

COMPETENCY COURSE FOR ENERGY MANAGERS: Implementing an Energy Management System in Your Company



**LEARN FROM UNIDO-DOE NATIONAL EXPERTS AND
INDUSTRY PRACTITIONERS ON ENERGY MANAGEMENT SYSTEMS!**



INTRODUCTION

Following the EEC law and its implementing rules and regulation (IRR), the designated establishments (above 500,000 kWh consumption per year) must nominate their Energy Manager and/or Conservation Officer. The IRR had detailed the qualification requirements (experience, license, education, etc.), roles/responsibilities and including the need to undergo regular/capacity building training on energy management (final training regulations and standards are still being developed by DOE/TESDA/CHED).

Equally important, the energy manager must regularly submit to DOE an annual report beginning this April. There are already proposed template developed/released by DOE; However, this report must be done carefully, properly, and judiciously as there are significant repercussions if done erroneously or incomplete. Anything you submit to the regulators may later be used against you or worst will serve as baseline for the company's performance which will be hard to revert and correct later. Hence, we need to be careful in the reporting and must truly reflect the current conditions of the company.

The IRR also requires the energy manager/conservation officer must integrate/adopt an energy management system following ISO50001 in their company (or equivalent). DOE knows very well that for the program to be sustainable, there must be a system or process! This is MPA's competitive edge given our partnership with PIEMPI and access to the UNIDO national experts who had undergone a very comprehensive energy management program (both technical and management) following ISO5000 framework.

**CPD points applicable to electrical, mechanical and electronics engineers only*

MERALCO POWER ACADEMY'S STRATEGIC APPROACH ON ENERGY MANAGEMENT

Holistic and multi-disciplinary:

- Importance of having an energy management system (policy, process, system, and methods) covering the management/leadership, organization, process & practices, culture, performance, improvements, and key result areas.
- Covers technical aspects of energy management (from energy sources, equipment specification, purchasing, production process, operation and maintenance, meter data collection/retrieval, technical/financial analysis, forecasting and trending, etc.
- Considers and integrates various disciplines impacting energy performance, system stability/reliability and economics such as renewables/imbedded generation, energy supply sources, load profile, production process, electrical/mechanical equipment design and proper/plant equipment operation and maintenance.

PROGRAM OBJECTIVES

At the end of the session, the participants will be able to:

- Explain the EEC Law and its IRR, including its impact, opportunities, and how to best support regulatory requirements and create value and savings to the company
- Apply the ISO50001:2018 energy management framework, the global gold standard on energy management system
- Establish a business case for action and support an integrated implementation of an energy management system in the company
- Support a systematic energy audit, assessment, and long-term improvement
- Conduct overall energy performance monitoring, sustainable efficiency improvement, cost savings and regulatory report compliance

WHO SHOULD ATTEND?

- Energy Managers
- Energy Conservation Officers
- Professionals assigned to monitor energy efficiency and conservation measures for organizations with 500,000kWh+ consumption
- Company decision makers (Middle to Senior Management)

RECOMMENDED SKILLS/KNOWLEDGE TO HAVE BEFORE THE TRAINING

- Basic MS Excel
- Basic knowledge on RA11285: Energy Efficiency & Conservation

PROGRAM OUTLINE

8 half-day on October 18-22 & 25-27, 2021

Module 1: Energy Management Awareness Workshop (0.5 day)

Duration: Half-day

- The local power industry, the energy issues and its impact to social, economic and environment
- The EEC Law and its salient provisions, role of an Energy Manager, Conservation Officer, Energy Auditor and the reportorial requirements
- Interplays of energy conservation, energy efficiency and renewable energy; what are the consumption and cost drivers of energy use and efficiency in the realms of Energy Management
- Energy Management system (EnMS) following the ISO 50001:2018 standards and framework-
 - High level structure of EnMS and the PDCA Cycle
 - Context of the Organization
 - Importance of Leadership
 - Planning, Support, Operation, Performance Evaluation, and Improvement
- Key success factors and success stories

Module 2: Implementing an Energy Management System in Your Company

Duration: 4 half-days with workshops

- Review of Key Concepts
- Organization, Roles, Policies, and Responsibilities
- Implementation Planning, Data Gathering, Energy Reviews, Baselineing, Performance Indicator, Trending, Analysis, Technical Audit and Opportunity lists
- Eight (8) steps Energy Review process and insights generation
- Actions to address Risk and Opportunities
- Objectives, targets, performance indicators, baselines
- Energy reviews and reporting
- Implementation Support requirements
- Resources, competence, awareness, communication, documentation, and control of document
- Operational planning, energy efficient design, procurement consideration, measurement, and verification
- Performance evaluation and internal audit
- Improvements and next steps

Module 3: Energy Audit and Post Energy Management System Implementation

Duration: 3 half-days with workshops

- Energy Management System Audit (definition, process, methods and reference guides/standards) following ISO50002 guidance and practices
- Energy audit team, roles, responsibilities, and skills/competencies
- Audit planning and types of audit
- Communication plan
- Data Collection
- Measurement Plan and measurement verification
- Conducting the site visit
- Analysis and insight generation
- Energy audit reporting
- Templates, forms, checklist requirements and other technical audit standard reference

Module 4: Process Integration and Next Steps

Duration: Half-day

- Energy Management System recap and the strategic approaches to implementation
- Renewable Energy option - requirements, benefits, impact, risks and technical/financial considerations
- Building/facilities design and retrofit taking into consideration the new green building code, occupational safety and health requirements
- Operation and maintenance programs - strategies, programs and best practices towards greater savings, higher production efficiency and productivity in the plant
- RE/EE Program and project development process and considerations
- Planning for a sustainable EnMS program and team development towards success
- Other complementary technical disciplines for Energy Management

LEARNING INVESTMENT

Enroll early to avail of our 10% early-bird discount!

15,000

Standard rate starting
October 4, 2021

13,500

Early-bird rate
until **October 3, 2021**

To enroll, please click this [link](#) or email learn@meralcopoweracademy.org.

After sending your enrollment request, please expect a reply from us within 24 hours containing the payment process and other reminders.

You may also contact us at +639608674624 if you need further assistance.

OTHER SUGGESTED COURSE TO SUPPLEMENT YOUR ENERGY MANAGEMENT KNOWLEDGE

COURSE TITLE	DATE	COURSE DESCRIPTION
Conducting Root Cause Failure Analysis: Understanding Causes of Machine Failures	October 14-15	This 2-day course enables the participants to conduct a deep-dive root cause failure analysis on machines to maintain a reliable plant operation. The course also discusses practical & systematic methods for analyzing performance problems and prevent them from recurring.
Implementing Condition Based Maintenance: Total Approach to Failure Prediction & Analysis to Improve Plant Reliability	November 18-19	This 2-day course equips the participants with the knowledge on how to realize a greater equipment reliability & longevity while enhancing budgetary cost containment goals. The course also covers oil analysis, ISO:4406:99, CBM through thermography, vibration monitoring, ultrasonic monitoring, and how to start CBM strategy in your plant.
Liquefied Natural Gas (LNG) Market & Fundamentals	November 22-26	This 3-day course equips the participants with the understanding on the LNG energy industry from mature markets, the market dynamics, value chain and the practical approaches to business and commercial project development. The course will be follow an interactive class-model coupled with exercises where teams will be "competing" to present a commercially attractive and solidly structured LNG deal in the region.