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## FOCUS ON: CHINA AND INDIA

China is America's third largest export market, growing by nearly 50 percent between 2009 and 2011. In India, \$1 trillion in infrastructure investment over the next five years and an expanding consumer class will increase demand for goods and services. Both countries are recognizing the importance of participation in international standardization, and a cooperative approach is key.

## The Chinese Electrotechnical Standardization Structure

By ZHANG Liang, Beijing Electrical Research Institute

**A**long with the economic recovery and industry upgrade of China, international standardization has become more important than ever before. With the intention to better contact and connect through global standardization, this article will introduce the Chinese National Committee and compare the national and the international structure of standardization.

### Chinese Electrotechnical Standardization Structure

To understand the Chinese electrotechnical standardization structure, the stakeholders – government authorities and industry bodies – should first be recognized. They are the key players in the current and future structure.

#### 1. Government Authorities

When speaking of the government authorities in the Chinese electrotechnical standardization structure, we are mainly referring to the Standardization Administration of China (SAC) and government authorities of industry sectors. They are the entities that can issue policies or regulations that may directly and indirectly influence electrotechnical standardization in China.

**a) National standardization organizations**  
SAC and the Certification and Accreditation Administration of China (CNCA) serve as the secretariat of the IEC Chinese National Committee. SAC is the only administrative authority that has unified management and overall coordination of standardization in China. Like the IEC, SAC is engaged in standardization work to support industry policies and regulations. Therefore, as a government

authority providing horizontal functions, SAC collaborates with other government authorities in industry so as to ensure that standardization deliverables are compliant with industry strategies, policies, and regulations.

**b) Government authorities of industry sectors**  
The government authorities within industry sectors are responsible for promoting growth in a sustainable way. The benefits of this



Shanghai Pudong, China

The Chinese Electrotechnical Standardization Structure (continued)

involvement by government authorities in standardization are obvious. On the one hand, the strategies, policies, and regulations issued by these government authorities can be supported by the standardization work. On the other hand, reduction of contradiction and overlap among standardization work within the scope of those authorities can be achieved by their initial review.

To address the challenges of emerging technologies such as smart grid and e-mobility, collaboration on crossover technology has been established between SAC and those related government authorities. For example, the Ministry of Industry and Information Technology (MIIT) is responsible for the vehicle industry, while the National Energy Administration of National Development and Reform Commission (NEA of NDRC) is responsible for the charging infrastructures. SAC works with them both to ensure that the crossover technology is properly addressed by the standardization work.

2. Industry bodies

Within any industry sector, people think in a similar way and speak a “common language”; therefore, it is easier to reach consensus within the industry bodies. The management of various industry sectors through industry bodies is an efficient way for the government authorities to accomplish their goals.

In the electrotechnical standardization field, the following industry bodies are entrusted by the government to assist in the management of IEC TC/SC mirror committees within their sectors:

- China Electricity Council (CEC, the representative for electrical grid operators, to manage 11 IEC Technical Committee [TC] or Subcommittee [SC] mirrors)
- China Electrical Equipment Industry Association (CEEIA,

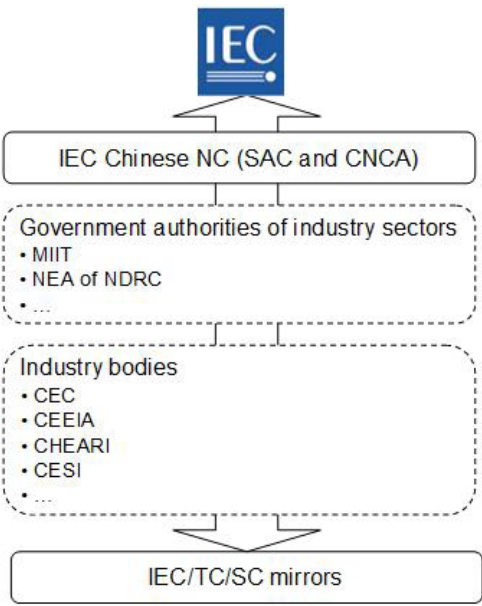
the representative for electrical equipment manufacturers, to manage 70 IEC TC/SC mirrors)

- China Household Electric Appliance Research Institute (CHEARI, the representative for household appliance manufacturers, to manage 12 IEC TC/SC mirrors)
- China Electronics Standardization Institute (CESI, the representative for information and communication technology product manufacturers, to manage 30 IEC TC/SC mirrors)
- Other industry bodies

As you can see by the outline at right, the policies and regulations related to standardization can be implemented from top to bottom; and the standard project can be submitted, reviewed, coordinated, and approved from bottom to top.

Comparing Chinese Standardization Structure to IEC Structure

To understand the Chinese standardization structure more easily, we can compare it to



the IEC structure in the table below.

From this table, it is clear that both SAC and CNCA play an important role in managing and directing national standardization and conformity assessment policies. Like the IEC Council and Council Board, SAC and CNCA, respectively, develop and issue a Five-Year

Comparing Chinese Standardization Structure to IEC Structure

| IEC Standardization Structure              | Chinese Standardization Structure         |
|--------------------------------------------|-------------------------------------------|
| IEC Council                                | SAC and CNCA                              |
| IEC Council Board                          | SAC and CNCA                              |
| IEC Standardization Management Board (SMB) | SAC                                       |
| IEC Conformity Assessment Board (CAB)      | CNCA                                      |
| IEC Market Strategy Board (MSB)            | State Grid                                |
| IEC Sector Boards (Former)                 | Industry bodies                           |
| IEC Strategic Groups                       | National standardization promoting groups |
| IEC Advisory Committees                    | Industry bodies and SAC/TCs/SCs           |
| IEC Technical Committees/Subcommittees     | SAC/TCs/SCs (IEC/TC/SC mirrors)           |

## The Chinese Electrotechnical Standardization Structure (continued)

standardization plan outlining the annual priorities of national standardization and conformity assessment.

At the management board level, Chinese IEC Standardization Management Board (SMB) members come from SAC, which functions much like the IEC SMB. This authority is also responsible for reviewing, approving, adjusting, and disbanding, if necessary, SAC TCs/SCs; they, in turn review, approve, and monitor the progress of the various standards projects. At the international level, the Chinese SMB members are assisted technically by the national support team consisting of representatives from industry bodies. Similar support mechanisms are also in place for the Chinese IEC Conformity Assessment Board (CAB) members and the IEC Market Strategy Board (MSB) member.

In the recent past, IEC maintained Sector Boards to monitor standardization consistency and to plan for trends within the industry sector. To follow the progress and contribute to the work of the former Sector Boards, experts from the China Electrical Power Research Institute (CEPRI) and the Instrumentation Technology and Economy Institute (ITEI) were nominated to Sector Board 1 and Sector Board 4, respectively.

In order to address crossover needs and emerging technologies like ultra-high vacuum (UHV), smart grid, and e-mobility, IEC established Strategic Groups whose work may lead to the coordination of future systems standardization. The Chinese National Committee also recognizes the importance of establishing such mechanisms. National standardization promotional groups responsible for constructing and coordinating the standardization infrastructure in specific systems have been established in recent years. The participants of such promotional groups are government authorities

in industry sectors and industry bodies with the related SAC TCs/SCs.

For historical reasons, our IEC Advisory Committee mirror committees operate as SAC TCs/SCs, and are managed by those closely related industry bodies. These SAC TCs/SCs are not only mirrors to the IEC Advisory Committee, but also to certain IEC TCs/SCs, as follows:

- CEEIA manages the SAC TC on Electrical Safety (mirror to IEC Advisory Committee on Electrical Safety, IEC TC 16, and IEC TC 70);
- CEC manages the SAC TC on Electromagnetic Compatibility (mirror to IEC Advisory Committee on Electromagnetic compatibility and IEC TC 77)
- China Quality Center (CQC), working with CEEIA, CESI, and CNIS, manages the SAC TC on Environmental Standardization of Electrical and Electronic Products and Systems (mirror to IEC Advisory Committee and IEC TC 111).

These SAC TCs/SCs and industry bodies are responsible for developing basic standards, which should be compliant to the product standards.

The SAC TCs/SCs and IEC TCs/SCs are the same in terms of standardization functions, but there are also differences. First, like other



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countries and regions, Chinese electrotechnical standards bodies operate their non-IEC TC/SC mirrors according to industry demand, such as the TC on Electrical Generators. Second, one SAC TC/SC may mirror several IEC TCs/SCs, based on many factors like representation, widely recognized technology division, and the effectiveness of coordination. For example, the SAC TC on Electrical Cables and Wires mirrors IEC TC 7, IEC SC 18A, IEC TC 20, IEC SC 46C, and IEC TC 55.

### Conclusion

This introduction to the Chinese electrotechnical standardization structure and its comparison to the international structure illustrates how the Chinese National Committee is a part of the international standardization family. Because the Chinese standardization structure is so similar to the international structure, it is easy to coordinate with other international standards bodies while preserving some minor differences according to our industry demand. Generally speaking, with the common thinking and language of the IEC, there are more similarities than differences. ■





## FOCUS ON: CHINA AND INDIA

### Spotlight on India: Opportunities in an Important Market

By Leslie McDermott, Program Manager – International Development,  
American National Standards Institute (ANSI)

The trade relationship between the United States and India is one of the world's most vibrant and growing bilateral partnerships. To underscore the key link between standards, conformance, and trade, the American National Standards Institute (ANSI) recently completed a multiyear U.S.-India Standards and Conformance Cooperation Program (SCCP).

Focusing on the critical link between industry engagement and effective standardization that facilitates trade, the SCCP was completed in partnership with the Confederation of Indian Industry (CII) and the Bureau of Indian Standards (BIS), with funding from the U.S. Trade and Development Agency (USTDA).

Now that the main program activities have finished, ANSI members and U.S. stakeholders overall can leverage the benefits of lasting relationships and access to key policy-makers in India, as well as an increased Indian awareness of best practices such as industry participation in standardization and referencing international standards in national regulations. Opportunities exist for companies or other stakeholders that consider India a priority market to build on this foundation or conduct follow-up activities.

#### SCCP Program Elements

In order to encourage international best practices and strengthen industry connections and participation in Indian standards and conformance activities, the SCCP included the following three main components:

#### StandardsPortal for India

The StandardsPortal ([www.StandardsPortal.org](http://www.StandardsPortal.org)) is an online resource intended to increase transparency and facilitate international trade by providing answers to the critical standards, conformance, market-access, and trade-related questions that companies must address to succeed internationally. First developed in cooperation with China, the StandardsPortal

now contains content on the Indian standards and conformance systems developed in coordination with CII and BIS. In addition, CII developed and maintains an Indian counterpart website at [www.StandardsPortal.org.in](http://www.StandardsPortal.org.in).

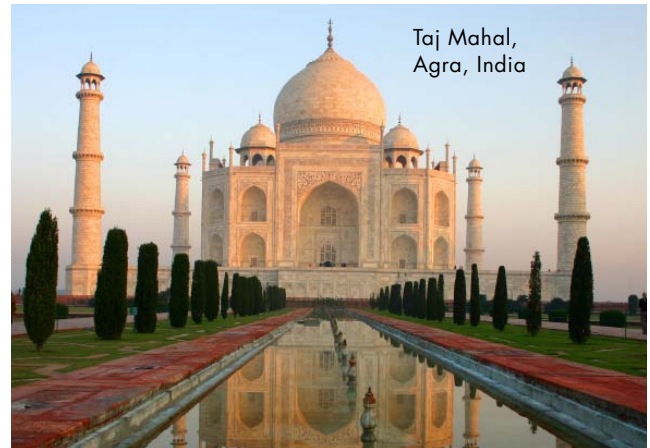
#### Industry Workshops

To facilitate technical exchange between industry experts, five workshops co-sponsored by U.S. organizations were held in India:

**Fire Safety in Tall Buildings (New Delhi – November 4, 2009), co-sponsored by Underwriters Laboratories:** Discussions included the role of fire safety standards in the U.S. and India, how to learn from tall building fires and develop a blueprint for safety infrastructure, and recommendations for improving codes and fire protection.

**Safe Storage of Liquid Natural Gas (New Delhi – February 15, 2010), co-sponsored by the National Fire Protection Association (NFPA):** Discussions included a safety overview of U.S. and Indian experiences with liquefied natural gas (LNG) terminal, shipping, and road transportation operations; LNG spill testing; and the regulatory framework for LNG in India. With the Indian government's emphasis on energy efficiency and clean fuel solutions, the use of LNG in the Indian energy sector is predicted to rise significantly in the next five years.

**Aerospace (New Delhi – February 18, 2010), co-sponsored by SAE International:** Discussions included the perspectives of small- and medium-sized enterprises on aerospace standards. In response to the Indian government's increased procurement offers



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Agra, India

including requirements for local content, Indian suppliers have seen increased opportunity with large multinational manufacturers such as Boeing. However, these manufacturers must use suppliers that meet relevant international standards. There is a large opportunity for further training and awareness-building between U.S. and Indian industry.

**Biometrics (New Delhi – July 22, 2010), co-sponsored by Purdue University and the International Biometrics Industry Association (IBIA):** Discussions included an overview of biometrics technology and standardization in the U.S. and India, and case studies in biometric technology application (including the U.S. Department of Homeland Security, the Unique Identification Authority of India, and issues with testing quality of biometric samples). Programs in both countries increasingly rely on biometric technology, and companies that understand and incorporate standards into their business practice will be able to compete at a higher level.

**Plumbing and Mechanical Codes and Standards (New Delhi – October 27, 2010), co-sponsored by the International Association of Plumbing and Mechanical Officials (IAPMO):** Discussions included an overview of consensus code development

## FOCUS ON: CHINA AND INDIA

## Spotlight on India: Opportunities in an Important Market (continued)

and environmentally friendly codes, and suggestions for enhancing or implementing voluntary standards in codes. IAPMO and the Indian Plumbing Association (IPA) worked together to lead the publishing of a Uniform Plumbing Code for India in 2008. The goal of the workshop was to encourage broader implementation of the Code with BIS's help.

### Market Access Directory

The Directory fills a market need for a central place to find information on the standards, regulations, and conformity assessment used by U.S. industry in the U.S. market. It will facilitate the adoption of these U.S. approaches in international markets, leading to reduced barriers to trade. U.S. stakeholders (government and private sector) will be better able to advocate for transparency and the increased use of certain standards and conformance approaches across the globe.

Under the SCCP, data for five initial sectors was compiled and is included in the Directory ([www.StandardsPortal.org/directory](http://www.StandardsPortal.org/directory)). The sectors are identified using the International Classification System (ICS), and include:

- Information technology equipment (ICS Codes 35.160–35.200)
- Telecommunications equipment (ICS Code 33.050)

- Petroleum equipment (ICS Code 75.180)
- Water purification equipment (ICS Code 13.060)
- Construction equipment (ICS Code 91.220)

### The Path Forward

As the impressive trade statistics indicate, India will continue to be an important export market for a growing variety of U.S. companies and industry sectors. As these numbers keep rising and India's economy grows, the Indian government has turned its attention to the role of standards and conformance in supporting such growth. In a wide range of international fora, India has stepped up its engagement and reinforced its commitment to becoming a leader.

During the period of the SCCP, India has shown a greater commitment to participation in and use of international standards. In ISO in particular, India has stepped up its engagement, including hosting the annual ISO General Assembly in New Delhi in September 2011. In addition, between 2009–2012 India joined the ISO Technical Management Board (TMB), and has shown similar interest in IEC governing bodies. This demonstration of commitment to international standardization represents a willingness on India's part to not only adopt international standards, but to actively participate in their development, benefiting



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industry overall. As the National Committee to the IEC, India has also shown its increased commitment as it will host the IEC General Meeting, which includes multiple technical committee and subcommittee meetings, in India in October 2013, a huge undertaking.

Regarding technical participation, India now participates in 595 ISO technical committees and sub-committees, and 155 IEC technical committees and sub-committees. Both of these levels are now comparable to U.S. and other developed countries' participation in the international organizations. In ISO, India has also shifted its focus more from "observing" memberships to "participating" or "P" memberships. Total overall participation has increased by 5% since the start of the SCCP.

In these and other international standards activities, U.S. interests will benefit from increased awareness of India's priorities, as well as engagement with Indian industry counterparts to encourage their participation in activities led by the Government of India.

### Further information

Interested stakeholders with questions or suggestions for specific initiatives to build on the SCCP foundation may contact ANSI at [intl@ansi.org](mailto:intl@ansi.org). Visit the StandardsPortal at [www.StandardsPortal.org](http://www.StandardsPortal.org). ■

## Indo-U.S. Trade by the Numbers

According to the U.S. Department of Commerce, bilateral trade in merchandise goods has increased almost 400% in the last 15 years.

In 2011 alone, U.S. exports to India reached \$21 billion, a 22% increase over 2008, when the SCCP began.

In 2011, Indian exports to the U.S. totaled \$36 billion, a 40% increase over 2008.

For more information, visit  
[www.export.gov/india](http://www.export.gov/india).



## New Energy Standardization in China

By Eric Zhang, Greater China Standards Manager, Underwriters Laboratories, Beijing

There are a lack of relevant standards to support the health and rapid development of new energy industry development in China, especially in photovoltaics, LED lighting, and wind energy. In this article, I will outline Chinese standardization work in wind energy and give you a brief look at the current situation.

Before delving into wind energy, it is useful to discuss the Chinese standards management scheme. Chinese authorities are responsible for standards management and guidance from the top level. However, there is also a national wind machinery technical committee, which is a mirror of IEC TC 88. The management stakeholders can be grouped as illustrated in the table below.

### Chinese Management Stakeholders in Standardization

| Category                           | Name                                                                           | Role and Responsibility                                                                                                                                                               |
|------------------------------------|--------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Government/ authority              | Standardization Administration of the People's Republic of China (SAC)         | Authorized by the State Council to exercise administrative responsibilities by undertaking unified management, supervision and overall coordination of standardization works in China |
|                                    | National Energy Administration (NEA)                                           | One duty of NEA is to executive management work on energy and electricity industry standard (energy industry standard and power industry standard)                                    |
| Standards management organization  | China Electrical Equipment Industry Association (CEEIA)                        | Responsible for electrical equipment standardization work                                                                                                                             |
|                                    | China Electricity Council (CEC)                                                | Responsible for formulating power technical standards and project cost norms                                                                                                          |
| National technical committee (MSB) | National technical committee for standardization of wind machinery (SAC TC 50) | Responsible for wind machinery equipment standardization work and it is the mirror committee of IEC TC 88                                                                             |
| Industry technical committee       | Wind energy technical committee (NEA TC 1)                                     | Responsible for wind power standardization in power grid areas                                                                                                                        |

### Wind Energy Technical Committee

The lack of standards in wind energy is a big problem, as it blocks further development of this industry in China. For the past few years, Chinese installed wind power capacity has been No.1 in the world. But due to the lack of relevant standards in areas such as offshore wind turbines, wind farm design, commission and operation, and wind resource prediction, the quality of equipment is not good enough.

In January 2010, the National Energy Administration established a wind energy industry technical committee (NEA TC 1) to support the development of wind energy. The task of NEA TC 1 is to establish a wind energy standardization system and develop a series of wind equipment testing and certification standards.

There are seven working groups within TC 1 for the following areas of standardization:

- Wind farm planning and design, which operates through HYDROCHINA
- Wind farm construction and erection, also through HYDROCHINA
- Wind farm O&M, through the China Electricity Council (CEC)
- Wind farm grid connection management, through CEC
- Wind energy machinery equipment, through SAC TC 50
- Wind energy electrical equipment, through CEEIA
- Wind resource measuring,

assessment, and forecasting, which operates through the CMA Public Meteorological service center

### Wind Energy Standardization Planning in the Next Five Years (2011-2015)

In December 2011, SAC published its Five-Year Plan on the national development of standardization. The Chinese government will focus more on standards for wind energy to to meet the needs of these industries in China, and set the following goals:

- Update and revise standards related to design, manufacture, and detection of large-scale wind turbines and critical components.
- Develop standards related to large-scale turbines suitable for Chinese environments such as extreme low/high temperature conditions, high humidity conditions, and large-scale offshore wind farms.
- Develop standards concerning survey, prediction, forecast of wind energy resources and assessment, site-selection, construction and commission, monitoring, and operation of large-scale wind farms.

### Conclusion

Chinese wind energy standardization is in the development phase, and there will be many new standards published in the next five years. Furthermore, these standards will form the base of the wind energy certification scheme in the future. The overall quality of Chinese wind energy will, as a result, continue to go higher and higher. ■



Eric Zhang



## China's Early Engagement

By Elise Owen, Director – International Development,  
American National Standards Institute (ANSI)

International standards are an important tool to facilitate international trade. Countries around the world are increasingly basing their government regulations on international standards developed by a variety of organizations, including the IEC, the International Organization for Standardization (ISO), and others, rather than on “home-grown” requirements. This reliance is strongly encouraged by the World Trade Organization (WTO) as a means to align requirements across borders. Assuming these international standards reflect your company's needs and priorities, you also reap the benefits of reduced transaction costs and time to market when selling products internationally.

However, if international standards do not meet the needs of your company, they can present a substantial threat to your global business. The WTO gives strong protection to governments that base their regulations on international standards. If a foreign requirement presents a barrier for your company, there is very little (if anything) that can be done to fight it if it is based on an international standard.

Given the importance of international standards, you should make sure that the standards being developed affect your business positively. The only way to do this is for your company to be actively engaged in international standards development.

As companies engage in international standardization, one particular development presents a “game change” – the rise of China's influence.

### The Rise of China

China's engagement in ISO, IEC, and other international standards bodies has grown significantly over the past five years as outlined in China's 11th Five-Year Plan (5YP) for 2006 – 2010. This has

included sharp increases not only in China's level of participation, but also in the number of leadership positions held by China, including 47 ISO Secretariats. China has also gained permanent seats on the top governing committees of both ISO and IEC. While many assumed that China's 11th 5YP presented “pie in the sky” goals, China has met or exceeded every benchmark.

China's international rise is supported by very strong government-led domestic standardization programs. For example, the Chinese government put out more than 4,000 standards in the 18-month period from January 2011 – June 2012. Of these, nearly 500 are mandated by the Chinese government, while the others are “recommended” by the government, meaning that they can be written into other regulations, used as the basis of government procurement bids, and more. An increasing number of these domestic requirements are also being put forward in international standards development bodies.



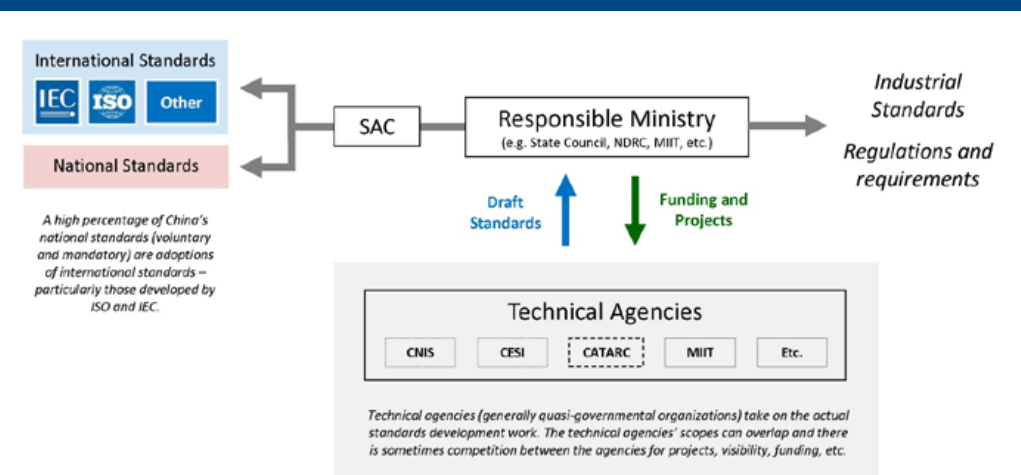
ANSI and its members receive a briefing from the Chinese government on China's 5YP for standardization.

### The Future of International Standards: Made in China?

China's unprecedented growth trend is expected to continue over the next five years with even more ambitious goals outlined in China's 12th 5YP (2011-2015). Specifically, the plan focuses on introducing Chinese technologies and standards developed in China into international standards organizations. There is significant high-level backing and funding from the Chinese government to support these goals.

This is particularly true for the Strategic Emerging Industries (SEIs) outlined in China's 12th 5YP (see box on next page). China has

## Standards Development in China



Most standards development projects in China are initiated by the government, which grants funding and authority to technical agencies (generally quasi-governmental organizations) to carry out standards development work. While these technical agencies are conducting work (see gray box), there are often opportunities for U.S. stakeholders to engage and influence technical decisions. However, once draft standards have been submitted to and approved by the responsible ministry, it is much more difficult to have a meaningful impact.

## China's Early Engagement (continued)

### China's Investment in Strategic Emerging Industries

|                                                                                         |                   |
|-----------------------------------------------------------------------------------------|-------------------|
| New energy (e.g., nuclear, wind, smart grid, etc.)                                      | USD \$786 billion |
| Energy-saving technology and environmental protection                                   | \$487 billion     |
| High-end equipment manufacturing (e.g., intelligent equipment, aerospace, etc.)         | \$235 billion     |
| Next-generation IT (e.g., smart devices, cloud computing, etc.)                         | \$157 billion     |
| New energy vehicles (e.g., electric cars and hybrids, battery charging equipment, etc.) | \$157 billion     |
| New materials (e.g., new chemical materials, nanomaterials, etc.)                       | \$115 billion     |

Source: Deloitte, "China Strategic Emerging Industries Development and Financial Policies," Dec. 2010; Note: 1 USD = approx. 6.5 RMB

committed more than \$1.5 trillion toward promoting these industries, and standards development is considered a key component of these promotion activities. The availability of funding and high-level government recognition – which can result in perks such as personal and organizational recognition, promotions, increased bonuses, and government projects – is attracting China's best and brightest to help quickly ascend the learning curve for effective engagement and influence in international standards.

China's emergence as a dominant player creates some great opportunities for international standardization. Most importantly, China is bringing new technologies and committing its top minds to the cause of international standardization. History has also shown that greater investment and involvement in the development of international standards results in greater buy-in to use international standards as the basis of regulations, rather than creating unique "home-grown" requirements.

The rise of China is also fundamentally changing the game for when and how decisions are made for international standards. In particular, high-level Chinese government attention to international standards

development can alter the timing of the "window of opportunity" for U.S. companies to influence international standards.

Traditionally, when new ideas or proposals are brought forward in international standards development organizations, there has been an expectation that this will be followed by technical questions, discussion, and debate – and that all sides will bend their positions to some degree or another to gain consensus. In China, on the other hand, policy and technical positions are reviewed by the Chinese government before they are put forward as Chinese positions or proposals. For standards that

fall into China's national priorities, decisions can be escalated as high as the minister or vice-premier level. Once Chinese government buy-in has been granted, the position is often essentially "locked in" and can be difficult to change without a loss of face.

Further, China has been working increasingly effectively behind the scenes to gain committed support from other countries before bringing positions or proposals internationally – meaning that waiting to discuss matters with China at the international table puts the U.S. at risk of standing alone with our positions – not to mention alienating



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the Chinese representatives who are often also responsible for developing and implementing their country's regulatory programs.

### Keys to the China Cabinet

Global industry has already begun to take notice of this dynamic and engage earlier. ANSI encourages U.S. companies and organizations to engage in the development of Chinese standards before they have gained high-level approval and before they are presented in international fora. This is particularly important industries that fall within China's SEIs.

### Further information

Contact ANSI at [intl@ansi.org](mailto:intl@ansi.org). ■

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#### IEC Global Visions – Interviews with Global Leaders

<http://www.iec.ch/globalvisions/>



## ANSI Hosts ISO General Assembly 2012 in San Diego



The American National Standards Institute (ANSI) is proud to have hosted this year's International Organization for

Standardization (ISO) General Assembly (GA) in San Diego, California.

As was the case when the USNC hosted the IEC 2010 General Meeting (GM) in Seattle, hosting the ISO 2012 GA has reaffirmed the U.S. commitment to the importance of international standardization, raised awareness of international standardization within U.S. government and industry, and contributed to the spirit of international cooperation that drives the standardization community.

"ANSI is among the most active ISO member bodies because we know that standards and conformance are critical to addressing the technological, economic, and societal challenges that we all face globally," said ANSI president and CEO, S. Joe Bhatia.

If there is one key element that is critical to developing the strongest solutions, it is broad participation. With more than 600 delegates from 163 ISO member countries and other international or regional organizations, this year's GA was a highly interactive and diverse

event that focused on dialogue and action.

Since the U.S. last hosted an ISO GA in 1973, the standardization industry itself has seen enormous change. The advent of information technology brought about a whole new set of business needs that rely on standards in more complex and inter-related ways. And in recent years we have seen a shift in the evolution of standards to address broad and global issues such as energy, sustainability, transportation, and cybersecurity. Vast opportunities for innovation and economic growth are developing in new and expanding industry sectors, and standards are absolutely key to helping industry tap into these technologies and bringing them to the market. In addition, the ISO landscape has broadened, with increased participation from more and more countries around the world bringing greater opportunities for shared knowledge and global harmonization.

USNC members will doubtless recall the excellent job done by ConferenceDirect, the meeting planning firm that was hired to coordinate logistics for the IEC 2010 GM. Because of the USNC's enthusiastic recommendation, ANSI decided to hire ConferenceDirect for the ISO GA. The Institute has been very pleased with the high level of service provided by John Vanella and his team.

Finally, thanks are due to the many USNC

members and participants that stepped forward in support and sponsorship of the ISO GA. They are:

### Platinum Sponsors

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### Further information

For more photos of the event, [click here](#). Visit [isoansi2012.org](http://isoansi2012.org) for more information. ■



The Welcome Reception took place at the USS Midway Museum (left); the Opening Ceremony featured remarks from National Institute of Standards and Technology director Dr. Patrick Gallagher (second from right) and ANSI Board chairman Jim Pauley (far right).



## USNC NEWS

### USNC Wins Big with 28 IEC 1906 Award Recipients for 2012



**C**reated in 2004 by the IEC Executive Committee (ExCo), the 1906 Award commemorates

the IEC's year of foundation and honours IEC experts around the world whose work is fundamental to the IEC. Specifically, the award is granted for exceptional, recent contribution to work related to the

development-either technical or from an organizational point of view-of a specific work project. Many believe this award to be especially significant since it is voted on by the recipient's peers. At the USNC Council Meeting held at FM Approvals in Norwood, MA, USNC President Phil Piqueira and IEC Vice President/SMB Chair Jim Matthews presented the IEC 1906 Award to the U.S. recipients who were able to attend.

The IEC 1906 Award for 2012 has been conferred upon the following 28 USNC experts:

**Joseph Antony,**  
UL LLC; IEC TC 72

**Derek Berry,**  
NREL; IEC TC 88

**Patricia Brett,**  
Honeywell; IEC TC 65

**Peter J. Chiaro, Jr.,**  
U.S. Department of Homeland Security; IEC TC 104

**Kendall Demaree,**  
Alstom Grid; IEC TC 57

**Herbert Falk,**  
Systems Integration Specialists Company (SISCO); IEC TC 57

**Larry Farr,**  
Eaton Electrical; IEC TC 17

**William T. Fiske,**  
Intertek C&E; IECEE

**Michael Gurreri,**  
TE Connectivity; IEC TC 86

**Steve Halliday,**  
High Tech Aid; ISO/IEC JTC 1

**Leo Heiland,**  
Intel; IEC TC 108

**Arlinda Huskey,**  
NREL; IEC TC 88

**Shubhen Kapila,**  
University of Missouri-Rolla;  
IEC TC 10

**Mike Leibowitz,**  
NEMA; IEC TC 113

**Richard Marek,**  
DuPont; IEC TC 14

**Robert McConnell,**  
Amonix Inc.; IEC TC 82

**Jon Miller,**  
Detector Electronics Corp.;  
IEC TC 31

**Scott Neumann,**  
UISOL; IEC TC 57

**Josip Novkovic,**  
CSA Standards; IEC TC 105

**Peter Perkins,**  
Principal Product Safety  
Consultant; IEC TC 108

**Frank Sharkey,**  
GS 1 US Go GSMP Inc.;  
ISO/IEC Jtc 1

**Eric Simmon,**  
NIST; IEC TC 111

**Frank Stupczy,**  
The Lincoln Electric Co.;  
IEC TC 26

**Roger Wicks,**  
E.I. DuPont De Nemours Co.;  
IEC TC 15

**K. Allen Woo,**  
Plantronics Inc.; IEC TC 108

**James R. Wright,**  
Siemens; IEC TC 17

**Linda Young,**  
Intel Corp.; IEC TC 111

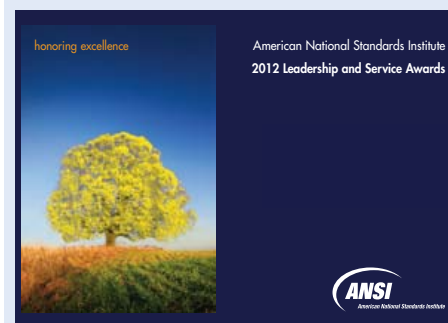
**Tim Zgonena,**  
Underwriters Laboratories;  
IEC TC 82

(l. to r.) IEC VP/SMB Chair Jim Matthews with recipients Tim Zgonena, Peter J. Chiaro, Jr., Jon D. Miller, Robert McConnell, Peter E. Perkins, Derek Berry, Mike Leibowitz, and USNC President Phil Piqueira



## USNC NEWS

### ANSI Honors USNC Members



**T**he American National Standards Institute (ANSI) has announced the recipients of its 2011 Leadership and Service Awards. ANSI will honor the fourteen distinguished award recipients during a banquet and ceremony to be held on Wednesday evening, October 12, at the Newseum in Washington, DC, in conjunction with World Standards Week 2012.

Among the honorees this year are four USNC professionals. **Jonathan Colby**, hydrodynamic engineer at Verdant Power, will receive the Next Generation Award, which honors individuals who have been engaged in standardization activities for less than eight years and who have demonstrated vision, leadership, dedication, and significant contributions to their chosen field of activity.

**Ronald Reimer**, director emeritus of global standards and trade at Rockwell Automation, will be awarded the Elihu Thomson Electrotechnology Medal, which honors an individual who has contributed in an exceptional, dedicated way to the field of electrotechnology standardization, conformity assessment, and related activities at the national and international levels.

Two USNC professionals will receive the Meritorious Service Award in recognition of their outstanding contributions to the U.S. voluntary standardization system:

**Joseph D. Hersey, Jr.**, chief of the U.S. Coast Guard's Spectrum Management and Telecommunications Policy Division; and **Bernard Liebler**, director of technology and regulatory affairs at AdvaMed. The USNC congratulates all the award winners. ■

## IEC HEADLINES

### New IEC/IEEE Global Standards Will Help Ensure Safety of Electrical Equipment at Nuclear Power Plants

The IEC and IEEE have announced the joint publication of new international guidelines for condition monitoring of electrical equipment installed in nuclear power plants. The organizations have also published three affiliated standards detailing specific techniques that can be used to perform the condition monitoring evaluations.

The series of international standards and guidelines, IEC/IEEE 62582, *Nuclear power plants – Instrumentation and control important to safety – Electrical equipment condition monitoring methods*, is intended for use by nuclear power plant operators, system evaluators, test laboratories, and licensees of nuclear power plants.

The standards are particularly important because they focus on condition monitoring of electrical equipment that performs vital nuclear power plant safety functions. A very important application is condition monitoring of electrical cables, which not only provide power needed to operate electrical equipment in nuclear power plants but also transmit signals to and from the various instrumentation and control equipment that performs safety and accident mitigation functions.

“While many countries and individual power utilities are pursuing smart grid strategies that integrate renewable energy supplies, nuclear plants will continue to provide an important source of power for society for many more years and the industry needs to continue to focus on the safety of these plants,” said Gary Johnson, chairman of IEC Subcommittee (SC) 45A, *Instrumentation and control of nuclear facilities*, and senior safety officer at the International Atomic Energy Agency (IAEA).

“IEC/IEEE 62582 establishes, for the first time, a worldwide common standard of a series of condition monitoring techniques that can be selected and applied, as appropriate,



to establish the actual condition of new or installed equipment. This test helps establish a baseline, which in turn allows nuclear plants to determine, with a high degree of confidence, how long equipment will be able to perform as expected, even in the event of a severe accident,” said Satish Aggarwal, chair of the IEEE Nuclear Power Engineering Committee.

“These monitoring techniques are important because they can be used at both new and existing nuclear power plants around the world. The decision to use a particular technique or combination of techniques will depend on the type of equipment involved, the type of condition information needed and a variety of site- and plant-specific factors,” explained Kjell Spang, project leader of the joint IEC/IEEE Development Team. “IEC/IEEE 62582 provides very pragmatic approaches that can be used to address important safety needs.”

The IEC and the IEEE Standards Association (IEEE-SA) collaborated extensively to develop these standards to promote international uniformity in the practice of electrical equipment condition monitoring. The IEC/IEEE 62582 series of standards was published under a joint agreement between IEC and IEEE, which was put in place in 2008 to foster the harmonization of technology standards used in different regions and regulatory environments.

The use of standardized condition monitoring approaches and techniques has many benefits for nuclear power plant operators. Standardized methods yield compatibilities for data collected from various sites and regions, facilitate the exchange of information and experiences, make it possible to build databases characterizing the condition of monitored equipment over time, and encourage the broad acceptance of results.

The initial standards also represent the culmination of significant research conducted by the nuclear industry.

This new series of international standards includes the following: IEC/IEEE 62582-1, Part 1: General. This standard establishes the need for condition monitoring and summarizes the various techniques plant operators can use as applicable and appropriate to their plants.

#### **IEC/IEEE 62582-2, Part 2: Indenter modulus**

This standard contains detailed descriptions of condition monitoring based on indenter modulus measurement techniques, which are primarily used to test cable jackets, insulation and o-rings that are installed in low-voltage environments.

**IEC/IEEE 62582-4, Part 4: Oxidation induction techniques** This standard specifies methods for using oxidation induction techniques to take samples from organic and polymeric materials in electrical equipment, e.g., cable jackets or insulation.

Two additional methods will be added to IEC/IEEE 62582 as they are developed and completed by IEC and the IEEE-SA. The forthcoming standards, and the techniques they will address, include the following:

- **IEC/IEEE 62582-3, Part 3: Elongation at break**
- **IEC/IEEE 62582-5, Part 5: Optical time domain reflectometry** ■



## IEC HEADLINES

## IEC-APRC Celebrates 10 Years of Supporting the Asia-Pacific Region and Beyond

This year IEC-APRC (Asia-Pacific Regional Centre) celebrates 10 years of promoting awareness of the IEC and providing support to TCs (Technical Committees) in the Asia-Pacific region and further afield.

The creation of APRC was approved by the Council and Council Board at the 2000 General Meeting in Stockholm, following a proposal by then Vice-President Ryoiku Toge. Toge had highlighted the need to promote awareness and understanding of IEC activities among businesses and maximize the participation of IEC members in the organization's activities in the Asia-Pacific region.

The official opening of the APRC office took place on 21 February 2002 with a high-level seminar attended by more than 150 delegates from 12 countries. The ceremony was officiated by then IEC President Sei-ichi Takayanagi and former Chairman of SPRING Cedric Foo.

Talking about APRC's achievements since it was launched in 2002, Chew says 'we have seen a significant increase in P-membership in TCs and SCs (Subcommittees) and a lot more participation in IEC CA (Conformity Assessment) activities from National Committees in the region, since we started out'. In 2004 APRC's scope was expanded to include providing support to TCs and SCs. Other achievements include the acceptance of IEC International Standards by regulators under the ASEAN (Association of Southeast Asian Nations) Harmonized Regulatory Regime for Electrical and Electronic Equipment, to be implemented by 2015.

Chew and his colleagues regularly participate in forums and meetings organized by regional standards and regulatory bodies such as PASC (Pacific Area Standards Congress), ASEAN and APEC (Asia-Pacific Economic Cooperation). Since 2002, they have also collaborated closely with JISC (Japanese Industrial Standards Committee) and APSG (Asia-Pacific Steering Group) to organize Human Resources Development seminars with a focus on sector-specific areas such as environmental standardization and more recently, energy efficiency.

To celebrate a decade of successful activity a cocktail reception is being planned, to take place during the joint JISC/IEC/APSG Human Resources Development seminar in December 2012. ■



Dennis Chew, regional director (far right) and seven staff members are based in the IEC-APRC's Singapore office.

## LAUGH TRACK

A mechanical engineer, an electrical engineer, a chemical engineer and a software engineer were riding in a car. The car broke down.

The mechanical engineer said, "I think a rod broke. We should check the rods."

The chemical engineer said, "I don't think it's getting gas. We should check the gas tank."

The electrical engineer said, "I think there was a spark. We should check the circuitry."

The computer engineer said, "I think we should get out of the car and then get back in again."



## ANSI SITE LICENSES SUPPORT USNC

To obtain the greatest value and convenience for your organization when buying IEC standards, USNC members should consider purchasing a site license from

the American National Standards Institute (ANSI). ANSI site licenses enable standards to be shared within a network. They provide real-time access to standards data and offer automatic notification of updates and revisions. And the revenue ANSI receives directly supports the activities and initiatives of the USNC.

The USNC/IEC is a totally integrated committee of ANSI. As such, the Institute provides administrative support to the USNC and its nearly 1,400 participants. ANSI also provides the fiduciary framework by which the USNC's financial obligations are met, including the payment of annual dues to IEC. And since ANSI is a non-profit organization, the revenue earned from your purchase helps to support the programs and services offered to USNC members.

When you purchase a site license from ANSI you are making a commitment to bolster U.S. leadership at the IEC table – and gaining the benefits of easy accessibility, total customization, and affordable pricing for your organization's standards needs.

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## ON THE GRID

## Participants Sought for ANSI Standardization Collaborative to Advance U.S. Energy Efficiency

To help advance a coordinated approach to energy efficiency in the U.S., the American National Standards Institute (ANSI) has launched the Energy Efficiency Standardization Coordination Collaborative (EESCC), and is seeking relevant experts to participate.

The EESCC will assess the energy efficiency standardization landscape and develop a standardization roadmap and compendium. The roadmap is intended to identify what standards, codes, and conformance programs are available or under development, what gaps exist, and what additional activities are needed to advance U.S. energy efficiency; and to increase awareness of these activities to support the implementation of standards, codes, and conformance activities among the public and private sectors.

Phase One of the roadmap will focus on five identified areas of need, with each to be addressed by a dedicated working group: **1.** Building energy and water assessment standards; **2.** Systems energy modeling, integration, and communications; **3.** Building energy rating and labeling; **4.** Evaluation, measurement, and verification; and **5.** Workforce credentialing. The first full plenary meeting of the EESCC is targeted for November 7-8, in the Washington, DC, area, with final dates and details to be confirmed.

### Further information

Stakeholders interested in joining the collaborative should visit [www.ansi.org/eesscc](http://www.ansi.org/eesscc) or email [eesscc@ansi.org](mailto:eesscc@ansi.org). Nominations for working group co-chairs are being accepted through October 5, 2012. ■



## SAVE THE DATES

## Mark Your Calendar for Upcoming Meetings & Events

### October 2012

**76<sup>th</sup> IEC General Meeting**, October 1–5, Oslo, Norway

|                 |           |
|-----------------|-----------|
| SMB Meeting     | October 1 |
| CAB Meeting     | October 2 |
| Council Board   | October 3 |
| Council Meeting | October 5 |



### ANSI World Standards Week

October 9–12, Newseum, Washington, DC

### JANUARY 2013

#### CAPCC/TMC/Council Meetings

January 15–17, Sony Inc., San Diego, CA

### FEBRUARY 2013

**SMB Meeting**, February 12, Geneva, Switzerland

### APRIL 2013

**COPANT General Assembly**, April 22–26, Gros Islet, St. Lucia

### MAY 2013

**CAPCC/TMC/Council Meetings**, April 30–May 2, Dell Inc., Austin, TX

**PASC 36**, May 20–23, Honolulu, Hawaii

### JUNE 2013

**CAB Meeting**, June 10, Geneva, Switzerland

**SMB Meeting**, June 11, Geneva, Switzerland

### SEPTEMBER 2013

**CAPCC/TMC/Council Meetings**, September 10–12  
Recommended Location: Washington, DC Area

### OCTOBER 2013

**77<sup>th</sup> IEC General Meeting**, October 21–25, New Delhi, India

For more event information, visit [www.ansi.org/calendar](http://www.ansi.org/calendar) and enter "USNC" or "IEC" in the key word search field.

## Upcoming Issues of News & Notes

**Quarter IV** System Standardization:  
Networking That Works



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of the electrotechnical community. Some articles are reprinted with permission from the IEC News log.

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