



COURSE NAME: Solar Panel Installation Technician

NSQF LEVEL: 4

REFERENCE ID: ELE/Q5901

ALIGNED TO: NCO-2004/ NIL

Brief Job Description:

The individual at work checks the installation site, understands the layout requirement as per design, assesses precautionary measures to be taken, installs the solar panel as per customer's requirement and ensures effective functioning of the system post installation.

Personal Attributes:

The individual must have: ability to work in standing position for long hours, good physical strength to handle solar panels and willingness to work in outdoor settings at varied locations such as roof tops, fields, urban or rural.

Module 1 : Basic Fundamental

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| • Course overview |
| • current (1.1) |
| • Types of electric current (1.1) |
| • Power |
| • Voltage |
| • Resistance |
| • Combination of resistors and current flow through a system of resistors |
| • Ohm's Law |
| • Solar Cells & Photovoltaic Panels (1.3 & 1.4) |
| • Solar panel connection format (1.2) |
| • Energy and sources of energy (1.2) |
| • Solar Energy System |
| • Load and energy calculation |
| • Electric power system (1.5) |
| • Basic of Computer |
| • Basic of Internet |
| • Story / Case Study Based Brain Storming Session |
| • Group Discussion |

Assessment for Module 1



Module 2 : Components of Solar System

- Solar PV module and STC of Module (2.1)
- The battery (2.2)
- Battery components and types of batteries
- Battery connection format
- Charge controller (2.3)
- Type of charge controller
- Solar inverter (2.4)
- Types of solar inverter
- Block diagram of inverter connection
- mounting (2.5)
- mounting types
- Basic of MS Office
- Basic of MS Word
- Basic of Email Writing
- Interaction With SME
- Interaction With Corporate

Assessment for Module 2

Module 3 : Technician Responsibility

- Technician responsibility (3.1)
- Understanding customer requirements
- Collect Equipment required for solar installation (3.2)
- Site analysis, Site Status Assessment (3.3)
- Load and energy calculation
- Inverter size calculation
- Battery size calculation
- Calculation of solar system
- Calculate the number of solar panels
- Earthing
- Installation process & Maintenance (3.4)
- Basic of MS Excel
- Basic of Listening Skill
- Conflict Management
- Interpersonal Skill

Assessment for Module 3



Module 4 : Process Adherence

- Safety System
- Workplace Safety (4.2)
- Technician Personal Qualities (4.1)
- Technician Coordination Properties (4.1)
- Basic of MS power Point
- Basic of Concall
- Basic of Video call
- Importance of Team
- Objection / Rejection Handling

Assessment for Module 4

Interaction with Subject Matter Expert

Certification