





Advanced Solar Professionals Course National Institute of Solar Energy – Gwal Pahari, Gurugram, Haryana- 122003

# **Objectives:**

The course aims for a better understanding and hands-on-practice in different streams of solar energy including Solar Photovoltaic technologies, Applications in On-grid and Off-grid systems, Solar Thermal technologies (low temperature and high temperature applications), Solar Resource Assessment, Management and Business Entrepreneur.

# Mode of Training:

Classroom lecture, Practical Hands-on, Field visit, Industrial visits, Lab experiments, Project Profiles –Business Entrepreneurship.

# **Duration & Fee:**

Total Duration : 1056 Hrs (6 months) Full Course Fees : 55,000 + GST (18%) Number of Seats : 40\* Date of Starting : 15th January 2018 Last date of receiving the application at NISE : 10-01-2018 Accommodation : On request

# **Target Audience:**

Diploma in any branch + Experience, B.Tech/BE or its equivalent in any branch of Engineering, Other graduate and post-graduate degrees in Science, MNRE Channel Partners and Solar Entrepreneurs.

## **Organized by:**

This course has been developed by National Institute of Solar Energy (NISE) in association with Skill Council for Green Jobs in line with their selected Qualification Packs (QPs).

# **Training Material:**

Relevant reading material for all covered topics.

# **Certification and Support for Employment:**

- NISE follows best practice standards and to develop the content and deliverables of its solar training courses. It has digitized library along with access to Science Direct journals.
- □ The participants will be receiving a joint certificate from NISE and Skill Council for Green Jobs (SCGJ).
- □ This certificate course is valid in India as well as recognized in 27 countries (countries listed by NSDC,MSDE).
- □ Certificate course will help the participants to explore the career possibilities in the following areas of Solar Energy field:
  - Entrepreneurship
  - Project Engineer

- EPC
  Solar Power Plant Designer
  Site Engineer
- ✤ Installer, Operation & Maintenance Trainer

**How to Apply:** Course details and application form(s) are in the advertisement. (Kindly refer NISE website www.nise.res.in)

\*Number is subjected to vary

Trainer

Program Advisor : Prof H.P.Garg Former Prof & Head of IIT Delhi



#### Venue: NISE Gurugram, Haryana

#### Date of start of course: 15-01-2018

## **ABOUT NISE:**

National Institute of Solar Energy (NISE) is an Autonomous Institute of Ministry of New and Renewable Energy, Government of India to function as an Apex National Centre for research and technology development and related activities in the areas of Solar Energy Technologies in the Country. NISE is located on a 200 acre campus at the Gurugram- Faridabad Road, Gwal-Pahari, Gurugram, Haryana. The Institute works on development of Solar Energy Technologies and practices and contributes in advancement of related Science and Engineering. The R&D activities of NISE are carried out in coordination with other research organizations and industry.

#### An unfolding global energy transition



### **NEED FOR THE COURSE:**

- All the Solar (both solar PV and thermal) Training courses in India are in short-term courses. They only cover a very specific portion of solar photovoltaic or solar thermal technology. NISE is very well known for its various successful Skill Development programs in the different aspects of Solar Energy. Our various scientific staffs deliver invited lectures across the country. It is observed the participants of any specific training program used to ask doubts/ queries regarding other faces of solar energy technologies. Most of the trainees have given feedback that if a joint long-term program could be framed including major technical & business sectors of solar energy.
- Therefore this 6 months "Solar Professional" course is framed for a better understanding and hands-on-practice of the solar energy fundamental (Solar Photovoltaic and Solar Thermal) for both technical and non-technical (business persons).

## **OBJECTIVE OF THE COURSE:**

• This course aims in a better understanding and hands-on-practice in the different streams of solar energy including Solar Photovoltaic technologies, Applications in the form of On-grid and Off-grid systems, Solar Water Pumping System, Solar Thermal technologies, Applications of Solar Thermal technologies, Solar Resource Assessment, Business Entrepreneurship.

## **ABOUT THE COURSE:**

This course has been developed by National Institute of Solar Energy (NISE) in association with Skill Council for Green Jobs in line with their selected Qualification Packs (QPs). This is a six months course designed for technical, non-technical and business persons who is interested in the solar sector.

## **CAREER OPPORTUNITIES:**

- The participants will be receiving a certificate from NISE and Skill Council for Green Jobs (SCGJ).
- This certified course will be nationally valid as well as recognized in other 27 countries (countries listed by NSDC, MSDE).
- Certificates course will help the participants to explore the career possibilities in the following areas:
  - ✤ Entrepreneurship
  - ✤ Site Engineer related to
  - Project engineer
  - Solar Power Plant Designer
  - ✤ Installer, O & M
  - ✤ EPC
  - ✤ Trainer

## **LEARNING OUTCOMES:**

- Understand the basics solar energy and concept of solar PV (photovoltaic) system\*
- Survey a solar PV installation site
- Understand all equipment related to solar PV system
- Design any solar PV system as per Customer's requirements as well as appropriate codes and standards
- Prepare the necessary technical documents related to the design, installation and operation of the PV system
- Installation of solar PV system based on the relevant designs and drawings.
- Operation and Maintenance of solar PV system including identification and troubleshooting of faults along with ensuring of safety while installation and operation
- Undertake project management for installation of solar PV system
- Understand necessary formalities with authorities for applications, submissions, approvals, interconnections, inspections, certifications, commissioning, etc. for PV system
- National and State Policies for SPV Power Plants
- Different Metering mechanisms and Key Implementation Requirements, Standards, Regulations
- Pre-commissioning inspection of the Solar PV Power Plant
- Work safety at a SPV site including knowledge of Personal Protective Equipment, Firstaid kit, Fire-extinguishers and Safe job practice at height.
- Understand the basics concept of various solar thermal technologies\*\*
- Site survey of a solar thermal system
- Understand all equipment related to the solar thermal system
- Design of solar water thermal system as per Customer's requirements as well as appropriate codes and standards
- Prepare the necessary technical documents related to the design, installation and operation of the solar thermal system

- Installation of a solar thermal system based on the relevant designs and drawings
- Operation and Maintenance a solar thermal system and ensuring safety while installation and operation of the solar thermal system
- Undertake project management for installation of a solar thermal system
- Understand the various necessary formalities with authorities for applications, submissions, approvals, interconnections, inspections, certifications, commissioning, etc. for solar thermal system
- National and State Policies for solar thermal system
- Pre-commissioning inspection of the Solar thermal Power Plant
- Work safety at a solar thermal installation site including knowledge of Personal Protective Equipment, First-aid kit, Fire-extinguishers and safe job practice at height.
- General aspects of Entrepreneurship and start-up of business
- Development of solar business\*\*\* in the field of Manufacturing, Installation, Operation & Maintenance, Testing & Commissioning
- Development of business-specific project profile including Market Research, Land & Cost analysis, Vendor availability, Transport feasibility, Manpower, Loans, Policies & Subsidies

\* Ground mounted, Rooftop solar, Grid connected rooftop solar PV system, Off-grid system applications (home lighting, street lighting & lantern) and solar water pump

\*\*Solar water heating system, solar cooker,

\*\*\*include solar PV, thermal & water pumping system

## TARGET AUDIENCE:

- (1) Diploma in any branch + Experience
- (2) B.Tech/ BE or its equivalent in any branch of Engineering
- (3) Other graduate and post-graduate degrees
- (4) Solar Entrepreneurs
- (5) Public Sector Undertaking Officials
- (6) EPC contractors
- (7) MNRE channel partners
- (8) Senior Energy Department Officials of Govt. of India and Officers from State Nodal Agencies etc.

## **TOPICS TO BE COVERED:**





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## SOLAR OFF-GRID ENTREPRENEUR

- Develop solar lighting solutions business
- Develop solar PV pumping business
- Develop solar PV off- grid power plant business

SOLAR PV BUSINESS DEVELOPMENT EXECUTIVE

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## PROJECT SUBMISSION AND CERTIFICATE DISTRIBUTION

## **COURSE FEE:**

Training Fee per participant	Rs. 55,000 +GST (18%) in favor of "National Institute of Solar
	Energy –Capacity Building" Gurugram
Total Course Fees	Rs 55,000 +GST (18%) (Non Refundable)
Fees Includes	Access all the lectures, Training Kit, Study material, Assessment & Certification Fees
Fooding and Lodging	Will be provided on Payment basis
TA/DA	TA /DA would not be provided by NISE.

## **NUMBER OF SEATS:**

No. of Seats	Selection criteria
40*	First come First serve basis
	Note: If Number of applications will be more then enrolment to this course will be done based on Personal Interview; whose date will be declared later through our website.

\*Number is subjected to vary.

## HOW TO APPLY?

**Participants may kindly make the Payment of Rs. 55,000 + GST (18 %) through RTGS/ NEFT/ Cheque/ Demand Draft (DD) only**, in favour of:

Account Holder Name	National Institute of Solar Energy –Capacity Building
Bank Name	State Bank of India, DLF QUTAB ENCLAVE, Shop No.: 109-110
	Qutub Plaza, Shoping C, Gurgaon Haryana

Account Type	Current Account
Account No.	37266665652
IFSC Code	SBIN0006604
Branch Code	6604

The course fee is one-time payable and non-refundable.

**Registration form** (Attached at "Annexure A"- Page No. 8) **and Payment Details form** (Attached at "Annexure B"- Page No. 9) are to be downloaded. The completely filled Registration form and Payment details form should be sent through **Email ID: asp6.nise@gmail.com; or through Courier/ Speed Post** at the following address by 10/Jan/2018:

Deputy Director General Skill Development Division National Institute of Solar Energy (NISE) Gurgaon Faridabad Road, Gwal-pahari, Gurugram-122003, Haryana

Note: The participants must clearly indicate and send their bank transfer details (by e-mail) in advance to the Program Director by  $10^{th}/Jan/2018$ , only then, the participants would be allowed to attend the training program.

No application will be accepted without complete payment procedures.

## **IMPORTANT DATES:**

Registration opens for the course	06/12/2017 to 09/01/2018
Last date of receiving of Registration form and	10/01/2018
Payment Details form	
Date of start of the course	15/01/2018

Note:

- (1) Updates (If any) regarding the course shall be displayed on NISE website, i.e. www.nise.res.in.
- (2) All dates indicated above are tentative. Any change in the schedule of any session will be displayed on the website only. All the participants are advised to check our website regularly for new updates.

## **CERTIFICATION AND ASSESSMENT:**

This course will be conducted based on Qualification Packs which are approved/ certified by National Skill Development Corporation (NSDC). This course has been developed on the basis of solar industry requirements. After completion of this course, a Third party exam-cum-assessment will be done for the course and the participants will be receiving a joint certificate from NISE and Skill Council for Green Jobs (SCGJ).

Apart from this assessment, internal exams will also be conducted by NISE in every month w.r.t. the covered topics of the course.

Ms. Swati Agariya :	Program Director
	asp6.nise@gmail.com, Ph: +91-8882937250.
For Payment/Accounts :	Mr. Jyoti Praksh-Consultant (0124 – 2853004): jyoti.nise@gmail
	Mr. Bhupesh Handa –Consultant (0124- 2853033): <u>nise.mnre@gm</u>

#### Annexure-A

## **Registration Form for "ADVANCED SOLAR PROFESSIONALS COURSE"**

Name of Participant	:			
Father's/ Husband's name	:			
Contact Number	:			
Adhaar Number	:			
Email ID	:			
Present Designation	:			
Present Organization Details	:			

Name of Organization	
Postal Address	
Phone Number	
Email ID	
GSTN number of the	
Organization	
(If Invoice /Receipt required in	
the name of organization)	

#### Permanent Address

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Name of Emergency contact	
person	
Relation with participant	
Postal Address	
Emergency contact no.	
Email ID	

### Payment details:

Amount Transferred	Rs.55, 000 + GST (18%)
Transaction by NEFT / RTGS /Cheque/ Demand Draft	
NEFT Number / RTGS Number /Cheque number/ Demand Draft number	
Transaction Reference Number	
Transaction Date	
Bank details (bank name, address and IISFC code)	

Accommodation required (on payment basis): YES/ NO

Qualification detail for course:

Experience:

No. of years	
Category (Student, R&D, Industry, Business, Others)	

Place: Date:

( ) Signature of Participant

# Annexure B

# **PAYMENT DETAILS**

Program Details
Program Name : Advanced Solar Professionals
Program Duration :
Name of Program Director: Ms Swati Agariya
Participant
FOR INDIVIDUAL
Name
Address (District/State/Pincode)
Mobile Number
Email ID
PAN
FOR CORPORATE/ORGANISATION/INSTITUTION
Registered Name of concern/organisation/institution
Registered Office Address
Address Line 1
District
State
Pin
Office Contact No.
Office Email
PAN
GST Registration Type (Composition, Consumer, Registered, Unregistered)
GST No.
State & State Code as per GST Registration
Whether SEZ/Government Entity/Deemed Export, If Yes, please specify
Participant Name
Participant Contact No.
Participant Email ID
PAYMENT DETAILS
Amount
NEFT/RTGS/Cheque/DD Transaction reference No.
Transaction Date
Bank with Branch Code
Note - All Fields are Mandatory.

Certified that the information provided is correct & accurate to the best of my knowledge & belief.

Name:-

Signature with Date

**Note:** If you require invoice against your organization it is mandatory to mention GSTN number of your organization. Otherwise your invoice will be generated as an individual.



# NATIONAL INSTITUTE OF SOLAR ENERGY

(An Autonomous Institute under Ministry of New and Renewable  $${\rm Energy}$)$ 

## APPLICATION FORM FOR ACCOMMODATION

- 1- NAME:
- 2- FATHER'S NAME :
- 3- ID NO (PAN CARD/ DL/ ADHAR/ OFFICE ID/ PASSPORT) :
- 4- POSTAL ADDRESS :
- 5- CORRESPONDENCE ADDRESS:
- 6- PERMANENT ADDRESS:
- 7- CONTACT NO:
- 8- EMAIL ID:
- 9- PROFESSION:
- 10- DURATION:

NAME AND SIGNATURE OF CANDIDATE

## RECOMMENDATION OF SUPERVISOR OFFICER (only for official use)

#### ACCOMODATION ALOTTMENT IN-CHARGE (only for official use)

Affix the new Passport photograph (Self Attested)

### **HOW TO REACH NISE:**

NISE is located in a 200 acres campus on Gurgaon-Faridabad Highway. It is approx. 10 KM from Guru Dronacharya Metro station or Sikanderpur Metro station. Radio Taxies, Ola cabs and Autos are available from these Metro stations to NISE and vice versa. When you are coming from Gurgaon to NISE, NISE is located on the left side of the Highway. If you are coming from Delhi by Car on Mehrauli– Gurgaon Road, after crossing Arjan Garh Metro station and crossing the Haryana Border take a left turn towards Faridabad at Le Meridien Hotel or at Metro Pillar No. P- 14. From this point NISE is located approx. 10 km away. If you are planning to come from Faridabad side, NISE is located just 4 km after crossing toll gate on Faridabad-Gurgaon Highway. You would find NISE on the right side of the Highway.

