

MINUTES OF THE 8th PROJECT STEERING COMMITTEE MEETING
Philippine Industrial Energy Efficiency Project
05 March 2019

ATTENDEES:

Mr. Jesus Cristino P. Posadas	Sr. Undersecretary, DOE
Ms. Tonilyn P. Lim	UNIDO Representative-Philippines
Mr. Sanjaya Shrestha	Project Manager, UNIDO
Ms. Tove Sahr	Project Associate, UNIDO
Mr. Oscarlito C. Malvar	NPC, UNIDO-PIEEP
Ms. Elma Eleria	Project Evaluation Officer, DENR-FASPS
Ms. Teara Constine Rabang	Project Support Officer, DENR-FASPS
Mr. Raul Sabularse	Deputy Executive Director, DOST
Mr. Oliver Desamito	TIDS, DTI-BPS
Mr. Antonio Nabong	Sr. SRS, DOE-EECD
Mr. Christian Hernaez	SRS II, DOE-EECD
Ms. Sheena A. Ganzagan	Project Assistant, UNIDO-PIEEP
Ms. Michelle Ann R. Paguel	Training Assistant, UNIDO-PIEEP

CALL TO ORDER

The meeting was called to order by Mr. Oscarlito C. Malvar, National Project Coordinator, Philippine Industrial Energy Efficiency Project (PIEEP), at around 5:25 in the afternoon on 05 March 2019 at the Mini Conference Room in the Office of the DOE Secretary, 4th floor, Building 5, Department of Energy, Rizal Drive, Bonifacio Global City, Taguig City.

PRESENTATION OF AGENDA

The meeting discussed the following agenda:

- Adopting the Minutes of the 7th PSC Meeting held on 5 December 2017
- Project Updates
 - Project Accomplishments
 - Project Terminal Evaluation Findings
- Next Steps:
 - Hand-over of Project Assets:
 - Knowledge Management
 - Physical assets
 - Discussion on Project Sustainability
 - Project Activities to be integrated in DOE program

HIGHLIGHTS OF THE MEETING

ADOPTION OF THE MINUTES OF THE 7th PSC MEETING ON 5 DECEMBER 2017

The Chair reviewed the minutes of the 7th PSC meeting and subsequently approved subject to proofreading of the document.

PROJECT UPDATES

Mr. Malvar, NPC of PIEEP, presented updates on the following components of the project:

ENERGY MANAGEMENT SYSTEM

- With regard to the Policy Support, the Project was able to conduct policy meetings and a workshop to help identify the barriers and provide some recommendations and advice to relevant project stakeholders. The project also supported in the dissemination of DOE's Departmental Administrative Order 110 and Circular 930305 during the capacity building activities. For the Local Government Unit level support, the project facilitated a Memorandum of Understanding (MoU) between the DOE and the Quezon City local government, which was signed last 2016. One of the highlights of the MoU is the plan of the Quezon City to incorporate Energy Management System as a tool for the Carbon Bank - a virtual bank where enterprises under the local government's jurisdiction can make deposits in the form of equivalent CO₂ emissions avoided upon implementing the EnMS in their factories. Companies that will implement the EnMS will earn business privileges or incentives upon renewing their business licenses/permits to operate in the city government of QC;
- With regard to the training materials and tools on EnMS, the Project developed and disseminated User Training Manual, Auditor Manual and Experts Module for EnMS. Each set is catered for factory personnel, auditors and national experts respectively;
- With regard to the National Awareness campaign on ISO 50001, the Project has produced banners, brochures, flyers and infographic promotional materials as well as created a website to increase awareness and to provide updates on the progress and achievements of the Project; The Project has also participated in various energy forums and stakeholders' conferences hosted by the DOE nationwide;
- With regard to the peer-to-peer network, the Project initially used a paid platform (Basecamp) to serve as an online forum where national experts can exchange ideas and discuss best practices to optimize the energy systems such as steam, compressed air and pump. Currently, the Project is using the free Facebook group platform as an online forum.
- With regard to the target number of local experts and factory personnel, the Project was able to:
 - Train and certify 44 local EnMS experts
 - Train 1,992 factory managers and staff on EnMS
 - Train 1,034 factories on EnMS implementation

- With regard to the target ISO-compliant EnMS implemented, the Project was able to:
 - Assist 45 companies to fully implement the EnMS – out of which 10 were able to achieve ISO 50001 certification
 - Develop 14 case studies on companies fully implementing the energy management system
- With regard to the recognition program, the DOE created a special category for companies implementing the Energy Management System and were duly recognized at the Don Emilio Abello Energy Efficiency Award. The companies awarded undergo rigid checking and evaluation of UNIDO international experts and local experts for thorough verification before being submitted to DOE for recognition.

SYSTEMS OPTIMIZATION

- The Project prepared and developed training materials and tools on Systems Optimization, such as User Training Manual, Vendor Training Manual and Experts Module. Each manual is catered for national experts, vendors and factory personnel respectively;
- With regard to the target number of local experts and factory personnel, the Project was able to:
 - Certify 44 local experts out of the 90 trained in pump, compressed air and steam systems;
 - Train 1,172 factory managers and staff;
 - Train 424 factories on the use and application of UNIDO developed tools for systems optimization;
- With regard to the target number of energy equipment sellers and vendors, the project was able to train 29 companies selling steam, compressed air and pump systems;
- With regard to the target documented industry demonstration projects, the Project was able to verify that:
 - 34 system assessments were conducted, of which 14 on compressed air systems, 14 on steam systems, and 6 on pump systems;
 - A total of 163 factories implemented SO projects
 - 6 case studies were developed on the systems optimization approach.

ENHANCEMENT OF FINANCING CAPACITY

- With regard to the harmonization of energy efficiency project evaluation criteria, the Project developed a questionnaire tool, which was distributed to 5 participating financial institutions and 15 industries;
- The Project also developed a set of training materials for national experts, financial institutions and industries;
- The Project was able to train 74 factory managers and staff from 43 factories, 52 bank managers from 22 banks and 38 national experts on the financial aspects of preparing an energy efficiency project.

PROJECT ACHIEVEMENTS

Mr. Malvar presented the following achievements of the project:

- The Project was able to saved 9,852,410 GJ of fuel, 425,560 MWh of electricity, and avoided 1, 613,090 tCO₂ emissions during its implementation;
- The total investments made by companies who implemented the EnMS and SO amounted to Php 528,443,000 (using internal funds) that corresponds to an energy savings equivalent to Php 795,964,731/year;
- The Project was able to facilitate the partnership between DOE and institutions as well as industry associations, namely:
 - Philippine Economic Zone Authority (PEZA)
 - Quezon City Local Government
 - Philippine Association of Water Districts (PAWD)
- Most importantly, the Project was able to establish and gain recognition from industry the local experts' expertise as resource persons in energy management system workshops and trainings and setting up the energy management system and systems optimization application;
- The local experts are being paid for their services as resource persons in trainings, technical site assessments and setting-up the system by the industry.

PROJECT TERMINAL EVALUATION FINDINGS

- Mr. Malvar reported the findings of the terminal evaluation conducted by an independent evaluator in the 3rd week of January 2019. The independent evaluator rated the project's overall performance as satisfactory. In the case of other criteria, the table below shows the project's ratings:

Criteria	Rating
Project design	Moderately satisfactory
Relevance	Highly satisfactory
Effectiveness	Satisfactory
Efficiency	Satisfactory
Sustainability of benefits	Moderately likely
Monitoring and evaluation	Satisfactory
Quality at entry/Preparation and readiness	Satisfactory
Implementation approach	Satisfactory
UNIDO backstopping	Highly satisfactory

- According to the findings during the terminal evaluation, the following lessons learned could be identified:
 - Activities related to market transformation can benefit from the involvement of institutional organizations and special interest association as partners. Mr. Malvar elaborated further that the project's partnership with PEZA provided an avenue for a structured implementation given PEZA's organizational capability to enforce regulations among their

business locators. PEZA can integrate in their policies to include EnMS implementation as one of their conditions for business locators in the economic zones;

- Start-up of an industrial energy efficiency program should involve larger and better-resourced industrial establishments where the probability is higher for successful implementation of EE projects and quickly demonstrating the benefits.
- The terminal evaluation findings concluded that:
 - The Philippines Industrial Energy Efficiency Project was a significant contributor in catalyzing interest in industrial energy efficiency in the Philippines;
 - The popularity of the trainings could be attributed to strong partnerships with industrial associations and institutional partners;
 - The PIEEP's financial training will be very valuable to industrial SMEs needing to comply with the newly promulgated EECA;
 - Challenges lie ahead for the implementation of the EECA including the need to:
 - Formulate implementing rules and regulations within the prescribed period of 6 months as mandated by law;
 - Adopt a strategic approach for the adoption of EnMS in the industrial sector that aligns with the Energy Efficiency and Conservation Roadmap for 2014 to 2030; and
 - Address the DOE's capacity constraints, most notably its shortage of staff and critical number of national experts who could be dedicated to assist DOE in a strategic approach to implementing the EECA;
- The following recommendation based on the terminal evaluation findings are:
 - Prepare a detailed profile of the Philippines industrial sector that will provide DOE a basis for identifying future IEE programmes;
 - Identify strategic needs for facilitating "industrial sectoral" implementation of the EECA;
 - During the initial phase of industrial sectoral implementation of EECA, focus on developing "process MEPS" to facilitate use of best EE technologies and equipment;
 - Sustain strengthened linkages with institutional partners built under PIEEP including LGUs, water districts, electric cooperatives, hospital associations, and PEZA under a green city initiative;
 - Immediately undertake actions to form an EnMS experts association;
 - Strengthen linkages with universities and technical colleges to include EnMS and systems optimization in their curriculum;
 - Seek donor funding from bilateral sources to bridge the period between the end of PIEEP (31 March 2019) and the commencement of the subsequent project on energy efficiency;

- If possible and with DOE consent, expand scope of IEE to include RE solutions in subsequent programming in the Philippines to reduce operational costs and improve competitiveness of industrial sector;
 - Assist DOE to strengthen linkage with Philippines Development Bank with SME lending window;
 - Assist DOE to intensify PEZA involvement in developing and mainstreaming industrial parks in the Philippines to Eco-Industrial Zones or Parks (EIPs)
- Mr. Posadas commented that the Project have over-achieved its targets. He said that it is really relevant due to what Mr. Malvar pointed out with regards to the Energy Efficiency and Conservation Act (EECA). He highlighted that with the EEC Act implemented, there will be no more volunteerism involved and energy management will be mandatory. He stated that the DOE and the Energy and Utilization Management Bureau will have to step up to be able to draw the IRR (Implementing Rules and Regulations). He added that promulgation of the EEC Act is very timely after 30 years of discussions and that among the ASEAN countries, the Philippines were the last to come up with a law addressing energy efficiency and conservation.

NEXT STEPS

- **Hand-over of project assets and discussion on project sustainability**
 - Mr. Malvar stated that all the knowledge management materials such as the database, reports, training materials and guidelines that the Project have developed will be put on a flash drive (USB) and the physical assets like audit equipment, office equipment and also the project vehicle will be handed over to the DOE. He said that the PMU already prepared and properly cataloged the knowledge management materials and are just waiting for the DOE's official acknowledgement in the remaining weeks of the Project. He added that he already talked and discussed these issues with Mr. Habitan and was advised that the PMU office, for the time being, will be used as the temporary storage of all the knowledge management materials as well as energy audit equipment, until a permanent repository will be identified;
 - Mr. Malvar also raised the matter on how the pool of local experts trained and certified by the Project can assist the DOE, especially for companies who wants to avail the services of the pool of experts. The transfer of the Project's website should be integrated with the DOE's website;
 - Mr. Posadas said that it is an IT matter and he will ask the DOE's IT office to do the migration. In addition, Mr. Posadas also mentioned that the EEC Act will require an energy database, just like in the Philippine energy plan; He mentioned that the Act will require a Philippine Energy and

Conservation plan and that it will have to be institutionalized and mandatory;

- Mr. Shreshta added that they also like DOE to post the training materials in DOE's website so that anybody interested that would like to be trained on EnMS and SO can easily download it from the website;
- Mr. Posadas said that it is a good idea. He added that there will also be a need for certification of energy managers;
- Mr. Malvar added that there will be a need for certification of auditors as well. He said that the training materials can be used by energy auditors who want to be certified as energy auditors;
- Mr. Sabularse suggested looking for the possibility of using online training via the internet. Online training can then be followed by an online examination, but actual practice should be included before certification of energy managers and energy auditors;
- Mr. Shreshta shared that UNIDO already tried online training in Thailand. He said that in Thailand, the training materials were available online to anybody who are interested and can readily access it since Thailand is in the advance stage in terms of energy efficiency training. He shared that Thailand is eager to use an online training platform due to the very strong demand for that kind of training. He added that it was not tried in the Philippines and in the other ASEAN countries since the energy efficiency market is not yet matured like in Thailand;
- Mr. Posadas welcomed the idea and said that in the future the DOE could also do it;
- Mr. Malvar asked how the trainings will be conducted when PIEEP wraps up. He also asked if the DOE will be the one to conduct the trainings and tap the national experts;
- Mr. Posadas said that the capacity building activity is an ongoing program of the DOE and with the advent of the EE&C law; he thinks that not only industrial associations will be requesting training, but other sectors as well. Mr. Posadas opined that the Department's capacity must be brought up with the necessary manpower to address the demand and added that the recommendation of the terminal evaluation to form an association of all local experts who graduated under the UNIDO project would be of great assistance in addressing the need for capacity building.

ADJOURNMENT

Having no more business to discuss, the meeting adjourned at 6:21 p.m.

Prepared:

MS. MICHELLE ANN R. PAGUEL
UNIDO Training Assistant, PMU-PIEEP

Noted:

MR. OSCARLITO C. MALVAR
National Project Coordinator, PMU-PIEEP

Approved:

MR. JESUS CRISTINO P. POSADAS
Sr. Undersecretary and National Project Director