

# National Institute of Solar Energy

Date: 22/9/2015

## Offering the “Quality verification services for photovoltaic power plants”

National Institute of Solar Energy (NISE), an autonomous centre of excellence of Ministry of New and Renewable Energy, Government of India, offering the Quality verification services for photovoltaic power plants to meet the quality standards and analyse the technical competence of solar PV plants to assure the customers.

The proposed specialized services are designed and offered for various stakeholders i.e., facility owners, investors, financial institutions, banks, EPC contractors, project developers, service providers and insurance firms interested in assessing the operational condition of a given solar PV facility or portfolio.

The service shall verify that the installation of plant is according to the precise specifications comply with a range of international standards including IEC 62446 - Grid connected photovoltaic systems – Minimum requirements for system documentation, commissioning tests and inspection and IEC 60364-7-712 that photovoltaic power plant is operating safely and according to the relevant guidelines and standards. The verification will include DC/AC system inspection, Testing and performance measurement of PV module/array and BOS etc. The verification report will include certificate of verification, inspection report, PV array test report and suggestions to improve the PV power plant wherever necessary. The relevant formats as follows are at annexures.

“Format for Service request for PV Plant Project Size Capacity of 10 kWp–100 kWp” (Form-A)

“Format for Service request for PV Plant Project Size Capacity of 101 kWp – 500 kWp”(Form-B)

“Format for Service request for PV Plant Project Size Capacity of 501 kWp–1000 kWp”(Form-C)

“Format for Service request for PV Plant Project Size Capacity of above 1000 kWp” (Form-D)

The interested customers may please contact the following division of NISE for the above Quality services.

N.B.Raju,  
DDG, NISE

DDG

Skill Development and consultancy division

National Institute of Solar Energy

Email: [pvservices.nise@gmail.com](mailto:pvservices.nise@gmail.com)



**Details of Photovoltaic power plant to be submitted to NISE for Quality verification service (To be filled up by customer)**

PV Plant type :

Stand alone	
Grid-Tied	
Hybrid	

PV plant Installation date :

PV plant commissioning date :

PV plant installed by (contractor) :

PV plant maintained by (service) :

PV Plant capacity :

Module technology :

Number of Strings :

Number of strings in parallel :

Number of strings in series :

Total number of modules :

Modules per string :

Array orientation :

Array tilt :

Number of arrays :

Module Make :

Nominal wattage of each module :

PV Modules IEC 61215/

IEC 61646 approved :

Inverter DC rated capacity :

PV inverter certified : if yes, mention the standard, submit copy

Inverter make :

Inverter 3-phase : Yes/ No

Inverter model number :

Inverter serial number :

Number of inverters :

Inverter DC rating :

Inverter voltage range :

Inverter manufacture warranty : .....(In years)

D.P.R (Detailed project report) : Yes/ No

System designer, company

System designer, contact person

System designer, postal address, telephone number and e-mail address

Dated:

Signature of authorized person

Name (in capital Letter):

Designation:

Seal of the Company:

**For office use only**

Verified by:

Remarks if any:

## GENERAL TERMS AND CONDITIONS

1. One report on Quality inspection of photovoltaic power plant (s) conducted by NISE will be issued to the customer.
2. The report shall contain all the verifications done by NISE as per the standard specifications.
3. The report contains the following disclaimer:
  - a) This is a report on measurements and verifications carried out on the photovoltaic plants reference no.----- by the National Institute of Solar Energy.
  - b) The data contents in this report do not constitute a qualification certificate under any set of specifications.
  - c) The measurements and verifications made and results reported in this test report are valid at the time of and under stipulated conditions of measurement”.
4. The test report if reproduced for any purpose, commercial or otherwise, Should be reproduce in full. Reproduction of a part of the report or an abstract thereof is not permitted.
5. For identification purpose, all documents submitted to the NISE for verification purpose shall be marked clearly and indelibly as per the standard.
6. The tentative period for verification of the photovoltaic power plant is two months from the date of submission of request however this period may be vary depending on the outdoor weather conditions and condition of measuring equipment and priority.
7. National Institute of Solar Energy shall not be responsible for any loss or damage caused during Quality verification service of photovoltaic plant.
8. The issued verification report is not a legal document and is not valid for any kind of legal formalities.
9. Warranty documentation for PV modules and inverters
10. Operation and maintenance information
11. Shall make proper arrangement to access the power plant and proper cleaning of the modules prior to the Quality verification team arrival.

Declaration:

I read the above mention general terms and conditions carefully and I agreed.

Signature with Seal

Date

Place:

NB: To be signed by officer not below the rank of G.M. / Equivalent

**CHECK-LIST**  
**(QUALITY VERIFICATION SERVICES OF PHOTOVOLTAIC POWER PLANT)**

1. For submitting the request for Quality verification service of photovoltaic power plant to NISE, the following Checklist is required to be satisfied/submitted along with application.
2. Demand Draft/RTGS for Rs..... for Quality inspection of photovoltaic power plant D.D.O., National Institute of Solar Energy, payable at New Delhi.
3. Order form duly filled.
4. Copies of Instruction manual and datasheets
  - a) Inverter
  - b) Module
  - c) Junction box/Combiner box
  - d) Others if any.
5. Copy of Warranty Cards.
6. Attested copy of Bill of materials.
7. Copy of Purchase Order.
8. Buyer approved Drawings, SLD's (single line drawings) & Specifications.
9. Buyer approved ITP (Indicating Parameters to Witnessed / Reviewed, Sampling Plan, Reference Specifications / Standards, Acceptance criteria etc.).
10. Copy D.P.R (Detailed project report)
11. Copy of IEC 61215/IEC 61646 and IEC 61730-1&2 qualification certificate of modules installed in PV Plant.
12. Copy of STC report of module of particular type. Copy of Inverter certification and test report from govt., authorized testing organization, if any.

Note: The customers shall make proper arrangements to the verification team to access photovoltaic power plant area wherever necessary to verify and to check PV plant. NISE staff can involve in measure and verification and are not responsible for the performance of the photovoltaic power plant.



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Inverter manufacture warranty : .....(In years)

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System designer, company

System designer, contact person

System designer, postal address, telephone number and e-mail address

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