



The Institution of Engineers, Malaysia

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Talk on "Introduction to the EnergyPlus Building Simulation Software"

Organised by the Young Engineers Section (YES), IEM

Date : **20th August 2014, Wednesday**
Time : **5.30 pm – 7.30 pm** (*Refreshment will be served at 5.00 pm*)
Venue : **TUS & C&S Lecture Room, 2nd Floor, Wisma IEM, PJ**
Speaker : **Ir. Dr. Ooi Koon Beng**

BEM Approved CPD/PDP Hours: **2**
Ref No: **IEM14/HQ/271/T**

SYNOPSIS

EnergyPlus® is the U.S. DOE building energy simulation program for modelling building heating, cooling, lighting, ventilating, and other energy flows. It builds on the most popular features and capabilities of BLAST and DOE-2 along with new capabilities such as time steps of less than an hour, modular systems and plant integrated with heat balance-based zone, simulation, multizone air flow, thermal comfort, and photovoltaic systems. The EnergyPlus simulation engine simulates for the dynamic heat transfer through a building envelop. EnergyPlus can also model and simulate the Heating, Ventilation and Airconditioning (HVAC) systems for indoor comfort (temperature, humidity, wind speeds, mean radiant temperatures) and air quality (ventilation and carbon dioxide concentration). Besides it can also simulate the effects of Daylighting, Green roofs, Phase Change

materials and other latest energy saving features.

"No experience with EnergyPlus is necessary, but more advanced users have the flexibility to export IDF input files and edit these to model a very wide range of HVAC system types."

EnergyPlus is downloadable free for academics and private personal use from the primary website www.energyplus.gov.

OBJECTIVES

To introduce designers and engineers to the EnergyPlus Building Simulation Software

Outline

1. Background and History of the EnergyPlus Building Simulation Program
2. Recognition of EnergyPlus for Energy Modelling and simulation
3. Capabilities and limitations of EnergyPlus.
4. What will be taught at the 2-day course (2nd & 3rd February 2015)

BIODATA OF SPEAKER



Ir. Dr. Ooi Koon Beng obtained his PhD in Low Energy Buildings from University Malaysia Sarawak (UNIMAS) in October 2012. As an EnergyPlus consultant (since 2006), Ooi was employed as a Research Assistant in an Australian Research Council project at Melbourne University and found the heating and cooling loads and air flow rates for the proposed University of Ballarat Technical Education Center, a 6000-square meter, double-storey educational building in 2008. He has also passed two examinations needed to rate the performance of commercial buildings in Australia: (i) the National Australian Built Environment Rating Scheme (NABERS) examination of the Australian Department of Climate Change and (ii) the

Green Star Professional examination of the Green Building Council of Australia (GBCA). He also qualified to rate residential buildings in Australia by passing the FirstRate® House Energy Rating software examination. He was a lecturer at Swinburne University of Technology in Sarawak, Malaysia (2003-2007) and two of Singapore's new polytechnics (1987-2002). He obtained his Bachelor of Engineering (Mechanical) Second Class Honours (Upper Division) from University Malaya, in 1968. He worked at Malayawata Steel Berhad, the largest steel manufacturer in South East Asia till 1986. He gained Professional Engineer (Ir) registration with the Board of Engineers in 1974. He has written 8 journals or international conference papers on Energy Efficient buildings since 2007.

Engr. Vivekasugha Alif Bin Gunaan (Grad, IEM)

Chairman

Young Engineers Section, IEM

FUNDS FOR IEM BUILDING FUND (WISMA IEM)
Kindly be informed that IEM will be charging participants RM10.00 administrative fee for talks organized by IEM.
The fee would be used for overhead costs, building maintenance expenses as well as to support the purchase of the new building.
All contributions will be deeply appreciated by IEM Students are however exempted.
Your understanding is greatly appreciated.

Announcements to note:

- Talk is for IEM members only (pre-registration and online registration are NOT required) (telephone and/or fax reservation will NOT be entertained)
- **Non-members may also attend the talk and will be charged a registration fee of RM50 and an administrative fee of RM10.**
- **For affiliate members**, there will be no registration fee. However, they are requested to produce their membership card as proof of membership. For the list of affiliates, refer to www.myiem.org.my/content/memorandum_of_understanding-469.aspx
- Limited seats available on a "first come first served" basis (maximum 110 participants).
- Latecomers will not be allowed to enter if the lecture hall is full.
- IEM members are required to produce your membership cards for confirmation of attendance.
IEM members who fail to produce their membership cards will be charged a fee of RM20.00

CPD/PDP HOURS CONFIRMATION	
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