



Welcome to the IEC

**International Electrotechnical Commission**

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# The IEC in brief

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A global network of 171 countries that covers 99% of world population and electricity generation



Offers an Affiliate Country Programme to encourage developing countries to participate in IEC work free of charge



Develops International Standards and runs four Conformity Assessment Systems to verify that electronic and electrical products work safely and as they are intended to



IEC International Standards represent a global consensus of state-of-the-art know-how and expertise



A not-for-profit organization enabling global trade and universal electricity access



## Key figures

171

Members and Affiliates

>200

Technical Committees and Subcommittees

20 000

Experts from industry, test and research labs, government, academia and consumer groups

>10 000

International Standards in catalogue

4

Global Conformity Assessment Systems

>1 million

Conformity Assessment Certificates issued

>100

Years of expertise

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# Global reach

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## Broad consensus

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We have agreements with close to 200 organizations and provide a worldwide platform to around 20 000 global experts from both private and public sectors.

## Partnerships

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We work closely with the International Organization for Standardization (ISO) and the International Telecommunication Union (ITU).

We have a strategic partnership with the World Trade Organization (WTO) to promote free and fair trade.

The IEC is a partner of the United Nations Sustainable Energy for All initiative (SE4ALL).



@ www.greenpeace.org

## IEC and Sustainable Development Goals (SDGs)

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Access to energy can be viewed as the golden thread that supports the attainment of most of the 17 SDGs and their sustainability once met. IEC work fully corresponds with SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all. Energy is foundational and enables the broad roll-out of accessible technologies for the 1,3 billion people who have no access to electricity now.

Through the SE4ALL initiative we provide, for example, a series of technical specifications with a focus on off-grid energy access. We are also working on the technical specifications for solar home system kits, renewable energy mini-grid systems, low voltage DC, and energy efficient es for use in off-grid applications.

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# We help keep the power on...

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Economic development is directly dependent on reliable access to good quality electrical energy. This doesn't happen by chance. It needs regulations but also the know-how and expertise to build relevant infrastructure that is safe, affordable and can be maintained in the long run. That's where the IEC can help.

## **Making electrotechnology work... for everyone**

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The IEC provides much of the global technical framework for energy generation and for the billions of components, devices and systems that use electricity and contain electronics.

Part of our mission is to ensure and verify safety, efficiency and interoperability of off-grid and on-grid infrastructure and improve energy efficiency, the world's largest untapped energy source.



## **Fact**

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IEC work is behind the scenes in many offices, including for the lighting, display screens, multimedia applications, telephones, other electric and electronic devices and data transmission.

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For example, IEC provides the foundation for . . .

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Light bulbs and lamps



Solar panels



Medical and dental equipment



Household appliances



Radio and television



Batteries

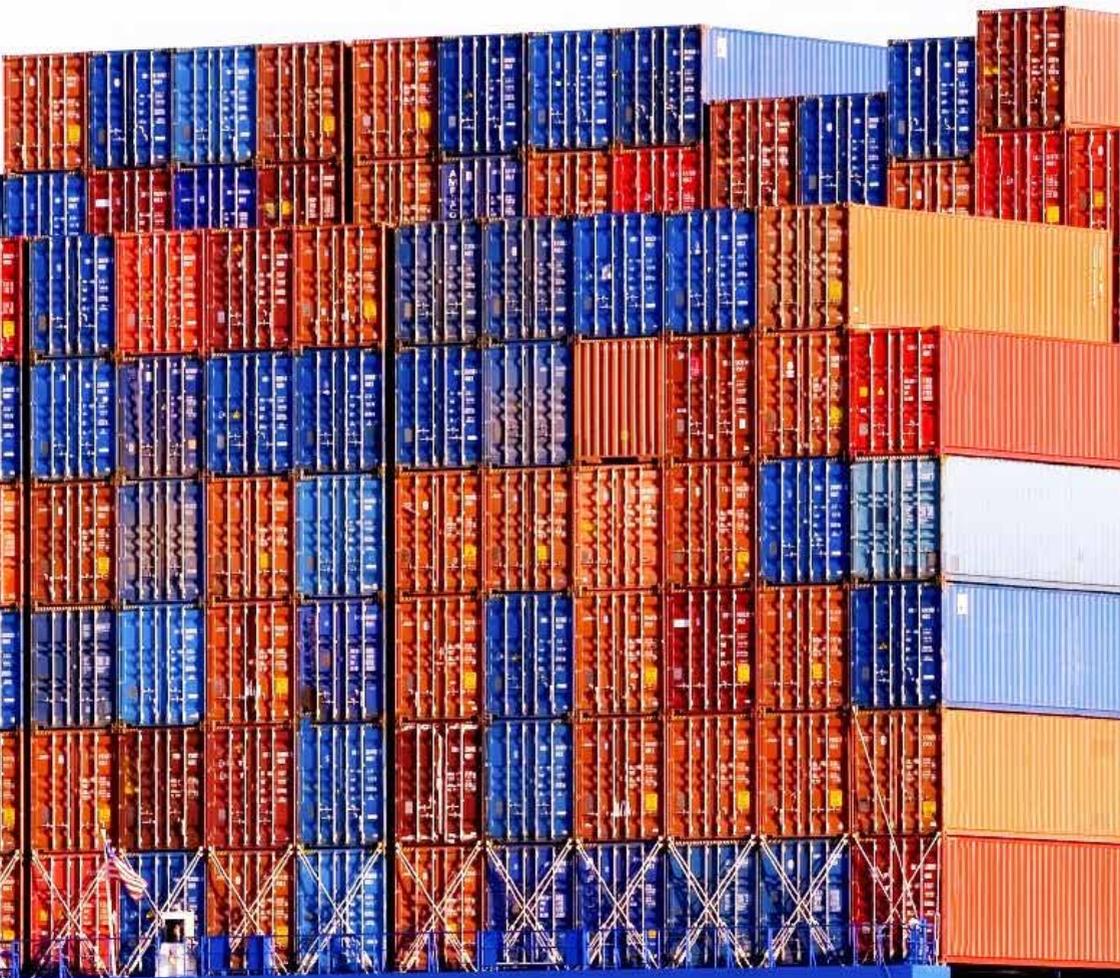


Power generation



Transportation





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# The benefits of International Standards

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IEC International Standards help define safety, performance, interoperability and other essential requirements for electrical and electronic technologies and form the basis for testing and verification. Together they ensure the safety of populations and support economic development.

## **Industry**

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- Be more competitive with globally accepted products and services
- Enter new markets faster and at less cost
- Increase profits with quality products that are safer and more broadly compatible
- Benefit from world expert knowledge and best practices

## **Regulators**

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- Boost local economy and enable participation in global trade through harmonized regulations
- Better protect national consumers and users
- Encourage sustainable infrastructure investment
- Enable sustainable energy production and distribution (on- and off-grid)

## **Consumers**

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- Access a greater choice of safe, reliable products and services at more competitive prices

## **→ Fact**

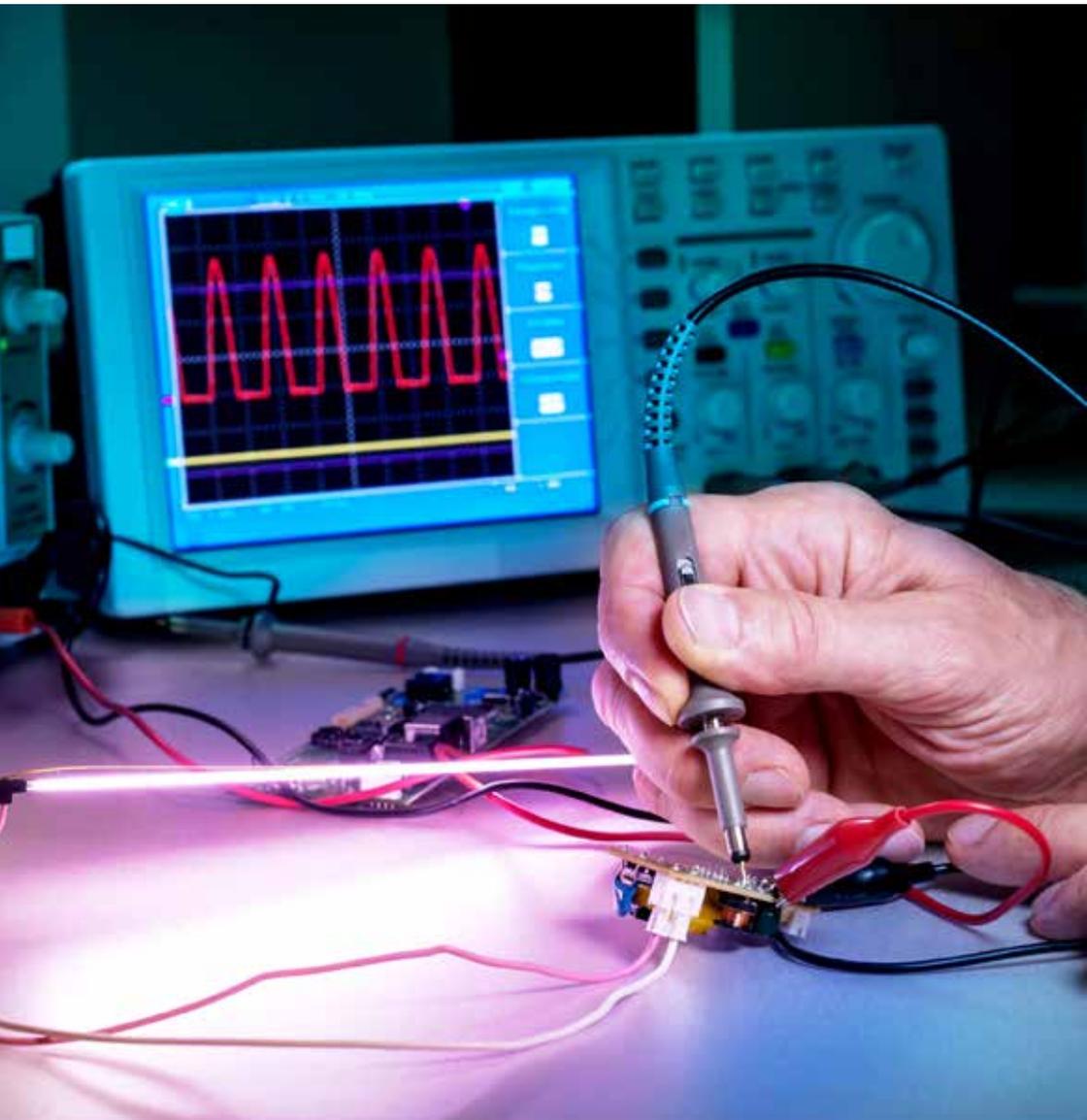
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Shipping is crucial to global trade – IEC work is crucial for shipping

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# Assessing conformity

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Testing and verification – conformity assessment – gives consumers confidence that electrical and electronic products meet expectations in terms of safety, performance, interoperability and other criteria. IEC work supports all forms of testing and verification. The IEC administers four Conformity Assessment (CA) Systems, comprising thousands of testing laboratories that issue test reports and certificates.

**IECEE – IEC System of Conformity Assessment Schemes for Electrotechnical Equipment and Components**

IECEE covers the testing and verification of a wide range of electric and electronic devices used in homes offices, medical facilities, manufacturing or public environments. The Affiliate Conformity Assessment Status (ACAS) allows developing countries to increase their awareness of testing and verification.

**IECEx – IEC System for Certification to Standards Relating to Equipment for Use in Explosive**

IECEx covers all verification needs of the explosive atmosphere industry. Ex areas are found in the oil and gas industry, mining, chemical processing, printing, paper and textile industries, grain handling and storage, sugar refineries, and more. IECEx is recommended by the UN, via UNECE as the world's best practice model for verifying conformity to International Standards in explosive areas.

**IECQ – IEC Quality Assessment System for Electronic Components**

IECQ is a worldwide approval and certification system that covers the supply of electronic components, associated materials and processes for the avionics and automotive industry. It also combats counterfeit electronics and verifies the use of hazardous substances.

**IECRE – IEC System for Certification to Standards Relating to Equipment for Use in Renewable Energy Applications**

IECRE covers the testing and verification of devices and systems for wind, ocean and solar power generation.

→ **Fact**

Developing the tools and protocols to verify that products deliver what they promise



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# Further information

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Please visit the IEC website at [www.iec.ch](http://www.iec.ch) for further information. In the "About the IEC" section, you can contact your local IEC National Committee directly. Alternatively, please contact the IEC Central Office in Geneva, Switzerland or the nearest IEC Regional Centre.

## Global

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## IEC Conformity Assessment Systems

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