



UNDERSTANDING
**ENERGY EFFICIENCY
CONSERVATION
ACT (EECA)**
AND ITS IMPACT ON COMPANIES

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OPTIMAL SYSTEMS ENGINEERING SDN BHD
ENGINEERING SUSTAINABILITY

OVERVIEW OF THE COURSE

This awareness course is designed to help companies gain a comprehensive understanding of the Energy Efficiency 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.

LEARNING OUTCOMES

At the end of the course, it is expected that participants will be able to:

- Grasp the key components of the EECA and their implications for businesses.
- Understand the regulatory and guideline requirements related to energy efficiency for large energy consumers.
- Identify the necessary preparations to meet compliance standards.

COURSE SCHEDULE

Time	Tentative
8.30 to 9.00	Registration
9.00 to 10.30	Understanding the EEC Act and Regulations <ul style="list-style-type: none">• Why was EECA introduced?• Who is affected by EECA?• What does EECA regulate?• Key compliance deadlines for companies.• Consequences of non-compliance.• Preparatory steps for companies.
10.30 to 10.45	Break
10.45 to 13.00	Overview of Guidelines Applicable for Energy Consumers <ul style="list-style-type: none">• Ascertaining Energy Consumers• Functions and Duties of REM• Energy Efficiency and Conservation Report• Energy Management System• Energy Audit Report

TARGET PARTICIPANTS

This course is specifically tailored for company personnels and stakeholders affected by the EECA, including 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 in 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 registered electrical energy manager 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 is the chair of Academy of Sciences (ASM) Energy Committee, the Chair of ASM Net Zero Task Force and the Chair of the Energy Efficiency and Conservation Act (Thermal Energy) Drafting Committee under the Ministry of Energy and Natural Resources. He founded and spearheaded the UTM Sustainable Energy Management initiative that led UTM to save over USD 7 million energy costs between 2011 and 2020, and to win the National and ASEAN Energy Awards.



TRAINER 2

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 electrical energy manager 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 Registered Electrical Energy Manager 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.