



SOLAR PV OPERATION & MAINTENANCE (O&M) 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 PV Operation & Maintenance (O&M) Training

Course Validity: 2 Days

Validity: Not Applicable

HRD Corp Scheme: Claimable

INTRODUCTION

This training introduces participants to the essential requirements of Solar PV operation and maintenance for rooftop and ground-mounted systems. It covers routine inspections, safety practices, preventive maintenance, inverter diagnostics, and troubleshooting. Participants will also learn performance monitoring, reporting, and corrective maintenance techniques to ensure continuous and reliable PV system operation. The course is designed to enhance practical competence and improve long-term system performance.

OBJECTIVE(S):

- Understand PV system operation and performance behaviour
- Learn preventive maintenance methods and inspection routines
- Identify common faults and apply troubleshooting techniques
- Understand inverter operation, alarms and protection systems
- Strengthen performance monitoring and reporting skills
- Implement corrective maintenance procedures effectively
- Ensure long-term PV system reliability and efficiency

TARGET GROUP(S):

- PV installers, technicians & maintenance teams
- Engineers & facility managers
- Renewable energy contractors
- ESG and sustainability teams
- Organisations operating PV systems

ENTRY REQUIREMENT(S):

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

TOPIC(S):

1. PV System Operation Overview
2. Preventive Maintenance & Inspection
3. Inverter Operation & Diagnostics
4. DC & AC Protection Systems
5. Performance Monitoring & Data Analysis
6. Troubleshooting Techniques
7. Corrective Maintenance
8. Documentation & Compliance Requirements

LIST OF REFERENCE BOOK(S):

- SEDA Malaysia PV System Guidelines
- ST (Suruhanjaya Tenaga) Electrical Safety Standards
- IEC O&M Standards for Photovoltaic Systems
- PV Inverter & Module Technical Manuals
- Solar Performance Monitoring Guidelines

LIST OF TEACHING AID(S):

- LCD projector
- Computer
- Whiteboard with accessories

METHODOLOGY(S):

- Lecture
- Case studies
- Hands-on troubleshooting demonstration
- Group discussions
- Practical O&M exercises

TRAINING SCHEDULE

Day 1

Time	Activity / Topic
8:30 am – 9:00 am	Registration and Introduction
9:00 am – 9:45 am	Topic 1: PV System Operation Overview
9:45 am – 10:30 am	Topic 2: Preventive Maintenance & Inspection
10:30 am – 10:45 am	Morning Tea Break
10:45 am – 11:30 am	Topic 3: Inverter Operation & Diagnostics
11:30 am – 12:30 pm	Topic 4: DC & AC Protection Systems
12:30 pm – 1:30 pm	Lunch Break
1:30 pm – 2:30 pm	Topic 5: Performance Monitoring & Data Analysis
2:30 pm – 3:30 pm	Practical Session: Monitoring & PR Calculation
3:30 pm – 3:45 pm	Afternoon Tea Break
3:45 pm – 5:00 pm	Workshop: Preventive Maintenance Planning

TRAINING SCHEDULE

Day 2

Time	Activity / Topic
8:30 am – 9:00 am	Recap of Day 1 & Q&A
9:00 am – 9:45 am	Topic 6: Troubleshooting Techniques
9:45 am – 10:30 am	Topic 7: Corrective Maintenance Procedures
10:30 am – 10:45 am	Morning Tea Break
10:45 am – 11:30 am	Practical: Fault Isolation & String Testing
11:30 am – 12:30 pm	Case Study: Common PV Failures
12:30 pm – 1:30 pm	Lunch Break
1:30 pm – 2:30 pm	Topic 8: Documentation & Compliance Requirements
2:30 pm – 3:30 pm	O&M Optimization & Long-Term Asset Management
3:30 pm – 3:45 pm	Afternoon Tea Break
3:45 pm – 5:00 pm	Final Practical Review, Q&A & Closing