

8 CDP Hours
(Mandatory REM Type 1)

ONLINE WORKSHOP ON
UNDERSTANDING

ENERGY EFFICIENCY CONSERVATION ACT(EECA)

AND ITS IMPACT ON ORGANISATIONS

22 February 2027
27 July 2027
(Online via Microsoft Teams)
Time: 9:00 am - 5:00 pm

*Date subject to change. For latest date, refer to website.

RM400.00 per pax *(For Energy Professionals)*
RM80.00 per pax *(For Students - i.e. Future Energy Professionals)*

**Price shown are inclusive 8% SST charges*
**For student, please ensure to upload a valid student card when filling out the registration form.*

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Optimal Systems Engineering Sdn Bhd
ENGINEERING SUSTAINABILITY

MyHS00015/22-E002

ABOUT THE COURSE **AND ITS UNIQUENESS**

This course is designed to help companies gain comprehensive understanding of the Energy Efficiency and Conservation Act (EECA) 2024. Participants will explore the key elements of the act, its implications for businesses, and the necessary steps to ensure compliance with its regulations and guidelines.

On top of its comprehensive coverage of the EECA, and being practice-driven, the course provides **five** extra values as follow:

- 8 points mandatory CDP approved by Suruhanjaya Tenaga.
- HRDC-approved training with REM-2 certified, Registered Energy Auditors (REA) and HRDC-accredited expert trainers.
- Insights from key experts involved in the drafting of energy & sustainability related policies, acts & regulations & guidelines.
- First-hand experience from practitioners who drove award-winning energy management transformation.
- Interactive engagement; access to digital copy of lecture materials & certificate of completion.

LEARNING **OUTCOMES**

At the end of the course, participants should be able to:

- Communicate the requirements of EEC-Act, regulations, guidelines and guides and their impacts on businesses.
- Know the specific EECA requirements for buildings & manufacturing facilities.
- Make the necessary preparations to comply with the EECA.

COURSE **SCHEDULE**

Time	Tentative
8.30 to 9.00	Registration
9.00 to 10.45	**Understanding the EEC Act and Regulations**
10.45 to 11.00	**Break**
11.00 to 13.00	**Overview of Guidelines and Guide Applicable for Energy Consumers and Person In Charge of Buildings (Part 1)** • Ascertaining Energy Consumers • Ascertaining Building and the Energy Intensity Performance of a Building • Functions and Duties of REM
13.00 to 14.00	**Lunch Break**
14.00 to 15.30	**Overview of Guidelines and Guide Applicable for Energy Consumers and Person In Charge of Buildings (Part 2)** • Energy Efficiency and Conservation Report • Energy Management System
15.30 to 15.45	**Break**
15.45 to 17.00	**Overview of Guidelines and Guide Applicable for Energy Consumers and Person In Charge of Buildings (Part 3)** • Energy Audit Report, • Route to Registered Energy Auditor (REA)

TARGET **PARTICIPANTS**

This course is specifically tailored for company personnels and stakeholders affected by the EECA, including *current* and *future* energy managers, compliance officers, facility and operations managers and senior management responsible for regulatory compliance.

TRAINERS' PROFILE



TRAINER 1

PROF IR TS DR ZAINUDDIN ABDUL MANAN

Zainuddin Abdul Manan is a professor of chemical and energy engineering, the founding director of UTM Process Systems Engineering Centre (PROSPECT), founding Dean of UTM Faculty of Chemical and Energy Engineering, founder of UTM Sustainable Energy Management Program and the CEO and founder of the UTM spin-off company OPTIMISE Sdn Bhd. He began his career as an engineer at PETRONAS and Hume Industries and has been an academic leader, educator, researcher, consultant and professional coach for over 25 years. He completed over 100 R&D & consultancy projects serving local and multinational companies, has numerous patents and over 450 publications that include 20 books/ chapters, 230 refereed journals and 250 conference proceedings on energy and resource conservation using process integration techniques. He is a co-author of the globally referred Book on Process Integration and Intensification – Saving Energy, Water and Resources. Zain is a UK/EU chartered engineer, a Fellow IChemE (UK), Fellow of Academy of Sciences Malaysia, a professional engineer, a professional technologist, a certified energy manager, a Type 1 Type 2 REM (Registered Energy Manager), a Registered Energy Auditor (REA) and a certified trainer for ASEAN energy managers. He has coached professionals from over 500 organisations and delivered over 400 invited talks in professional courses, conferences and seminars worldwide. Zain chaired the Academy of Sciences (ASM) Energy Committee, the ASM Net Zero Task Force and the Energy Efficiency and Conservation Act (Thermal Energy) Drafting Committee under the Malaysian Ministry of Energy. He founded and spearheaded the UTM Sustainable Energy Management initiative that led UTM to save over USD 7 million energy costs (2011-2022), to win the National & ASEAN Energy Awards, and to be ranked 1st globally by Time Higher Education on SDG7.



TRAINER 2

PROF IR TS DR SHARIFAH RAFIDAH WAN ALWI

Prof Ir Ts Dr Sharifah Rafidah Wan Alwi is a Professor in the Faculty of Chemical and Energy Engineering, Universiti Teknologi Malaysia. She previously helmed as the Director of Process Systems Engineering Centre for ten years (2011 to 2021). She is an expert resource minimisation consultant for multiple industries and is among the leading researchers in resource integration technique development. Prof Sharifah is also the co- founder and Director of Optimal Systems Engineering Sdn Bhd, a UTM Spin-off company. She has been extensively involved in 80 research projects, 17 industrial based projects for various companies and government agencies and has trained engineers from more than 300 companies in the field of sustainable engineering design and management. Together with her team, they have developed 7 resource minimisation software. Sharifah has won various international and national awards such as Green Talents 2009 (Germany), IChemE Highly Commended Sir Frederick Warner Prize 2011 (UK), ASEAN Young Scientist and Technologist Award 2014, National Young Scientist Award 2015, ASEAN-US Science Prize for Women 2016 in Energy Sustainability, Malaysia Research Star Award 2016, 2018, 2019, Top Research Scientists Malaysia 2018 and Sarawak State - International Women Award 2021. She was listed as 'Asian Scientist 100' in 2017 and 'Asia's Rising Scientists' in 2020, and '8 Women Scientists from Asia You Should Know' in 2021 by AsianScientist.com. Sharifah is also the Associate Editor for Journal of Cleaner Production and UTM Sustainable Energy Management System advisor. She has also served as the Chair for the Science Leadership Working Group under Young Scientist Network, Academy of Sciences Malaysia (YSN-ASM) and Chair for Malaysia IChemE Young Engineer Group (YEG). Sharifah is also a professional engineer, a professional technologist, a UK/EU chartered engineer, a certified energy manager, a registered energy manager (Type 1 and 2), a Registered Energy Auditor (REA) and a certified trainer for ASEAN energy managers.

TRAINERS' PROFILE



TRAINER 3

ASSOCIATE PROF IR DR LIM JENG SHIUN

Associate Professor Ir Dr Lim Jeng Shiun is the Director of Products and Service, Optimal Systems Engineering Sdn Bhd, a UTM spin-off company specialising in providing solutions related to energy conservation and GHG emissions reduction. He is also the Deputy Director of Process Systems Engineering Centre (PROSPECT), Universiti Teknologi Malaysia. His core expertise is in the area of innovative development and application of process systems engineering techniques for resource conservation, and energy and carbon planning. He is also a professionally Certified Energy Manager, Certified Energy Auditor, Accredited Energy Measurement & Verification Professional and a Type 1 Type 2 REM and a Registered Energy Auditor (REA) certified by the Energy Commission of Malaysia.

He is the trainer of the Energy Management Trainer Course conducted by MGTC to certify the Energy Manager. He is also the instructor for MSc Energy Management in UTM, sharing knowledge related to energy efficiency and energy management. As an engineer in practice, he has applied the output of his research work to consultancy projects for the industrial community. He has been extensively involved in more than 35 industrial-based projects for various companies and government agencies. The key clients include local industries and multinational companies such as BERNAS, FABER MEDISERVE, SHELL, OLEON in Malaysia and PERTAMINA in Indonesia.

He has assisted those companies to identify energy-saving opportunities worth millions of dollars and GHG reduction opportunities through the use of process integration and process systems engineering approaches in the energy audit and GHG emissions accounting projects. He has shared his project experience in his co-authored book titled Pinch Analysis for Energy and Carbon Footprint Reduction, published by the Institution of Chemical Engineers (IChemE). He has been invited to share his experience on Net Zero carbon for industry and facilities, including on Net Zero Carbon for Palm Oil Industry organised by IChemE.

WHAT OUR TRAINEES SAID

KAMISAH MOHD GHAZALI

HEAD, RESILIENT ENVIRONMENT
ISKANDAR REGIONAL DEVELOPMENT AUTHORITY (IRDA)

★★★★★

Highly insightful and **well-structured**. The speakers provided **clear, practical explanations** and **deep knowledge** that enhanced our understanding of EECA's implications on operational and strategic levels. An **excellent session** for anyone seeking to align their organisation with sustainable energy practices.

WAN MOHAMMAD FARIDUDDIEN

ENGINEER-ELECTRICAL/INSTRUMENTS
KEDAH CEMENT SDN BHD

★★★★★

The training provided an **excellent overview** of the Energy Efficiency and Conservation Act (EECA) and how it directly impacts our operational compliance and long-term cost savings. It **helped us see energy efficiency** not just as a technical goal but as a **strategic business imperative**.

PETER CHIO KIAN TATT

MANAGER IN ENGINEERING (PROJECT & RETROFIT)
PAVILION KUALA LUMPUR

★★★★★

The course was **very helpful**. It provided the **latest information** on energy saving practices and the role of current buildings in sustainability. It also included i**mportant details about REM requirements**, which was **very useful.**

OPTIMISE Energy Audit, GHG Accounting and EnMS Track Records

- Led UTM to be globally ranked 1st on SDG 7 - Affordable and Clean Energy
- Co-developer of ASEAN EMGS Energy Management System Standards with MGTC.
- Led UTM to win the ASEAN Energy Award and EMGS 3 Star EMGS Gold Standard.
- Involved in certification of energy managers and energy end users for 15 years.
- Developer of award-winning energy audit and energy monitoring software.
- Led UTM to achieve over RM 30 million energy savings between 2011-2023.
- Over 20 years experience in energy audit and optimisation consultancy, R&D and professional training for over 500 national/multinational companies.
- Certified trainer, auditors & centre for training & certification of energy managers.

Selected References

- Shell, Middle Distillate Synthesis
- BP – Amoco
- MLNG
- Felda Proctor and Gamble
- MIMOS Semiconductor
- Riau Pulp and Paper Mill
- Qatar LNG
- Pertamina Engineering Group
- PT Titan Petrokimia Interindo
- Pan Century, IOI Oleochemicals
- BASF – Petronas
- MTBE – Petronas
- Huntsman Tioxide
- Ansell Malaysia
- Hershey Malaysia
- Malaysia Newsprint Industries
- Malaysia Palm Oil Board
- Malaysia Energy Commission
- Technip (M) Sdn Bhd
- PT Chandra Asri
- Petronas Penapisan (M) Sdn Bhd
- Petronas Gas Sdn Bhd
- Kaneka Malaysia
- UKM, UPM, USM, UM, UNIKL

20+

Years Experience in Energy Audit and Optimisation

#1

Global Rank in R&D on 'Heat Exchanger. Retrofitting and Design' Elsevier Scival 2014

700+

National & Multinational Companies Benefitted from our Energy Trainings and Consultancy Services