

**AEMAS**

ASEAN Energy Manager Accreditation Scheme

**4 STAR RATING**
by HRDF

ENERGY MANAGER TRAINING COURSE (EMTC)

Date
23 – 27 September 2019

Venue
Bangi Resort Hotel
(Tentative)

Normal	: RM 4,240 / pax
AEMAS National Council	: RM 4,028 / pax
GTM Employee	: RM 4,028 / pax
Group of 4 (and above)	: RM 4,028 / pax
Early bird*	: RM 100 Discount / pax

* Price including 6% SST effective from 1st March 2019.

* Early bird rate : payment must be made fourteen (14) days before the training date.

AEMAS is the world's first regional certification system for energy managers and energy end-users. Partly funded by the European Union under the Switch-Asia Programme, it is currently being implemented by the ASEAN Centre for Energy in eight (8) ASEAN Member States, namely: Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Thailand and Vietnam. The scheme was launched by Yang Berhormat Dato' Seri Peter Chin Fah Kui, Minister of Energy, Green Technology and Water Malaysia on 19th July 2011 at Marriott Hotel, Putrajaya. It supports to make Malaysia greener by decreasing the carbon emission intensity by 40% by the year 2020 and Efficient Management of Electrical Energy Regulation 2008.

The overall objectives of the scheme are: 1) to reduce energy consumption from the manufacturing industrial sector in ASEAN; 2) to reduce emissions of greenhouse gases in ASEAN; and 3) to increase the professional standing of accredited energy managers. AEMAS consist of guidance on how to develop Sustainable Energy Management System in energy facilities that comply to requirement under ISO 50001 with the added benefits and advantages of achieving real and quantifiable energy savings and CO2 emission reductions.

Course Objective :

Energy Manager Training Course has been designed to provide knowledge and skills to implement Sustainable Energy Management Systems to all Energy Managers and certify them under the scheme.

Pre-requisites for participant :

- Age above 21 years old with proficient in English
 - Holds a degree in Engineering, Science, Economic, Accountancy, Law etc
 - 2 years experiences in Supervisory / Managerial Role
- (All supporting document must be certified true copy by Superior or HR department)

Who should attend?

Future Energy Managers - Profesionals from any dicipline - Facility/
Maintenance managers or Engineers - Industry personnels –



Registration Form

To confirm your registration, kindly complete this form and email to us at training@greentechmalaysia.my
For course enquiry, please contact us at: 03-8921 0800 ext 1891 or visit www.greentechmalaysia.my

Training date : _ _ _ / _ _ _ / _ _ _
Venue : _ _ _ _ _
Type of Payment (please tick):

Reg. No.	MGTC/DC/REC/GC-001
Revision	0
Date	1/6/2018

<input type="checkbox"/>	Cash
<input type="checkbox"/>	Cheque (no)
<input type="checkbox"/>	Local Order (Government Only)
<input type="checkbox"/>	HRDF (invoice is not required)
<input type="checkbox"/>	Tax invoice

• Organisation Details :

Contact Person :

Designation :

Tel : Fax : Email :

Company Stamp and Address

• Participant Details (1) :

Full name (as per IC) :

Designation : Mobile Phone : Email :

Highest Education level : () Vegetarian Meal

• Participant Details (2) :

Full name (as per IC) :

Designation : Mobile Phone : Email :

Highest Education level : () Vegetarian Meal

• Participant Details (3) :

Full name (as per IC) :

Designation : Mobile Phone : Email :

Highest Education level : () Vegetarian Meal

Please attach copy of the following :

- Identification Card (I.C)
- Highest Education Certificate (min. Degree level)*
- Brief CV*

*certified true copy by superior or HR department

Payment Details :

- Payment should be made to "Malaysian Green Technology Corporation" (CIMB Islamic Bank Berhad: 86-0043462-1).
- Payment by Local Order is only for Government, Government Agencies and Government-linked companies

Terms and conditions:

Programme Fee

- ✓ Fee includes refreshment, course materials, and certificate.
- ✓ Admittance will only be permitted upon receipt of full payment.
- ✓ For Government, Government Agencies and Government-linked companies, guarantee letter is accepted however payment must be made within 14 working days after the completion of training.

Cancellation/Transfer

✓ Upon registration, participant(s) are considered successfully enrolled in the event. Should participant(s) decide to cancel/transfer their enrolment, a cancellation/transfer policy shall be applied as follows:

- Written cancellation/transfer received less than five (5) working days from the date of programme:
 - A refund (less administrative charge of 20%) will be made
 - Unpaid registrations will also be liable for 20% administrative charges
- Written cancellation/no show on the day of the programme:
 - No refund will be entertained
 - Unpaid registrations will also be liable for full payment of the registration fee
 - Partial cancellation is not allowed

Substitution of participant(s) is allowed with no additional charge provided MGTC must be notified in writing of the name and designation of the new participant(s) five (5) days from the date of programme.

Certificate of Attendance and CPD Hours

- ✓ Upon full attendance of the programme, participants will be issued an Attendance Certificate during last day of training.
- ✓ The CPD hours will be stated in the Attendance Certificate. Participant(s) details will be submitted to ST within two (2) weeks after the programme.

Data Protection

- ✓ Personal Data is gathered in accordance with the Personal Data Protection Act 2010 (Act 709).

Disclaimer

- ✓ MGTC reserves the right to change the venue, facilitator, and reschedule or cancel the course whenever deemed necessary. We shall inform the participant(s) if any changes arise. MGTC also reserves the right to make alternative arrangements without prior notice should it be necessary to do so. Upon signing the registration form, you are deemed to have read and accepted the terms and conditions.

COURSE CONTENT

SYNOPSIS

Energy Manager Training Course has been designed to provide knowledge and skills to implement Sustainable Energy Management Systems to all Energy Managers and certify them under the AEMAS scheme. The program will assist participants to prepare an action plan on how to implement energy management system (EMS) at the workplace.

WHO SHOULD ATTEND

Future Energy Managers, Professionals from any discipline, Facility/ Maintenance managers or Engineers - Industry personnel, Malaysian Energy Professionals Association (MEPA) members.

Pre-requisites for participants:

- Age above 21 years old with proficient in English
- Holds a degree in Engineering, Science, Economic, Accountancy, Law etc
- 2 years experiences in Supervisory / Managerial Role

LEARNING APPROACH

Practical sessions where lectures will be supported with hands-on exercises, examination, group project report and presentation

COURSE OBJECTIVES

To develop Sustainable Energy Management System in energy facilities that comply to requirement under ISO 50001 with the added benefits and advantages of achieving real and quantifiable energy savings and CO2 emission reductions.

LEARNING OUTCOME

Upon completion of the course participants shall be able to prepare an action plan on how to implement energy management system (EMS) at the workplace that contribute to high energy consumption in the workplace

COURSE OUTLINE

Day 1 schedule

TIME	DURATION (MIN)	SESSION	SUBJECT
0830 1000	120	Registration, Opening & TC-0.1	<ul style="list-style-type: none"> Registration Welcoming speech & Opening remark deliver by GreenTech Malaysia Introduction to AEMAS
1000 1015	15	TEA BREAK	
1015 1130	75	TC-0.3	ENERGY POLICIES & LEGISLATIONS (1hrs 45min) 0.1 Introduction 0.2 Energy Policies in Malaysia 0.3 Legislations Related to Energy Management
1130 1215	45	TC-0.1	GLOBAL & LOCAL ENERGY TRENDS
1215 1315	60	TC-0.2	ENERGY EFFICIENCY STANDARD & LABELING
1315 1430	75	LUNCH	
1430 1545	75	TC-1	INTRODUCTION TO SUSTAINABLE ENERGY MANAGEMENT (2hrs 45min) 1.1 Introduction to AEMAS & Sustainable Energy Management 1.2 Definition and role of Energy Manager
1545 1600	15	COFFEE BREAK	
1600 1700	60	TC-1	1.3 Responsibilities of Energy Manager 1.4 Recommended Code of Practice for Energy Manager QUIZ SESSION

Day 2 schedule

TIME	DURATION (MIN)	SESSION	SUBJECT
0900 1045	105	TC-2	SETTING UP A SUSTAINABLE ENERGY MANAGEMENT SYSTEM (8hrs 45min) 2.1 Effective Tool for Appraising Energy Management Performance or Organization 2.2 Methodology for Preparation of Energy Management System 2.2.1 Energy Policy
1045 1100	15	TEA BREAK	
1100 1315	135	TC-2	2.2.2 Effective Energy Management Committee 2.2.3 Energy Accounting Centres (EAC) 2.2.4 Energy Efficiency Index (EEI) 2.2.5 Working Manual for Tools for Energy Management 2.2.6 Energy Management Working Procedures
1315 1430	75	LUNCH	
1430 1545	75	TC-2	2.2.7 Investment Appraisal for Energy Efficiency Project 2.2.8 Human Resources Development in Energy Management 2.2.9 Documentation in Energy Management System
1545 1600	15	COFFEE BREAK	
1600 1700	60	TC-2	2.3 Setting of Energy Target and Plan 2.3.1 Organizing Energy Audit and Analysis 2.3.2 How to set Energy Target & Plan (ET&P) 2.3.3 Measurement and verification

Day 3 schedule

TIME	DURATION (MIN)	SESSION	SUBJECT
0900 1045	105	TC-2	2.4 Integration of Energy Management System into Business Practice 2.4.1 Monitoring System 2.4.2 Reporting System 2.4.3 Integration of Energy Management System with other quality or standard system QUIZ SESSION
1045 1100	15	TEA BREAK	
1100 1315	135	TC-3	MANAGING ACTIVITIES IN SUSTAINABLE ENERGY MANAGEMENT (3hrs) 3.1 Project Management & Controlling 3.1.1 Project Management & Controlling Techniques 3.1.2 Budget & Resources Management 3.2 Energy Management & Performance Review 3.2.1 Performance Review – Strategy and Approaches
1315 1430	75	LUNCH	
1430 1545	75	TC-3	3.2.2 Conducting Performance Review QUIZ SESSION
1545 1600	15	COFFEE BREAK	
1600 1700	60		GROUP PROJECT DISCUSSION

Day 4 schedule

TIME	DURATION (MIN)	SESSION	SUBJECT
0900 1000	60	TC-4	FUNDAMENTAL OF ELECTRICAL SYSTEM (2hrs) 4.1 Overview of Energy 4.2 Electrical Energy Basics 4.3 Electrical Loads and Maximum Demand 4.4 Power Factor and Capacitors 4.5 Transformer 4.6 Electricity generation, Transmission and Distribution Structures and Classifications 4.7 Electricity Unit and Conversion
1000 1100	60	TC-5	UNDERSTANDING OF ENERGY PRICING AND ELECTRICITY BILLS (1hr) 5.1 Structure of Energy Pricing Related to Electricity Supply 5.2 Understanding of Electricity Billing System and Electricity Bills
1100 1115	15	TEA BREAK	
1115 1230	75	TC-6	INTRODUCTION TO ENERGY AUDIT (1hr 15min) 6.1 Definition 6.2 Need and Approaches in Energy Auditing 6.3 Methods and Approaches in Energy Auditing 6.3.1 Energy Audit Process 6.3.2 Guidelines 6.3.3 Instruments and Applications 6.4 Criteria of an Effective Energy Audit and Report 6.4.1 Energy Audit Process 6.4.2 Guidelines 6.4.3 Instruments and Applications 6.5 Measuring and Monitoring Equipment

TIME	DURATION (MIN)	SESSION	SUBJECT
			6.5.1 Energy Analyzer 6.5.2 Tachometer 6.5.3 Lux Meter 6.5.4 Amp Meter 6.6 Energy Management Monitoring and Control Equipment or System 6.6.1 Building Management System (BMS) 6.6.2 Building Automation System (BAS)
1230 1315	45	TC-7	ENERGY EFFICIENCY AND CONSERVATION POTENTIALS (2hrs) 7.1 Electric Motors 7.2 Compressed Air System
1315 1430	75	LUNCH	
1430 1545	75	TC-7	7.3 HVAC and Refrigeration System 7.4 Cooling Tower 7.5 Fans and Blowers 7.6 Pumps and Pumping System 7.7 Lighting System 7.8 Office Equipment 7.9 Control and Variables Speed Drives 7.10 Energy Efficient Technologies and Application in Electrical System 7.11 Boiler
1545 1600	15	COFFEE BREAK	
1600 1700	60	GROUP PROJECT DISCUSSION	

Day 5 schedule

Theoretical Test & Group Project Presentation

TIME	DURATION (MIN)	SESSION	SUBJECT
0900 0915	15	BREAKFAST	
0915 1215	180	THEORETICAL TEST	
1215 1445	175	LUNCH	
1445 1645	120	TEAM PROJECT PRESENTATION	
1645 1700	15	Closing Remark by MGTC	
1700 1715	15	COFFEE BREAK	