



ASIAN PRODUCTIVITY ORGANIZATION

PROJECT IMPLEMENTATION PLAN

30 June 2017

1. **Project Code** 16-IN-79-SPP-DMP-C-PAK
2. **Title** Development of Demonstration Companies—Energy Efficiency Program, Pakistan
3. **Reference** Project Notification 16-IN-79-SPP-DMP-C dated 1 August 2016
4. **Timing and Duration** July 2017 to March 2018
Details of the implementation schedules will be worked out separately.
5. **Implementing Organization** National Productivity Organization (NPO Pakistan)
6. **Objectives**

Under the APO Development of Demonstration Companies project, the designated National Productivity Organization (NPO Pakistan) is expected to:

- a. Showcase how a company can successfully design and implement energy efficiency and conservation (EE&C) improvement initiatives with the commitment and active participation of all stakeholders;
- b. Demonstrate visibly and tangibly how EE&C improvement initiatives lead to outstanding results for the company; and
- c. Disseminate the results of the demonstration companies to inspire other enterprises, workers, and all stakeholders to promote EE&C more vigorously in their workplaces.

7. Background

Under a special cash grant from the Ministry of Economy, Trade and Industry of Japan, the APO has been undertaking research on need assessment in Bangladesh, Mongolia, Nepal, Pakistan, and Sri Lanka. Among them, Pakistan selected the following companies for undertaking EE&C projects.

Asian Food Industries Limited

Asian Food Industries (AFI) is a food/biscuit and confectionery manufacturer based in Lahore, Pakistan. The company was established in 1969 with the Mayfair brand name. AFI serves consumers in Pakistan and in over 25 countries around the world. AFI, a family concern, was set up by the late Mehboob Elahi with the objective of developing and producing premium-quality confectionery. Now it has approximately 500 employees.

AFI faces the problems of high energy costs, high labor costs, low-skilled labor, high maintenance costs, and the need for safety and quality improvement. A safety and quality work plan was developed. The company is actively pursuing a manufacturing excellence program. ISO 14001 and OHSAS 18001 management systems are now in the implementation phase.

AFI follows a yearly work plan covering the whole supply chain including manufacturing. The factory has targets for equipment efficiency, energy efficiency, and process improvement which can lead to greater energy efficiency and the capacity building of technical staff.

Pakistan Engineering Company Limited (PECO)

Batala Engineering Company (BECO) was founded in the Indian city of Batala in 1944 by entrepreneur C.M. Latif. After 1947, the company migrated to Pakistan and started off in Lahore as an engineering setup. The company entered into technical collaborations with world-renowned organizations in Germany, Japan, the Netherlands, the UK, and the USA to lay the foundations of a modern engineering enterprise. The company developed very rapidly in the field of engineering goods. After 20 years, it was able to manufacture machine tools, along with diesel engines and pumps, tubewell accessories, electric motors, textile looms, bicycles, agricultural implements, steel structures, concrete mixers, and general engineering items. This was supported by steel smelting, steel rolling, a steel foundry, cast iron and nonferrous casting, a central tool room, forging, electroplating, galvanizing, material testing and research laboratories, and engineering and design departments. The company rapidly developed into a key industry in Asia. In 1972, the company was nationalized and renamed the Pakistan Engineering Company (PECO).

Since PECO was established more than 66 years ago, its designs, machinery and equipment, and layout are outdated. There is thus great potential to improve equipment efficiency and processes, while identifying gaps to save energy, train technical staff, and adopt new technologies and practices leading to energy savings.

Serena Hotels

Serena has established itself as one of the world's leading hospitality brands offering quality accommodation, holiday and conference solutions, and cultural heritage and adventure tourism. Its collection of 35 unique hotels, resorts, safari lodges and camps, palaces, and forts located in East Africa (Kenya, Rwanda, Tanzania, Uganda, Zanzibar), Mozambique, and Southern Asia (Afghanistan, Pakistan, Tajikistan) are in some of the world's most interesting, enchanting, historic, and exotic settings.

Serena Hotel was established in 1989 and therefore all its designs, machinery and equipment, and layouts may not comply with current benchmarks. Therefore, great potential for improvement is seen.

Moreover, high energy costs, along with high energy consumption and waste are key elements to be addressed. Building facades and orientations as well as electrical and thermal equipment are major areas to study to identify room for improvement.

8. Methodology

The APO will assign an expert(s) and he/she will visit each company at least once during 2017 and make other visits in 2017 for observance, analyses, and recommendations. The actual timing will be determined after consultations among the APO, NPO Pakistan, demonstration companies, and expert(s). In the intervals between expert visits, he/she can communicate with those concerned via e-mail, Skype, telephone, etc. for necessary advice. The program and itinerary for the first visit are as follows. These may change depending on the needs of the demonstration companies.

Day 1	Coordination meeting with the NPO Pakistan (Islamabad) and expert(s)
Day 2-4	Visit to company 1 in Islamabad
Day 5	Travel to Lahore and meeting with the NPO Pakistan (Lahore)
Day 6-8	Visit to company 2 in Lahore
Day 9-11	Visit to company 3 in Lahore, summary and review of company visits, and preparation of the subsequent schedule

9. Roles and Responsibilities

APO

- a. Assign an expert(s) for the implementation of the project;
- b. Coordinate communication among the expert(s), NPO Pakistan, and demonstration companies to ensure smooth implementation of the project; and
- c. Advise the NPO Pakistan and demonstration companies in planning and organizing follow-up activities such as developing promotional materials and/or organizing dissemination workshops or seminars for local participants so that they can learn directly from the demonstration companies' experiences.

NPO Pakistan

- a. Appoint a coordinator from the NPO Pakistan who will serve as the focal point for communication and coordinate the overall schedule for implementation of the project in the country;
- b. Provide, in addition to a coordinator, the necessary number of technical experts from the NPO Pakistan to work as counterparts to the expert(s) to be assigned by the APO, if necessary;
- c. Arrange all logistical requirements relating to the project (e.g., local transportation, discussion rooms, etc.) for the APO and NPO Pakistan team of experts;
- d. Monitor closely the process of implementation, particularly the key performance areas;

- e. Coordinate and supervise the production of a video/DVD on the demonstration companies' experience;
- f. Assist and supervise the demonstration companies in preparing an interim report and comprehensive final report for submission to the APO;
- g. Organize a dissemination workshop prior to and upon completion of the project to enable local people be aware of and learn about the start of the demonstration project as well as the activities of the APO;
- h. Compile the overall activities of the project in a practical, easy-to-follow manual/guidelines so that similar exercises can be replicated by other enterprises in the country; and
- i. Prepare a final report, stressing analyses of the impact of the demonstration project and its contribution to the NPO Pakistan's consulting capacity as well as suggestions/recommendations for replication utilizing local talent, local networks, and local resources.

Demonstration Companies

- a. Accept and facilitate consultancy services conducted by the experts assigned by the APO and NPO Pakistan team of experts;
- b. Designate a responsible official (preferably top-management level) and the necessary team members to work closely with the APO and NPO Pakistan team of experts;
- c. Video recording from the start of the process of implementation activities to produce a video/DVD upon completion of the project in association and consultation with the NPO Pakistan;
- d. Announce, publicize, and prominently display the APO's presence and involvement in the demonstration companies throughout the duration of the project;
- e. Share the experiences of the companies with local parties interested in learning about the Development of Demonstration Companies project;
- f. Present the experiences in a dissemination workshop to be organized upon completion of the project; and
- g. Prepare a comprehensive final report for submission to the APO explaining the initiatives taken during the project and their technical details along with overall analyses of the benefits and impact on the EE&C and competitiveness of the demonstration companies upon completion of the project.

10. Financial Arrangements

APO

- a. All assignment costs of the APO expert(s), i.e., honorarium, airfare, DSA, and overseas travel insurance;
- b. Total of up to USD10,000 as the local implementation costs including: production of a practical manual and a video/DVD for replication of the experience (to be prepared by the NPO Pakistan) and holding a dissemination workshop(s)/seminar(s) for the local public (to be arranged by the NPO Pakistan), for which 50% of the total cost can be advanced to the NPO Pakistan to cover the expenses soon after the Project Implementation Plan is issued, if necessary; and
- c. The remaining 50% will be paid after receiving the video/DVD, training manual, and final project report with the submission of necessary supporting documents under the applicable APO rules and regulations for the disbursement of project expenses.

The disbursement of expenses will be made at the appropriate time corresponding with the specific activities undertaken and following submission of the necessary supporting documents under the applicable APO rules and regulations for disbursement of project expenses.

NPO Pakistan

- a. Expenses relating to the assignment of a coordinator and NPO Pakistan expert(s) involved in this project.

Demonstration Companies

- a. Expenses for logistical arrangements related to the implementation of the project, including the local travel costs of the APO expert(s), as well as for NPO Pakistan experts when required due to the distance and/or location of the demonstration companies from the NPO Pakistan office/branch office;
- b. Costs associated with the purchase and installation of equipment and/or fixtures relating to the implementation of the project, if any; and
- c. All other expenses for the implementation of the project not covered by the APO and/or NPO Pakistan.

11. Accounting Procedures

- a. In regard to the expenses for the multimedia record and training manual production, 50% of the APO share can be advanced after the Project Implementation Plan is issued. The remaining 50% will be paid in exchange for the training manual, multimedia record, and final project report according to the proof of expense payment.

- b. If a local seminar/workshop is to be held, 50% of the APO share can be advanced before the seminar/workshop implementation and the remaining 50% will be paid after implementation according to the pro of of expense payment.
- c. For the settlement of expenses, the NPO is requested to provide all necessary proof of payment to the APO after completion of the program. The proof of payment, such as bills, payment records, and receipts, should be issued by third parties and must be submitted to the APO altogether at one time. The proof of payment should be written in clear English or with an English translation if not originally in English. The final payment will be made based on the actual expenditure after the NPO submits the proof of payment, training manual, multimedia record, and final project report. In general, internal evidence is not accepted as proof of payment and the expenses claimed by it will not be reimbursed.

12. Final Project Outputs

The Development of Demonstration Companies project will be completed with the submission of the following:

- a. Final reports prepared by the NPO Pakistan and demonstration companies;
- b. Practical manual for replication (in video/DVD and/or printed hard copy) prepared by the NPO Pakistan; and
- c. A video/DVD of the demonstration company experience to be prepared by the demonstration companies.

The APO will issue certificates of completion and present them to the demonstration companies upon completion of the project.



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