



ASIAN PRODUCTIVITY ORGANIZATION

## PROJECT IMPLEMENTATION PLAN

21 December 2015

1. **Project Code** 15-AG-39-GE-NFP-C-5
2. **Title** Practice-oriented Workshop on Energy Efficiency in India
3. **Reference** Project Notification 15-IN-64-GE-OSM-B dated 1 October 2014
4. **Timing and Duration** 18–22 January 2016 (five days)
5. **Venue** Chennai, India
6. **Implementing Organization** Dr. Ambedkar Institute of Productivity  
(National Productivity Council)  
6, Aavin Dairy Road, Ambattur Industrial Estate (North)  
Ambattur, Chennai – 660 098  
Phone: 044-26251808, 26255216  
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e-Mail: npcaipchn@gmail.com
7. **Number of Participants** Up to 30 qualified participants
8. **Objectives**
  - a. To raise awareness of energy efficiency to encourage reduced consumption and efficient utilization;
  - b. To share knowledge of practical methodology and key components of energy audits; and
  - c. To provide a platform for executives and professionals to exchange experiences and practices.

### 9. Background

Energy efficiency plays a critical role in an organization's productivity and competitiveness, especially in the context of rapid industrialization in APO member countries. It helps to reduce energy costs as well as environmental footprints, thus contributing to cost-effective, environment-friendly, sustainable development. Conducting energy management and auditing has thus become essential for enterprises to survive intense competition in the era of globalization.

One preliminary factor for applying energy-efficient practices is to bridge the gaps among theories, technical know-how, and actual practices of audits and management. Therefore a platform to share and exchange practical knowledge and experiences is needed to raise energy efficiency. In line with its strategic direction of promoting Green Productivity, the APO has been proactively promoting energy efficiency and energy management since 2006, including providing training courses, workshops, and e-learning courses. This workshop will disseminate knowledge of and practical methodologies for energy audits and other aspects of energy efficiency introduced in the APO multicountry observational study mission on Energy Efficiency conducted in Tokyo, Japan, from 26 to 30 January 2015, to more stakeholders in India.

## 10. Scope and Methodology

### Scope

- a. Global energy scenario;
- b. Concepts and fundamentals of energy audits;
- c. Energy efficiency demonstrations: compressed air systems, pumping systems, fan systems, boilers, steam traps, furnaces, and lighting systems;
- d. Renewable energy and applications;
- e. Case studies of thermal and electrical systems; and
- f. Overview of renewable energy options with demonstrations.

### Methodology

The workshop will consist of interactive sessions on theme presentations, demonstrations, case studies, sharing of experiences in energy audits and energy efficiency, individual/group exercises, and field visits to observe relevant facilities.

The tentative program and topics are as follows:

Date/Time	Activity
Sun., 17 Jan 2016	Arrival of participants in Chennai
Mon., 18 Jan 2016	Opening session Presentation of resource/country papers Presentation on energy savings in compressed air systems Energy saving demonstrations in a compressed air system lab
Tues. 19 Jan 2016	Compressed air system lab exercises and case studies Presentation on energy savings in pumping systems Energy savings demonstration in a pumping system lab Pumping system lab exercises and case studies Presentation on energy savings in fan systems Energy savings demonstration in a fan lab Fan lab exercises and case studies

Wed., 20 Jan 2016	Presentation on combustion and energy savings in boilers, steam traps, and furnaces Energy savings demonstration in a boiler and steam trap lab Energy savings demonstration in a furnace lab/open burner Furnace and boiler exercises and case studies Group exercises
Thurs., 21 Jan 2016	Industrial site visits
Fri., 22 Jan 2016	Presentation on energy savings in lighting systems Energy savings demonstration in a lighting lab Lighting lab exercises and case studies Overview of renewable energy and applications Presentation of group discussion output Program evaluation by participants, resource persons, and implementing organization Summing-up and closing session
Sat., 23 Jan 2016	Departure of participants

## 11. Qualifications of Participants

The participants are expected to possess the following qualifications:

Present Position	Managers/officials working in the field of energy auditing and management and responsible for implementing energy efficiency measures and environmental management.
Experience	At least three years of experience in the position described above.
Education	University degree or equivalent qualification from a recognized university/institution.
Language	All proceedings of the project are conducted in English, and participants are frequently required to make oral and written presentations. They must therefore be proficient in spoken and written English. Those who are not proficient in English will not be accepted.
Health	Physically and mentally fit to attend an intensive project requiring participants to complete a number of individual and group activities and strenuous fieldwork.
Age	Candidates who fit the above profile are typically between 30 and 50 years of age.

## **12. Resource Persons**

The APO will assign one of the resource persons from the previous APO multicountry observational study mission on this topic held in Japan. If needed, a local resource person(s) can be assigned by the implementing organization.

## **13. Financial Arrangements**

### **To be borne by the host country (India)**

- a. Implementation costs exceeding the APO share of USD10,000.
- b. Project management fees and personnel costs of the implementing organizations, including transportation of the facilitator(s) and project team to and from the project venue, meeting package for the project team, facilitator(s), and local resource person(s) during the workshop, personnel service fees for the development of the program, honorarium for the local resource person(s) if applicable, and consultation meetings with key stakeholders.
- c. Any other local implementation costs not covered by APO.

### **To be borne by the APO**

- a. All assignment costs of one resource person.
- b. Implementation costs up to a maximum of USD10,000 for making local arrangements. An itemized breakdown of the implementation costs is attached (Appendix 1).

## **14. Roles and Responsibilities**

The roles and responsibilities of the NPO and APO are:

### **NPO**

- a. Inviting local participants and arranging mass media coverage;
- b. Assigning a local resource person(s), if any;
- c. Making copies of the workshop materials;
- d. Organizing a five-day workshop in Chennai; and
- e. Bearing the balance of project implementation costs if the total amount exceeds USD10,000.

### **APO**

- a. Providing financial support for organizing the workshop as detailed in section 13;

- b. Assigning one resource person for the workshop; and
- c. Coordinating with the resource person and implementing organization.

### **15. Procedures for Project Implementation**

This project is to be implemented in close collaboration with the APO Secretariat, referred to as the APO in this document.

- a. A temporary advance of up to 50% of the total APO share will be remitted to the NPC, if necessary.
- b. The proposed project will be carried out by the implementing organization.
- c. The NPC will make the expenditures for the assigned items and settle the entire account by providing all necessary bills and receipts to the APO after completion of the workshop.
- d. The NPC will submit a project completion report and a statement of expenses supported by receipts, etc., related to the project to the APO within one month of project completion. The report will provide details on how the project was carried out in the country; program of activities; benefits and advantages to the local manufacturing and energy sectors, implementing organization(s), and host country; and follow-up action plans, among others.

### **16. Final Project Output**

Upon completion of the project, the NPC will undertake the following:

- a. Submit a project completion report on the workshop to the APO and disseminate the report on the proceedings including recommendations to relevant government bodies such as the Ministry of Industry of India within one month after project completion.
- b. Submit a statement of expenses supported by receipts/bills within one month after completion of the workshop.
- c. Submit documents and e-links relating to promotional material on the national program, e.g., newsletters, brochures, bulletins, news clippings, written in English or the local language with an English translation of the main points.
- d. Disseminate the knowledge and experience gained to the public and private sectors through publications, consulting and training services, etc.



Mari Amano  
Secretary-General

## Appendix 1

Project Code: 15-AG-39-GE-NFP-C-5

### Estimated APO Share of Costs for the Practice-oriented Workshop on Energy Efficiency

(Chennai, India, 18–22 January 2016)

No.	Item	Cost (USD)
1	Rental cost (conference room/audiovisual aids, lab equipment and machinery, etc.)	6,500
2	Reproduction of conference materials	700
3	Conference kit (bags, pens, papers, etc.)	1,250
4	Transportation (for site visit, if any)	1,000
5	Miscellaneous expenses (including local costs other than above)	550
<b>Total</b>		<b>10,000</b>
<b>Notes:</b>		
1. The APO will reimburse based on the actual expenses with a maximum of up to USD10,000.		
2. The NPC is required to submit to the APO receipts for all expenses incurred in implementing this national project.		