

Resolutions

Name of the Committee	No. of Meeting	Day	Date	Time	Venue
Solar Photovoltaic Energy Systems Sectional Committee, ETD 28	28 th	Wednesday	11 th December 2024	11:00 hrs	Virtual

Chairperson: Dr. Mohammad Rihan

Member Secretary: Ms. Meghna Mudgal

1. The committee confirmed the minutes of the 27th meeting held on 04 April 2024.
2. The committee decided to have enhanced participation from Industry given the rapid growth in solar sector. The following co-option requests were accepted by the committee:
 - i) M/s Vishakha Group, Ahmedabad – Being a major manufacturer of backsheets
 - ii) SAMA - Solar ancillary Manufacturers Association

It was decided to examine the co-option requests received from individuals and then decide in the next meeting. A group comprising of IIT-B, NSEFI, Techlab was formed for the above scrutiny.
3. IIT-B agreed to provide inputs/feedback w.r.t IEC TR 63149:2018 “Land usage of photovoltaic (PV) farms – Mathematical models and calculation examples” and LBIC (Light Beam Induced Current) based analysis of PV Modules (after due consultation with Mr Narayan (JNCASR)) within a week.
4. The committee decided to follow up with the convener of the Working Group WG 2 “Systems, tests and support structures”, Mr Balwant Kumar (CEA) for seeking inputs on progress of “Evolution of standard on **Floating Solar PV plant**”.
5. The committee decided to finalize the following documents for printing:
 - i) Doc ETD 28 (25768) – Adoption of IEC 62759-1: 2015 Photovoltaic (PV) modules - Transportation testing: Part 1 Transportation and shipping of module package units
 - ii) Doc ETD 28 (25770) – Revision of IS 12762 (Part 1): 2010 in line with latest IEC 60904-1: 2020 Photovoltaic devices: Part 1 Measurement of photovoltaic current - Voltage characteristics
 - iii) Doc ETD 28 (25771) – Revision of IS 12762 (Part 2): 2018 in line with latest IEC 60904-2: 2023 Photovoltaic devices: Part 2 Requirements for photovoltaic reference devices
 - iv) Doc ETD 28 (25773) – Revision of IS 12762 (Part 4): 2014 in line with latest IEC 60904-4: 2019 Photovoltaic devices: Part 4 reference solar devices - Procedures for establishing calibration traceability
 - v) Doc ETD 28 (25783) – Revision of IS 12763 : 2013 in line with latest IEC 60891: 2021 Photovoltaic devices: Part 4 Procedures for temperature and irradiance corrections to measured I – V characteristics (First Revision)
 - vi) Doc ETD 28 (25784) – Revision of IS 16228: 2019 in line with latest IEC 62108: 2022 Concentrator photovoltaic (CPV) modules and assemblies - Design qualification and type approval
 - vii) Doc ETD 28 (25785) – Revision of IS 16229: 2015 in line with IEC 62093: 2022 Balance-of-System components for photovoltaic systems - Design qualification natural environments
 - viii) Doc ETD 28 (25786) Revision of IS/IEC 61701:2011 in line with IEC 61701: 2020 Salt mist corrosion testing of photovoltaic (PV) modules

- ix) Doc ETD 28 (25788) Revision of IS/IEC 61724-1: 2017 in line with IEC 61724-1: 2021 Photovoltaic System Performance Part 1 Monitoring
- x) Doc ETD 28 (25790) Revision of IS/IEC 61730-1: 2016 in line with IEC 61730-1: 2023 Photovoltaic (PV) Module Safety Qualification Part 1 Requirements for Construction
- xi) Doc ETD 28 (25791) Revision of IS/IEC 61730-2: 2019 in line with IEC 61730-2: 2023 Photovoltaic (PV) Module Safety Qualification Part 2 Requirements for testing
- xii) Doc ETD 28 (25793) Revision of IS/IEC 62548: 2016 in line with IEC 62548-1: 2023 Photovoltaic PV Arrays - Design Requirements
- xiii) Doc ETD 28 (25794) Revision of IS/IEC/TS 62915 :2018 in line with IEC TS 62915: 2023 Photovoltaic (PV) Modules Type Approval, Design and Safety Qualification Retesting

6. The committee decided to withdraw IS 16149: 2014 “UV test for photovoltaic (PV) modules” as its requirements are now covered under IS 14286 series and IS/IEC 61730 series.

7. It was decided to form a small working group (WG) with the following scope and composition:

Scope of work: To review NP documents and CD documents of IEC TC 82 currently under circulation and propose India’s level of interest against each document. The recommendation of the WG shall be provided to the committee within 20 days.

Composition:

- i. Mr Kamlesh Yadav, NISE – Convener
- ii. Mr Prashant Kumar Upadhyay, SECI
- iii. Mr Saurabh Kumar, Techlabs
- iv. Mr Subrahmanyam Pulipaka, NSEFI
- v. Mr Gopal Kumar, First Solar
- vi. Dr Narendra Shiradkar, IIT-B

On completion of the above work, the sector-subsector classification of the committee shall be reviewed as given at Annex 4 of the committee.

8. New Subjects approved for formulation of Indian Standards

i. **Efficiency calculation formula**

The committee agreed that the formula proposed is at STC whereas the one used by BEE is for performance efficiency at a different temperature.

The formula proposed by MNRE to be examined by the committee and submit responses:

- If the formula may be included in IS 14286 series
- If yes, in which part of IS 14286 series should this formula be added as a National Annexure.
- If no, propose a new standard for efficiency requirements.

ii. **Solar Cells**

It was decided to circulate the list of Indian Standards available on Solar Cells as well as in IEC with the committee. The committee would then examine the two and confirm if these would be sufficient. If any of the IEC standards are to be considered for adoption, the same may also be proposed by the committee members. Further, if the committee members feel that the IEC and IS available on the subject are not sufficient, then a new standard may be proposed by the members. This work of examination by the committee

shall be completed within 20 days from circulation of the list of IS and IEC.

iii. **Sustainability in the area of Solar PV**

The committee decided to form a new working group (WG) for preparation of a draft standard on the subject.

Scope : Preparation of a draft standard on **Sustainability in the area of Solar PV**. The WG would first submit a white paper on the subject before drafting a document within a period of 30 days.

Composition:

- a) Mr Saurabh Kumar, Techlabs – Convener
- b) Dr Narendra Shiradkar, IIT-B
- c) NPL
- d) Mr Subrahmanyam Pulipaka, NSEFI (working with Solar Recycle India)
- e) Mr Gopal Kumar, First Solar
- f) Mr J Pande, ICAI

iv. **Backsheets and Encapsulant**

The committee decided to review the 2 draft standards received from M/s Vishakha and committee members shall submit the following within 14 days:

- Whether the two subjects fall within the purview of the committee
- If yes, whether the drafts are acceptable for further formulation of Indian Standards on the two subjects.