IFC International Finance Corporation WORLD BANK GROUP

Creating Markets, Creating Opportunities

NAPTIN

Solar PV Installation (SPVI), Solar PV Installation Supervision (SPVIS) and Mini-Grid Design (MGD) Course

National Power Training Institute of Nigeria (NAPTIN)

Course Description:
This curriculum was specially developed for Nigeria by the Nigerian Energy Support Programme (NESP) implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH in collaboration with the Renewable Energy and Energy Efficiency Programme (REEEP) funded by United States Agency for International Development (USAID).

These courses teach in practical terms the competencies required to carry out work as a Solar Photovoltaic Installer (SPVI), Solar Photovoltaic Installation Supervisor (SPVIS) and Mini-Grid Designer (MGD). It provides nationally valid references for curricula development and examination in the specified discipline. All these expectations are met in these intensive hands-on trainings.

Unit standards in this course have been benchmarked against similar regional and international unit standards and qualifications. These included but were not limited to Economic Community of West African States (ECOWAS) Formulaire de revision des Guides Techniques, South African unit standards, New Zealand unit standards, Australian unit standards and British national occupational standards.

International Finance Corporation (IFC) through the support of DFID and the Hungarian Government will provide a 75% scholarship (covering only tuition) support for qualified interested participant.

The courses are designed to conform with the following Standards and Safety Codes:

- *Nigerian Electricity Health and Safety Code (2014)*
- *Nigerian Electricity Health and Safety Standards Manual (March 2008: NERC)*
- *Nigerian Industrial Standard NIS 78:1978 Specification for the use of metric units in construction industry*
- *International Standard IEC 60364-7-712 1st edition 2002-05 Electrical Installation of Buildings – Requirements for special installations or locations - Solar photovoltaic (PV) power supply systems*
- *International Standard ISO 6707-1 Buildings and civil engineering works – Vocabulary – 4th edition 2014.*

Solar PV Installation (SPVI)

SPVI Objective:

i. Plan installation work
ii. Assist/install PV Systems
iii. Perform maintenance and troubleshooting
iv. Maintain records required for monitoring
v. Observe health and safety regulation

SPVI Course Content:

i. Introduction to solar photovoltaic
ii. Components and electrical connection
iii. Basic system sizing
iv. Site preparation
v. Installing a photovoltaic system
vi. Maintenance and troubleshooting
vii. Workplace safety and first aid

Target Audience/Entry qualifications for SPVI:

- *Engineering, technical and Science educational background (formal and informal) to install, troubleshoot and maintain domestic and smaller commercial solar photovoltaic*
- *Must be able to speak and write English*

Solar PV Installation Supervision (SPVIS)

SPVIS Objective:

i. Plan installation work
ii. install PV Systems
iii. Perform maintenance and troubleshooting
iv. Maintain records required for monitoring
v. Observe health and safety regulation
vi. Manage and maintain relationship with customers

SPVIS Course Content:

i. introduction to solar photovoltaic
ii. components and electrical connection
iii. Basic system sizing
iv. Site preparation
v. Installing a photovoltaic system
vi. Maintenance and troubleshooting
vii. Workplace safety and first aid
viii. Entrepreneurship and customer relation

Target Audience/Entry qualifications for SPVIS:

- *Engineering, technical and science formal educational background, to supervise and lead the installation, maintenance and troubleshooting of solar photovoltaic*
- *Must be able to speak and write English*

Mini-Grid Design (MGD)

MGD Objective:

i. Plan and design successful mini-grid for both residential and industrial application.
ii. Perform economic analysis for Profitability of mini-grid system
iii. supervise construction and commission of mini-grid power systems
iv. Provide related advisory Services on solar photovoltaic and micro hydro plants

MGD Course Content:

i. Renewable energy application in mini-grid design (Hydro, SPV, Wind, Biomass etc)
ii. Load assessment
iii. Mini-grid power generation technologies
iv. Mini-grid electric power distribution technologies
v. Social, Economic and legal framework of mini-grid deployment
vi. Project planning and Management.

Target Audience/Entry qualifications for MGD:

- *Electrical engineers to plan, design, analyze and commission renewable energy systems, supervise construction and provide related advisory services*
- *Minimum Higher National Diploma (HND) or university degree in engineering, or university degree in physics or comparable.*

Training Calendar

COURSE DESCRIPTION	TRAINING DATES
1. Solar PV Installation (SPVI) Course	25th Jun – 14th July 2018
2. Solar PV Installation Supervisor (SPVIS)	2nd July – 20th July, 2018
3. Solar Mini Grid Design (SMGD) Course	17th Sept – 13th Oct. 2018
4. Solar PV Installation (SPVI) Course	19th Nov – 8th Dec. 2018
5. Solar PV Installation Supervisor (SPVIS)	21st Jan – 9th Feb. 2019

Teaching methods

- Lectures (presentations & videos)
- Practical work
- Simulations
- Group work (homework, role play, presentation)
- Pop-quiz, Laboratory-experiments & workshops
- Field trips
- Demonstration
- Discussion

Assessment methods
Written examination
Practical | examination

Duration: *3 Weeks (120 hours)*
Cost:
Tuition – NGN150, 000 – (this includes: training facilitation and equipment fee, training materials, breakfast & lunch). Successful beneficiaries of the 75% partial scholarship will pay only N37,500 to participate in the programme after being shortlisted.

Accommodation: Make personal arrangement or liaise with NAPTIN for subsidized accommodation.

Note: Mini-Grid Design (MGD) duration and cost is slightly different.

Training Venue: NAPTIN Regional Training Centre, Ijora, Lagos State

HOW TO PARTICIPATE

- Interested participants should apply through NAPTIN's website at www.naptinportal.com by completing the online registration form as a trainee.
- Submitted applications will be reviewed and successful candidates will be communicated via their email address after the shortlisting process.

MODE OF PAYMENT

1. Direct online payment through your debit card Using Remita Web Pay option: You can make payment directly on the portal using your debit card through Remita web pay integration

2. Bank payment using Remita Book-on-Hold option: You can make payment at any of the designated Banks indicated on NAPTIN's portal using the Remita book-on-hold option after generating the RRR code

NOTE: Payment is done on NAPTIN's portal @ www.naptinportal.com after you must have registered as a trainee and apply for the Solar PV course of your choice and you have been successfully shortlisted. Note unless you have been shortlisted and received a notification from NAPTIN to that effect NO PAYMENT SHOULD BE MADE.

CONTACTS:
For further inquiries, contact NAPTIN support team on the following numbers: 08172780301, 08118979141. You can also forward your enquiries to this email: support@naptinportal.com

Supported by:

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