



Report to WTO TBT Committee

November 2017

IEC activities in developing and industrializing countries

June 2017 - October 2017

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 and industrializing countries in IEC International Standardization and Conformity Assessment activities.

IEC Regional Centre activities

IEC Africa Regional Centre

The IEC Africa Regional Centre (IEC-AFRC), located in Nairobi, Kenya, is the focal point for the IEC in Africa, 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.

Continuing visits to African countries of the IEC

IEC-AFRC Directors continued to tour Africa in order to support the electrotechnical standardization work of countries in the region. From July 2017 to October 2017, IEC-AFRC visited six African countries: Guinea Bissau, Guinea, Liberia, Sierra Leone, Eritrea and Ethiopia.

AFSEC Management Committee meeting, Lusaka, Zambia, 11 July 2017

IEC-AFRC Directors attended the 7th meeting of the African Electrotechnical Standardization Commission (AFSEC) Management Committee, held in Lusaka. IEC-AFRC and AFSEC officers held a side meeting to establish an action plan to be implemented together.

The agenda included reports from the AFSEC President and Secretary, discussions and adoption of resolutions on different matters regarding the responsibilities of the Management Committee. IEC-AFRC and AFSEC agreed to hold together some activities regarding the commemoration of the Year 2017 as African Year of Quality Infrastructure, and to have joint capacity building activities in Africa.

Participation in APUA Congress, Livingston, Zambia, 12-14 July 2017

IEC-AFRC Directors participated in APUA 19th Congress in Livingstone on the theme *Promoting emerging economies in Africa through sustainable energy development.*

APUA is the Association of Power Utilities of Africa. After the opening ceremony attended by His Excellency Mr. Edgar Chagwa Lungu, President of the Republic of Zambia, the Congress followed its agenda made of presentations, discussions in plenary and commission sessions. IEC-AFRC participated in the agenda and discussions and joined Commission 2 where they made a presentation to update participants on IEC and IEC-AFRC activities in Africa. The presentation highlighted the mission of the IEC Regional Centre, its activities and results, the lessons learned and the importance of power utilities in participating in IEC National Committee activities, and called for increased commitment of power utilities at national and international level to help voicing specific requirements of Africa in IEC International Standards.

The APUA Congress also gave the opportunity for IEC-AFRC to meet CEOs of national power utilities from different countries (Algeria, Benin, Congo, Togo) and permanent Secretaries of the regional associations West African Power Pool (WAPP) and Central African Power Pool (CAPP).

IEC Asia-Pacific Regional Centre

The IEC Asia-Pacific Regional Centre (IEC-APRC), located in Singapore, has a twofold mission: to promote awareness of the IEC in the region, increase the use of IEC

International Standards and Conformity Assessment Systems as well as enhance participation of all countries in the region in the IEC work; and to provide additional staff support to IEC Technical Committees and Subcommittees in the same way the IEC Central Office does at present.

AEF industry forum, Manila, Philippines, 19-22 June 2017

The Asian Electronics Forum (AEF) is a gathering of industry associations from Asian countries. At the annual forum hosted in Manila by the Semiconductor and Electronics Industries in the Philippines Foundation, Inc. (SEIPI), IEC-APRC Director shared on the latest developments on International Standards supporting IoT (internet of things) and smart manufacturing. The event was attended by about 60 participants from industry in the Philippines and other Asian countries, and served as an opportunity to reach out on International Standards activities in these emerging technologies.

IEC events and training in China, July-August 2017

Together with the Standards Council of China, the IEC organized 3 events in China to promote the use of standardization and conformity assessment.

In Qingdao and Shanghai, events were held for 150 participants from industry, followed by a training session on international standardization for 50 standardization experts. The IEC gave key note addresses during the 2017 Qingdao Forum in order to share experiences on international standardization and academia.

In Shenzhen, the IEC provided training for young professionals on the use of language and negotiation skills in standardization committees. A competition was organized and the winner participated in the 81st IEC General Meeting 2017 in Vladivostok, Russian Federation.

IEC/IECEx seminar, Jakarta, Indonesia, 27 June 2017

The IEC/IECEx seminar was hosted by BSN, the National Standardization Agency of Indonesia, and the IEC National Committee of Indonesia to create more awareness about IEC work in explosive atmospheres and to promote acceptance of IEC International Standards and

IECEx certification in the oil and gas industry and government bodies in Indonesia. The seminar was opened by the President of the IEC National Committee of Indonesia and attracted about 80 participants.

APEC Sub-Committee on Standards and Conformance meetings, and seminars on smart cities, WTO TBT Agreement and Good Regulatory Practice, Ho Chi Minh City, Vietnam, August 18-24, 2017

IEC, which has guest status at the Asia-Pacific Economic Cooperation (APEC) Sub-Committee on Standards and Conformance (SCSC), participated at the APEC SCSC meeting as well as that of the APEC SCSC Joint Regulatory Advisory Committee (JRAC) on Electrical and Electronic Equipment where the IEC-APRC Regional Director shared on latest developments in IEC.

At the Smart Cities workshop, the Chair of the IEC System Committee on electrotechnical aspects of smart cities shared about its activities and the need for collaboration with other organizations.

IEC-APRC Director shared about the IEC Conformity Assessment Systems and the Affiliate Conformity Assessment Status (ACAS) at the workshop on *Enhancing Regulator Expertise on the WTO TBT Agreement* while at the 2017 APEC Conference on Good Regulatory Practice, he shared on the IEC public commenting tools, which provides public access to draft IEC Standards.

Outreach in Yangon, Myanmar, 20 October 2017

About 50 participants from both the government and private sector attended the seminar on Importance and benefits of IEC IS and CA Systems and workshop on ASEAN Harmonized Electrical and Electronic Equipment Regulatory Regime (AHEEERR) in Yangon. Hosted by the Department of Research and Innovation of Myanmar, the objective of the event was to promote the benefits of participating in the IEC, using IEC International Standards and Conformity Assessment Systems. Visits were also made to

the Myanmar Engineering Society and Union of Myanmar Federation of Chambers of Commerce and Industry (UMFCCI).

Indonesia's National Quality Month seminar on smart cities, Jakarta, Indonesia, 24 October 2017

A seminar on the World Standards Day theme of Standards make Cities Smarter was organized by BSN, the National Standardization Agency of Indonesia, to kick-off numerous outreach activities relating to standards and quality. More than 600 participants attended the event which was opened by Indonesia's Minister of Research, Technology and Higher Education. IEC-APRC Director shared on IEC work relating to smart cities.

IEC Latin America Regional Centre

The IEC Latin America Regional Centre (IEC-LARC), 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.

Country visit, Santo Domingo, Dominican Republic, June 2017

IEC-LARC Director, together with the convenor of the IEC Systems Committee on low voltage direct current (LVDC), presented on updated activities of the IEC as well as on LVDC, rural electrification and energy efficiency. Meetings were held with government authorities and electrical retailer associations to enhance their participation and contributions to the National Electrotechnical Committee (NEC) of the Dominican Republic. A special visit and exchange of information took place with INDOCAL, the Dominican Institute for Quality, in its facilities and test laboratories.

Training course, Buenos Aires, Argentina, August 2017

IEC-LARC Director was present to provide an IEC National Committee annual training course with the assistance of local decision makers and experts. Topics such as IEC structure, International Standards, Conformity Assessment, White papers, Systems Committees and IT tools were presented and discussed.

FINCA meeting and workshop, Quito, Ecuador, September 2017

FINCA is the Forum of IEC National Committees of the Americas. Gathered in Ecuador were the IEC National Committees of Argentina, Brazil, Canada, Chile, Colombia, Mexico, United States of America and the IEC Affiliate Countries Bolivia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Paraguay, Peru, Saint Kitts and Nevis and Uruguay, as well government authorities and local stakeholders. IEC-LARC Director provided presentations on IEC Conformity Assessment Systems and the IEC Affiliate Conformity Assessment Status, and reported on the activities and upcoming events of the Regional Centre and Affiliate Country Programme.

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 and CEO.

Update on participation

With the recent declaration of additional national adoptions for a total of 53 national adoptions, and having previously established their National Electrotechnical Committee (NEC) in 2016, Tanzania met the criteria to be granted the IEC Affiliate Plus status.

With a previously established NEC and having recently declared 73 national adoptions, Togo also met the criteria to be granted the IEC Affiliate Plus status.

Out of the 87 developing countries that participate free of charge in the IEC Affiliate Country Programme, 31 countries have now been granted the Affiliate Plus status.

In July 2017, the Affiliate Secretariat was informed that Guinea Bissau has established its NEC. The NEC President is the Head of Renewable Energy Division at Ministry of Energy, the

▶ Vice-President is the Administrator at PP-Energie, and the Secretary the Director of Service at the Direction des Service de Normalisation et de Promotion de la Qualité (DSNPQ) – Directorate of Standardization and Quality Promotion. The NEC members are composed of the government, SMEs, consumer association, etc.

In August 2017, Guatemala informed the IEC Affiliate Secretariat about the establishment of their NEC. The NEC President is technical analyst at the Ministry of Energy and Mines, the NEC Vice-President is metrologist at the Ministry of Economy, and the NEC Secretary is a professional in standardization at the Guatemalan Standards Commission.

The Affiliate Secretariat was also informed about the establishment of a NEC in the Bahamas. The NEC President is from the Buildings Control Division of Ministry of Works and Urban Development, the Vice-President is from TDG Architects Ltd., and the NEC Secretary is from Alternative Power Sources (Bahamas) Ltd.

In October 2017, Cabo Verde informed about the establishment of its NEC. The NEC President is electronic and computer engineer at the Centre of Renewable Energy and Industrial Maintenance (CERMI), and the NEC Secretary is mechanical engineer at the Institute of Quality Management and Intellectual Property (IGQPI).

Out of the 87 developing countries that participate free of charge in the IEC Affiliate Country Programme, 56 have now established their NEC.

Botswana has submitted technical comments on an IEC International Standard of IEC TC 61: Safety of household and similar electrical appliances, and Ecuador has submitted technical comments on IEC International Standards of the IEC TC 14: Power transformers. These technical comments were forwarded to the Secretary of the respective technical committees to be considered at the next TC meetings.

IEC Affiliate countries are showing further interest in IEC work through the national adoptions of IEC International Standards. Eight countries have declared additional adoptions: Bangladesh, Bhutan, Cambodia, Ecuador, Ethiopia, Ghana, Madagascar, and Tanzania.

IEC Conformity Assessment activities

IEC Affiliate Conformity Assessment Status

As part of its commitment to involve developing countries in all aspects of IEC work, including Conformity Assessment Systems, the IEC is pleased to report that Azerbaijan and Costa Rica have both signed the ACAS Declaration and commit to accept IEC certificates and reports issued within the IEC Conformity Assessment Systems related to nationally adopted IEC International Standards.

ACAS e-Learning IECQ modules launched

The IEC is pleased to announce the release of its ACAS e-Learning modules for the IEC Quality Assessment System for Electronic Components (IECQ). These IECQ ACAS e-Learning modules are freely available for IEC Affiliates and Members on the IEC website. The modules are intended to train developing countries on the IEC CA Systems, including how they operate, and how developing countries can get involved. The modules are split into three levels of knowledge, with short tests available between levels. The IEC intends for developing countries to use this resource, in conjunction with regional ACAS events, in order to familiarize themselves with IEC Conformity Assessment procedures. The IECQ e-Learning modules are available in addition to the IECEE, IECEx and IECRE e-Learning modules.

ACAS events

IEC ACAS-COPANT-PTB regional seminar – Lima, Peru, 14-15 November 2017

The IEC, in collaboration with COPANT, the Pan American Standards Commission, PTB, the German National Metrology Institute (Physikalisch-Technische Bundesanstalt) and INACAL, the Peruvian National Quality Institute (Instituto Nacional de Calidad), will hold an IEC ACAS regional seminar in Lima. The intention is to build upon the ACAS regional seminar held in Costa Rica in November 2016, and to further develop the capacity building in quality infrastructure aspects of standardization and conformity assessment for the Latin America region. Regulators and national standards body members from the region have been invited and

live streaming services have been put in place for those unable to participate in person.

Regional collaboration

IEC-FINCA cooperation agreement

A cooperation agreement between the IEC and FINCA, the Forum of the IEC National Committees of the Americas, was signed in Vladivostok, Russian Federation during the 81st General Meeting of the IEC, 9-13 October 2017.

The objective of the Forum is to discuss the management and strategic activity, including next elections to the management boards. Members of FINCA began meeting once a year in 2004 and met officially as FINCA since 2007. IEC Associate Members and Affiliates Countries are invited to participate as observers.

The scope of the cooperation agreement is:

- to promote communication between FINCA and the IEC.
- to promote the use of IEC Standards in response to market demands.
- to ensure transparency of the Standards process in order to facilitate world trade.
- to accelerate the standardization process in order to meet the various demands of the market.
- to make rational use of available resources in standardization activities.
- to facilitate the implementation of agreements already reached concerning the nations and regional economic communities (RECs) of the Americas.
- to increase the involvement of experts in the Americas in the various committees of the IEC.

81st IEC General Meeting 2017 in Vladivostok, Russian Federation, 9-13 October 2017

The IEC annual gathering is not only a general assembly with management meetings such as Council, SMB and CAB. It is also a vast technical

platform for IEC international experts to meet and work on their ongoing projects. This year, over 120 technical meetings took place in Vladivostok at committee, subcommittee or working group levels. Affiliate delegates were able to attend any technical meeting of their choice as observers. It is always an opportunity for Affiliates to become more familiar with the development of IEC International Standards and to meet IEC international experts.

Some events were dedicated to IEC membership. This is the case of the National Committee (NC) President Workshop, the NC Secretaries Forum and the Technical Committees/Subcommittee Secretaries Forum. These meetings are held at each General Meeting and give IEC NC and TC officers the opportunity to exchange and to share their experience. To encourage the participation of the next generation of experts in IEC activities the IEC Young Professionals Programme organized a workshop during the General Meeting. Young professionals have the opportunity to meet with IEC experts and to get an insight in IEC standardization and conformity assessment activities. It is also the opportunity for networking with professionals from all over the world.

Events mainly for Affiliate country delegates were the Affiliate Forum and the Affiliate NEC Secretaries and Chairs Workshop. Other workshops such as the Workshop for Industrializing Countries were open to all delegates.

This year in total over 1 200 delegates from over 80 countries participated in the 81st IEC General Meeting. Amongst those, 44 delegates from 16 countries were from the Affiliate Country Programme.

Affiliate Forum

At the Affiliate Forum, the Affiliate Leader presented a report on new developments of the Affiliate Country Programme, while Affiliate Countries have had the opportunity to report on their work and shared their experience with other participants. External organizations whose work is aligned with the objectives of the Affiliate Country Programme were also invited to present during this session.

▶ 58 delegates from 24 countries participated in this edition of the Affiliate Forum in Vladivostok. The Affiliate Leader presented her report and following this, Bhutan and Ecuador presented case studies on the benefits of using IEC International Standards. Namibia then presented on how conformity assessment can support regulation in Africa.

Following the presentations and ensuing discussion, participants broke into three groups for the last session in order to focus on specific regional issues.

All presentations made during the Affiliate Forum are available in the presentation section of the Affiliate website.

Workshop for Industrializing Countries

This year's Workshop for Industrializing Countries was on IEC Quality Assessment System for Electronic Components (IECQ) and saw the participation of 92 delegates from 31 countries. There were presentations made by representatives of IECQ and case studies from IEC Members (Republic of Korea and Russian Federation) and from IEC Affiliate (Peru). These case studies highlighted the importance of light emitting diodes (LEDs) as one of the largest growing markets for which the IECQ System provides supply chain compliance tools. In particular, the case study from Republic of Korea focused on the integration of IEC International Standards and Conformity Assessment into the Korean LED lighting market, the case study from the Russian Federation focused on lighting in Russia along the themes of energy efficiency and quality assurance, and the case study from Peru on energy efficiency lighting in developing countries and the transformation of the lighting market in Peru.

Following demonstrations by IECQ Secretariat on how to find relevant online certificates using the IECQ website, discussions focused on overcoming challenges in implementing conformity assessment in the context of industrializing countries and underlining the crucial role of quality infrastructure for national economies.

All presentations made during the Workshop for Industrializing Countries are available in the presentation section.

Affiliate NEC Secretary and Chair Workshop

As a National Electrotechnical Committee (NEC) represents the electrotechnical standardization field of an IEC Affiliate country, the NEC Secretary's role is of particular significance in effectively coordinating activities for the benefit of all its stakeholders. Recognizing the importance of this coordination, the Affiliate NEC Secretary and Chair Workshop is arranged as a session during which more time can be allocated towards exploring the dynamics of an IEC Affiliate NEC.

For this edition of the NEC Secretary and Chair Workshop, 27 delegates from 13 countries participated. Presentations were heard from Côte D'Ivoire, DRC, Ghana and Peru on topics such as the developments of their NEC and activities within mentoring partnerships.

Following these presentations, the discussion amongst delegates focused on the topic of national adoptions of IEC International Standards, and also the particular challenges faced by those countries where English is not the working language. Together with IEC management, different approaches were explored in order to allow IEC to facilitate the work of Affiliate Countries whilst still fulfilling its obligations.

All presentations made during the NEC Workshop are available in the presentation section.

Access to electricity through LVDC

A new event was held this year to present the work of the IEC Systems Committee on low voltage direct current and low voltage direct current for electricity access – SyC LVDC where 43 delegates from 18 countries attended the event. Presentations were given by both the convenor and the technical secretary of IEC SyC LVDC on the role of LVDC technology in improving efficiencies in energy transmission and its importance for facilitating access to electricity, in particular for developing countries and in the context of microgrids.

IEC Mentoring Programme for Affiliates

The 81st IEC General Meeting was also the occasion for a number of mentoring partnerships to meet and hold bilateral talks, including those partnerships between Bhutan–Sweden, Côte D'Ivoire–France, DR Congo–France, Ecuador–Mexico and Mongolia–Germany.

Useful brochures/flyers

The IEC and the Sustainable Development Goals.

The IEC has issued a small brochure on *The IEC and the Sustainable Development Goals*. Often behind-the-scenes but nevertheless crucial, the work of the IEC directly impacts 12 of the 17 Sustainable Development Goals. This brochure provides a summary, goal-bygoal, of how IEC International Standards and Conformity Assessment Systems are making a difference. (English only)



Welcome to the IEC

A useful flyer to help communicate about IEC. It gives a basic overview of IEC structure, work and partnerships. Don't hesitate to download or ask for hard copies.



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 4 global Conformity Assessment Systems, IECEE, IECEx, IECQ and IECRE.

They cover testing, certification and approval of equipment, systems, components and in selected areas services and personnel to its International Standards.

IEC NC (National Committees): 83

Full Members: 60 Associate Members: 23

IEC Affiliates: 87With adoption: 46
With NEC: 54

IEC TCs and SCs: 203
Technical Committees: 104

Subcommittees: 99

IEC Publications: 9855 (as per 2017-03-08)

IEC Conformity Assessment Systems:

Over 1 000 000 issued certificates

ANNEX A

83 IEC National Committees (as per 2017-10-31)

Albania Associate Member Kuwait Full Member Algeria Full Member Latvia Associate Member Argentina Full Member Lithuania Associate Member Australia Full Member Luxembourg Full Member Austria Full Member Malaysia Full Member	-
Argentina Full Member Lithuania Associate Member Australia Full Member Luxembourg Full Member Austria Full Member Malaysia Full Member	
Australia Full Member Luxembourg Full Member Austria Full Member Malaysia 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	ŗ
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	
Iraq Full Member Switzerland Full Member	
Iran 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, DPR of Associate Member United States of America Full Member	
Korea, Republic of Full Member Vietnam Associate Member	-

ANNEX B

87 IEC Affiliates (as per 2017-10-31)

Afghanistan	January 2007	Kyrgyzstan	December 2003
Angola	July 2002	Lao PDR	June 2002
Antigua and Barbuda	May 2002	Lebanon	November 2001
Armenia	November 2001	Lesotho	July 2005
	June 2011	Liberia	November 2016
Azerbaijan Bahamas		Madagascar	April 2005
	July 2012	Malawi	November 2001
Bangladesh	November 2001	Mali	
Barbados	November 2001	Mauritania	November 2001
Belize	April 2002		May 2002
Benin	November 2001	Mauritius	November 2001 December 2001
Bhutan	July 2006	Mongolia	
Bolivia	November 2001	Mozambique	March 2003
Botswana	November 2001	Myanmar	November 2007
Brunei Darussalam	November 2001	Namibia	November 2001
Burkina Faso	November 2001	Nepal	November 2001
Burundi	April 2002	Niger	September 2006
Cambodia	November 2001	Palestine	April 2009
Cameroon	March 2005	Panama	April 2003
Cabo Verde	January 2017	Papua New Guinea	May 2004
Central African Republic	April 2008	Paraguay	December 2001
Chad	June 2008	Peru	September 2002
Comoros	November 2001	Rwanda	November 2001
Congo	June 2008	Saint Kitts and Nevis	September 2013
Congo (Dem. Rep. of)	November 2001	Saint Lucia	April 2002
Costa Rica	February 2000	Saint Vincent	
Côte D'Ivoire	September 2003	and the Grenadines	January 2008
Dominica	May 2002	Senegal	April 2002
Dominican Republic	August 2005	Seychelles	November 2001
Ecuador	April 2003	Sierra Leone	March 2003
El Salvador	February 2008	South Sudan	April 2013
Eritrea	August 1999	Sudan	April 2004
Ethiopia	June 2002	Suriname	November 2008
Fiji	November 2001	Swaziland	June 2003
Gabon	February 2007	Syria	July 2016
Gambia	March 2008	Tanzania	November 2001
Ghana	November 2001	Togo	April 2006
Grenada	November 2001	Trinidad and Tobago	January 2007
Guatemala	November 2001	Turkmenistan	December 2001
Guinea	January 2007	Uganda	November 2001
Guinea Bissau	November 2006	Uruguay	September 1996
Guyana	November 2001	Uzbekistan	October 2015
Haiti	May 2002	Yemen	April 2002
Honduras	August 2007	Zambia	March 2002
Jamaica	November 2001	Zimbabwe	November 2001





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