

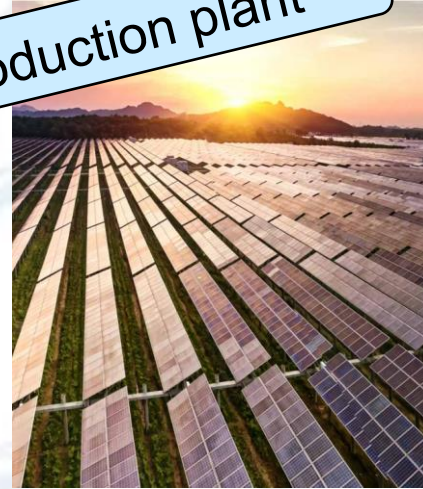
Photovoltaic installations

IEC Standards and Conformity Assessment





Rural electrification



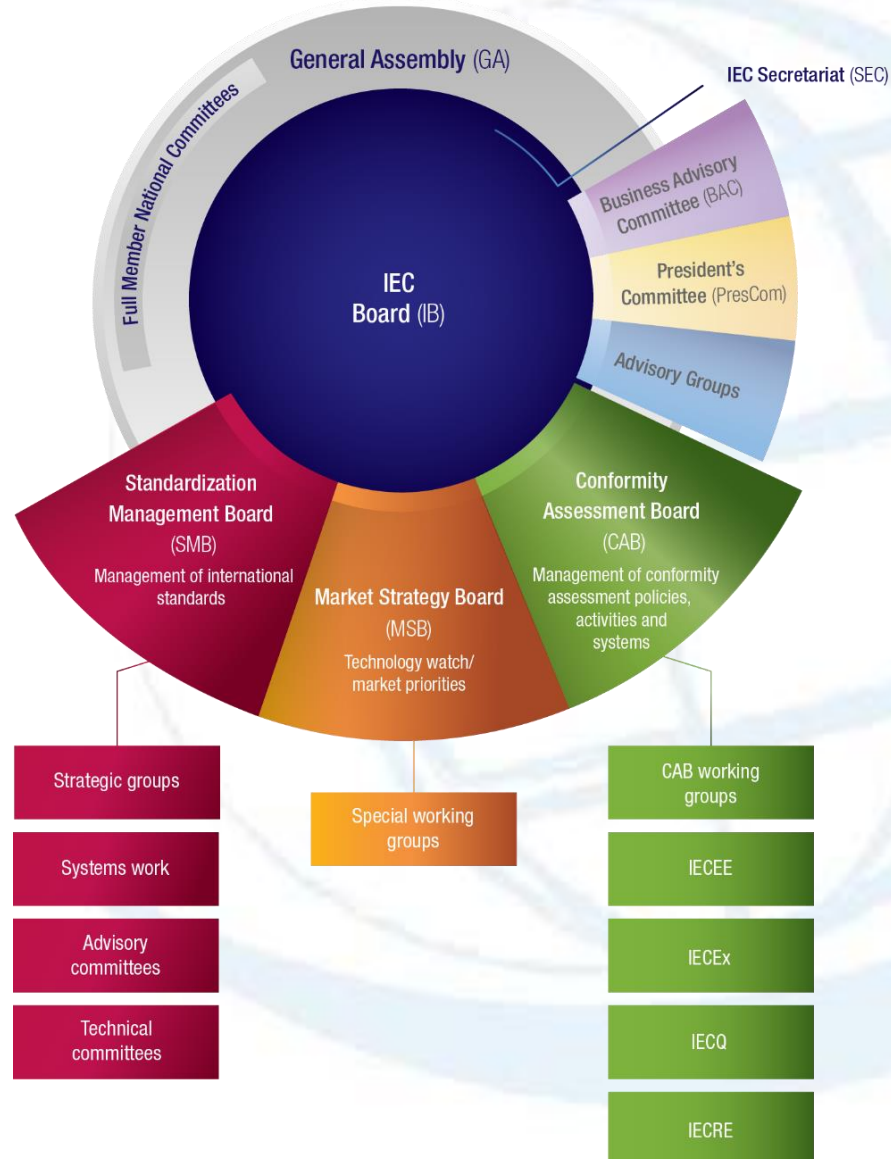
Production plant



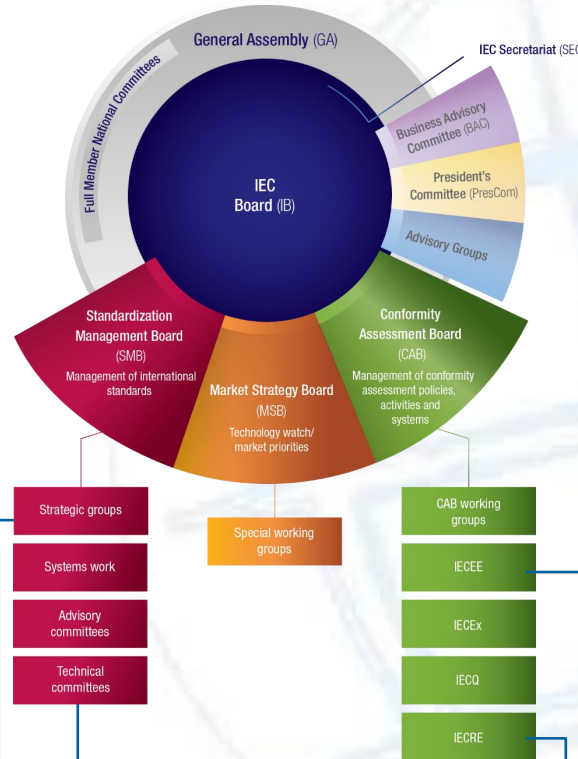
Solar Pico Systems



Residential installation



IEC and PV



Low Voltage Direct Current –
Systems Committee

TC 82 – Solar photovoltaic energy systems

TC 8 - System aspects of electrical energy supply

TC 57 - Power systems management and associated information exchange

TC 117 – Solar thermal electric plants

Photovoltaic components
Based on TC82 works

Photovoltaic production installations

The IEC Standards logo, consisting of the letters "IEC" in white on a blue square background, followed by the word "Standards" in a large, blue, sans-serif font.

TC 82 – Solar photovoltaic energy systems

IEC TS 62257 series → Recommendations for renewable energy and hybrid systems for rural electrification

IEC TS 62257-9-8, Baseline requirements for the quality, durability and accuracy for stand-alone renewable energy products with the aim of protecting consumers.

IEC TS 62257-9-5, Integrated systems - Laboratory evaluation of stand-alone renewable energy products for rural electrification.

Recognized by the [World Bank](#) and the United Nations Industrial Development Organization ([UNIDO](#))

TC 8 - System aspects of electrical energy supply

Design and management of distributed energy resources (DERs), including microgrids

TC 57 - Power systems management and associated information exchange

IEC TR 61850-90-23, in collaboration with TC 8 / Subcommittee 8B. It complements the IEC 61850-7-420 Standard which addresses the [integration of DERs into the grid](#).

TC 117 – Solar thermal electric (STE) plants

IEC TS 62862 series → to cover a wide range of different types of systems in installed plants. Apply to very large electricity generating installations.

Key IEC standards for PV

Components

Modules

- IEC 61215
- IEC 61730
- IEC 62941 (QMS)
- IEC TS 63126
- IEC TS 63209

Inverters

- IEC 62109
- IEC 62093
- IEC 63157 (QMS)

PV array structure –

Trackers

- IEC 62817

Direct Processes

Design

- IEC 62548
- IEC TS 62738

Engineering

- Civil
- Structural
- Electrical

Civil construction

Array construction

Installation

- IEC 63049

Inspection & Testing

- IEC 62446-1

Performance assessment

- IEC 61724-1/2/3

Operation &

maintenance

- IEC 63049

Location factors

Sand – Abrasion

- IEC 62788-7-3

Salt

- IEC 61701

Ammonia

- IEC 62716



Conformity Assessment

CAB working groups

IECEE

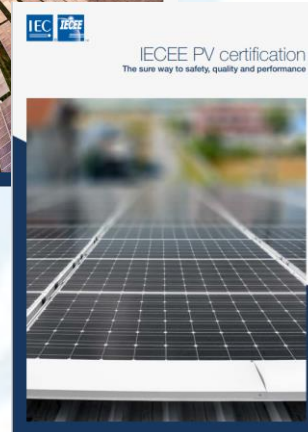
IECEX

IECQ


IECRE

IECEE runs a program which offers access to qualified testing laboratories for the certification of PV components and modules in accordance with the relevant IEC Standards


Fundamental pillar of the IECRE is to enable sustainable electricity generation and supply. It is the internationally accepted CA system for all power plants producing, storing or converting energy from **solar PV**, wind and various forms of marine energy



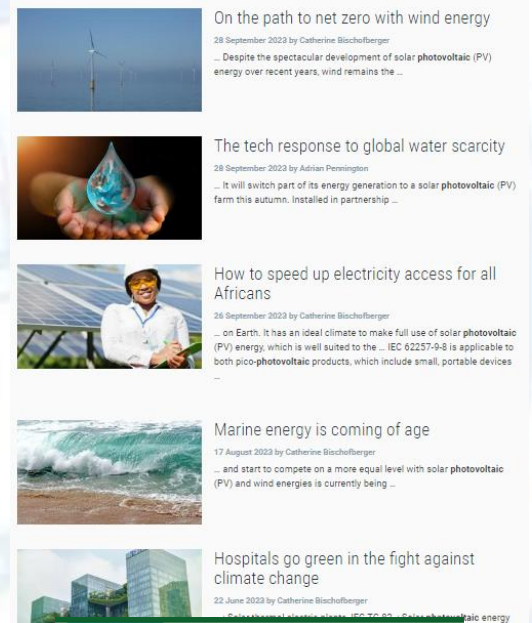
IEC More literature



IEC
 Rural electrification for universal electricity access



IEC
 Electricity access
 More than a promise: LVDC



On the path to net zero with wind energy
 28 September 2023 by Catherine Bischofberger
 ... Despite the spectacular development of solar photovoltaic (PV) energy over recent years, wind remains the ...

The tech response to global water scarcity
 28 September 2023 by Adrian Pennington
 ... It will switch part of its energy generation to a solar photovoltaic (PV) farm this autumn. Installed in partnership ...

How to speed up electricity access for all Africans
 26 September 2023 by Catherine Bischofberger
 ... on Earth, it has an ideal climate to make full use of solar photovoltaic (PV) energy, which is well suited to the ... IEC 62257-9-8 is applicable to both pico-photovoltaic products, which include small, portable devices ...

Marine energy is coming of age
 17 August 2023 by Catherine Bischofberger
 ... and start to compete on a more equal level with solar photovoltaic (PV) and wind energies is currently being ...

Hospitals go green in the fight against climate change
 22 June 2023 by Catherine Bischofberger
 ...

e-tech
 News & views from the IEC

MERCI - THANKS

