

GSEP
Global Superior Energy
Performance Partnership

An initiative of:



**International Collaboration to Develop Energy
Management Workforce Programs through the
Global Superior Energy Performance Partnership**

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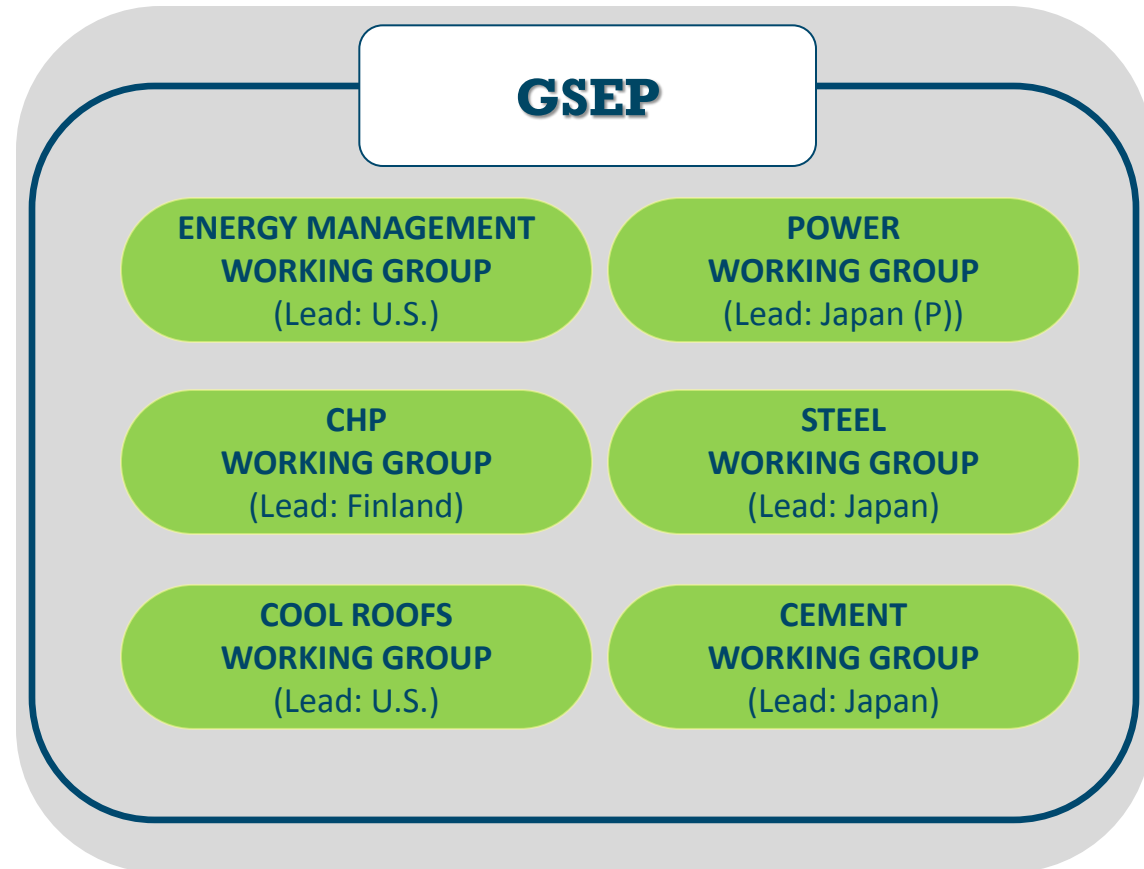
Global Superior Energy Performance Partnership (GSEP)

GSEP is one of 13 ongoing Clean Energy Ministerial (CEM) initiatives.

GSEP objectives are to significantly cut global energy use by:

- Encouraging industrial facilities and commercial buildings to pursue **continuous improvements** in energy efficiency
- Promoting **public-private partnerships** for cooperation on specific technologies or in individual energy-intensive sectors

Within GSEP there are six working groups



GSEP Energy Management Working Group (EMWG)

Goal: Achievement of continual improvement of energy performance in industrial facilities and commercial buildings through widespread implementation of energy management systems such as ISO 50001.

- **International effort led by 11 Countries**



Australia



Canada



Denmark



European Commission



India



Japan



Korea



Mexico



South Africa



Sweden



United States

- **Participation from policymakers, industry and related energy efficiency initiatives.**

Value of Energy Management

- Time and again, industrial energy efficiency has been demonstrated to be **cost-effective** while having a positive effect on productivity
- Despite this, energy efficiency improvements with very favorable payback periods often **do not get implemented**
- Even projects that are implemented may **not be sustained** due to lack of supportive operational and maintenance practices

Problem: Energy efficiency is not integrated into daily management practices.

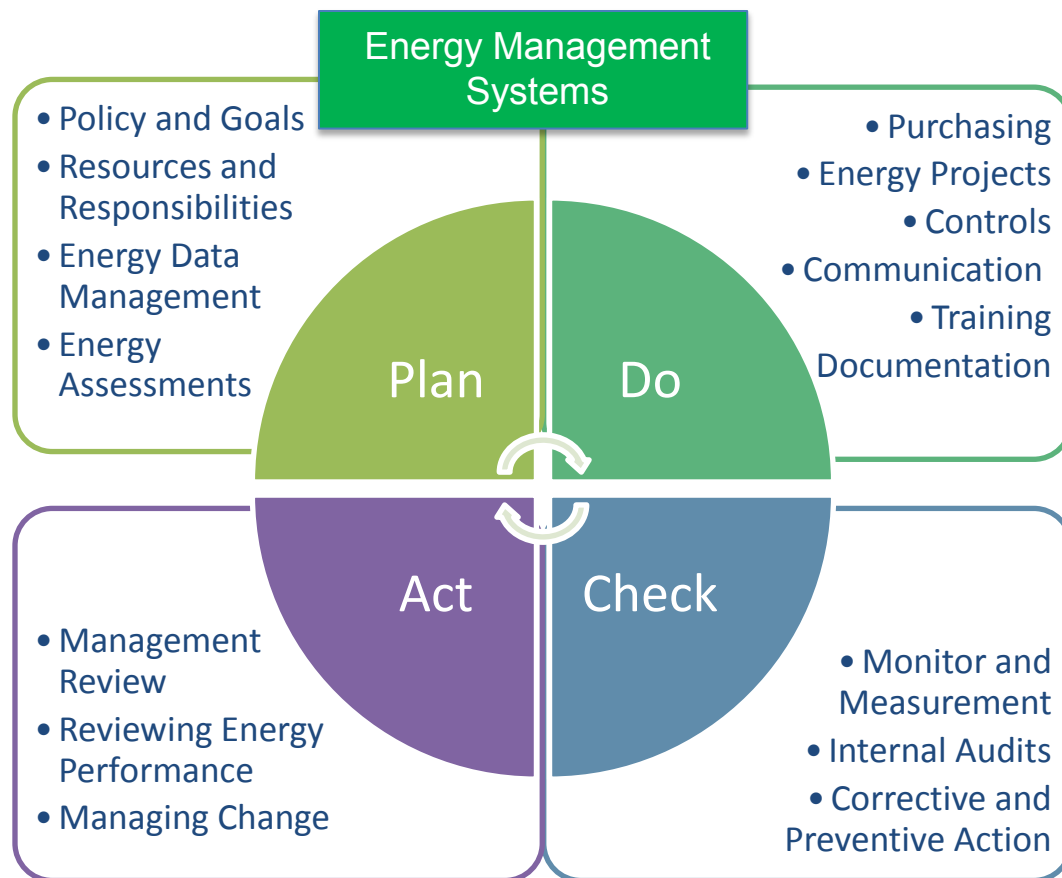
Solution: Staff at all levels within an organization need to be engaged in the management of energy on an ongoing basis.

Energy management requires an organization to shift from a project-by-project approach to one of continual improvement in energy performance

What is an Energy Management System (EnMS)?

Energy management systems (EnMS) help an organization institutionalize the policies, procedures, and tools to systematically track, analyze, and improve energy efficiency—leading to continual improvements in energy performance.

Industries that adopt EnMS may save up to 10-30% of their total energy use!



GSEP Energy Management Working Group (EMWG)

The GSEP EMWG's collaborative approach facilitates active peer sharing on a broad range of relevant activities led by its member countries.

Together, GSEP EMWG members:

- **Advocate for energy management**
- **Provide assistance on policies and programs**
- **Develop tools and resources**

EMWG Workforce Development & Multi-Country Analysis

- A key focus of the GSEP EMWG is working to prepare workforces to successfully implement and manage an EnMS.
- 2013 EMWG report: *Knowledge and Skills Needed to Implement EnMS in Industry and Commercial Buildings*

Analysis Outline:

- Knowledge and skills areas needed along each step of EnMS implementation
- Recommends the most relevant knowledge and skill areas for specific job positions that could be critical to successful EnMS implementation
- Identifies common professional development models that deploy educational offerings—from stand-alone trainings to formal credentialing processes.

Desired outcome:
provide guidance to curriculum developers to develop or improve education/training programs on energy management

http://www.cleanenergyministerial.org/Portals/2/pdfs/GSEP_knowledge_skills_EnMS_implementation.pdf

Steps of EnMS Implementation

The first portion of the EMWG analysis classified knowledge and skills areas according to the following steps in EnMS implementation:

- 1. Initiating an Energy Management Program:** Basic concepts and requirements; leadership commitment; establishing an energy team; developing energy policy
- 2. Conducting an energy review:** Collecting and analyzing energy data and costs; identifying major energy uses; energy assessments; identifying opportunities
- 3. Energy management planning:** Setting a baseline; determining performance metrics; evaluating and selecting projects; developing action plans
- 4. Implementing Energy Management:** Obtaining resource commitments; training and awareness; communication; executing action plans
- 5. Measurement and Verification:** Including the knowledge and skills required to monitor, measure, verify, track, and document energy use and savings
- 6. Management review:** Reviewing progress; modify goals and actions as needed

Job-Specific Knowledge and Skill Areas in EnMS

- The second portion of the EMWG analysis focused on six key personnel that can greatly affect energy management planning, review, and implementation
- Individuals in these positions who are knowledgeable in certain aspects of energy management can be critical to the success of an energy management program.
 - Chief Financial Officer
 - Sustainability Officer
 - Accountants and Financial Staff
 - Environmental, Health, and Safety Professionals
 - Engineers: Industrial, Mechanical, and Electrical
 - Tradespeople and Technicians
- The report identified the knowledge and skill areas relevant to energy assessment and management for each job type.
- The source documents provide greater depth for any given knowledge and skill area

Professional Development Models

- The final portion of the EMWG analysis identifies professional development models commonly used to deploy workforce education
- Programs vary in structure and mode of delivery depending on the market's needs or regulatory requirements in a particular country.
- Types of professional development models:
 - Awareness Trainings and Workshops
 - Continuing Education
 - Formal Education
 - Professional Credentialing

Professional Development Models

Professional Development Model	Example
Awareness Training/ Workshop	Canada's Dollars to \$ense: one-day workshops that offer energy-saving tips for organizations. Over 23,000 professionals trained from industrial, commercial and institutional organizations
Continuing Education	South Africa: Training for ISO50001 Auditors
Formal Education	Australia's Leadership & Change for Energy Efficiency in Accounting & Management: integrates energy efficiency existing undergrad and post-grad accounting courses
Credentialing	U.S. Certified Practitioner in EnMS: Exam-based credential that follows ISO/IEC 17024 standard that governs how bodies certify personnel

Thank you!