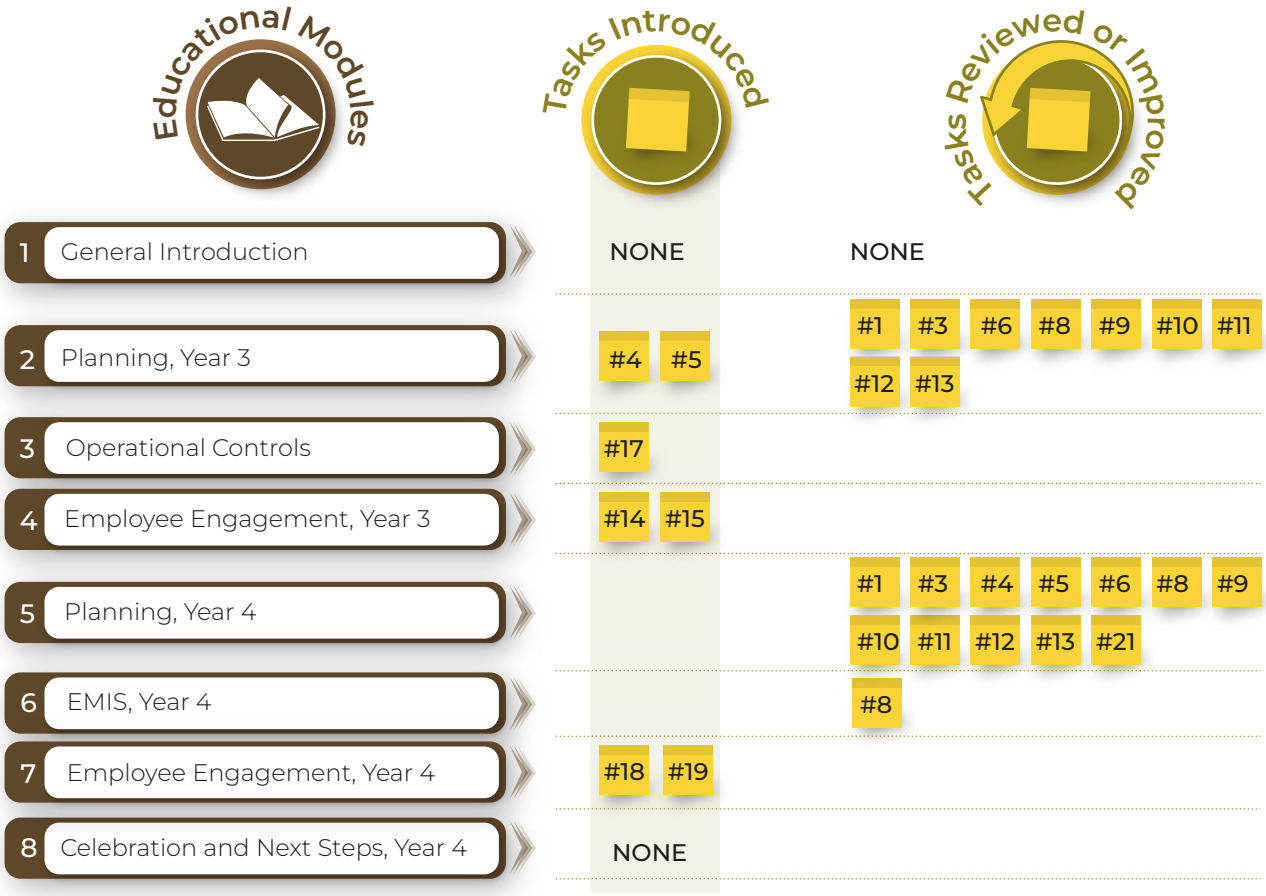
2.2.2.13.3 Requirements

- 1. Cycle 2 Completion and Next Steps Support shall be completed after EMA Year 4 and before Educational Module #8- Celebration and Next Steps, Year 4.
- 2. The Energy Coach and Energy Team shall summarize the site's Cycle 2 achievements and meet with the Executive Sponsor to present the site's achievements.
- 3. The Energy Team and Executive Sponsor shall decide whether or not to continue to Cycle 3.
- 4. The SEM Coach shall ensure this activity meets the listed objectives.
- 5. The Energy Coach shall document a plan for the site for Year 5. This plan shall be documented per the requirements below.
  - **General Information:** Including the location, the time, and the date, and the attendees.
  - **Cycle Decision:** The site's decision on whether to continue with the next cycle of the SEM program, who made or communicated the decision and key reasons for that decision.
  - **Conditions to Advancing:** If the customer is continuing to the next cycle, the conditions, if any, the program (SEM Coach or PA) is putting on the customer's continuation in the program (e.g., attendance to a percentage of educational activities, Energy Team involvement, minimum energy savings, etc.)
  - **Key Issues:** Any key issues the Energy Team and SEM Coach identified that could affect the site's ability to manage energy, whether or not the site is advancing to the next cycle.
  - **Next Steps:** For facilities that are not continuing on the SEM program:
  - **Improvement Opportunities:** A summary of what will happen with the major improvement opportunities that have not yet been implemented, the resources or programs that will support the site, etc.
  - **EnMS:** A summary of what the site plans to do with their EnMS (e.g. maintain with internal resources, not maintain, hire external resources to help improve, seek ISO 50001 certification, etc.).

2.2.3 Cycle 2 Educational Modules

Educational modules provide the necessary information that must be conveyed to the customer in the educational activities. These activities can be provided in a variety of ways, including face-to-face, on-line, or a combination of the two. Cycle 2 includes eight modules. References to Navigator tasks are included to provide context for the PA and SEM Coach; customers are not expected to understand the specific tasks or the Navigator itself. For a complete explanation of what educational modules are and how they are structured, refer to Section 1.2.2.1 Educational Modules.

Connection of educational modules and tasks:



2.2.3.1 Requirements for All Educational Modules

Requirements for all educational modules are:

- 1. Educational modules shall follow the sequence provided within each Cycle. Changes to the sequence are allowed only in special cases and shall be approved by the PA.
- 2. Educational Modules shall be introduced and completed within the Phase specified in the sequence provided within each Cycle. Modules or elements of the module can be repeated through any of the Cycles but shall be introduced at least once in the required Phase.
- 3. The Energy Team Lead or an appropriate Energy Team representative shall attend each module. It is recommended that any site staff who are affected by the content covered in each module attend that module. The SEM Coach shall make a recommendation on which Energy Team members and/or site staff are recommended to attend each module.
- 4. Feedback shall be gathered from the participants and a summary of the module and feedback must be documented as outlined in this document.

- 5. The objectives of the modules can be met through the implementation of multiple educational activities. Those activities can be either on-line or in person, live or pre-recorded/ on-demand, individual or cohort, or a mix of any of these. There is no requirement for a minimum or maximum duration for the educational activities.

- 6. Educational activities shall meet the objectives for the educational module they are supporting.

- 7. Educational module targets are provided as a reference and are not required to be met.

- 8. All educational modules must be documented per the requirements below:

  - **General Information:** Including the name, the location, the time, and the date of the activity and which module it supports.
  - **Attendees:** All attendees, separated by customer attendees, utility attendees, implementation contractor attendees, and other attendees (such as presenters).
  - **Summary of the Activity:** Including a summary of the type of activity (e.g., workshop, on-line webinar, pre-recorded class, etc.), attendance, presenters, agenda, key activities, materials provided to the customers.
  - **Presentations:** Including a summary of the presentations given and key questions asked.
  - **Group Activities:** Including a summary of any group activities conducted during the activity and the outcome of the activities.
  - **Conclusion:** Including a summary of any prizes, incentive payments, or awards handed out during the activity. Also, including any homework or next steps assigned to customers.
  - **Feedback:** A summary of the evaluation of the activity provided by customers, including any specific feedback given. The form must have the activity name on it, the date, and an optional name field for the customer to fill out. Unless a different approach has been agreed to by the PA, the feedback form shall include a rating from 1-5 (five being the best rating) on:

    - Whether the activity met expectations for gaining new information on the topic.
    - Whether the coaches presented information in an effective way.
    - If a workbook was provided, whether the workbook for the session is something the customer will refer to in working with their energy team.
    - Whether the preparation homework for the session helped the customer prepare for the activity and apply new principles at their site.
    - Whether the customer left the activity with specific ideas for how to improve their approach to the SEM program.
    - How the customer would rate their overall experience in the activity.
    - The feedback shall also include an area for the customer to comment on any item that rated three or lower, to comment on anything they would have liked to have spent more time on, and to provide any comments they would like to add. Providing the feedback form to customers is mandatory. Every effort should be taken to collect feedback although some customers may choose to not submit it.

2.2.3.2 Educational **Module #1:** General Introduction

The goal of this educational module is to give customers an introduction of the Cycle 2 approach to the general topics that were introduced in Cycle 1:

1. **Programmatic.** The program itself and its structure through the three cycles, program expectations in Cycle 2, the scope of what is included and not included in the program in this cycle, and the resources the program provides. What the approach to saving energy is in Cycle 2, how it differs from Cycle 1, and how it will progress in Cycle 3.
2. **Business Practice.** The approach to the EnMS, what the vision and goal for the EnMS is in this cycle, why it changes, how it will be developed, and how that continues into cycle 3.
3. **IDSM.** What the SEM program does or does not support in relation to energy performance metrics beyond efficiency (i.e. IDSM) in this cycle.
4. **GHG Emissions.** How the program does or does not support GHG emission reduction efforts in this cycle.

These topics are part of every educational module and it is important that customers understand the key changes from Cycle 1 to Cycle 2.

2.2.3.2.1 Objectives and targets

Topic	EnMS Related Objectives	GHG Related Objectives	IDSM Related Objectives	Program Related Objectives
General Introduction	What business practices will we be working on in Cycle 2? How do they differ from Cycle 1? From Cycle 3?	If we were managing GHG emissions in Cycle 1, how will Cycle 2 help us? If we were not but want to now, can we?	If we were managing various energy-related objectives in Cycle 1, how will Cycle 2 help us? If we were not but want to now, can we?	What is Cycle 2? How does it differ from Cycle 1? What are the program expectations in this Cycle? How does this cycle differ from Cycle 3?

There are **no business practice related targets** for this educational module as the intent is to introduce the customer to the overall structure and approach of Cycle 2.

2.2.3.3 Educational **Module #2:** Planning for Cycle 2

The objective of this educational module is for the customer to develop a plan of action for Cycle 2. The customer should reflect on their SEM program experience thus far, as they have engaged in the program for two years at this point. With an eye on the future, they will consider what has worked, what has not and where they want to go from here, both with their EnMS and their energy saving opportunities. Customers should learn how to review their Cycle 1 progress as well as any issues or changes that have developed as they create a plan for meeting their Cycle 2 objectives. Related Navigator Tasks introduced in this module are:

- **Task 4** Management Commitment
- **Task 5** Energy Policy

The focus should be on developing the customer's business practices for these two tasks. Other related tasks that should be reviewed and/or improved are:

- **Task 1** An EnMS and Your Organization
- **Task 3** Scope and Boundaries
- **Task 6** Energy Team and Resources
- **Task 8** Energy Data Collection and Analysis
- **Task 9** Significant Energy Uses (SEUs)
- **Task 10** Improvement Opportunities
- **Task 11** EnPIs and Energy Baselines
- **Task 12** Objectives and Targets
- **Task 13** Action Plans for Continual Improvement
- **Task 21** Monitoring and Measurement of Energy Performance

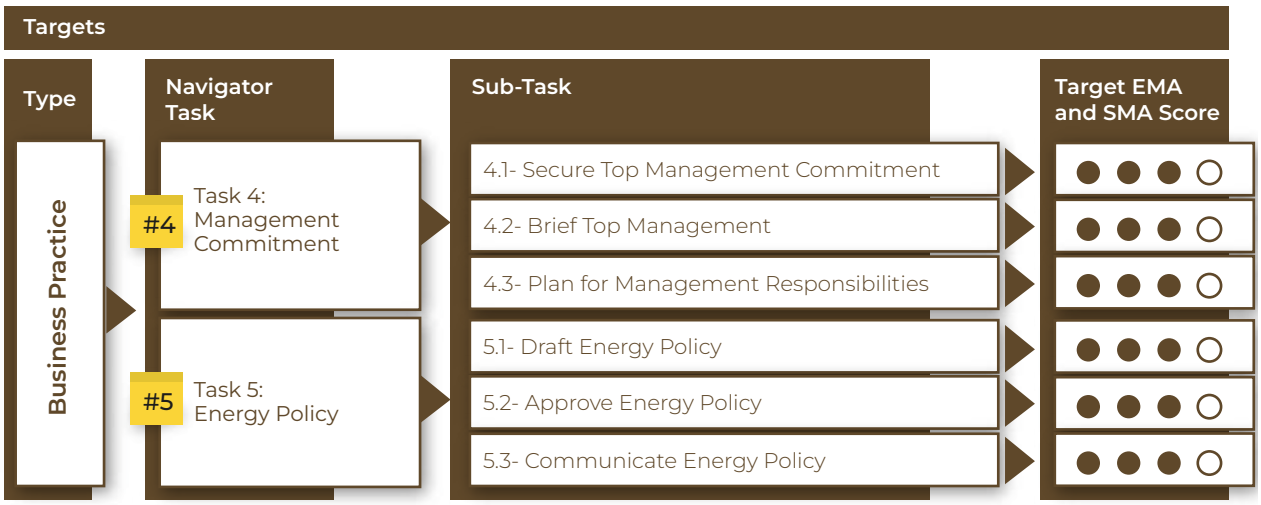
2.2.3.3.1 Objectives and targets

Topic	EnMS Related Objectives	GHG Related Objectives	IDSM Related Objectives	Program Related Objectives
#1 Task 1: EnMS and Your Organization	Have our corporate or high-level site objectives changed? Do any changes affect our EnMS? Are there any risks in those high-level issues that we should plan to mitigate?	Are there any changes in our goals or objectives for GHG emissions?	Are there any changes in our goals or objectives for energy-related issues?	
#3 Task 3: Scope and Boundary	Has anything changed that affects our scope and boundary? If so, do we need to make any changes to our scope and boundary?			Has anything changed in how the program can support us? Do any changes in our scope change how the program can supports us?

#4 Task 4: Management Commitment	How will our top management be involved? What actions do they need to take? How do we communicate with them?			When does the program need to meet with our top management?
#5 Task 5: Energy Policy	Why do we need an energy policy? Does our management need to see the policy? How can the energy policy be used?	Does the policy need to include mention of GHG emissions?	Does the policy need to include mention of other energy objectives?	Does the program need us to define our energy policy?
#6 Task 6: Energy Team and Resources	Do we need to change the makeup of our energy team for Cycle 2? Do we need to change how often we meet or what we discuss?	Does the Energy Team have sufficient understanding of GHG emissions and GHG reporting to meet our objectives?	Does the Energy Team have sufficient understanding of non-energy efficiency approaches to meet our objectives?	What role does the program expect us to fulfill in Cycle 2? Who on our team will be responsible? Is this different from Cycle 1?
#8 Task 8: Data Collection	Has anything changed that would change our Energy Data Collection Plan? Are we collecting the right data at the right time? Do we need to modify the data we collect or the approach we take?			What role does the program take in helping us collect data? Is it different than in Cycle 1?
#9 Task 9: SEUs	Do the SEUs (areas, processes, equipment, etc.) where we focus our efforts still apply? Do we need to change them?	Do we need to include GHG emissions as a criteria for selecting SEUs?	Do we need to include any criteria for other (e.g., demand, time of use, etc.) energy metrics?	
#10 Task 10: Improvement Opportunities	Do we have enough opportunities to meet our goals and objectives in Cycle 2 and beyond? Do we need to identify more opportunities? Should anything change in the criteria we use to we prioritize our opportunities?	Are there new GHG opportunities that we should look for? Are GHG emissions a higher priority in this Cycle?	Are there other new opportunities that we should look for? Has their priority or importance changed?	What role does the program play with helping us find or prioritize opportunities? Can the program help find opportunities other than energy efficiency? What types of opportunities do we look for in Cycle 2? Why are the Treasure Hunts optional?
#11 Task 11: EnPIs and Baselines	Are there any new objectives that need metrics or indicators? Do we need to modify any existing indicators or baselines for Cycle 2?	Has the format or content for reporting GHG emissions changed? If so, does this change our EnPIs or Baselines?	Are there any changes in how we want to track energy performance beyond efficiency? If so, does this affect our EnPIs or baselines beyond those for energy consumption?	
#12 Task 12: Objectives and Targets	Has anything changed that affects our EnMS objectives or targets? Do we need to make change to our EnMS objectives or targets?			Does the program have objectives and targets that we need to meet?

#13 Task 13: Action Plans	What projects do we have approved? Do our approved projects for Cycle 2 meet our objectives? Do those projects have or need action plans? Are we following our previously approved action plans?			Have the resources the program provides to manage or implement projects changed? Do any new projects need persistence strategies?
#21 Task 21: Monitoring and Measurement	Does the way we calculate energy performance apply to Cycle 2? Do we need to make any changes?	Does the way we are calculating energy-related GHG emissions meet our internal or external reporting needs?	Are there any changes that would affect if other energy metrics (e.g., demand, time of use, self-generation) we use to calculate our energy performance?	Are there any changes to the way the program calculates our energy performance?

Targets are for EMA and SMA scores for the Tasks and sub-tasks that are introduced in this module. Although the customer should be able to meet these scores after completing this module, the targets are not a requirement. The SEM Coach does not have to conduct either an EMA or SMA at this point, but it is highly recommended that both are updated as the customer completes any module and associated activities.



2.2.3.4 Educational **Module #3:** Operational Controls

The objective of this module is to help customers understand how to review and update standard operating procedures (SOPs) and operational and maintenance controls to consider energy performance.

In this module customers should understand that operational and maintenance controls can take a variety of forms. They can include, for example, documented procedures and work instructions, physical controls, use of licensed or other qualified personnel, or combinations of these. This module should provide examples that are relevant to the customer and provide strategies for reviewing and updating SOPs and operational and maintenance controls.

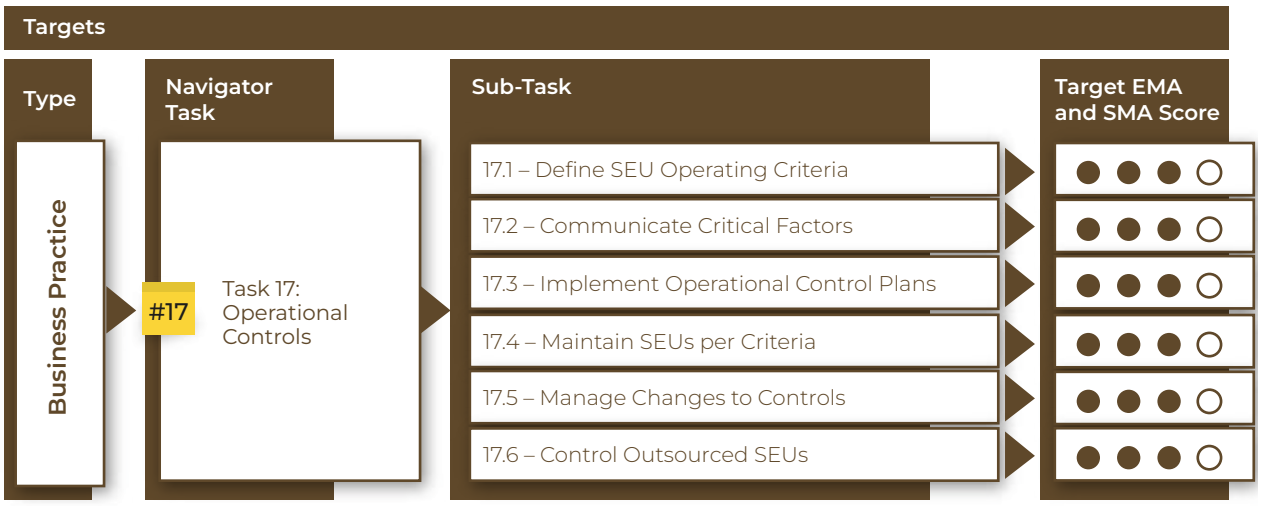
Related Navigator Tasks introduced in this module are:

- **Task 17** Operational Controls

2.2.3.4.1 Objectives and targets

Topic	EnMS Related Objectives	GHG Related Objectives	IDSM Related Objectives	Program Related Objectives
#17 Task 17: Operational Controls	Do we have standard operating procedures (SOPs) for all our SEUs? Do the SOPs for our SEUs consider energy? Can we improve the SOPs to optimize the SEUs energy consumption?	Are there changes we can make in our SOPs to account for energy-related GHG emissions?	Are there changes we can make in our SOPs to account for energy performance beyond energy consumption?	Are operational control and SOP opportunities captured in the opportunity register?

Targets are for EMA and SMA scores for the Tasks and sub-tasks that are introduced in this mod-ule. Although the customer should be able to meet these scores after completing this module, the targets are not a requirement. The SEM Coach does not have to conduct either an EMA or SMA at this point, but it is highly recommended that both are updated as the customer completes any mod-ule and associated activities.



2.2.3.5 Educational **Module #4:** Employee Engagement, Year 3

The objectives of this module are to provide strategies and tactics for: **1)** Accomplishing energy awareness among employees, and **2)** Identifying employees who might need training and providing that training. Customers should learn approaches to building support for EnMS objectives and targets, evaluate which employees may have gaps in their competence, and should be given practical approaches to begin planning their next steps in these important aspects.

Module #4 helps customers understand that the EnMS is most successful in the long-term when key employees are fully engaged and competent. The module should provide strategies for sparking interest and getting buy-in. It also helps customers recognize challenges and solutions for getting employees involved in the EnMS.

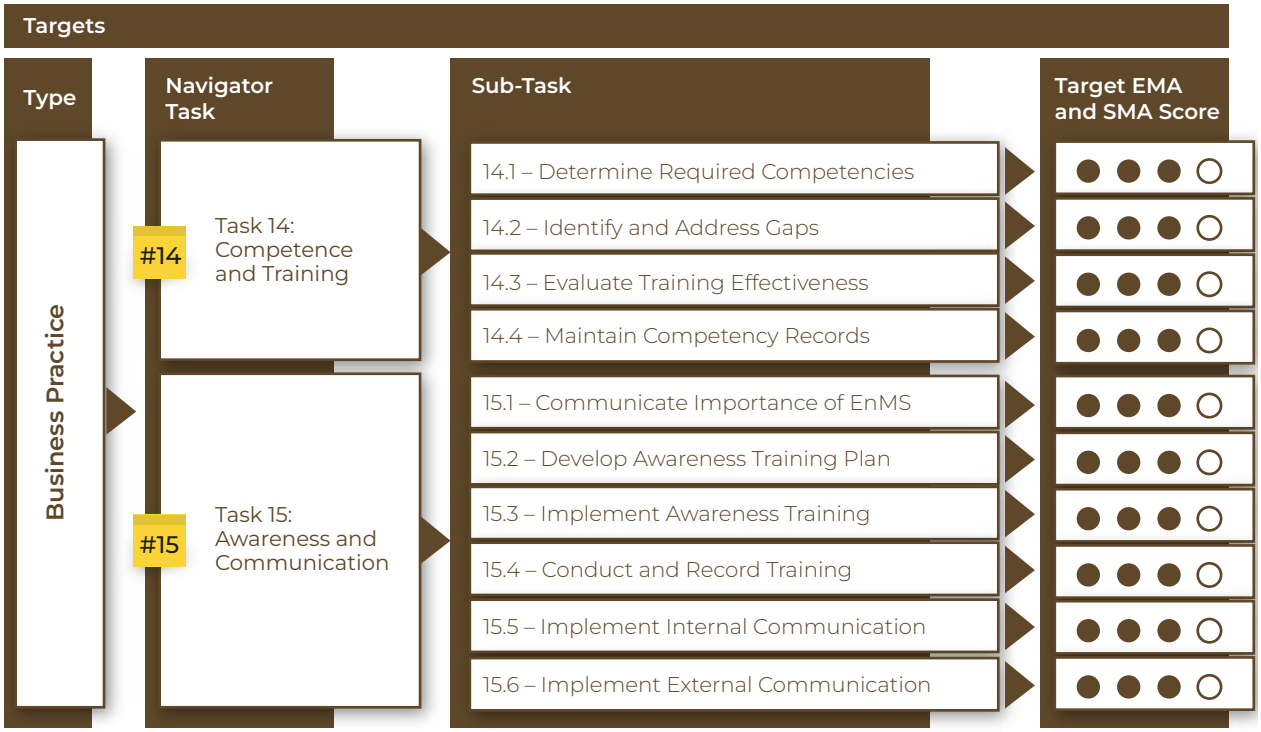
Tasks introduced in this module are:

- **Task 14** Competence and Training
- **Task 15** Awareness and Communication

2.2.3.5.1 Objectives and targets

Topic	EnMS Related Objectives	GHG Related Objectives	IDSM Related Objectives	Program Related Objectives
#14 Task 14: Competence and Training	How do we evaluate if the employees that operate our SEUs have the competencies they need? If they do not, how do we identify if any of them could benefit from training and what training we could provide?			Does the program have resources to help us train employees on energy efficiency or other energy best practices and strategies?
#15 Task 15: Awareness and Communication	Who in our site needs to know about our energy management efforts? How do we communicate this to them? Do we need to communicate our efforts externally?	Do we need to communicate our GHG emissions efforts to our staff along with or differently than our energy management efforts?	Do we need to communicate our efforts beyond energy consumption to our staff?	

Targets are for EMA and SMA scores for the Tasks and sub-tasks that are introduced in this mod-ule. Although the customer should be able to meet these scores after completing this module, the targets are not a requirement. The SEM Coach does not have to conduct either an EMA or SMA at this point, but it is highly recommended that both are updated as the customer completes any mod-ule and associated activities.



2.2.3.6 Educational **Module #5:** Planning, Year 4

The goal of this educational module is for the customer to review key elements of their EnMS and make any necessary updates for Year 4. Tasks introduced in this Cycle should be reviewed. ***These include:***

- **Task 4** Management Commitment
- **Task 5** Energy Policy
- **Task 14** Competence and Training
- **Task 15** Awareness and Communication
- **Task 17** Operational Controls

The customer should review these tasks to ensure that they identify any site-related changes or issues that may require changes to the Energy Team's business practices.

In addition, customers have been developing some business practices for the past three years and should be documenting them based on their experience so that they can be repeated in case there is turnover or a change in responsibility in the Energy Team. Processes for these tasks should also be reviewed and updated as needed, these tasks are:

- **Task 1** An EnMS and your Organization
- **Task 3** Scope and Boundaries
- **Task 6** Energy Team and Resources
- **Task 8** Data Collection and Analysis
- **Task 9** Significant Energy Uses
- **Task 10** Improvement Opportunities
- **Task 11** EnPIs and Baselines
- **Task 12** Objectives and Targets
- **Task 13** Action Plans for Continual Improvement
- **Task 21** Monitoring and Measurement of Energy Performance Improvement

2.2.3.6.1 Objectives and targets

Topic	EnMS Related Objectives	GHG Related Objectives	IDSM Related Objectives	Program Related Objectives
#1 Task 1: An EnMS and Your Organization	Have any of our organization's high-level objectives or strategies changed? Will that affect any of our energy management business practices?			
#3 Task 3: Scope and Boundaries	Are there any changes to our processes, systems, or areas that we should include in our energy management? Do those changes affect our scope or boundaries?			
#4 Task 4: Management Commitment	Do we need to make any updates to how our management engages with the Energy Team?			
#5 Task 5: Energy Policy	Do we need to make any updates to our Energy Policy or how we communicate it?			
#6 Task 6: Energy Team and Resources	Do we need to make any adjustments in our Energy Team make-up? Do we have the resources to meet our objectives?			
#8 Task 8: Data Collection and Analysis	Are we collecting the right data? Is the quality of the data what we need? How do we document our internal data collection processes and plans so we can maintain them if there is turnover?			
#9 Task 9: SEUs	Do our areas of focus (SEUs) apply to year 4? How do we select SEUs? How do we document that process so we can repeat it in the future?			

#10 Task 10: Improvement Opportunities	Do we have enough opportunities to meet our objectives for year 2 and beyond? Do we need to identify more? How do we prioritize our priorities? How do we document our process so we can repeat it in the future?	Will the program help us identify new opportunities if we need them?
#11 Task 11: EnPIs and Baselines	Have we compared our indicators to baselines for year 3? Should the indicators be modified for year 4? How often should we verify our indicators? How do we document the process for verifying our indicators?	What are the program's EnPIs and baselines?
#12 Task 12: Objectives and Targets	What are our objectives and targets for Year 4 and beyond? Has our management approved the objectives? How should we document them?	Does the program have objectives or targets that we need to meet?
#13 Task 13: Action Plans	Do our approved projects for year 4 meet our objectives? Do we have clear action plans? Do we need to form project teams for complex projects? Are we following the action plans for previously approved opportunities?	Are we following our previously defined persistence strategies? Do any new projects need a persistence strategy?
#14 Task 14: Competence and Training	Do we need to make any changes to our processes for evaluating if employees have the competencies they need or to the training we are providing?	
#15 Task 15: Awareness and Communication	Do we need to make any changes to our awareness and communication processes?	
#17 Task 17: Operational Controls	Do we need to make any changes or updates to our operational controls?	
#21 Task 21: Monitoring and Measurement	What process do we follow to make sure our data and metrics are monitored, measured and evaluated? How do we document this process?	Are we providing the program the data it needs to report our savings?

There are **no targets** for this educational module as new business practices are not introduced. However, the SEM Coach should ensure that customers understand that business practices introduced in Year 3 will be reviewed in the site-specific activity related to this educational module.

2.2.3.7 Educational **Module #6:** EMIS, Year 4

The objective of this module is to help customers look at more advanced concepts for Energy Management Information Systems. Again, an EMIS is not any specific hardware or software solutions but it is the proper integration and visualization of energy information so that multiple levels of employees and management within an organization are able to take actions and make decisions that save energy and maintain energy savings. In this module customers should be exposed to EMIS best practices, approaches for analyzing improvements to energy data management, examples or case studies of EMIS implementations, and common approaches to improve their EMIS. They should also understand the potential benefits of improving their system for managing energy data or reports.

Related Navigator Tasks introduced in this module are:

- ▹ **Task 8** Data Collection and Analysis

2.2.3.7.1 Objectives and targets

Topic	EnMS Related Objectives	GHG Related Objectives	IDSM Related Objectives	Program Related Objectives
#8 EMIS and Task 8: Data Collection and Analysis	What are EMIS best practices? How can a well-defined EMIS help this and other tasks (e.g., monitoring and measurement, SEUs, objectives and targets)? What are examples of EMIS implementations? How can we improve the way we are collecting, analyzing, visualizing, reporting, and/or sharing data? How can this support the way we operate and control our equipment and processes?			What support does the program provide?

There are **no targets** for this educational module. However, the SEM Coach should ensure, if targets have not been met by participants for Task 8, that this educational module provides further assistance in reaching the Cycle 2 targets for this task.

2.2.3.8 Educational **Module #7:** Employee Engagement, Year 4

The objective of this module is to help customers look at two processes that have the potential to have a major impact on energy performance: design and procurement.

In this context, the design requirements are not associated with the design of products or services to be sold by the customer or offered as a service by the customer (e.g., food products for a food processor); in this context, "design activities" are applicable to the development of new, modified, and renovated sites, equipment, systems, and processes within the site (e.g., the design of an additional production line) that can have a major impact on energy performance within the scope of the energy management system (EnMS). In this module, customers will look at how to integrate consideration of energy performance improvement opportunities and operational controls into design activities for those items. This can provide the basis for more innovative and energy-efficient designs.

In addition, the purchase of energy-using products, equipment, and services can affect a customer's significant energy uses (SEUs) and energy performance. In this module the organization will consider how a procurement process can consider energy performance when it is related to SEUs or when it can have a significant impact on energy performance.

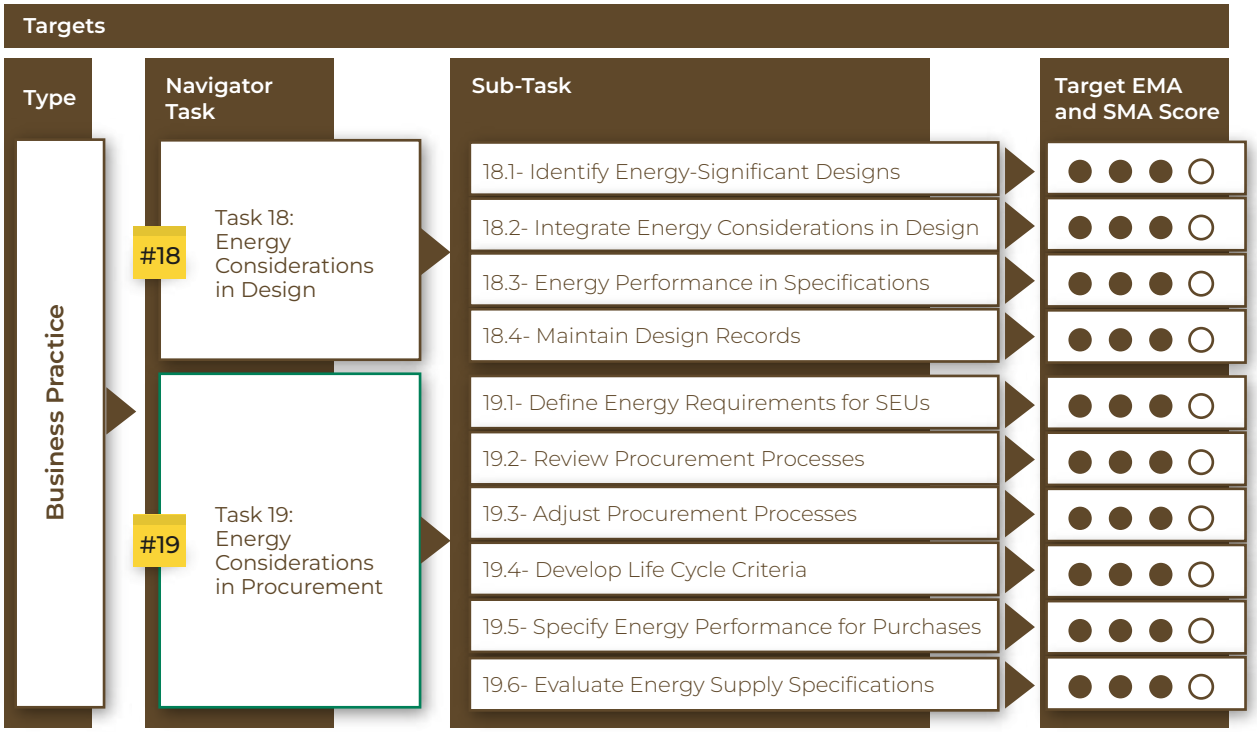
Related Navigator Tasks introduced in this module are:

- **Task 18** Energy Considerations in Design
- **Task 19** Energy Considerations in Procurement

2.2.3.8.1 Objectives and targets

Topic	EnMS Related Objectives	GHG Related Objectives	IDSM Related Objectives	Program Related Objectives
#18 Task 18: Energy Considerations in Design	Does the staff responsible for design consider energy performance in their specifications? How do we ensure they do?	Does the staff responsible for design also need to consider GHG emissions reductions in their specifications?	Does the staff responsible for design need to consider energy performance beyond consumption in their specifications? If so, how do we ensure they do?	
#19 Task 19: Energy Considerations in Procurement	How do we develop energy performance criteria for suppliers or service providers that affect our SEUs? How do we communicate the criteria to them?	Do we need to develop GHG reductions criteria for suppliers or service providers?	Do we need to consider energy performance criteria beyond consumption (e.g. demand, time of use, etc.)?	

Targets are for EMA and SMA scores for the Tasks and sub-tasks that this module covers. Although the customer should be able to meet these scores after completing this module, the targets are not a requirement. The SEM Coach does not have to conduct either an EMA or SMA at this point, but it is highly recommended that both are updated as the customer completes any module and associated activities.



2.2.3.9 Educational **Module #8:** Celebration and Next Steps, Year 4

The objective of this module is to recognize the customers' accomplishments and generate enthusiasm for continuing engagement in the SEM program. Customers have worked hard for four years; this module provides a forum for their peers to recognize the work they have done and hear what they have planned for the future.

The SEM Coach must work with each Energy Champion ahead of time to ensure they prepare a brief presentation explaining the story and outcomes through their engagement with the SEM program. This should be a similar presentation as that given to their Executive Sponsor. Customers should receive a certificate of accomplishment.

2.2.3.9.1 Objectives and targets

Topic	EnMS Related Objectives	GHG Related Objectives	IDSM Related Objectives	Program Related Objectives
Review of Cycle 1 and Cycle 2	What have we achieved the past 4 years? In this cycle? How do we present our progress to top management? To employees? To other organizations? What do we want to improve on or achieve in the next year or in **Cycle 3**?			What does **Cycle 3** look like? Will we continue with the SEM program? What do we do if we want to continue? If we do not?

There are **no targets** for this educational module. However, the SEM Coach should ensure that customers understand that business practices introduced in Cycle 2 will be reviewed in the site-specific activity related to this educational module.

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CYCLE 3

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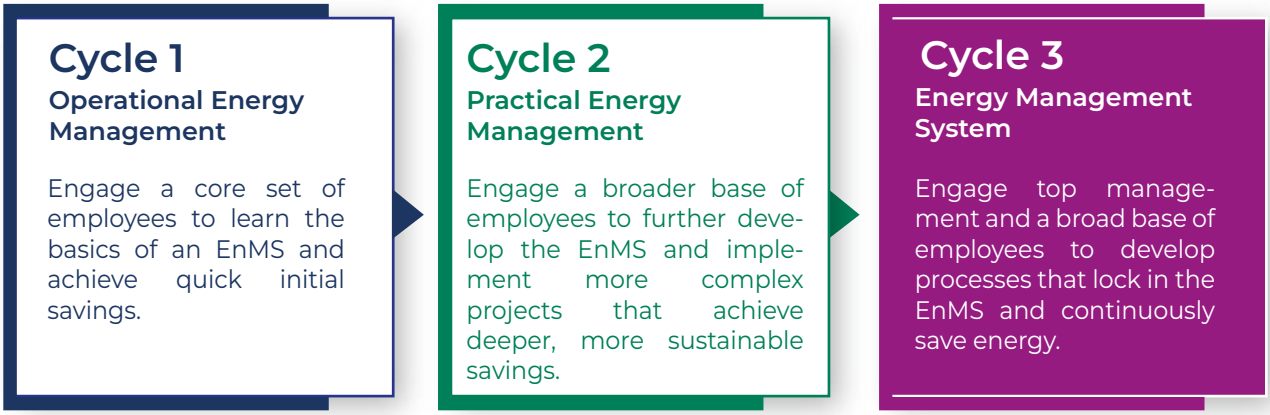
2.3 Cycle 3

2.3.1 Cycle 3 Overview

Cycle 3 focuses on locking in business practices so customers can continuously improve energy performance beyond their engagement in Core SEM. Cycle 3 ensures that top management, the Energy Team, and the site's staff have the commitment and processes to continually manage and improve their energy performance.

2.3.1.1 Cycle 3 Goals and Objectives



The goal for Cycle 3 is that customers have the business practices in place that allow them have a fully functional energy management system. This means that business practices are sufficiently documented to support long-term success, management is taking an active role, the organization is addressing legal and strategic risks, and the organization is periodically monitoring and reviewing the performance of the energy management system.

In practice this means a participant:

1. Has identified any legal or other requirements that might affect their energy management activities (Task 2- People and Legal Requirements).
2. Has plans to address any strategic risks that can affect their energy management activities (Task 7- Risks to EnMS Success).
3. Has documented key processes and information that helps ensure the effectiveness of their energy management activities (Task 16- Documenting the EnMS).
4. Monitors the performance of their energy management business practices (Task 20- Monitoring and Measurement of the EnMS).
5. Has a management team that periodically reviews the organization's energy performance and business practices (Task 23- Management Review).

It also means that by the end of the Cycle the participant will be able to manage these business practices, and those introduced in previous Cycles, with limited program support. In other words, the customer understands how to update and maintain any of the business practices and can gather external resources to help where needed.

For customers that plan on continuing on to the Graduate Pathway, it will be critical that they are able to meet Cycle 3 targets.

2.3.1.2 Cycle 3 Sequence

Changing the sequence of educational modules or site-specific activities is not recommended but it is ultimately the responsibility of the program administrator to approve any suggested changes. As mentioned earlier, specific cases may call for changes in either the timing or sequence of activities. Similar to Cycle 1 and 2, the sequence presented below should be followed in order. This means, for example, that Site-Specific Activitiy #1- Kick-off Meeting, Year 5 is completed before Educational Modules #1, and #2.

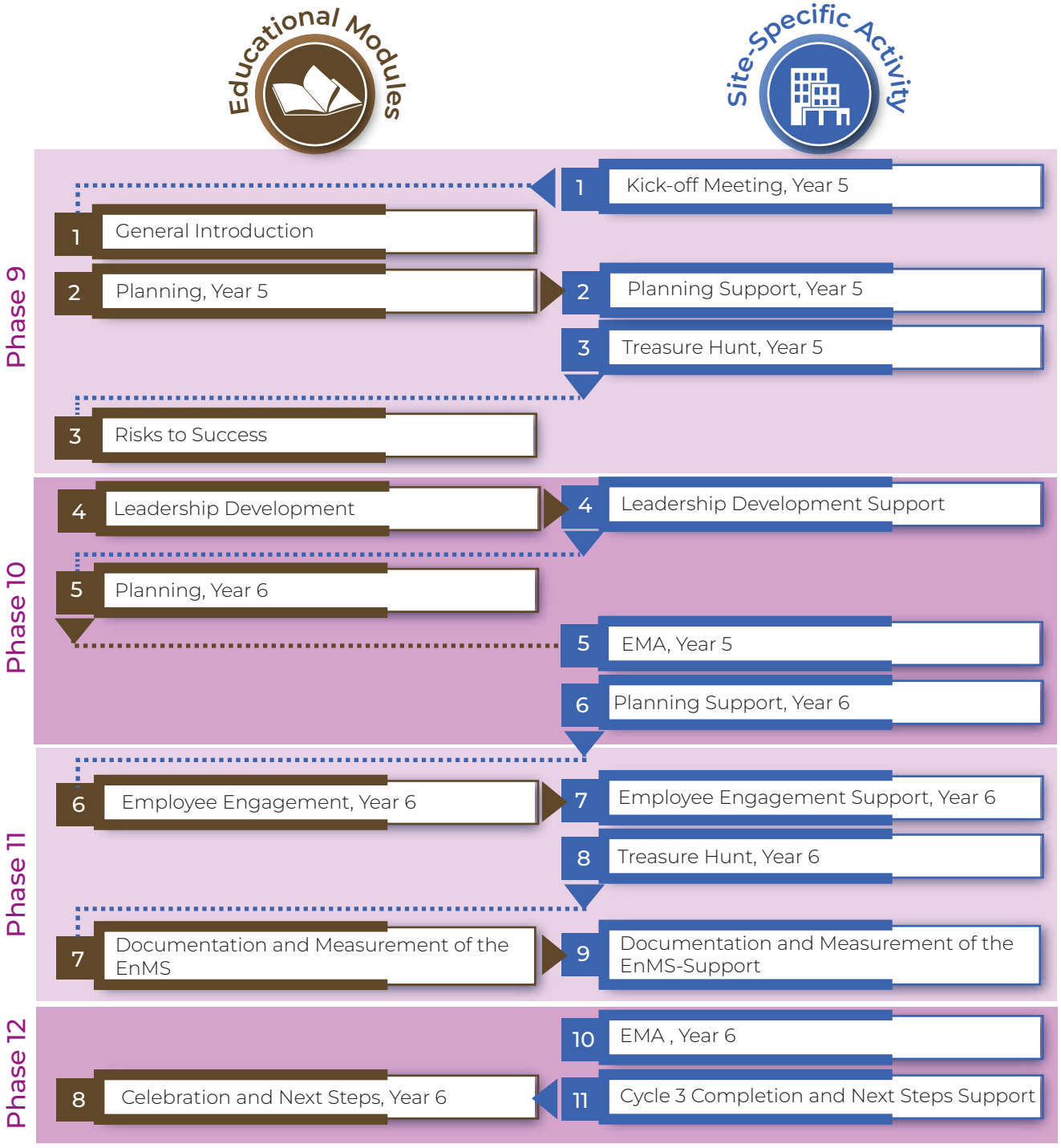


Table 10 - Cycle 3 Sequence

2.3.1.3 Cycle 3 Targets

As mentioned earlier, the Objective for Cycle 3 is that the participant has business practices that allow them to have a functional energy management system. In practice, this means that by the end of the Cycle, participants should have implemented the Tasks introduced through the educational and site-specific activities in this Cycle, and maintained the business practices introduced in previous Cycles.

It is recommended, but not required, that participants be able to score a "3" on all tasks and subtasks introduced in Cycle 1, 2, and 3 on both the 50001 Ready Energy Management Assessment (EMA) Excel Tool and the 50001 Ready Self-Management Assessment (SMA) Excel Tool.

Cycle	Navigator Task #	Navigator Task Name	EMA Score	SMA Score
Cycle 1	#1	An EnMS and Your Organization	●●●○	●●●○
	#3	Scope and Boundaries	●●●○	●●●○
	#6	Energy Team and Resources	●●●○	●●●○
	#8	Energy Data Collection and Analysis	●●●○	●●●○
	#9	Significant Energy Uses (SEUs)	●●●○	●●●○
	#10	Improvement Opportunities	●●●○	●●●○
	#11	EnPIs and Energy Baselines	●●●○	●●●○
	#12	Objectives and Targets	●●●○	●●●○
	#13	Action Plans for Continual Improvement	●●●○	●●●○
	#21	Monitoring and Measurement of Energy Performance	●●●○	●●●○
Cycle 2	#4	Management Commitment	●●●○	●●●○
	#5	Energy Policy	●●●○	●●●○
	#14	Competence and Training	●●●○	●●●○
	#15	Awareness and Communication	●●●○	●●●○
	#17	Operational Controls	●●●○	●●●○
	#18	Considerations in Design	●●●○	●●●○
	#19	Considerations in Procurement	●●●○	●●●○
Cycle 3	#2	People and Legal Requirements Affecting the EnMS	●●●○	●●●○
	#7	Risks to EnMS Success	●●●○	●●●○
	#16	Documenting the EnMS	●●●○	●●●○
	#20	Monitoring and Measurement of the EnMS	●●●○	●●●○
	#23	Management Review	●●●○	●●●○

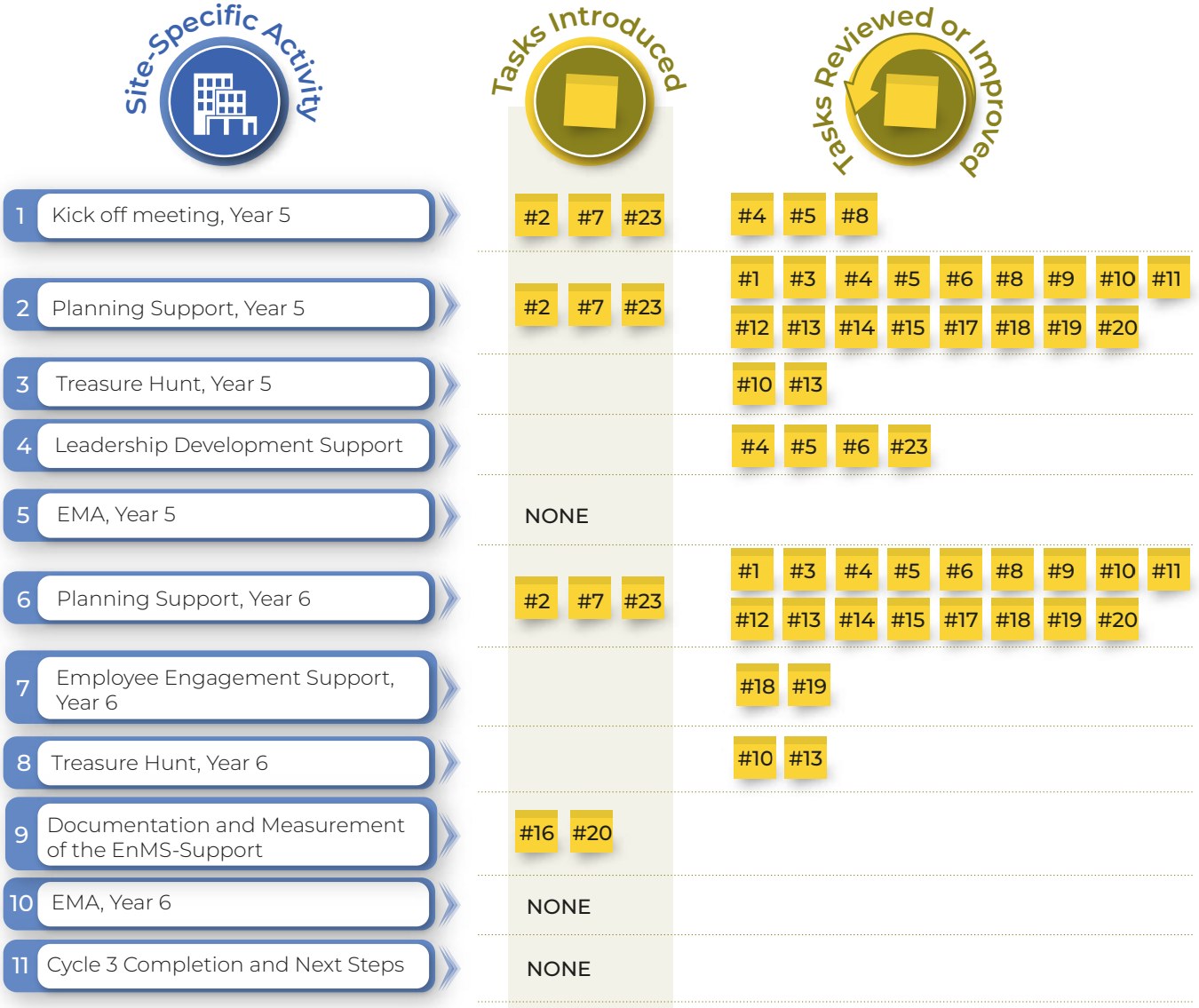
2.3.2 Cycle 3 Site-Specific Activities

2.3.2.1 Overview of Site-Specific Activities

Site-Specific Activities are activities that are implemented with an individual site. Site-Specific Activities can vary significantly from customer to customer and may depend on a variety of factors, including the site's objectives, priorities, expertise, infrastructure, available resources, etc. An overview of each activity is provided along with the objectives and targets, optional steps, and requirements for that activity.

References to Navigator tasks are provided for context. It is not a requirement to show the customer the details of the task nor the Navigator tool itself.

Connection of Site-Specific Activity and tasks:



2.3.2.2 Site-Specific **Activity #1:** Kick-off Meeting, Year 5

The Kick-off Meeting gives the SEM Coach, Energy Champion, and key facility stakeholders, the opportunity to review the past Cycle and discuss this Cycle's goals, roles, and approach. It sets expectations and lays the foundation for the facility's effective participation in Cycle 3 and for potential participation in the Graduate Pathway.

As in the previous two cycles, the Kick-off Meeting begins the customer's engagement with the SEM program in Cycle 3. Similar to Cycle 2, this meeting has multiple purposes:

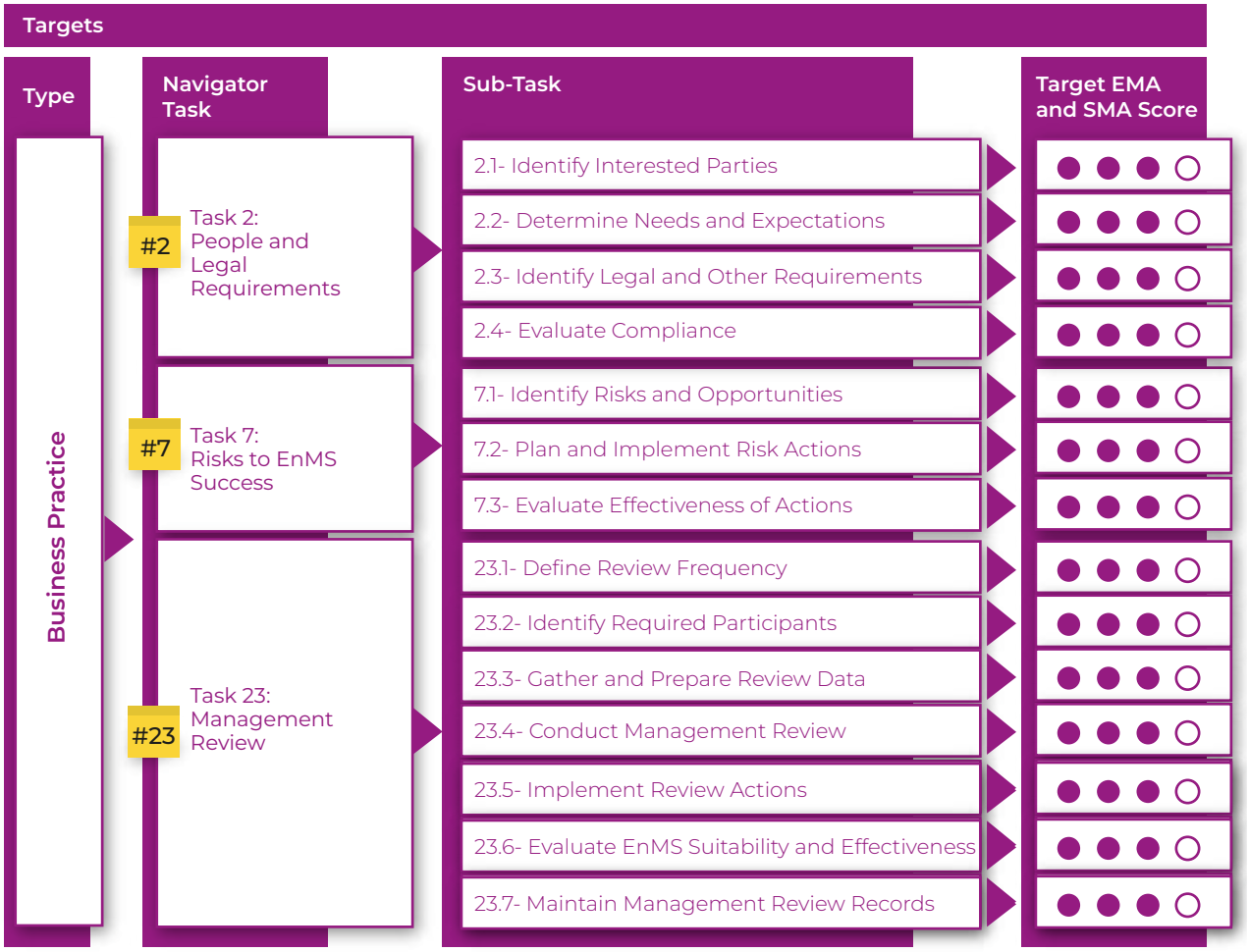
1. Introducing the Executive Sponsor and Energy Champion to the requirements and objectives of Cycle 3, including energy savings and EnMS goals, and ensuring they understand the differences between this cycle and Cycle 2.
2. Ensuring the Executive Sponsor understands the role and requirements of top management in Cycle 3, including the purpose of Task 23- Management Review, any changes in Task 4- Management Commitment and any follow up discussions that may come from future work on these tasks.
3. Ensuring the Executive Sponsor has an opportunity to have input into topics that could be risks or requirements for their energy management system and discussing Task 2- People and Legal Requirements and Task 7- Risks to EnMS Success.
4. Articulating the customer's commitment to the SEM program, including resources and goals necessary for meeting this cycle's objectives.
5. Discussing with the Data Owner any changes in needed in the Data Collection Plan.
6. In addition, this meeting should make clear to both the Executive Sponsor and the Energy Team Lead that Core SEM ends after Year 6 and they should understand their options to either enter the Graduate Pathway or end their engagement.

As with the other site-specific activities, the Kick-off Meeting is meant to be held with an individual site and not in a group or cohort environment.

2381 ### 2.3.2.2.1 Objectives and Targets

Type	Objectives
Programmatic	**1. Executive Sponsor and Energy Team Lead understand:** **a.** The Cycle 3 vision and goals, expectations, roles, and requirements for their site's involvement in the SEM program. **b.** The Executive Sponsor's role in Cycle 3. **c.** Any changes in the roles of the SEM Coach, PA, and Account Executive. **d.** Any changes in the expected roles and responsibilities of the Energy Team Lead, Data Owner, Executive Sponsor, and Energy Team. **e.** Any changes in how the SEM program can help support key corporate and site objectives and strategies. **f.** The site's options and responsibilities after Cycle 3 finishes, including the requirements for entering the Graduate Pathway.
Business Practice	**2. Executive Sponsor articulates or confirms:** **a.** The resources (human and capital) available to support the program in Cycle 3. **b.** Any existing or desired objectives or targets the program should try to meet, including Cycle 3 EnMS and savings objectives and targets. **c.** Agreement to the program's Cycle 3 requirements, including Executive Sponsor's role and management review **d.** Potential risks or requirements for the energy management system. **e.** The direction the site will take after completion of Cycle 3.
	3. Data Lead and SEM Coach make any necessary changes to the Energy Data Collection Plan for Cycle 3. This should include any changes in roles and responsibilities.

The targets below relate to EMA and SMA scores. Although the customer may not be able to meet these targets after the Kick-off meeting, the targets should be considered so that progress can be made towards meeting them by the end of the Cycle.



2.3.2.2.2 Optional Steps

Although these steps are optional, it is highly encouraged that they be included as a standard offering to all customers in Core SEM, especially if the customer will continue to the Graduate Pathway.

1. **IDSM Data Collection Plan Addendum:** At the program administrator's discretion and based on customer needs, the program may provide additional support for customers that want to track energy performance metrics beyond energy consumption (e.g. energy generated and/or stored, demand, time of use) by helping them develop an expanded data collection plan that includes data for those metrics. Similar to the energy data plan, the IDSM data plan is an agreement between the Data Owner and the SEM Coach on what data is necessary to collect and expectations (e.g. responsibility, frequency, process for transferring data, etc.) for data transfer.

2. **GHG Data Collection Plan Addendum:** At the program administrator's discretion, the program may provide additional support for customers that want to track their energy-related GHG emissions by helping them develop a GHG data collection plan. Similar to the energy data plan, the GHG Data Collection Plan is an agreement between the Data Owner and the SEM Coach on what data is necessary to collect and expectations (e.g. responsibility, frequency, process for transferring data, etc.) for data transfer. The PA and SEM Coach shall determine which sources of energy are in-scope for this activity.

2.3.2.2.3 Requirements

- 1. The Kickoff Meeting shall be held prior to any other educational or site-specific activities.
- 2. The meeting shall include at least:
  - **a. From the Program:** The SEM Coach. The Account Executive is optional but highly recommended.
  - **b. From the Customer:** The Executive Sponsor, Energy Team Lead, and Data Lead.
- 3. The meeting can be held in multiple parts, for example one meeting with the Executive Sponsor and the Energy Champion to discuss high-level activities and another with the Data Lead and the Energy Champion to discuss data needs and timing.
- 4. The meeting shall be held with only one organization (i.e. not with other facilities in the same cohort).
- 5. Where possible, the meeting(s) shall be held in person.
- 6. The SEM Coach shall ensure the meeting(s) meets the listed objectives and targets.
- 7. If offered, optional steps (IDSM and GHG- Data Collection Plan Addendums) shall be introduced in this meeting.
- 8. The meeting shall be summarized and documented in the Scoping Summary per the requirements below:
  - **General Information:** Including the location, the date, and the attendees of the Kick-off Meeting.
  - **Agenda:** Include the agenda of the meeting and any notes (e.g., any topics that were not discussed or additional topics that were covered, any issues that were highlighted, etc.).
  - **Energy Efficiency History and Plans:** Any pending and planned energy efficiency projects must be documented in the Opportunity Register in accordance with requirements outlined in the M&V Guide.
  - **Recommended Next Steps:** If any, recommendations on next steps the program should take with this customer.
- 9. If offered, optional steps shall be documented per the requirements below:
  - **Process:** A brief overview of the process followed for each optional step offered, including any modifications made and how the addendum was documented in the data collection plan.

2.3.2.3 Site-Specific **Activity #2:** Planning Support, Year 5

Planning for Year 5 prepares the site for continued success in Year 5 and in Cycle 3. It helps the Energy Team and SEM Coach review Year 4 progress and shortfalls and compare them with Year 5 targets and objectives to create a plan of action for Year 5 and Cycle 3.

The goal of this activity is to review key items that might affect the site's approach for Cycle 3 and make any necessary changes to existing business practices. A second goal is to help the participant further develop the business practices introduced in the Kick-off Meeting and in educational module #2. The Energy Team should review their Cycle 2 actions (e.g., implemented projects, energy savings, objectives, performance indicators, SEUs, energy map, etc.) and determine if any significant changes need to be made for Cycle 3, based on the Navigator Tasks discussed in Educational Module #2- Planning, Year 5.

This activity repeats the experience and expectation set up in Cycle 1 and further developed in Cycle 2 for annual planning to ensure the facility meets its targets and objectives. The Energy Team should be able to the lead this activity using the processes the Energy Team has developed. The Energy Coach should focus their support on ensuring the customer is using and enhancing their processes so planning activities can continue beyond the Core SEM.

The SEM Coach and Energy Team should use this planning session to determine if a Treasure Hunt is needed, or not, to identify opportunities to meet the Cycle's objectives.

2.3.2.3.1 Objectives and Targets

Type	Objectives
Business Practice	**The Energy Team:** **1.** Reviews Cycle 2 actions and issues to evaluate their progress versus program and site expectations. **2.** Reviews the Tasks discussed in Educational Module #2- Planning, Year 5 to develop EnMS and savings targets and makes any necessary changes for Cycle 3. **3.** Updates any business practices or documents (e.g., SEUs, Energy Map, Energy Data Collection Plan, etc.) as needed **4.** Sets a plan for Cycle 3 and subsequent years, including selection of opportunities, development of action plans, and any necessary improvements in data collection or selection of indicators. **5.** With the SEM Coach, determines whether or not the Treasure Hunt, Year 5 is necessary based on the site's objectives and remaining opportunities. **6.** Develops an approach to identify how management will review energy management progress. **7.** The SEM Coach and SEM Champion determine whether or not the Treasure Hunt, Year 5 is necessary based on the site's objectives and remaining opportunities.

There are **no targets** for this activity. However, the SEM Coach should ensure that, if targets were not met for any Task in EMA, Year 4, there is a plan to review the business practices related to those Tasks. In addition, if targets were not yet met for Task 23: Management Review, this activity should be structured to help the customer meet those targets.

2.3.2.3.2 Optional Steps

There are **no optional steps** for this activity at this time.

2.3.2.3.3 Requirements

- 1. Planning Support, Year 5 shall take place after Educational Module #2- Planning for Cycle 3.
- 2. Planning Support, Year 5 Support shall be supported by the appropriate Energy Team members and site staff.
- 3. The SEM Coach and Energy Team shall determine whether Treasure Hunt, Year 5 is necessary.

- 4. The SEM Coach shall ensure the support meets the listed objectives.
- 5. This activity must be documented per the requirements below.
  - **General Information:** Including the location, the time, and the date, and the attendees, for any meeting or meetings supporting this activity.
  - **Summary of the Activity:** Including a summary of the type of activity (e.g., workshop, on-line webinar, etc.), attendance, presenters, agenda, key activities, materials provided to the customer.

2.3.2.4 Site-Specific **Activity #3:** Treasure Hunt, Year 5

This and subsequent Treasure Hunts expand the opportunity-finding process. They help the customer uncover new energy-saving actions by going deeper into energy-consuming systems covered in previous years or by expanding into systems that have not been covered, ensuring there are enough opportunities to meet the facility's targets for the year, the Cycle, and future years.

As previously stated, the objective of any Treasure Hunt is to identify energy waste and energy saving opportunities to meet the organization's objectives and targets, which is an element of Task 10- Improvement Opportunities. A successful outcome of this Treasure Hunt is the identification and prioritization of opportunities to meet Cycle 3 and beyond objectives. The focus of this Treasure Hunt should be not only to find opportunities, but also to ensure the customer has the processes and understanding to manage future Treasure Hunts.

The intent of the Treasure Hunts over the Core SEM six years is to build a comprehensive, facility-wide view of energy-saving opportunities from a full systems perspective. While each individual Treasure Hunt does not need to address every aspect, together over time they should encompass opportunities related to system set points, operating practices and processes, process controls, maintenance procedures, equipment upgrades, and more. In addition, IDSM (e.g., distributed generation, storage, demand response, time-of-use, peak demand reduction, etc.) opportunities and GHG reduction opportunities should be included where possible (even if additional resources are not available, see Optional Steps) in all Treasure Hunt activities to ensure the customer has a broad view of their energy performance improvement opportunities.

To strengthen customer engagement and participation, all Treasure Hunts are strongly recommended to be conducted in-person and should be held on-site wherever possible.

2.3.2.4.1 Objectives and Targets

Type	Objectives
Business Practice	**The Energy Team:** **1.** With the SEM Coach, identify any additional energy savings opportunities, including operational control opportunities, needed to meet Year 5, 6 and subsequent year (i.e. years 7 and 8) objectives and targets **2.** With the SEM Coach, document the site's additional opportunities using the Opportunity Register and quantify potential savings for each opportunity. **3.** Prioritizes their identified opportunities and selects opportunities to implement in year 5 and 6 and subsequent years (i.e., years 7 and 8). **4.** Develops action plans, where appropriate.

There are **no targets** for this activity. However, the SEM Coach should ensure that, if targets were not met for Task 10 in EMA, Year 4, there is a plan to use this Treasure Hunt to review and improve the business practices related to that Task.

2.3.2.4.2 IDSM and GHG Related Steps

As mentioned in Treasure Hunt 1, these steps should be included, though customers are not required to implement these measures. This allows customers to consider all their energy-related opportunities, especially if continuing on to the Graduate Pathway.

1. **IDSM Calculation of Opportunities:** The program will provide additional support for customers that want to estimate IDSM-related calculations for each energy saving opportunity and use that value as part of the prioritization exercise. This could be either a numerical value (e.g. estimates on demand reduction for each opportunity) or a relative ranking (e.g. high impact on demand). If provided, this should be integrated into the Treasure Hunt activities.

2. **IDSM Treasure Hunt:** The program will provide additional support for customers that want to identify IDSM-related opportunities beyond energy efficiency (e.g., distributed generation, storage, demand response, time-of-use, peak demand reduction, etc.) and include those opportunities as well as the consideration of IDSM-related data in the prioritization exercise. The scope and responsibilities (e.g. use of other resources) for the IDSM Treasure Hunt should be defined by the program administrator and SEM Coach prior to the event.

3. **GHG Calculation for Opportunities:** The program will provide additional support for customers that want to calculate GHG emissions for each energy saving opportunity and use that value as part of the prioritization exercise. If provided, the GHG emissions calculations should be integrated into the Treasure Hunt opportunity prioritization activities and in the Opportunity Register.

4. **GHG Treasure Hunt:** The program will provide additional support for customers who want to identify energy-related GHG emissions opportunities beyond energy efficiency (e.g. electrification of propane forklift trucks) and include those opportunities as well as the consideration of GHG emissions reductions in the prioritization exercise. The scope and responsibilities of the GHG Treasure Hunt should be defined by the PA and SEM Coach prior to the event.

2.3.2.4.3 Requirements

- 1. The Treasure Hunt, Year 5 shall take place after completion of Site-Specific Activity #3-Planning for Cycle 3.
- 2. The Treasure Hunt, Year 5 shall be attended by the appropriate members of the Energy Team and site staff.
- 3. The SEM Coach shall ensure the Treasure Hunt meets the listed objectives.
- 4. All opportunities identified shall be recorded in the Opportunity Register. The Coach must ensure that capital projects identified be documented in accordance with any additional PA requirements, which may require documentation outside of the opportunity register. Opportunity Register requirements are provided in the M&V Guide.
- 5. The Energy Star Treasure Hunt Guide[20] or a similar guide shall provide additional guidance for conducting a Treasure Hunt.

[20] https://www.energystar.gov/industrial_plants/treasure_hunt

- 6. The Treasure Hunt shall be summarized per the requirements below.

  - **General Information:** Including the location, the date, and the attendees.
  - **Attendees:** Including all participants in the Treasure Hunt (including any guests and implementation contractor technical support).
  - **Process:** A summary of the process followed during the Treasure Hunt, including how IDSM and GHG emissions steps were implemented.
  - **Next Steps:** This section will highlight next steps relative to the Treasure Hunt. For example, if another Treasure Hunt is necessary in order to identify projects to meet the cycle's goals, or if the customer will need support developing action plans.

2.3.2.5 Site-Specific **Activity #4:** Leadership Development Support

Leadership Development Support helps the customer strengthen their management's role and involvement in driving energy performance over the long-term.

The goal of this activity is to help the customer improve their tasks related to the long-term leadership of the EnMS. The focus of this activity should be in ensuring the processes for all tasks are well defined and can lead to a clear and repeatable practices.

Tasks related to this activity are those introduced and discussed in Educational Module #3- Risks to Success and #4- Leadership Development, including:

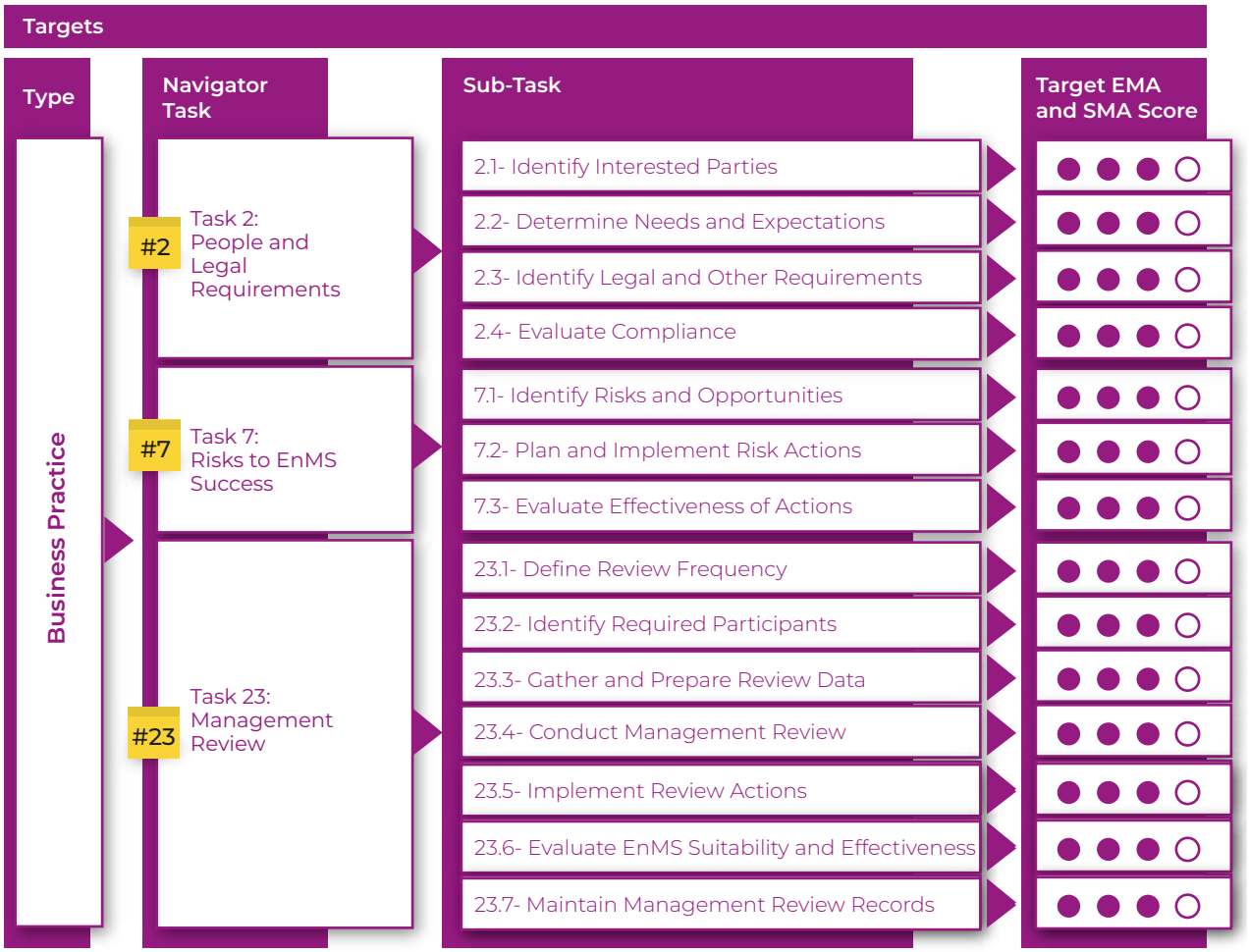
- **Task 2** People and Legal Requirements
- **Task 4** Management Commitment
- **Task 5** Energy Policy
- **Task 6** Energy Team and Resources
- **Task 7** Risks to EnMS Success
- **Task 23** Management Review

One difficult task for the Energy Team, and where the Energy Coach may assist, may be to review the Energy Team's own roles and responsibilities and to objectively discuss what the make-up of the team could be going forward.

2.3.2.5.1 Objectives and Targets

Type	Objectives
Business Practice	**The Energy Team:** **1.** Documents a plan to engage top management in the Tasks discussed in Educational Module #4- Leadership Development, including a periodic review of the EnMS by top management. **2.** Documents a plan to identify and address the issues discussed in Educational Module #3- Risks to Success **3.** Reviews the plans with top management and gets their approval to implement it. **4.** Documents a plan for maintaining the Energy Team's involvement beyond Cycle 3. **5.** Defines the resources needed now and after Cycle 3.

Targets are for EMA and SMA scores for Tasks and sub-tasks that are introduced in this Cycle and that this activity supports. The customer should meet these targets after completing this activity and any associated educational modules. In addition, if targets were not yet met for any additional Tasks related to this activity (Task 4: Management Commitment, Task 5: Energy Policy, and Task 6: Energy Team and Resources), this activity should be structured to help the customer meet those targets.



2.3.2.5.2 Optional Steps

There are **no optional steps** for this activity at this time.

2.3.2.5.3 Requirements

- 1. Leadership Development Support shall take place after Educational Module #3- Risks to Success and #4- Leadership Development.
- 2. Leadership Development Support shall be attended by any appropriate Energy Team members and site staff.
- 3. The SEM Coach shall ensure the support meets the listed objectives.
- 4. This activity must be documented per the requirements below.
  - **General Information:** Including the location, the time, and the date, and the attendees, for any meeting or meetings supporting this activity.
  - **Summary of the Activity:** Including a summary of the type of activity (e.g., workshop, on-line webinar, etc.), attendance, presenters, agenda, key activities, materials provided to the customer.

2.3.2.7 Site-Specific **Activity #5:** EMA, Year 5

The Energy Management Assessment provides an evaluation of the site's energy management practices at the end of Year 5. It provides a measure of the customer's progress on their business practices, from the SEM Coach's perspective, compared to program targets.

The goal of the EMA, Year 5 is to provide the program an assessment of the site's energy management practices relative to the business practices that have been introduced thus far. The EMA shall consist of an assessment of the tasks listed below using the 50001 Ready Energy Management Assessment[21]. These are Tasks that were introduced thus far in this Cycle:

- **Task 2** People and Legal Requirements Affecting the EnMS
- **Task 7** Risks to EnMS Success
- **Task 23** Management Review

Tasks assessed in the Year 4 EMA do not need to be assessed again unless the SEM Coach knows there is a change or they were not included in previous EMAs. Those tasks should be included in the EMA scores and are listed below.

- **Task 1** An EnMS and Your Organization
- **Task 3** Scope and Boundaries
- **Task 4** Management Commitment
- **Task 5** Energy Policy
- **Task 6** Energy Team and Resources
- **Task 8** Energy Data Collection and Analysis
- **Task 9** Significant Energy Uses (SEUs)
- **Task 10** Improvement Opportunities
- **Task 11** EnPIs and Energy Baselines
- **Task 12** Objectives and Targets
- **Task 13** Action Plans for Continual Improvement
- **Task 14** Competence and Training
- **Task 15** Awareness and Communication
- **Task 17** Operational Controls
- **Task 18** Considerations in Design
- **Task 19** Considerations in Procurement
- **Task 21** Monitoring and Measurement of Energy Performance

Similar to EMA, Year 4, this EMA assessments are not intended to be a customer-facing process, the primary purpose is to document the customer's EnMS progress through Cycle 2. The SEM Coach should have been working closely with the Energy Team on these business practices and should have the knowledge to complete the EMA without their input. Optionally, the SEM Coach can engage with the Energy Team to complete the EMA, with the results shared with the Energy Team.

[21] The 50001 Ready Energy Management Assessment is available at https://industrialapplications.lbl.gov/energy-management

2.3.2.7.1 Objectives and Targets

Type	Objectives
Business Practice	**1.** The SEM Coach identifies the site's progress with respect to EnMS practices introduced in Cycle 1 and Cycle 2 and thus far in Cycle 3. **2.** Optionally, the SEM Coach can use the EMA and/or SMA as a customer-facing process to complete the EMA and/or SMA and share findings with the Energy Team.

The EMA should document the customer's progress towards meeting the expected (not required) EMA score at the end of Year 5. These targets relate to EMA and SMA scores for Tasks that have been introduced in this Cycle. Although an SMA is not required, conducting one for the Tasks listed would help the SEM Coach understand the customer's progress towards the SMA targets at the end of Year 5 and their ability to enter the Graduate Pathway.

Targets

Type	Navigator Task	Navigator Task Name	EMA Score	SMA Score
Business Practice – CYCLE 1	#1	An EnMS and Your Organization	●●●○	●●●○
	#3	Scope and Boundaries	●●●○	●●●○
	#6	Energy Team and Resources	●●●○	●●●○
	#8	Energy Data Collection and Analysis	●●●○	●●●○
	#9	Significant Energy Uses (SEUs)	●●●○	●●●○
	#10	Improvement Opportunities	●●●○	●●●○
	#11	EnPIs and Energy Baselines	●●●○	●●●○
	#12	Objectives and Targets	●●●○	●●●○
	#13	Action Plans for Continual Improvement	●●●○	●●●○
	#21	Monitoring and Measurement of Energy Performance	●●●○	●●●○
Business Practice – CYCLE 2	#4	Management Commitment	●●●○	●●●○
	#5	Energy Policy	●●●○	●●●○
	#14	Competence and Training	●●●○	●●●○
	#15	Awareness and Communication	●●●○	●●●○
	#17	Operational Controls	●●●○	●●●○
	#18	Considerations in Design	●●●○	●●●○
	#19	Considerations in Procurement	●●●○	●●●○
Business Practice – CYCLE 3	#2	People and Legal Requirements Affecting the EnMS	●●●○	●●●○
	#7	Risks to EnMS Success	●●●○	●●●○
	#23	Management Review	●●●○	●●●○

2.3.2.7.2 Optional Steps

Although the SMA is optional, it is highly encouraged that it be included as a standard offering to all customers in Core SEM, especially if the customer will want to continue to the Graduate Pathway.

1. **Self-Management Assessment (SMA):** The SMA is an assessment of the site's ability to manage business practices without the SEM program's support. It is an assessment that helps the program understand if the customer is taking steps towards the Cycle's SMA targets. Although not required in Cycle 1, an SMA is required for entry into the Graduate Pathway's Cycle 4 and it is highly recommended that the SEM Coach conduct the SMA on an annual basis, both to understand the customer's progress as well as to make the SMA at the end of Year 6 less onerous. If the SMA is completed, US DOE's 50001 Ready Self-Management Assessment shall be used.

2. **Customer-Facing EMA and/or SMA:** At the program administrator's and implementation contractor's discretion, the program may provide a customer-facing, facilitated EMA and/or SMA at any time during this Cycle. It is recommended, but not required, that the customer-facing EMA and/or SMA closely match the structure of the required EMA and/or SMA.

2.3.2.7.3 Requirements

- 1. EMA, Year 5 shall be completed before Site-Specific Activity #6- Planning Support, Year 6.
- 2. EMA, Year 5 shall consist of an assessment of the site's existing practices relative to the Navigator tasks introduced in Cycle 1, Cycle 2, and thus far in Cycle 3 using US DOE's 50001 Ready Energy Management Assessment.
- 3. The SEM Coach shall complete the EMA and can optionally engage with the Energy Team to complete the assessment.
- 4. This activity shall be documented per the requirements below.
  - **General Information:** Including the date, and the individuals leading and participating in the EMA and SMA.
  - **Task and Subtask Score:** The score for each task and subtask included in the EMA and SMA and the scores and dates for that task and subtask in past EMAs or SMAs.
  - **Overall Average Score:** The average score for all tasks included in the EMA and SMA and the average scores on past EMAs and SMAs.
- 5. If offered, optional steps shall be documented per the requirements below:
  - **General Information:** Including the date, and the individuals leading and participating in the EMA and/or SMA.
  - **Process:** A brief overview of the process followed for each optional step offered, including any modifications made.

2.3.2.6 Site-Specific **Activity #6:** Planning Support, Year 6

Planning for Year 6 prepares the site for continued success in Year 6. It helps the Energy Team and SEM Coach review Year 5 progress and shortfalls and compare them with Year 6 targets and objectives to create a plan of action for Year 6.

The goal of this activity is to review key items that might affect the site's energy management approach and make any appropriate changes for the sixth and final year of their Core SEM engagement. The Energy Team should review their Year 5 actions taken (e.g., implemented projects, energy savings, objectives, performance indicators, SEUs, energy map, etc.) and determine if any changes to business practices need to be made for SEM Program Year 6 based on the Navigator Tasks discussed in Educational Module #5- Planning, Year 6.

This activity repeats the experience and expectation set up in Cycle 1 and Cycle 2 for annual planning. The Energy Team should now be able to lead their own planning sessions and should have already developed the processes to support them. In this planning session the Energy Coach should focus their support on ensuring the energy team has, is following, and improves their documented business practices related to annual planning.

The SEM Coach and Energy Team should use this planning session to determine if a Treasure Hunt is needed, or not, to identify opportunities to meet SEM Program Year 6 objectives.

2.3.2.6.1 Objectives and Targets

Type	Objectives
Business Practice	**The Energy Team:** **1.** Reviews progress on Tasks discussed in Educational Module #5- Planning, Year 6 **2.** Reviews or sets year objectives and targets for year 6 and subsequent years (i.e. beyond the PA sponsored SEM program). **3.** Makes any needed changes for year 6 and subsequent years, and plans any needed activities, such as identification of opportunities, development of action plans, improvements in data collection, etc. **4.** With the SEM Coach, determine whether or not the Treasure Hunt, Year 6 is necessary based on the site's objectives and remaining opportunities.

There are **no targets** for this activity. However, the SEM Coach should ensure that, if targets were not met for any Task in EMA, Year 5, there is a plan to review the business practices related to those Tasks. In addition, if targets have not yet been met for Tasks introduced in this Cycle (Task 2: People and Legal Requirements, Task 7: Risks to EnMS Success, and Task 23: Management Review), plans should be made to improve the business practices related to those tasks.

2.3.2.6.2 Optional Steps

There are **no optional steps** for this activity at this time.

2.3.2.6.3 Requirements

- 1. Planning Support, Year 6 shall take place after Educational Module #5- Planning, Year 6.
- 2. Planning Support, Year 6 shall be supported by the appropriate Energy Team members and site staff.
- 3. The SEM Coach and Energy Team shall determine whether Treasure Hunt, Year 6 is necessary.
- 6. The SEM Coach shall ensure the support meets the listed objectives.
- 7. This activity must be documented per the requirements below.
  - **General Information:** Including the location, the time, and the date, and the attendees, for any meeting or meetings supporting this activity.
  - **Summary of the Activity:** Including a summary of the type of activity (e.g., workshop, on-line webinar, etc.), attendance, presenters, agenda, key activities, materials provided to the customer.

2.3.2.8 Site-Specific **Activity #7:** Employee Engagement Support, Year 6

Employee Engagement Support, Year 6 helps the customer review and improve organization-wide participation processes.

The objective of this activity is to review and enhance processes that engage employees. This activity builds on the activities in years 3 and 4, where the Energy Team began to work with a broad level of employees. With that experience in mind, they can now review and recommend further changes to processes.

Tasks related to this activity are those discussed in Educational Module #6- Employee Engagement, Year 6:

- **Task 14:** Competence and Training
- **Task 15:** Awareness and Communication
- **Task 18:** Considerations in Design
- **Task 19:** Considerations in Procurement

2.3.2.8.1 Objectives and Targets

Type	Objectives
Business Practice	**1.** The Energy Team determines design and purchasing processes that can be improved and develops a plan to work with staff. **2.** The Energy Team reviews competence and training processes, identifies improvements, and develops a plan to implement the improvements. **3.** The Energy Team reviews awareness and communication processes, identifies improvements, and develops a plan to implement the improvements.

There are **no targets** for this activity. However, the SEM Coach should ensure that, if targets were not met for Tasks 14, 15, 18 or 19 in EMA, Year 5, this activity helps the customer meet those targets.

2.3.2.8.2 Optional Steps

There are **no optional steps** for this activity at this time.

2.3.2.8.3 Requirements

- 1. Employee Engagement Support, Year 6 shall take place after Educational Module #6- Employee Engagement, Year 6.
- 2. Employee Engagement Support, Year 6 shall be supported by the appropriate Energy Team members and site staff.
- 3. The SEM Coach shall ensure the support meets the listed objectives.
- 4. This activity must be documented per the requirements below.
  - **General Information:** Including the location, the time, and the date, and the attendees, for any meeting or meetings supporting this activity.
  - **Summary of the Activity:** Including a summary of the type of activity (e.g., workshop, on-line webinar, etc.), attendance, presenters, agenda, key activities, materials provided to the customer.

2.3.2.9 Site-Specific **Activity #8:** Treasure Hunt, Year 6

This Treasure Hunt expands the opportunity-finding process. It helps customers uncover new energy-saving actions by going deeper into energy-consuming systems covered in previous years or by expanding into systems that have not been covered, ensuring there are enough opportunities to meet the facility's targets for the Cycle and future years.

As previously stated, the objective of any Treasure Hunt is to identify energy waste and energy saving opportunities to meet the organization's objectives and targets, which is an element of Task 10- Improvement Opportunities. A successful outcome of this Treasure Hunt is the identification and

prioritization of opportunities to meet Year 6 and beyond objectives. If held, the focus of this Treasure Hunt should be not only to find opportunities, but also to ensure the customer has the processes and understanding to manage future Treasure Hunts.

The intent of the Treasure Hunts over the Core SEM six years is to build a comprehensive, facility-wide view of energy-saving opportunities from a full systems perspective. While each individual Treasure Hunt does not need to address every aspect, together over time they should encompass opportunities related to system set points, operating practices and processes, process controls, maintenance procedures, equipment upgrades, and more. In addition, IDSM (e.g., distributed generation, storage, demand response, time-of-use, peak demand reduction, etc.) opportunities and GHG reduction opportunities should be included where possible (even if additional resources are not available, see Optional Steps) in all Treasure Hunt activities to ensure the customer has a broad view of their energy performance improvement opportunities.

This Treasure Hunt, is optional only if energy performance improvement opportunities have been identified and documented in the opportunity register that meet or exceed energy performance targets for the next two years.

To strengthen customer engagement and participation, all Treasure Hunts are strongly recommended to be conducted in-person and should be held on-site wherever possible.

2.3.2.9.1 Objectives and Targets

Type	Objectives
Business Practice	**The Energy Team:** **1.** With the SEM Coach, identify any additional energy savings opportunities, including operational control opportunities, needed to meet Year 6 and subsequent years (i.e. beyond the PA sponsored SEM program) objectives and targets and quantify potential savings for each opportunity. **2.** With the SEM Coach, document the site's additional opportunities using the Opportunity Register and quantify potential savings for each opportunity. **3.** Prioritizes their identified opportunities and selects opportunities to implement in year 6 and subsequent years (e.g., years 7 and 8).

There are **no targets** for this activity. However, the SEM Coach should ensure that, if targets were not met for Task 10 in EMA, Year 5, there is a plan to use this Treasure Hunt to review and improve the business practices related to that Task.

2.3.2.9.2 IDSM and GHG Related Steps

As mentioned in Treasure Hunt 1, these steps should be included, though customers are not required to implement these measures. This allows customers to consider all their energy-related opportunities, especially if continuing on to the Graduate Pathway.

1. **IDSM Calculation of Opportunities:** The program will provide additional support for customers that want to estimate IDSM-related calculations for each energy saving opportunity and use that value as part of the prioritization exercise. This could be either a numerical value (e.g. estimates on demand reduction for each opportunity) or a relative ranking (e.g. high impact on demand). If provided, this should be integrated into the Treasure Hunt activities.

2. **IDSM Treasure Hunt:** The program will provide additional support for customers that want to identify IDSM-related opportunities beyond energy efficiency (e.g., distributed generation, storage, demand response, time-of-use, peak demand reduction, etc.) and include those opportunities as well as the consideration of IDSM-related data in the prioritization exercise. The scope and responsibilities (e.g. use of other resources) for the IDSM Treasure Hunt should be defined by the program administrator and SEM Coach prior to the event.

3. GHG Calculation for Opportunities: The program will provide additional support for customers that want to calculate GHG emissions for each energy saving opportunity and use that value as part of the prioritization exercise. If provided, the GHG emissions calculations should be integrated into the Treasure Hunt opportunity prioritization activities and in the Opportunity Register.

4. GHG Treasure Hunt: The program will provide additional support for customers who want to identify energy-related GHG emissions opportunities beyond energy efficiency (e.g. electrification of propane forklift trucks) and include those opportunities as well as the consideration of GHG emissions reductions in the prioritization exercise. The scope and responsibilities of the GHG Treasure Hunt should be defined by the program administrator and SEM Coach prior to the event.

2.3.2.9.3 Requirements

- 1. The Treasure Hunt, Year 6 shall take place after completion of Site-Specific Activity #6-Planning Support, Year 6.
- 2. The SEM Coach shall make the decision on whether this Treasure Hunt is necessary based on the outcomes of Year 6 Planning and if there are enough opportunities to meet the organization's targets for at least two years.
- 3. The Treasure Hunt shall be attended by the appropriate members of the Energy Team and site staff.
- 4. The SEM Coach shall ensure the Treasure Hunt meets the listed objectives.
- 5. If this Treasure Hunt is held, all opportunities identified shall be recorded in the Opportunity Register. The Coach must ensure that capital projects identified be documented in accordance with any additional PA requirements, which may require documentation outside of the opportunity register. Opportunity Register requirements are provided in the M&V Guide.
- 6. The *Energy Star Treasure Hunt Guide*[22] or a similar guide shall provide additional guidance for conducting a Treasure Hunt.
- 7. If the Treasure Hunt is held, the Treasure Hunt shall be summarized per the requirements below.
  - **General Information:** Including the location, the date, and the attendees.
  - **Attendees:** Including all participants in the Treasure Hunt (including any guests and implementation contractor technical support).
  - **Process:** A summary of the process followed during the Treasure Hunt, including how IDSM and GHG emissions steps were implemented.
  - **Next Steps:** This section will highlight next steps relative to the Treasure Hunt. For example, if another Treasure Hunt is necessary in order to identify projects to meet the cycle's goals, or if the customer will need support developing action plans.

[22] https://www.energystar.gov/industrial_plants/treasure_hunt

2.3.2.10 Site-Specific **Activity #9:** Documentation and Measurement of the EnMS-Support

This activity focuses on documenting the energy management system, and making sure there is a way to measure how effective, beyond saving energy, business practices are.

The goal of this activity is that the customer defines: **1)** How they will document the EnMS, and **2)** How they will track trends in the performance of their EnMS activities.

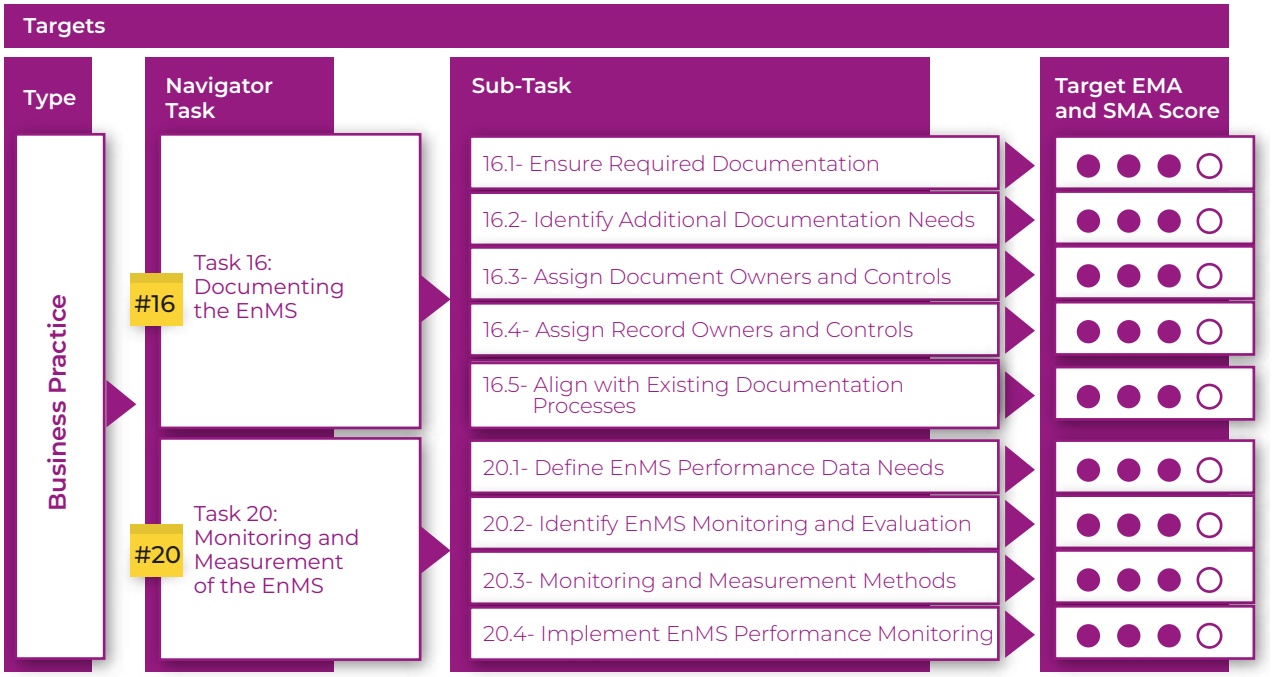
Tasks related to this activity are:

- **Task 16** Documenting the EnMS
- **Task 20** Monitoring and Measurement of the EnMS

2.3.2.10.1 Objectives and Targets

Type	Objectives
Business Practice	**The Energy Team:** **1.** Determines the processes and information to document and defines a process for creating and controlling documents. **2.** Determines what data or information is needed to evaluate progress in the EnMS.

Targets are for EMA and SMA scores for Tasks and sub-tasks that are introduced in this activity and that the customer should meet after completing this activity. Although the SEM Coach does not have to conduct either an EMA or SMA at this point, it is recommended they update both as the customer completes this activity and associated educational modules.



2.3.2.10.2 Optional Steps

There are **no optional steps** for this activity at this time.

2.3.2.10.3 Requirements

- 1. Documentation and Measurement Support shall take place after Educational Module #7- Documentation and Measurement of the EnMS.
- 2. This activity shall be supported by the appropriate Energy Team members and site staff.
- 3. The SEM Coach shall ensure the support meets the listed objectives.
- 4. This activity must be documented per the requirements below.
  - **General Information:** Including the location, the time, and the date, and the attendees, for any meeting or meetings supporting this activity.
  - **Summary of the Activity:** Including a summary of the type of activity (e.g., workshop, on-line webinar, etc.), attendance, presenters, agenda, key activities, materials provided to the customer.

2.3.2.11 Site-Specific **Activity #10:** EMA, Year 6

EMA, Year 6 provides a final assessment of the site's energy management practices and outcomes at the conclusion of the SEM program.

The goal of the EMA, Year 5 is to provide the program an assessment of the site's energy management practices relative to the business practices that have been introduced thus far. The EMA shall consist of an assessment of the tasks listed below using the 50001 Ready Energy Management Assessment .
Tasks that were introduced between the last EMA and this one are[23]:

- **Task 16** Documenting the EnMS
- **Task 20** Monitoring and Measurement of the EnMS

Tasks assessed in the Year 5 EMA do not need to be assessed again unless the SEM Coach knows there is a change or they were not included in previous EMAs. Those Tasks should be included in the EMA scores and are listed below.

- **Task 1** An EnMS and Your Organization
- **Task 2** People and Legal Requirements Affecting the EnMS
- **Task 3** Scope and Boundaries
- **Task 4** Management Commitment
- **Task 5** Energy Policy
- **Task 6** Energy Team and Resources
- **Task 7** Risks to EnMS Success
- **Task 8** Energy Data Collection and Analysis
- **Task 9** Significant Energy Uses (SEUs)
- **Task 10** Improvement Opportunities
- **Task 11** EnPIs and Energy Baselines
- **Task 12** Objectives and Targets
- **Task 13** Action Plans for Continual Improvement
- **Task 14** Competence and Training
- **Task 15** Awareness and Communication
- **Task 17** Operational Controls
- **Task 18** Considerations in Design
- **Task 19** Considerations in Procurement
- **Task 21** Monitoring and Measurement of Energy Performance
- **Task 23** Management Review

This activity follows Educational Module #7- Documentation and Measurement of the EnMS, which helps the customer understand how the EMA can be used to measure progress on the EnMS. If the customer intends to use the EMA in future years, this activity can be used to assist them in filling out the EMA. If not, similar to past EMA's, the SEM Coach can fill out the EMA based on their knowledge of the site or optionally can engage with the Energy Team to complete the EMA and/or SMA.

[23] The 50001 Ready Energy Management Assessment is available at https://industrialapplications.lbl.gov/energy-management

2.3.2.11.1 Objectives and Targets

Type	Objectives
Business Practice	**1.** The SEM Coach identifies the site's progress with respect to EnMS practices introduced in Cycle 1, Cycle 2, and Cycle 3. **2.** Optionally, the SEM Coach can use the EMA as a customer-facing process to complete the EMA and share findings with the Energy Team. **3.** The Energy Team understands the site's progress in Cycle 3 relative to the Navigator tasks introduced in Cycle 1, Cycle 2, and Cycle 3.

The EMA should document the customer's progress towards meeting the expected (not required) EMA score at the end of Year 6. These targets relate to EMA and SMA scores for Tasks that have been introduced in all Core SEM Cycles. Although an SMA is not required, conducting one for the Tasks listed would help the SEM Coach understand the customer's progress towards the SMA targets at the end of Year 6 and will be required if the customer intends to continue on to the Graduate Pathway.

Targets

Type	Navigator Task	Navigator Task Name	EMA Score	SMA Score
Business Practice – CYCLE 1	#1	An EnMS and Your Organization	●●●○	●●●○
	#3	Scope and Boundaries	●●●○	●●●○
	#6	Energy Team and Resources	●●●○	●●●○
	#8	Energy Data Collection and Analysis	●●●○	●●●○
	#9	Significant Energy Uses (SEUs)	●●●○	●●●○
	#10	Improvement Opportunities	●●●○	●●●○
	#11	EnPIs and Energy Baselines	●●●○	●●●○
	#12	Objectives and Targets	●●●○	●●●○
	#13	Action Plans for Continual Improvement	●●●○	●●●○
	#21	Monitoring and Measurement of Energy Performance	●●●○	●●●○
Business Practice – CYCLE 2	#4	Management Commitment	●●●○	●●●○
	#5	Energy Policy	●●●○	●●●○
	#14	Competence and Training	●●●○	●●●○
	#15	Awareness and Communication	●●●○	●●●○
	#17	Operational Controls	●●●○	●●●○
	#18	Considerations in Design	●●●○	●●●○
	#19	Considerations in Procurement	●●●○	●●●○
Business Practice – CYCLE 3	#2	People and Legal Requirements Affecting the EnMS	●●●○	●●●○
	#7	Risks to EnMS Success	●●●○	●●●○
	#16	Documenting the EnMS	●●●○	●●●○
	#20	Monitoring and Measurement of the EnMS	●●●○	●●●○
	#23	Management Review	●●●○	●●●○

2.3.2.11.2 Optional Steps

Although the SMA is optional, it is highly encouraged that it be included as a standard offering to all customers in Core SEM, especially if the customer will continue to the Graduate Pathway.

1. **Self-Management Assessment (SMA):** The SMA is an assessment of the site's ability to manage business practices without the SEM program's support. It is an assessment that helps the program understand if the customer is taking steps towards the Cycle's SMA targets. Although not required in Cycle 1, an SMA is required for entry into the Graduate Pathway's Cycle 4 and it is highly recommended that the SEM Coach conduct the SMA on an annual basis, both to understand the customer's progress as well as to make the SMA at the end of Year 6 less onerous. If the SMA is completed, US DOE's 50001 Ready Self-Management Assessment shall be used.

2. **Customer-Facing EMA and/or SMA:** At the program administrator's and implementation contractor's discretion, the program may provide a customer-facing, facilitated EMA and/or SMA at any time during this Cycle. It is recommended, but not required, that the customer-facing EMA and/or SMA closely match the structure of the required EMA and/or SMA.

2.3.2.11.3 Requirements

- 1. EMA, Year 6 shall be completed before Site-Specific Activity #11- Cycle 3 Completion and Next Steps Support.
- 2. EMA and SMA, Year 6 shall consist of an assessment of the site's existing practices relative to the Navigator tasks introduced in Cycle 1, Cycle 2, and Cycle 3 using US DOE's 50001 Ready Energy Management Assessment and 50001 Ready Self-Management Assessment. Unless the Energy Team plans on using the EMA once the program ends, the SEM Coach shall answer these questions and can optionally engage with the Energy Team to answer the questions.
- 3. The EMA results shall be shared with the Energy Team.
- 4. This activity shall be documented per the requirements below:
  - **General Information:** Including the date, and the individuals leading and participating in the EMA and SMA.
  - **Task and Subtask Score:** The score for each task and subtask included in the EMA and SMA and the scores and dates for that task and subtask in past EMAs or SMAs.
  - **Overall Average Score:** The average score for all tasks included in the EMA and SMA and the average scores on past EMAs and SMAs.
- 5. If offered, optional steps shall be documented per the requirements below.
  - **General Information:** Including the date, and the individuals leading and participating in the EMA and/or SMA.
  - **Process:** A brief overview of the process followed for each optional step offered, including any modifications made.

2.3.2.12 Site-Specific **Activity #11:** Cycle 3 Completion and Next Steps Support

This activity concludes Core SEM and helps the customer review their engagement so they can plan their direction after Year 6.

This activity has two goals: **1)** Help the site understand and summarize their achievements and issues in Cycle 3, and **2)** Help the site create a transition plan once their Core SEM engagement ends.

At this point, the Energy Team should be fully capable of preparing a summary of their achievements through the six-year engagement in the Core SEM. The SEM Coach should focus support on helping the Energy Team think through next steps once the cycle finishes. These next steps can include:

1. Identifying with the Energy Team any issues that arouse during Cycle 3, either technical or management, and identifying potential strategies for addressing them.
2. Discussing with the Energy Team whether or not the customer is a good candidate to continue on to the Graduate Pathway. (I.e., if the customer meets the Graduate Pathway eligibility requirements).
3. If not continuing:
    - **a.** Identifying, with the program administrator, whether there are any resources (technical or financial) available to help implement any opportunities that were identified but not implemented.
    - **b.** Discussing with the Energy Team what next steps the customer might take with their EnMS and helping them identify resources that might help them. Next steps could include completion or advancement of additional Navigator tasks, US DOE 50001 Ready recognition, ISO 50001 Certification, etc.

2.3.2.12.1 Objectives and Targets

Type	Objectives
Programmatic	**1.** The Energy Team and Energy Coach understand and summarize the site's achievements for both EnMS and energy performance in Cycle 3. **2.** The Executive Sponsor understands the site's achievements in Cycle 3 and through the site's six-year engagement in Core SEM. **3.** The Energy Team and Executive Sponsor understand options for continuing to the Graduate Pathway. **4.** The Energy Team and SEM Coach create a plan for the site, either for continuing to develop their EnMS or for maintaining it.

There are **no targets** for this activity. However, the SEM Coach should ensure that, if targets were not met for any Task in EMA, Year 6, those Tasks be summarized as issues for the customer to address, especially if they are planning on participating in the Graduate Pathway in the future.

2.3.2.12.2 Optional Steps

There are **no optional steps** for this activity at this time.

2.3.2.12.3 Requirements

- 1. Cycle 3 Completion and Next Steps Support shall be completed after EMA and SMA, Year 6 and before Educational Module #8- Celebration and Next Steps, Year 6.
- 2. The Energy Coach and Energy Team shall summarize the site's Cycle 3 achievements and meet with the Executive Sponsor to present the site's achievements over Cycle 3 and the past six years.
- 3. The Energy Champion and Energy Coach shall create a plan for the site to continue onto the Graduate Pathway or to exit the SEM Program. This plan shall be included in the Cycle 3 Transition Summary.
- 4. The SEM Coach shall ensure this activity meets the listed objectives.
- 5. This activity must be documented per the requirements below.
  - **General Information:** Including the location, the time, and the date, and the attendees, for any meeting or meetings supporting this activity.
  - **Summary of the Activity:** Including a summary of the type of activity (e.g., workshop, on-line webinar, etc.), attendance, presenters, agenda, key activities, materials provided to the customer.

2.3.3 Cycle 3 Educational Modules

Educational modules provide the necessary information that must be conveyed to the customer in the educational activities. These activities can be provided in a variety of ways, including face-to-face, on-line, or a combination of the two. Cycle 3 includes eight modules. References to Navigator tasks are included to provide context for the PA and SEM Coach; customers are not expected to understand the specific tasks or the Navigator itself. For a complete explanation of what educational modules are and how they are structured, refer to Section 1.2.2.1 Educational Modules.

Connection of educational modules and tasks:

2.3.3.1 Requirements for All Educational Modules

Requirements for all educational modules are:

- 1. Educational modules shall follow the sequence provided within each Cycle. Changes to the sequence are allowed only in special cases and shall be approved by the PA.
- 2. Educational Modules shall be introduced and completed within the Phase specified in the sequence provided within each Cycle. Modules or elements of the module can be repeated through any of the Cycles but shall be introduced at least once in the required Phase.
- 3. The Energy Team Lead or an appropriate Energy Team representative shall attend each module. It is recommended that any site staff who are affected by the content covered in each module attend that module. The SEM Coach shall make a recommendation on which Energy Team members and/or site staff are recommended to attend each module.

- 4. Feedback shall be gathered from the participants and a summary of the module and feedback must be documented as outlined in this document.

- 5. The objectives of the modules can be met through the implementation of multiple educational activities. Those activities can be either on-line or in person, live or pre-recorded/ on-demand, individual or cohort, or a mix of any of these. There is no requirement for a minimum or maximum duration for the educational activities.

- 6. Educational activities shall meet the objectives for the educational module they are supporting.

- 7. Educational module targets are provided as a reference and are not required to be met.

- 8. All educational modules must be documented per the requirements below:

  - **General Information:** Including the name, the location, the time, and the date of the activity and which module it supports.
  - **Attendees:** All attendees, separated by customer attendees, utility attendees, implementation contractor attendees, and other attendees (such as presenters).
  - **Summary of the Activity:** Including a summary of the type of activity (e.g., workshop, on-line webinar, pre-recorded class, etc.), attendance, presenters, agenda, key activities, materials provided to the customers.
  - **Presentations:** Including a summary of the presentations given and key questions asked.
  - **Group Activities:** Including a summary of any group activities conducted during the activity and the outcome of the activities.
  - **Conclusion:** Including a summary of any prizes, incentive payments, or awards handed out during the activity. Also, including any homework or next steps assigned to customers.
  - **Feedback:** A summary of the evaluation of the activity provided by customers, including any specific feedback given. The form must have the activity name on it, the date, and an optional name field for the customer to fill out. Unless a different approach has been agreed to by the PA, the feedback form shall include a rating from 1-5 (five being the best rating) on:

    - Whether the activity met expectations for gaining new information on the topic.
    - Whether the coaches presented information in an effective way.
    - If a workbook was provided, whether the workbook for the session is something the customer will refer to in working with their energy team.
    - Whether the preparation homework for the session helped the customer prepare for the activity and apply new principles at their site.
    - Whether the customer left the activity with specific ideas for how to improve their approach to the SEM program.
    - How the customer would rate their overall experience in the activity.

The feedback shall also include an area for the customer to comment on any item that rated three or lower, to comment on anything they would have liked to have spent more time on, and to provide any comments they would like to add. Providing the feedback form to customers is mandatory. Every effort should be taken to collect feedback although some customers may choose to not submit it.

2.3.3.2 Educational **Module #1:** General Introduction

The goal of this educational module is to give customers an update in the general topics introduced in Cycle 1 and Cycle 2:

1. **Programmatic.** The program itself and its structure through this last cycle, expectations in Cycle 3, the scope of what is included and not included in this cycle, and the resources the program does and does not provide. What the approach to saving energy is in Cycle 3 and how it differs from Cycle 2.
2. **Business Practice.** The approach to the EnMS, what the vision and goal for the EnMS is in this cycle, why it changes, how it will be developed in this cycle, and how the EnMS may be maintained after this cycle.
3. **IDSM.** What the SEM program does or does not support in relation to energy performance metrics beyond efficiency (i.e. IDSM) in this cycle.
4. **GHG Emissions.** How the program does or does not support GHG emission reduction efforts in this cycle.

These topics are part of every educational module and it is important that customers understand the key changes from Cycle 2 to Cycle 3.

2.3.3.2.1 Objectives and targets

Topic	EnMS Related Objectives	GHG Related Objectives	IDSM Related Objectives	Program Related Objectives
General Introduction	What business practices will we be working on in Cycle 3? How do they differ from Cycle 1 and 2?	If we were managing GHG emissions in Cycle 1 and/or 2, how will Cycle 3 help us? If we were not but want to now, can we?	If we were managing various energy-related objectives in Cycle 1 and 2, how will Cycle 3 help us? If we were not but want to now, can we?	What is Cycle 3? How does it differ from Cycle 1 and 2? What are the program expectations in this Cycle? What happens when we complete Cycle 3?

There are **no business practice related targets** for this educational module as the intent is to introduce the customer to the overall structure and approach of Cycle 3.

2.3.3.3 Educational **Module #2:** Planning for Cycle 3

The goal of this educational module is for the customer to develop a plan of action for Cycle 3. The customer should reflect on their SEM program experience thus far, as they have engaged in the program for four years at this point. With an eye on the future, they will consider what has worked, what has not and where they want to go from here, both with their EnMS and their energy saving opportunities. Customers should learn how to review their Cycle 1 and Cycle 2 progress as well as any issues or changes that have developed as they create a plan for meeting their Cycle 2 objectives. ***Related Navigator Tasks introduced in this module are:***

- **Task 23** Management Review

This Task will be covered in more detail in the next educational module but should be discussed in this planning module as it should have been discussed at the kick off meeting and will be an important part of this year's efforts.

Other tasks that should be reviewed and/or improved are:

- **Task 1** An EnMS and Your Organization
- **Task 3** Scope and Boundaries
- **Task 4** Management Commitment
- **Task 5** Energy Policy
- **Task 6** Energy Team and Resources
- **Task 8** Energy Data Collection and Analysis
- **Task 9** Significant Energy Uses (SEUs)
- **Task 10** Improvement Opportunities
- **Task 11** EnPIs and Energy Baselines
- **Task 12** Objectives and Targets
- **Task 13** Action Plans for Continual Improvement
- **Task 14** Competence and Training
- **Task 15** Awareness and Communication
- **Task 17** Operational Controls
- **Task 18** Considerations in Design
- **Task 19** Considerations in Procurement
- **Task 21** Monitoring and Measurement of Energy Performance

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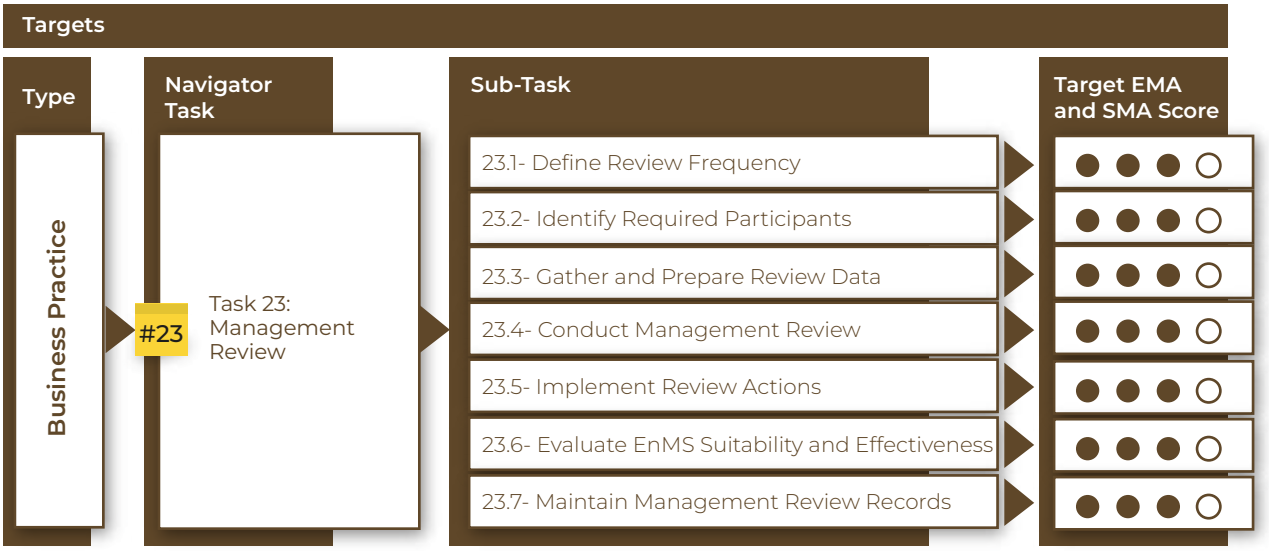
2.3.3.3.1 Objectives and targets

Topic	EnMS Related Objectives	GHG Related Objectives	IDSM Related Objectives	Program Related Objectives
#1 Task 1: EnMS and Your Organization	Have our corporate or site objectives changed? Do any changes affect our EnMS? Should we document any of these objectives?	Are there any changes in our objectives for GHG emissions?	Are there any changes in our goals or objectives for energy-related issues?	What are we planning on doing to manage energy past Cycle 3?
#3 Task 3: Scope and Boundary	Has anything affected our scope and boundary?			Has anything changed in how the program can support us? Do any changes in our scope change how the program supports us?
#4 Task 4: Management Commitment	How will our top management be involved? What actions do they need to take? How do we communicate with them?			
#5 Task 5: Energy Policy	Has anything changed that would change our Energy Policy? Does it capture our objectives for Cycle 3?			
#6 Task 6: Energy Team and Resources	Do we need to change the makeup of our energy team for Cycle 3? Do we need any additional resources to meet Cycle 3 objectives?			What roles does the program expect us to fulfill in Cycle 3? Are they different than in Cycle 2?
#8 Task 8: Data Collection	Has anything changed that would change our Energy Data Collection Plan? Are we collecting the right data at the right time? Do we need to modify the data we collect or the approach we take?			
#9 Task 9: SEUs	Do our SEUs (areas, processes, equipment, etc.) or the criteria we use to select them still apply? Do we need to change them?			
#10 Task 10: Improvement Opportunities	Do we have enough opportunities to meet our objectives in Cycle 3 and beyond? Do we need to identify more opportunities? Should anything change in how we prioritize our opportunities?	Are there new GHG opportunities that we should look for? Are GHG emissions a higher priority in this Cycle than before?	Are there other new opportunities that we should look for? Has their priority or importance changed?	What role does the program play with helping us find or prioritize opportunities? Can the program help find opportunities other than energy efficiency? What types of opportunities do we look for in Cycle 3?
#11 Task 11: EnPIs and Baselines	Are there any new objectives that need metrics? Do we need to modify any existing metrics or baselines for Cycle 3?	Has the format or content for reporting GHG emissions changed? If so, does this change our EnPIs or Baselines?	Are there any changes in how we want to track energy performance? If so, does this affect our EnPIs or baselines beyond consumption?	

#12 Task 12: Objectives and Targets	Do we need to change our EnMS objectives or targets?			Does the program have objectives and targets that we need to meet?
#13 Task 13: Action Plans	What projects do we have approved? Do the projects we have approved to implement in Cycle 3 meet our Cycle 3 objectives? Do those projects have action plans?			Have the resources the program provides to manage or implement projects changed?
#14 Task 14: Competence and Training	Do we need to make any changes to our processes for evaluating if employees have the competencies they need or to the training we are providing?			Have any program resources changed that could help us train employees?
#15 Task 15: Awareness and Communication	Do we need to make any changes or updates to our awareness and communication processes?			
#17 Task 17: Operational Controls	Do we need to make any changes or updates to any of our operating procedures or operational controls?			
#18 Task 18: Energy Considerations in Design	Do we need to make any changes or updates to how our design processes consider energy or GHG emissions?			
#19 Task 19: Energy Considerations in Procurement	Do we need to make any changes or updates to the energy or GHG performance criteria we developed for suppliers or service providers?			
#21 Task 21: Monitoring and Measurement	Does the way we calculate energy performance apply to Cycle 3? Do we need to make any changes?	Does the way we are calculating energy-related GHG emissions meet our internal or external reporting needs?	Are there any changes that would affect if other energy metrics (e.g., demand, time of use, self-generation) we use to calculate our energy performance?	Are there any changes to the way the program calculates our energy performance?
#23 Task 23: Management Review	What should our top management review? How often should they review it?			When does the program need to meet with our top management?

Targets are for EMA and SMA scores for the Tasks and sub-tasks that this module covers. Although the customer should be able to meet these scores after completing this module, the targets are not a requirement. The SEM Coach does not have to conduct either an EMA or SMA at this point, but it is highly recommended that both are updated as the customer completes this module and associated activities.



2.3.3.4 Educational **Module #3:** Risks To Success

This module explores some of the high-level opportunities and risks that could affect the EnMS. The objective of this module is for customers to understand how to identify and act on high-level risks and opportunities.

Tasks introduced in this module are:

- **Task 2** People and Legal Requirements Affecting the EnMS
- **Task 7** Risks to EnMS Success

Related Navigator Tasks introduced in this module are:

- **Task 1** EnMS and your Organization
- **Task 13** Action Plans for Continual Improvement

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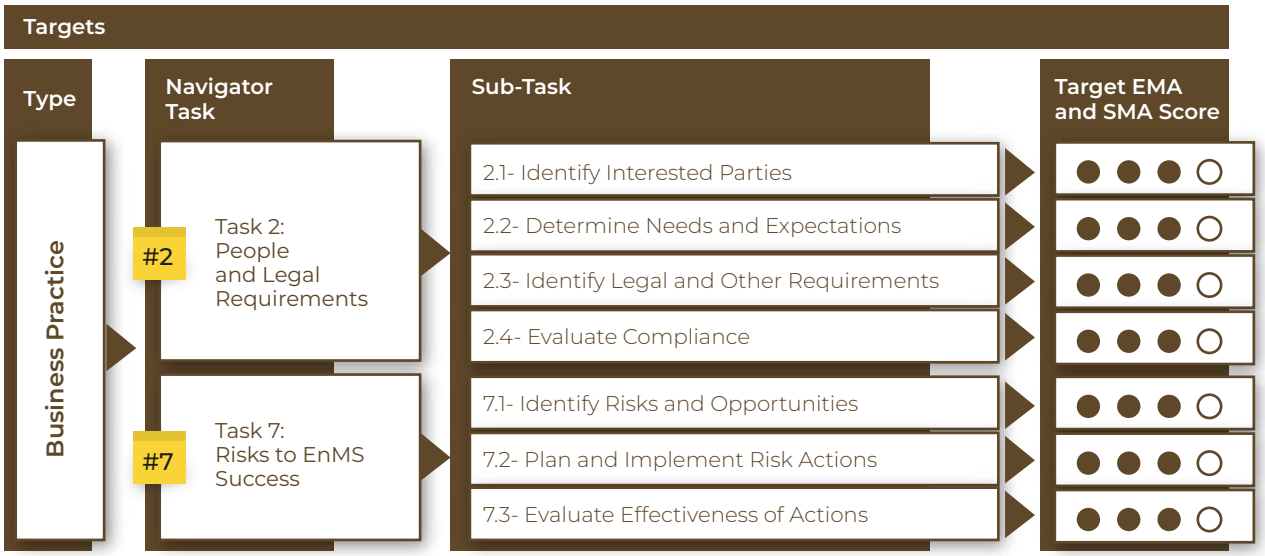
2.3.3.4.1 Objectives and targets

Topic	EnMS Related Objectives	GHG Related Objectives	IDSM Related Objectives	Program Related Objectives
#1 Task 1: EnMS and your Organization	What are the key strategic issues or objectives that we have identified that could affect the EnMS? What are some strategic opportunities that could help us if we act upon them?			
#2 Task 2: People and Legal	Who might have an interest, either internally or externally, in our energy performance, consumption, or energy management activities? Are there legal requirements that we need to meet? Are there voluntary requirements that we need to meet?	Who might have an interest, either internally or externally, in our GHG emissions? Are there legal requirements that we need to meet? Are there voluntary requirements that we need to meet?	Are there internal or external interests or requirements in our energy metrics beyond consumption?	
#7 Task 7: Risks to EnMS	Which risks or opportunities should we act on? Should we document them? Should our management review our list? Should we create action plans for those we plan to act on?	Are there risks or opportunities around our GHG emissions that we want to act on?	Are there risks or opportunities that could affect how we manage energy beyond consumption? Should we act upon them?	Is the SEM program end a risk to us maintaining our EnMS?
#13 Task 13: Action Plans for Continual Improvement	How do we create action plans for strategic risks or opportunities? Do we use the same approach as for energy improvement opportunities or create a different approach? Should we document this approach?	Are there risks or opportunities around our GHG emissions that we want to act on?	Are there risks or opportunities that could affect how we manage energy beyond consumption? Should we act upon them?	Should we create an action plan for maintaining the EnMS after the SEM program ends?

Targets are for EMA and SMA scores for the Tasks and sub-tasks that this module covers. Although the customer should be able to meet these scores after completing this module, the targets are not a requirement. The SEM Coach does not have to conduct either an EMA or SMA at this point, but it is highly recommended that both are updated as the customer completes this module and associated activities.



2.3.3.5 Educational **Module #4:** Leadership Development

The objective of this module is for the customer to understand how to ensure both management and the Energy Team are developed to ensure the long-term success of the EnMS.

Related Navigator Tasks introduced in this module are:

- **Task 23** Management Review

Tasks related to this module are:

- **Task 3** Scope and Boundaries
- **Task 4** Management Commitment
- **Task 5** Energy Policy
- **Task 6** Energy Team and Resources

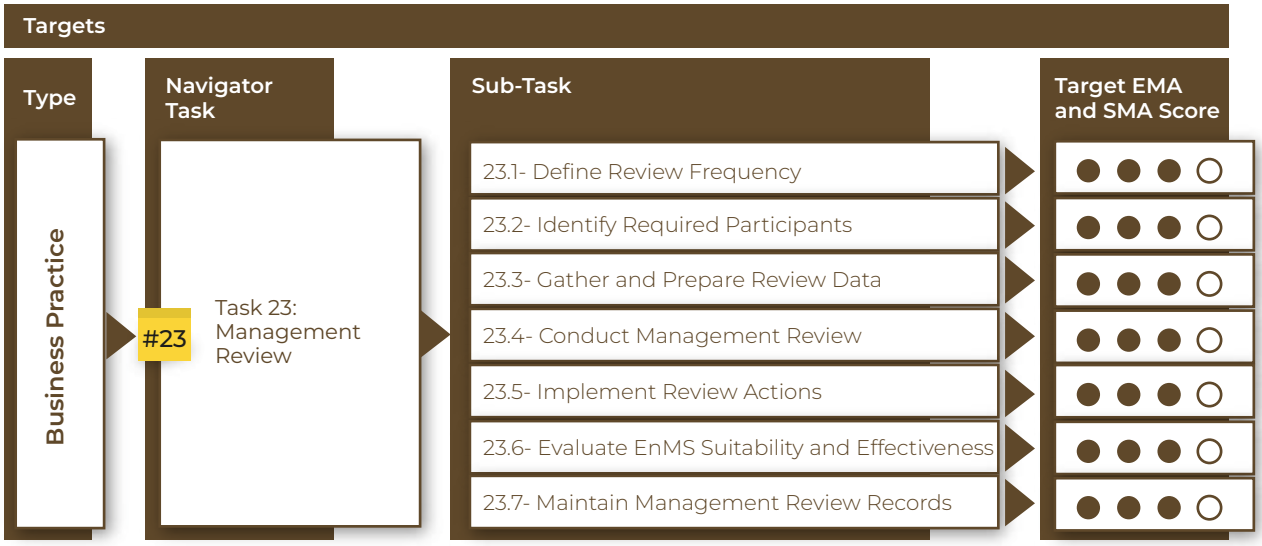
Task 4- Management Commitment and Task 23- Management Review should have been discussed with the Executive Sponsor in the Kick-off Meeting.

3100

2.3.3.5.1 Objectives and targets

Topic	EnMS Related Objectives	GHG Related Objectives	IDSM Related Objectives	Program Related Objectives
#3 Task 3: Scope and Boundaries	Do any strategic issues, risks to the EnMS, or people and legal requirements change our scope and boundary? Have we documented our scope and boundary well enough so it is clear to the team, management, and staff?			
#4 Task 4: Management Commitment	Does our management need to be more involved in order for the EnMS to succeed in the long term? Do we need to make a formal plan for them to understand and approve?			Is our management committed to maintaining the EnMS after the program ends?
#5 Task 5: Energy Policy	Are there items that should be in our energy policy to make sure our EnMS succeeds in the long-term? Should our management review and approve the policy? Who should be aware of the policy?	Should GHG emissions be included in our Energy Policy?	Should we include any specific items that we use to calculate energy performance, beyond consumption, in our policy?	
#6 Task 6: Energy Team and Resources	As we move to maintain our EnMS, who should be on our energy team in the long-term? Do we rotate participation? Should we formally document the Energy Team's role? Other staff's role? What are the resources (financial, human, etc.) that we will need after Cycle 3 completion?	As we move to maintain our EnMS, what level of knowledge do we need on our energy team to allow us to continually manage GHG emissions?	As we move to maintain our EnMS, what level of knowledge do we need on our energy team to allow us to continually manage energy performance beyond energy consumption?	What roles has the program been taking that need to transition to the Energy Team?
#23 Task 23: Management Review	What data or information does our top management need to review? How often? Who prepares it? What feedback do we want?			

Targets are for EMA and SMA scores for the Tasks and sub-tasks that this module covers. Although the customer should be able to meet these scores after completing this module, the targets are not a requirement. The SEM Coach does not have to conduct either an EMA or SMA at this point, but it is highly recommended that both are updated as the customer completes this module and associated activities.



2.3.3.6 Educational **Module #5:** Planning, Year 6

The goals of this educational module are for the customer to review key elements of their EnMS and make any necessary changes for Year 6. In addition, customers should understand how to progress in some key tasks, preparing them to maintain their EnMS once the Core SEM ends. Emphasis on this module is on ensuring customers make their business practices repeatable by creating the internal processes that fit the organization's needs.

The following tasks were introduced earlier in this Cycle and can be reviewed to see if there is additional work needed in year 6:

- **Task 2** People and Legal Requirements
- **Task 7** Risks to EnMS Success
- **Task 23** Management Review

The following tasks were introduced in earlier Cycles and should be reviewed to ensure they are still relevant for year 6.

- **Task 1** An EnMS and Your Organization
- **Task 3** Scope and Boundaries
- **Task 4** Management Commitment
- **Task 5** Energy Policy
- **Task 6** Energy Team and Resources
- **Task 8** Energy Data Collection and Analysis
- **Task 9** Significant Energy Uses (SEUs)
- **Task 10** Improvement Opportunities

- **Task 11** EnPIs and Energy Baselines
- **Task 12** Objectives and Targets
- **Task 13** Action Plans for Continual Improvement
- **Task 14** Competence and Training
- **Task 15** Awareness and Communication
- **Task 17** Operational Controls
- **Task 18** Energy Considerations in Design
- **Task 19** Energy Considerations in Procurement
- **Task 21** Monitoring and Measurement of Energy Performance

2.3.3.6.1 Objectives and targets

Objectives for tasks introduced in earlier Cycles are not listed but are similar to the objectives for Educational Module #2: Planning for Cycle 3.

Topic	EnMS Related Objectives	GHG Related Objectives	IDSM Related Objectives	Program Related Objectives
#2 Task 2: People and Legal Requirements	Have we identified the people and legal requirements that might affect our performance? Do we have a process to review these periodically?			
#7 Task 7: Risks to EnMS Success	Have we identified the risks to our success and a plan to address them? Do we have a process to review the risks or plans periodically?			
#23 Task 23: Management Review	Have we defined the data or information that our management needs to review and the process to ensure it gets prepared? Has our management conducted a management review? Do we have one planned?			

There are **no targets** for this educational module as new business practices are not introduced. However, the SEM Coach should ensure that customers understand that business practices introduced in Year 5 will be reviewed in the site-specific activity related to this educational module.

2.3.3.7 Educational **Module #6:** Employee Engagement, Year 6

The objective of this educational module is to review and enhance the employee engagement processes. Emphasis on this module is on ensuring customers make these business practices repeatable.

Tasks related to this module are:

- **Task 14:** Competence and Training
- **Task 15:** Awareness and Communication
- **Task 18** Considerations in Design
- **Task 19** Considerations in Procurement

2.3.3.7.1 Objectives and targets

Topic	EnMS Related Objectives	GHG Related Objectives	IDSM Related Objectives	Program Related Objectives
#14 Task 14: Competence and Training	Are our competence and training processes working well? Are there improvements we need to make? Are these processes documented?			Have any program resources changed that could help us train employees?
#15 Task 15: Awareness and Communication	Are our awareness and communicatin processes working well? Are there improvements we need to make? Are these processes documented?			
#18 Task 18: Design	What processes can we put in place to make sure that our staff responsible for any design activities consider energy improvement opportunities, process controls, and energy performance?	What processes can we put in place to make sure that our staff responsible for any design activities consider GHG emissions reduction opportunities?	Do our design processes need to consider energy performance beyond energy consumption?	
#19 Task 19: Procurement	Can we modify our procurement processes and criteria for purchases that affect our energy performance? Do our procurement staff have lifecycle criteria for purchases related to energy?	Can we modify our procurement processes and criteria for purchases that affect our GHG emissions? Do our procurement staff have lifecycle criteria for purchases related to GHG emissions?	Do our procurement processes need to consider energy performance beyond energy consumption?	

There are **no targets** for this educational module as new business practices are not introduced. However, the SEM Coach should ensure that Tasks 14, 15, 18, and 19 meet EMA and SMA target scores.

2.3.3.8 Educational **Module #7:** Documentation and Measurement of the EnMS

Documenting the energy management system (EnMS) helps the customer ensure or don´t change its proper functioning over time. The objectives of this educational module are that the customer understands: **1)** How to define what their needs are in terms of documenting the EnMS, and **2)** How to track trends in the performance of their EnMS activities.

Related Navigator Tasks introduced in this module are:

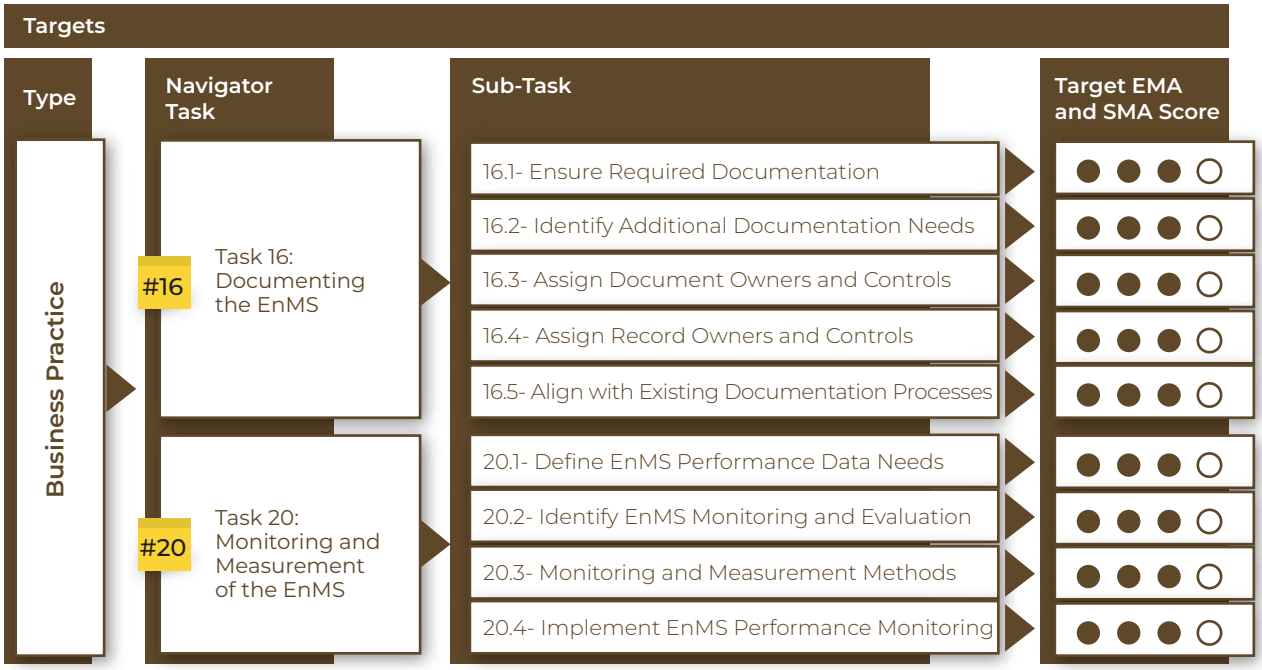
- **Task 16** Documenting the EnMS
- **Task 20** Monitoring and Measurement of the EnMS

As in other educational modules in Cycle 3, the emphasis on ensuring customers make these business practices repeatable after SEM program completion.

2.3.3.8.1 Objectives and targets

Topic	EnMS Related Objectives	GHG Related Objectives	IDSM Related Objectives	Program Related Objectives
#16 Task 16: Documentation	What do we need to document in our EnMS to make sure it lasts? What documents or records do we already have that we can use? How should we control our EnMS documents and records?			
#20 Task 20: Monitoring and Measurement of the EnMS	How do we determine trends in our EnMS activities? Is there data or information we need to evaluate?			How can the EMA be used to monitor and measure progress in the EnMS?

Targets are for EMA and SMA scores for the Tasks and sub-tasks that this module covers. Although the customer should be able to meet these scores after completing this module, the targets are not a requirement. The SEM Coach does not have to conduct either an EMA or SMA at this point, but it is highly recommended that both are updated as the customer completes this module.



2.3.3.9 Educational **Module #8:** Celebration and Next Steps, Year 6

The objective of this module is to recognize the customers' accomplishments and generate enthusiasm for maintaining their EnMS after completing Core SEM, including deciding whether or not to continue to the Graduate Pathway. Customers have worked hard for two years; this module provides a forum for their peers to recognize the work they have done and hear what they have planned for the future.

The SEM Coach must ensure each Energy Team Lead prepares a brief presentation explaining the story and outcomes through their engagement with the SEM program and their plans once they complete Core SEM. This should be a similar presentation as that given to their Executive Sponsor. Customers should receive a certificate of accomplishment for their completion of the Cycle and Core SEM.

2.3.3.9.1 Objectives and targets

Topic	EnMS Related Objectives	GHG Related Objectives	IDSM Related Objectives	Program Related Objectives
Review of past 6 years	What have we achieved the past 6 years? In this Cycle? How do we present our progress to top management and to employees? What do we want to improve on or achieve after we finish Core SEM?			"Do we want to continue to the Graduate Pathway? If not: What happens after Cycle 3 finishes? What happens to projects that are identified but have not been implemented? Are there any resources, technical or educational, available after Cycle 3 finishes?

There are **no targets** for this educational module. However, the SEM Coach should ensure that customers understand that all business practices introduced in the Core SEM Program will be reviewed in the site-specific activity related to this educational module, especially if the customer decides to continue on to the Graduate Pathway.

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GRADUATE PATHWAY

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3 Graduate Pathway Guidance

3.1 Cycle 4

3.1.1 Cycle 4 Overview

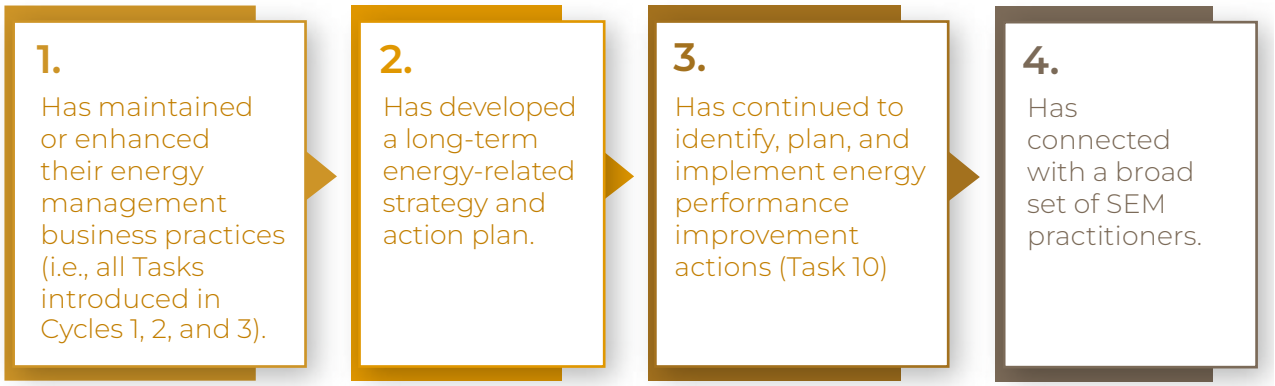
In Core SEM, customers save energy by developing and enhancing their energy management business practices. In the Graduate Pathway, customers will have an opportunity to continue to save energy by developing long-term energy strategies that support overarching business objectives.

There is a significant shift in approach from Core SEM to the Graduate Pathway, and it is important that customers understand and commit to the Cycle 4 structure, approach, goals, targets and expectations. This includes an understanding of the requirements to continue to a potential Cycle 5.

3.1.1.1 Cycle 4 Goals and Objectives

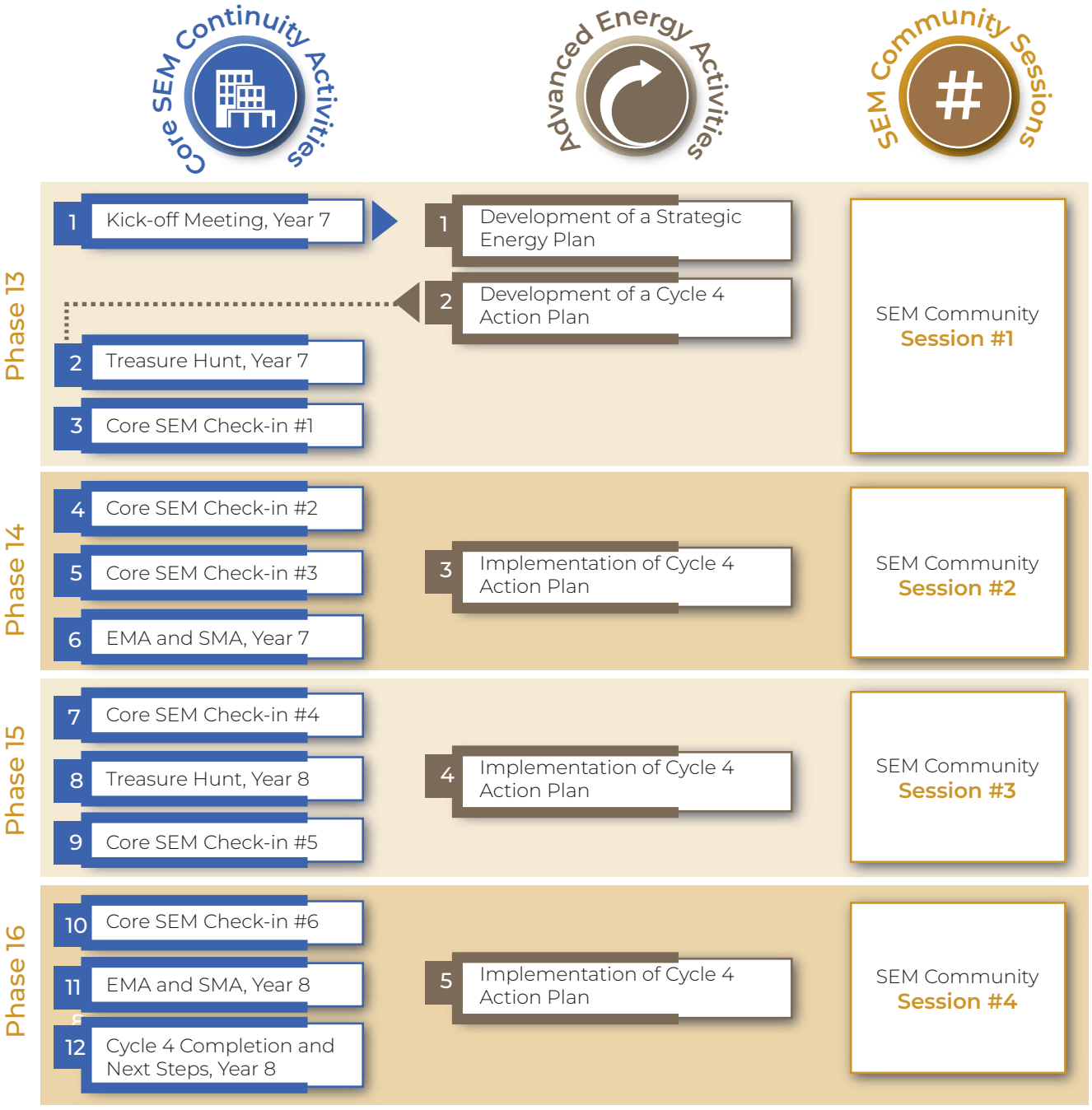
The goal for Cycle 4 is that customers better align their energy management business practices with long-term company objectives while expanding their SEM peer network.

In practice, this means that the participant:



3.1.1.2 Cycle 4 Sequence

Cycle 4 activities are scheduled by Phase, with the first of all activities being the Kick-off Meeting. The sequencing of activities within each phase is not critical, meaning that there is flexibility in how the activities are sequenced within a Phase. The only exceptions are that: **1)** The Kick-off Meeting should supersede all activities to ensure the customer understands the structure and requirements of Cycle 4 and **2)** The Treasure Hunt in Year 7 take place after the customer has developed a Strategic Energy Plan, and a Cycle 4 Action Plan.



3.1.1.3 Cycle 4 Targets

As mentioned earlier, the goal for Cycle 4 is that the customer better align their Core SEM business practices with their organization's long-term objectives while expanding their SEM peer network. Activities are designed to support that goal and through the activities outlined above, a customer should (but is not required to):

Targets

1. Maintain a score of at least 3.0 on all Core SEM tasks on the EMA and SMA.
2. Develop a long-term strategic plan for energy that aligns with an organizational objective.
3. Identify opportunities to meet short-term and long-term targets.
4. Attend four SEM Community sessions.

3.1.1.4 Cycle 4 Eligibility Requirements

To participate in Cycle 4, customers must have completed the three Core SEM cycles and meet the following requirements:

- Achieve a score of at least 2.4 (80% of an average score of 3) on the EMA and SMA across the 22 Navigator tasks introduced in the Core SEM Cycles. Participants must meet the 2.4 average on each assessment separately (i.e., meeting or surpassing the requirement on one assessment does not offset a shortfall on the other).
- If an SMA has not been conducted for this customer, one must be done prior to the beginning of Cycle 4.

Participants who fall below the 2.4 threshold on either assessment may be eligible for entry into Cycle 4 subject to the following provisions:

- The participant's SEM Coach can recommend provisional entry based on the customer's commitment to meet the 2.4 EMA and SMA thresholds and with the customer's understanding that savings cannot be claimed unless the thresholds are met.
- The PA's approval is documented in the participant's Year 7 Kick-off Meeting Summary.
- The participant claims savings in Year 7 only if the EMA and SMA thresholds are met.

3.1.1.5 Potential Requirements to Continue Beyond Cycle 4

Core SEM Continuity Activities are site-specific activities that help customers maintain the momentum built in Core SEM.

Although SEM program activities beyond Cycle 4 are not yet defined, potential eligibility requirements are included to prepare both the participant and the implementation contractor should a Cycle 5 be included in the future. Requirements that customers must meet in order to continue beyond Cycle 4 are:

1. Maintain EMA and SMA scores at or above 2.4 for Tasks introduced in Core SEM.
2. Participation in at least two SEM Community Sessions during Cycle 4.
3. Development of a Strategic Energy Plan during Cycle 4.

3.1.2 Core SEM Continuity Activities

Core SEM Continuity Activities help customers maintain the business practices they developed during Core SEM, help them identify new energy performance improvement opportunities, and help them implement already identified opportunities. These activities include:

- A kick-off meeting to launch Graduate Pathway efforts.
- Quarterly check-ins with the SEM Coach.
- Identification of energy performance improvement opportunities (i.e., Treasure Hunts).
- Annual EMA and SMA assessments.
- A next-steps meeting to review Cycle 4 progress and plan future efforts.

3.1.2.1 Kick-off Meeting, Year 7

The Kick-off Meeting is the site's initial engagement with the Graduate Pathway. The meeting gives the SEM Coach, Energy Team, and the Executive Sponsor the opportunity to align on Cycle 4 goals, roles, and approach. It sets expectations and lays the foundation for the facility's effective participation in the Graduate Pathway.

If the customer had provisional conditions for entering Cycle 4 (i.e., score below 2.4 on either the SMA or EMA), those provisions should be reviewed and discussed at the Kick-off Meeting.

The meeting has multiple purposes:

1. Introducing the Executive Sponsor and Energy Team Lead to the requirements, options and objectives of Cycle 4, and ensuring they understand the differences between Core SEM and the Graduate Pathway.
2. Articulating the customer's commitment to this cycle, including the resources and goals the customer will commit in order to meet the cycle's objectives.
3. Articulating the activities the customer will participate in.
4. Reviewing the organization´s long-term objectives and choosing an approach for their Strategic Energy Plan.
5. Reviewing provisions, where applicable, to the customer's participation in Cycle 4.

The Kick-off Meeting should be held in-person where possible.

3.1.2.1.1 Objectives

Type	Objectives
Programmatic	**1.** Executive Sponsor and Energy Team understand: **a.** The Cycle 4 objectives, expectations, roles, activities, and requirements for the site's participation in the Graduate Pathway. **b.** Any provisions to the customer's participation in Cycle 4. **c.** Any changes in the roles of the SEM Coach, PA, and Utility Account Executive (where applicable). **d.** Any changes in the expected roles of the Energy Team or Executive Sponsor. **e.** The site's options and responsibilities after Cycle 4 finishes. **2.** The Energy Team and SEM Coach: **a.** Review the organization´s long-term objectives and choose an approach for the Strategic Energy Plan. **b.** Review the year's SEM Community sessions and, if possible at this meeting, choose which sessions to attend. **c.** Review the site's EMA and SMA scores and discuss if there are any current or potential changes to the site's scores. **d.** Review the site´s opportunity register, energy performance improvement action plans for Year 7, and, discuss a possible approach for the Treasure Hunt in Year 7. **e.** Agree to the cadence of check-ins and decide if meetings are needed more frequently than the Cycle 4 sequence shows.

There are **no targets** for this activity at this time.

3.1.2.1.2 Requirements

- 1. The Kick-off Meeting shall be held prior to any other Cycle 4 activity.
- 2. The meeting shall include at least:
  - **From the Program:** The SEM Coach. The Utility Account Executive, where applicable, is optional but highly recommended.
  - **From the Customer:** The Executive Sponsor and Energy Team Lead. The Energy Team is optional but highly recommended.
- 3. The meeting can be held in multiple parts, for example one meeting with the Executive Sponsor and the Energy Team Lead to discuss high-level activities and another with the Energy Team to discuss plans for Cycle 4.
- 4. The meeting shall be held with only one organization (i.e. not with other facilities from different companies in the same cohort). Multiple participants from the same organization are allowed if they can benefit from a single meeting.
- 5. Where possible, the meeting(s) shall be held in person.
- 6. The SEM Coach shall ensure the meeting(s) meets the listed objectives and targets.

- 7. The meeting shall be summarized and documented per the requirements below:
  - **General Information:** Including the location, the date, and the attendees of the Kick-off Meeting.
  - **Agenda:** Include the agenda of the meeting and any notes (e.g., any topics that were not discussed or additional topics that were covered, any issues that were highlighted, etc.).
  - **Recommended Next Steps:** If any, recommendations on next steps the program should take with this customer. Include details on any provisions, where applicable, to the customer's entry into Cycle 4, including the PAs approval.

3.1.2.2 Treasure Hunt, Year 7 and Treasure Hunt, Year 8

Treasure Hunts in Cycle 4, similar to those in Core SEM, are meant to identify energy performance improvement opportunities. However, in Cycle 4 the goal of the Treasure Hunts changes.

The intent of the Treasure Hunts over the Core SEM six years was to build a comprehensive, facility-wide view of energy-saving opportunities from a full systems perspective. While each individual Treasure Hunt did not need to address every aspect, together over time they should have encompassed opportunities related to system set points, operating practices and processes, process controls, maintenance procedures, equipment upgrades, and more. In addition, IDSM (e.g., distributed generation, storage, demand response, time-of-use, peak demand reduction, etc.) opportunities and GHG reduction opportunities should have been included in those Treasure Hunts.

Treasure Hunts in Cycle 4 should ensure that the opportunities presented to the customer, and documented in the opportunity register, include a systems perspective and that both IDSM and GHG emissions reduction opportunities are well documented and actionable. In addition, these Treasure Hunts should focus on supporting the customer's Strategic Enery Plan. For this reason, it is recommended that the Treasure Hunt, Year 7 be held after the customer develops their plans.

Treasure Hunt, Year 7 is required and Treasure Hunt, Year 8 is optional only if sufficient energy performance improvement opportunities have been identified and documented, in the Opportunity Register, to meet or exceed energy performance targets for at least the next two years and to meet any targets set in the Strategic Energy Plan.

3.1.2.2.1 Objectives

Type	Objectives
Business Practice	**The Energy Team and SEM Coach:** **1.** Identify energy savings opportunities, focusing on areas, systems, or opportunity types not identified in Core SEM, as well as opportunities that support any other Cycle 4 activities (i.e., Strategic Energy Plan). **2.** Identify IDSM and GHG emissions reduction opportunities. This includes calculating energy and/or GHG emissions reductions from these opportunities. **3.** Quantify potential savings for each opportunity. **4.** Document the site´s opportunities using the Opportunity Register. **5.** Prioritize the identified opportunities.

There are **no targets** for this activity at this time.

3.1.2.2.2 Requirements

- 1. Treasure Hunt, Year 7 shall take place after completion of the Kick-off Meeting and should take place after the completion of the Strategic Energy Plan.
- 2. Treasure Hunt, Year 7 and Treasure Hunt, Year 8 (if held), shall be attended by the Energy Team Lead and any appropriate Energy Team members and site staff.
- 3. The SEM Coach shall ensure the Treasure Hunt meets the listed objectives and requirements.
- 4. All opportunities resulting from the Treasure Hunt must be documented in the Opportunity Register. If Demand Response (DR) protocols have been included in the opportunities and these include time of day savings potential (if executed), these DR protocols should be reviewed and updated where applicable.
- 5. The Coach must ensure that capital projects identified be documented in accordance with any additional PA requirements, which may require documentation outside of the opportunity register. Opportunity Register requirements are provided in the M&V Guide.
- 6. The Energy Star Treasure Hunt Guide[24] or a similar guide shall provide additional guidance for conducting a Treasure Hunt.
- 7. Treasure Hunt, Year 7 and Treasure Hunt, Year 8 (if held) shall be documented in the Treasure Hunt Summary per the requirements below.
  - **General Information:** Including the location, the date, and the attendees (including any guests and implementation contractor technical support).
  - **Process:** A summary of the process followed during the Treasure Hunt, including how IDSM and GHG emissions reduction opportunities were identified.
  - **Next Steps:** This section will highlight next steps relative to the Treasure Hunt. For example, if another Treasure Hunt is necessary in order to identify projects to meet the cycle's goals, or if the customer will need support in developing action plans for new opportunities.

3.1.2.3 Core SEM Check-in #1 through #6

Core SEM Check-ins are quarterly opportunities for the Energy Team and the SEM Coach to review the site's progress in implementing energy performance improvement opportunities and in maintaining the site's ability to manage energy. These check-ins provide the SEM Coach an opportunity to provide support for both of these topics, and provide an opportunity to offer any needed support for Cycle 4 activities. Although required at least quarterly, these check-ins can happen more frequently where needed. In addition to these check-ins, the SEM Coach should be available to participants for support when the site has questions or when any issues, such as Energy Team turnover, arise.

[24] https://www.energystar.gov/industrial_plants/treasure_hunt

3.1.2.3.1 Objectives

Type	Objectives
Programmatic	**The Energy Team and SEM Coach:** **1.** Review any provisions that were set for participation in Cycle 4. **2.** Discuss progress on any other Cycle 4 activities (e.g., participation in SEM Community sessions).
Business Practice	**The Energy Team and SEM Coach:** **1.** Review any changes in the organization to see if any business practices need to be updated or if changes need to be made to the EMA or SMA scores. **2.** Review progress on the implementation of energy performance improvement opportunities and their associated action plans. This includes both IDSM and GHG emissions reductions opportunities. **3.** For Year 8, determine if a Treasure Hunt is needed and what the focus of the Treasure Hunt will be. **4.** As needed, provide support for questions or issues.

3.1.2.3.2 Requirements

- 1. The Core SEM Check-ins shall include at least:
  - **From the Program:** the SEM Coach. The Utility Account Executive, where applicable, is optional.
  - **From the Customer:** The Energy Team Lead.
- 2. The Check-ins shall take place at least quarterly.
- 3. The Check-ins shall be held with only one organization (i.e. not with other facilities from different companies in the same cohort). Multiple participants from the same organization are allowed if they can benefit from a single meeting.
- 4. SMA and EMA scores should be checked and updated during check-ins.
- 5. The SEM Coach shall ensure the Check-ins meet the listed objectives and targets.
- 6. The Check-ins shall be summarized and documented per the requirements below:
  - **General Information:** Including the location, the date, and the attendees of the Kick-off Meeting.
  - **Agenda:** Include the agenda of the meeting and any notes (e.g., any topics that were not discussed or additional topics that were covered, any issues that were highlighted, etc.).
  - **Recommended Next Steps:** If any, recommendations on next steps the program should take with this customer.

3.1.2.4 EMA and SMA, Years 7 and 8

The EMA and SMA assessments provide an evaluation of the site's energy management practices. They together provide a measure of the customer's progress on their business practices, from the SEM Coach's perspective, compared to program targets.

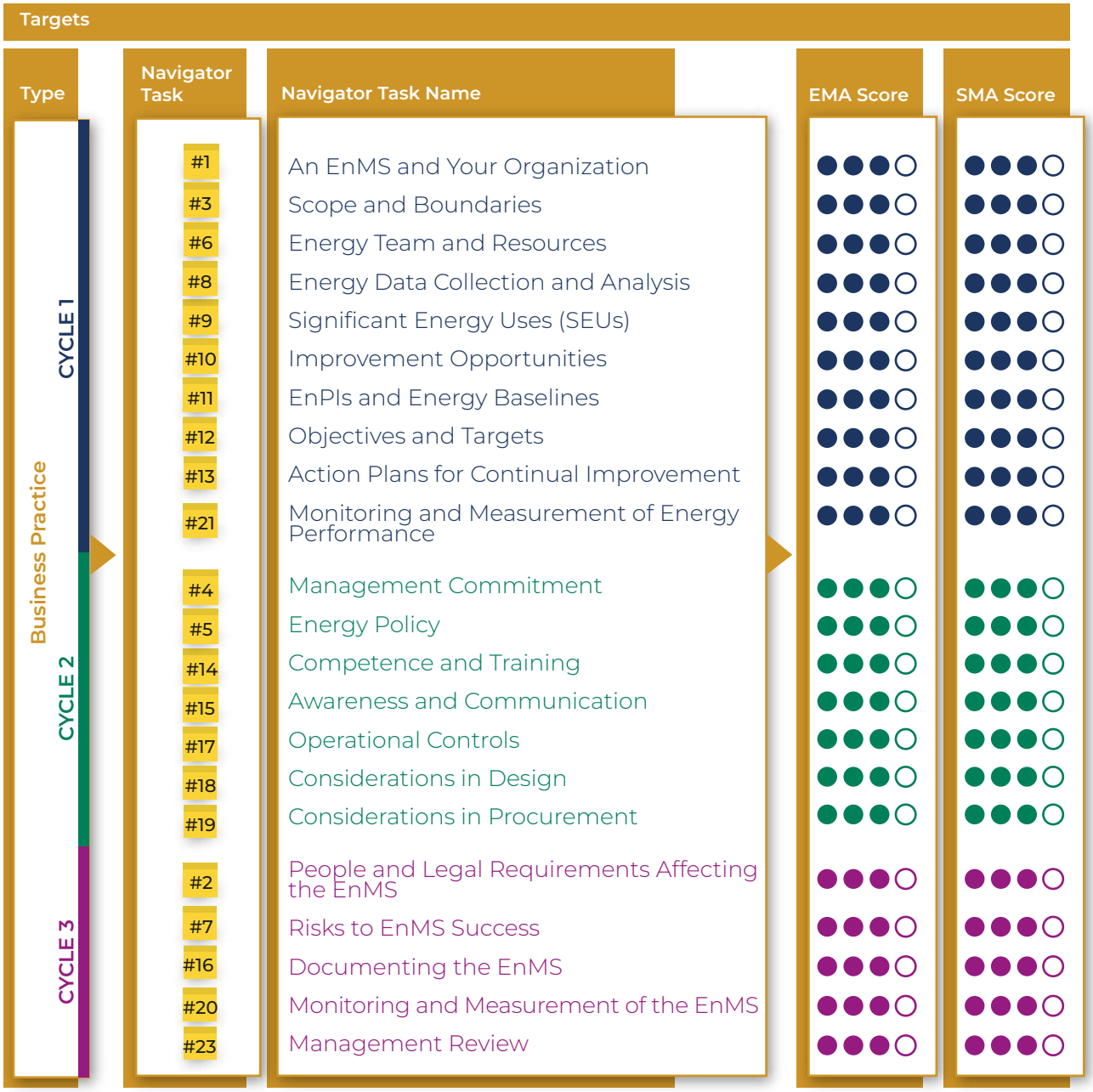
The goal of the EMA and SMA in the Graduate Pathway is to provide the program an assessment of the site's continued ability to sustain the energy management practices introduced in Core SEM. The EMA and SMA shall consist of an assessment using the 50001 Ready Energy Management Assessment and the 50001 Ready Self-Management Assessment.

Tasks assessed in the Year 6 EMA or any previous SMAs do not need to be assessed again unless the SEM Coach knows there is a change to the customer's ability to implement those business practices or if a Task was not included in previous EMAs or SMAs.

3.1.2.4.1 Objectives

Type	Objectives
Programmatic	**The Energy Team and SEM Coach:** **1.** Identify and update any changes to EMA or SMA scores on all tasks introduced in Core SEM.

Targets for EMAs and SMAs conducted in the Graduate Pathway are an average score of 3 on all tasks introduced in Core SEM.



3.1.2.4.2 Requirements

- 1. The EMA and SMA shall consist of an assessment of the site's existing practices relative to the Navigator tasks introduced in Core SEM using US DOE's 50001 Ready Energy Management Assessment and 50001 Ready Self-Management Assessment. The SEM Coach shall fill out these assessments and can optionally engage with the Energy Team or Energy Team Lead.

- 2. The SEM Coach shall ensure the EMA and SMA meet the listed objectives.

- 3. The EMA and SMA results shall be documented in the EMA Summary per the requirements below:
  - **General Information:** Including the date, and the individuals conducting or participating in the EMA and SMA.
  - **Task and Subtask Score:** The score for each task and subtask included in the EMA and SMA, and the scores and dates for that task and subtask in past EMAs and SMAs.
  - **Overall Average Percentage Score:** The average score for all tasks included in the EMA and SMA, and the average scores on past EMAs and SMAs.

3.1.2.5 Cycle 4 Completion and Next Steps, Year 8

Cycle 4 Completion and Next Steps helps the customer review their progress, successes, and challenges from participating in Cycle 4. It helps the facility decide what steps they will take after completing Cycle 4.

This activity has two goals: **1)** Help the site understand and summarize their achievements and issues throughout their involvement in Cycle 4, and **2)** Help the site put together a plan for what steps they will take upon the completion of Cycle 4. Achievements and issues should be presented to the Executive Sponsor along with a recommended plan of action for the site to maintain their energy management business practices after Cycle 4.

3.1.2.5.1 Objectives

Type	Objectives
Programmatic	**1.** The Energy Team and SEM Coach understand and summarize the site's achievements and issues for energy performance, energy management business practices, and any Advanced Energy activities. **2.** The Executive Sponsor understands the site's achievements and issues. **3.** The Energy Team develops a plan for maintaining their business practices and implementing energy performance improvement actions after the completion of Cycle 4.

There are **no targets** for this activity. However, the SEM Coach should ensure that, if targets were not met for any Task in the EMA or SMA, those Tasks be summarized as issues for the customer to address, especially if they are planning on participating in future Graduate Pathway activities.

3.1.2.5.2 Requirements

- 1. Cycle 4 Completion and Next Steps shall be completed after the EMA and SMA, Year 8.
- 2. The Energy Coach and Energy Team Lead shall summarize the site's achievements and issues in Cycle 4 and meet with the Executive Sponsor to present the site's achievements.
- 3. The SEM Coach shall ensure this activity meets the listed objectives.

- 4. The Energy Coach shall document this activity per the requirements below:

  - **General Information:** Including the location, the time, and the date, and the attendees.
  - **Key achievements:** The site's key achievements in Cycle 4, including results and achievements in Advanced Energy Activities and SEM Community Activities.
  - **Cycle Decision:** The site's decision on whether to continue with the next cycle of the SEM program (if one is available), who made or communicated the decision and key reasons for that decision.
  - **Conditions to Advancing:** If the customer is continuing to the next cycle, the conditions, if any, the program (SEM Coach or PA) is putting on the customer's continuation in the program.
  - **Key issues:** Any key issues the Energy Team and SEM Coach identified that could affect the site's ability to manage energy, whether or not the site is advancing to the next cycle (if one is available).
  - **Next steps:** For facilities that are not continuing on the SEM program:

    - **Improvement Opportunities:** A summary of what will happen with the major improvement opportunities that have not yet been implemented, the resources or programs that will support the site, etc.
    - **EnMS:** A summary of what the site plans to do with their EnMS (e.g. maintain with internal resources, not maintain, hire external resources to help improve, seek ISO 50001 certification, etc.).

3.1.3 Advanced Energy Activities

Advanced Energy Activities help customers create long-term energy strategies and plans that support their facility or organization's long-term objectives. These activities help customers define long-term strategies as well as actionable short-term steps. The activities include:

1. The development of a Strategic Energy Plan that links energy to the customer's organizational objectives (e.g., GHG emissions reduction objectives or long-term capital planning).
2. The development of a Cycle 4 Action Plan that supports the Strategic Energy Plan.
3. Support in the implementation of the Cycle 4 Action Plan.

3.1.3.1 Development of a Strategic Energy Plan

The Strategic Energy Plan helps the customer document a long-term (i.e., five or more years) approach that aligns energy with key facility or organizational long-term objectives. The Energy Team develops the plan with support from the SEM Coach and presents the plan to the Executive Sponsor for review and approval.

This activity can be implemented either in a group environment or with an individual facility as long as the objectives and requirements are met. It can also be done as a series of education and/or work sessions depending on the complexity of the customer's facility and the objectives chosen.

The plan should document:

- **The organizational objectives that the plan is supporting.** These objectives can include long-term: GHG emissions reductions, capital planning, net-zero objectives, etc. These objectives should have been identified as part of Task 1: An EnMS and Your Organization.

- **A snapshot of the facility's current status relative to the organizational objective.** For example, if GHG emissions reductions are the organization's key objective, the snapshot for GHG emissions would be the previous year's energy-related GHG emissions (even though the baseline may be another year).

- **A gap or risk assessment of the organizational practices that should be improved or modified.** For example, the Task 23: Management Review, may need to be updated to include an annual review of the long-term energy plan and Task 10: Improvement Opportunities may need to be updated to include opportunities that are more closely aligned with the objectives (e.g., opportunities focused on GHG reductions).

- **Management Commitment.** The support that management is providing for the plan including the resources (staff and financial) that may be allotted for this effort and the expectations for management. For example, the date that management reviewed and/or approved the plan, the annual budget allocated, etc.

3.1.3.1.1 Objectives

Type	Objectives
Business Practice	**The Energy Team:** **1.** Develops and documents a Strategic Energy Plan. **2.** Presents the plan to the Executive Sponsor and receives approval to develop a Cycle 4 Action Plan.

There are **no targets** for this activity at this time.

3.1.3.1.2 Requirements

- 1. Development of a Strategic Energy Plan shall take place after the Kick-off Meeting, Year 7 and before Treasure Hunt, Year 7. This activity should take place early in Phase 13.

- 2. Development of a Strategic Energy Plan shall be supported by the appropriate Energy Team members and site staff.

- 3. The SEM Coach shall ensure the activity meets the listed objectives.

- 4. This activity must be documented per the requirements below:

  - **General Information:** Including the location, the time, and the date, and the attendees, for any meeting or meetings supporting this activity.
  - **Summary of the Activity:** Including a summary of the type of activity (e.g., workshop, on-line webinar, etc.), presenters, agenda, key activities, summary of materials provided to the customer.
  - **Next Steps:** Including any items in the plan that were not completed, key items that need to be followed up on, etc.
  - **A copy of the customer's strategic plan:** Including organizational objectives targeted by the customer, the facility's current status to those objectives, a gap analysis of the organizational practices to change or improve, and a summary of the management commitment.

3.1.3.2 Development of a Cycle 4 Action Plan

Development of a Cycle 4 Action Plan helps customers define the actions that need to be implemented in Cycle 4 (i.e., Years 7 and 8) to support the long-term Strategic Energy Plan. This activity helps customers think through and document the technical and organizational details to ensure the strategic plan is successful.

Similar to the Strategic Energy Plan, the Cycle 4 Action Plan can be implemented either in a group environment or with an individual facility as long as the objectives and requirements are met. It can also be done as a series of education and/or work sessions depending on the complexity of the customer's facility and the objectives chosen.

The plan should document:

- Targets for the two-year period (i.e., Year 7 and Year 8).
- Energy performance improvement opportunities that the customer intends to implement in the two years to meet those targets.
- Organizational practices to improve or modify in the two years.
- Milestones, timelines, and responsible parties for any key actions that support the Strategic Energy Plan.

3.1.3.2.1 Objectives

Type	Objectives
Business Practice	**The Energy Team:** **1.** Develops and documents a Cycle 4 Action Plan. **2.** Presents the plan to the Executive Sponsor and receives approval to implement it.

There are **no targets** for this activity at this time.

3.1.3.2.2 Requirements

- 1. Development of a Cycle 4 Action Plan shall take place after the Development of a Strategic Energy Plan and before Treasure Hunt, Year 7.
- 2. Development of a Cycle 4 Action Plan shall be supported by the appropriate Energy Team members and site staff.
- 3. The SEM Coach shall ensure the activity meets the listed objectives.
- 4. This activity must be documented per the requirements below:
  - **General Information:** Including the location, the time, and the date, and the attendees, for any meetings supporting this activity.
  - **Summary of the Activity:** Including a summary of the type of activity (e.g., workshop, on-line webinar, etc.), presenters, agenda, key activities, summary of materials provided to the customer.

- **Next Steps:** Including any items in the plan that were not completed, key items that need to be followed up on, etc.
- **A copy of the customer's Cycle 4 Action Plan:** Including targets for year 7 and 8, energy performance improvement opportunities to implement, organizational practices to improve or modify, and key milestones, timeline, etc.

3.1.3.3 Implementation of Cycle 4 Action Plan

Implementation of Cycle 4 Action Plan helps customers implement the action plan. The SEM Coach should help ensure the customer is on track to meet any targets set. This activity should be coordinated with the following SEM Continuity activities: **1)** Core SEM Check-ins, and **2)** Treasure Hunts.

This activity should be conducted with an individual organization and should include:

- Reviews of key milestones from the action plan.
- Identification of issues relative to implementing the action plan.
- The identification and documentation (i.e., Treasure Hunts Year 7 and 8) of energy performance improvement actions (EPIAs) to support the Cycle 4 Action Plan.
- Help in the implementation of EPIAs that support the Cycle 4 Action Plan.
- Help in the modification or improvement of business practices that support the Cycle 4 Action Plan.

3.1.3.3.1 Objectives

Type	Objectives
Business Practice	**The Energy Team:** **1.** Reviews key milestones from the Cycle 4 Action Plan. **2.** Identifies issues relative to implementing the Cycle 4 Action Plan. **3.** Identifies and documents EPIAs to support the Cycle 4 Action Plan. **4.** Implements EPIAs that support the Cycle 4 Action Plan. **5.** Modifies or improves business practices that support the Cycle 4 Action Plan.

There are **no targets** for this activity at this time.

3.1.3.3.2 Requirements

- 1. Implementation of Cycle 4 Action Plan shall be held after the Development of a Cycle 4 Action Plan.
- 2. Implementation of Cycle 4 Action Plan support can be a combination of activities and can be combined with SEM Continuity activities (i.e., Core SEM Check-ins and Treasure Hunts) where applicable.
- 3. The activity (or activities) shall be held with only one organization (i.e. not with other facilities from different companies in the same cohort). Multiple participants from the same organization are allowed if they can benefit from conducting this activity together.

- **4.** The SEM Coach shall ensure the activity meets the listed objectives and targets.
- **5.** This activity does not need to be documented separately but shall be summarized and documented in the Cycle 4 Completion and Next Steps, Year 8 activity.

3.1.4 SEM Community Sessions

3.1.4.1 SEM Community Session #1, 2, 3, and 4

SEM Community Sessions help customers connect with other SEM Program participants, expanding their SEM peer network. SEM Community Sessions should be structured to give customers the opportunity to both learn from experts and get to know each other. Depending on the topic, these sessions can be open for SEM Program participants that are not in the Graduate Pathway, per implementation contractor and/or PA discretion. Participants should also be given an opportunity to share their expertise on the session's topic where applicable.

These sessions are meant to expand the participant's network and implementation contractors should aim to bring together participants that have not yet met through previous Core SEM activities. SEM Community Sessions should be offered at least twice per year and should vary in content and approach so that participants continue to attend. It is recommended that at least one session per Cycle be in person.

Where possible, the SEM Community Sessions should support Advanced Energy Activities. For example, topics for SEM Community sessions could include discussions on technologies that could inform a large number of customer's Strategic Energy Plans.

Sessions should be defined on an annual basis to give customers time to plan their attendance.

Optional Steps:

1. Sharing with Core SEM Participants. Although not required, an effort should be made to allow participants to share experiences with Core SEM participants, either through case studies or through presentations (live or recorded), sharing the participant's experience in either Core SEM or the Graduate Pathway.

3.1.4.1.1 Objectives

Type	Objectives
Business Practice	**Participants:** **1.** Meet other Graduate Pathway participants. **2.** Share expertise on topics. **3.** Where possible, learn about topics that could support their Advanced Energy strategic plans.

There are **no targets** for this activity at this time.

3.1.4.1.2 Requirements

- 1. SEM Community Sessions shall be held at least twice per year. It is recommended that at least one per Cycle be in person.

- 2. Implementation contractors shall develop an annual plan of the sessions to share with participants.

- 3. SEM Community Sessions shall be documented per the requirements below:

  - **General Information:** Including the name, the location, the time, and the date of the session.
  - **Attendees:** All attendees, separated by customer attendees, utility attendees, implementation contractor attendees, and other attendees (such as presenters)
  - **Summary of the Activity:** Including a summary of the type of activity (e.g., workshop, on-line webinar, pre-recorded, etc.), attendance, presenters, agenda, key activities, materials provided to the customers.
  - **Presentations:** Including a summary of the presentations given.
  - **Networking Activities:** Including a summary of any networking activities conducted during the session and the outcome of the activities.

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4. Annex

4.1 Acknowledgements

The authors would like to thank the staff of the California Public Utilities Commission, Pacific Gas and Electric, San Diego Gas and Electric, Southern California Gas, Southern California Edison, and Marin Clean Energy, who provided their expertise and knowledge and made available their contractors' time to support the revision of this Design Guide. Contractors from DNV, Cascade Energy, CLEAResult, kW Engineering, Leidos, EPS, Stillwater Energy, and Jay Luboff Consulting, among others, shared their experience and insights in implementing SEM programs in California and other regions to make this a better document.

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4.2 EnMS Progression

Business practices are introduced and enhanced throughout the three cycles. The table below provides a summary of the Navigator tasks introduced through each of the cycles. Tasks are presented in the order in which they are introduced to the customer.

Navigator Task #		Navigator Task Name	CYCLE 1	CYCLE 2	CYCLE 2
#1	Task 1	An EnMS and Your Organization	Introduced	Improved	Improved
#6	Task 6	Energy Team and Resources	Introduced	Improved	Improved
#3	Task 3	Scope and Boundaries	Introduced	Improved	Improved
#8	Task 8	Energy Data Collection and Analysis	Introduced	Improved	Improved
#9	Task 9	Significant Energy Uses (SEUs)	Introduced	Improved	Improved
#11	Task 11	EnPIs and Energy Baselines	Introduced	Improved	Improved
#10	Task 10	Improvement Opportunities	Introduced	Improved	Improved
#12	Task 12	Objectives and Targets	Introduced	Improved	Improved
#13	Task 13	Action Plans for Continual Improvement	Introduced	Improved	Improved
#21	Task 21	Monitoring and Measurement of Energy Performance	Introduced	Improved	Improved
#4	Task 4	Management Commitment		Introduced	Improved
#5	Task 5	Energy Policy		Introduced	Improved
#15	Task 15	Awareness and Communication		Introduced	Improved
#17	Task 17	Operational Controls		Introduced	Improved
#14	Task 14	Competence and Training		Introduced	Improved
#18	Task 18	Energy Considerations in Design		Introduced	Improved
#19	Task 19	Energy Considerations in Procurement		Introduced	Improved
#2	Task 2	People and Legal Requirements			Introduced
#7	Task 7	Risks to EnMS Success			Introduced
#16	Task 16	Documenting the Energy Management System			Introduced
#20	Task 20	Monitoring and Measurement of the EnMS			Introduced
#23	Task 23	Management Review			Introduced

3599 The table below shows the Tasks in numerical order. Tasks 22, 24, and 25 are not introduced.

Navigator Task #		Navigator Task Name	CYCLE 1	CYCLE 2	CYCLE 2
#1	Task 1	An EnMS and Your Organization	Introduced	Improved	Improved
#2	Task 2	People and Legal Requirements			Introduced
#3	Task 3	Scope and Boundaries	Introduced	Improved	Improved
#4	Task 4	Management Commitment		Introduced	Improved
#5	Task 5	Energy Policy		Introduced	Improved
#6	Task 6	Energy Team and Resources	Introduced	Improved	Improved
#7	Task 7	Risks to EnMS Success			Introduced
#8	Task 8	Energy Data Collection and Analysis	Introduced	Improved	Improved
#9	Task 9	Significant Energy Uses (SEUs)	Introduced	Improved	Improved
#10	Task 10	Improvement Opportunities	Introduced	Improved	Improved
#11	Task 11	EnPIs and Energy Baselines	Introduced	Improved	Improved
#12	Task 12	Objectives and Targets	Introduced	Improved	Improved
#13	Task 13	Action Plans for Continual Improvement	Introduced	Improved	Improved
#14	Task 14	Competence and Training		Introduced	Improved
#15	Task 15	Awareness and Communication		Introduced	Improved
#16	Task 16	Documenting the Energy Management System			Introduced
#17	Task 17	Operational Controls		Introduced	Improved
#18	Task 18	Energy Considerations in Design		Introduced	Improved
#19	Task 19	Energy Considerations in Procurement		Introduced	Improved
#20	Task 20	Monitoring and Measurement of the EnMS			Introduced
#21	Task 21	Monitoring and Measurement of Energy Performance	Introduced	Improved	Improved
#23	Task 23	Management Review			Introduced

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4.3 Revision History

Version and Date	Section	Change
2.0, July 31, 2025		Initial Release - Note: Customers that completed Cycle 3 prior to the release of this document were eligible for a "Transition Year" which was detailed in a separate document.
2.1, September 1, 2025	EMA Site-Specific Activities (requirements section), Cycle 1 sequence diagram (page 24), Treasure Hunt Site-Specific Activities and diagrams from pages 26 and 113.	• Within the EMA Site-Specific Activities, the requirements section was revised to correct the sequencing of this activity relative to other activities and educational modules. In Cycle 1, the sequence diagram was updated so that EMA, Year 1 directly precedes Planning Support, Year 2, with no educational modules in between. • The Treasure Hunt is now recommended to be conducted in person and on site. • The connection between Site-Specific Activities and related Navigator tasks was updated in the diagrams in Cycle 1 (page 26) and Cycle 3 (page 113).

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