

Energy Efficiency and Conservation Guidelines for Malaysian Industries

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INTRODUCTION

“Waste not, Want not!” goes the wise saying. Waste management started with the control of wastage at the end of the pipeline but slowly progressed to that at the source following another wise adage of “Prevention is better than cure!” Hence it is about time Malaysia puts in some effort to popularise Energy Efficiency (EE) and Energy Conservation (EC) in our local industries with introduction of related guidelines to be accepted, adopted and practiced by all concerned.

The primary goal of the Energy Efficiency (EE) and Energy Conservation (EC) Guidelines are to assist industries in Malaysia to achieve better energy efficiencies and energy conservation of natural resources leading to sustainability and reduction of greenhouse gases emission leading to less air pollution and global warming.

PRELUDE TO ENERGY EFFICIENCY (EE) AND ENERGY CONSERVATION (EC)

The development of EE and EC Guidelines is one of the additional programmes of the Malaysian Industrial Energy Efficiency Improvement Project (MIEEIP), a project implemented by Pusat Tenaga Malaysia and co-funded by the Malaysian Government, United Nations Development Programme (UNDP), Global Environment Facility (GEF) and the local private sector, which has been implemented since July 2000 with the principal objective of improving energy efficiency in the industrial sector.

The development of the guidelines was guided with assistance from Japan. As a result of a Policy Dialogue between Malaysian and Japanese governments, the Ministry of Economy, Trade and Industry (METI) Japan through the Green Partnership Program (GPP) has agreed to provide support to the Energy Conservation Programme in Malaysia. Under the stewardship of Kementerian Tenaga, Air dan Komunikasi (KTAK) and Suruhanjaya Tenaga (ST), Pusat Tenaga Malaysia (PTM)



Group photo of workshop participants at A'Famosa, Melaka

in collaboration with Japan External Trade and Organisation (JETRO) has been commissioned to develop the Guidelines on EE and EC for the Malaysian industries with specific objectives as listed below:-

1. To promote EE and EC activities in the Malaysian industries particularly through the energy benchmarking of commonly-used equipment;
2. To provide guidelines for industries to establish their respective standards for the efficient use of energy and internal benchmarking, which shall complement the on-going Energy-use Benchmarking Programme of the MIEEIP;
3. To encourage the industries to use the guidelines as a reference document for energy conservation and achieve at least 1% energy savings per year;
4. To reduce the emission of greenhouse gases that have global warming potentials through efficient use of energy in equipment.

PHASE ONE

The first phase of the project will be the formulation of guidelines that covers

electrical equipment as follows:-

1. Motors
2. Pumps
3. Chillers
4. Air compressors
5. Fans and Blowers
6. Cooling Towers
7. Lighting
8. Transformers

The objective of the guidelines is to provide standard values and set guidelines on efficient utilisation which will provide the target standard value for equipment's energy consumption and performance, selection of equipment and the best practices on the standard criteria of measurement, monitoring and recording with respect to the mode of operation, inspection and maintenance.

ROLE OF IEM IN THE ORGANISATION STRUCTURE OF THE PROJECT

IEM plays an important role in this project with members participating in all the Working Groups (WG) as members with the Mechanical Engineering Technical Division (METD) heading the WG on Pumps and Air Compressors and the Electrical Engineering Technical Division heading the WG on Transformers.



Handing over of the final draft on Transformers to Deputy Director of PTM

IMPORTANT MILESTONES OF THE PROJECT

(a) Preparation

The entire project will span over a three year period beginning in the middle of 2006 and expected to complete by the year 2008. The first workshop was convened on 14 August 2006 with the formation of the Working Groups and to

lay down the Terms of Reference, to chart action plans and strategic approach to tie in with the schedule specified.

Each of the Working Groups carried out individual separate meetings to work on their respective guidelines which were then presented to all other Working Groups together with the experts from Japan in

the Second Workshop in 15-16 September 2006. Discussions and comments from all were noted and worked upon to arrive at the final draft of the respective guidelines.

The final drafts were again presented and reviewed recently in January 2007 and the feedback would be incorporated into the final drafts to be compiled by

PTM with collaboration from the Japanese experts.

(b) Implementation

Once the final draft of the guidelines is ready, they have to be disseminated to all the stakeholders with publication as reference to be used by the industries. The various phases for their promotion have to be identified and the most effective method chosen to ensure the success of the project. The out-reach awareness programme has to be well planned in order to reach all stakeholders.

The training of trainers programme has also to be implemented at the same time to ensure the expected outcome of acceptance of the guidelines.

Demonstration projects will also have to be planned and implemented to build up base-line data to tell the success stories and become the flagship towards voluntary acceptance, commitment and adoption of the culture of energy efficiency and energy conservation to ensure sustainable development and a better future. ■