

# Southeast Energy Management Cohort Program

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## Overview of Training and Coaching Services

### GENERAL

The Georgia MEP is partnering with other Southeast MEPs to implement the *Southeast MEP Energy Management Program*. The program, composed of several multi-day training workshops, coaching sessions, assessments, and software tools will support manufacturers in the Southeast to implement best practices in energy management that are based on ISO 50001, the international energy management standard. Georgia Tech, in partnership with the U.S. Department of Energy has successfully tested this group-based approach with over 75 companies in North America. Recent studies show that companies, on average, are achieving a 14% reduction in energy costs within 2 years. These manufacturers have sustained the savings and are continuing to improve their energy performance.

This program is heavily subsidized by the MEP partners, reducing the cost to the manufacturers by over 70%. At the end of the program, it is expected that all companies will receive “50001 Ready” recognition from the U.S. Department of Energy. Some of the companies may wish to obtain ISO 50001 Certification and can receive a Readiness Review from certified ISO 50001 auditors to determine their readiness for 3<sup>rd</sup> party certification.

### PHASE-BASED IMPLEMENTATION APPROACH

The implementation model for this project leverages the elements of the phase-driven, step-by-step approach that was used successfully at more than 75 industrial sites that participated in the DOE Energy Management Demonstrations for the Superior Energy Performance program as well as the CEC North American Pilot (<http://www.cec.org/more/north-american-energy-management-pilot-program>). The implementation model will be delivered through a series of phases that are aligned with the continual improvement framework of ISO 50001. A brief summary of each phase is presented below. Details, tools, training, and coaching are provided in each phase based on the milestones and the defined deliverables for that phase. All training is activity-based and is designed to help the company with completing its implementation deliverables.

### GETTING STARTED: Developing Project Infrastructure (November-January 2018)

**Summary:** *Getting Started activities involve defining the scope and boundaries of the enterprise’s energy management system (EnMS) and laying the foundation for the entire ISO 50001 implementation effort. It is critical that the responsibilities of top management are understood and demonstrated, including the formation of the energy team(s), and the establishment of an energy policy that communicates top management’s commitments to energy performance improvement and that directs associated energy management activities. An initial webinar with each company helps to lay the groundwork for this effort, establishes expectations, develops program logistics and begins to define the responsibilities of each company.*

*In addition, a 1.5 to 2 day gap assessment is conducted onsite by a dedicated coach to establish EnMS implementation priorities that are inputs into the organization's implementation planning. During this gap, the coach will also work with the implementation team to gather and conduct an initial energy data analysis in preparation for the first onsite training.*

**PHASE I IMPLEMENTATION – “PLAN” – Determining Significant Energy Uses and Improvement Opportunities (5 months starting in February 2018)**

*Summary: Phase I focuses on establishing 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 are established and specific energy performance improvement objectives and targets are set. The recommendations resulting from the energy opportunity assessments are inputs to the action plans developed to achieve the objectives and targets for energy performance improvement.*

**Phase II IMPLEMENTATION – “DO” – Managing Significant Energy Uses and Improvement Actions (4 months starting in July 2019)**

*Summary: 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 are evaluated and additional controls defined and implemented as needed. Existing design, procurement and change management processes are adjusted to ensure they include appropriate energy considerations where energy performance can be impacted. Training, communication and documentation are used to define expectations for energy management across the scope and to further embed energy management actions into daily operations.*

**Phase III IMPLEMENTATION – “CHECK” and “ACT” – Checking the System and Ensuring Continual Improvement (4 months starting in November 2019)**

*Summary: 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 are established to ensure top management has the inputs it needs to make informed decisions on energy management and take action consistent with the organization's commitment to continual improvement in energy performance.*

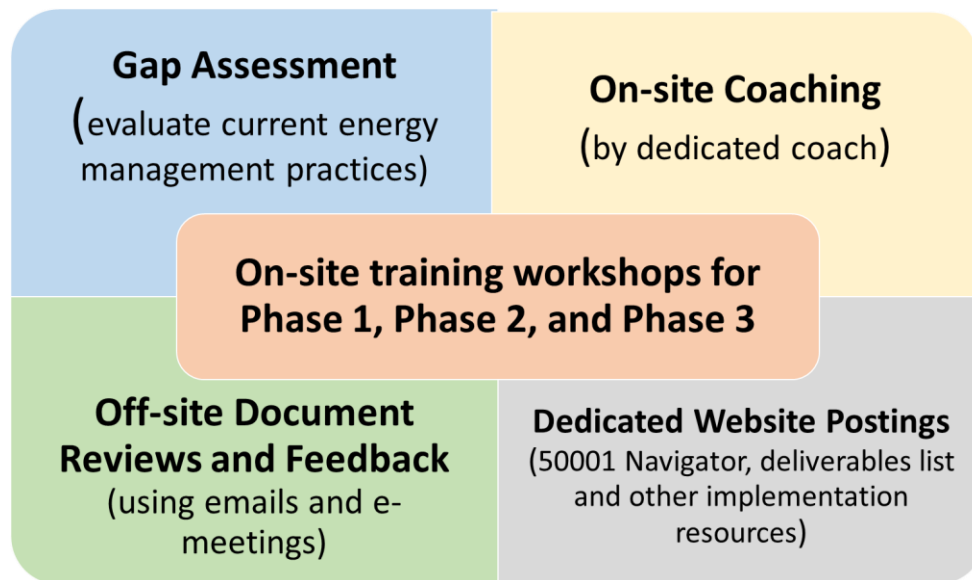
**Phase IV CERTIFICATION (Optional) – Assessment and Evaluation (2 months)**

*Summary: This phase is for companies that wish to obtain ISO 50001 certification. This Phase of the implementation effort involves a readiness review 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 SEP Enterprise-wide Pilot program. Any nonconformities from the readiness review will be addressed by the enterprise through formal corrective action.*

## DEMONSTRATION MODES OF DELIVERY

Elements of the implementation model used successfully by the DOE Energy Management Demonstrations that is leveraged for this project is the use of multiple modes of delivery to guide each organization's implementation team through the EnMS implementation process.

### Technical Approach: Delivery Modalities



All of these modes of delivery will be available during the pilot and most will be part of the core service package. Some of the services described below are optional. A gap assessment is to be conducted on-site by a dedicated coach and the facility implementation team. This assessment will evaluate the current practices and procedures in order to understand the gaps in the company's energy management practices. This will provide an accurate view of what it will take for the facility to fully implement an ISO 50001 energy management system and help establish the priorities for the implementation program effort.

### Core Services and Tools

**Assigned coach:** Each Partner will be assigned a dedicated coach from one of the MEP Centers. This coach will act as another member of the energy team and assist with implementation efforts. This coach will ensuring that the appropriate technical resources are available to support and address the company's efforts and needs as they progress through the program. Georgia Tech instructors will support these coaches' assistance efforts.

**On-Site Training Workshops:** Two-day on-site group training workshops are conducted at the beginning of Phase I ("PLAN") and Phase II ("DO") and a 2.5 day training at the beginning of Phase III ("CHECK" and "ACT"). These interactive workshops cover the ISO 50001 requirements specific to each phase of EnMS implementation, introduce implementation strategies and tools, and provide hands-on team exercises to help participants apply what they have learned.

Monthly online training webinars and coaching calls: Training webinars and coaching calls are available to address specific topics corresponding to the deliverables schedule. Georgia Tech instructors will support the dedicated company coach and implementation team. The coaching call is used to discuss homework, answer questions, provide feedback, determine next steps, and address any issues or topics as needed.

Defined deliverables (including homework): A *Deliverables and Events Schedule* is 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 Enterprise-wide Partner implementation team within a specified timeframe. The team is trained on the relevant topics prior to each homework assignment. The homework is followed up on through the coaching calls and document reviews.

Dedicated website: A dedicated website set up by Georgia Tech will be used to facilitate communication and information sharing between the Georgia Tech coaching team and the Enterprise-wide 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.

Implementation tools: Topic-specific ISO 50001 implementation tools and related resources will be introduced in the on-site training workshops. They are made available through the dedicated project website. These resources are derived from long-standing and well-vetted management system implementation tools developed by Georgia Tech over the past twenty years to support industrial technical assistance programs. They include forms, worksheets, checklists, templates, examples and topical guidance. Customized to ISO 50001, the tools have been tested successfully in a variety of settings under the DOE Energy Management pilot and demonstration programs. As part of the pilot, these tools may be modified and refined as appropriate to meet the needs, challenges and successes of the companies in their implementation efforts. Recently, under funding from DOE, these tools were among the resources used to develop the web-based 50001 Navigator used for ISO 50001 Implementation (<https://navigator.industrialenergytools.com/>).

Readiness review (optional & extra cost): After the EnMS has been fully implemented and has been in operation for at least 30-60 days, an experienced audit team will conduct a “readiness review” of the entire EnMS for those companies that are seeking ISO 50001 certification. This review is intended to evaluate the intent, implementation and effectiveness of the EnMS for the purpose of determining the Enterprise-wide Partner’s readiness for a third-party certification audit. Corrective action on any nonconformities identified during the audit will be required.

Other software tools will also be utilized by managing data and developing energy performance metrics. These DOE tools are the Energy Footprint and EnPI Tools. The Energy Footprint tool is an Excel-based spreadsheet that helps a company to manager and analysis energy data as well as organize its energy systems and equipment. This tool will also calculate an energy balance for the facility, defining those energy systems that are major energy consumers. The EnPI Tool and its online equivalent – EnPI Lite – are also Excel-based spreadsheets that are a companion tool to the Energy Footprint. It will take the energy data and related relevant variables (e.g. production, weather) and

develop energy performance metrics that are considered best practice and provide accurate performance improvement calculations under all operating conditions.

## MILESTONES

The major program milestones are shown in the Gantt chart below. It is expected that each company will attend all of the training sessions and provide the resources needed to complete this 12-14 month effort.

