2-Days Workshop on GHG Emissions Accounting & Management

(Based on ISO 14064-1:2018)

16 CDP Hours Approved under the Optional CDP Topic

11 - 12 May 2027
15 - 16 November 2027

(Online via Microsoft Teams)
Time: 8:30 am - 5:00 pm

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



Drive Energy-Emissions Management to Net Zero



Identify, Quantify, Analyse & Report GHG Emissions



Monitor and Reduce Energy and Emissions

RM2,700 per pax (Normal Rate)

**Price excluding 8% SST charges*

Register Now!
https://shorturl.at/yzsPX

Organized by:

Optimise
Optimal Systems Engineering Sdn Bhd
Engineering Sustainability

HRD Corp Claimable

MyHijau

MyHS00015/22-E002

General Inquiry : +6016-7167248 Email : inquiry@optimalsystems.my www.optimalsystems.my

OVERVIEW

Are you ready to take your organisation's sustainability and ESG efforts to the next level? Join our upcoming training on GHG accounting and energy-emissions management with a 3-in-1 package of *training*, *case study and working sessions* as well as *software demonstration*.

Over the course of two days, you'll have the chance to learn and apply the techniques for GHG accounting and reporting, from principles and inventory boundaries to emission quantification and reporting based on the ISO 14064-1:2018 standards. We will also demonstrate how to use a GHG accounting software to streamline your reporting process.

Wait, there are more. You will also be exposed to the Science-Based Target Initiative (SBTI) to establish corporate emissions target, and a systematic hierarchical approach for energy and emissions management reduce energy and emissions.

Don't miss out on this valuable opportunity to gain the knowledge and skills you need to transform your organization's sustainability and ESG efforts. Register today and join our 3-in-1 training program!

LEARNING OUTCOMES

At the end of this training, participants will be able to:

- Drive and plan
  - Gain awareness and drive to synergise energy and emissions management.
  - Pave the way toward net-zero carbon emissions.
- Identify, quantify, analyse and report
  - Understand the concept and principles of GHG accounting and reporting, including the inventory boundary, GHG emission identification and reporting.
  - Quantify GHG emissions.
  - Use LCOS GHG accounting software.
  - Report the results based on ISO 14064 standards.
- Target, evaluate and mitigate
  - Establish Science-Based Target Initiative (SBTI Targets)
  - Evaluate emission reduction options
  - Systematically mitigate GHG emissions

TARGET AUDIENCE

Sustainability or ESG managers, energy and environmental engineers and managers, consultants and professionals interested in implementing sustainable practices.

WORKSHOP SCHEDULE

Day 1	
8:30am - 9:00am	Registration and Breakfast
9:00 am - 10:30 am	**Imperatives for Energy & Emission Management (E2M)** **Overall E2M Approach & NZE Essentials** • Carbon Neutrality & Net Zero • GHG Accounting Standards, Emissions Scope • GHG Inventory vs Product Carbon Footprint (PCF)
10.30 am - 10.45 am	Break
10:45 am - 12:00 pm	**Setting GHG Inventory Scope & Boundary**
12:00pm – 12:30 pm	**GHGe (Emissions) Accounting – General Basis**
12:30 pm - 13:30 pm	Lunch Break
13:30pm - 15:00pm	**GHGe Accounting – Stationary Combustion**
15:00pm - 15:15pm	Break
15:15pm - 16:15pm	**GHGe Accounting – Mobile Sources + Fugitive Emissions**
16:16pm - 17:00pm	**GHGe Accounting - Waste**

Day 2	
8:30am - 9:00am	Participants arrival and Breakfast
9:00am - 10:30am	**GHGe Accounting - Others**
10:30am - 10:45am	Break
10:45am - 11:45am	**GHGe Benchmarking & Targeting (e.g., using SBTI)**
11:45am - 12:30pm	**GHGe Mitigation - The 5R E2M Hierarchy**
12:30pm - 14:30pm	Lunch Break
14:30pm - 15:30pm	**Cost-Benefit Analysis: Marginal Abatement Cost Curve**
15:30pm - 15:45pm	Break
15:45pm - 17:00pm	**GHG Inventory Reporting based on ISO 14064 Standard**

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SPEAKERS' 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 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.

SPEAKERS' 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 (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.

WHAT OUR TRAINEES Said



The GHG calculation training was clear and insightful, making complex concepts easy to understand. The practical examples and hands-on exercises greatly improved my grasp of the subject. I now feel confident applying these skills in my work. Highly recommended!

Nur Aishah binti Kamarudin
Facility Engineer
Omron Malaysia Sdn Bhd
2-Days Workshop on GHG Emissions Accounting and Management participants [20 - 21 August 2024]

Attending the GHG Emissions Reporting and Management course improve my understanding of sustainability practices. The instructors were highly knowledgeable . The real-world examples and practical tools provided have already helped me apply what I learned to improve our organization's environmental initiatives. I highly recommend this course to anyone looking to make a meaningful impact in the fight against climate change.



Nurul Izzati Yusop
Facilities Engineer/HOS M&E
CTRM Aero Composites Sdn Bhd
2-Days Workshop on GHG Emissions Accounting and Management participants [9-10 December 2024]



I think what is great about this training is that we get to practice almost immediately the details shared. This way the understanding of the subject is immediately applied and clarified if not understood especially since the training is done online.

THARMASWARAN
PROJECTMANAGER
FLUX POWER ENGINEERING SDN BHD
Introduction to GHG Accounting participants [8 February 2023]

Optimise
Optimal Systems Engineering Sdn Bhd
ENGINEERING SUSTAINABILITY

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

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