



The SCEM programme is designed for engineering professionals who intends to build their career as energy managers. It gives a thorough understanding of key energy issues either in building or industry sector. This programme will help participants develop the technical skills and competencies to manage and track energy usage within organisations.

A SCEM is envisioned as:

A competent energy professional equipped and qualified to perform technical and managerial functions in the areas of:

- Energy audits, management and measurements
- Energy retrofitting services
- Financial advisor for energy efficiency measures and contracting
- Consultation and procurement services
- Facility and energy management
- Energy engineering works



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Sustainable Energy Association of Singapore

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SCEM Professional Level training focuses on the theory and practice of energy management, energy efficiency and analysis, procurement, finance and economics. The training aims to develop competency in energy audit works, energy performance and contracting and project management, energy efficiency analysis, energy economics and financial assessment. Participants will eventually identify saving potentials and make sound recommendations and proposals.



Training Course Contents

The SCEM curriculum comprises compulsory and elective modules. Each individual undertakes 4 compulsory and 2 elective modules.

Core Modules

Energy Measurement & Audit (24 Hours)

Accurate energy measurement and analysis are essential for any energy improvement program. Accurate and continuous measurement of sub-systems energy demand and efficiency has been proven to lead to sustainable and highly efficient buildings. This module will equip participants with knowledge to accurately measure and analyse energy demand and efficiency of common mechanical and electrical systems in buildings together with an awareness of legislative requirements.



Energy Management & Economics (24 Hours)

Engineering professionals who intend to build their careers as energy managers need to understand principles related to the management and economics of energy. This module covers the setting up of energy management systems (including an introduction to ISO 50001), the formation of the energy management team and the integration of energy management systems into business practice.



Air-Conditioning and Mechanical Ventilation Systems (24 Hours)

ACMV systems are a major energy consumer in hot humid Singapore. Energy managers need a basic knowledge of ACMV systems to run the ACMV plant and equipment. Besides meeting the objectives of providing thermal comfort to occupants and other requirements, the energy manager must have the skills to operate the plant in an energy efficient manner.



Motor-Driven Systems (24 Hours)

Engineers who manage energy and facilities need a good understanding of how motor driven systems work. The module provides participants with a basic understanding and knowledge of motor driven systems and the application of these systems.



Elective Modules

Combined Heat & Power Systems (24 Hours)

The use of sustainable CHP systems versus conventional electrical power plants and fuel fired boilers can reduce the energy loss resulting in reduced emission and environmental impact. These combined power plants can also be made to function as cogeneration or trigeneration systems producing two or three useful effects simultaneously.



Steam & Compressed Air Systems (24 Hours)

Steam and compressed air systems consume significant energy in industrial plants. In addition, there are many opportunities to recover waste heat from various industrial processes. Therefore, energy efficient design and appropriate operation strategies for these systems have the potential to significantly reduce energy consumption in industrial facilities.



Lighting Systems and Building Envelopes (24 Hours)

The façade together with the rest of the building envelope and roof contribute most to the solar heat gain of a building. Energy managers should be well-equipped with knowledge and technical skills to minimise these loads. Possession of a good knowledge of lighting products, systems, design & methods of integrating supplementary daylight will help energy managers to save on lighting and thermal loads.



Course Fees: S\$5,885.00 (6 Modules Fee, inclusive of GST)
Exam Fees of S\$85.60 per exam (inclusive of GST) charged separately.



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