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Organised by:  
 Mechanical Engineering Technical Division,  
 The Institution of Engineers, Malaysia

# One Day Course on Renewable Energy Boiler System

4 November 2014 (Tuesday)  
 9.00am – 5.00pm

Venue:  
**DORSETT GRAND SUBANG HOTEL**  
 Jalan SS 12/1, 47500 Subang Jaya, Selangor Darul Ehsan

## REGISTRATION:

Name(s)	IEM M'ship No. / Grade	Fees (RM)
Total Amount Payable		

Company: \_\_\_\_\_

Address: \_\_\_\_\_

Mobile: \_\_\_\_\_ Tel(O): \_\_\_\_\_ Fax: \_\_\_\_\_

E-mail: \_\_\_\_\_

(Please write clearly as the "Confirmation Notification" will be sent via email)

Contact Person: \_\_\_\_\_ Designation: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## PAYMENT DETAILS

Cash RM \_\_\_\_\_

Cheque no. \_\_\_\_\_ for the amount of RM \_\_\_\_\_  
 (non-refundable) and made payable to "THE INSTITUTION OF ENGINEERS, MALAYSIA"  
 and crossed 'A/C Payee Only'.

### Terms & Conditions:

- For ONLINE REGISTRATIONS, only ONLINE PAYMENT is applicable [via Credit Card]
- Payment via CASH / CHEQUE / BANK-IN TRANSMISSION / BANK DRAFT / MONEY ORDER / POSTAL ORDER / LO / WALK-IN will be considered as NORMAL REGISTRATION
- For online registrations, please note that **payment MUST be made before the closing date** at the latest.
- If payment is not received and verified within the stipulated time, the registration fee will be reverted to the normal registration fee.
- FULL PAYMENT** must be settled before commencement of the course, otherwise participants will not be allowed to enter the hall. If a place is reserved and the intended participants fail to attend the course, the fee is to be settled in full. If the participant failed to attend the course, the fee paid is non refundable. Registration fee includes lecture notes, refreshment and lunches.
- The Organising Committee reserves the right to cancel, alter, or change the program due to unforeseen circumstances. Every effort will be made to inform the registered participants of any changes. In view of the limited places available, intending participants are advised to send their registrations as early as possible so as to avoid disappointment.

**BEM Approved CPD/PDP Hours: 6.5**  
**Ref. No: IEM14/HQ/325/C**

## REGISTRATION FEES

Grade	Normal Fee	Online Fee
IEM Student Member	RM 200.00	RM 100.00
IEM Graduate & Corporate Member	RM 500.00	RM 400.00
Non IEM Member	RM 1000.00	RM 900.00

**Closing Date: 31 October 2014**

## Tentative Programme

08:00 – 08:45	Registration
09:00 – 09:30	Open Ceremony by Datul Seri Ir. Dr. Judin, CEO CIDB
09:30 – 11:00	Session 1 - Project Development Do and Don't by Ir Mohamad Adan Yusof
11:00 – 11:15	Tea Break
11:15 – 12:00	Session 2 – Feedstock supply & fuel quality management by Ir. Zaki Anhar
12:00 – 13:00	Session 3 - Specific Issues on Biomass Boiler Design by Ir. Luk Chau Beng an assist by Engr. Chong Thiam Heng
13:00 – 14:00	Lunch
14:00 – 15:00	Session 4 –Environment Acts & Control by Ir. Zaki Anhar
15:00 – 15:15	Tea Break
15:15 – 17:00	Forum Panel Discussion
17:00	End of Conference

## Synopsis

Energy is an important part of life. Previously viewed as a luxury, it is now considered a necessity in life. The consumption of Electrical Power in Malaysia, as in the majority of the world, has increased dramatically over the past 20 years. The result is the rapid utilisation of Natural Resources used for Power Generation. Aside from electrical generation, fossil fuels have been greatly used for other utilities such as heating and cooling.

The increase in Fossil Fuel based steam generation has caused an increase in costs, as these resources are finite, and prices will increase with demand. Fossil fuel utilisation also contributes to the increase in Carbon Dioxide concentration in the atmosphere due to its emission.

To counter these impacts, Steam Generation from Renewable Sources has been put forward as an alternative. Renewable sources are infinite, and do not adversely impact the atmosphere.

One key aspect of Renewable Energy is the source. It is prudent to develop power generation schemes based on locally available sources. This reduces logistics costs, and provides security of generation. To complement the fuel requirement, fuel imports from reasonable distances would be acceptable.

A number of feasible investment opportunities are available when utilizing RE resources for energy production especially in co-generation plants and the option to link to the grid with a feed-in-tariff.

This workshop will discuss the key, but often neglected aspects of biomass utilisation, eg:

- Feedstock Supply
- Feed Quality and Preparation
- Specific Issues on Biomass Boiler Design
- Biomass Boiler Operation Issues
- Environmental Control
- Financial Aspects of Biomass Utilisation - Beyond Plant Operation

## Biodata of Speaker

**Ir. Mohamad Adan Yusof** is an Electrical Engineer graduated from University of Wales, UK. He spent his initial years in LLN/TNB from 1994 to 1997, he was attached to EPU (Prime Minister's Department). He has provided consultancy services amongst others to ADB, UNPD, DANCED/DANIDA, USAID undertaking projects in Malaysia, Indonesia, India Sri Lanka and Canada. He is the CEO of Mensilin Group. His main experience is in development of bio-energy plants particularly using agricultural waste. (To add other works carried out internationally).

**Engr. Chong Thiam Heng** is a Mechanical Engineer graduated from The University of Leeds with BEng (Hons). He spent many years in boiler design, fabrication, commissioning up to rehabilitation evaluation and proposal of boilers. Presently he is the Engineering Manager in Mackenzie Industries Sdn Bhd designing, manufacturing and commissioning industrial boilers

**Ir. Ooi Ho Seng** possessed a Bachelor of Engineering (Mechanical) in 1972 and also obtained a Masters in Engineering Science degree in 1975 from University Malaya. He started as a Research Officer in MARDI (Malaysian Agricultural Research and Development Institute) from 1974 to 2005 and had developed various research and commercial machinery prototypes for the agricultural and oil palm industry. He had published more than 30 research articles and contributed more than 50 conference and seminar papers. He also served as an adjunct lecturer at UPM in 2003 and Monash Sunway University from 2006 and 2007. In 2007 he started two consultancy companies (i) SGT Konsult Sdn Bhd which is an engineering consultancy firm that undertakes palm oil mill design, construction and management; including project management and turnkey projects and (ii) O3 Solutions Sdn Bhd which is a BioNexus company involved in biotechnology R&D on microbes and waste management. The company undertakes engineering projects involving the treatment and management of palm oil mill wastes, in particular, and agricultural and other organic wastes, in general. He had also served as the IEM Agricultural & Food Engineering Technical Division (AFETD) as Deputy Chairman (2000 to 2003), as Chairman (2003 to 2006) and as Advisor (2006 to 2009). He is a Committee Member of Membership Drive and Promotion Sub-Committee of IEM 2011 to 2013 and a Vice Chairman since 2013.

**Ir. Zaki Anhar** is a Mechanical and Energy Engineer caught in a love affair with fuels. Although his career has brought him in close contact with various fuels, coal has always had a special place in his heart. After graduating from Cardiff University with a MEng (hons) in Mechanical Engineering and MPhil in Mechanical Engineering and Energy Studies, he spent his early career in Kapar Energy Ventures (KEV), which still stands as the largest multi-fueled power plant in Malaysia. After leaving KEV, he joined Shell Global Solutions, International, dealing with Downstream and LNG Utilities. He is now the Executive Director of IFME Consultants, which is the Main Independent Coal Specialist for TNB Fuels, whereby he is tasked with conducting Trial Burns for all new coals sent to Peninsular Malaysia Coal Fired Power Plants. Ir Zaki has also conducted Coal Quality and Utilisation Training in Malaysia for the open market, and also for TNB.

**Ir. Kumar Subramaniam** graduated from UPM with an Agricultural Engineering degree in the year 1993. He started his career as a consulting engineer from 1993 to 1994. He then worked for a boiler manufacturing company producing Boilers, heat exchangers and Process Plants from 1995 to 1998. The company had international projects in Indonesia, PNG, Solomon Islands, South America and Africa besides projects in Malaysia. He started his own Engineering Consultancy works in 2003, providing Engineering Consultancy services for agro-based industries, mainly oil palm and downstream activities. Currently he is the Adjunct Lecturer in University Putra Malaysia. He served as an IEM Council member for session from 2013 to 2015 and chairman of the Agriculture & Food Engineering Technical Division, IEM from 2009 to 2011 and currently the advisor.

**Ir. Luk Chau Beng** has vast experience in Boilers and Pressure Vessels. Presently he is a Head of Department at a Power Plant, He is the Chairman of the SIRIM'S Technical Committee for Boiler and Pressure Vessels. He has led his team to develop the Malaysian's Inspection and Repair Codes for Malaysia, He has also represented Malaysia in the International Technical Committee meeting overseas to discuss and finalize ISO Codes for Pressure Vessels. In the area of energy efficiency, he has led the team to develop the energy efficiency guidelines for Malaysian Industries under KeTTHA for Boilers, Thermal Oil Heaters, Furnace, Pumps and Compressors