


A hand is shown from the bottom, holding a glowing, spherical network of white lines and nodes. The nodes are small circles, some of which are highlighted in a light blue color. The background is a soft, out-of-focus blue and white, suggesting a digital or network environment.

International Best Practices in Quality Assurance followed in the Rooftop Solar

(by Dr. Saurabh Kumar, National project consultant)

Structure

- (1) Current Gaps in quality assurance relevant for financing PV-Systems
 - (2) Results of the gaps in quality assurance relevant for financing PV-Systems
 - (3) Summary of activities 2016: Consultancy BIS and MNRE
 - (4) Project overview
- 

1. Current Gaps in quality assurance relevant for financing PV-Systems

- Installation of PV-Systems is not often done according to international best practices/standards.
- Installation of PV-Systems is often done by untrained workers.
- Certification schemes are only offered by certification bodies outside of the Indian standards system.
- In many key areas for quality control (e.g. inverter testing), accredited laboratories are missing.
- Not all relevant IEC-Standards are adopted to the Indian standard system.

2. Results of the gaps in quality assurance relevant for financing PV-Systems

- This situation may result in risks for the performance of the PV-Systems and their safety.
 - For example, in the past several rooftop systems caught fire
 - Grid instability/Power quality
- 

3. Summary Activities 2015

Consultancy MNRE

- Review of the technical specifications of the MNRE Rooftop programm.
- Elaboration of recommendations on additional IEC standards to be included in the technical specifications, in the following areas:
 - Installation
 - Mounting
 - Modules
 - Inverters
 - Components

3. Summary Activities 2015

Consultancy BIS

- Review of the existing BIS Standards in the PV sector.
- Elaboration of recommendations on IEC standards to be adopted in India.
- Presentation of the recommendations in a workshop with the members of the BIS Technical Committee (ET 28) and additional stakeholders. Definition of priority areas for adopting new IEC standards.
- Based on these results, ET 28 will elaborate a plan for the standards to be adopted.

4. Activity 2016

Study “Quality criteria in financing schemes of renewable energy projects”

On current approaches, possible bottlenecks and lessons learned with respect to quality and safety criteria applied in financing renewable energy projects.

- Exploration of Quality & Safety criteria for financing RE projects by interviewing various stakeholders in India and Indonesia.
- provide recommendations on how to incorporate quality- and safety-related requirements in financing renewable energy projects.

Draft results will be discussed in a roundtable discussion with experts on **March 17, 2016 at NISE**

5. Project overview

- **Implementation period:** 03/2014 – 02/2018 (4 years)
- **Donor:** Federal Ministry for Economic Cooperation and Development
- **Political project partner:** MNRE
- **Objective:** Quality Infrastructure services needed to assure the quality and reliability of solar energy systems are increasingly demanded and have been improved considering international best practices.



**Thank
You!!!**

Project Team:

- Dr. Michael Brinkschröder (Project Coordinator)
michael.brinkschroeder@ptb.de
- Dr. Saurabh Kumar (National Project Consultant)
s4u.hunny@gmail.com
- Mr. Niels Ferdinand (International Project Consultant)
mail@ferdinand.es