

Introducing IEC

Pierre Selva



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Pierre Selva
IECEE Treasurer

Fisuel General Assembly
Lebanon, May 2019



INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

Scope of the IEC

Energy generation and the millions of devices and systems that use or produce electricity and contain electronics.



100 years of experience

Founded in 1906 to promote international co-operation on all questions of standardization and related matters in the field of Electrotechnology



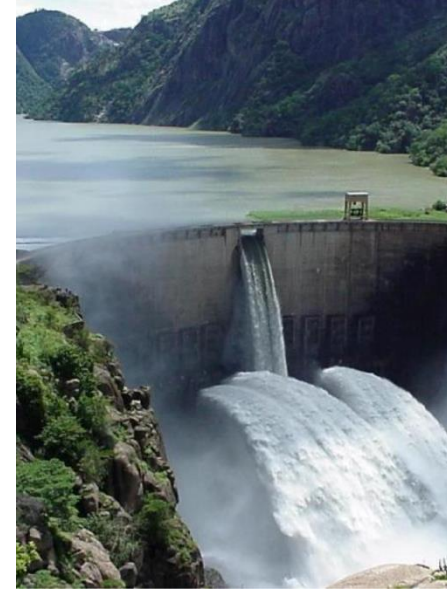
...the IEC makes electrotechnology work for you!



SDG 7 Energy = core to IEC



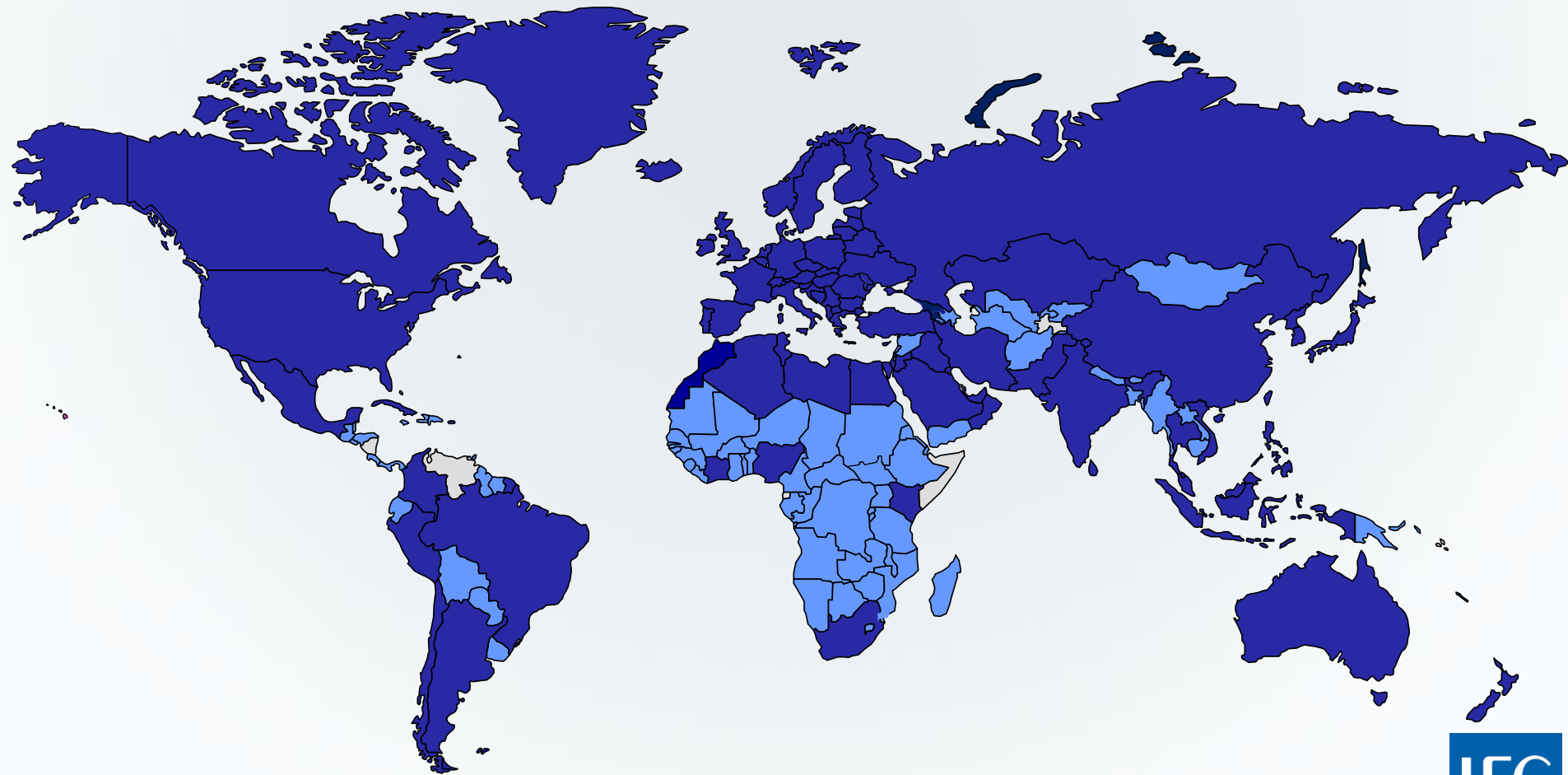
SUSTAINABLE
ENERGY FOR ALL



IEC Family: 172 countries

86 **Members**

86 **Affiliates**



IEC Family: Lebanon is affiliate



IEC Affiliate country



Ordre des Ingénieurs et Architectes de Beyrouth (OEA)
Secteur 47 - Mar Elias
Rue Maison de l'Ingénieur
B.P. 11
Riad El Solh 1107 2120
LB-3118 Beyrouth
Lebanon

Principal Contact

Mr Jad Tabet

[✉ Send Email](#)

No NEC defined

President

to be nominated

Secretary

to be nominated

Selected IEC Technical Committees and Subcommittees

Committee	Description
TC 1	Terminology
TC 20	Electric cables
TC 23/SC 23A	Cable management systems
TC 23/SC 23B	Plugs, socket-outlets and switches
TC 34/SC 34D	Luminaires
TC 37/SC 37A	Low-voltage surge protective devices
TC 64	Electrical installations and protection against electric shock
TC 81	Lightning protection
TC 82	Solar photovoltaic energy systems
TC 121/SC 121B	Low-voltage switchgear and controlgear assemblies

Who we are :

Global knowledge platform

20 000 experts

206 Technical Fields (SC/TC)

1 450 working groups

Over 9 000 standards

Over 1 000 000 certificates



Standards
development

Conformity
Assessment
activities

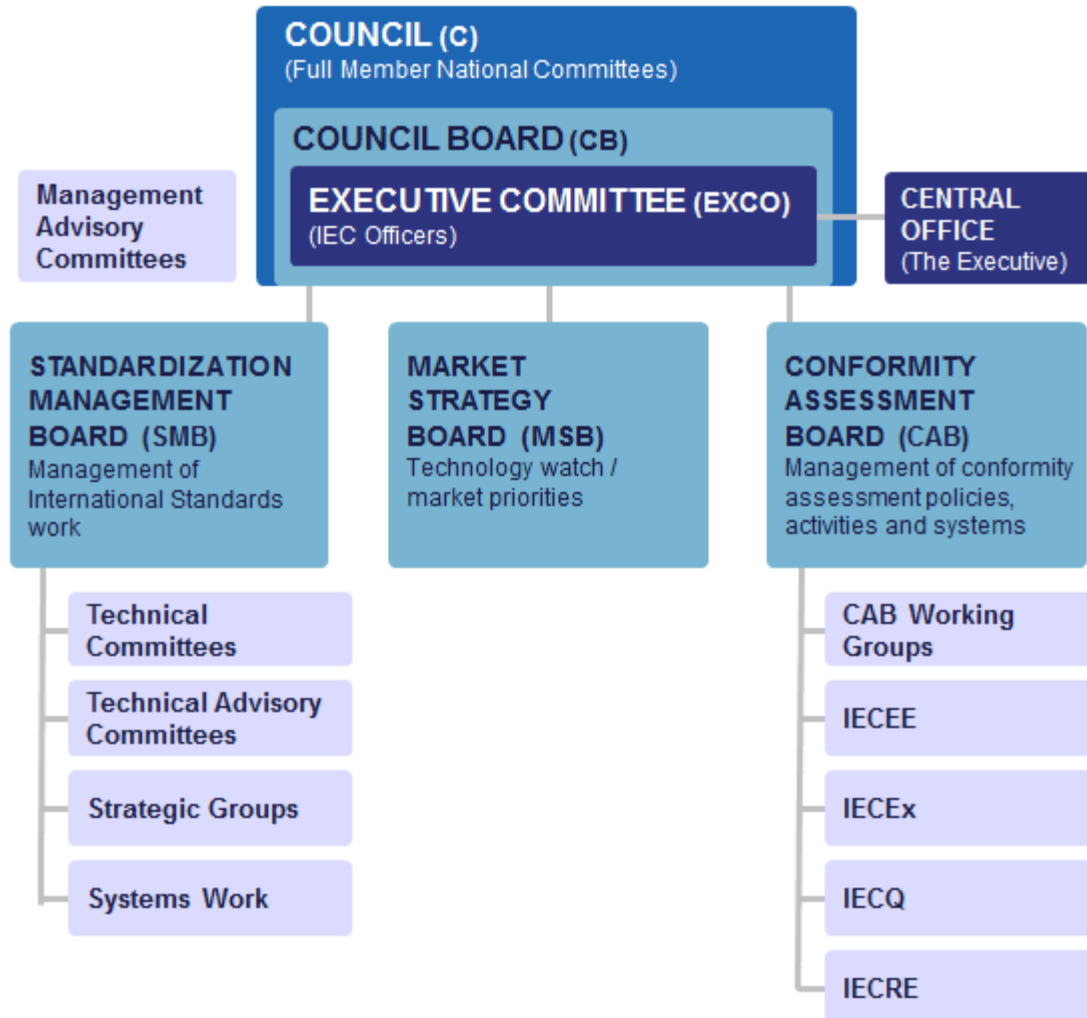
Like two sides of a coin

Standards = knowledge

Conformity Assessment = application of knowledge

**Standards +
Conformity Assessment = Value**

IEC Organigramme



CAB - Conformity Assessment Board

IECEE

System of
Conformity
Assessment
Schemes for
Electrotechnical
Equipment and
Components

IECEX

System for
Certification to
Standards
Relating to
Equipment for
use in Explosive
Atmospheres

IECQ

Quality
Assessment
System for
Electronic
Components

IEC RE

IEC General System for
Certification to
Standards relating to
plant, equipment and
services associated with
Renewable Energy
Systems

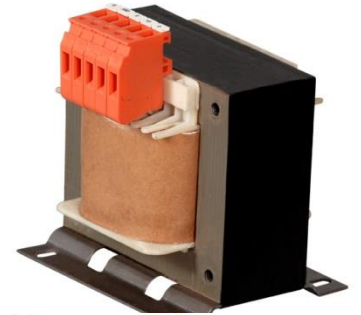
IEC Wind
Energy Scheme

IEC Solar
Energy Scheme

IEC Marine
Energy Scheme

IECEE

System for conformity assessment schemes for electrotechnical equipment and components



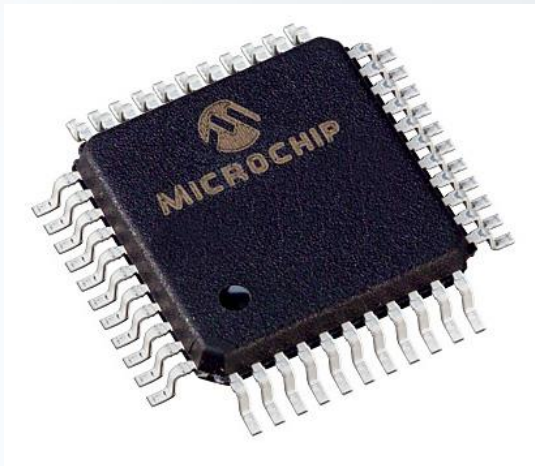
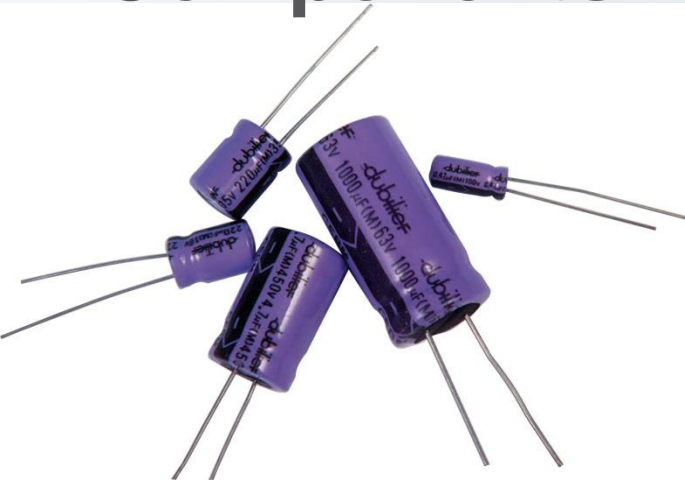
IECEx

Worldwide system for certification to standards relating to equipment for use in explosive atmospheres



IECQ

Quality Assessment System for Electronic Components



IECRE

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



IECRE : Types of Renewable Energy Sources

Common sources include:

- **Solar – Photovoltaic (PV)**
- **Solar – Thermal**
- **Wind Power**
- **Marine Energy**
- **Hydro Energy**
- **Geothermal**
- **Biomass and biogas**
- **Fuel Cells**



Wind Energy



Solar Energy



Complex Marine Systems



Drivers for “Renewables” Growth:

- Reduced dependency on fossil fuels
- Carbon Dioxide emission reductions
- Incentives (government and market based)
- Large and increasing investments in:
 - Technology improvements
 - Performance
 - Reliability
 - Longevity
- Costs reduction
- Control and integration systems (Smart Grid)
- Training in design, selection and installation

Benefits of Conducting Conformity Assessment thru IEC

- IEC Brand
 - Global recognition - industry
 - International recognition, e.g. WTO + UN
 - IEC Reports and Certificates used Nationally
- Open and Transparent Process
 - Clear Rules
 - Transparency in process and results
- Industry have a say and provide direct input.
- Consistency in CA processes among participating Certification/Test Bodies



electrical safety
=
key issue for developing
countries

86 Affiliates and potential

AMERICAS

Antigua & Barbuda
Bahamas
Barbados
Belize
Bolivia
Costa Rica
Dominica
Dominican Republic
Ecuador
El Salvador
Grenada
Guatemala
Guyana
Haiti
Honduras
Jamaica
Panama
Paraguay
Peru
Saint Kitts & Nevis
Saint Lucia
St Vincent & the Grenadines
Suriname
Trinidad & Tobago
Uruguay

AFRICA

Angola
Benin
Botswana
Burkina Faso
Burundi
Cabo Verde
Cameroon
Central African Rep.
Chad
Comoros
Congo
DRC Congo
Djibouti
Eritrea
Ethiopia
Gabon
Gambia
Ghana
Guinea
Guinea Bissau
Equatorial Guinea
Lesotho

Liberia

Madagascar
Malawi
Mali
Mauritania
Mauritius
Mozambique
Namibia
Niger
Rwanda
Senegal
Seychelles
Sierra Leone
Somalia
South Sudan
Sudan
Swaziland
Tanzania
Togo
Uganda
Zambia
Zimbabwe

ASIA

Afghanistan
Armenia
Azerbaijan
Bangladesh
Bhutan
Kyrgyzstan
Lebanon
Mongolia
Myanmar
Nepal
Palestine
Turkmenistan
Uzbekistan
Yemen

ASIA-PACIFIC

Brunei Darussalam
Cambodia
Fiji
Lao PDR
Papua New Guinea

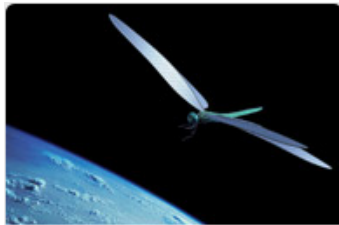
Affiliate Conformity Assessment Status (ACAS)



ACAS package benefits

- Regional awareness events
- ACAS section on IEC Affiliate website
 - <http://www.iec.ch/affiliates/acas>
- Webinars (upon request)
- Access to online certificates
- Observer status at IEC CA System management meetings (based on prerequisite training conditions)

e-Learning modules



IEC Affiliates

IEC Programme for
developing countries

Affiliate Country list

Affiliate Country
Programme

Your participation

National adoptions

ACAS

General Meetings

Forum & Workshops

Facts & Figures

Contact

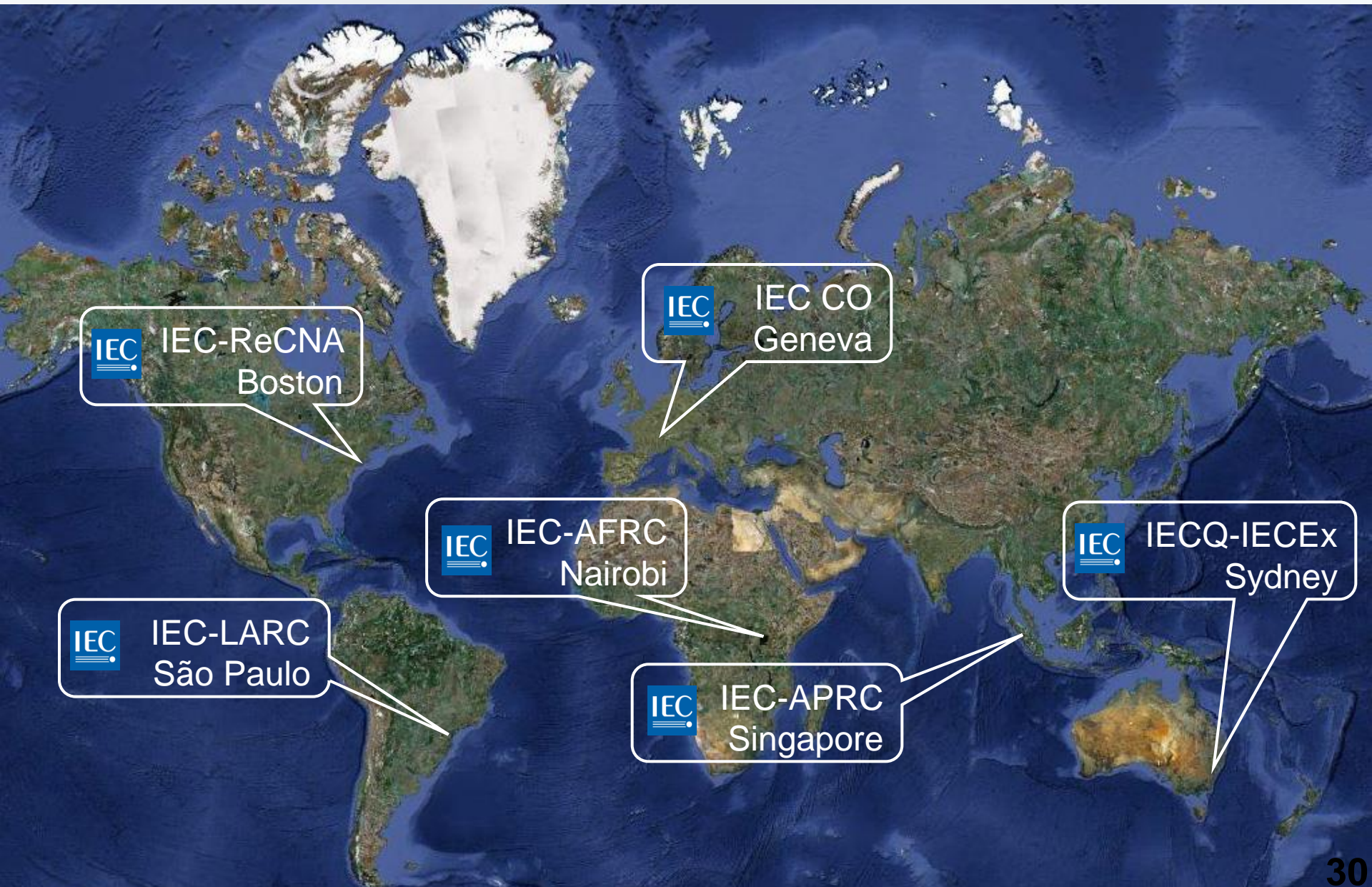
- **Level 0**
 - Introductory e-Learning modules
 - Available for all Affiliate participants with IEC login
- **Level 1**
 - Intermediate e-Learning modules
 - Available only for Affiliate participants nominated through the ACAS Pledge signed by their country
 - Short test at end of Level 1 for access to Level 2
- **Level 2**
 - Advanced e-Learning modules
 - Available for Affiliate participants who have passed the test for the previous levels, and whose country has signed the ACAS Declaration
 - At the end, participants will receive a "Recognition of Achievement" attesting that they have successfully completed an ACAS e-Learning course

Benefits of importing with the IEC Conformity Assessment Systems

Benefits for developing countries

- No need to develop a separate system of certification or approval
- The regulations of the countries can be simplified by requiring the conformity of the IEC ad hoc system
- Wider range of safe products

IEC offices



Conclusion

- Important effort is made by IEC to involve all countries in its global standardization and conformity assessment activities.
- Participation in IEC standardization work by countries allows them to be actors and not only users
- IEC Conformity Assessment Systems facilitate trade and ensure electrical safety
- IEC Regional Centers aim to help countries to benefit fully from IEC work and will facilitate intra regional and international trade of electrotechnical products regard to WTO objectives
- IEC – through its Regional Centres – is available to support all countries and their different stakeholders in collaboration with the NCs and NECs

THANK YOU

MERCI

