

# ACCREDITED ENERGY MEASUREMENT & VERIFICATION PROFESSIONAL (AEMVP) TRAINING

Organised by :



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Date : 13 ~ 15 March 2023

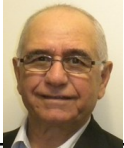
Venue : PKNS BizPoint, Seksyen 7, Shah Alam

\* **12 CPD Points**

**Fees :**

- **RM 3500.00 / person (Public / Non members)**
- **RM 3200.00 / person (MAESCO members)**

## Trainer's Profile



Dr. Hassan Bathish is a Chartered Engineer (Institution of Engineers, Australia) and hold an MBA (Technology Management), a Ph.D in Power System Engineering, a M.Sc. in Electrical Drives and Automation of Industrial Plants, and a Certified Measurement & Verification Profession by EVO (USA) with more than 40 years of professional experience. Dr Hassan is a leading energy management trainer with world class expertise in, energy efficiency, monitoring & verification, least cost renewable power generation and Smart Grid applications

## Participant Eligibility

Each candidate for AEMVP certification must attend the 2.5 days training of Energy Measurement & Verification training prior to sitting for the AEMVP exam. Each candidate for AEMVP certification must pass the 3-hour written open-book exam as well as meet one of the following criteria:

- 4-year degree from an accredited university or college in science, engineering, architecture, business, law, finance or related field, **AND** 3 years of experience in energy or building or facility management, or energy measurement and verification; **OR**
- Registered Professional Engineer or Professional Architect with **AND** 3 years of verified experience in energy or building or facility management, or energy measurement and verification; **OR**
- 4-year non-technical degree from an accredited college or university in a field not specified above **AND** 5 years of verified experience in energy or building or facility management, or energy measurement and verification; **OR**
- 2 year technical degree **AND** 5 years of verified experience in energy or building or facility management, or energy measurement and verification; **OR**
- 10 years of verified experience in energy or building or facility management, or energy measurement and verification; **OR**
- Current Status of Registered Electrical Energy Manager (REEM). Current Status of Registered Electrical Energy Manager (REEM).

## Training Objectives

1. Raising the technical understanding of Energy Measurement & Verification (EM&V) fundamentals by specialist involved in EM&Vs;
2. Maintaining existing accreditation of existing **AEMVPs**;
3. Familiarizing with the status of International Measurement and Verification Standards, Guidelines and Protocols widely used globally;
4. Learning how to develop and implement an effective EM&V Plan;
5. Learning on how to decide on the acceptable level of metering accuracy to be used for EM&Vs;
6. Learning how to deal with metering errors, missing or corrupted metering data;
7. Learning how to model energy monitoring data using regression analysis and understanding statistical uncertainty and level of confidence and precision levels in estimating energy savings as per adopted EM&V Plan;
8. Learn how to verify the operations and savings Renewable Energy Systems; and
9. Learning how to adopt the most suitable Energy Measurement & Verification Option that fits your project;
10. Learn how to issue an effective reporting on estimated savings within the agreed precision range.

## Course Outline

1. The Need for Energy Measurement & Verification Standards;
2. Overview of Global Energy M&V Standards, Protocols and Guidelines;
3. Energy Measurement and Verification Principles;
4. Energy Measurement and Verification Plan;
5. M&V Uncertainty and other Critical Issues;
6. Energy M&V Related Data Gathering and Analysis;
7. Adjustments of Energy Baseline;
8. Examples on Using Measurement & Verification Standards;
9. Verification of Renewable Energy System Operations and Savings; and
10. Workshop on How to Select the Energy M&V Option that Fits Your Project.

## To Register :

<http://www.maesco.org.my>

**MAESCO, 9, Jalan SS7/10, Kelana Jaya, 47301, Petaling Jaya, Selangor**

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