

The Institution of Engineers, Malaysia

Bangunan Ingenieur, Lots 60/62, Jalan 52/4, Peti Surat 223, 46720 Petaling Jaya, Selangor Darul Ehsan Tel: 03-79684001/2 Fax: 03-79577678 E-mail: sec@iem.org.my IEM Homepage: http://www.myiem.org.my

# TALK ON

### "Technological Advances of POME Methane Capture and Utilization and Prospects to Renewable Energy Sources Development"

Organised by the Agricultural and Food Engineering Technical Division, IEM BEM Approved CPD/PDP Hours: 2 Ref No: IEM17/HQ/359/T

Date : 7<sup>th</sup> October 2017 (Saturday)

Time : 09.00 am – 11.00 am (Refreshments will be served at 8.30 am)

Venue : C&S & TUS Lecture Room, 2nd Floor, Wisma IEM, Petaling Jaya, Selangor

Speaker : Dr. Tong Soo Loong

# **SYNOPSIS**

The first decade of rapid biogas projects development in Malaysia has benefitted from implementation of the Clean Development Mechanism (CDM) under the Kyoto Protocol with the financial incentives provided by Annex I countries to developing countries during the first commitment period from 2005 till 2012. It was with this background that the target set by MPOB that all palm oil mills in Malaysia must have a biogas-capture plant in place for its POME treatment latest by year 2020 had appeared realistic. However, with the abandoning of the CDM scheme by the Annex I countries since 2013, the growth momentum of the biogas industry was retarded. It was timely and fortunately with the foundation built in the first decade, the introduction of the new SEDA (Sustainable Energy Development Authority, Malaysia) FiT Rate incentives for Biomass and Biogas Power to Grid in early 2014 ensured that the growth of biogas plants development could be sustained and further enhanced. This presentation reviews the technological advances during this period and assesses the prospects of contribution as a substantial renewable energy source in the country. In the first part, we will focus on the technology advances in expanding and enhancing biogas production, in terms of process and plant designs, including hardware and equipment development and optimization, and also feedstock enhancement and consolidation, and exploration of new feedstock sources. In particular, a new level of solid anaerobic digestion comes into play with prominent prospects where much larger scale of bio-methane production can be expected. In the second part, we will look into advances in the biogas utilization front where strengthening of power generation for in-house use and grid connection are recognized as the mainstay for new biogas plants coming on-line for the immediate term. We will also cover emerging technologies and efforts in the upgrading of biogas captured for use as Bio-CNG, or injection in the natural gas grid, which would hold the key to the future to the biogas industry and in providing large scale bio-methane as a renewable energy source.

### **BIODATA OF SPEAKER**

Dr. Tong obtained his B.Sc. from Nanyang University, Singapore in 1967 and Ph.D. from McMaster University, Canada in 1971 (both in Chemistry). Dr. Tong Soo Loong is a Director and Principal Consultant of Enviro-LIFT Services Sdn Bhd. Prior to joining Enviro-LIFT, Dr. Tong served as a Senior Manager in Alam Sekitar Malaysia (ASMA) from Sept. 1997 till August 2000. He was responsible for the management of the National Water Quality Monitoring Network contract with the Department of Environment, Malaysia and development of waste water management consultancy services for the industries. Dr. Tong served as Lecturer and Associate Professor for 20 over years at University of Malaya until 1997. His R&D interest was on environmental analytical chemistry. He has been actively involved in Environmental and Analytical Chemistry research and teaching and he has made significant contributions in the field of water quality studies and environmental management.

Ir. Yong Hong Liang Chairman 2016/2017 Agricultural and Food Engineering Technical Division, IEM

## ANNOUNCEMENT TO NOTE

<u>FEES</u> <u>(Inclusive 6% GST)</u> (<u>Effective 1st October 2017)</u>

#### <u>Members</u>

Registration Fee : FOC Administrative Fee :

Online : RM15 Walk In : RM20

### **Non-Members**

Registration Fee : RM50 Administrative Fee : RM20

• Limited seats are available on a "first come first served" basis (maximum 100 participants).

• To secure your seat, kindly register online at www.myiem.org.my

#### PERSONAL DATA PROTECTION ACT

I have read and understood IEM's Personal Data Protection Notice published on IEM's website at www.myiem.org.my and I agree to IEM's use and processing of my personal data