



# IEM MECHANICAL & ELECTRICAL FORUM

KL CONVENTION CENTER  
23 - 25 MAY 2016

The mechanical and electrical (M&E) engineering fields are ever evolving. There are many changes in the legislation, practices and contracts that has change how the engineer approaches the design and specifications. And in today' s world of multi-tasking and being technology savvy, M&E engineers are expected to have broad knowledge in the area of safety and risk management. To be a leading-edge engineer, engineers would need to know how a sub-system builds into an infrastructure and be beneficial to the community.

Day 1 – 23 May

Day 2 – 24 May

Day 3 – 25 May

## STREAM 1

### Power

- ❖ Renewable Energy Policy & latest development of RE in Malaysia
- ❖ Overview of MS ISO 50001 Energy Management System
- ❖ Latest electrical installations requirement
- ❖ Electrical Safety Legislation Update
- ❖ Why Earn a Professional Certification in Project Management?

### REVAC

- ❖ Commissioning Process for Smoke Control System
- ❖ Healthcare Ventilation System Requirements and Challenges
- ❖ Emphasising Controls In Green Buildings (Air-conditioning Systems)
- ❖ IOT of REVAC Systems

## STREAM 2

### Development in Code and Standards

- ❖ OSC 3.0
- ❖ M&E concern with Strata or mixed development
- ❖ New UBBL
- ❖ IEM M&E form of contract
- ❖ Earthquake Restraints for Mechanical Systems

### M&E Infrastructure

- ❖ Railway control centre ergonomic M&E
- ❖ Greenfield Power Plant Project
- ❖ Regulatory Compliance to Water Services Industry Act 2006 (WSIA) for Water and Sewage Works
- ❖ Water Use Reduction in Green Buildings
- ❖ PM of Major Infra Works

### Safety and Risk Control

- ❖ Combustible Dust Explosion Risk Management
- ❖ Lift & Escalator Code in Malaysia
- ❖ Very Early Aspirating Smoke Detection Technology and Solutions
- ❖ New approach to Gas Detection
- ❖ CLASS and GHS for M&E

# IEM MECHANICAL & ELECTRICAL FORUM

DATE	TIME	THEME	STREAM 1	THEME	STREAM 2
23 May 2016 (Monday)	10:30 am - 11:30 am	<u>GREEN ENERGY &amp; SUSTAINABLE</u> BEM Approved CPD/PDP Hours: 4 Ref No: IEM16/HQ/184/F	Conservation of Water - Apply Basic Engineering Principles <b>(Ir. Gary Lim)</b>	<u>DEVELOPMENT IN CODE &amp; STANDARDS</u> BEM Approved CPD/PDP Hours: 5 Ref No: IEM16/HQ/185/F	M&E Concern with Strata or Mixed Development <b>(Ir. Lum Youk Lee)</b>
	11:30 am - 12:30 am		Why Green Energy & Sustainability <b>(Mr. James Chua)</b>		OSC 3.0 of Building Permits <b>(Ir. Yim Hon Wa)</b>
	12:30 pm - 2.00 pm		<b>BREAK</b>		<b>BREAK</b>
	2:00 pm - 3:00 pm		Hydrocarbon as Greener and More Efficient Refrigerants <b>(Mr. Ferdinand Ng)</b>		New UBBL <b>(Ir. Thin Choon Chai)</b>
	3:00 pm - 4:00 pm		Green Technology & Sustainable Development <b>(Ir. Dr. Aidil Chee Tahir)</b>		Earthquake restrains for Mechanical Systems <b>(Ir. Tan Yiing Yee)</b>
	4:00 pm - 5:00 pm		Energy Efficiency : Catalyst for Green? <b>(Ir. Kok Yen Kwan)</b>		IEM Form of Contracts for Civil and Mechanical & Electrical Engineering Works <b>(Ir. Oon Chee Kheng)</b>
24 May 2016 (Tuesday)	10:30 am - 11:30 am	<u>POWER</u> BEM Approved CPD/PDP Hours: 5 Ref No: IEM16/HQ/186/F	Renewable Energy Policy & Latest Development of RE in M'sia <b>(Dato' Dr. Ali Askar)</b>	<u>M&amp;E INFRASTRUCTURE</u> BEM Approved CPD/PDP Hours: 5 Ref No: IEM16/HQ/187/F	Railway Control Centre Ergonomic M&E <b>(Ir. Syed Neguib)</b>
	11:30 am - 12:30 pm		Overview of MS ISO 50001 Energy Management System - Requirements with Guidance for Use <b>(Ir. Francis)</b>		Greenfield Power Plant Project <b>(Ir. Fam Yew Hin)</b>
	12:30 am - 2.00 pm		<b>BREAK</b>		<b>BREAK</b>
	2:00 pm - 3:00 pm		Latest Updates on MS1979:2016- Electrical Installations of Buildings - Code of Practice <b>(Ir. Yau Chau Fong)</b>		Regulatory Compliance to Water Services Industry Act 2006 (WSIA) for Water and Sewage Works <b>(Mr. Chow Kin Liung)</b>
	3:00 pm - 4:00 pm		Electrical Safety Legislation Update- Amendment of Electricity Supply Act 1990 with Respect to Improving Safety Practices <b>(Ir. Hj. Nur Ali Bin Omar)</b>		Water Use Reduction in Green Buildings <b>(Mr. Gregers Reimann)</b>
	4:00 pm - 5:00 pm		"Why Earn a Professional Certification in Project Management?" <b>(Ir. Frankie Chong)</b>		PM of Major Infra Works <b>(Ir. Dr. Cheong Thiam Fook)</b>
25 May 2016 Wednesday	10:30 am - 11:30 am	<u>REVAC</u> BEM Approved CPD/PDP Hours: 4 Ref No: IEM16/HQ/188/F	Commissioning Process for Smoke <b>(Ir. Soong Peng Soon)</b>	<u>SAFETY &amp; RISK CONTROL</u> BEM Approved CPD/PDP Hours: 3 Ref No: IEM16/HQ/189/F	Combustible Dust Explosion Risk Management <b>(Mr. Felipe Ong)</b>
	11:30 am - 12:30 am		IOT of REVAC Systems <b>(Ir. Dr. Tan Chee Fai)</b>		Lift & Escalator Code in M'sia <b>(Mr. Raghib, Grad IEM)</b>
	12:30 pm - 1:30 pm		<b>BREAK</b>		<b>BREAK</b>
	1:30 pm - 2:30 pm		Healthcare Ventilation System Requirements & Challenges <b>(Ir. Al-Khairi)</b>		Very Early Aspirating Smoke Detection Technology and Solutions & New approach to Gas Detection <b>(Mr. Derrick Wong)</b>
	2:30 pm - 3:30 pm		Emphasising Controls In Green Buildings (Air-conditioning Systems) <b>(Ir. Daniel Lim Kim Chuan)</b>		CLASS & GHS for M&E Engineers CLASS <b>(Ir. Kim Kek Seong)</b>

DATE	TIME	STREAM 2
23 May 2016 (Monday)	12:30 p.m - 1:30 p.m	COPE in Code Assessment and Risk Management <b>(Ir. Loo Chee Kin)</b> BEM Approved CPD/PDP Hours: 2 Ref No: IEM16/HQ/190/T
24 May 2016 (Tuesday)	12:30 p.m - 1:30 p.m	Flood Pumping Stations <b>(Ir. Puvanesan)</b> BEM Approved CPD/PDP Hours: 2 Ref No: IEM16/HQ/191/T

\*Attending on the lunch time forum is complimentary to participants who have signed up for any day or stream

# IEM MECHANICAL & ELECTRICAL FORUM

24 MAY 2016 (TUESDAY)

STREAM 1

POWER

BEM Approved CPD/PDP Hours: 5

Ref No: IEM16/HQ/186/F

10. 00 am – 10.30 am	Registration
10. 30 am – 11.30 am 	<p><b>Topic : Renewable Energy Policy &amp; Latest Development of RE in Malaysia</b></p> <p>The introduction of FiT saw the kickstart of the RE Industry in Malaysia; now many people are questioning whether the generous Tariffs, especially for PV, actually benefited the country or just helped enrich a few people.</p> <p>What is the role of Net Energy Metering (NEM) and Large Scale Solar (LSS) in the development of the local RE Industry? How do they differ from FiT?</p>
Dato' Ir. Dr. Ali Askar Sher Mohamad	
11.30 am – 12.30 pm 	<p><b>Topic: Overview of MS ISO 50001 Energy Management System – Requirements With Guidance For Use</b></p> <p>The MS ISO 50001, based on the international standard ISO 50001, was established to enable organisations to establish the systems and processes necessary to improve energy performance, including energy efficiency and intensity. Using energy efficiently helps organisations to save money as well as helping to conserve resources and tackle climate change. The standard supports organisations in all sectors to use energy more efficiently, through the development of an energy management system (EnMS). The standard is based on the management system model of continual improvement also used for other well-known standards such as ISO 9001 (Quality Management) or ISO 14001 (Environmental Management). This makes it easier for organisations to integrate energy management into their overall efforts to improve quality and environmental management. The standard provides a framework of requirements for organizations to:</p> <ul style="list-style-type: none"> <li>• Develop a policy for more efficient use of energy</li> <li>• Fix targets and objectives to meet the policy</li> <li>• Use data to better understand and make decisions about energy use</li> <li>• Measure the results</li> <li>• Review how well the policy works, and</li> <li>• Continually improve energy management.</li> </ul> <p>The talk will cover: -</p> <ul style="list-style-type: none"> <li>• Background &amp; Introduction</li> <li>• Scope &amp; Definitions</li> <li>• Energy Management System Requirements</li> <li>• Implementation and Operation</li> <li>• Why isn't industry more energy efficient</li> <li>• Overall Goal</li> <li>• Barriers to Improve EE</li> </ul>
Ir. Francis Xavier Jacob	
12.30 pm – 2.00 pm	Break
2.00 pm – 3.00 pm 	<p><b>Topic: Latest Updates On MS1979:2016 - Electrical installations of buildings - Code of practice</b></p> <p>This Malaysian Standard was developed by the Working Group on Electrical Installation, Protection and Insulation Practice under the authority of the Industry Standards Committee on Generation, Transmission and Distribution of Energy. Development of this Malaysian Standard was carried out by The Electrical and Electronics Association of Malaysia (TEEAM) which is the Standards Writing Organisation (SWO) appointed by SIRIM Berhad to develop standards for electrical installation, protection and insulation practice.</p> <p>This Malaysian Standard cancels and replaces MS 1979:2007, Electrical installations of buildings - Code of practice.</p> <p>More than 80 % of Malaysian low voltage electricity customers are domestic dwellings and residential houses catering to uninformed consumers. On the other hand, less than 20 % of Malaysian electricity customers are commercial, industrial consumers or other non-domestic and non-residential consumers. Therefore, whilst MS IEC 60364 as a set of standards provides guidelines for the whole spectrum of low voltage electrical installations of buildings for both the informed as well as the uninformed consumers, this Malaysian Standard developed under the direction of the regulatory body, however, deals with the low voltage electrical safety of uninformed consumers.</p> <p>The speaker will be presenting through each and every Code Of Practice and focusing on the major changes to the codes in comparing with the earlier MS1979: 2007 version</p>
Ir. Yau Chau Fong	

# IEM MECHANICAL & ELECTRICAL FORUM

24 MAY 2016 (TUESDAY)  
STREAM 1  
POWER

3.00 pm – 4.00 pm



**Ir. Hj. Nur Ali Za Bin  
Omar**

## **Topic : Electrical Safety Legislation Update - Amendment of electricity Supply Act 1990 with respect to improving safety Practices**

Electricity Supply (Amendment) Act 2015 telah dikuatkuasakan pada tahun 2015 dengan meminda Electricity Supply Act 1990 di mana antara objektif pindaan dilaksanakan adalah untuk memantapkan aspek keselamatandan perlindungan kepada pengguna tenaga elektrik di Malaysia.(Enhance safety and consumer protection).

4.00 pm – 5.00 pm



**Ir. Frankie Chong**

## **Topic : "Why Earn a Professional Certification in Project Management?"**

It is reckoned that throughout the world, as the number of projects swell, the pool of certified talent in project management is not keeping pace. For example, of the 20 million people participating in projects worldwide, just one million have professionally recognized formal training on how to best execute those projects. One thing becomes clear: The demand for skilled project managers is at a critically urgent level.

With the dynamic demands from the workplace, an individual who is skilled in Project Management techniques stands above the rest in terms of having superior abilities to plan, organise and to systematically approach his or her work. This important value also provides the individual a real competitive advantage in terms of career advancement and developing his true managerial potential.

In pursuing industrial excellence and credibility, a true professional can differentiate his or her capabilities by way of international certification. The fundamental rationale for certification of Project Managers is to ensure that the project industry is managed by knowledgeable and competent professionals who possess the minimum skills in applying best practices in project management, with the ultimate goal that the stakeholder's needs and expectations are adequately fulfilled

Addressing the importance of certification, the speaker will cover the following topics:

- Case for certification of professional project managers
- Supporting survey findings on the health and common practices of Project Management in Malaysia
- The certification route to internationally recognized professional project managers

It is hoped that the talk will create awareness of certification among the industry players and to promote professionalism by adopting the best practices and standard in project management. As the world economy becomes more globalised and competitive, it is imperative that Project Managers have internationally recognized competence in managing projects. They should then seriously consider the route to certification that can reap many benefits both for the individuals as well as for the organizations.

# IEM MECHANICAL & ELECTRICAL FORUM

24 MAY 2016 (TUESDAY)

STREAM 2

**M&E INFRASTRUCTURE**

BEM Approved CPD/PDP Hours: 5

Ref No: IEM16/HQ/187/F

10. 00 am – 10.30 am	Registration
10. 30 am – 11.30 am  <b>Ir. Syed Neguib Bin Syed Mohamed</b>	<b>Topic : Railway Control Centre Ergonomic M&amp;E</b> The Malaysian Government is expected to spend up to RM 160 Billion by year 2020 in rail transport projects to reduce traffic congestion, increase fuel saving and reducing carbon emission. This talk aims to give an introduction to the essential parts of a railway system and focuses on the nerve center of the system which is the Control Centre, providing an overview on the functionality and how Ergonomic Studies and M&E Design plays a critical role in the efficiency and safety of the railway system.
11.30 am – 12.30 pm  <b>Ir. Fam Yew Hin</b>	<b>Topic : Greenfield Power Plant Project</b> Depending on the availability of various natural resources, electricity can be generated via coal, oil, natural gas, hydro, nuclear, wind and geothermal. Today, with the limited fuel supply and increasing environmental concerns, most policy makers and developers have also placed great emphasis on green energy technology.  The objective of this session is to introduce to the audience the outlook of various power generation technologies, and the factors to be considered in developing a new power plant or acquisition of an operating power plant.
12.30 pm – 2.00 pm	Break
2.00 pm – 3.00 pm  <b>Mr. Chow Kin Liung</b>	<b>Topic : Regulating Compliance to Water Services Industry Act 2006 (WSIA) for Water and Sewerage Works</b> Water Services Industry Act 2006 (WSIA) was enforced in 2008 whereas the Suruhanjaya Perkhidmatan Air Negara Act 2006 (SPAN Act) which establishes the Commission (SPAN) was enforced in 2007. Both acts empower SPAN to carry out holistic regulation of water services industry for water supply services and sewerage services throughout Peninsular Malaysia and Federal Territory of Labuan. The aim is to provide uniform regulating regime and to improve efficiency and effectiveness of water and sewerage services sectors.  The objective of this topic is to present an overview on the functions of SPAN, in particular the regulating compliance to the Act for M&E engineers engaged in the water and sewerage works. It will highlight various necessary compliances by the M & E engineers for the design and execution of water and sewerage projects.
3.00 pm – 4.00 pm  <b>Mr. Gregers Reimann</b>	<b>Topic : Water Use Reduction in Green Buildings</b> 1. Importance of water conservation - increased frequency and severity of hot dry climate 2. A look as water consumption per capita in the region 3. Comparative review of water consumption of 2 JKR offices (Blok F vs Blok G). Non-Green vs GBI Platinum 4. Water conservation / reuse strategies at Menara Kerja Raya - we'll run through the rainwater harvesting system, greywater recycling system and water usage monitoring & leakage warning system 5. Breakdown of water usage - how much is the RWH & GWR contributing to total water usage of the building 6. Lessons learnt - focusing on GWR & RWH
4.00 pm – 5.00 pm  <b>Ir. Dr. Cheong Thiam Fook</b>	<b>Topic : PM of Major Infra Works</b>

# IEM MECHANICAL & ELECTRICAL FORUM

**FORUM SPECIAL FEATURE BY IEM**

**24 MAY 2016 (TUESDAY)**

**STREAM 2**

BEM Approved CPD/PDP Hours: 2  
Ref No: IEM16/HQ/191/T

**12.30 - 1.30 pm**



**Ir. Puvanesan Mariappan**

## **Topic : Flood Pumping Stations**

Flooding is the most common cause of disaster in the world and by far the fastest growing. Flooding occurs mainly due to overflow of the river, backwater effect due to tidal intrusion from the sea, morphological issues and inadequate capacity of waterway, drainage system and any existing tributaries. Flood can be mitigated via construction of polder bund and pumping stations. Flood pumping stations will be established once the flood mitigation scheme design developed with detailed hydrological and hydraulic modelling. The establishment of excellent flood pumping station consists of flooding control, source and solution of flooding, the design of flood control pumping station, CFD and model testing and vortex and its prevention.

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