

MASTERCLASS ON PROCESS INDUSTRY ENERGY AUDIT

COURSE OVERVIEW

With the advent of the Energy Conservation Act, energy intensive Process Industries (Refineries, Petrochemical Plants, Specialty Chemicals and Food Processing) will have to submit annual Energy Efficiency improvement plans to the NEA. To be able to do that, Energy Audits need to be carried out annually to identify potential improvement areas.

As there are so many varied processes, equipment and systems, Energy Auditing in the Process Industry is therefore a demanding discipline in terms of the knowledge that is required as described above. Another facet that determines whether a facility is operated in an Energy Efficient way is whether it has good Energy Management System that ensures systematic measurement and control.

LEARNING OBJECTIVES

This Masterclass from Actsys Process Management Consultants Pte Ltd in collaboration with SEAS, is intended to give an overview and to create an awareness of the knowledge required to carry out an Energy Audit.

Actual case studies from numerous Energy Audits that have been carried out by Actsys will be discussed to illustrate key learning points. Hands-on exercises will be provided with preconfigured spreadsheets for participants to visualise learning points. For some of the equipment demonstrations will be carried out with simulation models.

**PDUs TO BE
AWARDED TO SCEMs
& PROFESSIONAL
ENGINEERS**

**APPLICABLE FOR
PRODUCTIVITY AND
INNOVATION CREDIT (PIC)**

17 - 19 MAY 2016

9:00AM - 5:00PM

SEAS Training Centre

9 Penang Road, #08-02 Park Mall, Singapore 238459



MASTERCLASS ON PROCESS INDUSTRY ENERGY AUDIT

PROGRAMME OUTLINE

Energy Auditing - What is it all about?

A description of all the activities including measurements and calculation tools will be given in order for the participant to get an appreciation of the steps involved in carrying out an Energy Audit.

Common Equipment & Energy Performance

This is followed by presentations of typical equipment, unit operations and utility systems that are in the process industry. The basic operating principles and energy performance of the following common equipment will be discussed in addition to how their energy performance will affect the overall plant energy efficiency.

Process System Energy Efficiency Performance

The above section deals with individual process equipment and their related energy efficiency aspects. How such equipment are operated as a system can also make a difference to overall plant energy efficiency. It is therefore essential to also perform comprehensive analysis of the system as a whole. This following section gives an overview of energy efficiency improvement possibilities of process systems.

ISO 50001 Energy Management System

The final section of the masterclass will be to help the participant determine if his own workplace is compliant to ISO 50001 Energy Management System standard. Ultimately for any workplace to be a top performer in Energy Efficiency, it should have the proper management processes in place and ISO 50001 provides a comprehensive checklist. This module provides a familiarization of the elements of ISO 50001 and in particular details and examples will be given.

**Energy Survey at each Participant's Plant Facilities (1 day)

In order to help consolidate the learning from this Master Class, an onsite 1 day Energy Survey will be conducted by an Actsys consultant together with the respective participant to put into practice newly acquired knowledge and to have a 1-1 coaching by the Actsys consultant.

ABOUT THE TRAINERS



Mr. Norman Lee is the Managing Director and Founder of ACTSYS, providing consultancy services for performance monitoring and energy optimization of power plants, refineries, and petrochemical complexes.

With more than 30 years of industrial experience in British Petroleum and Shell, Norman is a leading consultant in thermal conversion, distillation, gas treating and utilities, providing plant performance monitoring and technological services for refinery projects, plant modification and optimization.

Norman graduated from Imperial College, University of London in 1979 with a first class honours degree in Chemical Engineering. He also completed his M.Sc Advanced Chemical Engineering degree from the same university. He is a Fellow of the Institution of Chemical Engineers (UK) and a Singapore Certified Energy Manager.



Ms. Liu Shanshan is a consultant of ACTSYS with extensive experience in handling local and regional projects with combined cycle and cogeneration based power plants. She has performed power plant feasibility studies, power plant performance monitoring, root cause analysis in power plants, energy audit, trouble shooting projects and performance assessment projects.

Shanshan graduated with BSc Chemical Engineering degree from the University of Alberta Canada in 2007. She worked in Suncor Energy Oil Sands project in Alberta before joining Actsys in 2008.

RATES

EARLY BIRD (before 29 April)	NORMAL FEE	GROUP FEE
S\$1,200.00 (SEAS Member)	S\$1,510.00 (SEAS Member)	S\$1,440.00 (4+ delegates from 1 organization)
S\$1,510.00 (Non Member)	S\$1,832.00 (Non Member)	

* EENP member is entitled to SEAS member rate

* Fees inclusive of GST

* Payment to SEAS & Address: Please send a crossed cheque to:

Sustainable Energy Association of Singapore, 9 Penang Road, #08-02 Park Mall, Singapore 238459

CALL US AT 6337 9886 TO ENQUIRE

REGISTRATION FORM Yes! I would like to register for this programme I am unable to attend but please put me on your mailing list

PARTICIPANT'S DETAILS	Number of Delegates	Fees Payable
1	Name (Dr/Mr/Mrs/Ms) HP No Email	NRIC No Designation PEB <input type="text"/>
2	Name (Dr/Mr/Mrs/Ms) HP No Email	NRIC No Designation PEB <input type="text"/>

ORGANIZATION'S DETAILS

Company Name	
Company Address	
Contact Name	Tel
Email	Fax