Optimise
Optimal Systems Engineering Sdn Bhd
ENGINEERING SUSTAINABILITY

2-Days Workshop on
CONCEPT AND PROCEDURE FOR THE ESTABLISHMENT OF AN

ENERGY MANAGEMENT SYSTEM

(Based on ISO 50001:2018)

06 - 07 August 2025 (Cyberjaya)
13 - 14 October 2025 (Online)
Time: 8:30 am - 5:00 pm
*Date subject to changes. For latest date, refer to website.

RM3,200 per pax (Normal Rate)
RM3,100 per pax (Register 30 days before workshop, or Group of 3)

RM2,700 per pax (Online Session)
RM2,600 per pax (Register 30 days before workshop, or Group of 3)
**Price excluding 8% SST charges*

16 CDP Hours Approved under the Mandatory Topic REM Type 1
(Category: Management
Sub-Category: Setting up ISO 50001:2018

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https://shorturl.at/pCe2z

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WORKSHOP OVERVIEW

Energy Management System Standards (EnMS) such as ISO 50001:2018 has been a globally proven tool for the systematic, efficient and sustainable management of energy use in an organisation. EnMS has enabled many organisations to achieve multiple bottom line benefits of reduced energy cost, minimised GHG emissions, improved profitability and enhanced its public image. This workshop is designed to empower organisations to establish and implement the ISO 50001:2018 Energy Management System Standards (EnMS) as an integral part of a company's environmental and social governance (ESG) initiative.

WORKSHOP BENEFITS

Customise EnMS establishment in line with organisational needs.
Implement a systematic, holistic and sustainable energy management program.
Improve energy efficiency, profitability and minimise GHG emissions.
Raise organisation's image and competitiveness via EnMS.

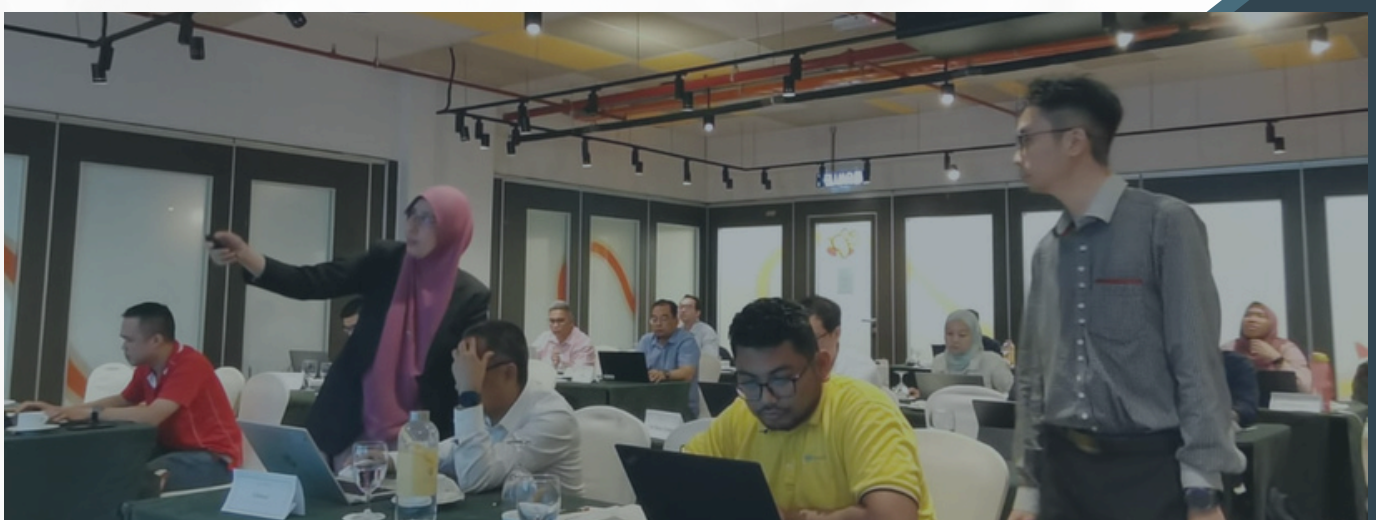
WORKSHOP LEARNING OUTCOMES

At the end of the workshop participants are expected to be able to

- Describe the importance and benefits of EnMS for an organization.
- Communicate real-life success stories, and make a strong case for EnMS establishment. Establish EnMS context, needs, scope and structure based on elements of ISO50001:2018. Plan the EnMS actions, resources, activities, programs and set improvement targets. Implement operational control, design and procurement requirements.
- Perform energy monitoring and evaluate implementation performance.
- Conduct EnMS continual improvement program.

WHO SHOULD ATTEND?

A holistic and effective EnMS implementation should include the top management representative, the energy manager as champion of the initiative, key members of an organisation's energy committee which typically comprise of quality assurance/control manager, technical personnel such as the facility, operation, and maintenance manager



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TRAINERS' PROFILES

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 Type 1 Type 2 REM (Registered 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 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) and a certified trainer for ASEAN energy managers.

TRAINERS' PROFILES

TRAINER 3

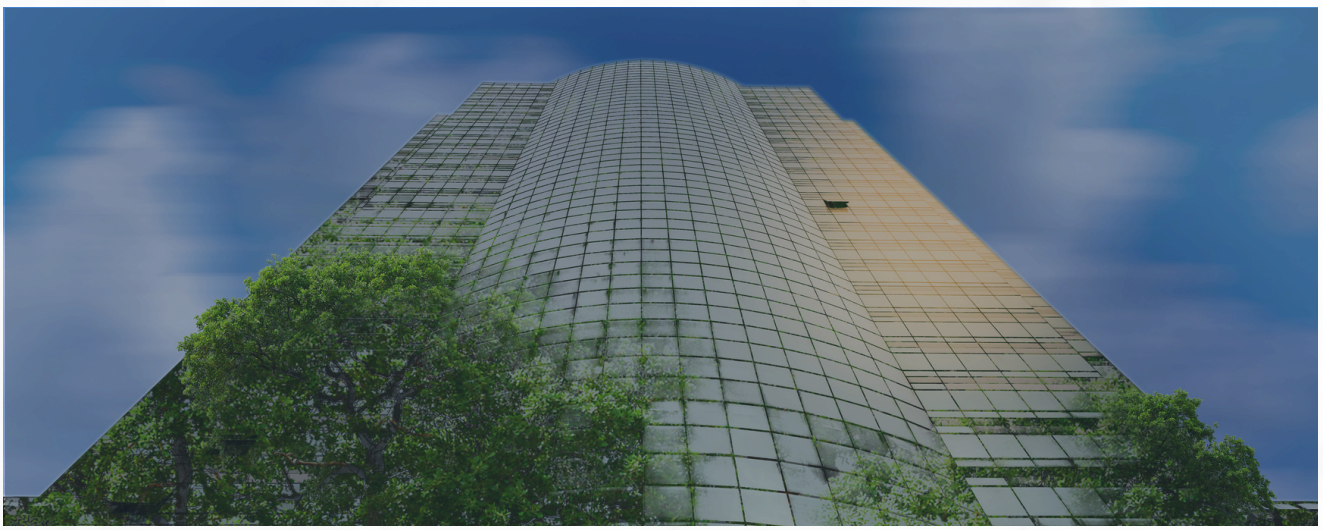
ASSOCIATE PROF IR DR LIM JENG SHIUN

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 (Registered 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.

WORKSHOP SCHEDULE

Day 1	
9:00 am - 9:30 am	Introduction to ISO 50001:2018
9:30 am - 11:00 am	Clause 4: Context of EnMS
11:00 am - 11:15 am	Break
11:15 am - 12:45 pm	Clause 5: Leadership
12:45 pm - 14:00 pm	Lunch Break
14:00 pm - 15:30 pm	Clause 6: Planning
15:30 pm - 17:00 pm	Clause 7: Support

Day 2	
9:00 am - 10:30 am	Clause 8: Operation
10:30 am - 10:45 am	Break
10:45 am - 12:45 pm	Clause 9: Evaluation
12:45 pm - 14:00 pm	Lunch Break
14:00 pm - 15:30 pm	EnMS Checklist
15:30 pm - 17:00 pm	Clause 10: Non-Conformity and Continual Improvement



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

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

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WHAT OUR TRAINEES SAID

TS MOHD MAWARDI BIN HUSSAIN

VOCATIONAL TRAINING OFFICER KKTM SRI GADING

Concept and Procedure for the Establishment of an Energy Management System participants

This course is **tremendously helpful** for me to implement the **energy management system** in my organisation. The syllabus is **well explained** and full of examples to follow.

MOHD UZAINI MOHD ARIFF

SUSTAINABLE DEVELOPMENT MANAGER PETRONAS

Concept and Procedure for the Establishment of an Energy Management System participants

The training is **useful** with “real life examples”.

WONG TIEN YI

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Concept and Procedure for the Establishment of an Energy Management System participants

This training provided **up-to-date information** and know-how; It is a fruitful sharing delivered by a team of **high-level professionals**. I shall continue participating with this organisation to gain more in the lovely field.