Please fax or email the	e registration form to:
-------------------------	-------------------------

Sustainable Energy Development Authority Malaysia, Galeria PjH, Aras 9, Jalan P4W, Persiaran Perdana, Presint 4, 62100 Putrajaya No. Tel: 03-88705850/03-8870 5852/54 No. Fax: 88705900 Email : rizal@seda.gov.my / hambali@seda.gov.my

Postcode:	City:	State:	
Phone No.:	Fax No.:	H/P No.:	
Email:			

Disipline / Major in:

I hereby confirm that the information provided is true and correct and understand the terms and condition below.

Signature

Name :

#### **TERMS AND CONDITIONS**

1) The registration fee is not refundable and no cancellation is allowed except for replacement.

2) A replacement can only made latest by two weeks before the event.

3) Each participant MUST send the registration form together with the payment slip (for electronics fund transfer – EFT) or photocopy of cheque (together with the bank-in slip) as proof of payment.

4) Registration of participant does not warrant confirmation of seat until payment has been made. The seat will only be allocated once payment is received by SEDA Malaysia.

5) The training is limited to 30 participants only.

6) Payment can be made by cheque or electronics fund transfer (EFT) via Cimbclicks only to:

Bank account number and bank details :

Account Owner	:	Sustainable Energy Development Authority Malaysia
Account No.	:	8600308067
Bank Name & address	:	CIMB Bank Berhad
Swift Code	:	CIBBMYKL



# ENERGY EFFICIENCY MANAGEMENT FOR AIR-CONDITIONING AND **MECHANICAL VENTILATION (ACMV)** TRAINING

4<sup>th</sup> – 5<sup>th</sup> OCTOBER 2017

AUDITORIUM SEDA MALAYSIA Fee: RM1,500 /pax (Inclusive GST) Eligible for 8 hours credit of CDP for Registered Electrical Energy Manager (REEM)

Time	Торіс	Duration
8.30 a.m	Participants Registration	30 mins
9.00 a.m.	Introduction & Overview of the Training Program	15 mins
9.15 a.m.	Chapter 1: Introduction to Air-Conditioning &	1 hr
	Mechanical Ventilation	
	Principles of Refrigeration	
	Psychometrics	
	Cooling Load Estimation & Software	
10.15 a.m.	Break	15 mins
10.30 a.m.	Chapter 1: Introduction to Air-Conditioning &	1 hr 30 mins
	Mechanical Ventilation (cont.)	
	Refrigerant Issue	
	• Types of Air-Conditioning Systems (introductory)	
	Types of Mechanical Ventilation Systems	
	(introductory)	
1.00 p.m.	Lunch Break	1 hr 15 mins
2.15 p.m.	Chapter 2: Factors Affecting Air-Conditioning	1 hr
	Design	
	Human Comfort	
	Indoor Design Conditions	
	Outdoor Design Conditions	
	Ventilation Requirements	
	Heat Source (Radiation, Convection & Conduction)	
215 n m	Conduction)	1E mine
3.13 p.m.	Chapter 2: Tupes of ACMV System - Design &	13 1111115 2 hr 20 mins
5.50 p.m.	Selection	2 111 30 1111113
	Design and Selection of ACMV	
	ACMV Systems	
	Chapter 4: Understanding Cooling Load & Load	
	Profile	
	Peak Cooling Loads	
	Diversity Factors	
	Base Cooling Loads	
	Phantom Loads	
6.00 p.m.	End of Day 1	

### PROGRAM OUTLINE DAY 2

Time	Торіс	Duration
9.00 a.m.	Chapter 4: Understanding Cooling Load & Load	15 mins
	Profile (cont.)	
	Full Load and Part Load Operation	
	Chillers Configuration	
	Peak Load Shaving	
10.00 a.m.	Chapter 5: Water and Air Distribution System	30 mins
	• Piping	
	Valves	
10.30 a.m.	Break	15 mins
11.00 a.m.	Chapter 5: Water and Air Distribution System	1 hr
	Pumps	
	Cooling Towers	
	• PAHUs, AHUs, FCUs, Fans	
12.00 p.m.	Chapter 6: Energy Efficient Equipment/Components	1 hr
	Variable Speed Drives (VSD)	
	Heat Recovery Wheel	
1.00 p.m.	Lunch Break	1 hr 15 mins
2.15 p.m.	Chapter 7: Testing & Commissioning and	1 hr
	Sustainable Maintenance	
	Testing & Commissioning	
	Sustainable Maintenance	
3.15 р.т.	Tea break	15 mins
3.30 p.m.	Chapter 8: SAVE Chiller Program Case Studies	2 hr 30 mins
	Introduction	
	<ul> <li>Case Study 1 – Office Building</li> </ul>	
	Case Study 1 – Hotel	
	Case Study 1 – Retail Mall	
6.00 p.m.	End of Training	

## **Objectives:**

- 1) To increase awareness on the energy efficiency practices and saving measures in building ACMV system for building operators/engineers
- 2) To provide knowledge on efficient management of ACMV system

#### **TRAINERS**



Years of Experience: Over 35

Ir. Chen Thiam Leong

Qualification: B. Sc. (1<sup>st</sup> Class Honours) in Mechanical Engineering, University of Leeds, England, 1978

**Membership:** Fellow IEM, Member of ACEM, BEM Professional Engineer, Chartered Engineer, Chartered Institution of Building Services Engineers, United Kingdom, Fellow and Distinguished Lecturer of AHSRAE, Fellow, Institution of Fire Engineers (UK) Malaysia Branch

Ir. Chen is a Past President of the Association of Consulting Engineers Malaysia (ACEM), the Institution of Fire Engineers Malaysia (IFEM), ASHRAE Malaysia Chapter and the Kiwanis Down Syndrome Foundation. He is also the Advisor to the Malaysian Air-Conditioning & Refrigeration Association (MACRA), GBI Accreditation Panel member, GBI trainer and examiner.

Ir. Chen is a 1<sup>st</sup> Class Honours Mechanical Engineering graduate from the University of Leeds UK, and has been involved in Energy Efficiency designs since the early 80s. He regularly lectures in the international circuit on the subjects of Sustainability and Energy Efficiency under the ASHRAE Distinguished Lecturer program.

Chen was involved in the development and revisions of the Malaysian Standard on Energy Efficiency (MS1525), and drafted Bylaw 38A on Energy Efficiency for the Uniform Building By-Laws Amendment 2012. He was also involved in the National Steering Committees on Energy, Ozone Depleting Substances and Building Integrated Photo Voltaics and is the author/co-author of various Malaysian Standards such as Smoke Control, Pressurisation and Raised Floors; as well as the Guide to Fire Protection in Malaysia. His papers are regularly featured in technical journals.

Since 2008, he has led the development of various GBI rating tools. He was a consultant for the National Energy Efficiency Master Plan Study, acted as expert for the Mega Science Framework Study for Sustained National Development (Energy Sector), and national expert for the National HCFC Phase-out Master Plan.

Chen's innovative EE designs have won 2 ASEAN Energy Awards, Emerson Cup Winner and most recently a 2<sup>nd</sup> Placing in the prestigious ASHRAE Technology Award 2013. In recognition of his contribution to the engineering fraternity, he was honoured with the ACEM Gold Medal Award in 2010.

# TRAINING MATERIALS IS PROVIDED!!!

