

Agenda

| 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 VC Meeting URL : https://bismanak.webex.com/bismanak/j.php?MTID=mf69ee48c607496f660c1114cf96163 Meeting ID : 2510 954 6646 Password : ETD@28 |

Chairperson: Dr. Mohammad Rihan

Member Secretary: Ms. Meghna Mudgal

ITEM 0.1 WELCOME AND OPENING REMARKS BY THE CHAIRPERSON

ITEM 1 CONFIRMATION OF THE MINUTES OF THE LAST MEETING

1.1 The minutes of the last meeting (27th meeting) of Solar Photovoltaic Energy Systems Sectional Committee, ETD 28 held on 04 April 2024 were circulated vide BISDG letter No. ETD 28/A-2.27 on dated 15 April 2024.

No comments were received.

The Committee may formally confirm the minutes of the 27th meeting without any modification.

ITEM 2 COMPOSITION OF SECTIONAL COMMITTEE

The present composition of Sectional Committee is given in [Annex-1](#).

Standardization is a collaborative effort and its success largely depends on the participation and contribution of the members of the concerned technical committees. Further, for standards to be relevant it is also important that viewpoints of all interested stakeholders are brought on board and duly considered while building consensus on the standard being developed.

The status of participation of members in the previous two meetings of **ETD 28** is also given in **Annex-1**.

It is to be informed that absence from two consecutive meetings of the TC may result in the lapse of the membership.

2.1 Following Co-Option requests have been received:

1. M/s Vishakha Group, Ahmedabad
2. Solar ancillary Manufacturers Association (SAMA)
3. Ms Sharmeela, Anna University, Chennai
4. Shri S. Dharmaselvan, MSME Testing Centre, Chennai – Requested in individual capacity
5. Shri Sivaraman P, Individual expert
6. Shri Praveen Krishnan, Enphase Energy
7. Shri Richie Stephen, UL Standards & Engagement – Requested in individual capacity
8. Mr R.K. Jain – Individual capacity

See [Annex 2](#).

The committee may consider.

ITEM 3 ACTION ARISING OF PREVIOUS MEETING

| SI No. | Item No.of Last Minutes | Subject | Decision of 27 th meeting | Action Taken |
|--------|-------------------------|--|--|--|
| 1. | 2.1 | Withdrawn the membership of following organization | <ol style="list-style-type: none"> 1. Amara Raja Batteries, Tirupati 2. Central Electronics Limited, Sahibabad 3. Electronics Test and Development Centre, Chennai 4. L&T, Mumbai 5. R R Soura Shakti Pvt. Ltd., Hyderabad 6. Tata Power Limited, Mumbai 7. The Energy and Resources Institute, New Delhi 8. IREDA, New Delhi 9. Shri Vaman Kuber, (IN Personal Capacity) | Removed |
| 2. | 2.2 | Co-option request received from: | <ol style="list-style-type: none"> 1. FS Solar ventures Private Limited Barakhamba Road, New Delhi- Shri Gopal Kumar (Specialist Standardization & Certification) 2. VVP Engineering College, Department of Nanotechnology, Rajkot- Shri Jaysukh H Markna (Head and Associate Professor). | All have been added to the composition of the committee. |

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| | | | 3. Techlab Testing & Research Institute, Jalgaon–Shri Saurabh Kumar (CEO) 4. MNRE, Delhi 5. NSEFI, Delhi | |
| 3. | 3.1(2) | IEC 62759-1:2015 Photovoltaic (PV) modules - Transportation testing - Part 1: Transportation and shipping of module package units- Adoption | Committee decided to Wide Circulate this document for a period of 03 months and also to get views of manufacturer through association. | Doc. No 25768 Date of Circulation: 30 May 2024 Last date of comment: 28 August 2024 |
| 4. | 3.1(3) | EN 50380:2017 Marking and documentation requirements for Photovoltaic Modules. | NISE to provide details of manufacturer | To be discussed in the meeting. |
| 5. | 3.1(13) | IEC TR 63149:2018 Land usage of photovoltaic (PV)farms - Mathematicalmodels and calculation examples- Adoption | IIT-Mumbai to provide comments for adoption | Comments awaited. |
| 6. | 3.1(14) | Low concentration Photovoltaic Concentrators. (IEC 62787) | The committee requested M/s RR Soura Shakti to submit a draft for consideration of committee. | Draft not received. However, committee may consider adoption of IEC 62787. |
| 7. | 3.1(15) | LBIC (Light Beam Induced Current) based analysis of PV Modules | IIT-Bombay and JNCASR to review IEC 63202 series | Representat ives from IIT-B and JNCASR to update the committee. |
| 8. | 4.2 | Evolution of Standards on floating solar PV plant | For this Subject Committee decided to constitute a new Panel with following experts: 1. CEA (convener) 2. IEEMA 3. SECI 4. NISE 5. NSEFI 6. GERMI | Panel Convener may update the progress of work. |

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| | | | 7. Members from PSUs | |
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ITEM 4 PRESENT POSITION OF WORK UNDER THE SCOPE OF ETD 28

4.1 The present position of work under ETD 28 is given in **Annex 3**.

The committee may review.

4.2 Identification of Sectors, Sub-sectors and sub-sub-sectors in Sectional Committee

In order to effectively prepare and maintain Indian Standards, it is proposed that each sectional committee may identify sectors, sub-sectors, sub-sub-sectors under its framework and all national and international work must be carried out within that framework.

The proposed framework with ETD 28 is given at **Annex 4**.

The committee may discuss and finalize.

4.3 Wide Circulated Documents for Printing

Following documents were approved for wide circulation in the last meeting of the sectional committee:

| SI No. | IS/IEC No. | Title | Revised IEC | Decision Taken in last meeting | Action Taken |
|--------|--|---|-------------------|---|--|
| 1. | IS 12762 (Part 1): 2010 IEC 60904-1 : 2006 | Photovoltaic devices: Part 1 measurement of photovoltaic current - Voltage characteristics (First Revision) | IEC 60904-1:2020 | Committee decided to wide circulate the revised version of IEC documents for 30 days. | Doc. No 25770 Date of Circulation: May 2024 Last date of comment: 29-June-2024 |
| 2. | IS 12762 (Part 2) : 2018 60904-2 : 2015 | Photovoltaic devices: Part 2 Requirements for photovoltaic reference devices (Second Revision) | IEC 60904-2: 2023 | | Doc. No: 25771 Date of Circulation: May 2027 Last date of comment: 29-June - 2024 |
| 3. | IS 12762 (Part 4) : 2014 IEC 60904-4 : 2009 | Photovoltaic devices: Part 4 reference solar devices - Procedures for establishing calibration traceability | IEC 60904-4:2019 | | Doc. No: 25773 Date of Circulation: May 2024 Last date of comment: 29-June-2024 |
| 4. | IS 12763 : 2013 IEC 60891 : 2009 | Photovoltaic devices - Procedures for | IEC 60891: 2021 | | Doc. No: 25783 Date of Circulation: |

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| | | temperature and irradiance corrections to measured I - V characteristics (First Revision) | | | May 2024 Last date of comment: 30-June-2024 |
| 5. | IS 16228 : 2019 IEC 62108 : 2016 | Concentrator photovoltaic (CPV) modules and assemblies - Design qualification and type approval (First Revision) | IEC 62108:2022 | | Doc. No: 25784 Date of Circulation: May 2024 Last date of comment: 30-June-2024 |
| 6. | IS 16229 : 2015 IEC 62093 : 2005 | Balance-of-System components for photovoltaic systems - Design qualification natural environments | IEC 62093:2022 | | Doc. No: 25785 Date of Circulation: May 2024 Last date of comment: 30-June-2024 |
| 7. | IS/IEC 61701 : 2011 | Salt mist corrosion testing of photovoltaic (PV) modules | IEC 61701:2020 | | Doc. No: 25786 Date of Circulation: May 2024 Last date of comment: 30-June-2024 |
| 8. | IS/IEC 61724-1 : 2017 IEC 61724-1 : 2017 | Photovoltaic System Performance Part 1 Monitoring (First Revision) | IEC 61724-1:2021 | | Doc. No: 25788 Date of Circulation: May 2024 Last date of comment: 30-June-2024 |
| 9. | IS/IEC 61730-1 : 2016 IEC 61730-1 : 2016 | Photovoltaic (PV) Module Safety Qualification Part 1 Requirements for Construction (First Revision) | IEC 61730-1:2023 | | Doc. No 25790 Date of Circulation: July 2024 Last date of comment: 24-August-2024 |
| 10. | IS/IEC 61730-2 : 2019 IEC 61730-2 : 2016 | Photovoltaic (PV) module safety qualification: Part 2 requirements for testing (First Revision) | IEC 61730-2:2023 | | Doc. No 25791 Date of Circulation: May 2024 Last date of comment: 30-June-2024 |
| 11. | IS/IEC 62548 : 2016 | Photovoltaic PV Arrays Design Requirements | Withdrawn and Replaced by IEC 62548-1:2023 | | Doc. No 25793 Date of Circulation: May 2024 Last date of comment: 02-July-2024 |

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| 12. | IS/IEC/TS 62915 :2018 | Photovoltaic (PV) Modules Type Approval, Design and Safety Qualification” Retesting | IEC TS 62915:2023 | | Doc. No 25794 Date of Circulation: June 2024 Last date of comment: 02-July-2024 |
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Committee may consider and approve the above documents for printing.

4.4 Review of Indian Standards

Base IEC Standards of following ISs have been withdrawn:

| SI No. | Indian Standard | Subject |
|--------|--|--|
| 1. | IS 16149 : 2014 IEC 61345 : 1998 | UV test for photovoltaic (PV) modules |
| 2. | IS 16663 : 2018 IEC/TS 62727 : 2012 | Photovoltaic systems - Specifications for solar trackers |

The committee may review.

4.4 In accordance with laid down procedures, all published Indian Standards should be reviewed by their respective Sectional Committees every five years after its publication.

The Committee may review.

ITEM 5 INTERNATIONAL ACTIVITES

5.1 The present position of work including list of published IEC Standards by the corresponding IEC TC 82 is given in [Annex 5](#).

The Committee may consider formulation of Indian Standards on new subjects or revision of published standards taking into account the work done at International level.

The Committee may consider.

5.2 Designation of Indian Experts at IEC Projects

- a) The Member Secretary, in consultation with the Chair of the SC and the HoD, and if felt necessary, with the entire SC, shall establish and indicate the Level of Interest in respect of each of the NWIPs or draft standards received from ISO/IEC in the IRD Portal.
- b) The next step will be to designate one or two members of the SC to represent BIS in respect of the standards of the Level H (High) and M(Medium). The designated experts will be the face and voice of

BIS for that project at the ISO/IEC level.

- c) The designated expert shall have the responsibilities of sharing detailed comments on the Drafts/documents received from ISO/IEC, helping the SC in putting together the rationale for proposing NWIPs and firming up proposals for leadership positions and secretariats and briefing the SC on the deliberations at ISO/IEC level.

The projects under IEC TC 82 currently at NP and CD stage are listed in [Annex 5](#). Committee members may consider nominating themselves as experts in the IEC WG/MT. The following role and responsibilities of experts may be noted:

- I. As a member registered in the working group from India (BIS), registered expert is required to share in advance each time he/she wishes to attend the meeting of the WG so that India's view point can be consolidated in the National Mirror Committee on the subject under discussion and the same shall then be presented by him/her in the Working Group.
- II. As a member registered in the working group from India (BIS), expert is also required to de-brief the members of the committee on return and submit a detailed report of their participation in the meeting containing the following:
 - i. Main topics and issues under discussion in the WG/MT
 - ii. Any specific project/standard(s) you are associated with
 - iii. Your specific contributions (please highlight) and any significant input provided between two meetings, or since you joined the WG, whichever is later
 - iv. Your vision on how your continued participation in these WG will help India's interest and development of standards at national level as well.

The committee may discuss.

ITEM 6 NEW SUBJECTS AND FUTURE PROGRAMME OF WORK

With a view to enhance participation at IEC and to develop standards at IEC itself, BIS Sectional committees must be forthcoming in identifying new topics for proposing international standards at the ISO/IEC committee levels.

6.1 MNRE has shared a letter asking ETD 28 to consider inclusion of **Efficiency calculation formula in IS 14286 series** and test report format for laboratories.

The committee may discuss and decide.

6.2 Indian Standards on Solar Cells

Indian Standards on **Solar Cells** may be identified and prepared by the committee.

The committee may consider.

6.3 Sustainability in the area of Solar PV

The concept of sustainability has gained paramount importance over the past few years. The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries.

Standards and their implementation are foundational to the attainment of SDGs. BIS as the National Standards

Body has the responsibility to ensure that national standards facilitate achievement of Sustainable Development Goals. As Indian Standards are formulated and taken to large-scale implementation by all the stakeholders, addressing sustainability in standards would not only result in achieving Sustainable Development Goals but also leads to inclusive growth of the industry. Hence, it is now utmost necessary that the sustainability dimension is be deeply ingrained in Indian Standards.

The Committee may discuss.

ITEM 7 DATE AND PLACE OF NEXT MEETING

ITEM 8 ANY OTHER BUSINESS