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Seconded European Standardisation Expert in China
(SESEC)

Index

Takeaways

Face of Standardization: CEN-CENELEC Interview with Dr. Betty XU

Dr. Betty XU, Director of SESEC project, was interviewed by CEN-CENELEC to celebrate 60 years of collaboration on European standardization. Dr Betty XU analysed the benefits and the main achievements of European Standardization System in detail; she also shared her views on the evolution and directions of standardization for the next 60 years.

China Standardisation Development Annual Report (2019) released

SAC released the China Standardisation Development Annual Report (2019). In 2019, China released 2,021 national standards, prepared and established 41 national professional standardisation technology organisations – including one dedicated to blockchain, filed 4,880 new industry standards and 7,238 local standards, and added 6,227 association standards.

Draft Data Security Law of the People's Republic of China Released for Public Comments

The draft *Data Security Law* marks the elevation of data security to national security level. Together with the *Cybersecurity Law* (which entered into force in 2017) and with which complementarities will constantly be sought, the draft *Data Security Law* can be seen as integral part of China's concept of national security and as a supporting regulation of the *National Security Law*, and as such it has significant implications.

MIIT: Support the Participation of International Enterprises in China's 5G Development and Application

During the "2020 China Internet Conference - 5G Ecological Forum", MIIT revealed that more than 360,000 5G base stations had been established in China by the end of June 2020, with the number of 5G users exceeding 100 million. China will continue to support the participation of international enterprises in its 5G development and application process, thus sharing its 5G achievements with the world and deepening openness and cooperation, ultimately leading to win-win benefits.

TC28's Subcommittee 42 on Artificial Intelligence Established in Beijing

On 6 August 2020, the kick-off meeting and first plenary meeting of SAC/TC28 SC42 was held in Beijing. SAC/TC28 SC42 is mainly responsible for the development and revision of AI-related standards. During the meeting, a general working group was established; four research groups were also established for models and algorithms, chips and systems, products and services, and trustworthiness.

National Energy Administration of China: Guiding Opinions on Accelerating the Establishment of New Standard Systems for Energy

NEA and SAC published a call for comments on the *Guiding Opinions on Accelerating the Establishment of New Standard Systems for Energy*. Key highlights of the document include objectives of the reform, standard systems, management of standards, development of standards, coordination of work, and information disclosure.

2020 Annual Meeting of the Working Group on Green Manufacturing Standards for Automobile Industry Held in Tianjin

NTCAS held the "2020 Annual Meeting of the Working Group on Green Manufacturing Standards for the Automobile Industry" in Tianjin. The meeting presented the framework of the standards system of green manufacturing and circular economy in the automotive industry, reviewed the projects on industrial energy conservation and green standardisation, and also summarised the progress of standardisation research, outlining proposals for follow-up actions.

Horizontal Issues

1. Face of Standardization: CEN-CENELEC Interview with Dr. Betty XU

#Horizontal

10 June 2020 is an important day for the CEN and CENELEC Community. In 1960, representatives from ISO and IEC members in the European Economic Community (EEC) and EFTA countries agreed to the creation of two European Standardization Organizations, CEN and CENEL – which then became CENELEC. In a period that witnessed the founding steps of European integration, such agreement of principles set the basis for the creation of a common European Standardization System. In 2020, CEN and CENELEC celebrate 60 years of collaboration on European standardization, and this provides us with an opportunity to look back at the successes achieved, and to reflect on the road that is still ahead.

As part of the celebrations, CEN and CENELEC launched the project 'Faces of standardization', which features the publication of a series of monthly interviews with different individuals who are actively contributing to European standardization. The interviewees include the Chair of CEN/TC, the Chair of CEN-CENELEC JTC, the Director General APPLiA, as well as SESEI (Seconded European Standardization Expert for India) and SESEC (Seconded European Standardization Expert in China).

In September 2020, Dr. Betty XU, Director of SESEC project, was interviewed by CEN-CENELEC. During the interview, Dr. Betty XU introduced herself and her involvement in standardization affairs, also through a series of anecdotes from her 14 years' of direct experience in the field. In terms of European Standardization, Dr Betty XU analyzed the benefits and the main achievements of European Standardization System in detail; she also shared her views on the evolution and directions of standardization for the next 60 years, particularly her conviction that there will be more harmonized standards all over the world to support product and technology interoperability and international trade. SESEC project will continue its efforts to enhance the visibility of European standardization activities in China, to increase the cooperation between Chinese and European standardization bodies, and to support European companies facing standardization-related issues hampering market access to China.

The full text of CEN-CENELEC interview with Dr. Betty XU is available at: https://www.cencenelec.eu/aboutus/60Years/Documents/FacesOfStandardization_SESEC_HR.pdf.

For more information, you can browse the official website of CEN-CENELEC on CEN and CENELEC celebrate 60 years of Contributing to Standardization in 2020.

2. China Launches Two Serial Standard Projects for IPR and Patent Protection

#Standard #IPR

On 30 July 2020, SAC initiated and published two serial national standard projects in the field of intellectual property, namely: (i) the *Management Specifications for Intellectual Property Rights Protection on E-commerce Platforms*, and (ii) the *Patent Navigation Guide.*

- *Management Specifications for Intellectual Property Rights Protection on E-commerce Platforms.*

China's e-commerce sector is the biggest in the world in terms of volume and value of transactions. However, piracy remains a rampant issue on all e-commerce platforms, where pirate editions of books, games, software, and video/audio products can frequently be found, resulting in severe IPR infringements leading to market disruptions. Indeed, in e-commerce environments – where the physical scope of IPR protection is unclear – intellectual achievements as knowledge assets are more susceptible to piracy and counterfeiting, and it is more difficult for the infringed party to file complaints and effectively enforce its rights.

In order to address this issue, an agreed IPR protection framework stipulating the technical requirements for IPR protection processes should be established and observed by e-commerce stakeholders, including e-commerce platforms, merchants, consumers and public regulators. Therefore, in November 2019, the General Office of the CPC Central Committee and the General Office of the State Council proposed, in the *Opinions on the Intensified Protection of Intellectual Property Rights*, to formulate standards for the management and protection of IPR on e-commerce platforms.

In this context, and also in view of the fact that neither in China nor abroad there are standards on IPR protection and management on e-commerce platforms that can be used as reference, SAC launched this new project. The *Management Specifications for Intellectual Property Rights Protection on E-commerce Platforms* will stipulate the general requirements for IPR protection that will apply to the construction, operation and management of e-commerce platforms. It will also provide technical requirements for the operation of e-commerce merchants.

- Serial Standard: the *Patent Navigation Guide*.

The *Patent Navigation Guide* will be comprised of eight parts: general principles for patent navigation, six patent navigation standards for specific areas (regional planning, industrial planning, enterprise management, R&D activities, standard application, and talent management), and service requirements for patent navigation.

Patent navigation refers to the deep integration of patents into the innovation of industrial technologies, products, organisations and business models – based on the effective utilisation of patent information resources and patent analysis. It is an exploratory work that can guide and support balanced development among various industries. The development of the serial standard aims to facilitate sharing, intensive integration, collaborative development and efficient utilisation of production factors such as talents, technologies and capital; it also aims to speed up the transformation and upgrading of traditional industries, and to raise the operational level and innovation efficiency of industries.

The launch of the serial standard project is grounded on strong policy background and support. In December 2015, the State Council's *Several Opinions on Accelerating the Construction of a Powerful Country with Intellectual Property Rights under the New Situation* first called for the establishment of a work mechanism for the development of the patent navigation industry. In February 2020, the State Council further issued the *Notice on Promoting the Third Batch of Reform Measures to Support Innovation*, requiring the promotion and divulgation of decision-making mechanisms for patent navigation for emerging industries, based on industrial data and patent data.

At the operational level, the National Intellectual Property Administration (CNIPA) has formulated a series of guidelines and specifications to guide patent navigation work, including:

- The *Patent Navigation Pilot Project Workbook (First Edition)*, published in September 2013: it provides an operational guide for industrial patent analysis, IP appraisal for major economic

and technological activities, and patent reserve and operation;

- The *Guidelines for the Implementation of Industrial Planning Patent Navigation Projects (Provisional)*, published in July 2015: it reviews the management methods of industrial planning patent navigation projects, including organisational models, process management and working mechanisms. It also systematically introduces the contents and results of the analysis of three basic project stages, aiming at standardising and guiding industrial patent navigation work;
- *The Guidelines for the Implementation of Enterprise Operation Patent Navigation*, published in December 2016: it introduces the main principles, key contents and analysis modules of enterprise operation patent navigation projects, aimed at standardising and guiding enterprise patent navigation work;
- *The Guidelines for the Implementation of Patent Navigation for the Evaluation of Regional Innovation Resources*; the *Management Specifications for the Regional Distribution of Intellectual Property Rights*; the *Technical Manual for the Regional Distribution of Intellectual Property Rights*; and the *Guide for the Compilation of Resource Allocation-oriented Catalogue with Intellectual Property at the Core* – formulated between 2016 and 2018: they introduce the general principles, working methods and operational procedures of regional patent navigation projects, aimed at standardising and guiding relevant work.

These standards are all formulated by SAC/TC554 (National Technical Committee for the Standardization of Knowledge Management), and are under the management of CNIPA.

3. ISO/IEC/JTC 1 Standards Led or Jointly Led by China in 2019

#Standards #ISO/IEC

On 31 July, SAC's Standard Innovation Department published the list of 12 ISO/IEC/JTC 1 international standards led or jointly led by China in 2019:

No.	TC/SC/PC	Standard Code	Standard	Leading Unit
1	ISO/IEC JTC 1	ISO/IEC 30146:2019	Information technology — Smart city ICT indicators	CESI
2	ISO/IEC JTC 1	ISO/IEC 20546:2019	Information technology — Big data — Overview and vocabulary	Huawei
3	ISO/IEC JTC 1 /SC 7	ISO/IEC 25020:2019	Systems and software engineering — Systems and software Quality Requirements and Evaluation (SQuaRE) — Quality measurement framework	CESI
4	ISO/IEC JTC 1/SC 7	ISO/IEC 25030:2019	Systems and software engineering — Systems and software Quality Requirements and Evaluation (SQuaRE) – Quality requirements framework	CESI
5	ISO/IEC JTC 1/SC 25	ISO/IEC 14543-5-101:2019	Information technology — Home electronic systems (HES)architecture — Part 5-101: Intelligent grouping and resource sharing — Remote AV access profile	IGRS Alliance
6	ISO/IEC JTC 1/SC 25	ISO/IEC 14543-5-12:2019	Information technology — Home electronic system (HES) architecture — Part 5-12: Intelligent grouping and resource sharing for HES Class 2 and Class 3 — Remote access test and verification	IGRS Alliance
7	ISO/IEC JTC 1/SC 27	ISO/IEC 9798-3:2019	IT Security techniques — Entity authentication — Part 3:Mechanisms using digital signature techniques	WAPI Alliance
8	ISO/IEC JTC 1/SC 29	ISO/IEC 15938-15:2019	Information technology — Multimedia content description interface — Part 15: Compact descriptors for video analysis	Peking University
9	ISO/IEC JTC 1/SC 36	ISO/IEC 19479:2019	Information technology for learning, education, and training — Learner mobility achievement information (LMAI)	Beijing University of Posts and Telecommunications
10	ISO/IEC JTC 1/SC 40	ISO/IEC TR 30105-7:2019	Information technology — IT Enabled Services — Business Process Outsourcing (ITES-BPO) lifecycle processes — Part 7: Exemplar for maturity assessment	Neusoft Clod Technology
11	ISO/IEC JTC 1/SC 41	ISO/IEC 21823-1:2019	Internet of Things (IoT) — Interoperability for IoT systems— Part 1: Framework	Chongqing University of Posts and Telecommunications; CESI
12	ISO/IEC JTC 1/SC 41	ISO/IEC TR 30148:2019	Internet of things (IoT) — Application of sensor network for wireless gas meters	Chongqing University of Posts and Telecommunications; CESI

4. State Council: Facilitate the Development of Integrated Circuit and Software Standards

#State Council

On 4 August 2020, the State Council published the *Several Policies for Facilitating the High-quality Development of the Integrated Circuit Industry and the Software Industry in the New Era*. The document calls, among others, for more sustained efforts to formulate standards for integrated circuits and software, so to improve their standardisation systems.

The integrated circuit industry and the software industry are at the core of the information industry; they play a critical role in advancing and leading the new round of technological and industrial revolution. In order to promote the rapid development of the integrated circuit and software industries, in 2001 and 2011 the State Council released, respectively, the *Several Policies for Encouraging the Development of the Software Industry and the Integrated Circuit Industry*, and the *Several Policies for Further Encouraging the Development of the Software Industry and the Integrated Circuit Industry*. Despite these efforts, however, imported chips still occupy a significant proportion of China's total imported goods: more than 400 billion chips worth over 300 billion USD are imported to China each year. The overdependence on other countries for such a critical product may present serious risks to the development of China's information industry, and therefore it has become a key concern for the Chinese administration – especially after the United States' recent restrictions on chip supply for Huawei.

In this context, the newly-released *Several Policies for Facilitating the High-quality Development of the Integrated Circuit Industry and the Software Industry in the New Era* contains unprecedented fiscal and tax support for the integrated circuit industrial chain, for instance:

1. Corporate Income Tax (CIT) exemption for the first ten years, for all state-encouraged integrated circuit manufacturers and projects whose operating periods exceed 15 years, and which produce integrated circuits with a line width of no more than 28 nanometers;
2. CIT exemption for the first two years (starting from the first profitable year), and 50% CIT reduction from the third to fifth year, to all software enterprises involved in integrated circuit design, devices, material, packaging and testing;
3. Extension of currently existing preferential VAT policies for integrated circuit enterprises and software enterprises;
4. Exemption of import duties on raw materials used for production, and on self-use equipment, for all state-encouraged key integrated circuit enterprises and software enterprises.

In addition, the document also outlines supportive policies for a wide range of activities in the field, including investment and financing, R&D, import and export, personnel training, intellectual property, market application and international cooperation.

Standardisation, as a critical activity at the foundation of high quality industrial development, is also a key highlight of the document. Major policies in this regard include:

- Encourage software enterprises to implement national standards for software quality, information security and software development; promote the establishment of integrated circuit standardisation organisations, improve relevant standard systems, and strengthen capabilities for standard verification and R&D.
- Give full play to industry associations and standardisation organisations, facilitate the formulation of standards for integrated

circuits and software, and promote quality evaluation for integrated circuits and specifications for the measurement of software development costs.

- Strengthen the communication between Chinese and international industry associations; support Chinese enterprises to cooperate with international partners both at home and abroad, and promote their active participation in international standard-development bodies and in the international market.

These policies indicate that the standardisation of integrated circuits and software is likely to be raised to the same strategic status of other key emerging standardisation fields – such as 5G, AI and cybersecurity – and to shift to centralised coordination and management. Furthermore, in order to quickly address and fill standardisation gaps emerged during the course of industrial development, significant attention will be given to the development of both government standards (formulated by standardisation organisations) and association standards (formulated by industry associations).

Finally, it is noteworthy that the document explicitly points out that "*the policies apply to all eligible integrated circuit enterprises (including those involved in design, production, packaging, testing, device and material) and software enterprises established in China, regardless of their ownership nature*", and that "*the policies shall come into force immediately*". This reflects the urgency that the Chinese government, under enormous pressure, attaches to the development of advanced integrated circuit technologies. The policy document, therefore, represents a positive development for all investors.

5. ZHANG Xiaogang: China Has Become the Largest Contributor to International Standardisation over the Past Five Years

#Horizontal #Standardisation

During the "Forum for the Development and Management of Science Associations", hosted during the 22nd Annual Conference of the China Association for Science and Technology (CAST) held in Beijing, Zhang Xiaogang, former chair of ISO and of the Word Steel Association, stated that all countries around the world recognise that China has, over the past five years, made the largest contributions to international standardisation.

Specifically, in his speech titled "International standardisation leads the high-quality development of China's science associations", Zhang pointed out: "*Since 2000, alongside with rapid economic development and the increasingly higher global status of China's manufacturing industry, China has always been vocal in the development of international rules. So far, China has led the development of 495 international standards, a number largely exceeding the 395 standards originally planned to be finished by 2020"*. Nonetheless, despite these efforts, China still lags far behind developed countries in this area. According to statistics, among all international standards ever developed, those led by the United States, the United Kingdom, Germany, France and Japan occupy 90-95% of the total, while those led by the other 170 countries only account for 5% of the total; the proportion of international standards led by China has expanded from 0.7% six years ago, to 1.8% today.

http://m.cnr.cn/news/20200812/t20200812_525202752.html

6. Ministry of Transport: Facilitate the Construction of New Infrastructure in the Field of Transportation

#New Infrastructure #Transportation

On 3 August 2020, the Ministry of Transport (MOT) published the *Guiding Opinions on Facilitating the Construction of New Infrastructure in the Field of Transportation*.

The document highlights that "*in order to promote the efficiency, expand the functions and boost the development of transportation, and in line with the general trend to make transportation more digital, interconnected and intelligent, we need to facilitate the digital transformation and intelligent upgrading of transportation infrastructure driven by technological innovation; we also need to build new transportation infrastructure that is convenient, smooth, economic, efficient, green, intensive, intelligent, advanced, safe and reliable*".

The document outlines five key development goals to be achieved by 2035:

- Thorough improvement of the ability of transportation infrastructure to perceive, analyse, manage and provide services accurately;
- Efficient control over the energy consumption levels for the construction and operation of infrastructure;
- Comprehensive coverage of ubiquitous sensing facilities, advanced transmission networks, and Beidou Space & Time information services in the field of transportation;
- Basic establishment of industrial data centres and network security systems;
- Gradual application of intelligent trains, self-driving vehicles and intelligent ships.

To achieve these goals, the document proposes 14 main tasks, which can be grouped under three main categories:

- Build intelligent transportation system (ITS) infrastructure that is integrated and efficient. Such infrastructure should be formed by smart highways, smart railways, smart waterways, smart ports, smart civil aviation, smart postal services, smart hubs, as well as by the application of new materials and new energy – thus being fully and comprehensively enabled by advanced information technology.
- Facilitate the construction of information infrastructure, mainly by supporting relevant departments in promoting the application of advanced technologies such as 5G, the Beidou system and remote sensing satellites, cybersecurity, data centres and artificial intelligence (e.g. autonomous driving).
- Improve industrial innovative infrastructure, mainly by supporting capacity-building through R&D of technology, such as through laboratories and long-term performance monitoring networks for infrastructure.

The document positions the improvement of standards and specifications as a crucial means to accomplish the goals. Specifically, the document proposes that "*we need to build a standard system that suits the construction of new transportation infrastructure, we need to step up the supply of standards in key areas, we need to develop key standards and basic standards separately, and we need to transfer pilot testing results into standards in a timely manner, with the aim to effectively guide engineering and construction. Furthermore, we need to accelerate the improvement of standards and specifications for communication networks, for the Beidou system, for environmental perception, for traffic guidance and management, for Building Information Modelling (BIM), and for data integration; we also need to facilitate the construction of an infrastructure specification system that can be applied to autonomous driving, automated terminals and unmanned delivery. In addition, mechanisms for the*

internationalisation of standards, for the joint development of standards by the government and enterprises, and for dynamic adjustment, should also be established".

The construction of new infrastructure is one of the key policies issued by China in 2020. As a type of core infrastructure supporting national economic development, transportation is one of the top priorities for the construction of new infrastructure. The newly-published Guiding Opinions, therefore, represent a crucial document for implementing the construction of new infrastructure in the field of transportation, aimed at guiding the technological and industrial development of transportation and relevant standardisation work over the next 15 years.

7. China Holds High-level Talks on Standardisation with the United Kingdom and Germany

#Standardization #Horizontal

A video conference on China-UK standardisation cooperation was held on 17 August 2020. This meeting was attended by Tian Shihong, Deputy Director of China's State Administration for Market Regulation (SAMR) and Director of the National Standards Committee, and Scott Steadman, Executive Director of Standards at the British Standards Institution (BSI).

During the meeting, both sides agreed on the work plan for 2021 of the China-UK Standardisation Cooperation Commission. They also discussed China-UK cooperation in the business environment, the latest progress of the "China Standards 2035" plan, and also exchanged views and opinions on their cooperation under the ISO/IEC framework and on the institutional reform of IEC.

In particular, Tian Shihong highlighted the significance of China-UK bilateral cooperation on the standardisation of the business environment, and outlined a set of needs and requirements for future cooperation activities.

A few days later, on 21 August 2020, a video conference on China-Germany standardisation cooperation was also held. It was attended by Tian Shihong, Deputy Director of China's State Administration for Market Regulation (SAMR) and Director of the National Standards Committee, and Christoph Winterhalter, Chairman of the Executive Board of the German Institute for Standardisation (DIN).

The key topics discussed during the meeting by the two sides include the *ISO Strategy 2030*, the digitalisation of standards, cooperation between China and Germany on machine-readable standards, and the governance of ISO/IEC JTC1.

In particular, Tian Shihong shared China's opinions and position on the planning and implementation of the *ISO Strategy 2030*, outlined recommendations to strengthen further bilateral cooperation in the digitalisation of standards, and reaffirmed the importance of the efforts of China-Germany cooperation in promoting machine-readable standards and in the governance of international standards organisations.

8. Video Conference of the Heads of BRICS National Standardisation Bodies

#Horizontal #Standardisation

On 19 August 2020, a meeting of the Heads of BRICS National Standardisation Bodies (NSBs) was held via videoconference. The meeting, which represents a supporting event for the 12th BRICS Summit, was chaired from the Chinese side by Cui Gang, Director-General of the Department of Standards Innovation Management of the State Administration of Market Regulation (SAMR); and by Ricardo Fragoso, Director-General of the Brazilian National Standards Organisation (ABNT); Alexei Abramov, Head of the Federal Agency for Technical Regulation and Metrology of the Russian Federation (Rosstandart); D.K. Agrawal, Director-General of the Bureau of Indian Standards (BIS); and Jodi Scholtz, Lead Administrator of the South African Bureau of Standards (SABS).

During the meeting, Cui Gang shared the experience and achievements of China's standards in response to the COVID-19 pandemic. The participants agreed with Cui's proposals to promote the mutual recognition of standards among BRICS countries, to jointly formulate international standards, to facilitate the signing of the BRICS NSBs Memorandum of Understanding on Cooperation in the Field of Standardisation, and to strengthen the establishment of the BRICS Standardisation Information Sharing Platform.

In addition, during the meeting the representatives of the delegations also discussed and agreed on the Working Mechanism on Technical Regulations, Standards, Metrology and Conformity Assessment Procedures; and on BRICS cooperation in the field of lighting.

9. SAMR's Interpretation of the "Key Areas of Implementation for Enterprise Standards 'Top Runners' in 2020"

#SAMR #Top Runners

Introduction:

The Enterprise Standards "Top Runners" scheme was designed and launched to encourage enterprises to improve the quality of their products and services. It is based on the disclosure and supervision of enterprise standards published on the Enterprise Standard Information Public Service Platform – which is clearly encouraged by Art. 27 of the *Standardisation Law*. According to the scheme, a list of enterprises with higher level of standards for their products and services in certain areas is selected every year as'top runner'enterprise. The evaluation, assessment and identification of enterprise standards 'top runners' is conducted by third-party agencies.

On 20 August 2020, State Administration for Market Regulation (SAMR) issued the Key Areas of Implementation for Enterprise Standards'Top Runners'in 2020. The document illustrates a list of product and service areas, within which enterprise standards will be compared and evaluated, and the final list of 'top runners' will be selected. The publication of the document marks the beginning of the enterprise standards 'top runner' scheme in 2020.

- **What are the key areas of implementation, and why are these needed?**

According to *GB/T 4754-2017 Industrial classification for national economic activities*, it is estimated that China's current national economy is structured on more than ten thousand industries – and the number of product and service categories circulating on the market is even more challenging to estimate. Among these many industries, the degree of disclosure of enterprise standards varies significantly, making it impossible to evaluate them all at once. Therefore, every year a set of key industry areas are determined by competent authorities: these will be the focus areas – that is, key areas of implementation – in which enterprise standards will be evaluated in the corresponding year.

Once determined, the key areas of implementation will always remain in the list for all the following years. This means that the scope of the key areas of implementation will continuously expand every year in line with the implementation of the enterprise standards 'top runners' scheme.

- **How are the key areas of implementation determined?**

On 13 April 2020, SAMR issued the *Notice on the Solicitation of Key Areas of Implementation for Enterprise Standards 'Top Runners' in 2020*, soliciting all provinces, regions, municipalities and eight central government ministries to submit suggestions for the key areas of implementation for 2020. The Notice specified that the suggestions had to focus on the industries classified by *GB/T 4754-2017 Industrial classification for national economic activities* as Grade 3 or Grade 4.

All suggestions received were collected by the China National Institute of Standardisation (CNIS) – the key agency for the 'top runners' scheme. CNIS then organised an expert discussion, on the basis of which the list of key areas of implementation for 2020 was determined. The final list covers 184 areas, including agriculture, consumer goods, equipment manufacturing, emerging industries and services. Among them, 131 are new areas in 2020 and 53 are key areas that had already been determined in 2019.

- **What are the main changes introduced in this year's key areas compared with those of 2019?**

Compared with key areas in 2019, this year's key areas of implementation differ in the following aspects:

1. *GB/T 4754-2017 Industrial classification for national economic activities* is officially introduced as the basis for the selection of key areas in 2020. This makes the selection process more standardised and science-based compared to the previous year.
2. In 2020, the list of the 184 key areas was determined based on the industrial classification of *GB/T 4754-2017*, and covers more than one thousand specific products and services. The scope of the list therefore was greatly expanded this year compared to 2019, when only around one hundred categories of products and services were covered.
3. The new key areas added in 2020 include for the first time areas directly affecting the society: (i) agricultural areas (e.g. grains and oil, agricultural and sideline processing); (ii) sophisticated industries (e.g. new energy vehicles and aviation equipment); and (iii) social service industries (e.g. express delivery, Internet data, financial information and housekeeping). Therefore, the enterprise standards 'top runners' in 2020 will provide a more comprehensive and effective support for the high-quality development of various industries in China.

- **Why was *GB/T 4754-2017 Industrial classification for national economic activities* introduced as the basis for the selection of key areas in 2020?**

The adoption of GB/T 4754-2017 is mainly based on the following three considerations:

1. In 2019, the suggestions for the key areas of implementation received varied enormously, reflecting the different understandings and priorities of the various ministries, regions and provinces involved. The introduction of GB/T 4754-2017 in 2020 contributed to minimise such differences and to provide a reference to the collection process.
2. The introduction of GB/T 4754-2017 marks a clear direction for the promotion of the enterprise standards 'top runners' scheme, by clarifying how many industries have been covered at present, and how many industries will need to be covered in the future.

3. Finally, GB/T 4754-2017 is the most common and diffused classification system for industries within the management and operation procedures of government departments and enterprises in China. At the same time, the fact that GB/T 4754-2017 has been regularly updated over the years (currently at its fifth edition) ensures that the industrial classification system keeps pace with and best reflects China's economic and social development.

- **What are the next steps?**

1. A series of 'top runner' standards (note: not 'top runner' enterprises, but 'top runner' standards) were proposed in the first half of 2020 to standardise and guide the work of evaluation agencies, and at the same time to guide the development of enterprise standards. At the same time, supporting materials such as evaluation guidelines and case studies have been prepared, and a further notice on the solicitation of evaluation agencies for the enterprise standards 'top runners' scheme will be officially published in the upcoming weeks.
2. Another priority will be to continue improving the enterprise standards 'top runners' management information platform (qybzlp.com). While retaining all the functions already introduced in 2019, the platform will add new functions to improve the user experience, such as selection of product and service categories, only review, automatic index comparison and ranking, etc.
3. The final list of 2020 enterprise standards 'top runners' will be released in three batches in October, November and December. This will allow sufficient time to evaluation agencies for conducting research and evaluation of enterprise standards, thus ultimately ensuring the quality and authority of the list.

The original news in Chinese is available at: **https://www.cnis.ac.cn/bydt/kydt/202009/t20200901_50269.html**

10. China Standardisation Development Annual Report (2019) released

Standardisation

On 9 September 2020, the Standardisation Administration of China (SAC) released the *China Standardisation Development Annual Report (2019)*. The report is a flagship publication that every year reviews and summarises the key takeaways from China's standardisation work.

In particular, the report illustrates that, in 2019, China achieved the following key results:

- Released 2,021 national standards;
- Prepared and established 41 national professional standardisation technology organisations – including one dedicated to blockchain;
- Filed 4,880 new industry standards and 7,238 local standards;
- Added 6,227 association standards;
- Added an additional 55,962 self-declared enterprise standards, bringing the total number of self-declared enterprise standards released to over 370,000.

In terms of deepening the standardisation reform, in 2019 China further integrated and streamlined mandatory standards. In particular, the National Development and Reform Commission, the Ministry of Public Security, the Ministry of Transport, and the Ministry of Ecology and Environment, have proactively

promoted the integration and revision of mandatory national standards to support the policy of "*Three Inspections in One"* for road vehicles. Recommended national standards were also further optimised, by adopting strict approval procedures which led to an increase of the project rejection rate of recommended national standards to 52%. Association standards also developed rapidly, with more than 12,000 association standards released by more than 3,000 social organisations, covering areas such as smart transportation, sharing economy, and elderly care services. Enterprise standards were also further invigorated through the deep implementation of the enterprise standards 'top runner' scheme, which in 2019 selected 315 enterprise standards from 245 companies. Finally, in 2019 China also actively promoted the comprehensive reform of local standardisation: Shanxi, Zhejiang, Jiangsu and other provinces refined 11 standards, including on regional coordination, which can be replicated and promoted on a wider scale; 8 regional coordination standards were also released for the Beijing-Tianjin-Hebei region, while Hainan, Zhengzhou and Yiwu explored and actively promoted city-centred standardisation innovation.

In terms of the construction of standards systems, in 2019 China achieved remarkable results especially in (i) agricultural and rural standardisation work, and (ii) food quality and safety:

- For the agricultural and rural standards system, China introduced a new era of top-level design of standardisation; it issued and implemented 113 national standards for various fields, including agricultural input quality safety assurance, animal and plant disease prevention and control, and agricultural product quality classification; and focused on establishing a comprehensive, whole-chain, multi-layer and modern agricultural standards system.
- For the food quality and safety standards system, China continued to promote the establishment of a national food quality and safety standards system; it comprehensively carried out the clearance and streamlining of national food quality standards, it promoted the upgrading of manufacturing standards, and promoted the establishment of new industrial standards systems.

In addition, in 2019 China vigorously promoted the standardisation of elderly care services and domestic service industry; formulated national standards for urban rail transit facilities and operations; promoted the establishment of a standards system for national ecological pilot sites; promoted the standardisation of pilots projects on community-level government; summarised successful experiences in standardisation that can be replicated and promoted on a wider scale, gained from sectors such as construction of 'beautiful towns and villages', rural property rights transfer, new urbanisation, urban-industrial integration, etc.

Furthermore, the Report also indicates that China in 2019 further enhanced the functions of the National Standards Full Text Disclosure System, disclosing 1,804 standards. An information service platform for industry standards and local standards was established; while the international standards information platform, the China-Europe and the China-Germany standardisation platforms achieved effective linkages with other international and foreign standards such as ISO, IEC, German, French, and Spanish standards. The National Public Service Platform for Standard Information provided more than 180 national and industry standards from Kazakhstan, Russia, Sweden and other countries. The National Standard Implementation Feedback Platform was put into operation, while the National Standard Formulation and Revision System was also introduced – featuring a mechanism for collecting and processing feedback on standards implementation. Linkages were also established to connect standardisation work with law enforcement, inspections, and quality management, so to contribute to standards formulation and information-sharing. Moreover, China further improved evaluation methods for the effectiveness of

implementation of national standards, and successfully evaluated a set of key standards in the field of engineered wood and cosmetics – thus providing direct evidence for the revision of relevant standards. Finally, the number of legal persons and other organisations in the Unified Social Credit Code Database exceeded 100 million for the first time – reaching 101.92 million, an increase of 26.75% from 2018; the registration coverage was further expanded, covering more than 30 types of institutions. The national commodity database was also strengthened, with the total amount of data entries in the database exceeding 100 million and ranking first in the world.

For the Chinese version of the report, please visit

http://www.sac.gov.cn/sxxgk/zcwj/202008/P020200827470578698634.pdf

Regulation and Rules

11. Regulations on Access Management of New Energy Vehicle Manufacturers and Products Revised by MIIT

#New Energy Vehicle #MIIT

On 24 July 2020, the revised version of the *Regulations on Access Management of New Energy Vehicle Manufacturers and Products* (hereinafter, the "Access Regulations") was published by MIIT. The purpose of the revision of the Access Regulations, first published and implemented in 2017, was to adjust some of its provisions which no longer suit the present conditions. The revision work mainly involved three aspects:

- The original access requirements relating to "design and development capability" in Article 5 and in documents listed the Annex, such as the *Examination Requirements for Access of New Energy Vehicle Manufacturers,* were deleted in order to stimulate more effectively the vitality of enterprises thanks to lower access threshold.
- The maximum downtime for new energy vehicle manufacturers was expanded from 12 to 24 months. Still, in line with Article 34 (3) of the *Measures for Access Management of Road Vehicle Manufacturers and Products*, special public disclosure is required if a manufacturer cannot maintain normal operations for over two years. In this regard, the requirements of the revised Access Regulations for new energy vehicle manufacturers should stay consistent.
- The temporary provisions for the transitional period of new energy vehicle manufacturers applying for access were deleted, as the transitional period ended its two-year course on 30 June 2019. The temporary provisions applied to all new energy vehicle manufacturers and products which had gained access before the implementation of the Access Regulations.

The Annex of the Access Regulations has also been revised correspondingly according to the revision of provisions.

The revised Access Regulations will come into force on 1 September 2020.

12. Policy for Facilitating Service-Oriented Manufacturing Jointly Formulated by Fifteen Ministries

#Manufacturing

In July 2020, fifteen ministries – including MIIT – jointly published the *Guiding Opinions on Further Facilitating the Development of Service-Oriented Manufacturing*. The document outlines the development objectives of service-oriented manufacturing, namely:

1. Through the selection and nurturing of service-oriented manufacturing demonstration enterprises, platforms, projects and cities, promote the philosophy and models of service-oriented manufacturing, and increase the service input and output of manufacturers;
2. Establish a group of application service providers that control core technologies, shape a favourable ecosystem stimulating the development of service-oriented manufacturing, and contribute to the affirmation of a group of leading multinational enterprises and industrial clusters in this field, thus raising the status of China's manufacturing industry in the global industrial and value chain.

Service-oriented manufacturing represents an emerging industrial form, and it has frequently appeared in a wide range of fields and segments of the manufacturing industry. While in line with the general trend of transformation and upgrading of the manufacturing industry, service-oriented manufacturing has taken various shapes and implementation paths. The *Guiding Opinions* highlight in particular the development of nine key service models, namely: (i) industrial design services; (ii) customization services; (iii) supply chain management; (iv) shared manufacturing; (v) inspection, testing and verification services; (vi) product lifecycle management; (vii) total integration and general contracting; (viii) energy conservation and environmental protection services; and (ix) productive financial services. All these models involve service innovation within all segments of the manufacturing industrial chain, as well as horizontal and cross-cut integrated services.

In order to support the innovation of these models, the *Guiding Opinions* outline four main priority areas on which efforts will be focused: (i) advancement of IT application capabilities; (ii) standardisation; (iii) personnel training; and (iv) establishment of public service systems. With respect to standardisation, the document calls for improving service specifications and standards, specifically,

- Establishment of tailored service-oriented manufacturing evaluation systems for different fields and sectors of the manufacturing industry;
- Formulation of application-oriented standards for products and services, key technical standards, and application standards for sub-sectors, with a particular focus on issues such as data integration, interconnection and sharing;
- Exploration and launch of testing and verification of application standards;
- Strengthening of the standardised and quality-based management of industrial services, of the application of standards, and of certification and accreditation systems for relevant standards;
- Achievement of joint breakthroughs in both standards and key generic technologies of service-oriented manufacturing in relevant sectors;
- Support to patent application for innovative achievements in services, e.g. design, in order to further strengthen IPR protection;

In addition, the document positions international cooperation and exchanges as crucial for shaping a favourable environment stimulating the sound development service-oriented manufacturing. In particular, the document explicitly outlines that "*China should actively participate in the establishment of international standardisation systems and trade rules for service-oriented manufacturing, and promote the mutual recognition of standards and certification of products/services both bilaterally and multilaterally. Under the guidance of the government, Chinese manufacturers should obtain service qualifications recognised worldwide, and actively undertake international projects, so that Chinese equipment, technologies, standards, certification and services can go global*".

Background

In 2016, in order to implement *Made in China 2025*, MIIT, the National Development and Reform Commission, and the Chinese Academy of Engineering, jointly formulated the *Guidelines for the Special Project of Developing Service-Oriented Manufacturing,* aimed at guiding the development of service-oriented manufacturing from 2016 to 2018. The newly released *Guiding Opinions* can be seen as the continuation of the former document, and as such they aim to guide the development of service-oriented manufacturing over the next five years.

13. Measures for the Administration of Industrial Internet Identification (Draft for Comments) Published for Public Comments in China

#Industrial Internet

In order to contribute to the implementation of the State Council's "*Guiding Opinions on Deepening the Internet+ Advanced Manufacturing Industry to Develop the Industrial Internet*", the Ministry of Industry and Information Technology (MIIT) issued the "*Measures for the Administration of Industrial Internet Identification (Draft for Comments)"*. The draft measures were designed with the purpose of standardising the industrial Internet identification services, strengthening the development and application of industrial Internet signs, and thus promoting the healthy development of the industry. The period for comments began on 14 August 2020.

The draft measures include a total of 19 articles. The key highlights can be summarised in six points:

Firstly, the draft measures find their legal basis on six key laws and regulations: (i) *Law of the People's Republic of China on Network Security*; (ii) the *Regulations of the People's Republic of China on Telecommunications*; (iii) the *Measures for the Administration of Internet Information Services*; (iv) the *Measures for the Administration of Internet Domain Names*; (v) the *Measures for the Administration of Telecommunications Business Licenses*; and the (vi) *Measures for the Administration of the Security Protection of Communication Networks* (Article 1).

Secondly, the targets of the draft Measures are providers of industrial internet identification registration services and analytical services, including all relevant operations and maintenance services (hereinafter referred to as 'identification services'), operating from the territory of the People's Republic of China (Article 2).

Thirdly, MIIT is the body responsible for supervising identification services nationwide (Article 3), while relevant communication departments of provinces, autonomous regions and municipalities are responsible for supervising identification services within their jurisdictions (Article 4).

Fourthly, any entity that wishes to provide identification services shall apply and obtain a license from MIIT or from local-level communication departments in the locality where the entity is based (Article 6).

Fifthly, the draft measures clearly specify all the specific requirements that entities providing identifications services must meet (Article 7 to Article 16).

Sixthly, local-level communication departments will be responsible for enforcing, in accordance with relevant laws and regulations, administrative punishment on identification service providers who violate relevant laws and regulations (Article 17).

Within industrial internet, there is not and there cannot be a globally unified coding system for identification; unified application and visiting models based on identification are also not existing. Indeed, considering that the development of industrial internet is still at its primary stage, all countries have their own focuses and priorities for internet identification. For instance, in the United States, the Advanced Manufacturing Partnership focuses its attention on the supporting role that industrial internet platforms have on manufacturing; in Germany, the Industry 4.0 strategy focuses mostly on the smartification of the manufacturing process; in Japan, the internet industry emphasises the interaction, interconnection and digitalisation among humans, equipment, and systems.

In China, the purpose of these draft measures and of supporting analytical schemes for industrial internet identification, is mainly to ensure a unified entry point for searching and management: any queries should be first directed to this entry point for obtaining the information required. At the current stage, China's priority is not to achieve interconnectivity with the international community, rather to self-develop an industrial internet identification system that can later be made compatible with other international identification systems.

The period for submitting comments on the draft measures will close on 13 September 2020.

Information Security

14. Draft Data Security Law of the People's Republic of China Released for Public Comments

#Data Security

On 2 July 2020, the full text of the draft *Data Security Law of the People's Republic of China* was released online for public comments. The draft law features a total of 51 articles, divided in seven chapters: (i) general rules; (ii) data security and development; (iii) data security systems; (iv) obligations for data security protection; (v) government data security and openness; (vi) legal liability; and (vii) supplementary provisions.

The draft *Data Security Law* marks the elevation of data security to national security level. Together with the *Cybersecurity Law* (which entered into force in 2017) and with which complementarities will constantly be sought, the draft *Data Security Law* can be seen as integral part of China's concept of national security and as a supporting regulation of the *National Security Law*, and as such it has significant implications.

It is also noteworthy that Art. 49 of the draft law stipulates that all data activities involving personal information must abide by the provisions of relevant laws and administrative regulations: this leaves room in the future for the introduction and convergence with the *Personal Information Protection Law* in China. According to various analyses, it is expected that the formal implementation of the *Cybersecurity Law*, the *Data Security Law* and the *Personal Information Protection Law* will significantly contribute to the development of China's digital economy, from the dimensions of network, data and personal data.

Support to the promotion of data security and development:

The aim of the draft *Data Security Law* is to ensure the security of data throughout various data development and utilisation activities as well as overall industrial development. Chapter II of the draft law outlines various principles and support that China will give to such activities.

In particular, Art. 17 stipulates that China will establish and improve the management system for data transactions, giving legitimate legal status to data transactions and selling activities. Among these, it is expected that three key existing standards will become an important reference to promote data transactions: "*Information Security Technology Data Trading Service Security Requirements*" (GB/T 37932-2019); "*Information Technology Data Trading Service Platform Common Function Requirements*" (GB/T 37728-2019); and "*Information Technology Data Trading Service Platform Transaction Data Description*" (GB/T 36343-2018).

Data security systems:

Data security is at the very heart of the draft law. According to Art. 3, data security refers to the capability to ensure that data is effectively protected and used in accordance with the law, and that data remains in a safe state thanks to the adoption of necessary measures. These include, as outlined by Art. 4, the total adherence to the concept of national security, the establishment and improvement of governance systems, and capacity-building.

The specific responsibilities of data security management and supervision are outlined by Art. 6 and Art. 7. In particular, decision-making and coordination of data security work will be the responsibility of central national security leadership bodies, which will also supervise lower-level departments; the responsibilities of regions and departments will be limited to the data, aggregated data, processed data, and the security of data generated through their own activities and work – therefore covering the entire process from data generation to processing. The responsibilities of component authorities for the investigation and punishment of misconducts and violations are outlined in Chapter VI of the draft.

With respect to *ex ante* data protection, Art. 19 requires a classification and grade-based approach to data security. Unlike the *Data Security Management Measures (Draft for Comments)* issued in May 2019, the draft *Data Security Law* does not provide a clear definition of the scope of 'important data' protection, but leaves it to all relevant regions and departments based on specific catalogues formulated by them in accordance with national provisions. As 'important data' involves national security, the delegation of its protection to regions and departments has sparked heated debate, also in view of potential discrepancies and conflicts among important data protection catalogues of different regions and departments. How these concerns will be addressed remains to be clarified.

The draft *Data Security Law* also stipulates that China will establish centralised, unified and authoritative mechanisms for data security risk assessment, reporting, information sharing, monitoring and rapid alert; and that it will strengthen the acquisition, analysis, research and rapid alert of data security risk information. Moreover, a data security review system will be established to conduct national security reviews of data activities that affect or may affect national security, so to increase risk prevention.

With respect to *ex post* emergency response, Art. 21 stipulates that China will establish an ad hoc mechanism for the emergency handling of data security. In the event of a data security incident, the relevant competent department shall activate emergency response plans in accordance with the law, take corresponding emergency measures to eliminate safety hazards, prevent their further expansion, and timely inform the public if potentially affected.

In the context of cross-border data flows, the draft law stipulates that China will have the right to implement export control measures over data that falls into the category of "controlled items", namely items relating to the fulfilment of international obligations and the safeguarding of national security. When an overseas law enforcement agency requests the collection of data stored in the territory of the People's Republic of China, relevant departments and individuals may share it only after having obtained prior approval. In addition, the draft Law allows China to adopt countermeasures against discriminatory measures taken by other countries pertaining to data and data utilisation technologies in connection to trade and investment activities.

Finally, it is noteworthy that although the provisions stipulated by the draft apply to the collection, storage, processing, use, provision, trading and disclosure of data conducted within the territory of the People's Republic of China, they also allow China to conduct investigations for legal liability on any organisation and individual outside the territory of the People's Republic of China whose data activities harm China's national security, public interests, or the legitimate rights and interests of Chinese citizens and organisations . Though certainly presenting differences, this is in line with "long arm jurisdiction" provisions stipulated e.g. in the EU's GDPR ("any act involving the processing of EU personal data, can be governed"); indeed, some observers argue that China's scope of application of the draft *Data Security Law* is a response to similar EU and US practices.

The data security obligations of different subjects:

In addition to strong centralised supervision, the establishment of China's data security governance system also needs to rely on self-management and inter-agency cooperation. Chapters IV, V VI of the draft outline the data security obligations and security measures for different subjects carrying out data activities, and stipulate corresponding legal liabilities.

However, the current draft of the *Data Security Law* still lacks specific provisions for practical implementation. Issues such as the division of 'important data' boundaries, as well as the establishment of systems for data security, data transaction, and cross-border data flows, will still need to be clarified. Nevertheless, the publication of the draft *Data Security Law* reflects China's determination and confidence in regulating and optimising the legal system for data security in support to the digital economy.

15. 2020 China Cybersecurity Week: Cybersecurity Standards Forum Held in Zhengzhou

#Cybersecurity

On 16 September 2020, as part of the activities scheduled for the 2020 China Cybersecurity Week, the Cybersecurity Standards Forum was held in Zhengzhou, Henan province. The Forum was sponsored by the Zhengzhou Municipal People's Government, organised by the National Information Security Standardisation Technical Committee (TC260), and co-organised by the China Electronics Standardisation Institute (CESI).

During the forum, key speakers and participants stressed that cybersecurity standardisation work should be undertaken to contribute to the implementation of the decisions of the Central Cyberspace Affairs Commission, particularly with respect to:

- Strengthening top-level research on national standards on cybersecurity; optimising and improving the national cybersecurity standards system;

- Accelerating the development of urgently-needed key standards, especially on data security for online platforms and for biometric identification;
- Strengthening international standardisation exchanges and cooperation.

The forum also remarked the key directions of cybersecurity work – and in particular of cybersecurity standardisation:

- Promoting the development of urgently needed key standards;
- Making significant efforts to improve the quality of standards;
- Enhancing the timeliness of standards development;
- Dedicating to the establishment of standardisation talent teams.

Among the keynote speakers of the forum, there were: LIU Xiangang, Deputy Secretary General of TC260, who introduced the overall situation of national standardisation of cybersecurity; WANG Jianmin, Dean of Tsinghua University, who illustrated several data security standards and good practices; LI Jingchun, chief engineer of the National Research Centre for Information Technology Security, whose speech focused on the security and protection of critical information infrastructure. YUAN Jie, Deputy General Manager of Information Security Management and Operation Centre of China Mobile, who shared the achievements made in the standardisation of 5G security; LIU Bei, Director of the National Information Centre, who introduced the security standards and good practices for remote and mobile working offices; Dr HU Ying, from CESI, who provided an overview of the progress of standardisation of AI security; XUE Yongbo, from Huawei, who introduced the security standards and good practices for supply chain; and finally JIANG Zengzeng, standardisation expert from Tencent, who introduced face recognition security and standardisation practices.

As one of the important activities of this year's China Cybersecurity Week (which was held in Zhengzhou from 14 to 20 September 2020), the Cybersecurity Standards Forum played a positive role in promoting good practices and increasing awareness of the implementation and application of national cybersecurity standards.

The Cybersecurity Standard Forum was entirely recorded and can be viewed online through the following link: http://www.gjwlaqxcz.cn/forum/detail?id=11.

5G and Industrial Digitalisation

16. MIIT: Support the Participation of International Enterprises in China's 5G Development and Application

#MIIT #5G

The COVID-19 pandemic that has hit China for half a year has not slowed down the country's progress in the construction of 5G networks. On 25 July 2020, during the "2020 China Internet Conference - 5G Ecological Forum", Wen Ku, Director of MIIT's Information and Communications Development Department, revealed that more than

360,000 5G base stations had been established in China by the end of June 2020, with the number of 5G users exceeding 100 million.

Nonetheless, although progressing rapidly, 5G is also facing various issues and challenges. These include, for instance, the lack of in-depth research on the integrated application of 5G in vertical industries, the lack of exploration of new business models, and the lack of core technology capacities. To address these problems, Wen Ku outlined three suggestions at the conference:

1. Creation of an open 5G ecosystem

In order to ensure the provision of internet services that are convenient, flexible, reliable and secure, and to promote the mutual development of networks and applications, it is vital to support basic telecommunication operators and improve 5G networks. Therefore, exchange and cooperation should be deepened among basic telecommunication operators, network equipment manufacturers, terminal manufacturers, system integrators and various vertical application industries, which can enable industry leaders and SMEs to complement each other and achieve synergistic development. Furthermore, China will continue to support the participation of international enterprises in its 5G development and application process, thus sharing its 5G achievements with the world and deepening openness and cooperation, ultimately leading to win-win benefits.

2. Establishment of an innovative 5G ecosystem

China should continue its efforts to build a policy environment supporting and stimulating innovation, and raise its capabilities for original innovation, with a particular focus on the forefront of 5G industrial development. This can be fostered through strengthened R&D and innovation of leading, critical and basic core technologies. At the same time, in order to meet the demand of 5G integrated application, China should also facilitate and promote the innovation of technology applications, such as the integration of 5G with AI and big data technologies.

3. Ensuring a healthy 5G ecosystem

On the one hand, China should ramp up its efforts in the research of 5G safety technologies and standards, with the aim to achieve breakthroughs especially on the safety side. It should also welcome international organisations such as ITU and 3GPP to play a positive role in (i) establishing an evaluation and certification system that earns global recognition and trust, and in (ii) launching unified safety certification standards. In this way, challenges in 5G safety technologies can be addressed organically.

On the other hand, China should participate actively and thoroughly in the global 5G industrial chain, thus shaping a healthy ecosystem that features constructive interactions, collaborative research, openness and mutual benefits.

These suggestions indicate that the Chinese government retains an open attitude towards 5G industrial development, and that it values positively international platforms such as ITU and 3GPP.

In addition to Wen Ku's keynote presentation, during the conference two white papers relating to the 5G industry were published:

- The *White Paper on 5G Communications Development in 2020,* published by the China Institute of Communications (CIC) and Tencent: it analyses the distribution of 5G users across China, and points out that, among various 5G applications, users focus more on new cultural and creative industries (games, video, etc.), and industrial Internet (the Internet of Vehicles, telemedicine, etc.).
- The *White Paper on the Network Architecture of 5G Industry Virtual Private Network,* published by China Academy of Information and Communications Technology (CAICT) on behalf of the 5G Applications Industry

Array (5GAIA) and the Alliance of Industrial Internet (AII): it introduces the background and information of 5G industry VPN, as well as some practices and efforts by enterprises to explore VPN architecture.

17. China Mobile's Performance Shows the Enormous Power Consumption of 5G Network

#China Mobile #5G

On 13 August 2020, China Mobile published its performance report for the first half of 2020. During this period, the operating costs of the company increased drastically by 10.7 billion RMB, an astonishing increase partly resulted from increased power consumption of its 5G base stations.

According to various analysts, one single 5G base station needs two to three times more the electricity used by one 4G base station; one interviewee from China Tower revealed that the cost of electricity for operating 100,000 5G base stations is estimated at around 2 billion RMB each year. Indeed, according to data released by China Mobile, the telecom giant had established 188,000 5G base stations by the end of June 2020, from which it can be calculated that the electricity costs of its 5G base stations accounted to around 4 billion RMB.

This enormous power consumption of 5G base stations may in part explain why China Mobile has been reluctant to deploy rapidly its 5G network. By comparison, around 700,000 4G base stations were established by China Mobile alone in the first year of construction of the 4G network – confirming that the progress of 5G network is significantly slower compared to its predecessor. It is noteworthy that, by July 2020, a total of around 400,000 5G base stations had been established by China's three major telecom operators (China Mobile, China Unicom and China Telecom).

In addition to expensive operating costs, the costs for the construction of the 5G network are also much higher compared to its predecessor: 5G base stations have a smaller coverage than 4G base stations, thus requiring a much higher density which cannot be achieved by only upgrading existing stations. As if it were not enough, the wireless download speed of 5G base stations is one hundred times as much as that of 4G base stations, therefore the existing optical fibre transmission network cannot support the 5G network unless it is strengthened or rebuilt – which is way more difficult and costly.

For these reasons, the progress of deployment of the 5G network has been below the expectations. Even if China's three major telecom operators achieve the goal of building 600,000 5G base stations by the end of 2020, the scale of the network will still be much smaller than that achieved by China Mobile in the first year of the 4G network. It does not come as a surprise, therefore, that the establishment of a 5G network with nation-wide coverage is projected to take another three to five years.

18. China-led International Standard for Smart City ICT Reference Framework Released

#Smart City

On 7 August 2020, the international standard for smart city ICT framework (ISO/IEC 30145-3:20, 20 Information Technology -- Smart City ICT Reference Framework -- Part 3: Smart City Engineering Framework) was officially

released. It is the first Smart City ICT Reference Framework standard released by ISO/IEC JTC 1; its development was led by China.

The ISO/IEC 30145 series of international standards put forward, from different perspectives, the framework, principles and requirements of information and communication technologies in support to the construction of smart cities. The newly-released part 3 of the standard focuses on the engineering perspective: it provides the ICT framework, structured in layers of information and communication technologies, essential for the operation of smart cities. This framework also provides the mapping of the ICT techniques to various system entities in order to support the smart city's business, knowledge management, and operational systems from the engineering perspective. Part 1 and part 2 of ISO/IEC 30145 – respectively Smart City Business Process Framework and Smart City Knowledge Management Framework – are expected to be released in 2021. In addition, ISO/IEC JTC 1/WG 11 (Smart City Working Group) has recently started the compilation of guidelines for the application and implementation of international standards such as ICT reference framework and ICT evaluation index: these will provide systematic solutions for the overall planning of smart cities within global cities, as well as for the planning, design, construction, operation and maintenance of specific smart city ICT projects.

The ISO/IEC 30145 series of international standards is developed by ISO/IEC JTC 1/WG 11 (Smart City Working Group), together with the China Electronics Standardisation Institute (CESI) and experts from Peking University, the New Generation Standardisation Institute of the Shandong Academy of Sciences, the China Electronics Technology Group Corporation (CETC), Tencent, CETC Great Wall and other enterprises, as well as experts from the United Kingdom, Canada, Japan and other countries. The approval of this series of international standards was mainly proposed by Chinese experts, based on China's national standard *GB/T 34678-2017 Smart City Technology Reference Model* – thus representing a milestone for the internationalisation of China's smart city standards and experience in urbanisation.

CESI is the Secretariat and mirror committee in China of ISO/IEC JTC 1/WG 11. CESI has always committed to the development, application and promotion of international standards for ICT in smart cities, continuously illustrating China's smart city practices and solutions with the international community, and uniting with countries around the world to meet the challenges and opportunities of smart cities. To date, a total of ten international standards for ICT in smart cities have been approved – six of which are based on China's national standards or practical experience.

The original news in Chinese is available at: **http://www.cesi.cn/202008/6716.html**

19. 2020 (3rd) China IPv6 Development Forum held in Beijing

#IPv6

On 28 August 2020, the Expert Committee for the Large-scale Deployment of IPv6 held the 2020 (third) China IPv6 Development Forum in Beijing. The purpose of the forum was to accelerate the large-scale deployment of next generation Internet technologies based on the Internet Protocol Version 6 (IPv6), as well as to promote the divulgation of IPv6 applications and the coordinated development of IPv6 technology, industry, network, and applications.

According to academician Dr. Wu Henquan, a keynote speaker of the forum, by July 2020 more than 90% of LTE users in China were allocated IPv6 addresses, while the number of active IPv6 users reached 362 million –

corresponding to approximately 40% of total Chinese Internet users. The total IPv6 data flow on the three major telecommunication companies LTE core network reached 4372Gbps, accounting to 10% of the total. In addition, the top 100 commercial websites and applications in China can be accessed through IPv6.

Currently, the world internet based on IPv4 is facing serious problems like exhausted network addresses and low-quality services. IPv6, on the other hand, can provide sufficient network addresses and vast innovative opportunities. IPv6 is the globally recognised solution for the next generation of commercial internet applications. In this context, China has been very proactive in promoting the large-scale deployment of IPv6, releasing in recent years various key policy documents, including:

- The *Action Initiative to Promote the Large-scale Deployment of the Internet Protocol Version 6 (IPv6)*, released in 2017 by the General Office of the Central Committee of the Communist Party of China and the State Council. The document outlined a series of objectives to be reached by IPv6 by the end of 2020 in China, including: (i) number of active IPv6 users to exceed 500 million and accounting to more than 50% of all Internet users; (ii) new network addresses to abandon private IPv4 addresses; and (iii) accelerate the deployment of IPv6 in a series of priority areas, such as: China's top 100 commercial websites and applications; governments outside the network website system or above the municipal level; radio and television media website systems above the city and prefecture level; large internet databases; the top ten content distribution networks; all cloud products of the top ten cloud service platforms; 5G networks and services; as well as new mobile and fixed terminals, and international entrances and exits.
- The *Notice on Launching the Special Operation for IPv6 Network Readiness in 2019*, released by MIIT in April 2019. It outlined a detailed operation for a comprehensive IPv6 transformation of backbone networks, metropolitan area networks, and access networks.
- The *Notice on Carrying out the Special operation to Improve IPv6 End-to-End Connectivity in 2020*, released by MIIT in March 2020. Taking as core objective the improvement of the user experience of IPv6 networks and the achievement of application requirements, the document outlined three milestones for large-scale IPv6 deployment in 2020, namely to significantly improve network performance, active connections, and data flow proportions.

The Chinese government is steadily promoting the comprehensive replacement of IPv4 with IPv6, and cultivating new IPv6 application ecosystems. However, judging from the data released during the 2020 (third) China IPv6 Development Forum, it emerges that there still is a gap between the current IPv6 deployment level and the expected objectives.

Finally, it is noteworthy that during the forum, the Expert Committee for the Large-scale Deployment of IPv6 also issued the white paper of China IPv6 Development status, and hosted two thematic parallel sessions: *IPv6+ Industry Salon*, and *IPv6 and New Development in Education and Research*.

Artificial Intelligence

20. First Batch of ITU-T IoT Blockchain Standards Led by China Unicom and ZTE

#IoT #Blockchain

Recently, three Internet of Things (IoT) blockchain standards were approved at the plenary meeting of ITU-T SG20 (IoT and smart cities and communities). The standards, led by China Unicom and Zhongxing Telecommunication Equipment Corporation (ZTE), are:

- ITU-T Y. *59 Overview of blockchain for supporting Internet of Things and smart cities and communities in data processing and management aspects*. It provides use cases and practical analysis of blockchain technologies in the field of IoT (including smart cities), such as for data processing in IoT, and blockchain as a decentralised data storage platform in IoT.
- ITU-T Y. 4561 *Blockchain-based data management for supporting Internet of Things and smart cities and communities*. It starts from the characteristics of blockchain, and elaborates in detail on the demand for blockchain-based data management. On this basis, the standard further defines the reference models, functional entities and their capabilities, and interaction processes of blockchain-based data management, and also offers two implementation cases. The standard will play a guiding role in providing practical reference of blockchain-based data management services for IoT application.
- ITU-T Y. 4560 *Blockchain-based data exchange and sharing for supporting Internet of Things and smart cities and communities*. It defines the demands, functional models and platforms of blockchain-based data exchange and sharing, as well as their deployment modes. This standard will play a guiding role in achieving blockchain-based data exchange and sharing in different scenarios, e.g. through the same platform, or taking place between different platforms and/or between blockchains.

The three new standards, together with Y.4464 *Framework of blockchain of things as decentralised service platform* which was published in January 2020, constitute the first batch of IoT blockchain standards; they mark significant progress in the research on blockchain application in IoT. Y.4464, the first IoT blockchain standard ever published, proposes and defines the concept of BoT (Blockchain of Things), adds the capabilities of blockchain to IoT reference models, and elaborates on the features, general capabilities, general processes and use cases of blockchain-based distributed IoT service platforms. The standard also outlines constructive ideas and ways to offer IoT applications through blockchain technologies by IoT devices such as IoT terminals, gateways and platforms.

The four standards are all led by China Unicom and ZTE, indicating how Chinese enterprises are actively participating and committing to IoT blockchain standardisation, as well as the competitive edge that they have already gained. It also signals that China is becoming increasingly more active in international standardisation of emerging technologies.

21. Guidelines for the Establishment of the New Generation of Artificial Intelligence Standards System Released by SAC, CAC, NDRC, MOST and MIIT in China

#Artificial Intelligence

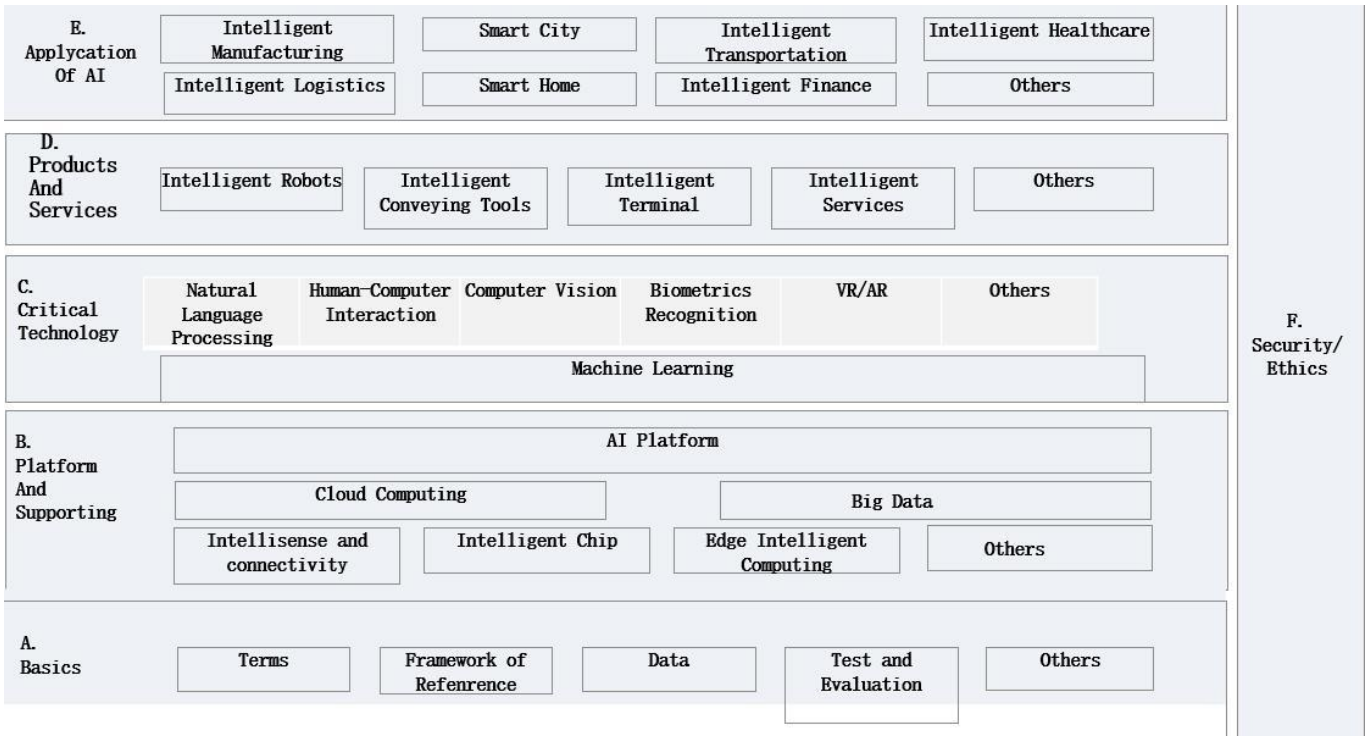
On 4 August 2020, the Standardisation Administration of China (SAC), the Cyberspace Administration of China (CAC), the National Development and Reform Commission (NDRC), the Ministry of Science and Technology (MOST), and the Ministry of Industry and Information Technology (MIIT), jointly issued the *Guidelines for the Establishment of the New Generation of Artificial Intelligence Standards System*.

The document outlines a two-stage strategy to be achieved by the national artificial intelligence (AI) standards system, namely:

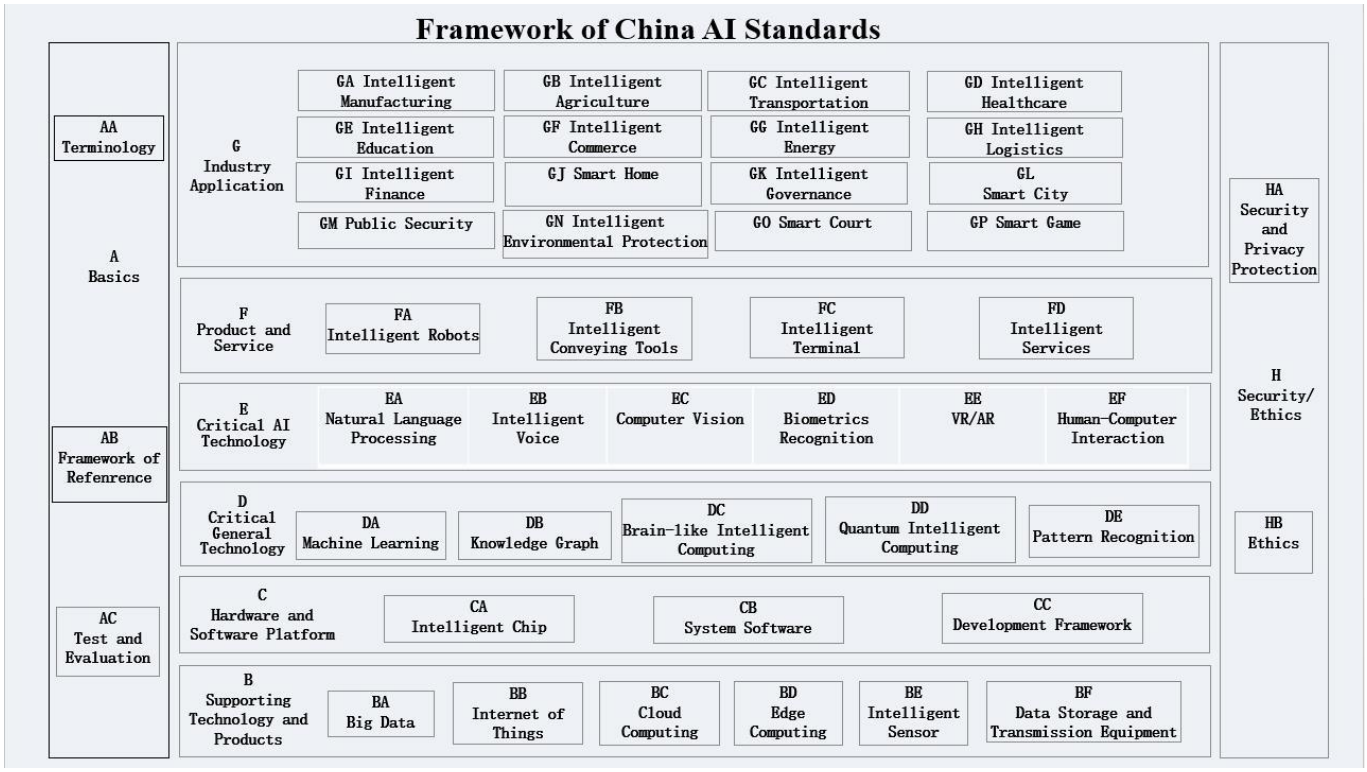
- By 2021:
    - Clarify the top-level design nature of AI standardisation;
    - Research general rules for the establishment of the AI standards system and for the development of standards;
    - Clarify the relationship between standards;
    - Complete the pre-research of more than 20 key standards, especially on critical general and AI technologies, as well as AI ethics.
- By 2023:
    - Complete the preliminary establishment of the AI standards system;
    - Focus on the development of urgently needed standards such as data, algorithms, systems and service, and promote their application in various industries such as manufacturing, transports, finance, public security, housing, elderly care, environmental protection, education, healthcare, and justice;
    - Establish a test and verification platform for AI standards, thus increasing the provision of public services.

Framework of China AI standards

According to the Guidelines, the national AI standards system framework will consist of eight parts: (i) basics; (ii) supporting technologies and products; (iii) hardware and software platforms; (iv) critical and generic technologies; (v) critical AI technologies; (vi) products and services; (vii) industrial application; and (viii) security and ethics. Previously in 2018, the China Electronics Standardisation Institute (CESI) had released the White Paper on Artificial Intelligence Standardisation (2018), which proposed a framework of China's AI standards system that covered the status of AI technology, industry and standardisation both in China and abroad (Figure 1).



However, although the White Paper was developed under the overall guidance of SAC, it was still seen as a report from a professional standardisation institute, rather than from a state agency, and as such it could only be used as a general reference for the development of AI standards. The newly-released *Guidelines for the Construction of a New Generation of Artificial Intelligence Standards System*, developed by five key central regulators, overcome this issue: the new framework proposed is a significant improvement and refinement of the version previously proposed by CESI (Figure 2).



China AI standards

The Guidelines provide definitions for all kinds of AI standards, and illustrate the key points for their development according to the two-stage strategy for the establishment of the AI standards system. In the annex, the Guidelines provide a detailed list of the development directions and priorities of 63 kinds of AI standards, focusing on technology, industry application and security. However, no lists of standards already issued, currently under research or under planning, is provided in the Guidelines.

The Chinese version of the *Guidelines for the Construction of a New Generation of Artificial Intelligence Standards System* can be accessed, for free, at this link: http://www.miit.gov.cn/n1146290/n1146402/c8048502/part/8048508.pdf

22. TC28's Subcommittee 42 on Artificial Intelligence Established in Beijing

#Artificial Intelligence

On 6 August 2020, the kick-off meeting and first plenary meeting of the Subcommittee 42 on Artificial Intelligence of SAC's National Technical Committee 28 on Information Technology (SAC/TC28 SC42), was held in Beijing. More than 70 experts from various artificial intelligence (AI) fields, including production, education, research, and application, attended the meeting in person; they were joined by 300 other experts who participated via online platforms.

SAC/TC28 SC42, as the mirror committee of ISO/IEC JTC 1 SC 42, is mainly responsible for the development and revision of AI-related standards, which cover AI basics, technology, risk management, trustworthiness, governance, products and applications. During the meeting, a general working group was established; four research groups were also established for models and algorithms, chips and systems, products and services, and trustworthiness.

The charter of the subcommittee and its work plan were also reviewed. In 2020, the main activities of SAC/TC28 SC42 will be to:

- Improve organisational building and management, including the establishment of an e-mail account where public comments on the working group will be received; as well as the finalisation of the Subcommittee's online platform, logo, and procedures for recruiting members;
- Continue research and development of AI standards, especially on AI graph and framework. Initiate proposals for standards on AI evaluation models
- Complete research on new infrastructure, and finalise the first draft of the research report by December 2020;
- Strengthen international cooperation, particularly with ISO and IEC. Accelerate the conversion of national standards into international standards.

Energy Efficiency and Environment

23. Overview of China's Energy Conservation Policies and Measures

#Energy Conservation

China is constantly exploring new ways and paths for energy conservation in order to achieve green development. Over the past few years, numerous energy conservation policies and measures have been formulated and implemented at all levels throughout the country, promoting energy conservation in a variety of fields such as industry, construction, transportation, public institutions and residential buildings.

China's energy conservation policies and measures mainly focus on seven aspects: (i) improving overall planning and target management; (ii) improving laws, regulations and standard systems; (iii) raising public awareness and organising the National Energy Conservation Week; (iv) promoting policy and market mechanisms; (v) facilitating R&D and dissemination of technologies; (vi) improving the management of key energy users; and (vii) participating in international energy efficiency cooperation.

1. **Improving overall planning and target management**

Since the 11th Five-year Plan (2006-2010), China has set up clear national targets for energy conservation to be achieved over each Five-year period. For instance, for the 13th Five-year Plan, the overall targets for energy conservation include a 15% drop by 2020 in national energy consumption per 10,000 CNY of GDP compared with 2015, and less than 5 billion tons of standard coal of total energy consumption. It has also made significant efforts to improve overall work management and planning by formulating the *Energy Conservation and Emission Reduction Comprehensive Work Plan*, which allocates detailed tasks to specific levels, regions, sectors and key energy users, and introduced a Target Responsibility Evaluation mechanism to evaluate the work of all levels of government and key energy users.

2. **Improving laws, regulations and standard systems**

In China, the major national law for energy conservation is the *Energy Conservation Law*, which was first enacted in November 1997, and then reviewed in 2007, 2016 and 2018. The Law stipulates the overall principles for energy conservation in areas including industry, construction, transportation, public institutions and key energy users. A series of supporting regulations have also been formulated and/or reviewed by the central government to facilitate the implementation of the Law, including: the formulation and revision of the *Administrative Measures for Energy Efficiency Labels* and the *Administrative Measures for Energy Conservation of Key Energy Users*; and the formulation of the *Measures for Energy Conservation Supervision* and the *Measures for Energy Conservation Review of Fixed Asset Investment Projects*.

As for China's energy conservation standard system, there currently exist 340 national standards – 200 of which are mandatory – covering all key sectors and facilities. Standardisation efforts continue to be made in order to support and meet the growing demand for energy conservation: for instance, the development of standards for

energy conservation is listed among the key priorities of MIIT's *Key Work Points for the Standardisation of Industry and Communication Technology in 2020*.

3. **Raising public awareness and organising the National Energy Conservation Week**

- Organisation of ten energy conservation campaigns

In 2008, The State Council announced ten energy conservation campaigns to increase public awareness of energy conservation:

- Experience energy shortage;
- Drive one less day per week;
- Restrict indoor temperature and reduce the use of elevators;
- Restrict the use of streetlight and landscape lighting;
- Use energy conservation products;
- Use environment-friendly products;
- Reduce the use of disposable items;
- Wear casual clothes during official businesses in summer;
- Foster energy conservation habits;
- Promote energy conservation policies.

These campaigns have been implemented successfully throughout the decade, and some have even become integral part of the daily lives of Chinese people.

- National Energy Conservation Week

The National Energy Conservation Week was created in 1990 during the sixth meeting of the State Council's energy conservation office, with the objective to raise public awareness of energy conservation. Since 1991, the activity has been held every year, gradually growing into a flagship nationwide campaign organised by 14 national ministries, including NDRC, the Ministry of Ecology and Environment, the Ministry of Education, MIIT, etc. For each annual edition of the Energy Conservation Week, a specific theme is chosen that best serves the need at the time for energy conservation, with various activities held nationwide.

In 2020, the 30th National Energy Conservation Week was held from 29 June to 5 July, with the main theme being "save energy and increase efficiency for lucid waters and lush mountains". Numerous activities were organised to showcase and disseminate energy conservation concepts, knowledge, products and technologies, and to promote public energy conservation and consumption of green products.

4. **Promoting policy and market mechanisms**

- Market mechanisms

In China, market mechanisms have constantly been improved to provide more effective support to energy conservation. Policies and measures in this regard include:

- Favouring price, tax and financing policies supporting energy conservation, e.g.: the introduction of a price-based resource tax on coal; the transformation of environmental protection fees into taxes; differential

and punitive electricity prices; tiered pricing for electricity for energy-intensive industries and enterprises; etc.;

- Establishment of certification systems for energy conservation products, such as the Energy Conservation Certification;
- Launch of the Energy Efficiency "Top Runner" Program, under which detailed lists of energy-efficient products, enterprises and public institutions are selected and published to represent key benchmarks for energy conservation, and to incentivise others to follow;
- Reimbursable use of energy rights and pilot energy right trading;
- Energy Performance Contracting (EPC) model, an investment model by which the cost of energy conservation projects can be reimbursed by saved energy costs.
- Government tax relief and financial support

In China, government tax relief and financial support has always played a vital role to stimulate individuals and enterprises to reduce the use of energy. The following policies and measures have been implemented in this regard by the Chinese government:

- Preferential VAT policies, such as VAT exemptions or refunds;
- Corporate Income Tax (CIT) incentives, such as CIT deduction for special equipment for energy and water conservation, and CIT reliefs for energy and water conservation projects, EPC projects, and the Clean Development Fund;
- Individual Income Tax incentives, such as Individual Income Tax exemptions for energy conservation awards;
- Vehicle and boat tax incentives, such as vehicle and boat tax exemptions and deduction for electric vehicles, fuel cell vehicles and new energy vehicles;
- *Interim Measures on Special Management of the Central Budgetary Investment in Ecological Development*, which specifies the central government's financial support for major projects in resource conservation and cyclic utilisation, environmental pollution control, and the energy conservation and environmental protection industry.

5. **Promoting R&D and dissemination of technologies**

In order to provide a technological foundation for China's energy conservation efforts, numerous policies and measures have been formulated and widely adopted to encourage the R&D and dissemination of energy conservation technologies. Some examples include:

- R&D: organisation and execution of commercialisation/industrialisation projects for key energy conservation technologies; facilitation of R&D and commercialisation/industrialisation of emerging energy conservation technologies and equipment; and promotion of the integrated application of energy conservation systems.
- Dissemination: establishment of a market-oriented green technology innovation system; collection from the public of proposals for advanced green technologies; appraisement and selection of the first batch of green technologies; and facilitation of R&D, transfer and promotion of green technologies in response to market demands.

Relevant policy documents recently issued by the National Development and Reform Commission include:

- The *Green Industry Guidance Catalogue (2019 edition)*, in February 2019;
- The *Guiding Opinions on Establishing of a Market-oriented Green Technology Innovation System*, in April 2019;
- The *Notice on the Organisation of Green Technology Recommendation*, in June 2020; and
- The *Notice on the Establishment of the Green Industry Demonstration Base*, in July 2020.

It is also noteworthy that after China joined the Mission Innovation initiative in 2015, a global initiative of 24 countries and the European Commission working to reinvigorate and accelerate global clean energy innovation, China committed to double its investment in clean energy research and innovation by 2020. To this end, it has significantly supported R&D investment in clean energy through National Key R&D Programmes (also called Megaprojects). Fifteen out of 64 currently-existing National Key R&D Programmes (NKPs) are dedicated (fully or partially) to R&D in clean energy, including projects for new energy vehicles, highly-efficient development and utilisation of water resources, magnetic confinement fusion, smart power grid technologies and green building.

6. **Improving the management of key energy users**

The management of key energy users is of great significance for raising overall energy efficiency and for controlling energy consumption levels. In this regard, a series of policies and measures have been rolled out by China, including:

- Identification and mapping of key energy users;
- Allocation to specific key energy users of "double control" targets, i.e. control of both quantity and intensity of total energy consumption;
- Promotion of a voluntary commitment system calling for energy users to participate voluntarily and meet certain energy conservation requirements. The list of enterprises who have fulfilled the commitment will be disclosed publicly;
- Requirement for key energy users to submit periodic reports on energy consumption;
- Appointment of responsible person for energy management in key energy users;
- Establishment of an online energy consumption monitoring system for key energy users.

7. **Participating in international energy efficiency cooperation**

China has become increasingly active in international energy efficiency cooperation. A flagship initiative is the G20 Energy Efficiency Leading Programme (EELP) approved in 2016 during the G20 Hangzhou Summit. The programme, which is mainly led by the Chinese government, outlines long-term targets, cooperation principles and fields, as well as implementation mechanisms for energy conservation in all G20 countries. The key priority fields listed in the programme include: means of transportation (especially heavy trucks); interconnected equipment; energy efficiency financing; construction; energy management; power generation and super-efficient equipment; TOPTENs (top ten energy efficiency technologies and top ten implementations); regional energy systems; frameworks for sharing energy efficiency knowledge; terminal energy consumption data; and measurement of energy efficiency. The programme reflects China's "go global" policy as well as its growing influence in international cooperation on energy efficiency.

In addition, since China's participation in the Mission Innovation initiative from 2015, China has been a very active player in international cooperation on clean energy research. The two main channels through which the Chinese government supports international cooperation in clean energy research are intergovernmental cooperation NKPs

which open to universities, research institutes and enterprises, and the establishment of joint research partnerships or facilities between Chinese public institutions and foreign governments or institutions.

In conclusion, China has formulated and implemented, at all levels, a wide range of energy conservation policies and measures. These represent a solid proof of China's determination and commitment to shift towards a green country. Such efforts are expected to be continued and even intensified in the future to achieve more ambitious energy conservation targets, a stricter Target Responsibility Evaluation mechanism, to substantially improve energy conservation in key fields, and to divulgate and raise more widely energy conservation awareness.

24. National Energy Administration of China: Guiding Opinions on Accelerating the Establishment of New Standard Systems for Energy

#Energy

On 24 June 2020, the National Energy Administration (NEA) published a call for comments on the *Guiding Opinions on Accelerating the Establishment of New Standard Systems for Energy*, which were jointly formulated with the Standardisation Administration of China (SAC). SESEC's summary of the key highlights of the document are:

Objectives of the reform:

- Clearly define the role of the government and of the market in energy standardisation, and specifically the scope of the standards led by the government and that of standards led by the market;
- Determine the scope, boundaries and levels of new energy standard systems, based on science as well as on the industrial development and standardisation progress of sectors including electricity, nuclear power, coal, oil gas, new energy and renewable energy, and electric devices; efforts to constantly improve these standard systems should be made.

Standard Systems:

Mandatory standards for the energy sector should be confined to those areas affecting people's health, personal and property safety, national security, and ecological and environmental security, as well as to those areas relating to the basic requirements of socio-economic management. Specifically, standards that fall into these categories mainly include standards for electrical safety, petroleum products, environmental protection that involves energy, energy efficiency, energy consumption quotas per unit of product, and engineering construction.

Recommended standards should highlight their public-welfare nature. Recommended national standards can, in general, be classified into three types:

- Basic generic standards that stipulate terminology, graphic symbols, classification and coding for energy and other industries;
- Testing methods and measurement standards that are complementary to mandatory standards and that contribute to their actual implementation;
- Standards that play a leading role in their corresponding industries.

Association standards should continue to be led by the market, with the focus on raising competitiveness. The future development of association standards should put strong emphasis on new technologies, sectors, modes and models of energy, in harmony with the implementation of national and sectoral standards.

Based on the clarified scopes of national, sectoral and association standards, the definition of each standard level should also be set in a scientific manner. The boundaries of generic basic standards and of standards

for products, services, technology and management, should be properly defined, thus contributing to the shaping of a clear standard system which also meets the needs for international standardisation exchange and cooperation.

Management of standards:

In order to give full play to market forces, the number of newly-released energy sectoral standards should be limited by (i) expanding the coverage of each standard, and (ii) facilitating the serialisation of standards. In sectors such as electricity, coal, oil gas and electrical devices, further efforts should be made for the coordination, integration and optimisation of recommended national standards with sectoral standards for energy.

The selection of the most appropriate association standards should rely on market competition. This entails research to establish an effective mechanism for the conversion of association standards into national or sectoral standards. Besides, a complaint and reporting mechanism for association standards should also be built, according to which an evaluation of good practices can be conducted by the administrative bodies for energy standardisations established by NEA and all relevant standardisation technical committees (TCs).

Development of standards:

The priority for the establishment of new standard systems for energy should be put on emerging sectors, such as intelligent energy, the Internet of Energy, wind power, solar power, biomass energy, energy storage, and hydrogen energy.

In principle, the establishment and management of standardisation TCs, as well as the formulation of standard development and revision plans, should be carried out on the basis of the energy standard systems.

Coordination of work:

Energy standardisation TCs should be responsible for the establishment of national standard systems and sectoral standard systems for energy, as well as for the design and maintenance of standard system diagrams. In case of contradictions emerging during the establishment of energy standard systems, such as overlaps among the scopes of work of various TCs or administrative bodies, these should be adjusted and coordinated for the former by administrative bodies for energy standardisation, and for the latter by NEA and SAC.

Social organisations that develop association standards should comply with relevant regulations, keep standard systems coordinated and unified, and ensure that association standards are aligned with national and sectoral energy standards.

Information Disclosure:

Constant efforts should be made to facilitate the disclosure of information on recommended national standards and sectoral standards for energy, adhering to the principle that 'publication is the norm, non-disclosure is the exception'. Based on the needs of their work, energy standardisation technical organisations should disclose, in a timely manner, information and diagrams of the energy standard systems on relevant standardisation information platforms, and organise divulgation services.

In general, the *Guiding Opinions on Accelerating the Establishment of New Standard Systems for Energy* reflect the implementation of the standardisation reform specifically in the energy field. The document sets a clear definition of the role and relationships of all levels of energy standards, and outlines the needs for executing and coordinating standardisation work among all actors involved. At the same time, the document also suggests that the government still holds prominent control over the standardisation work in the energy field. For example, the development of association standards should be carried out under the standard systems designed by the government, should align with government standards, and should be subject to government-led performance evaluation. Finally, although the disclosure of information is a requirement clearly highlighted in the document, the specific requirements of information disclosure

remain vague: this may potentially result in difficulties for enforcement, or worse in apparently but not essentially public information.

25. Guiding Opinions on Strengthening the Standardisation of Green Packaging for Express Delivery Issued by Eight Chinese Central Government Departments

#Green Packaging #Express Delivery

On 9 August 2020, the State Administration for Market Regulation (SAMR), the National Development and Reform Commission (NDRC), the Ministry of Science and Technology (MOST), the Ministry of Industry and Information Technology (MIIT), the Ministry of Ecological Environment (MEE), the Ministry of Housing and Urban-Rural Development (MOHURD), the Ministry of Commerce (MOFCOM), and the State Post Bureau (SPB), jointly issued the *Guiding Opinions on Strengthening the Standardisation of Green Packaging for Express Delivery*. The Guiding Opinions constitute a comprehensive plan, for the next three years, for standardisation work in the field of green packaging for express delivery services in China.

Background

For the last six consecutive years, China has ranked first in the world in terms of volume of express deliveries. According to estimations, every year the industry generates more than 9 million tons of paper waste and about 1.8 million tons of plastic waste – and the figures are continuing to grow rapidly. The impact of the industry on the environment can no longer be neglected. Standards are seen as effective tools in this regard, especially for making express delivery packages greener, lighter and recyclable. Therefore, the strengthening of standardisation work for promoting green packaging and to curb pollution, has recently become a key requirement for the transformation, upgrading and sustainable development of China's express delivery industry.

At present, China has already developed a series of standards on express delivery packaging, covering envelopes, bags, boxes, biodegradable tapes, and electronic waybills; they all play a positive role in supporting the green development of the express delivery industry. However, following the rapid transformation and development of the industry as well as its deeper integration with other sectors such as transportation and manufacturing, a set of urgently needed standards needs to be developed, covering new materials, technologies and products for green packaging, as well as the integrated operations of the industry.

In this context, and in order to promote "green, light and recyclable" packaging for the express delivery industry, the newly-released Guiding Opinions outline the overall goals of China's standardisation work for express delivery green packaging in the next three years, mainly focused on overcoming four key existing problems:

- Upgrade the green packaging standard system for express delivery, by increasing its coverage to also include products, evaluation, management, safety, research and development, design, production, use, recycling, and treatment.
- Address the existing inadequacies of standards in certain key areas, by accelerating the development of important standards covering the application of new materials, the connection between the upstream and downstream industries, as well as the recycling system, so to improve the overall utilisation rate of express delivery packages.

- Promote the effective implementation of standards. On the one hand, relevant departments are encouraged to (i) adopt express delivery green packaging standards when formulating relevant laws and policies, (ii) strengthen coordination, and (iii) incorporate the implementation of standards into the overall supervision and management of the express delivery and e-commerce industries. On the other hand, e-commerce operators and express delivery enterprises are encouraged to purchase express packaging products in line with green standards.
- Improve the internationalisation of Chinese green standards, by strengthening international exchanges and cooperation, by showcasing China's good practices in express delivery green packaging, and by actively participating in international standardisation activities to promote the development of relevant international standards.

In the following months, firmly grounded on the green concept outlined by the Guiding Opinions, SAMR will continue to guide the development of a set of important and urgently needed standards, and to constantly improve the express delivery green packaging standard system by incorporating the full life cycle of design, materials, production, use, evaluation, recycling and disposal. The efforts of SAMR will significantly contribute to the "green revolution" of express delivery packaging.

The Chinese version of the *Guiding Opinions on Strengthening the Standardisation of Green Packaging for Express Delivery* can be accessed, for free, at this link: http://www.gov.cn/zhengce/zhengceku/2020-08/09/content_5533459.htm.

26. 2020 Green Computing Standards and Industry Summit held in Shenzhen

#Green Computing #Standards

On 15 August 2020, the Green Computing Consortium (GCC) held the 2020 Green Computing Standards and Industry Summit during the 8th China Information Technology Expo – the key expo for the electronic information industry sponsored by the Ministry of Industry and Information Technology (MIIT) and the Shenzhen Municipal People's Government.

In early August 2020, the State Council issued the *Several Policies for Promoting the High-Quality Development of the Integrated Circuit Industry and the Software Industry in the New Era*. The document outlined a set of supportive policies for the innovation of integrated circuits and software; it now represents a key guiding and reference document for the establishment of the green computing technology system, and even for the whole open innovation ecosystem in the field of information technology. During the 2020 Green Computing Standards and Industry Summit, GCC illustrated the three main priorities for upcoming work and activities:

- Adhere to open source, openness and innovation, and jointly contribute to the establishment of the green computing technology and industrial ecosystem;
- Increase the promotion of technology applications, and expand the demonstration effect of valuable industries; and
- Strengthen the integration among production, education and research, and jointly build a system for technological innovation and personnel training.

The Summit highlighted the key role that standards play in supporting green computing. In particular, the leader of the GCC Standard and Evaluation Working Group introduced the development processes of relevant standards based on the latest GCC standard

architecture, including: (i) Technical Requirements for Green Computing Server Security; (ii) Technical Requirements for Green Computing Server Basic Input and Output System (BIOS); (iii) Technical Requirements for Green Computing Server System Management; (iv) Evaluation Specifications for Server Sub-Scene - Big Data Scene; (v) Evaluation Specifications for Server Sub-Scene - Distributed Storage Scenarios; (vi) Evaluation Specifications for Server Sub-Scene - High Performance Computing Scenario; and (vii) Evaluation Specifications for Server Sub-Scene - Web Application Scenario.

In addition, the Deputy Director-General of MIIT's Electronic Information Department, in his speech, highlighted the necessity for standardisation activities to focus on the key fundamental standards and on system architecture, application and validation. These will provide basic safeguard and support for technological development and the construction of the ecosystem, as well as high-performance, low-cost, scalable, and easy-to-manage products and solutions to users, ultimately contributing to the continuous improvement of the business value and market competitiveness.

Background:

The Green Computing Consortium, referred to as "GCC", is a non-profit social organisation voluntarily formed by actors from all over the industrial chain, including technology providers, manufacturers, system integrators and enterprise users. GCC mainly follows the main IT development trends of open source software and open hardware. Specifically, based on open technologies such as ARM computing chip, it provides green and energy-saving products that are easier to use and manage for the end enterprise users.

The original news in Chinese is available at: http://www.cesi.cn/202008/6750.html.

27. Notice on Beginning the Recommendations for National Green Data Centres in 2020, published by MIIT and other 6 central government bodies

#Green Data

On 6 August 2020, the Ministry of Industry and Information Technology (MIIT), the National Development and Reform Commission (NDRC), the Ministry of Commerce (MOFCOM), the National Government Office Administration (CNGOA), the China Banking Regulatory Commission (CBRC), and the National Energy Administration (NEA), jointly issued the *Notice on Beginning the Recommendations for National Greed Data Centres (2020)*.

Concerned about the serious waste of resources and energy currently affecting some data centres in China, Chinese government established the National Green Data Centre programme, aiming to guide Chinese data centre industry to shift towards a more efficient and environment-friendly model of growth. Chinese government have also issued several policies to improve the standards for green data centres.

Specifically, every year MIIT and other key central government bodies jointly select a batch of National Green Data Centres from the various data centres operating in production and manufacturing, telecommunications, public services, energy, finance and e-commerce. The basic requirements that must be met by candidates are:

1. Possession of independent legal personality and clear ownership rights. Abiding by relevant laws and regulations during the construction and operation of the data centre. No records in the past three years of safety or environmental accidents, of law infringements, or of breach of trust as recognised by judicial or administrative bodies.
2. Clear and complete physical boundaries of the computing system, independent power supply and distribution, and deployment of refrigeration systems in line with the *Action Plan for Green Efficient Refrigeration*. This Action Plan highlights several tasks for refrigeration standards, including:

- Raise the energy efficiency standards of refrigeration products, phasing out ones with low-efficiency. The energy efficiency limits of major refrigeration products should meet the access requirements for energy efficiency in developed countries, and should try to achieve the leading role of the first-level energy efficiency indexes worldwide.
- Promote green and efficient refrigeration consumption, and encourage the inclusion of green and energy efficiency indexes as part of the tender evaluation criteria of products, so as to increase the role and importance of the indexes.
- Further cooperation with the international community, especially through analysis of refrigeration energy efficiency standards and evaluating methods in different countries, so as to promote regional and international coordination and mutual recognition of standards.

3. Follow the *Guiding Opinions on the Construction and Distribution of Data Centres*, which highlight the need to increase efforts in the standardisation of data centres, specifically by developing and assessing the standards and evaluating methods for energy efficiency, services and safety.
4. Not included, in the previous year (2019), in the *Rectification List for Special Supervision of the Industrial Energy Conservation and Efficiency of Data Centres*.

Candidates officially selected as National Green Data Centres will receive capital and industry support by the government through favourable policies. This means that National Green Data Centres will have more advantages compared to other actors in the sector, as well as more opportunities to develop in a more sustainable way. This also sends an important signal to foreign data companies in China to comply with higher energy efficiency standards while improving the reliability of their services.

28. 2020 Annual Meeting of the Working Group on Green Manufacturing Standards for Automobile Industry Held in Tianjin

Automobile #Green Manufacturing

On 10 September 2020, the National Technical Committee for Auto Standardisation (NTCAS) held the “2020 Annual Meeting of the Working Group on Green Manufacturing Standards for the Automobile Industry" in Tianjin. The meeting was attended by more than 20 experts from the Auto Standardisation Research Institute (ASRI) of CATARC (the SOE holding the NTCAS), automotive original equipment manufacturers (OEMs), universities and testing agencies.

During the meeting, the representatives of the working group first provided an overview of the work and progress of the working group in 2020. In particular, they presented the framework of the standards system of green manufacturing and circular economy in the automotive industry, reviewed the projects on industrial energy

conservation and green standardisation, and also summarised the progress of standardisation research, outlining proposals for follow-up actions.

Then, the working group discussed in detail the drafts of various standards, including:

- *Guidelines for Green Factory of Automobile Industry*;
- *Calculation Method of Overall Energy Consumption for Per Unit Output of Automobile Products;*
- *Calculation Method of Overall Water Consumption for Per Unit Output of Automobile Products*;
- *Evaluation of Green Supply Chain Management Practices in Automobile Industry*;
- *Technical Specification for Green-design Product Assessment for Automobiles*.

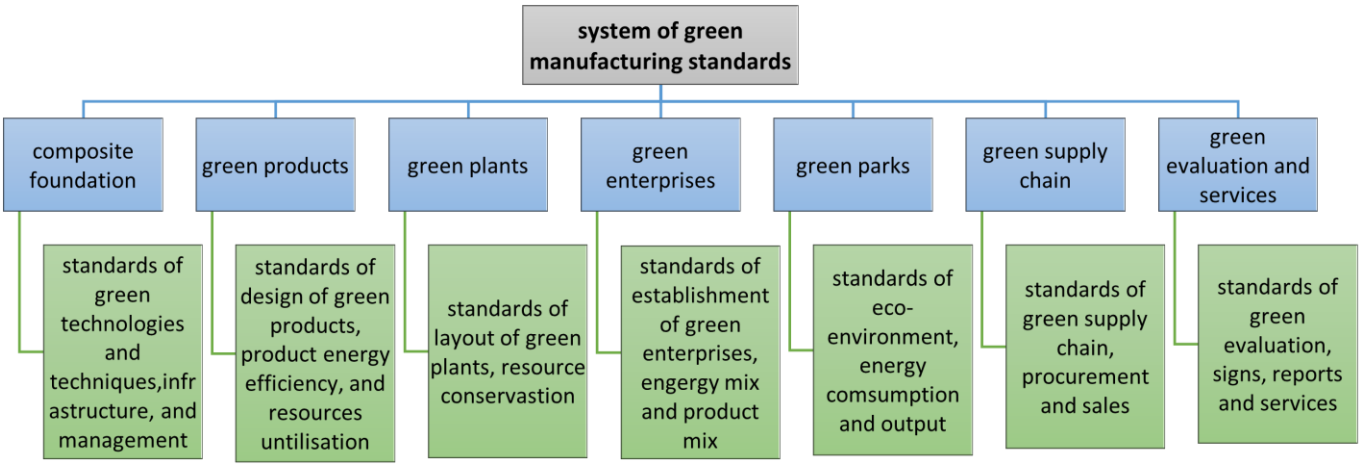
In particular, the experts focused their discussion mostly on the first document (which has been indicated as the key framework document guiding the establishment of the green manufacturing standards system), specifically on how to improve the applicability of the guidelines, its evaluation index weight, and the limit requirements of partial clauses. The *Guidelines for Green Factory of Automobile Industry* is expected to set up an evaluation index system for green factory that meets the needs of industrial development, guiding the automobile industry to efficiently manage green factories and thus standardise the green manufacturing in factories.

Background:

Following stricter laws and regulations on energy and environmental protection, and the growing momentum for the establishment of green factories, the automobile industry is burgeoning and consuming more energy. At the same time, however, there is a lack of evaluation methods and detailed rules for automobiles green factories in China – highlighting the need to formulate evaluation standards and rules for the industry, thus contributing to green manufacturing.

The Working Group on Green Manufacturing Standards for the Automobile Industry was established by NTCAS against this backdrop, and to improve green manufacturing standards of the auto industry. Its establishment is also seen as a response to the call of the Ministry of Industry and Information Technology (MIIT) and the Standardisation Administration of China (SAC) to establish a green manufacturing standards system – which is illustrated in detail in the *Guidelines for the Establishment of the Green Manufacturing Standards System* jointly formulated by MIIT and SAC. This document is aimed at implementing the *Made in China 2025* initiative and promoting the standardisation of green manufacturing.

The document highlighted that the energy-saving and comprehensive utilisation standards systems in various industries and telecommunications should be combined into an integrated system of green manufacturing standards – which is divided into seven key aspects: composite foundation, green products, green plants, green enterprises, green parks, green supply chain and green evaluation and services:



As one of the major industries underpinning the establishment of the green manufacturing standards system, the automobile industry will follow the seven key aspects above. The standards revised by the working group can contribute to improve the whole system of green manufacturing standards in the auto industry, and provide foundation for the green evaluation of automobiles in the future.

Intelligent Transportation

29. MOT(China) Calls for Comments on the Guidelines for the Establishment of the Internet of Vehicles National Standards System — Intelligent Transportation (Draft for Comments)

#MOT #Internet of Vehicles

On 29 July 2020, the Ministry of Transport (MOT) published a call for comments on the *Guidelines for the Establishment of the Internet of Vehicles National Standards System—Intelligent Transportation (Draft for Comments).*

The Draft outlines two specific goals for the development of the Internet of Vehicles (IoV) national standards system:

- By the end of 2022, a preliminary standards system that supports IoV applications and industrial development should have been established. A set of standards for intelligent transportation should have been formulated, covering fields such as infrastructure and driver assistance. At least 20 standards should be formulated or revised over this period.
- By the end of 2025, the standards system should have become mature. A set of key standards for intelligent vehicles should have been formulated, covering fields from intelligent management and services to vehicle-infrastructure integration. 20 additional standards should be formulated or revised over this period, bringing the total number of IoV standards to 40.

The *Guidelines for the Establishment of the Internet of Vehicles National Standards System* is a serial policy document issued by MIIT and SAC. It consists of six parts, five of which have already been released, namely:

- *Information Communication*
- *Electronic Products and Services*
- *Intelligent Connected Vehicles*
- *Intelligent Vehicle Management*
- *Overall Requirements.*

The newly-released part, by MOT, on *Intelligent Transportatio*n, is in fact the last piece of the jigsaw of China's IoV standards system. IoV entails the coordination of multiple technical areas and administrative bodies; among them, MOT has always been in charge of the standardisation work for intelligent transportation. The release of the new Guidelines signals that China has completed the integration of IoV standardisation work based on an inter-ministerial coordination mechanism. Moreover, the new document on intelligent transportation has largely benefitted from MOT's well-established standardisation experience in the field, as can be seen from the completeness and thoroughness of the draft compared to the other parts of the IoV standard system.

Market Access

30. CNCA Notice on Further Facilitating CCC for Products Including Explosion-Proof Electrical Equipment

#CNCA #CCC

On 4 August 2020, the Certification and Accreditation Administration of China (CNCA) released a set of guiding opinions to facilitate the obtainment of China Compulsory Certification (CCC) for various products, including explosion-proof electrical equipment, gas burning appliances for domestic use, and household refrigerating appliances with a capacity of over 500 litres. The key highlights of the opinions include:

1. Fully implement the *Notice of the SAMR's General Office on Carrying out Quality Certification Work amidst COVID-19 Prevention and Control*, which allows CCC application materials to be reviewed during the pandemic, while on-site examination to be postponed or carried out after the pandemic. For more details about the document, visit: http://www.gov.cn/zhengce/zhengceku/2020-02/04/content_5474547.htm.
2. While ensuring the validity of CCC, recognise the assessment results of international bilateral and multilateral certification systems that China has joined, recognise the examination and testing results of production licenses for industrial products, and adopt the information of other voluntary certification assessment systems, in order to avoid repeated evaluations and thus reduce the financial and time burdens for obtaining certificates.
3. When encountering difficulties, due to the pandemic, in sending inspectors to overseas factories for inspection, certification institutions are encouraged to conduct such inspections through online platforms or through entrustment of overseas institutions.

4. Help enterprises to acquire certificates by 1 October 2020 by all means possible, especially for entrusted certification still under application. Such support should include arranging technical personnel to conduct one-to-one communication with enterprises, increasing policy divulgation efforts, and actively providing technical services. The aim is to prevent delays in acquiring certificates and consequent impact on imports and sales, due to lack of knowledge on CCC policies and technical requirements.

In July 2019, CNCA published an announcement for relevant enterprises to complete the transition from production licenses to CCC by 1 October 2020. Since then, enterprises have often filed complaints on the transition period considered too short. As shown in these newly-released measures, CNCA has adopted various flexible measures, but has not changed the length of the transition period. As a result, relevant enterprises should actively use all the supporting measures offered by CNCA in order to obtain CCC for their products as soon as possible.

Annex-SESEC Upcoming Online Events

SESEC IV Online Event 18: China AI Policy, Regulation and Standard Update

On 4 August 2020, the Standardisation Administration of China (SAC), the Cyberspace Administration of China (CAC), the National Development and Reform Commission (NDRC), the Ministry of Science and Technology (MOST), and the Ministry of Industry and Information Technology (MIIT), jointly issued the Guidelines for the Establishment of the New Generation of Artificial Intelligence Standards System. And on 6 August 2020, the kick-off meeting and first plenary meeting of the Subcommittee 42 on Artificial Intelligence of SAC's National Technical Committee 28 on Information Technology (SAC/TC28 SC42), was held in Beijing. So SESEC IV will organize Online Event 18 on "China AI Policy, Regulation and Standard Update" on 12 November 2020, to summarize the recent update of information on AI.

Dr. Betty XU, the SESEC expert, will give an introduction to the update of China AI policy, regulation and standard.

Detailed information is as follows:

Topic: "China AI Policy, Regulation and Standard Update"

Time and Date: 9:30- 10:30 am Brussels time, Thursday, 12 November 2020

Presenters: Dr. Betty XU

Language： English

Please register your participation to SESEC IV Online Event 18 via following links:

https://yxmc.webex.com/yxmc-en/onstage/g.php?MTID=ee6df0536f36b070f6bb7d43ff3540d17

SESEC IV Online Event 19: Industrial Internet Policy, Regulation, Technology and Standards in China

At present, a new round of scientific and technological revolution and industrial transformation is booming, and the digital, networked and intelligent development of the industrial economy has become the core content of the fourth Industrial Revolution. As an important cornerstone and key support of the Fourth Industrial Revolution, the Industrial Internet provides concrete ways to realize and advance it. In order to grasp a basic understanding of Industrial Internet, SESEC IV will organize Online Event 19 on "Industrial Internet Policy, Regulation, Technology and Standards in China" on 1 December 2020.

Dr. Betty XU, the SESEC expert, will give an introduction to the Industrial Internet policy, regulation, technology and standards in China.

Detailed information is as follows:

Topic: "Industrial Internet Policy, Regulation, Technology and Standards in China"

Time and Date: 9:30- 10:30 am Brussels time, Tuesday, 1 December 2020

Presenters: Dr. Betty XU

Language： English

Please register your participation to SESEC IV Online Event 19 via following links:

https://yxmc.webex.com/yxmc-en/onstage/g.php?MTID=ea5863d09db17e0aee51cb4591c741cc3

SESEC IV Online Event 20: Quick CCC Introduction for New Comers

China Compulsory Certification, whose abbreviation is CCC. The full name of 3C certification is "China Compulsory Product Certification". It is a product conformity assessment system implemented by the Chinese government in accordance with laws and regulations in order to protect consumers' personal safety and national safety, and strengthen product quality management. So SESEC IV will organize Online Event 20 on “Quick CCC Introduction for New Comers” on 8 December 2020, to summarize the basic information of CCC.

Dr. Betty XU, the SESEC expert, will give an introduction to what is CCC, whether your products need CCC and how to do CCC in China.

Detailed information is as follows:

SESEC IV Online Event 20

Topic: “Quick CCC Introduction for New Comers”

Time and Date: 9:30- 10:30 am Brussels Time, Thursday, 8 December 2020

Presenters: Dr. Betty XU

Language： English

Please register your participation to SESEC IV Online Event 20 via following links:

https://yxmc.webex.com/yxmc-en/onstage/g.php?MTID=e1dc484e9d48c2e5428c6c76d211eeded

Introduction of SESEC Project

The Seconded European Standardization Expert in China (SESEC) is a visibility project co-financed by the European Commission (EC), the European Free Trade Association (EFTA) secretariat and the three European Standardization Organizations (CEN, CENELEC and ETSI). Since 2006, there has been three SESEC projects in China, SESEC I (2006-2009). SESEC II (2009- 2012) and SESEC III (2014-2017). In April 2018, SESEC IV was officially launched in Beijing, China. Dr. Betty XU was nominated as the SESEC expert and will spend the next 36 months on promoting EU-China standardization information exchange and EU-China standardization cooperation.

The SESEC project supports the strategic objectives of the European Union, EFTA and the European Standardization Organizations (ESOs). The purpose of SESEC project is to:

- **Promote European and international standards in China;**
- **Improve contacts with different levels of the Chinese administration, industry and standardization bodies;**
- **Improve the visibility and understanding of the European Standardization System (ESS) in China;**
- **Gather regulatory and standardization intelligence.**

The following areas have been identified as sectorial project priorities by the SESEC project partners: Internet of Things (IoT) & Machine-to-Machine(M2M) communication, communication networks & services, cybersecurity & digital identity, Smart Cities (including transport, power grids & metering), electrical & electronic products, general product safety, medical devices, cosmetics, energy management & environmental protection (including eco-design & labelling, as well as environmental performance of buildings).

SESEC IV China Standardization and Technical Regulation Bimonthly Newsletter

SESEC IV China Standardization and Technical Regulation Bimonthly Newsletter is the gathering of China regulatory and standardization intelligence. Most information of the Monthly Newsletter was summarized from China news media or websites. Some of them were the first-hand information from TC meetings, forums/workshops, or meetings/dialogues with China government authorities in certain areas.

In this Bimonthly Newsletter

In this Bimonthly Newsletter, some news articles were abstracted from Chinese government organizations. All new published standards, implementation or management regulations and notice are summarized; original document and English version are available.

Abbreviations

SAMR	State Administration for Market Regulation	国家市场监管总局
CAS	China Association	中国标准化协会
CCC	China Compulsory Certification	中国强制认证
CCSA	China Communication Standardization Association	中国通信标准化协会
CEC	China Electricity Council	中国电力企业联合会
CEEIA	China Electrical Equipment Industrial Association	中国电器工业协会
CELC	China Energy Labeling Center	中国能效标识中心
CESI	China Electronic Standardization Institute	中国电子标准化研究所
CMDSA	Center for Medical Device Standardization Administration	医疗器械标准管理中心
CNCA	Certification and Accreditation Administration of China	中国国家认证认可监督 管理委员会
CNIS	China National Institute of Standardization	中国国家标准化研究院
CNREC	China National Renewable Energy Center	中国国家可再生能源中 心
EPPEI	Electric Power Planning and Engineering Institute	电力规划设计总院
IEC	International Electrotechnical Commission	国际电工委员会
ITEI	Instrumentation Technology and Economy Institute	机械工业仪器仪表综合技术与经济研究所
MEE	Ministry of Ecology and Environment	中国生态环境部
MIIT	Ministry of Industry and Information Technology of People's Republic of China	中国工业和信息化部
MoH	Ministry of Health	卫生部
MoHURD	Ministry of Housing and Urban-Rural Development	住房与建设部
MOT	Ministry of Transport	中国交通运输部
MOST	Ministry of Science and Technology	中国科学技术部
NDRC	National development and reform commission People's Republic of China	中国国家发改委
NIFDC	National Institute of Food and Drug Control	中国食品药品检定研究 院
SAC	Standardization Administration of China	国家标准化管理委员
SGCC	State Grid Corporation of China	国家电网
TC	Technical Committee for Standard Development	标准化技术委员会