



North American Energy Management Pilot Program

Program Description

General

The Commission for Environmental Cooperation (CEC), in collaboration with Natural Resources Canada (NRCan), Mexico's *Comisión Nacional para el Uso Eficiente de la Energía* (National Commission for the Efficient Use of Energy) (CONUEE) and the US Department of Energy (DOE), is partnering with private sector facilities in Canada, Mexico and the United States to implement the North American Energy Management Pilot Program. The program, composed of several multi-day training workshops, coaching sessions, and assessments, will support companies (partners) across North America in developing approaches for implementing the ISO 50001 standard and the Superior Energy Performance® (SEP) program.

Program Implementation and Timeline

The pilot program will be delivered between February 2016 and April 2017 in phases aligned with the “Plan-Do-Check-Act” continual improvement framework of ISO 50001. Details, tools, training, and coaching will be provided for each partner on the milestones and the deliverables appropriate to each phase. It is expected that each partner will establish an enterprise-level team of representatives at the corporate level and from each of the company's participating facilities.

Program milestones	Schedule
Developing Project Infrastructure via webinar	February–March 2016
Implementation Phase I: “Plan”	April–September 2016
Implementation Phase II: “Do”	October 2016–February 2017
Implementation Phase III: “Check” and “Act”	March–April 2017
Implementation Phase IV: Assessment and Evaluation	May–June 2017
Monthly online training webinars and coaching calls	for the duration of the program
Quarterly reports review	for the duration of the program
Off-site document reviews and feedback	for the duration of the program

Program Milestones

Developing Project Infrastructure

The initial part of the training will define the scope and boundaries of the enterprise's energy management system (EnMS) and lay the foundation for the ISO 50001 implementation effort. An initial webinar with each company will lay the groundwork for this effort, establishing expectations, developing program logistics, and beginning to define the responsibilities of each company. It is critical that the top management responsibilities for participating companies (partners) are understood and demonstrated. The partner is expected to appoint an energy management representative, form an enterprise energy team, and establish an energy policy that communicates the commitments top management has made to energy performance improvement and directs associated energy management activities.

Also during this initial step, a gap assessment will be conducted remotely via webinar with the Partner's implementation team. The gap assessment will explore the current practices, procedures and systems within the defined scope of the EnMS to determine its conformance to ISO 50001 and SEP. This will provide useful information to help determine what it will take for the enterprise's requirements to fully implement an ISO 50001 energy management system and SEP performance requirements.

Implementation Phase I: "Plan"

Determining Significant Energy Uses and Improvement Opportunities

Phase I establishes processes for the ongoing collection, analysis and management of energy data and related information to support energy management decision-making, including the determination of the significant energy uses and best opportunities for energy performance improvement. Energy performance metrics and associated baselines will be established and specific energy performance improvement objectives and targets will be set. The recommendations resulting from the energy opportunity assessments will be used as input into the action plans developed to achieve the objectives and targets for energy performance improvement.

Implementation Phase II: "Do"

Managing Significant Energy Uses and Improvement Actions

Phase II establishes the processes needed to manage the significant energy uses and implement the action plans for achieving energy performance improvement through the energy objectives and targets. Existing operational and maintenance controls associated with the significant energy uses and the energy objectives and targets will be evaluated and additional controls defined and implemented as needed. Existing design, procurement and change management processes will be adjusted to ensure they include appropriate energy considerations where energy performance can be impacted. Training, communication and documentation will be used to define expectations for energy management across the scope and to further embed energy management actions into daily operations.

Implementation Phase III: "Check" and "Act"

Checking the System and Ensuring Continual Improvement

Implementing a system of checking processes to ensure robust monitoring, measurement, calibration, performance verification and problem identification and correction are the cornerstone of Phase III. This will include defining processes for internal auditing and corrective and preventive action. Since the checking processes generate the data and other information needed by top management to evaluate energy performance and the EnMS, system connections will be established to ensure top management has the inputs needed to make informed decisions on energy management and take action consistent with the organization's commitment to continual improvement in energy performance.

Implementation Phase IV: “Assessment and Evaluation”

The EnMS is intended to embed systematic processes for energy management and energy performance improvement into the operations of the enterprise. This phase of the implementation effort could involve a Readiness Review¹ to evaluate the conformance and effectiveness of the EnMS. The results of the Readiness Review will identify any issues or problems that need to be corrected to meet the requirements of ISO 50001 and SEP, ensure continual improvement in energy performance, and successfully complete the North American Energy Management Pilot Program. Any non-conformity from the Readiness Review will be addressed by the enterprise through formal corrective action.

Post-program Milestone

ISO 50001 or SEP Certification Audit

Upon successful completion of the program, organizations will be ready for the ISO 50001 or SEP certification audit by a third party. To become certified to ISO 50001 only, an organization will choose a certification body or verification body to obtain the forms necessary begin the audit process. Organizations that are pursuing both ISO 50001 and SEP certification will complete and submit a SEP Application Form to the SEP Administrator. The organization will also select an accredited SEP Verification Body to conduct the audit. The SEP Administrator will review the application for completeness and will send the approved application to the SEP Verification Body specified by the organization.

The verification process is similar for ISO 50001 and SEP, except that the SEP audit also verifies energy performance improvement and additional SEP requirements beyond ISO 50001. The audit team conducts a two-stage audit. A Stage 1 readiness review is conducted on-site or remotely to determine if the organization is prepared for the Stage 2 audit. During the Stage 2 audit, an audit team will visit the organization to determine whether the certification requirements have been met.

After the audit, the certification body will issue the ISO 50001 certificate. For SEP, the SEP Verification Body will issue both the ISO 50001 and SEP certificates. If the organization does not conform to certification requirements, the certification body (or SEP Verification Body) will issue corrective actions that must be completed before receiving certification.

¹ A readiness review for the company's primary facility represents an additional cost of US\$6,600. The CEC will cover 50% of this cost (i.e., US\$3,300) for companies that formally commit to pursuing ISO 50001 certification for its primary facility immediately after the training.

Services and Tools

Assigned coaching teams

Each partner company will be assigned an experienced EnMS coaching team for one of its facilities. This team comprises a management system specialist and an energy efficiency expert. This team will guide the partner implementation team through ISO 50001 implementation, ensuring that the appropriate technical resources are available to support and address the company's efforts and needs as they progress through the pilot program.

In-person training workshops

Face-to-face group training workshops lasting 2.5 days will be conducted at the beginning of Phase I ("Plan"), Phase II ("Do") and Phase III ("Check" and "Act"). These interactive workshops will cover the ISO 50001 and SEP requirements specific to each phase of EnMS implementation, introduce implementation strategies and tools, and provide hands-on team activities to help participants apply what they have learned.

Monthly online training webinars and coaching calls

Training webinars and coaching calls with each CEC Partner's implementation team will be conducted monthly to address specific topics corresponding to the deliverables schedule. The webinar portion of the interaction generally will take 1 to 1.5 hours and is designed to train the teams on what is required for an ISO 50001 EnMS. Each monthly webinar includes relevant tools and resources to support their implementation efforts. Coaching by phone will be used to discuss homework, answer questions, provide feedback, determine next steps, and address any issues or topics as needed. Additional coaching calls (separate from the monthly webinars) can be used to provide coaching and technical assistance, cover the results of off-site document reviews, and address any topics or issues as needed.

Implementation tools

Topic-specific ISO 50001 implementation tools and related resources will be introduced in the face-to-face group training workshops for each phase and in the monthly webinars. They will be made available through the dedicated project website. These resources are derived from long-standing and well-vetted management system implementation tools developed by the consultant over the past twenty years to support industrial technical assistance programs. They include forms, worksheets, checklists, templates, examples and topical guidance. As part of this pilot program, these tools may be modified and refined as appropriate to meet the needs, challenges and successes of the partners in their implementation efforts.

Defined deliverables (including homework)

A *Deliverables and Events Schedule* will be used to guide the activities of the teams in each phase of the EnMS implementation process. They are assigned as part of "homework" to be completed by the partner implementation team within a specified timeframe. The team will be trained on the relevant topics prior to each homework assignment. The homework will be followed up on through the combined monthly webinars and coaching calls.

Quarterly reports

During the course of the project, the partner will be required to collect and record specific information that is then reported quarterly using a Quarterly Report Form. The data and information to be collected includes: level of effort (number of hours and number of personnel working on the implementation); costs (labor, in-kind contributions, materials and supplies, etc.); quantitative and qualitative benefits, including energy savings; and, implementation strategies, successes and barriers. This information will be used in the ongoing project evaluation process to make appropriate adjustments to the ISO 50001 implementation program, including associated tools and training. This information can also be leveraged to inform the reports prepared at the end of the pilot program as well as case studies.

Check-in calls for each phase

Another element of reporting by the partners will involve telephone calls of 30 to 60 minutes duration that will be led and facilitated by the partner's EnMS management representative, with the partner's top management and the coaches in attendance. The purpose of the calls will be to brief top management on the progress in the program, upcoming activities, implementation success and challenges, and importantly, the status of resources and any additional support needed.

Readiness Review

After the EnMS has been fully implemented and has been in operation for at least 30 to 60 days, an experienced audit team might conduct a Readiness Review² of the entire EnMS. This review is intended to evaluate the intent, implementation and effectiveness of the EnMS for the purpose of determining the partner's readiness for a third-party certification audit. Corrective action on any non-conformity identified during the audit will be required.

Dedicated website

A dedicated website will be used to facilitate communication and information sharing between the coaching team and the partner's energy team, to provide access to implementation tools, and to establish a platform for review and feedback on the EnMS documentation. In addition, a general section available to all participants will include announcements and downloadable implementation tools and other resources.

Optional Services

The services described below are optional. Coaches and the partner will determine during the initial gap assessment and project plan development which additional, if any, training and coaching services will be needed. Changes to the project plan and supplementary services can be added later, if needed.

Additional implementation coaching

Over the course of the pilot program, a number of "hands-on" coaching sessions could be conducted for each Partner, if desired. These are outcome-based, "hands-on" working sessions involving the company's team(s) and their coaches. They will be led by the assigned coaches and timed to correspond with specific milestones and deliverables (structured topics) and in response to the

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specific needs of the facilities (“open” topics). How the sessions are conducted and what topics or issues are addressed would be customized according to the implementation needs of the enterprise. Part of the coaching session may involve working with the entire partner team on one topic, while another part may involve working on a different issue or deliverable with only selected members of a facility team. During the SEP demonstrations, for instance, many organizations needed assistance on developing energy source models for Energy Performance Indicators in order to calculate energy performance improvement. These coaching sessions may be conducted either on- or off-site.

Off-site document reviews

If desired, the energy team will be able to upload drafts of their EnMS documents for review and feedback from their coaches. This is accomplished using a dedicated website, supplemented by e-mail and e-meeting communications. To ensure an effective and efficient document review and feedback processes, there is an expectation within the ISO 50001 implementation program that submission by the partner implementation team of drafts for review will correspond with the schedule of deliverables. Feedback may be provided in a variety of ways. These could include, for example, e-mail, electronic meetings, teleconferences, summary reports, and comments inserted into draft documents.

Certified Practitioner in Energy Management Systems (CP-EnMS) Training

This training is designed to provide individuals with the basic knowledge and skills needed to assist organizations with implementing ISO 50001 and the additional SEP energy management system requirements of ANSI/MSE 50021. This training can be used to prepare for the CP-EnMS exam. Each CEC Partner is eligible for a 25% discount on the cost of an open enrollment (public) offering of this training for one individual.

Energy system assessments

During the energy review of the EnMS implementation planning phase, energy efficiency experts will be made available to assist members of the energy management teams in identifying opportunities for energy performance improvement on the specific energy systems that are prevalent within the company facilities.