



SOLAR ENERGY FUNDAMENTALS TRAINING



MTBM Group Sdn. Bhd. (1600656-M)

Level 8, MCT Tower, Sky Park, One City, Jalan USJ 25/1, 47650 Subang Jaya, Selangor

Course Title: Solar Energy Fundamentals Training

Course Validity: 1 Day

Validity: Not Applicable

HRD Corp Scheme: Claimable

INTRODUCTION

This training provides essential foundational knowledge on solar energy principles and photovoltaic (PV) technology. Participants will learn the basics of solar radiation, PV module operation, system components and energy generation concepts. The course is designed for individuals who require a clear and simplified understanding of how solar energy systems function..

OBJECTIVE(S):

- Understand the basic concepts of solar energy and photovoltaic principles
- Identify major components of a Solar PV system
- Learn how PV modules convert sunlight into usable electricity
- Understand simple system configurations and energy flow
- Gain awareness of safety considerations and basic performance concepts
- Build fundamental readiness for further Solar PV technical training

TARGET GROUP(S):

- New learners in renewable energy
- General staff and executives
- ESG, sustainability and environmental teams
- Facility and property management personnel
- Organisations introducing solar energy awareness

ENTRY REQUIREMENT(S):

- Able to read, write, and communicate in Malay/English

TOPIC(S):

1. Introduction to Solar Energy and Photovoltaic Principles
2. Types of Solar Energy Systems and Applications
3. PV Modules, Cells and Basic Technology Variants
4. Solar Radiation, Irradiance and Basic Energy Concepts
5. PV System Components and Energy Flow Basics
6. Simple System Configurations (Off-Grid, On-Grid, Hybrid)
7. Basic Performance Concepts and Energy Yield Awareness
8. Fundamental Safety and Handling Requirements

LIST OF REFERENCE BOOK(S):

- Solar Energy Basic Guides
- Introductory PV System Manuals
- SEDA Malaysia Solar Resources Guides
- General Renewable Energy References

LIST OF TEACHING AID(S):

- LCD projector
- Computer
- Whiteboard with accessories

METHODOLOGY(S):

- Lecture
- Case studies
- Group discussions

TRAINING SCHEDULE

Day 1

Time	Activity / Topic
8:30 am – 9:00 am	Registration and Introduction
9:00 am – 9:30 am	Topic 1: Introduction to Solar Energy & PV Principles
9:30 am – 10:00 am	Topic 2: Solar Energy Systems & Applications
10:00 am – 10:30 am	Topic 3: PV Modules, Cells & Technology Basics
10:30 am – 10:45 am	Morning Tea Break
10:45 am – 11:15 am	Topic 4: Solar Radiation & Energy Concepts
11:15 am – 12:00 pm	Topic 5: PV System Components & Energy Flow
12:00 pm – 1:00 pm	Lunch Break
1:00 pm – 1:45 pm	Topic 6: System Configurations (Off-Grid, On-Grid, Hybrid)
1:45 pm – 2:30 pm	Topic 7: Basic Performance Concepts & Energy Yield
2:30 pm – 2:45 pm	Afternoon Tea Break
2:45 pm – 3:30 pm	Topic 8: Fundamental Safety & Handling
3:30 pm – 4:30 pm	Group Discussion & Closing Q&A