



One-day Workshop on Photovoltaic Metrology - Testing and Calibration of Solar Cells and Modules

September 06, 2017



Organised by
CSIR-National Physical Laboratory, New Delhi - 110012

This workshop is an initiative to sensitize the professionals involved in the area of Photovoltaics (PV) on various aspects of "Photovoltaic Metrology". In order to achieve the solar power target of 100 GW by 2022, the deployment of solar cells/modules is increasing at a rapid pace, although most of this is being met through imports. Despite this, no adequate Testing and Calibration facilities currently exist in the country to ascertain the quality of these solar cells/modules in terms of their efficiency and performance evaluation. This workshop proposes to highlight the various issues and challenges in Photovoltaic Metrology to ensure the quality of the PV devices. The aim of the workshop is to sensitize policy makers, government officials, researchers and industry professionals on the importance of Testing and Calibration of PV devices and Quality Measurement System.



Workshop Themes

- Metrology – Testing and Calibration
- Quality Measurements System ISO 17025 : 2005
- Efficiency measurement of solar cells – uncertainty in related parameters
- Standard protocols of solar cell/module testing and calibration (IS 14286/IEC EN 61215, 26077/IEC EN 61646, IS/IEC EN 61730-1,2).
- Importance of PV Metrology in Indian context

APEX Level Testing and Calibration at CSIR-National Physical Laboratory

CSIR-National Physical Laboratory (CSIR-NPL) is the "National Measurement Institute" (NMI) of India, mandated by an act of Parliament and is the custodian of "National Standards" with a responsibility of maintenance and dissemination of Standards at par to international level. However, India currently lacks the necessary testing and calibration facilities to ensure the quality of PV devices in terms of efficiency and performance. An uncertainty of measurement in the efficiency determination leads to an ambiguity in the product value assessment, both in technical and financial terms. Thus, it is imperative to ascertain the uncertainty of various physical parameters, associated with the measurement of the efficiency of solar cells/modules, for their performance evaluation.

The quality of the PV devices can only be ensured by accurate and precise measurements and their traceability to the Primary Standards. As an NMI, it is also obligatory to maintain Quality Management Systems (ISO/IEC 17025:2005) in the measurement protocols and PV standards for solar cell/module testing and calibration (e.g. IS 14286/IEC EN 61215, 26077/IEC EN 61646, IS/IEC EN 61730-1, 2 etc).

In order to address these issues, CSIR-NPL is organizing a one-day workshop on "PV Metrology: Testing and Calibrations of Solar Cells and Modules" on September 06, 2017 at its campus. The objective of the workshop is to sensitize, educate and spread awareness among the PV community on critical issues and challenges in PV measurements and their traceability to Primary Standards and related Quality Management Systems.

Kindly confirm your participation in this workshop to the undersigned before August 25, 2017

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