

PHYSICAL EVENT

Technical Talk on Application of AI to Energy Management Using Integrated Solar PV + BESS Systems

Organised by: Seniors Special Interest Group SSIG, IEM

BEM Approved CPD: 2 Hours

CPD Ref.No.: IEM25/HQ/100/T



17 MAY 2025
SATURDAY



9.00 AM - 11:00 AM



Auditorium Malakoff
Wisma IEM



Mr. Koay



Mr. Ng

REGISTER NOW

Registration fee

- Student Member: Free
- IEM Member: RM15.00
- Non-Member: RM70.00



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SYNOPSIS

eCOS© or Energy Control Cost Optimization System is an AI driven Real Time Energy Management System for Commercial & Industrial (C&I) Users. The system incorporates software-based digital control to integrate solar photovoltaic (PV) and battery energy storage systems (BESS). Mathematical Optimization Techniques are employed taking as inputs ML (Machine Learning) predicted Load demand and ML forecasted Solar PV generation to leverage the Peak/Off-Peak Electricity Tariff Differential Pricing applied to C&I Users. eCOS© adopts a Dynamic Targeted approach and is fully automated. eCOS© maximizes harvesting of Solar PV generated, minimizing wastage.

The eCOS© system has won the SEDA-IEEE 2024 Impact Award and the APICTA Malaysia Industrial Merit Award 2024.

This presentation will touch on the Architecture and some of the Technology and methods employed to implement eCOS©. It will illustrate some Use cases and will include a 'Live' demonstration of the System in operation.

SPEAKERS BIODATA

Mr. Koay read Engineering Science at The University of Warwick, UK where he graduated with a Bachelor of Engineering Science in Electronic Systems and a Masters in Engineering (Electronic Systems).

Mr. Koay has spent most of his working career in the Communications Systems Industry working for leading Communications Systems Providers such as Lucent Technologies, Alcatel-Lucent and Nokia where he was managing the Professional Services Teams which designed and implemented whole turnkey Communications Networks for the leading CSPs in the region. Alan has spent a large part of his career posted regionally including assignments in Australia, Indonesia, Malaysia, Philippines and Singapore.

Mr. Koay switched Technology Streams after leaving the Communications Systems Industry and is now working in the Renewable Energy space focusing on the application of AI in this Technology area. He currently leads a Team of Engineers and Computer Scientists with AmSolar Pte. Ltd. developing the Software Control and Management systems to improve Solar PV/BESS (Solar Photo Voltaic/Battery Energy Storage Systems) performance using Digital Control and Artificial Intelligence.

Mr. Ng completed his Bachelor of Engineering Science degree in Electrical and Electronics Engineering at Trinity University, Texas and went on to do an MBA at the same University. He has worked at various leading US and European multinational companies in the semi-conductor manufacturing industry including Hewlett-Packard, Western Digital and Siemens in Penang and Kuala Lumpur, Malaysia. Skip left the Semi-conductor manufacturing industry to start up AmSolar Sdn Bhd a pioneer company in the Malaysian Solar PV industry in 2011.

Mr. Ng is currently the CEO at AmSolar. AmSolar Sdn. Bhd. is an established and fully accredited Solar PV Engineering, Procurement and Construction Company. It has to date designed, installed, consulted for or Program managed the construction of a total of 180 Mwp of Solar PV Systems with installations throughout Malaysia. This has included residential, Commercial, Industrial as well as Solar Farm projects.

Mr. Ng has been very interested in improving the performance of Solar PV Systems and has been a driving force in developing various innovations in this space.