



INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

REPORT TO WTO TBT COMMITTEE

October 2013

IEC. Making electrotechnology work for you.



IEC ACTIVITIES IN DEVELOPING COUNTRIES

JUNE 2013 – OCTOBER 2013

This report to the WTO Technical Barriers to Trade Committee highlights the activities of the IEC, its Members, Affiliates and Regional Centres related to increasing the participation of developing countries in IEC International Standardization and Conformity Assessment activities.

Expansion of the IEC Family



In September 2013, the IEC Affiliate Country Programme welcomed **Saint Kitts and Nevis** as its newest participant bringing the total number of countries in the IEC Family to 165: 82 Members and

83 Affiliates. The country is affiliated through its national standardization body. Saint Kitts and Nevis participated in the **CATRTA** (Canada-Americas Trade-related Technical Assistance Program) workshop that was held back to back with the **COPANT**, the Pan American Standards Commission, General Assembly in April 2013 (see our **June report**). It was the opportunity for the IEC-LARC (IEC Regional Centre for Latin America) Manager to meet with the delegate from Saint Kitts and Nevis and to renew the invitation made by the IEC in 2012 to join its Affiliate Country Programme. The next step will be to bring together stakeholders from the private and the public sectors to establish a NEC (National Electrotechnical Committee) and start benefiting from what IEC can offer to support electrification and ensure electrical safety for the population.

IEC Regional Centres support IEC Members

IEC Regional Centre for Latin America

The IEC-LARC (IEC Regional Centre for Latin America), located in São Paulo, Brazil, is the focal point for the IEC in Latin America, helping to promote awareness of the IEC in the region, increase the use of IEC International Standards and IEC Conformity Assessment Systems and enhance participation and membership of countries in the region.

- **CONCAMIN and COMENOR Forum – Mexico City, Mexico, 25 June 2013**
IEC's former President, Jacques Régis, and the IEC-LARC Manager were present

at the **CONCAMIN**, the confederation of Mexican chambers of industry, and **COMENOR**, the Mexican council for standardization and conformity assessment, event. This annual forum hosts a large number of high-level representatives from government authorities and standardization entities, as well as regulators, allowing IEC Officers to network and promote the work of the Commission.

IEC Asia-Pacific Regional Centre

The IEC-APRC (IEC Asia-Pacific Regional Centre), located in Singapore, has a twofold mission: to promote awareness of the IEC in the region, increase the use of IEC International Standards and enhance participation of all countries in the region in the Commission's work; and to provide additional staff support to IEC Technical Committees and Subcommittees in the same way the IEC Central Office does at present.

- **Seminar on International Standardization for Semiconductor Devices – Singapore, 19 July 2013**
IEC-APRC collaborated with the IEC National Committee of Singapore, **SSIA** (Singapore Semiconductor Industry Association), **JISC** (Japanese Industrial Standards Committee) and **PCSS** (Promotion Committee of Semiconductor Standardization, Japan) to organize the seminar and promote the work of the IEC Technical Committee on Semiconductor Devices as well as its Subcommittees. Aside from promoting awareness of the industry in Singapore, the event was an opportunity to gather interested industry parties to consider further participation in this area. Close to 40 participants attended the seminar which was held at the IEC-APRC.
- **2013 IHS DAY APAC Summit – New Delhi, India, 25 July 2013**
The **2013 IHS DAY APAC** (IHS DAY Asia-Pacific) Summit is the 2nd regional, high-level, annual meeting organized by IHS for senior executives. The event focused on the business challenges and opportunities within India and the country's ►

- ▶ future within the global economy. IEC-APRC participated in the sessions on the “Role of Product Engineering & Design in Shaping the Global Industry” and “Innovation in Product Engineering – Mitigating Risk Increasing Productivity and Adding Value with Critical Business Information”. IEC-APRC explained that standards are the commercialization of research & development and encouraged the industry in India to participate more actively in IEC Technical Committees so that it could influence the development of future standards. More than 800 participants attended the event.
- **Seminar on Green Standards – Xiamen, China, 8 September 2013**



With regulatory authorities increasingly imposing requirements for energy efficient electrical and electronic products, while also reducing the use of hazardous substances, it is important for manufacturers to be aware of the latest developments in international standards and conformity assessment requirements as these are usually referred to by the regulators. IEC-APRC participated at the seminar which had as theme, “Promoting Green Development, Advancing Trade Capacity – the New Trend of International Cooperation”. A presentation was made introducing the IEC, its activities relating to green technology and encouraging active participation by Chinese experts. The seminar was held in conjunction with the 17th CIFIT (China International Fair for Investment and Trade) and was organized by UNIDO (United Nations Industrial Development Organization) and the Fujian provincial Chamber of Commerce for mechanical and electrical equipment import and export.

IEC Regional Centre for North America

The IEC-ReCNA (IEC Regional Centre for North America), located in Worcester, MA, USA, is

responsible for coordinating the work of 21 IEC Technical Committees and 19 Subcommittees. Many of these committees have their secretariats in North America. In addition, the IEC-ReCNA provides support for:

- IEC MSB (Market Strategy Board) which identifies the principal technological trends and market needs in the IEC’s fields of activity.
- IEC SMB SG 3 (Standardization Management Board Strategic Group 3) for Smart Grid which comprises technical experts from 14 different countries representing several areas of the Smart Grid including, but not limited to, bulk generation, transmission, distribution, metering and the customer.
- IEC SMB SG 6 for Electrotechnology for Mobility which provides recommendations for an IEC strategy encompassing the complete domain of automotive electrotechnics and electromobility.
- IEC SMB ACTEL (Advisory Committee on Telecommunication) which comprises experts from 6 different countries dealing with coordination activities and guidelines related to infrastructures used for communications.
- IEC WSGF (World Smart Grid Forum) Project Group bringing together leaders and technical experts of the global Smart Grid scene for assessment of technical, regulatory and market achievements in the Smart Grid domain.
- IEC SEGs (Systems Evaluation Groups) for Smart Grids and Smart Cities which are open groups used in the first stage of systems development whose role is to engage the community of experts, identify the relevant stakeholders and define the general architecture and boundaries of the problem to be addressed regarding Smart Grids and Smart Cities.

IEC Central Office supports the IEC Kenyan National Committee

In September 2013, the IEC gave a training workshop on its Standardization Strategy, processes and tools for the members of the IEC NC (National Committee) of Kenya. The event was hosted by KEBS (Kenya Bureau of Standards) and organized in cooperation with the Ministry of Industrialization and Enterprise. IEC Development Community Business Coordinator gave lectures to 50 participants from industry, university and consumer organizations who participated in this two-day training workshop. Comment by the participants was that the workshop served as an eye-opener on standardization strategies and that it highlighted how to increase Kenya’s participation in ▶

- ▶ IEC International Standardization activities. As another result of the workshop, the Kenyan NC decided to start using the IEC electronic tools for the national work in its mirror committees.

IEC Mentoring Programme

In June 2013, the IEC launched its Mentoring Programme for IEC Members and IEC Affiliates. The purpose of this programme is to broaden participation at all levels (standards development, management, conformity assessment) by encouraging well developed National Committees to mentor and share experiences with other NCs and Affiliates National Electrotechnical Committees.

This is a voluntary programme to which participants commit themselves for up to two years, with a progress report after one year and another at the end of the period.

The Mentoring Programme will help IEC Members and IEC Affiliates at the management and technical levels. Mentoring at the management level will focus on the reinforcement of the structure and functioning of the NC or NEC. Mentoring at the technical level is aimed at enhancing the participation of experts, focusing on the procedures for commenting on IEC International Standards during their development and guidance for understanding the requirements in these standards.

The IEC is pleased to report that two mentoring partnerships began in September 2013 with the [German NC](#) serving as mentor for the [Czech NC](#), and the [Austrian NC](#) serving as mentor for the NEC of [Rwanda](#). At the occasion of the IEC General Meeting in New Delhi in October 2013, Austria and Rwanda have been invited to share their experiences during the IEC Affiliate Forum.

With its Mentoring Programme, the IEC is hoping to involve more countries in its International Standardization work, particularly developing and newly industrialized countries, thus facilitating their implementation of the WTO TBT Agreement.

IEC Affiliate Country Programme

The [IEC Affiliate Country Programme](#) is aimed at developing countries that do not yet have the necessary infrastructure and technical expertise to participate in IEC activities as a Member.

Participants join the Programme free of charge on invitation by the IEC General Secretary.

First mentoring partnership between Rwanda and Austria

Shortly after the launch of the IEC Mentoring Programme for Affiliates in June 2013, Rwanda, through its National Electrotechnical Committee, requested to benefit from the IEC Mentoring Programme. The Secretary of the IEC National Committee of Austria replied positively to the request and both partners agreed to sign a mentoring agreement in July 2013. The mentoring activities began in September 2013 and are expected to last up to two years. These activities will focus on the reinforcement of the existing NEC, the adoption of IEC International Standards, the establishment of mirror committees of the IEC and the participation of Rwanda in IEC Standardization work by commenting on IEC Draft International Standards.

IEC-LARC training session for Honduras – June 2013

The IEC Regional Centre for Latin America Manager organized a web conference in June 2013 with the [OHN](#), the national standards body of [Honduras](#), and its NEC stakeholders. It was the occasion to introduce the IEC, its structure, its International Standards and to give an in depth presentation of the benefits of the IEC Affiliate Country Programme.

IEC-LARC training session for Peru – August 2013

In August 2013, the IEC-LARC Manager met with [INDECOP](#), the national standards body of [Peru](#), and its stakeholders who are also members of the Peruvian NEC to help them further benefit from Peru's IEC Affiliate Plus status. He also addressed the mirror technical committees of the IEC and government authorities concerned with counterfeit and low quality imported products. This is also an issue for multinational manufacturers that are working to establish an industry association to support government actions against low quality products.

IEC conference and training workshop – Kinshasa, DRC, 2 September 2013

Back to back with the [AFSEC](#) (African Electrotechnical Standardization Commission) 3rd General Assembly on 28-29 August 2013 in Nairobi, Kenya, the IEC Affiliate Country Programme Executive Secretary made an official visit to [DRC](#) (Democratic Republic of Congo) in September 2013 to support the newly



- ▶ established National Electrotechnical Committee and to raise the awareness on IEC International Standards and Conformity Assessment Systems to the President's Office, the Prime Minister's Office and several ministries. It was also the opportunity to train [OCC](#) (Office Congolais de Contrôle) stakeholders. DRC is affiliated with the IEC through OCC which carries out both standardization and conformity assessment activities. Their NEC was established in 2012 and this upgraded the DRC to IEC Affiliate Plus status. During the conference that brought together 120 participants, the IEC explained that the NEC had a crucial role to play in the development policies of the country, by identifying appropriate standards for adoption, following up on those standards that were already adopted and getting involved in commenting on documents produced by the selected IEC Technical Committees. The next step for the DRC NEC is to establish mirror technical committees of the IEC and to involve all those who have expertise in the electrotechnical field. Some new IEC Technical Committees could be considered to serve the national needs for standards such as [IEC TC 4](#) on hydraulic turbines, [IEC TC 31](#) for equipment for explosive atmospheres, or [IEC TC 86](#) on fibre optics. The IEC also pointed out the work of [IEC TC 82](#) as relevant to support a decentralized rural electrification programme, and in particular IEC International Standard 62257-9-5 which is now sponsored by the [World Bank/IFC](#) (International Finance Corporation) through the [SE4ALL](#) (Sustainable Energy For All) initiative in partnership with IEC.

Access to IEC International Standards for adoption

Since our last report, 15 developing countries have received free of charge a total of 388 copies of IEC International Standards to consider for adoption: [Afghanistan](#), [Bolivia](#), [Dominican Republic](#), [Ecuador](#), [Grenada](#), [Guinea](#), [Peru](#), [Rwanda](#), [Seychelles](#), [South Sudan](#), [Sudan](#), [Swaziland](#),

[Tanzania](#), [Uruguay](#) and [Zimbabwe](#). South Sudan joined the IEC Affiliate Country Programme in April 2013 and ordered its first batch of 11 IEC International Standards related to power capacitors and transformers, high and low voltage fuses and cables, overhead transmission lines as well as high voltage switchgear and controlgear. With its newly established National Electrotechnical Committee, Gabon is sending a delegation to the forthcoming 77th IEC General Meeting in New Delhi, India, 21-25 October 2013, and should soon start participating actively in the IEC Affiliate Country Programme.

Regional collaboration

African Electrotechnical Standardization Commission

IEC participated in the [AFSEC](#) (African Electrotechnical Standardization Commission) 3rd General Assembly held in Nairobi, Kenya, 28-29 August 2013. The meeting was attended by 62 delegates representing 14 African countries. Since its last General Assembly, AFSEC has gained 4 new members: [DRC](#), [Namibia](#), [Rwanda](#) and [Zambia](#). [SADC](#) (Southern African Development Community) joined AFSEC as an Affiliate Member via its standardization arm [SADCSTAN](#) (SADC Cooperation in Standardization). Other Affiliate Members are EAPP (Eastern Africa Power Pool), SAPP (Southern African Power Pool), UPDEA (Union of Producers, Transporters and Distributors of Electric Power in Africa), PIESA (Power Institute for East and Southern Africa) and AFREC (African Energy Commission). AFSEC members approved the recommendation from IEC mirror committees to adopt as pan African electrotechnical standards the IEC International Standards from [IEC TC 13](#): Electrical energy measurement and control, [IEC TC 57](#): Power systems management and associated information exchange, and [IEC TC 64](#): Electrical installations and protection against electric shock. AFSEC Members also decided to add [IEC TC 82](#): Solar photovoltaic energy systems, to their list of IEC mirror committees and to establish a conformity assessment committee whose members will be appointed at the next General Assembly to be held in DRC in September 2014. A workshop on Smart Grid with African Power Pools and AFSEC mirror committees of the IEC is scheduled in Abidjan, Côte D'Ivoire, in 2014, with the technical support of IEC experts.

Following the General Assembly, AFSEC signed the PAQI (Pan African Quality) ▶

- Infrastructure) agreement in Nairobi, Kenya, on Friday 30 August 2013. The infrastructure is based on the International Quality Infrastructure with AFSEC representing the IEC through its National Electrotechnical Committees in the field of standardization.

Forum of IEC National Committees of the Americas 2013 Meeting – Miami, USA, September 2013

The FINCA, the Forum of IEC National Committees of the Americas, 2013 Meeting saw its seven country members (Argentina, Brazil, Canada, Chile, Colombia, Mexico and USA) take an important decision in inviting the region's IEC Affiliate countries and Associate Members to participate as observers in future events. For the first time this year, [COPANT](#), the Pan American Standards Commission, Executive Secretary, Kory Eguino, was in attendance, and the USA invited Sandra Gomez of [INTECO](#), the Costa Rican national standards bureau, as an observer. Also present were three participants from the IEC Young Professionals Programme.

7th APEC Conference on Good Regulatory Practice – Medan, Indonesia, 26-27 June 2013

The 7th [APEC](#) (Asia-Pacific Economic Cooperation) conference on Good Regulatory Practice brought together more than 100 experts from government, business and international organizations to discuss the critical regulatory issues facing the APEC community. Ann Weeks, UL (Underwriters Laboratories) Vice President for Global Affairs and IEC-APRC Regional Director participated in session 8, moderated by former IEC Vice President, Frank Kitzantides, to discuss ways to move forward with conformity assessment and GRP (Good Regulatory Practice). IEC-APRC shared that the IEC Conformity Assessment Systems, which use the IEC International Standards, are ready made tools that the regulators can depend on and cited that the [UNECE](#) (United Nations Economic Commission for Europe) has endorsed IECEx (IEC System for the Certification to Standards relating to Equipment for use in Explosive Atmospheres) as a "Good Regulatory Practice".

Partnership with UN Foundation and World Bank

The IEC, the [World Bank Group](#), and the [United Nations Foundation](#) have worked together to give developing countries access to important technical documents that support rural electrification ([IEC Technical Specification 62257 series](#)) at

discounts ranging between 50% and 75%. The documents in the series support energy access through a range of technologies for rural electrification in developing countries (more information on these documents can be found [here](#)). To make these important documents more accessible to key stakeholders, the IEC, the World Bank Group, and the United Nations Foundation collaborated to provide the following discounts to qualified stakeholders:

- 75% discount on IEC/TS 62257-9-5 with or without its normative references
- 58% discount on entire IEC/TS 62257 series with all normative references
- 50% discount on any other individual documents in the IEC/TS 62257 series (with or without normative references)

- See [IEC press release](#)

IEC Conformity Assessment activities

New status in conformity assessment for IEC Affiliates

After the launch of the IEC Affiliate Plus status in August 2009, the IEC Affiliate Country Programme Secretariat is pleased to report that a new ACAS (Affiliate Conformity Assessment Status) is now offered to Affiliate participants, following a decision from the IEC CAB (Conformity Assessment Board) in June 2013. ACAS will offer Affiliate participants new benefits in all IEC CA (Conformity Assessment) Systems, IECEE (IEC System of Conformity Assessment Schemes for Electrotechnical Equipment and Components), IECQ (IEC Quality Assessment System for Electronic Components) and IECEx (IEC System for the Certification to Standards relating to Equipment for use in Explosive Atmospheres), including any future IEC CA Systems. The objective is to train Affiliate countries to use IEC International Standards and benefit from IEC CA Systems through the recognition of IEC CA Certificates, whenever possible on the national level. These benefits include:

- Regional awareness events
- Documentation and guides on conformity assessment at the IEC
- Webinars (upon request)
- Learning modules on IEC website and CD-ROMs (under development)
- A resource database (under development)
- Active participation in each IEC CA System, based on prerequisite training conditions ►

► Any Affiliate country that has met the following criteria is entitled to ACAS:

- Officially declared the adoption of IEC International Standards as national standards
- Signed the ACAS Pledge
- Made the commitment to use the ACAS Learning Modules

Existing IECEE Affiliates have automatically been granted ACAS, and have a year to sign the pledge document.

IECEE new field of activity

The IEC has a number of Technical Committees that prepare International Standards connected with specific areas of industrial automation.

IEC TC 65: Industrial-process measurement, control and automation, provides many of the standards that are relevant for industry.

IEC TC 2: Rotating machinery, **IEC TC 17:**

Switchgear and controlgear, **IEC TC 22:** Power electronic systems and equipment, **IEC TC 44:**

Safety of machinery - Electrotechnical aspects, and **IEC TC 66:** Safety of measuring, control and laboratory equipment, all play important roles in this field. The complexity and sophistication of today's systems and equipment in industrial plants require a specific approach to safety and security.

To provide an improved response to industry and market needs, IECEE offers a new service entirely dedicated to industrial automation. One of the first tasks was to gather into one product category – INDAT – all the existing IEC International Standards that have a direct bearing on products used in industrial automation. The introduction of the INDAT product category has benefits for industry as well as for IECEE CBs (Certification Bodies) and TLs (Test Laboratories).

► [More in IEC e-tech June 2013](#)

IECEE-AFSEC Seminar – Nairobi, Kenya, 26-27 August 2013

As announced in our previous report, IECEE and AFSEC (African Electrotechnical Standardization Commission) held a seminar in Nairobi, Kenya, 26-27 August 2013. This seminar, back to back with AFSEC 3rd General Assembly, brought together over 80 participants from 14 African countries: four IEC Members ([Egypt](#), [Kenya](#), [Nigeria](#), [South Africa](#)) and ten IEC Affiliate countries ([Côte D'Ivoire](#), [DRC](#), [Gabon](#), [Ghana](#), [Ethiopia](#), [Namibia](#), [Rwanda](#), [Tanzania](#), [Uganda](#), [Zambia](#)).

The seminar addressed representatives from

national standards organizations, utilities, regulatory authorities, universities and technical institutes, ministries, consumer associations, telecommunications, manufacturers and SMEs. The seminar included a general presentation of IEC Conformity Assessment Systems with an emphasis on IECEE by its Executive Secretary. It was followed by specific presentations from IECEE testing and certification experts from Italy and China and a lead and technical assessor from France. The case studies dealt with refrigerators, luminaires and electronic equipment. The two-day workshop included a site visit to Kenyan laboratories from ABM (Associated Battery Manufacturers EA Ltd), KEBS (Kenya Bureau of Standards) and Power Technics Ltd. The delegates also learnt how to access online certificates which are available on the IEC website (see [agenda](#) here). The event was organized as a benefit from the newly launched ACAS (Affiliate Conformity Assessment Status), under the terms of the cooperation agreement signed between AFSEC and the IEC in 2009.

IECEX-UNECE Workshop – Fortaleza, Brazil, 18 September 2013

As part of the 2013 IECEX series of meetings held in Brazil, the United Nations, the UNECE (United Nations Economic Commission for Europe) WP6 (UNECE Working Party on Regulatory Cooperation and Standardization Policies) Ex Sector initiative Regulators Workshop was considered a major success with over 100 participants and representatives from various parts of Latin America.

The IEC President, Dr Klaus Wucherer, gave a Key Note address confirming the IEC's full support concerning standards and conformity assessment activities in this important area and advised that it was pleasing to see the UN endorsement of IEC TC 31 International Standards and the IECEX Schemes via publication of the UNECE CROs (Common Regulatory Objectives) Publication. The IEC then delivered a series of presentations on the IECEX sector with other speakers from regulatory authorities and the UNECE also making contributions (see [agenda](#) here).

Forthcoming UNECE-IECEX Conference – Kuala Lumpur, Malaysia, 19-20 February 2014

The Malaysian National Committee of the IEC in conjunction with IECEX, UNECE and the IEC-APRC (IEC Asia-Pacific Regional Centre), are planning a two-day International Conference for 19-20 February 2014, covering standards, ►

► regulations and conformity assessment in the highly specialized field of “Equipment and installations in areas where an explosion or fire hazard may exist (Ex areas)”. Such areas include those associated with industries such as petrochemical plants, chemical processing and storage facilities, fuel storage and filling stations associated with transportation, areas giving rise to combustible dusts including storage and handling of grain, pharmaceutical manufacturing, furniture manufacturing and painting processes and many more. The Conference will follow a similar theme to the two-day conference in Dubai, UAE, 20-21 March 2012, with technical presentations to assist capacity building with participants gaining practical knowledge concerning how area classification is conducted and the subsequent selection and installation of Ex equipment. Issues concerning maintenance and repair will also be included. Being planned as a sponsored event, it is expected that attendance will be free of charge with all participants receiving a “Conference Certificate of Attendance”.

► *Preliminary inquiries and expressions of interests may be directed to info@iecex.com*

IECEx awareness workshop –Lubumbashi, DRC, 5-6 September 2013

At the occasion of the country visit to the DRC (Democratic Republic of Congo) previously mentioned in this report, the IEC organized a workshop for the IEC Affiliate stakeholders of the mining province of Katanga. The workshop took place in Lubumbashi, the province capital, and brought together some 40 participants coming from various mining industries, universities, consumers, the ministry of energy, the provincial branch of the OCC (Office Congolais de Contrôle) and laboratories all participating in the newly established provincial branch of the DRC National Electrotechnical Committee. The IEC gave a general presentation on its three Conformity Assessment Systems and how developing countries can benefit through the IEC Affiliate Country Programme. IECEx expert from Sydney gave a presentation via teleconference. In spite of the language barrier and time difference, the discussions were animated and raised many issues regarding piracy, counterfeit, education of mining personnel, how to access training, lab certification, IEC’s role in training university students and future engineers. The workshop was closed by the provincial Minister of Energy. ■

About the IEC

The IEC is the world leading organization that prepares and publishes International Standards for all electrical, electronic and related technologies – collectively known as “electrotechnology”. The IEC also administers three global Conformity Assessment Systems, IECEE, IECEx and IECQ, for testing, certification and approval of equipment, systems, components and in selected areas services and personnel to its International Standards.

IEC NC (National Committees): 82

Full Members: 60

Associate Members: 22

IEC Affiliates: 83

With adoption: 37

IEC TCs and SCs: 174

Technical Committees: 95

Subcommittees: 79

IEC Publications: 6 959

(as per 2012-12-31)

IEC Conformity Assessment Systems:

Over 1 000 000 issued certificates

ANNEX A

82 IEC National Committees (as per 2013-10-01)

Albania	Associate Member	Latvia	Associate Member
Algeria	Full Member	Libya	Full Member
Argentina	Full Member	Lithuania	Associate Member
Australia	Full Member	Luxembourg	Full Member
Austria	Full Member	Malaysia	Full Member
Bahrain	Associate Member	Malta	Associate Member
Belarus	Full Member	Mexico	Full Member
Belgium	Full Member	Moldova	Associate Member
Bosnia & Herzegovina	Associate Member	Montenegro	Associate Member
Brazil	Full Member	Morocco	Associate Member
Bulgaria	Full Member	Netherlands	Full Member
Canada	Full Member	New Zealand	Full Member
Chile	Full Member	Nigeria	Associate Member
China	Full Member	Norway	Full Member
Colombia	Full Member	Oman	Full Member
Croatia	Full Member	Pakistan	Full Member
Cuba	Associate Member	Philippines, Rep. of the	Full Member
Cyprus	Associate Member	Poland	Full Member
Czech Republic	Full Member	Portugal	Full Member
Denmark	Full Member	Qatar	Full Member
Egypt	Full Member	Romania	Full Member
Estonia	Associate Member	Russian Federation	Full Member
Finland	Full Member	Saudi Arabia	Full Member
France	Full Member	Serbia	Full Member
Georgia	Associate Member	Singapore	Full Member
Germany	Full Member	Slovakia	Full Member
Greece	Full Member	Slovenia	Full Member
Hungary	Full Member	South Africa	Full Member
Iceland	Associate Member	Spain	Full Member
India	Full Member	Sri Lanka	Associate Member
Indonesia	Full Member	Sweden	Full Member
Iran	Full Member	Switzerland	Full Member
Iraq	Full Member	Thailand	Full Member
Ireland	Full Member	The Former Yugoslav	
Israel	Full Member	Rep. of Macedonia	Associate Member
Italy	Full Member	Tunisia	Associate Member
Japan	Full Member	Turkey	Full Member
Jordan	Associate Member	Ukraine	Full Member
Kazakhstan	Associate Member	United Arab Emirates	Full Member
Kenya	Associate Member	United Kingdom	Full Member
Korea, Republic of	Full Member	United States of America	Full Member
		Vietnam	Associate Member

ANNEX B

83 IEC Affiliates (as per 2013-10-01)

Afghanistan	January 2007	Haiti	May 2002
Angola	July 2002	Honduras	August 2007
Antigua and Barbuda	May 2002	Jamaica	November 2001
Armenia	November 2001	Kyrgyzstan	December 2003
Azerbaijan	June 2011	Lao PDR	June 2002
Bahamas	July 2012	Lebanon	November 2001
Bangladesh	November 2001	Lesotho	July 2005
Barbados	November 2001	Madagascar	April 2005
Belize	April 2002	Malawi	November 2001
Benin	November 2001	Mali	November 2001
Bhutan	July 2006	Mauritania	May 2002
Bolivia	November 2001	Mauritius	November 2001
Botswana	November 2001	Mongolia	December 2001
Brunei Darussalam	November 2001	Mozambique	March 2003
Burkina Faso	November 2001	Myanmar	November 2007
Burundi	April 2002	Namibia	November 2001
Cambodia	November 2001	Nepal	November 2001
Cameroon	March 2005	Niger	September 2006
Central African Republic	April 2008	Palestine	April 2009
Chad	June 2008	Panama	April 2003
Comoros	November 2001	Papua New Guinea	May 2004
Congo	June 2008	Paraguay	December 2001
Congo (Dem. Rep. of)	November 2001	Peru	September 2002
Costa Rica	February 2000	Rwanda	November 2001
Côte D'Ivoire	September 2003	Saint Kitts and Nevis	September 2013
Dominica	May 2002	Saint Lucia	April 2002
Dominican Republic	August 2005	Saint Vincent and the Grenadines	January 2008
Ecuador	April 2003	Senegal	April 2002
El Salvador	February 2008	Seychelles	November 2001
Eritrea	August 1999	Sierra Leone	March 2003
Ethiopia	June 2002	South Sudan	April 2013
Fiji	November 2001	Sudan	April 2004
Gabon	February 2007	Suriname	November 2008
Gambia	March 2008	Swaziland	June 2003
Ghana	November 2001	Tanzania	November 2001
Grenada	November 2001	Togo	April 2006
Guatemala	November 2001	Trinidad and Tobago	January 2007
Guinea	January 2007	Turkmenistan	December 2001
Guinea Bissau	November 2006	Uganda	November 2001
Guyana	November 2001	Uruguay	September 1996
		Yemen	April 2002
		Zambia	March 2002
		Zimbabwe	November 2001



INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

3, rue de Varembé
PO Box 131
CH-1211 Geneva 20
Switzerland

Tel: + 41 22 919 02 11
info@iec.ch
www.iec.ch