



PROJECT IMPLEMENTATION PLAN

26 September 2018

1. **Project Code** 18-IN-06-GE-DLN-A-01
2. **Title** Self-learning e-Course on Energy Efficiency Techniques
3. **Reference** Project Notification 18-IN-06-GE-DLN-A dated 23 January 2018
4. **Timing and Duration** 1 November 2018–30 November 2019 (one year)
5. **Implementing Organizations** APO Secretariat and National Productivity Organizations (NPOs)
6. **Number of Participants** Minimum 400 participants
7. **Self-registration** Self-registration opens from 10:00 AM Japan Standard Time on 1 November 2018 on the eAPO web portal: <http://eAPO-tokyo.org>

Note: Participants can register directly from this portal on the APO website. Those who are already registered can access the course by using the assigned username and password. If you have forgotten your username and password, please refer to the help page on the home page of the portal.

8. Objectives

To familiarize participants with the basic concepts, together with best practices, of energy efficiency techniques.

9. Background

Rapid industrialization in Asian economies has been a strong driving force in raising productivity in the region. On the other hand, however, it has shown negative effects on the environment such as global warming, climate change, energy price fluctuations, etc. Organizations that waste energy through lax processes and insufficient management are not only losing money but are also causing avoidable pollution through increased carbon emissions. In addition, energy security and fossil-fuel depletion have become global concerns. Proper energy management through energy efficiency/conservation measures is therefore of paramount importance.

The APO has been promoting the concept of Green Productivity (GP) since 1994, where the focus is to enhance productivity and simultaneously reduce negative impacts on the environment. GP leverages various productivity tools and techniques to help organizations improve their quality, occupational safety, and environmental management. This course will provide participants with basic knowledge of energy efficiency techniques, specifically of different subcomponents that are crucial for energy efficiency in organizations, together with

an introduction to best practices.

10. Scope and Methodology

Scope

The course will cover the following modules:

1. Energy efficiency basics
 - 1.1. Definitions
 - 1.2. Power factor
 - 1.3. Energy accounting
 - 1.4. Insulation
 - 1.5. Energy storage
2. Lighting
 - 2.1. Introduction
 - 2.2. Lighting devices
 - 2.3. Lighting control
 - 2.4. Design and maintenance
3. Motion (motors)
 - 3.1. Introduction
 - 3.2. Motors
 - 3.3. Controls
 - 3.4. Efficiency considerations
4. Combustion (boilers)
 - 4.1. Introduction
 - 4.2. Combustion
 - 4.3. Boilers
 - 4.4. Efficiency considerations
5. Cooling
 - 5.1. Basics
 - 5.2. Central systems
 - 5.3. Energy-efficient designs
 - 5.4. Energy-efficient operations
6. Management techniques
 - 6.1. Role of maintenance
 - 6.2. Smart energy
 - 6.3. District heating/cooling
 - 6.4. Energy management systems

Final examination

Methodology

Module study, additional study material for participants, intermittent quizzes for self-assessment, and a final examination to qualify for the APO e-certificate for eligible participants.

11. Qualifications of Candidates

The target groups are environmental/GP/energy management personnel, trainers, or consultants, and senior/mid-level managerial and technical personnel from industry in the environmental/energy field.

12. Eligibility for e-Certificate

A minimum score of 70% on the final examination is required to qualify for the APO e-certificate.

Note: Participants from nonmember countries are welcome to take the course for self-development, although APO e-certificates will not be provided.



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