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Spotlight

World Standards Day 2024 celebrated in Xi'an
2024年世界标准日主题活动在西安举办

Features

Upgrades and trade-ins achieve remarkable effect
大规模设备更新和消费品以旧换新取得显著成效

Special Report

Breaking boundaries for sustainable and inclusive growth
–ISO Annual Meeting 2024
打破边界 共建可持续和包容的世界
——2024年国际标准化组织年度大会召开

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The national standard GB/T 44130.1—2024, *Charging and battery swap service information exchange for electric vehicles—Part 1: General rules*, has taken effect since Sept. 1, 2024.

It is applicable to the information exchange among charging and battery swap platforms, and between these platforms and other systems and devices.

Celebrating World Standards Day in Xi'an

Special for all standardizers, the World Standards Day (WSD) is celebrated on October 14 every year to recognize the importance of standards and the contribution made by all standardization workers from all over the world.

The State Administration for Market Regulation (SAMR) and the National Standardization Administration of China (SAC) celebrated the WSD by hosting a theme activity in Xi'an, an ancient city with a history of more than 3,000 years and well-known for the Terracotta Warriors of Emperor Qin Shi Huang.

During the event, more than 40 important national standards were released, with the assessment results of mirror committees of international standards organizations and the winners of ISO and IEC awards unveiled. Officers from local governments and representatives from research institutes, associations and enterprises shared their experience on fostering innovation in mechanism and facilitating the development of the AI and automobile industry via standardization.

The FEATURES column introduces the important national policy issued in March, the *Action Plan on Promoting Large-scale Equipment Upgrades and Trade-ins of Consumer Goods*, and presents how standards play a big role in implementing the Action Plan and the progresses made so far.

The SPECIAL REPORT column presents the series of reports on the ISO Annual Meeting 2024 held in Cartagena, Colombia, which include the articles showcasing the highlights of three sessions focusing on the road to women's entrepreneurship, how to build global confidence in AI, and the sustainable energy transition respectively.

May the Nov./Dec. issue bring some valuable information. Enjoy your reading!

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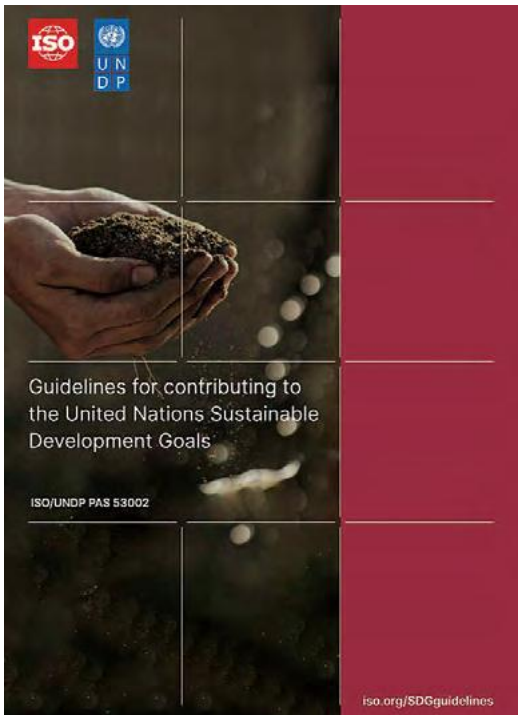


World Automobile Standards and Innovation Conference held in Shenzhen

The 2024 World Automobile Standards and Innovation Conference (WASIC) convened on October 22-24 in Pingshan district, Shenzhen city, South China's Guangdong province.

The conference was themed "Leading with greenness, low carbon, digitalization, and intelligence, standards empowering sustainable development of the automobile industry". It focused on the hot issues of the automobile industry at home and abroad, gathering representatives of international standards organizations from 20 countries and regions around the world.

During the conference, Pingshan district was awarded the Shenzhen's Demonstration Area of Vehicle, Road and Cloud. The major construction project for a testing base of land-air intelligent connected comprehensive transportation was launched, and fruitful results were released, to deepen international exchanges and cooperation in the field of standards and regulations, and facilitate the high-quality development of the automobile industry in Shenzhen towards a world-class level.

Guided by the State Administration for Market Regulation (SAMR), National Standardization Administration of China (SAC), and the Ministry of Industry and Information Technology (MIIT), the China Automotive Technology and Research Center Co., Ltd. signed a MoU with Japan Automotive Research Institute and Uganda National Bureau of Standards respectively. Efforts will be made to carry out in-depth cooperation on standardization in the field of electric vehicles, re-manufacturing of auto components, cultivation of standardization talents, and international standards cooperation, which will bring new impetus to the global automotive industry.

Standard is the globally recognized national quality infrastructure, which is an important aspect of the national fundamental system. Standardization plays a basic and leading role in promoting the high-quality development of the automobile industry. Chinese standards for automobile are increasingly recognized and adopted overseas. So far, 35 Chinese automobile standards have been adopted by countries and regions such as the European Union, Russia, Israel, and Chile, 11 of which are electric vehicle standards.

College students compete in the National Standardization Olympiad

The finals of the "Mo Gan Shan" National Standardization Olympiad of College Students were held on October 12-13 in Huzhou city, Southeast China's Zhejiang province.

The competition was guided by SAMR, and hosted by the China Association for Standardization (CAS), China Jiliang University, and the National Standardization League of Universities. Themed "Standards lead the future, innovation fulfills dreams", the competition aims to stimulate college students' interest and enthusiasm for standardization knowledge, and cultivate standardization talents with international vision and innovation capability. It is expected to promote the innovation and practical capabilities of college students, and boost the major construction of standardization engineering.

The competitors were divided into four groups: college students major in standardization/others, vocational college students, and the Belt and Road international students, with eight recommended subjects such as standardization of carbon peak and neutrality, smart city standardization, as well as the standardization of geographic information and the Internet of Vehicles.

The competition attracted 579 teams of more than 3,200 college students from 106 universities domestically and internationally since April. After rounds of matches, 46 teams entered the finals.

The finals took the mode of on-site defense, including sessions of presentation and Q&A, to comprehensively examine the students' ability to construct the standardization system and optimize the existing standards. Two grand prizes, 8 first prizes, 13 second prizes, and 21 third prizes were awarded to the outstanding students.

SAC/TC 609 on data established in Beijing

The national standardization technical committee on data (SAC/TC 609) was established on October 28 in Beijing, and its first plenary meeting was held on the same day. Liu Liehong, Administrator of National Data Administration, attended and addressed the meeting.

The meeting was attended by officers from SAMR, Office of the Central Cyberspace Affairs Commission, MIIT, and Ministry of Finance, members of SAC/TC 609, experts, and representatives of standardization organizations.

Data standards are an important basis of the data working system, which play an important role in consolidating the foundation of data economy, giving full play to data potentials, releasing data value, seizing development opportunities, and building new strengths in this field, addressed Liu Liehong.

In the face of new situations and new requirements, we must do the job well and foster innovation in data standardization, and steadily carry out the development of data standards. It is necessary to build a good environment for data standardization work, strengthen theoretical learning, speed up standards development, promote standards application, and join hands to deepen international cooperation, thus building SAC/TC 609 into a platform for cooperation, development, and sharing. We should give full play to the advantages of talents, develop more excellent standards, and contribute to China's data standardization, said Liu.

Guided by SAMR and the National Data Administration, the meeting was undertaken by the China Electronics Standardization Institute, which holds the secretariat of the committee.

SAC/SWG 38 on general agricultural standards set up

The founding ceremony and the first plenary meeting of SAC/SWG 38, *Basic and general standards in agriculture*, were held on October 29 in Beijing. Xu Changxing, First-class Inspector of the Standards Technical Management Department of SAMR, Xu Minggang, Academician of the Chinese Academy of Engineering and Chair of SAC/SWG 38, and 59 members of SAC/SWG 38 attended the meeting. Li Zhiping, Vice President of China National Institute of Standardization (CNIS), which holds the secretariat of the working group, presided over the meeting.

Agricultural standardization is the basis and premise for realizing modern agriculture, which plays an important supporting role in promoting the high-quality development of China's agriculture, pointed out by Xu Changxing. Basic and general standards for agriculture are an important part of the agricultural standards system.

Since the high-quality development of agriculture put forward higher requirements for the basic and general standards for agriculture, Xu Changxing hoped that all members of the working group and relevant units could strengthen coordination and cooperation, accelerate construction of the standards system, improve the efficiency of standards development and revision, enhance the promotion and application of standards, and promote international standardization cooperation. The working group is also expected to build up China's strengths in this field.

Xu Minggang stressed that it is necessary to apply the latest scientific research achievements in the basic and general standards for agriculture as soon as possible, and facilitate the high-quality development of agriculture with high-level standards. CNIS will earnestly do the secretariat work well, said Li Zhiping.

The establishment of SAC/SWG 38 marks a new development stage of China's agricultural standardization, which will boost the high-quality development with new impetus.

BRICS seeks trade development and standards cooperation

The BRICS Economic and Trade Forum was held on October 28 in Beijing, co-organized by the China Council for the Promotion of International Trade (CCPIT), China General Technology (Group) Holding Co., Ltd., and the Chinese chapter of the BRICS Business Council.

The forum focused on trade development and standards cooperation among BRICS countries, and aimed to implement the outcomes of the BRICS Leaders' Meeting. It was attended by more than 500 representatives from ISO, standardization administrative departments of BRICS countries, business councils, enterprises, and foreign embassies in China in person or online.

The forum strives to enhance the connectivity of BRICS countries, expand cooperation in various fields and at all levels, improve the security and stability of industrial chains and supply chains, effectively build up the strength of BRICS countries in global economic governance, and promote the coordinated development among countries.

Zhang Shaogang, Vice Chair of CCPIT, said that this year is the start of greater BRICS cooperation. We should boost the high-quality trade development by standards, and strengthen the development and supply of standards for services, to build a mutually beneficial partnership of standardization cooperation, and help achieve the high-quality and sustainable development of trade and investment among BRICS countries.

Representatives from international organizations and standardization bodies of BRICS countries attended the forum to discuss the status and trends of trade development and standards cooperation, which includes Khaled Soufi, Chair of the Egyptian Organization for Standards & Quality (EOS) and President-elect of ISO, Mogamat Mahdi Basadien, Minister Plenipotentiary of Embassy of South Africa to China, Gudkov Nikolay, Regional Representative CCI of Russia in East Asia, Yao Xin, Secretary General of CCPITCSC, and Julia Bonner Douett, Chair of ISO/DEVCO.

The Chinese version of ISEAL's *Code of Good Practice for Sustainability Systems* was released at the forum.

Chinese delegation attends the World Telecommunication Standardization Assembly

The World Telecommunication Standardization Assembly (WTSA-24) took place on October 15-24 in New Delhi, India. Held by ITU every four years, the global event defines the next period of study for ITU-T.

The assembly was attended by over 3,000 representatives from more than 150 ITU member states, six regional telecommunication organizations in the Asia-Pacific, Europe, Americas, Africa, Arab, and the Commonwealth of Independent States, as well as related international organizations and renowned enterprises, which reaches a record high. The event focused on the direction of ITU's standards research in the period of 2025-2028, and the election of research group management positions, and other important issues.

The attendees reviewed and modified 45 existing resolutions and agreed eight new resolutions, reinforcing the organization's standards work to meet fast-evolving global needs. Members of ITU have agreed on priorities for standards and capacity development in areas ranging from artificial intelligence (AI) and the metaverse to sustainable digital transformation at the WTSA-2024.

During the WTSA-24, the Chinese delegation participated in international exchange activities. The delegation met with elected officials of ITU, held meetings with delegations from the U.S., Russia, the U.K., South Africa, Egypt, Saudi Arabia, and other countries, exchanged in-depth insights on jointly promoting global cooperation in fields such as digital technology and standardization, to promote the development of emerging industries with standards.

The Chinese delegation not only proposed motions on AI and the Internet of Vehicles, but also recommended experts to assume the next term of chairs or vice chairs of standardization research groups, continuously contributing to the work of ITU and sharing experience with global partners.

Plenary meeting of ISO/TC 291 held in Shanghai

The 10th plenary meeting of ISO/TC 291, *Domestic gas cooking appliances*, was held in Shanghai on October 22, which was hosted by the China National Hardware Association for the first time.

The meeting was attended in person and virtually by experts from China, Germany, France, Japan, the U.K., Canada, Italy, Uganda, Ethiopia, and other countries.

It is the first time for China to hold the ISO/TC 291 plenary meeting, making it a great opportunity to share China's experience and learn from global partners in the field of gas cooking appliances.

Liu Runfeng, convenor of ISO/TC 291/AHG 1 and Vice President of China National Hardware Association, said that the association has participated in the development of ISO standards with leading efforts for the first time. The association will vigorously serve the work of ISO/TC 291/AHG 1, spread China's practice, and promote achievements of the cookware industry.

ISO/TC 291 works on the safety, terminologies, classification, structure and performance characteristics, test methods, and labels of domestic gas cooking appliances.

The attendees also visited the China International Hardware Show 2024 and the Kitchen-Bathroom & Houseware World Expo 2024, to better know about the development of the industry in China.

ISO 37111:2024 released in China-Singapore Tianjin Eco-City

The meeting on promoting the high-quality development of green and low-carbon sector convened in the China-Singapore Tianjin Eco-City on October 14, when ISO 37111:2024, *Sustainable cities and communities—Urban settlements—Guidance for a flexible approach to phased implementation of ISO 37101*, was released.

The meeting was attended by more than 140 representatives from the national standardization technical committees, sectoral administrative departments, and enterprises. The participants discussed issues including low-carbon transportation, green port construction, zero-carbon demonstration units, new energy vehicle power, and marine economy.

ISO 37111 aims to help global urban settlements at different stages of sustainable development to adopt a progressive approach to determine the processes, objectives and priorities. The standard absorbs best practices of sustainable development in small and medium-sized cities around the world.

ISO 16521:2024 on concrete-filled steel tubular hybrid structures released

Recently, the international standard ISO 16521:2024, *Design of concrete-filled steel tubular (CFST) hybrid structures*, was issued, which is the first ISO standard in this field.

Based on the fruitful research results in the field of CFST hybrid structures and the rich experience of multi-scenario application in engineering, China has contributed to the development of ISO 16521:2024 with leading efforts.

The standard provides guidelines for the design, construction, and inspection of CFST hybrid structures. These structures can be used as main structural components in columns, girders, piers, or arches in buildings, bridges, especially in high-rise structures, long-span spatial structures, and large-scale bridges.

It helps to realize ISO's commitment to the sustainable development goal of "infrastructure that is resilient to risks", and is of great significance to promote the application of CFST hybrid structures worldwide.

WORLD STANDARDS DAY 2024 celebrated in Xi'an

2024年世界标准日主题活动在西安举办

By Jin Jili
文/靳吉丽

The theme activity of the World Standards Day 2024 in China was held in Xi'an, Shaanxi province, on October 14. Zhang Xiaogang, former ISO President, read the congratulatory message from IEC, ISO, and ITU for this year's World Standards Day (WSD), the theme of which is "Shared vision for a better world". Sergio Mujica, ISO Secretary-General, and Jo Cops, IEC President, addressed the event via videos.

Standards are the internationally recognized national quality infrastructure, and an important component of the national fundamental system. Focusing on the top priority of high-quality development, we must actively use standardization as an effective means to help transform scientific and technological innovation achievements, lead the development of new quality productive forces, promote the upgrading of traditional industries, and facilitate the high-level opening up, said Liu Jun, Vice Minister of SAMR in the address.

Several other leaders also addressed the event, including Li Jun, Vice Governor of Shaanxi province, Wang Wei, Second-class Inspector of International Cooperation and Science and Technology Department, Ministry of Water Resources, Lin Qiang, Deputy Director-General of Science and Technology Department, Ministry of Transport, as well as Zhao Chaofan, Deputy Director-General of Science and Technology Department, Ministry of Industry and Information Technology.

Zhang Xiaogang
Former ISO President

Sergio Mujica
ISO Secretary-General

Jo Cops
IEC President

Liu Jun
Vice Minister of SAMR

Li Jun
Vice Governor of
Shaanxi province

On the occasion of the WSD, more than 40 national standards were released, covering the areas such as scientific and technological innovation, green development, high-quality life, and high-level safety.

These standards will help drive the development of strategic emerging industries through innovation and create a new engine for high-quality development, further promote the energy conservation and emission reduction as well as transformation and upgrading of traditional industries, help improve people's health and life quality, and ensure the safety of people's lives and property.

The assessment results of nationwide mirror committees of international standards organizations, winners of ISO and IEC awards, and winners of the first national standardization knowledge competition were announced by Liu Chengyang, Deputy Director-General of Standards Innovative Management Department, SAMR.

To keep pace with the latest trends and requirements of international standardization work, SAMR (SAC) strengthened the management of mirror committees of ISO and IEC. The assessment work involved 353 mirror committees in 26 industries. As a result, 34 of them were rated as the first-class mirror committees.

Besides, 16 Chinese experts won the ISO Excellence Award in 2023 and 2024, and 32 Chinese experts received the IEC 1906 Award in 2024, making great contributions to international standardization work. Eight teams won prizes in the first national standardization knowledge competition, which lasted for more than two months since September 5.

During the event, representatives from the People's Government of Pudong New Area, Shanghai, Shaanxi Administration for Market Regulation, China Electronics Standardization Institute, China Society of Automotive Engineers, and State Grid Corporation of China shared their experience on standardization work mechanism innovation, supporting the high-quality development of the Belt and Road Initiative by standards, promoting the innovative industrial development through AI standardization, and how association standards enable the transformation and upgrading of industries.

Winners of ISO Excellence Award in 2023 and 2024

2023–2024年度“ISO卓越贡献奖”获得者

Chen Jianping 陈建平	Wei Bin 魏 斌	Zhu Tao 朱 涛	Liu Pengyu 刘鹏宇
Zhu Xia 朱 霞	Zhang Junjiao 张君娇	Bai Yun 白 云	Bai Yuqi 白玉琪
Xu Xiaofeng 许晓锋	Xu Likun 许立坤	Leng Mingjian 冷明鉴	Xu Qinhua 徐钦华
Zhang Xuan 张 璇	Shen Lihan 申立汉	Yue Ming 岳 明	Shen Gongtian 沈功田

Winners of IEC 1906 Award in 2024

2024年度“IEC 1906奖”获得者

Li Yun 李 赟	Liu Jie 刘 洁	Ding Zhenpei 丁震霈	Pan Aiqiang 潘爱强
Wu Ming 吴 鸣	Liu Haitao 刘海涛	Liang Xidong 梁曦东	Zhang Tianjue 张天爵
Peng Chunrong 彭春荣	Guo Hai 郭 海	He Jian 贺 建	Rong Ling 戎 玲
Xiong Zhuang 熊 壮	Chen Yi 陈 毅	Zheng Dongning 郑东宁	Liu Shenxing 刘申兴
Mou Xi 牟 希	Huang Qiuxin 黄秋鑫	Teng Yun 滕 云	Zhang Yewen 张冶文
Tan Bo 谭 波	Song Weihong 宋伟宏	He Huiwen 何慧雯	Sun Huadong 孙华东
Du Chao 杜 超	Xing Lin 邢 琳	Yang Shuping 杨书评	Yuan Wangtan 袁望坦
Huang Hua 黄 华	Chen Zhengwei 陈正伟	Wan Biyu 万碧玉	Wang Feifei 王飞飞

SPEECHES OF LEADERS

Wang Wei

Second-class Inspector of International Cooperation and Science and Technology Department, Ministry of Water Resources

Water conservancy is a fundamental industry for economic and social development, and also an important component of the national undertakings. With the support of SAMR and SAC, remarkable progress has been made in the standardization work for water conservancy.

Firstly, the top-level design has been reframed. The institutional system for water conservancy standardization has been improved with the establishment of a leading group and an expert committee in the Ministry of Water Resources (MWR) and the release of normative documents such as the *Administrative Measures for Water Conservancy Standardization Work*, the *Rules for the Review of Technical Standards on Water Conservancy*, and the *Guidelines for Strengthening the Management of Association Standards on Water Conservancy*.

Secondly, standards system building has made the leap forward. The research on the key problems of water conservancy standardization has been deployed. The standards system architecture has been optimized, and seven versions of the standards system table have been successively released. The number of standards has been reduced from over 800 to 644.

Thirdly, standards implementation has generated new growth drivers. The annual report about water conservancy standardization has been issued for six successive years. The service platform for querying existing valid standards on water conservancy has been comprehensively improved, realizing the full text disclosure of all sectoral standards and their foreign versions for people's convenient inquiry and use. The linkage mechanism for the feedback of standards review and implementation information, standards implementation effect evaluation and others has been established.

Fourthly, international cooperation on standards has made breakthroughs. ISO/TC 339 on small hydropower plants has been established with the secretariat held by China. The plan on the internationalization of water conservancy standards has been formulated, the proposal of a new ISO standard has been submitted, and the proposals of two ISO standards on specifications of tide height measurement and terminologies of small hydropower have been approved. The foreign language versions of more than 80 standards have been applied in many countries of Asia, Africa, and Latin America.

In the next step, MWR will focus on the standardization work in the following aspects. Firstly, strengthening the application of standards on water disaster prevention and securing the bottom line of safety with standards. Secondly, promoting the interactive development of standardization and technological innovation, establishing the linkage mechanism of key science and technology projects and standardization work, and taking standards as important outcomes of science and technology plans. Thirdly, enhancing the international communication and cooperation via standardization work.

Lin Qiang

Deputy Director-General of Science and Technology Department, Ministry of Transport

Under the leadership of SAMR, the quality and efficiency of standards supply in the transport area have been constantly improved, laying a solid foundation for smooth travel and logistics, and leading the high-quality industrial development.

By the end of 2023, there were 908 valid national standards, 3,145 sectoral standards, and 2,405 local standards in the transport area, and 940 association standards were disclosed through self-declaration on the national public service platform for standards information.

In terms of promoting efficient transport and logistics, the Ministry of Transport (MOT) emphasizes the better coordination of standards for different modes of transport. A great number of national and sectoral standards including GB/T 44430-2024, *Waybill of container intermodal transport*, and JT/T 1506-2024, *Technical requirements for container shipping information exchange platform and interface based on blockchain*, have promoted the sound development of containers with uniform and normative design, usage, and data exchanges of container waybills.

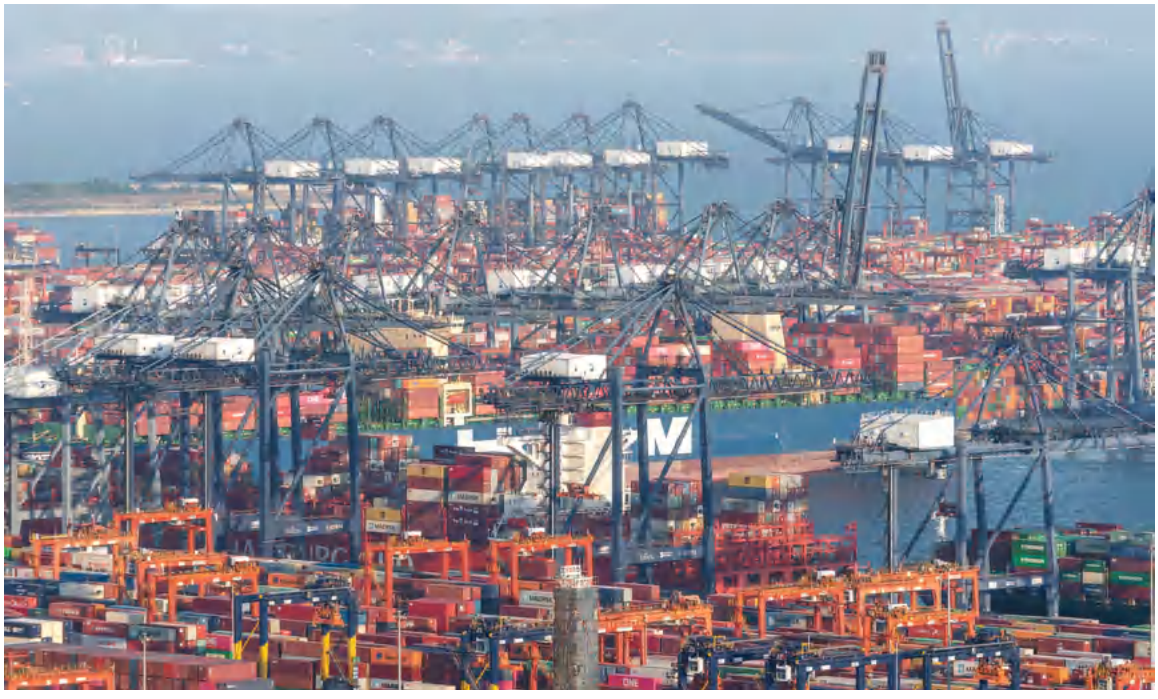
In terms of facilitating travel, the series of mandatory national standards on road traffic signs and markings as well as voluntary national standards on operational safety assessment of urban rail transit and buses have been released, enhancing the safety in the transport field.

In terms of facilitating AI development, a number of important standards for cooperative vehicle-infrastructure system, autonomous driving test application, and automated terminal operating system of containers have been developed to lead the development of new business forms and modes.

With the support of SAMR, MOT has actively pushed forward the establishment of national standard verification sites on intelligent transport and others, and statistical analysis sites on the implementation effect of mandatory standards for road transport and ship transport safety, to constantly improve the scientificity and applicability of standards and effectively implement standards.

MOT has positively promoted the international communication and cooperation on standards, and developed a batch of international standards in railway, container, intelligent transport, large dredging equipment, and other areas. It has applied for the establishment of the ISO technical committee on innovative ports and terminals, aiming to promote the intelligent green development of ports and terminals with global counterparts. Within the transport strategic cooperation mechanism for Belt and Road countries, it has promoted the adoption of Chinese standards in key projects of transnational cooperation.

In the next step, MOT will expedite actions on the improvement, management innovation, and internationalization of standards, and put more efforts into AI, safety and resilience of infrastructure, and sustainable development, reducing the cost and improving the quality and efficiency of transport and logistics, and boosting the national strengths in transport and quality.



Zhao Chaofan

Deputy Director-General of Science and Technology Department, Ministry of Industry and Information Technology

The Ministry of Industry and Information Technology (MIIT) is the domestic counterpart of ITU in charge of relevant standardization work. Since 2021, MIIT has organized the development of over 500 ITU international standards, carried out the evaluation and analysis of international standards adoption, and systematically compared Chinese standards and international standards. So far, the conversion rate of international standards in the industry and information technology area and other areas such as steel and nonferrous metals has reached 87 percent and 90 percent respectively.

In the next step, MIIT will steadily advance the institutional opening up of standards, and focus on the work in the following aspects.

Firstly, promoting the domestic and international standards work in a coordinated way. Based on the domestic and international markets, MIIT will constantly improve the harmonization of national, sectoral, and international standards, and positively carry out the standardization work that is cross-sector, cross-realm, and cross-border. It will systematically advance standards development, and actively promote the application of international standards.

Secondly, steadily enhancing the contribution of international standards. MIIT will exert the role of bilateral and multilateral cooperation mechanisms, and vigorously maintain the international order of standardization. It will work with SAC to support domestic enterprises and institutions to participate in international standardization activities, develop international standards, and contribute proposals.

Thirdly, actively cultivating international industry and standards organizations. Drawing on existing experience, MIIT will support leading Chinese enterprises to absorb global resources, establish international industry and standards organizations, and steadily optimize the cooperation environment of industries.

Fourthly, constantly expanding the international talent team of standards. MIIT will provide professional standardization training, and select a batch of standardization talents from universities, research institutions, and key enterprises to work in international organizations.

编译/靳吉丽

(Translated and edited by Jin Jili based on the speeches at the event)

SHARING OF EXPERIENCE

Pudong's experience of standardization mechanism innovation

标准化机制创新的“浦东”经验

Lyu Xuecheng
Deputy Head of Pudong New Area People's Government, Shanghai City

The Pudong New Area has followed the standardization polices of the country, vigorously implemented the standardization strategies, and fulfilled the historical mission of "serving as a pioneer of reform & opening-up and innovative development".

Provide strong organizational leadership and incentive policies for standardization

First, we have issued the local regulation for standardization innovation to facilitate the market-oriented, international and digital development of standards. Six standards innovation alliances have been established to publish 8 joint enterprise standards in the fields such as AI, biological medicine, low carbon and environmental protection to meet the industrial development needs. Second, we have strengthened the organizational leadership, and effectively exerted the role of standardization coordination mechanism to boost economic growth. Third, we have optimized the policies and incentives. In the past three years, Pudong has invested more than 30 million yuan into

standardization projects to stimulate market vitality. Thirteen standardization experts have been selected as the first batch of talents of the Pearl Project in Pudong. We have also supported Shanghai Second Polytechnic University to set up the standardization major to cultivate professionals in this field.

Promote international communication and technical cooperation via standards

First, we have taken the advantages of international organizations to create an environment for innovative development. We have enhanced international cooperation and exchanges based on the TCs, SCs and WGs as well as mirror committees of ISO, IEC and other international standards organizations. Second, we have supported all kinds of entities to participate in the development and revision of international standards. In the past two years, experts from Pudong have participated in the development and revision of 19 international standards with leading efforts in areas such as AI, biological medicine, electronic information, and intelligent manufacturing. Besides, we have encouraged foreign-invested enterprises to participate in the development of Chinese standards. In 2023, 20 foreign-invested enterprises in Pudong participated in the development or revision of 34 national standards with leading efforts, facilitating the opening-up and harmonization of standards as well as technological advancement and industrial development. Third, we have strongly supported the international communication activities to jointly promote technological innovation and social progresses. The National Engineering Research Center of Digital Television (NERC-DTV) has organized to establish an international cooperation and research organization with 20 countries as members, and included more than 20 independent core technologies into standards, making these technologies involved in international standard certification.

Facilitate high-quality industrial development and improve people's life quality by standardization means

First, based on the strengths of three world-class industrial clusters in Pudong, 9 committees of association standards, 6 committees of local standards, and 7 new standards organizations have played a crucial role in accelerating the development of key technical standards to boost the high-quality industrial development. Pudong has organized to develop the first local standard and 26 supporting association standards for ship supply, achieving the goal of "one code for one product" for more than 50,000 shipborne products. Second, we have tried to use standards to build a modern city and improve people's lives. Pudong has continuously improved the public service standards system, and built national and municipal standardization pilot projects for the 15-minute service circle, delivering better public services to citizens. It has also published more than 40 district standards to effectively improve social governance and public services.

In the next step, the Pudong New Area will continue to implement the *National Standardization Development Outline*, and boost reform and innovation in the standards field, leading the technological innovation, opening-up and high-quality development with high standards.

Soft connectivity of standards boosts high-quality Belt and Road development

以标准软联通服务共建“一带一路”高质量发展

Zhang Xiaoping
Director General of Shaanxi Administration for Market Regulation

Shaanxi province serves as an important part in the Belt and Road cooperation, which is also at the forefront of China's westward opening up. It also shoulders the significant missions of implementing national strategies including the ecological protection and high-quality development of the Yellow River Basin and the Western Region Development Strategy.

In recent years, Shaanxi Administration for Market Regulation has used soft connectivity of standards to contribute to the Belt and Road Initiative and the reform and opening-up. As of now, Shaanxi has held the National Research Center for Metrology Testing of Belt and Road Countries and the National Research Center for Central Asian Standardization, set up two overseas standardization pilot projects, and built the Belt and Road Thinktank composed of nearly 200 experts. It has also carried out international exchange activities for over 20 times, cultivated more than 300 technical experts, and developed the foreign language versions of 14 provincial standards to be promoted and applied in Central Asia.

Improve three systems to stimulate vitality of opening-up and cooperation

First, we have improved the policy system by issuing the *Shaanxi Province's Action Plan on Standards Connectivity for the Belt and Road Cooperation*, and releasing the implementation document for the *National Standardization Development Outline*. Shaanxi has also set the special fund to support international standardization activities. Second, we have strengthened the fundamental supporting system by establishing the Central Asian Standardization Research Platform and the Shanghai Cooperation Organization Agricultural Standards Information Service Platform. These platforms can provide the inquiry services of more than 60,000 standards of 18 international standards organizations and 60 countries. The corpus of Chinese and Russian standardization has been completed, which collects more than 600 morphemes. Third, we have built the collaboration and promotion system. Shaanxi has closely cooperated with the Central Asia Standardization Research

Center in Xinjiang in the aspects of resources, research and personnel, and held the Belt and Road standard brand promotion activity during the World Expo for four consecutive years.

Explore three paths to expand new space for opening-up and cooperation

The first path is for modern agriculture innovation. We have promoted the construction of the Belt and Road International Agricultural Cooperation Standardization Demonstration Zone, and published the book, *The New Products and Technologies of Crops in the Belt and Road (The Volume of the Republic of Belarus)*. The second path is for people's well-being and happiness. Xi'an TCM Encephalopathy Hospital has worked with the Kazakhstan Medicine Association to develop the overseas TCM standards system. The third is for service brand. We have promoted the mutual recognition of standards for China-Europe Railway Express, and constructed Shaanxi's standardized single window for international trade, providing packages of services for more than 30,000 foreign trade enterprises.

Create a new mode for opening-up and cooperation in three aspects

In terms of key industrial cooperation, we have guided key companies such as LONGi, the world's leading solar technology company, to carry out mutual standards recognition in areas of photovoltaic product manufacturing and PTD equipment testing. In terms of major engineering projects, we have supported CNPC Tubular Goods Research Institute to develop 7 standards for petroleum tubular goods with Chinese-English or Chinese-Russian bilingual version, and 30 major pipeline engineering standards to support the major transnational pipeline engineering projects in Central Asia. In terms of technological innovation, we have established a national technical standards innovation base in Yangling district, Xianyang city, set up one industrial innovation alliance, and cultivated 5 teams for technical standards innovation.

So far, Shaanxi province has led the development of 72 international standards, and held 2 secretariats of ISO technical bodies and 30 mirror committees. It has also won 16 China Standards Innovation and Contribution Awards, 4 of which are the first prizes.

AI standards facilitate industrial innovation and development

人工智能标准促进行业创新发展

Liu Xiangang
Vice President of China Electronics Standardization Institute

Now, main countries and regions in the world have stepped up the layout of AI.

In the past two years, the United States has issued four policies closely related to AI standardization. It required the National Institute of Standards and Technology (NIST) to develop a global standards plan, and emphasized the planning and research of standards in advance, specifying that standards are a part of the AI technical development cycle.

Based on the work of CEN/CENELEC JTC 21, Europe mainly adopted the international standards developed by ISO/IEC JTC 1/SC 42, rather than developed its own standards. To implement the *EU Artificial Intelligence Act*, it planned to develop and publish standards on risk management, data quality and other aspects before April 2025.

China has released the documents such as the *Global Artificial Intelligence Governance Initiative*, and the *Guide for the Construction of National AI Industry Comprehensive Standardization System (2024)*, to lead the safe, trustworthy and high-quality development of AI technologies and industry.

As of now, ISO and IEC have jointly published ISO/IEC 42001, *AI management systems*, NIST has released the NIST-AI-600-1, *Artificial Intelligence Risk Management Framework: Generative Artificial Intelligence Profile*, and China is also conducting research on the AI management ability maturity model.

In terms of international standards, ISO/IEC JTC 1/SC 42 is responsible for developing the AI international standards. It has 5 working groups with Chinese experts serving as the convenor and secretary of WG 5. So far, Chinese experts have participated in the development of 8 AI international standards, among which 6 have been published.

In terms of Chinese standards, in 2018, SAC approved to set up the national working group for AI standardization. In March 2020, SAMR (SAC) approved to establish the national standardization subcommittee on AI (SAC/TC 28/SC 42). Remarkable progress has been made in this field.

In terms of standards system building, in 2024, the Ministry of Industry and Information Technology (MIIT), SAC, and other two ministries jointly issued the *Guide for the Construction of National AI Industry Comprehensive Standardization System (2024)*, which adds new technologies compared to the 2020 version, and sets the goal of participating in the development of 20 international standards. Up to now, 14 AI standards have been released, with 110 under development. In October 2023, the *Global Artificial Intelligence Governance Initiative* was put forward, which expounds on China's solutions for AI governance in the aspects of AI development, safety, and governance. To implement the Initiative, SAC/TC 260 on cybersecurity published the *AI Security Governance Framework* this year, proposing the security governance standards system composed of 6 parts.

In terms of specific security standards, the national standard, *Cybersecurity technology—Basic security requirements for generative artificial intelligence service*, which is in the stage of seeking for opinions, is expected to support more than 190 types of big models. The national standard draft on labeling method for content generated by artificial intelligence, which is also in the same stage, requires to identify the information generated by AI to prevent people's misunderstanding.

Association standards boost transformation and upgrading of automobile industry

以团体标准赋能汽车产业转型升级

Established in 1963, China Society of Automotive Engineers (China-SAE) started to formulate the sectoral technical specifications in 2006, taking the lead in exploring the association standards development in the automotive field. Now, nearly 10,000 automotive R&D engineers participate in the development and revision of association standards every year.

SAE has accumulated a lot of experience on how to use association standards to lead the upgrading of the automobile industry. The association standards work in SAE mainly focuses on the electrified, intelligent and network-connected transformation of automobile, and building the appropriate, forward-looking association standards system to lead the development of industrial technologies.

To address the demands of new technologies and products of electric cars and intelligent connected cars, as well as their industrialization, SAE has conducted the research on standards in key fields such as power battery, automotive chips, vehicle control and operating system, and intelligent driving, filling the gap in this area. At the same time, SAE has paid great attention to the fundamental and common technologies in the automobile industry, and adopted the latest technological results in time, promoting the upgrading of both standards and the industry.

By now, SAE has developed 346 association standards, among which 166 are related to electric cars and 71 to intelligent connected cars. More than 1,300 units in the industry have participated in the standards development, among which 107 are international or foreign companies. The automobile industry is a typically interdisciplinary and technology intensive industry, therefore 370 governmental departments also participated in the development of these standards, which are from other sectors in the upstream and downstream of the automobile industrial chain such as information & communication, materials and energy. The main developers of these association standards are vehicle companies and important research institutes.

Ding Yanci
Director of Standards Management, China Society of Automotive Engineers

Here are two cases demonstrating how standards and pilot projects lead the innovative development of the industry.

In 2017, SAE published the first association standard for the application of network connection in automobile. Based on the standard, SAE organized the global large-scale demonstration and application of the interconnectivity of intelligent connected automobiles in 2018, attracting the participation of more than 100 units in the sectors such as information communication, transport, map and code. As a result, the important cross-sectoral and synergic verification platform of "automotive intelligence and networked connection" has greatly speeded up the technological development and industrialization of intelligent connected automobiles.

With the popularization of electric cars, high-voltage wiring and connectors have been considerably applied. To find the solution of testing the shielding properties of high-voltage wiring of electric cars accurately, SAE has developed a brand new testing standard. After BYD used the standard to test high-voltage wiring, the testing cost reduced by 22 percent, the shielding performance improved by 30 percent, and the assembly process time reduced by nearly 60 percent. According to the requirements of the standard, more than 30 testing bodies of China Testing & Certification International Group have provided the third-party testing services for some 200 companies at home and abroad.

High standards facilitate energy transition and high-quality development of new power system

以高标准保障能源转型和新型电力系统全产业链高质量发展

Meng Qingqiang
Chief Engineer of State Grid Corporation of China

Guided by SAMR, China's standardization has achieved remarkable results. The State Grid Corporation of China steadily operates the power grid with the highest voltage level, the strongest energy resource allocation capacity, and the largest scale of new energy grid connection. The State Grid thoroughly implements the *National Standardization Development Outline*, and strengthens the top-level design to build a new pattern of the coordinated development of domestic and international standardization work, which demonstrates the role of standards in supporting the high-quality development of power grid.

Standards help support new energy consumption

New energy power generation has undergone rapid development in the past 20 years in China, which has been rendered the world's largest installed capacity. The State Grid has insisted on the coordinated development of scientific research, standards and industry, and realized 97 percent of new energy consumption, laying a solid foundation of green and sustainable development.

With the goals of carbon peak and neutrality, the development and utilization of new energy to a greater extent is an inevitable choice. The State Grid will improve the standards system of new energy grid connection, and actively lead the upgrading of the new energy industry, enhancing the strength and resilience of the industrial chain with high standards.

Standards ensure power security

With the large-scale application of the new energy DC transmission system, the security and stability of a power system is facing great challenges. The State Grid has mastered core technologies and established a complete standards system for power grid operation control, ensuring the safe and stable operation of the world's largest power system with high standards, and providing reliable and quality power supply for high-quality economic and social development.

Standards improve the quality of power supply

The State Grid continues to increase investment in research and standardization of energy infrastructure, and carries out intelligent transformation of power grid infrastructure and intelligent microgrid construction, supporting the rapid development of China's new energy vehicle industry.

Electricity meters are related to national economy, people's livelihood, and system security. Efforts are made to strengthen the innovation of technologies and standards for power measurement. So far, the State Grid has realized the reliable operation of 700 million smart meters in China, and supported the construction of 5 million ones in Saudi Arabia and 1.2 million ones in Indonesia, which has become another success of China's electric power standards to go global.

Standards serve the Belt and Road Initiative

The State Grid participates in international standardization activities. It has promoted the establishment of the first IEC technical committee and system committee, and held the secretariats of nine IEC technical bodies. Focusing on the advantageous areas and strategic emerging industrial directions, it has carried out the overall layout of international standardization work.

As of September, the State Grid has contributed to the development of 273 international standards with leading efforts, in which 122 ones have been issued, creating a good environment for sharing China's technologies, equipment, standards, and services in the field. It has promoted the overseas application of more than 600 Chinese standards, actively serving the Belt and Road Initiative.

To achieve the dual carbon goals, we must accelerate the construction of a new power system. The State Grid will work with all parties to promote the development of core key technologies and the application of innovation achievements of standards, to make greater contributions to the energy transition and the high-quality development of the whole industrial chain of the new power system.

编译/曹欣欣 方洛凡

(Translated and edited by Cao Xinxin and Fang Luofan based on the speeches at the event)

Upgrades and trade-ins achieve remarkable effect

大规模设备更新和消费品以旧换新取得显著成效

By Jin Jili
文/靳吉丽

China started a new round of large-scale equipment upgrades and trade-ins of consumer goods earlier this year, as part of its efforts to increase domestic demands and boost economic growth. It is a key decision of the Chinese government to promote the high-quality development.

So far, the program has been put in place for more than half a year with impressive results. This article looks into the guiding policy for upgrades and trade-ins, its supporting measures and remarkable effect.

Guiding policy

The Central Economic Working Conference 2023 held in last December required to promote the program of large-scale equipment upgrades and trade-ins of consumer goods by improving and using standards for technologies, energy consumption, emissions and others.

The fourth meeting of the Central Financial and Economic Affairs Commission in February emphasized that "accelerating product upgrades is an important measure for promoting the high-quality development, and it is necessary to encourage and start a new round of large-scale equipment upgrades and trade-ins of consumer goods".

In March, this year's *Report on the Work of the Government* came up with the policy of "encouraging upgrading and technological transformation of production and service equipment, and promoting consumer goods trade-in programs".

A few days later, the *Action Plan on Promoting Large-scale Equipment Upgrades and Trade-ins of Consumer Goods* was released by the State Council as a guiding document to make overall deployment. It puts forward four actions on equipment upgrades, trade-ins of consumer goods, recycling and reutilization, and improvement of standards, and specifies 20 key tasks in five aspects.

According to the Action Plan, by 2027, China will increase its investment in the equipment for industry, agriculture, construction, transportation, education, culture, tourism, healthcare and other fields by more than 25 percent compared with that in 2023.

The energy efficiency of major energy-using equipment in key industries will basically reach the level of energy conservation, the proportion of the capacity with environmental performance reaching A-level will significantly increase, and the rate of popularizing digital R&D and design tools as well as the numerical control rate of key processes in industrial enterprises above designated size will exceed 90 percent and 75 percent respectively.

As of 2027, the number of recycled scrapped cars will roughly double, and second-hand car transactions will increase by 45 percent compared with that in 2023, the Action Plan states. In addition, the recycling of waste household appliances will increase by 30 percent, and the proportion of recycled materials in the supply of resources will further increase.

After the Action Plan was released, a "1+N" policy system was orderly pushed forward, in which "1" indicates the Action Plan, and "N" represents the supporting implementation plans and tailored measures in various fields.

Supporting measures

In term of the improvement of standards, the *Action Plan on Promoting Large-scale Equipment Upgrades and Trade-ins of Consumer Goods Led by the Improvement of Standards* was issued by SAMR and other six ministries and commissions in March, which puts forward a list of nearly 300 national standards to be developed and revised by 2025.

In terms of equipment upgrades, the *Implementation Plan on Promoting Equipment Upgrades in Industrial Fields* was released by seven departments including the Ministry of Industry and Information Technology (MIIT) in late March.

The plan specifies the four actions on advanced equipment upgrades, digital transformation, green equipment promotion, and safety improvement to comprehensively drive the equipment upgrades and technological transformation in major industries. The implementation rules for equipment upgrades in eight areas such as industrial equipment, energy-using equipment and environmental infrastructure have been successively released later.

In terms of the trade-ins of consumer goods, the *Action Plan on Promoting the Trade-ins of Consumer Goods* was jointly issued by the Ministry of Commerce (MOC) and other 13 departments in April to organize the nationwide trade-in campaign for vehicles, household appliances, electric bicycles and

decoration of kitchens and bathrooms. So far, leading e-commerce platforms of China including JD.com and Tmall.com have fully participated in the trade-in program of household appliances.

In terms of large-scale recycling and reutilization, a special fund for waste electrical and electronic products has been established to provide subsidies to support the recycling. The supporting policy for government procurement of green products has been studied and developed to expand the coverage of policy implementation and facilitate the green transformation and upgrading of relevant industries.

An inter-ministerial conference system for large-scale equipment upgrades and trade-ins of consumer goods has been officially established to make concerted efforts for putting the Action Plan in place, which is led by the National Development and Reform Commission (NDRC) and participated by 21 departments, according to a press conference held in June. The policy system has been well established since then.

In July, approved by the State Council, the *Measures for Strengthening the Support of Large-scale Equipment Upgrades and Trade-ins of Consumer Goods* was jointly released by NDRC and the Ministry of Finance (MOF), which puts forward a series of supporting policies and tailored measures.

After months of efforts, supporting rules have been comprehensively introduced at national and local levels, the fund of treasury bonds has been allocated, and supporting policies have been launched in all respects.

Local governments across the nation have issued more than 140 implementation plans and supporting rules for the upgrades and trade-ins program, which define the work goals, operation procedures and division of responsibilities in related fields.

For example, a total of 20 regions and cities including Beijing, Tianjin and Shanghai have released the policies for encouraging consumers to replace cars, and 31 regions including Jiangsu, Zhejiang and Hubei provinces have provided new subsidies for replacing old household appliances with new ones.

An extra fund of 300 billion yuan was established via ultra-long special treasury bonds. Under the program, factories are encouraged to replace old machines with advanced new ones, and consumers can enjoy subsidies on automobiles, household appliances and others.

For instance, the subsidies for personal trade-ins of new energy vehicles and petrol vehicles have reached up to 20,000 yuan and 15,000 yuan respectively. Consumers can enjoy subsidies of no more than 2,000 yuan while purchasing household appliances.

Remarkable effect

With concerted efforts of various parties, the equipment upgrades and trade-ins of consumer goods have gradually achieved remarkable effect, which can be showed in five aspects.

Firstly, the investment growth has been vigorously driven. The policies of equipment upgrades have motivated business entities to update various equipment such as elevators. In the first eight months of this year, the investment in the purchase of equipment and tools increased by 16.8 percent, contributing 64.2 percent to the total investment growth, an increase of 3.5 percentage points over the previous seven months.

Secondly, the potential of consumption has been effectively released. The policies of trade-ins have been put in place in various regions, increasing the sales of key consumer goods significantly. In August, the sales of passenger vehicles in China reached more than 1,905,000, with a month-to-month increase of 10.8 percent; the sales of new energy vehicles reached more than 1,027,000, a month-to-moth growth of 17 percent. The sales of household appliances and audio and video products increased by 3.4 percent on a year-on-year basis.

Thirdly, the industrial development has been greatly promoted. Unlocking the potential of domestic demand, relevant policies have promoted the rapid growth of industries such as equipment manufacturing, vehicles and household appliances. In August, the added value of shipping and related equipment, urban railway transport equipment, and communication equipment increased by 23 percent, 17.1 percent, and 10.3 percent respectively on a year-on-year basis. The output of household washing machines, smart television, household refrigerators and other products realized rapid growth.

Fourthly, the people's well-being has been greatly improved. To improve the living condition of citizens, governments in various regions have upgraded old elevators in residential areas and environmental infrastructure. In the first eight months, the investment in production and supply industries of electricity, heat, gas and water closely related to urban construction increased by 23.5 percent.

Fifthly, the green transformation has been vigorously supported. Driven by the policy, the new energy vehicle industry has witnessed positive growth trend. In August, the output of new energy vehicles and charging piles increased by 30.5 percent and 97 percent respectively on a year-on-year basis. The retail sales of energy-saving household appliances have seen fast growth. Also, remarkable progresses have been made in the actions for recycling and reutilization and improvement of standards. From January to August, more than 5,900 intelligent facilities for recycling community waste were added, and 4.21 million scraped cars were recycled with a year-on-year growth of 42.4 percent.

In the next step, NDRC will work with related departments to fully put the policies and supporting measures in place, and strengthen the scheduling and supervision work, fund supervision and management, as well as policy publicity, helping more enterprises and people understand the policies and enjoy the benefits.

Standards facilitate effective upgrades and trade-ins

标准助推“两新”行动方案实施

By Jin Jili
文/靳吉丽

Exerting the leading role of standards is very important for achieving the high-quality development. In recent years, China has unceasingly improved the mandatory national standards for energy efficiency and safety of products, expedited the development and revision of standards in the areas of digital, intelligent, green and low-carbon development, and led the continuous technological upgrading of industrial and consumer goods.

Earlier this year, the national program of large-scale equipment upgrades and trade-ins of consumer goods, a significant push for stimulating consumption, was launched. Standards have greatly supported its implementation across the nation.

Big role of standards

In March, SAMR and other six ministries and commissions issued the *Action Plan on Promoting Large-scale Equipment Upgrades and Trade-ins of Consumer Goods Led by the Improvement of Standards*. It lays out a list of nearly 300 national standards to be developed and revised in 2024 and 2025, which provides the technical foundation for the program, and gives full play to the role of standards in promoting upgrades, expanding consumption, and smoothing circulation.

According to the Action Plan, 129 and 165 key national standards will be developed and revised in 2024 and 2025 respectively, to further improve the standards system. The consistency between national standards and international standards for consumer goods in key areas will reach over 96 percent.

The coordination between policies and standards will be enhanced to improve the quality of products and services, gradually increase the ratio of advanced capacity, and provide more high-quality and durable consumer goods. Thus, standards will contribute to the high-quality economic development, achieving significant results.

Among these national standards, more than 70 ones are mandatory. They will define mandatory requirements and specifications for technical indicators, energy consumption, energy efficiency and other aspects, playing a leading role in pushing forward the upgrades of related equipment and products.

The mandatory standards are expected to be effectively implemented to use more scientific and reasonable technical indicators in equipment and product manufacturing, helping realize the goal of regular upgrades.

Specific tasks

The Action Plan puts forward specific tasks in four aspects, according to Liu Hongsheng, Director-General of Standards Technical Management Department, SAMR, at a regular policy briefing of the State Council held on April 22.

Firstly, 113 national standards will be developed and revised to accelerate the upgrading of standards for energy consumption and emission technologies, and constantly lead equipment upgrades.

A batch of mandatory national standards on energy consumption limit and energy efficiency of household appliances and industrial equipment will be promptly developed and revised. The standards for the discharge of air, water and other pollutants will be optimized, the standards for carbon emission accounting and product carbon footprint will be improved, and the level of standards for CNC machine tools and agricultural and construction machinery will be raised. These efforts will secure the bottom line of standards for safety in production, firefighting, and industrial product safety, and help increase the ratio of advanced capacity.

Secondly, 115 national standards on product quality and safety will be developed and revised to facilitate the trade-in of consumer goods.

The upgrading of standards for electric vehicles, intelligent connected vehicles, and after-sale services of vehicles will be expedited. The development of standards for the traditional household appliance safety and new and elderly-oriented household appliances will be enhanced. The standards for the interconnectivity of intelligent household appliances and the quality grading of household products will be developed and revised. The standards for formaldehyde emission of wood-based panels and other decorative materials will be stricter. More standards for high-end electronic products, civilian drones and other fields will be developed. These efforts will meet people's demands for improving the life quality.

Thirdly, 66 national standards will be developed and revised to increase the supply of standards for recycling and reutilization, and vigorously promote the industrial circulation.

The supply of standards for the green design of household appliances, furniture, electronic products, wind power, photovoltaic power and others will be increased. The standards for information clearing methods of second-hand electronic product transactions, classification of availability of second-hand electronic and electrical products, and valuation of second-hand cars will be released. The standards for recycling, sorting, disassembly, and reutilization of key products will be rapidly improved, and the standards and policies of renewable resource import will be perfected. These efforts will help form the closed loop of resource utilization.

Fourthly, the supporting measures for standards implementation will be improved, and concerted efforts will be made to promote the practical use of standards.

The coordination of policies and measures on standards and financial support will be strengthened. Green product certification and high-end quality certification will be vigorously

boosted, increasing the confidence of consumers in product quality. In terms of key consumer goods such as electric vehicles, electronic appliances, and children's products, more efforts will be put into defect investigations and recalls. The catalogue of quality and safety supervision of consumer goods will be established, quality supervision and enforcement will be strengthened, and standards implementation will be enhanced, in order to constantly improve the quality and safety of products.

Progresses

So far, the proposals of all above-mentioned national standards have been approved, and 70 standards have been released, covering energy consumption, energy efficiency, pollutant discharge, safe production, electric vehicles, household appliances, civilian drones and other aspects.

In terms of consumer goods, 30 national standards have been released, which will hold the bottom line of safety, improve the level of quality, accelerate the upgrading of traditional consumption, and constantly stimulate the potential of domestic needs.

For example, in the field of household appliances, the mandatory national standard GB 44246-2024, *Household and similar electrical appliances, electrical parts of sporting goods and electric toys—Safety technical specification*, and 103 supporting voluntary national standards have comprehensively specified the safety requirements and verification methods of household appliances, achieving the 100 percent of consistency with international standards.

In the field of furniture, nine national standards have been released, including three mandatory national standards, GB 28007-2024, *Technical specifications for the safety of infants' and children's furniture*, GB 18584-2024, *Limit of harmful substances of furniture*, and GB 28008-2024, *Technical specification for the safety of furniture structure*, and six voluntary national standards such as GB 28008-2024, *Technical specification for the safety of furniture structure*. As of now, there are over 110 existing national standards in the furniture field, which will play a crucial role in promoting the upgrading of the furniture industry and facilitating the consumption of furniture products.

Besides, 12 national standards on reutilization including GB/T 35603-2024, *Green product assessment—Sanitary wares*, and GB/T 44132-2024, *Recovery of traction battery used in electric vehicle—General requirements*, have been released to drive green production and lead green consumption.

Since the Action Plan was released, SAMR has worked closely with related departments of the State Council to establish a detailed work schedule, optimize the work procedures, make work assignments, and evaluate and report the progresses on a regular basis.

However, the vitality of standards is proved in implementation. After the successive release of standards, SAMR will make efforts to strengthen the publicity and implementation of standards, and enhance the overall planning and layout of standards and related policies, so as to better facilitate the effective upgrades and trade-ins.

New IEC White Paper on benefits of digital twins for energy sector

Deploying renewables for electricity generation is essential to meeting the world's climate action targets. By 2030, renewable power is expected to surpass 10 terawatts globally, nearly quadrupling the current capacity.

This projection also brings the current limitations of the existing infrastructure into sharp focus. In coming decades, grid networks need to be more robust and flexible. Modernizing the current infrastructure and expanding the transmission systems are therefore on government priority lists to enable their clean energy transition efforts.

Digital twin technologies could prove to be the key to accelerating the quest for more resilient, efficient, and sustainable power systems.

What benefits can digital twins bring to the energy sector?

Effective use of digital twin technologies can help grid planners and grid operators manage their systems efficiently, helping them overcome infrastructural challenges of dealing with load growth, variability of renewable energy, and extreme weather.

Digital twins help utility companies improve planning and specifications, operational efficiency and personnel training. They offer a way to stress-test important assets and systems in preparation for a wide range of scenarios, including severe weather episodes.

They can also help industry meet net-zero goals and adapt to climate change by helping planners monitor and identify design alternatives to reduce carbon emissions.

The technology will be even more important as we grow into a more connected society, with different sectors having to work closely with each other to leverage synergies.

New IEC White Paper analyzes the potential opportunities

The new IEC White Paper will revolutionize the energy sector focuses on the benefits digital twins can bring. Addressing challenges in such an implementation, the paper recommends among other solutions, the adoption of core standards for describing underlying data models, and to create secure open data exchange policies.

The paper provides recommendations for tangible actions that government agencies, standards bodies, and digital twin stakeholders can take to unlock the potential of digital twin technologies and their revolutionary impact on the energy sector of the future.

(Source: IEC)

New global agreements on AI, metaverse and sustainability at key ITU standards conference

Members of the ITU have agreed on priorities for standards and capacity development in areas from AI and the metaverse to sustainable digital transformation at the World Telecommunication Standardization Assembly (WTSA-24) which closed on October 24 in New Delhi, India.

The conference reviewed and modified existing guidance and agreed eight new resolutions reinforcing the organization's standards work to meet fast-evolving global needs.

"The outcomes of WTSA-24 remind us that humanity has one Earth, one human family and one shared digital future," said ITU Secretary-General Doreen Bogdan-Martin. "Together with the global standards community, ITU is committed to ensuring that our digital future is technically strong, with innovation, inclusion and sustainability at its core."

Accelerated support for high-priority standards work

The new WTSA Resolutions all emphasize support for developing countries. "ITU standards and capacity development must create the foundation for the digital future we want," said Seizo Onoe, Director of the ITU Telecommunication Standardization Bureau. "My top priorities are impactful standards and the strong industry engagement and support to developing countries that create this impact. The decisions of WTSA highlight ITU membership's commitment to these goals."

Planning the way forward, together

WTSA is the governing conference for ITU's standardization work.

The conference set out the strategy, structure and working methods of ITU's standardization arm (ITU-T). The conference also appointed the new leadership teams of standardization expert groups and established their mandates and scope of work for the next four years.

The opening week also featured the first International AI Standards Summit, organized by the leading developers of international standards, ITU, ISO, and IEC. The new summit finished with AI for Good Impact India, kicking off a new series of regional AI for Good events.

Other high-profile special events during WTSA-24 raised awareness in India and globally about how ITU standards can ensure new technologies are a force for good.

(Source: ITU)

Keeping planes safe: the role of IECQ in the aerospace industry

December 5, online

The avionics industry relies on the quality, reliability, and safety of electronic components. This is critically important given avionics failures can quickly become disastrous. Therefore, assurance of meeting stringent criteria for safety and quality becomes paramount.

IECQ, the IEC Quality Assessment System, provides the necessary certification of compliance for electronic components that apply to critical industry sectors, including aerospace.

As part of the world of IEC CA services webinar series, the IEC Academy offers this webinar, organized just two days before International Civil Aviation Day, and dedicated to presenting the significance of IECQ certification in the field of avionics.

Panellists will discuss the standards and certification process related to IECQ services for the avionics industry, demonstrating how they reduce the risk of component failure, improve operational safety, and ensure aviation safety and efficiency.

For more information on the event website: **https://www.iec.ch/academy/webinars/keeping-planes-safe-role-iecq-aerospace-industry**

ETSI-ITU Symposium on ICT Sustainability: Standards Driving Environmental Innovation

December 11-12, Geneva, Switzerland

The symposium will bring together industry leaders, policymakers, researchers and stakeholders to explore the crucial role of standards in promoting sustainable ICT practices. Standards guide the development of technologies that minimize environmental impact and enhance energy efficiency.

Through the circular design of ICT products, networks and services, standards ensure environmentally friendly technology. Lifecycle assessments consider all stages from creation to disposal, helping to assess, analyze and reduce the overall environmental footprint.

Adapting ICT products, networks and services to climate change ensures resilience, while standards for environmental conditions guarantee efficient and safe operation. Furthermore, ICT solutions enable the environmental impact in other sectors to be reduced.

For more information on the event website: **https://www.itu.int/en/ITU-T/Workshops-and-Seminars/2024/1211/Pages/default.aspx**

Webinar "Introduction to CEN-CLC/JTC 23—Horizontal Topics for PPE"

January 16, 2025, online

As a new joint technical committee, the CEN-CLC/JTC 23 is aiming to introduce the purpose of the committee to a wider audience of experts. The established Working Groups will introduce and present their ideas for work items and will inform prospective experts so that they can participate in the Working Groups.

Participants will have the opportunity to ask questions and give feedback on the proposed topics. PPE topics to be covered will include ensembles, comfort, sustainability, ergonomics, inclusiveness, SMART, durability, fire, and rescue.

For more information on the event website: **https://www.cencenelec.eu/news-and-events/events/2024/2025-01-16-webinar-jtc23**

AI Event: Applying the AI Management System Standard for Practical Success

February 25, 2025, Brisbane, Australia

The AI Management System Standard, known as AS ISO/IEC 42001:2023, helps to guide organizations in responsibly managing their AI systems. A key foundation of the standard is continuous improvement—Plan-Do-Check-Act.

Hosted by Standards Australia and supported by the National AI Centre, this event will explore the importance of the continuous improvement methodology in managing AI opportunities and risks. Attendees will gain insight into why compliance and rules-based approaches are no longer fit for purpose against the evolving challenges and opportunities with AI.

This event is designed for SMEs and corporates seeking to operationalize AI applications and systems to enhance business performance in a responsible and ethical manner.

For more information on the event website: **https://www.standards.org.au/engagement-events/events/ai-event-applying-the-ai-management-system-standard-for-practical-success-brisbane**

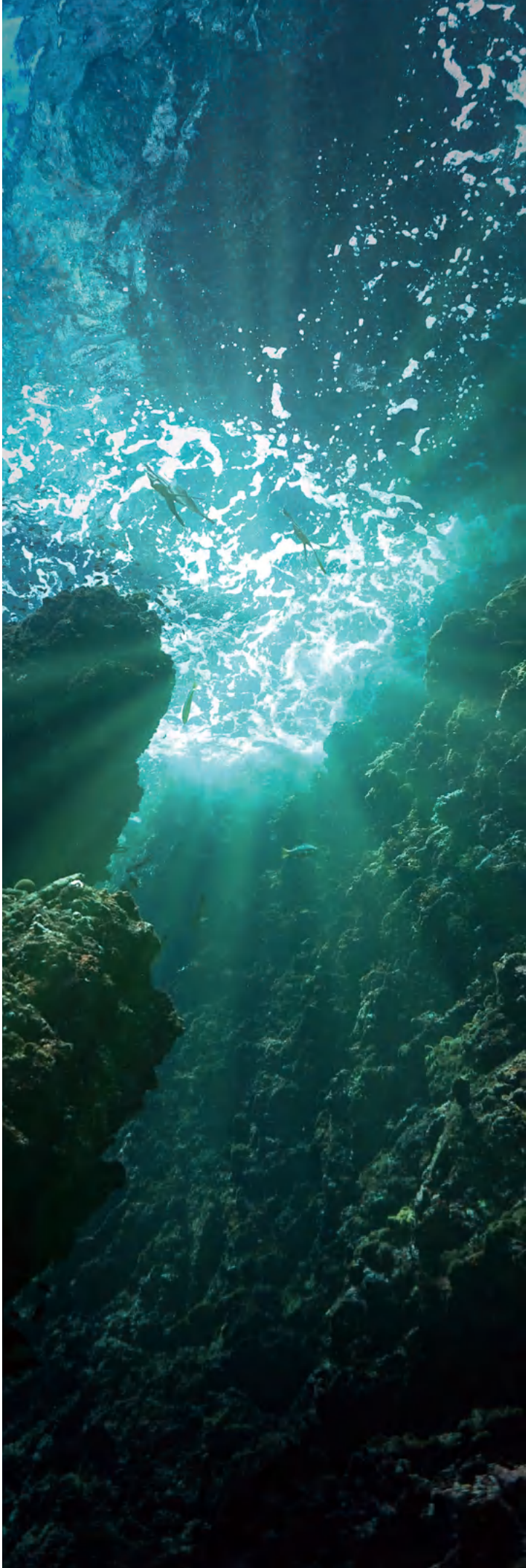
Breaking boundaries for sustainable and inclusive growth

–ISO Annual Meeting 2024

打破边界 共建可持续和包容的世界

——2024年国际标准化组织年度大会召开

By Fang Luofan
文/方洛凡



The 46th Annual Meeting of ISO was held in Cartagena, Colombia. The event was attended by more than 700 representatives of ISO members, as well as international and regional organizations, with more than 2,200 representatives participating in the series seminars virtually.

The attendees listened to the report on the work of ISO in 2024, reviewed and approved the membership fees in 2025, and elected the next ISO President and board members. The conference focused on global cooperation, sustainable development, and inclusivity in international standardization. The theme of "Breaking boundaries" reflects the necessity to overcome challenges that transcend borders, such as climate change, biodiversity loss, and technological advancements. And fruitful achievements have been made during the event.

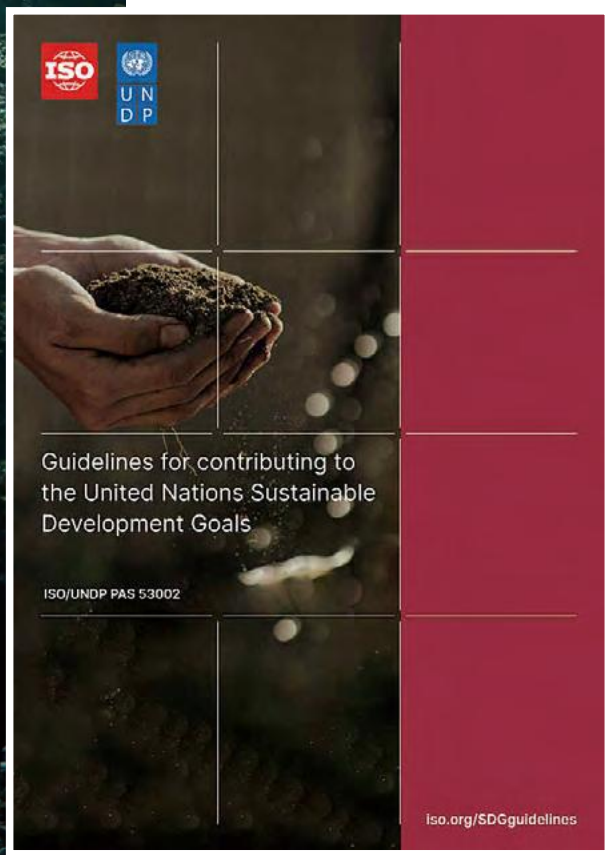
ISO and UNDP released guidelines for SDGs

ISO and the UNDP launched the first-ever international guidelines designed to help businesses and organizations advance their contributions to the UN Sustainable Development Goals (SDGs). ISO/UNDP PAS 53002:2024, *Guidelines for contributing to the United Nations Sustainable Development Goals (SDGs),* provides organizations with a unified approach to systematically manage and optimize their impact on sustainable development across various operational aspects.

World Standards Forum to be held

Launched by ISO President Sung Hwan Cho, ISO, with the support of IEC and ITU, will hold the first World Standards Forum in December 2025 in Seoul, South Korea.

The World Standards Forum is a new and unique international event that promotes high-level dialogue among decision makers from industry, government and standards community, to strengthen the strategic role of standards in economy and society. At this forum, participants can know about first-hand strategic insights and get external perspectives to strengthen and develop the international standards ecosystem. They can raise awareness of the strategic significance of international standards, especially in facilitating trade and addressing increasingly complex global challenges.



The two-day forum will focus on the major forward-looking market needs of international standards such as artificial intelligence, the frontier of technology, and the relationship between people and society. ISO also welcomes members to nominate senior business leaders and policy makers to contribute more to the initiative.

LDE Leadership Award announced

The 2024 Lawrence Eicher Leadership Award was given to ISO/TC 309, *Governance of organizations*. The award recognizes the significant contribution and excellence of ISO technical committees or sub-committees to the development of ISO international standards, encourages innovative and collaborative work, rewards the implementation of innovative and efficient processes and solutions, and ensures the provision of excellent services.

HIGHLIGHTS OF SPEECHES

Sung Hwan Cho
ISO President

This week promises a rich variety of thought-provoking sessions, covering emerging trends, global challenges and future opportunities. Inspiring speakers from across business, government, public, and private sectors spark passionate discussions and debates. I hope that like me, you are also excited at the prospect of encountering fresh ideas, opinions, and perspectives, and are ready to consider the role of standards in achieving the 2030 Agenda for Sustainable Development.

In today's fragmented global landscape, we face many challenges such as climate change, biodiversity loss, and the rise of emerging technologies. Addressing these issues calls for different perspectives and an international approach. For this reason, the theme of breaking boundaries is woven throughout this year's annual meeting program. It reminds us to defy conventions and harness diverse viewpoints for lasting transformative change. Sustainable and inclusive economic growth is critical for both developing and developed countries international standards, all the wheels of seamless global trade. They help drive economic progress, adjust energy transition, and environmental action to strengthen communities and build a more inclusive and resilient world.

Emerging technologies such as AI present great risks, but also tremendous opportunities to put positively transform society in order that we all enjoy the huge potential rewards. It is imperative that we develop standards to ensure the responsible development by focusing on people and planning. International standards create lasting value throughout human-centric solutions that build a better future. All our members are striving for innovation, quality, and sustainability.

It is a fast-paced world. Being reactive is not an option. We must take the reins and engage not only with the standards community, but also beyond to develop international standards that address the growing needs of society.

We can harness the power of international standards to bring about this change to help shape a more sustainable, equitable, and inclusive world and future without limits. Let's start the journey together right from this moment.

This year we have record participation in our meeting, with nearly 700 people participating in person and more than 10,000 people joining online.

The world is changing at an incredible pace. If we want to remain relevant, we need to challenge the status quo and the business-as-usual approach. We need to embrace diversity, new approaches and innovation, and break boundaries. It's not a place to arrive. It's a mindset. It's an attitude. It's a way to travel.

All of that are connected by the concept of breaking boundaries with focus on sustainability, AI, and human capital, because we want to remain a human-centric organization. The talents are combined to make people's life easier, safer, and better.

Sergio Mujica
ISO Secretary-General

We are facing challenges we have never seen before. For instance, the effects of climate change are shaking the foundations of our daily life and economies. Climate change is just one issue of a larger web of challenges, including rising inequality and global pandemic. Touching every corner of our world, this crisis has made one thing clear–We are interconnected than ever before.

Over 4 trillion dollars is needed every year between now and 2030, which is actually only 1% of global wealth. Merely 1% of global wealth can help reduce inequality, manage climate crisis, eliminate poverty, ensure good health, and realize gender equality. We are creating a common language for sustainability that speaks directly to investors, businesses, and financial institutions. ISO/UNDP PAS 53002:2024 lays the groundwork for increased private capital flowing towards sustainable projects and initiatives.

Aligning with the SDGs is not just the right thing to do. It is the necessary thing to do. If we want a world where business can flourish, sustainability must be at the core of operations as we move forward. We are trying to create a world where sustainability and long-term profitability go hand in hand, and it will bring greater prosperity for all.

Marcos Athias Neto
Assistant Secretary-General, Assistant Administrator and Director, Bureau for Policy and Programme Support, the United Nations Development Programme (UNDP)

This is a future where technology drives economic growth and improves lives. It is a future we call the all-electric and connected society to achieve this vision. We are working closely with ISO and global network of experts. Together, we are developing international standards and ensuring their correct implementation through conformity assessment.

IEC and ISO joint technical committees are at the forefront of a wide range of technologies, such as AI, cybersecurity, digital media, and quantum technologies. Our collaboration also includes conformity assessment, and we participate in the development of the ISO/IEC 17000 series standards on conformity assessment. Conformity assessment ensures that standards are implemented consistently, providing assurance, safety, interoperability and efficiency.

Another area of collaboration between IEC and ISO is low emission hydrogen. We held an international hydrogen conference in partnership with ISO and the UN. Our goal was to raise awareness of the role of hydrogen in clean energy transition. As the conversation around scaling the hydrogen economy grows within the energy infrastructure, IEC and ISO will play a crucial role in navigating the challenges of clean hydrogen production.

We will take forward the conversation on green hydrogen and clean energy transition at the upcoming COP29. We look forward to our continued collaboration in fostering a safe and sustainable world.

Jo Cops
IEC President

We have seen growing recognition in recent years worldwide of how much our economies and societies depend on technical standards. Our recent AI for Good Global Summit provided direct proof that technical standards and capacity building can make contribution to global AI governance. ITU, IEC, and ISO are united in our key message to all AI stakeholders at the summit. We highlighted our commitment to developing coordinated and comprehensive standards.

Every breakthrough in science and technology comes with transformation. Our work must continue helping everyone to navigate new frontiers with confidence and certainty. That is what our standard process is built for. ITU's processes ensure that all participants' voices are heard and that every step is determined by consensus.

I would like to highlight my deepest thanks to all the experts that support our work, especially standardization experts from ITU, ISO, and IEC. I hope that we will work together to ensure that our standards meet the high expectation of the fast-growing range of stakeholders.

Seizo Onoe
ITU-T Director

Beyond glass ceilings:
the road to women's entrepreneurship
超越玻璃天花板：女性的创业之路

This session focused on the challenges faced by women entrepreneurs. It drew the following conclusions: women-led businesses are crucial for economic growth and equity; digital solutions play a pivotal role in empowering women entrepreneurs; international standards provide benchmarks to overcome barriers for women and scale operations.

Noelia Garcia Nebra, Head of Sustainability at ISO, moderated the event, which was attended by Cynthia Umutoniwabo, Co-founder & CEO of Loopa, Federico Restrepo, Co-founder of Impact Hub Colombia, Zhang Yan, Director of International Cooperation Department, China National Institute of Standardization, and Larisa Jasbon Fadul, Innovation Management Consultant of IXL Center.

Noelia Garcia Nebra: Women businesses contribute trillions to the global economy. However, they continue to encounter various problems such as limited funding or persistent gender biases. Could you share with us your journey as an entrepreneur in Rwanda?

Cynthia Umutoniwabo: When I move back to Rwanda in 2019 with a cancer diagnosis, I had big aspiration to do something for myself, other women and my kids.

I joined a special program dedicated for women to acquire skills for software engineering. It helped me to join another program that is meant to equip entrepreneurs not only with the skills, but also the funding to start business. Last year we won the biggest tech competition in Rwanda, which has propelled us into where we are at the moment.

I think one of the main things any entrepreneur would face is different challenges. What we do is to transform organic waste into organic fertilizers. We know we are doing the right thing, and that keeps us going. I think we should maintain the growing mindset and consider problems as opportunities to cope with challenges.

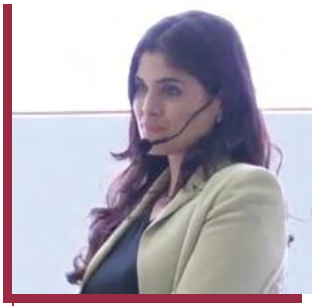
Cynthia Umutoniwabo
Co-founder & CEO of Loopa

What does it mean to be a woman entrepreneur today? How do you think we have evolved in that space?

Larisa Jasbon Fadul: Being a woman entrepreneur means driving business and creating jobs, driving innovation and market impact, as well as driving social change, sustainability change, and environmental change. I want to share three stories based on my experience working with women entrepreneurs.

A woman CEO from Dubai, who was a very low-paid worker in a bakery, had the desire to her own business. She just got a loan from a friend and started selling cupcakes and desserts. In a 3-year period, she was able to use technology to standardize processes and build up production facility of 90 workers, 70% of which were women.

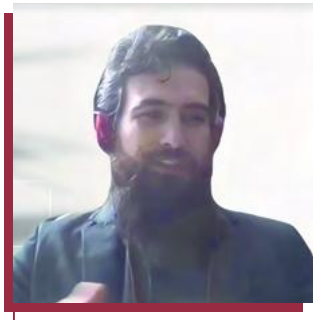
The second story is from an entrepreneurial group of women from Colombia, but live in Spain. They saw that the exchange rate from Colombian pesos to euros was really high. Every time their parents or family members sent money to them, they were charged high transaction fees. And when they wanted to send back money, they also had those transaction fees. It is a problem not only for them, but for many Colombians that are working or living in Spain. They decided to go into financial technology and create a platform for easier and seamless transactions between Colombia and Spain. I was fortunate to be one of their mentors in a startup program, and they won one of the highest startup awards in Spain.



Larisa Jasbon Fadul
Innovation Management Consultant of IXL Center

The third example of entrepreneurial women is Jennifer Colpas, an entrepreneur in Colombia. She is a member of the Global Shaper and the One Young World. Through these networks, she was able to build an advisory board of top people worldwide that could help her business grow. She is providing basic sanitation facility, energy, and water to rural areas in Colombia, and has impacted more than 21,000 people.

Besides the drive, desire and vision, what they have in common is the ability to use technology to break the barriers and use available networks and platforms of others. So I think that woman entrepreneurship is breaking the glass ceiling. Even though there are still biases and stereotypes, it is definitely a great time for women.



Federico Restrepo
Co-Founder of Impact Hub Colombia

When we think about women-led business, we always think about micro businesses. Actually many women are driving social innovative businesses that bring a lot to the community. How is the landscape around woman entrepreneurship in Latin America?

Federico Restrepo: There are a lot of social and structural barriers that have stopped us performing certain things. The amount of money that goes to women entrepreneurship is around 10% of venture capital funding, which is very low. That is because our perception creates barriers for women.

Why do we need to encourage more women to become an entrepreneur? Because if you have more women entrepreneurs, you will have more output and better economy. My first initiative in the World Bank was to work with big corporations to build more inclusive value chains. We managed to help women start their own businesses and become providers of big corporations. Therefore, big companies need to change their processes to make up for the structural barriers for women.

Even from the institutions that promote entrepreneurship, we always consider woman entrepreneurship as survival or informal entrepreneurship, because they are based on food or fashion. But when you think about it, any type or scale of business is just a matter of mindset. So part of the work has been done in Latin America is how we make more women have access to technology, which means they can expand their business. In fact, it is more beneficial for humanity to have more women entrepreneurs. We are also generating more economic empowerment there. Many benefits can be achieved and more women are starting their own businesses, when institutions align to taking down the barriers.

What is the role that men can play in supporting women entrepreneurs, and how can you be part of the solution of creating a more inclusive ecosystem?

Federico Restrepo: Consider you have a company and other business partners can figure out your value chain and providers. How many of those providers are women-owned businesses? How many of your own employees are women? If those employees are women, are they earning the same salaries and are you giving the same opportunities that men have? All of those things are things that we need to learn and act upon.

When we talk about women entrepreneurship, we don't consider it as something that generates economic value, but as CSR or social responsibility. I think we need to transform the story and switch it into how this is generating economic value for everyone, because no business man or woman can thrive in a society that is dying. If the 50% of people are on the strain, it is going to be very hard for humanity to take the next steps into history.

What is the current state of women entrepreneurship in China? And what unique challenges and opportunities women face there?

Zhang Yan
Director of International Cooperation Department, CNIS

Zhang Yan: Women are vital builders of the nation. China has formulated and implemented relevant laws and regulations to fully safeguard women's economic rights and interests, particularly their right to equal employment and equal pay, resolving to eliminate gender discrimination in employment. By enacting and enforcing laws and regulations, China has also bestowed women the equal right to education, to continue improve women's educational level, with the majority of them having access to quality education.

Since the process of reform and opening up in 1978, women's participation in economic and social development has been significantly strengthened across various fields. The first female Chinese Nobel Prize laureate Tu Youyou, who has made remarkable contributions to the research on traditional Chinese medicines against malaria, stands out as an extraordinary representative of the Chinese women.

The All-China Women's Federation plays a key role in promoting gender equality, safeguarding women's rights and interests, and promoting the all-round development of women. Through education, legal aid, policy advocacy, and various social services, the women's federations at all levels provide a wide range of support and opportunities for women, and strive to raise social awareness of gender equality for a more fair and inclusive society.

Anji County Women's Federation provides training for women in villages to increase income by various means.

Motivating females especially in rural areas

China has a large population, and the rural population reaches 510 million, 48% of which is female. Therefore, enhancing rural women's capabilities and promoting their employment is of great significance to the Chinese government.

The Chinese government has issued a series of favorable policies such as providing training for new industries and business models, supporting women's participation in traditional handicraft industries, encouraging female scientific and technological talents engaging in technology entrepreneurship, fostering rural commerce for women to start up businesses, and advocating women's active engagement in rural revitalization, to fully leverage their potential in industrial development and modernization of agriculture and rural areas.

The government also encourages and supports women to establish new agricultural business entities and agricultural social service organizations through platforms such as rural entrepreneurship and innovation parks (bases). Also, efforts are made to train highly qualified female farmers to become leaders of agricultural technology associations or skilled managers for modern agriculture.

In 2018, the Chinese government issued the *National Rural Revitalization Strategic Plan (2018-2022)*. Accelerating comprehensive rural revitalization and the modernization of agriculture and rural areas is fundamental to comprehensively advance Chinese modernization. It is also a commitment to realize the UN SDGs.

Standards empower rural women

Standards are a robust support for the modernization of the national governance system and capability.

Anji county, located in the northwest of Zhejiang province, has done an excellent job in the construction of beautiful villages, and was visited by both the former and the current ISO Secretary-General. In 2015, guided by SAC and other ministries, the Anji County People's Government developed the national standard GB/T 32000-2015, *Guidelines for the construction of beautiful villages*. The construction of beautiful villages is inseparable from the construction of beautiful courtyards. Therefore, under the guidance of the All-China Women's Federation, the Anji County Women's Federation took the lead in developing GB/T 43561-2023, *Guidelines for the construction of beautiful rural courtyard*, the first national standard of its kind.

The development process of GB/T 43561-2023 fully considers the role of women. Firstly, women are indispensable in the construction of beautiful rural courtyards. Secondly, women have recognized the role of standardization in promoting their careers. Thirdly, women have the capability to carry out standardization work independently.

Actions have been made to further encourage women to engage in the rural revitalization of China. GB/T 43561-2023 encourages rural women to develop characteristic home accommodations, leisure farms, agritourism, and small picking gardens, and use the courtyard to develop e-commerce and live-streaming sales. For example, approximately 110,000 applications have been submitted to participate in the construction of beautiful courtyards in Anji, and the women have become "the most popular hostesses". Their courtyards have attracted thousands of followers on social media, who later become their customers. More than 70% of the county's women-owned homestays are located in beautiful courtyard demonstration villages, with an average annual net income of about 300,000 yuan (42,090 dollars).

We are committed to fostering a culture of gender equality, benefiting everyone and contributing to sustainable, people-centered development. We are very happy to share the experience and stories with friends from all the world and jointly address the challenges via standard-related policies and actions. Invest in women and empower them, you will get much return in the future!

采写/方洛凡

(Written and edited by Fang Luofan based on the speeches in the session)

*The materials and photos of the Anji case are provided by Anji County Women's Federation.

Trust in AI: How to build global confidence

对人工智能的信任: 如何建立全球信心

During the ISO Annual Meeting, the session themed on "Trust in AI: How to build global confidence" was held on September 10. Wael Diab, Chair of ISO/IEC JTC 1/SC 42 on AI, Heather West, Senior Director of Cybersecurity & Privacy Services at U.S. based law firm Venable and coordinator of the alliance for trust in AI, and Wan Sie Lee, Director of Trusted AI & Data at Singapore's Infocomm Media Development Authority (IMDA) were invited as guests to discuss how to prevent potential risks brought by the rapid development of AI technologies, and how standards can play a crucial role in the process to build global confidence on AI. The meeting took place in hybrid forms, attracting participants from all over the world both on site and online.

Heather West
Senior Director of Cybersecurity & Privacy Services, Venable

There are a lot of regulations on AI, such as the EU Act and ministerial guidance from the G7. What's your perspective on these guidance, regulations and legislation? Is there is a consensus on how we're approaching it overall?

Heather West: There is a huge amount of regulation and guidance on AI. Governments around the world, organizations like ISO and individual companies are all working quickly to understand the best way to use these tools. When these emerging technologies move so quickly, not being reactive is important. I think there is actually a surprising amount of consensus. If you look at how different countries, organizations and standards bodies are thinking about these things, all of key themes come through its responsibility, ethics, alignment, safety, and security.

Wan Sie Lee
Director, Trusted AI & Data, IMDA

IMDA has been working tirelessly on building a trusted AI ecosystem in Singapore, how does that benefit businesses? Is it important to have a consistent approach?

Wan Sie Lee: It is very important in terms of how we are supporting the businesses by building the trustworthy and safe AI ecosystem. No matter regulations or standards, these are all different levers that we can actually use to achieve a trusted ecosystem.

Businesses worry about risk, consumers worry about how to make sure they get access to the right opportunities and the outcomes that they get from AI are

fair and transparent. We want to make sure that people do not lose their jobs as a result. We have also to address concerns around misinformation. There are all different issues that need to be addressed, it requires not only regulations but also standards.

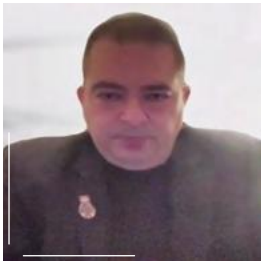
We work with standards bodies, and emphasize building capacity in the industry. That's why we developed toolkits like the AI Verify to help build capacity. It is a framework for organizations to look through to see how they've achieved trustworthy AI test systems.

Is it possible to find a balance between supporting innovation, making business friendly and protecting users through AI governance?

Wan Sie Lee: We have to do that. I think finding the balance is about creating benefits for businesses and consumers so that they can actually see that AI does improve their lives. We also should make sure we put in place a safeguard. Then, businesses will get more benefits, people are more familiar and prepared to use AI, companies will be more prepared to address some risks of AI because it's good for the business.

Companies and organizations need guidance, because it can provide a lot of clarity and direction right for them. So we have published guidelines and frameworks. We also work closely with standards bodies to refine some of these into much more detail.

While ISO recently launched the AI management system standard, ISO/IEC 42001, how challenging is it to address something which is evolving and changing entire industries on a global scale?

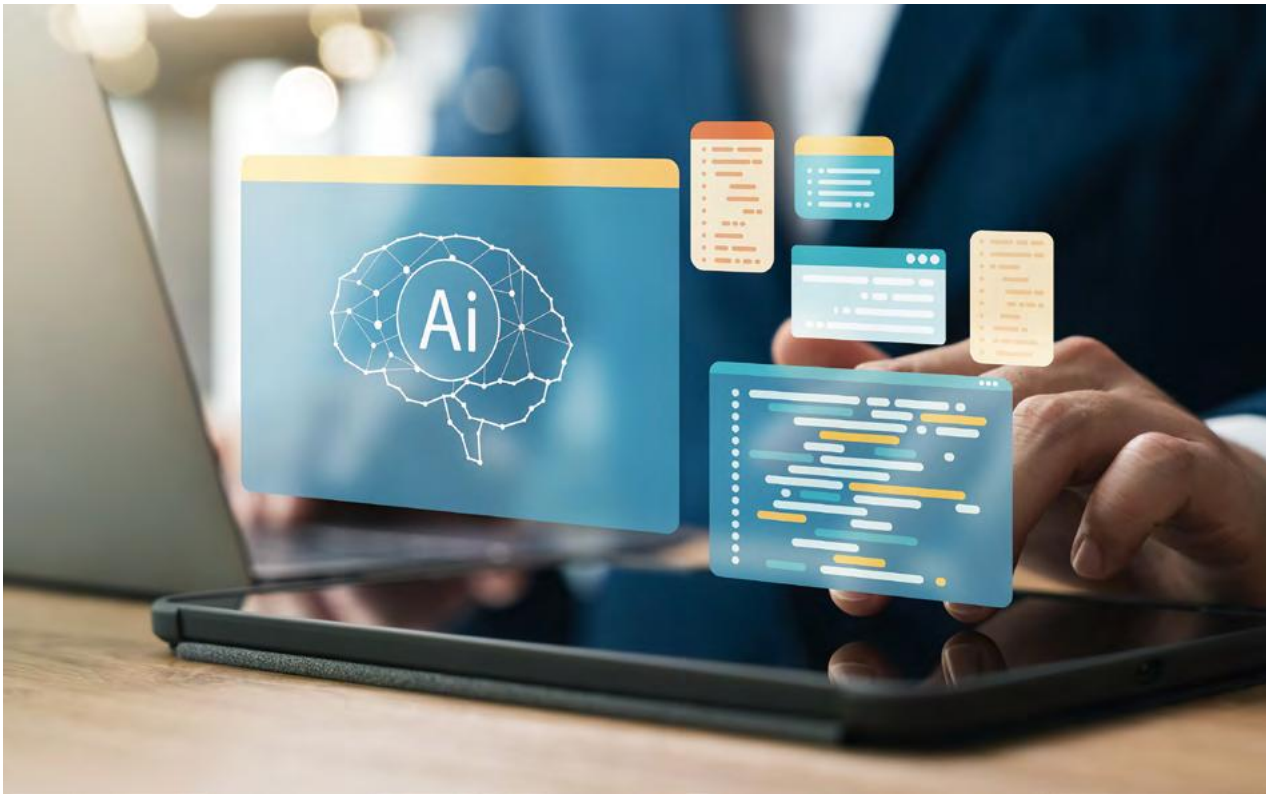


Wael Diab
Chair of ISO/IEC JTC 1/SC 42 on AI

Wael Diab: AI has differences from traditional IT systems, but it does share a lot with traditional systems and through ISO/IEC JTEC 1, there is a huge infrastructure that's already out there.

We want to be able to not only address the lack of confidence in the new technology, but also track the changes that are happening. ISO/IEC 42001 standard is a unique thing that's offered by ISO. And we use that within SC 42 in a very novel way to basically address these differences and help open the door to conformity assessment, auditability, and so on. By doing that, we can increase consumer and user confidence in these systems.

By using a management system standard, this brings together all of the work



that we have done in SC 42, and provides really a platform for not only the standards development, but also for organizations looking to do conformity assessment. Our goal is to basically build these sort of a portfolio of standards that can be used in the vertical domain, so they can have a start of dealing with the AI perspective, then bringing it into their ecosystem of standards.

A management system standard can be used as in a vertical domain, and also can be extended for a particular sector. It's also important to note that there is an increased number of participation from SMEs. And one of the things that SC 42 is working on is a handbook to help SMEs understand how ISO/IEC 42001 can be used. So it's a very exciting time because we're seeing not only the technology itself change very quickly, but also a lot of vehicles and sectors are interested in using AI.

Safeguarding data is a key responsibility for any organization. And we've seen an increasing number of cyber attacks recently. How can organizations ensure that they have robust data strategies?

Heather West: While it is basics, it's also not easy, but working through it methodically and working through the problem and trying to figure out what is good enough. We're not looking for perfect.

Wan Sie Lee: Data protection officers in big companies have the resources to figure out what they want to do, but for smaller companies, they need simple suggestions or guidelines on how to protect data. One method is to encrypt your data. If you encrypt your data, even if somebody can break into your system, they won't be able to make sense.

Wael Diab: On the security side, one of the committees that we work very closely with is JTC 1/SC 27. In fact, our management system standard in many ways was modeled after what ISO/IEC 27001 on information security, cybersecurity and privacy protection does. There's a huge infrastructure of standards that already exist. We have actually recognized that data is an essential part, not only from a cyber security point of view and trustworthiness, but also in terms of getting the results that you expect and avoiding undesired results in the system.

How important is collaboration with governments, consumer associations, and standards developers to make sure that AI remains beneficial?

Wan Sie Lee: I'm glad to see that over the past year there has been so many activities in international collaboration, and governments have talked to each other to work together. Because for a small country like Singapore, it is important to work with global organizations. With all global platforms our own standards were not our own frameworks. We want to make sure that we are plugged into what's developing internationally.

Consumers and businesses want to make sure that no matter what happens, the new systems and new services that they use are still going to be a safe and reliable systems as before. I guess that is the point about standards.

Wael Diab: Absolutely. I think if we do our job right, they shouldn't have to worry. We should develop standards together with regulatory frameworks and other best practices to ensure that they feel the confidence.

We work very closely with other committees. Currently we have some 65 countries that participate in the development of standards and over 33% of which are from developing countries. We are bringing together a community that has a diversity of stakeholders, not just the people that are producing standards.

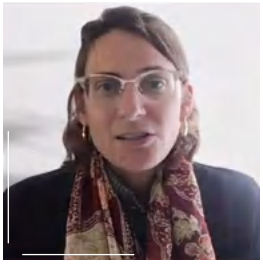
采写/曹欣欣

(Written and edited by Cao Xinxin based on the speeches in the session)

Sustainable energy transition: Strategies for success

可持续能源转型的关键

How can we achieve sustainable energy transition and create a fairer and more resilient future for all? How can we let low-income and vulnerable groups afford clean energy? What role can standards play in the sustainable energy transition? To discuss the above questions, a session with the theme "Sustainable energy transition: Strategies for success" took place on September 11 during the ISO Annual Meeting in Colombia, which invited Silvio Dulinsky, Deputy Secretary General of ISO, Vimal Mahendru, IEC Vice President and IEC envoy for the UN SDGs, Marcelo Behar, Senior Advisor to COP30, World Business Council for Sustainable Development (WBCSD), and Jane Cohen, Senior Program Manager of People-Centered Clean Energy Transitions, International Energy Agency (IEA).



Jane Cohen
Senior Program Manager for People-Centered Clean Energy Transitions, IEA

Where are we right now in terms of affordable access to clean power?

Jane Cohen: As we know, millions of people still live on the margins of the energy economy. They not only have no access to clean energy, but also no access to any form of energy. They're not able to take advantage of the benefits of being part of the energy economy.

Our policy makers, businesses, labor leaders, indigenous communities and all stakeholders work towards the clean energy transition to ensure that we are achieving universal access to energy. We need everyone's support for this major structural transition. We really have to build in the core of the policies and intentional targets to ensure that we are bringing people in from those margins, so that they have access to not only energy, but clean energy and the benefits of clean air, livelihoods, better health, etc. Policy design is very important. No two communities are the same, so policy makers should understand who they're targeting with the policies, and make sure those policies are designed to meet the needs of those communities.

Silvio Dulinsky
Deputy Secretary General of ISO

ISO is committed to the clean energy transition. International standards play a big role in the process. What do you think is the biggest challenge in terms of sectors and industries?

Silvio Dulinsky: Energy transition is very inspiring, but I think there are some main challenges. One is policy making. It is very difficult for some sectors to

achieve transition, such as cement, concrete, chemicals, aluminum, aviation, because structurally they either rely on technologies or infrastructure that are very difficult to transit from fossil fuels to renewable energy. That is very challenging for them to change. But they are making progress.

The other is infrastructure. It is not only about transportation but about energy and the multiple value chains that we need to move goods or people around the world. The infrastructure is needed to enable the energy transition.

The third is about agriculture. Agriculture represents about 17% of the total greenhouse gas emission in the world. But it is very fragmented, and is embedded in cultural traditions and people's livelihoods, so it is very difficult to change the way that they operate.

The last one is the financial sector, which plays multiple roles in society, because it mobilizes investment for the transition.

Innovations and new technologies are crucial in the energy transition. How is ISO supporting technological solutions?

Silvio Dulinsky: We are collaborating with IEA on the energy efficiency, and the objective is to double the energy efficiency from now to 2030. It is very important that the respective national adoptions of international standards enable policy makers, so that we have an integrated approach to how the energy systems of the countries will move towards more efficient appliances and equipment. The policy making will create the incentives for that, and standards provide the basis for the policy making at the national level to be consistent across the world.

Unfortunately, the world is not on track to achieve the SDGs, particularly SDG 7, which is the affordable, clean energy for all. What are your thoughts on that?

Vimal Mahendru
IEC Vice President and IEC envoy for the UN SDGs

Vimal Mahendru: Energy efficiency is important, and there is a global target to double energy efficiency. One good thing is that the standardization community are moving towards that direction, and standards are keeping pace with this expectation from society. IEC has realized that we cannot go from low energy efficiency to a very high energy efficiency level immediately. So what we are trying to do is to create a step method, which is like a star rating system, where five star means high energy efficiency.

In terms of SDG 7, when the whole idea of the UN SDGs came up in 2015, there were about 1.1 billion people with no access to electricity in the world, about 20% of the population. Today the number has reduced to about 675 million people. That is still a huge number. Imagine a world where there is no electricity,

it is like disconnecting those communities from the 21st century. Access to energy is the key, and the good thing is standards exist.

What has IEC done to support the energy transition?

Vimal Mahendru: The first thing IEC did was enabling electricity access, which is also the reason that brought me into the IEC community 10 years ago. As I mentioned before, 675 million people do not have access to electricity worldwide. This figure has reduced considerably because a new standard for DC micro grids was developed. The standard can help people have low-cost, rapid electricity access.

Recently, we have set up a standardization evaluation group (SEG) that will use all the technologies required to bring about an effective energy and efficient community. Experts from all over the world are joining it, and they are helping fill gaps so that the future can be a little more in that direction.

Marcelo Behar
Senior Advisor to COP30, WBCSD

What is the role of public and private sectors in enabling the transition?

Marcelo Behar: The World Business Council for Sustainable Development was founded in 1992. When we had the first conference in Rio de Janeiro, Brazil, and the public and private sector for the first time started to work together and build solutions that would connect multinationals, governments and address all challenges faced by us. I think we succeed pretty well on the challenge of the CFC emissions. That was a very good example to show that when you use public policy in the private sector, you can achieve global results. This is also the reason why I think the role of ISO is crucial.

COP29 is coming up, and ISO is going to attend the meeting. How will ISO bring partners in?

Silvio Dulinsky: In November, ISO will attend the COP29 and hold an standards pavilion in the meeting. It is very meaningful, because it means there is a space where the global standards community can come together and discuss with our stakeholders and policy makers, what is the role and how to leverage international standards to make progress on the climate action agenda to speed up the action by its scaling solutions globally. Two years ago, we launched the net zero guidelines at the COP. Last year, we launched some more technical standards, especially on hydrogen. This year, we are working very hard to publish standards related to the SDGs together with UNDP.

采写/曹欣欣

(Written and edited by Cao Xinxin based on the speeches in the session)

The national standard GB/T 44092-2024, *Configuration requirement for sports-park*, has taken effect on Sept. 1, 2024.

It specifies the basic requirements for sports parks, their sports categories and site facilities, and also classifies sports parks according to their areas.

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