WTTP:

Workforce Technical Transformation Programme

Solar Photovoltaic Systems Installer

(SEDA Certification)

Contents

Executive Summary

Programme Name	Workforce Technical Transformation Programme: Solar Photovoltaic Systems Installer
Programme Objective	To develop talents in the Grid Connected Photovoltaic Systems installation field, with well-founded knowledge and skills pertaining to the suitable application and use of Photovoltaic Systems, by providing them with knowledge in installation, operation, and maintenance of Grid Connected Photovoltaic Systems.
Development Sector	Renewable Energy / Solar Photovoltaic – Grid Connected Solar Photovoltaic Systems Installation and Maintenance
Certification Body	SEDA Malaysia
Target Learners	• Malaysians • Age 24 and below • minimum SPM
Programme Duration	6 months (3+3)
Programme Fees	RM 7500/pax
Learners Monthly Allowance	RM 300/pax

Overview

Due to the declining cost of solar, the market is forecasted to grow very rapidly at about 30 percent per year through 2015 and then at a rate of 25 percent per year until 2020. This implies an increase of 100 times in solar share by 2020, when it would account for 5 percent of renewable energies and 1 percent of global energy supply. This will translate into global cumulative installed capacity of 560 gigawatts, with annual demand of 113 gigawatts and RM918 billion of revenues in 2020. Asia will drive a significant portion of this demand and supply by 2020. This demand trend is expected to continue over the next few decades, and solar is predicted to account for as much as 25 percent of global energy supply by 2050.

Should domestic use of PV begin to ramp dramatically in line with the experience of other countries, labour and skills would likely present the next bottleneck in deployment. A number of skills will be required to install PV systems that may not currently be in abundant supply or ready to instantly port over for use, including wiring and racking, engineering and design, and system monitoring and certification. These skills are well understood in other places and training programs can be made available to people with similar skills or appropriate qualifications to gain precise capabilities in the solar sector.

To ensure that Malaysia is able to cater the human capitals in this development, SEDA Malaysia have developed courses to provide Malaysians with the skills needed in the RE sector focussing in Solar Photovoltaic, and have made it mandatory that installations under the Feed-in Tariff mechanism must be done by certified competent persons to ensure that the installation quality and safety are up to Malaysian Standards.

Industry Demand

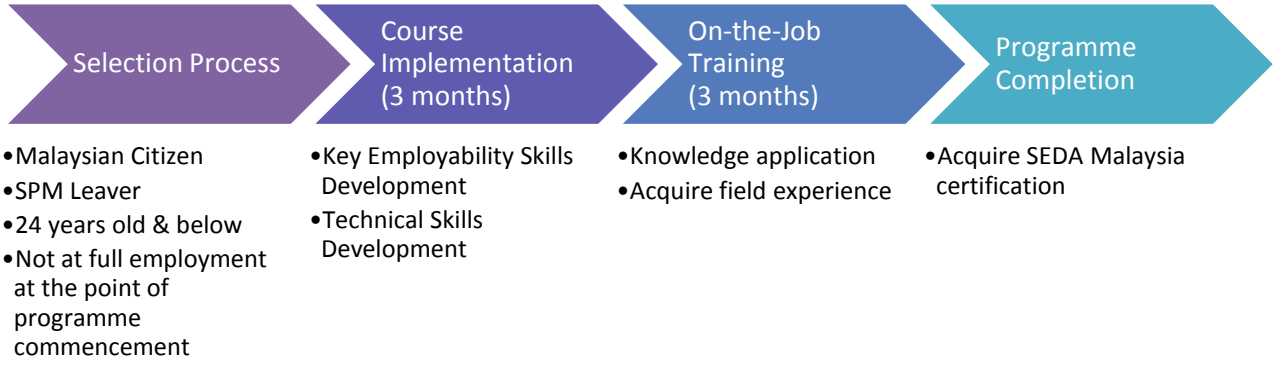
The industry in Malaysia demands talent for the following

- Grid-Connected Photovoltaic (PV) Systems Designer
- Grid-Connected Photovoltaic (PV) Systems Wireman and Chargeman
- Grid-Connected Solar Photovoltaic (PV) Systems Installer and Maintainer

Programme Proposal

Programme Title	Workforce Technical Transformation Programme: Solar Photovoltaic Systems Installer
Programme Objective	To develop talents in the Grid Connected Photovoltaic Systems installation field, with well-founded knowledge and skills pertaining to the suitable application and use of Photovoltaic Systems, by providing them with knowledge in installation, operation, and maintenance of Grid Connected Photovoltaic Systems. The aim of the programme is to • Increase the uptake of solar PV power systems by giving customers increased confidence in the installation work • Improve the safety, performance, and reliability of solar PV systems installed in the field • Encourage industry best practice for all installation work involving solar PV power systems • Give participants access to training opportunities to update their skills • Maintain a network of competent solar PV power systems installer
Programme Duration	6 months (3+3 programme)
Programme Fees	RM 7500/pax
Allowance	Monthly allowance RM 300/pax

Programme Structure



Course Structure

Technical Skills Development	**Core Modules** SEDA Malaysia - Grid Connected Solar Photovoltaic (PV) Systems Installer and Maintenance Training Course 1 *Modul 1 – Amalan Kesihatan Pekerjaan dan Keselamatan* 2 *Modul 2 – Pengenalan Kepada Elektrik Solar* 3 *Modul 3 – Penyediaan Pemasangan Sistem* 4 *Modul 4 – Peralatan Sistem dan Pepasangan Sistem Elektrikal* 5 *Modul 5 – Senggaraan dan Pembetulan*
Key Employability Skills Development	**Core Modules** 1 *5S* 2 *Technical Drawing and Mechanical Skills* 3 *Engineering Mathematics* 4 *Electrical Wiring* 5 *Effective Communication Skills & Report Writing* 6 *CiDB Green Card*

Programme Justification

The implementation of SEDA Malaysia - Grid Connected Solar Photovoltaic (PV) Systems Installer and Maintenance Training Course over JPK NOSS Solar Installation and Maintenance Practitioner & Solar Installation and Maintenance Assistant Practitioner

- Overview of SEDA Malaysia
    - *The Sustainable Energy Development Authority of Malaysia (SEDA Malaysia) is a statutory body formed under the Sustainable Energy Development Authority Act 2011 [Act 726]. The key role of SEDA is to administer and manage the implementation of the feed-in tariff mechanism which is mandated under the Renewable Energy Act 2011 [Act 725].*

- Competent Person for Feed-in Tariff Mechanism
    - *As a requirement for feed-in tariff application through SEDA, any installation must be done by SEDA Certified competent persons.*

- Depth of knowledge
    - *JPK NOSS covers a vast area of Solar Photovoltaic Systems (Stand-Alone Systems and Grid –Connected Systems) technology and some portion of Renewable Energy.*
    - *SEDA Malaysia brings the focus to the area of Grid-Connected Solar Photovoltaic Systems as it is widely implemented for the feed-in tariff mechanism.*