SESEC V Report

Report on CEEIA's Annual Meeting of Standardization

July | 2024

Seconded European Standardization Expert in China
(SESEC)

Report on CEEIA's Annual Meeting of Standardization

On July 25-26, 2024, the Standardization Working Committee of the China Electrical Equipment Industry Association (CEEIA) (hereinafter referred to as "The Committee") held its 2024 Council and General Assembly in Guangzhou. At the meeting, the Committee Secretariat summarized the association's standardization work in 2023 and proposed the key tasks for 2024, which specifically include:

1. Summary of Work in 2023

1.1 Improvement of Work Systems and Institutional Construction

The Committee released the *Detailed Rules for the Work of the CEEIA Standardization Professional Committees*," comprehensively regulating the work responsibilities, formation procedures, and work processes of the 69 professional technical committees for association standards (Association Standard Committees) under CEEIA.

The Committee completed the following three standards, providing a basis for CEEIA to carry out standardization services:

- *Guidelines for the Evaluation of Demonstration Projects for the Application of Association Standards in the Electrical Industry*
- *Guidelines for the Evaluation of Standard Innovation Projects in the Electrical Industry*
- *Guidelines for the Evaluation of Standardization Demonstration Enterprises in the Electrical Industry*

1.2 Research Conducted on the Standard System for Electrical Equipment in New Power Systems

CEEIA established the General Coordination Group for New Power System Equipment and Dual Carbon Standards, proposing the *Framework for the Construction of the Standard System for Electrical Equipment in New Power Systems*. This general group consists of the Power Generation Equipment Group, Power Transmission and Transformation Equipment Group, Power Distribution Equipment Group, Energy Storage Equipment Group, and Carbon Footprint Coordination Group. They will conduct research on standards for electrical equipment in new power systems, promoting the coordinated development of the electrical equipment industry chain and the construction of new national power systems

1.3 Formulation of Association Standards

In 2023, CEEIA formulated 147 and released 118 association standards, both increasing by 10% compared to the previous year. As of July 2024, CEEIA has released a total of 603 association standards (currently effective), with an additional 323 under development.

In recent years, CEEIA's association standardization work has focused on filling gaps and supporting technological innovation in areas such as promotion of achieving carbon peak and neutrality (hereinafter, referred to as " Due Carbon "), intelligent manufacturing, and green manufacturing. The specifics are as follows:

a) Promoted the "Dual Carbon" and "Digital and Intelligent" development of electrical equipment. Last year, the committee launched 66 "Dual Carbon" standard projects, accounting for 45% of the planned number. These projects covered:

i) equipment in new energy fields such as hydropower, wind power, photovoltaic power generation, and fuel cells,

ii) the use of new materials, technologies, and processes in electrical equipment to promote carbon reduction and energy efficiency improvement,

iii) green design evaluation and carbon emission accounting for products like high-voltage switches, wires and cables, low-voltage electrical appliances, rotating machinery, and electrical accessories,

iv) carbon emission accounting and environmentally friendly technology standards for the electrical equipment in enterprise's zero-carbon high-efficiency zone.

Last year, the committee also initiated 55 "Digital and Intelligent" projects, accounting for 40% of the planned number, covering:

i) general technical specifications for intelligent motors,

ii) online monitoring and fault diagnosis for remote operation and maintenance of motors,

iii) application standards for full-process intelligent manufacturing, remote operation and maintenance, and full lifecycle quality monitoring of generators, distribution appliances, intelligent home appliances, and robots.

b) Enhanced the green manufacturing standard system. At the green supply chain level, the committee issued technical specifications for the evaluation of green design products such as arc welding equipment, contactors and motor starters, and universal circuit breakers. In the wind power equipment manufacturing sector, it released standards such as the guidelines for green supply chain construction, green supply chain management specifications, green factory construction specifications, and green factory evaluation specifications.

c) Developed and applied the "Forerunner" standards. The field of power tools has taken the lead in formulating a series of "Forerunner Technical Requirements for Power Tools" standards. In 2023, six Forerunner standards were released for electric drills, sanders, angle grinders, impact screwdrivers, and impact wrenches. In 2024, another ten standards will be published. These standards, determined through extensive testing and data collection, aim to lead the effective supply of mid-to-high-end products and services, creating more benchmark companies in the power tools industry.

d) Developed testing and evaluation standards. Last year, the committee released over 20 evaluation method standards across various fields, including rotating machinery, power transformers, general electrical equipment, low-voltage electrical appliances, high-voltage switches, and robots. These include standards such as *Technical Specifications for Insulation Structure of New Energy Vehicle Drive Motors, Guidelines for Seismic Testing of Power Transformers, Performance Testing of Electrical Equipment under Simulated High-Altitude Conditions, Technical Specifications for Testing the Current Limiting Energy of Miniature Circuit Breakers, and Reliability Testing and Evaluation of Robots* to meet the testing requirements of electrical products in different scenarios.

e) Expanded the development of cross-cutting standards. In 2023, CEEIA, in collaboration with the China Machinery Industry Federation, the China Electrotechnical Society, the China Electronic Energy-Saving Technology Association, and the China Nuclear Energy Association, jointly planned and released a total of 15 standards to promote the effective connection of standard systems across the industrial chain.

2. Key Work Focus for 2024

2.1 Accelerate the establishment of an interactive mechanism for converting scientific and technological achievements into standards. Leverage the organizational advantages and channels for formulating national, sector, and association standards in the electrical industry, CEEIA will continue innovating and improving the electrical standards system.

2.2 Promote the upgrade of standards in the field of electrical equipment to facilitate the advancement towards high-end (high-tech/high-performance), intelligent, and green transformation. CEEIA will

a)deeply engage in the formulation and revision of standards for intelligent manufacturing, green manufacturing, and service-oriented manufacturing;

b)improve the integrated standard system for the convergence of information technology and industrialization, and accelerate the development of digital transformation standards;

c)develop and establish new standards in areas such as new energy storage, low-carbon energy efficiency, high-efficiency operation, and safety risk assessment to guide new industry formats and models.

2.3 Complete the research report of the *New Power System Electrical Equipment and Dual Carbon Standard System in the Electrical Industry*, to strengthen the construction of the new power system standard system. CEEIA will

a)focus on the development and revision of standards for electrical equipment in fields such as clean energy and new energy power generation, intelligent transmission and distribution, and new energy storage;

b)organize the development of standards in key areas such as green product design and evaluation, efficient energy utilization, and carbon footprint evaluation to promote sustainable development.

2.4 Promote more direct participation of China's electrical industry in international standard development and revision through new channels such as international standard innovation teams. CEEIA will actively plan the development and revision of key international standards in emerging fields such as clean energy and new energy power generation equipment and intelligent power equipment.

2.5 Explore the establishment of an evaluation mechanism for the work of the special committees on association standards, promoting the optimization of their structure, enhancing their capacity, and facilitating the development of their association standards and standardization technical services.

2.6 Strengthen the coordination and synergy of technical development and standardization in the electrical industry's upstream and downstream industries. CEEIA will

a)utilize standards from various technical fields to construct a standard system compatible with the industrial chain;

b)enhance coordination and synergy with relevant societies/associations for cross-industry or intersecting technical fields to promote the systematization and matching of standards across the upstream and downstream industrial chains and address the standardization needs brought about by new fields and industries emerging from industrial transformation and upgrading.

2.7 Strengthen the management of association standards development and revision. CEEIA will

a)Standardize the process of developing association standards, strictly follow the association standard development procedures, and improve the quality of association standards.

b)Investigate the implementation and application of existing association standards in the electrical industry to understand their impact on the industry, and promote the adoption of association standards by the government, users, and testing and certification bodies. Accelerate the review and revision of association standards for various electrical products such as motors, transformers, and industrial boilers in line with new national energy consumption requirements.

c)Participate in the association standardization organization capability evaluation activities and complete the evaluation of CEEIA's organizational capabilities.

d)Conduct research and solicitation for pilot projects on the adoption of association standards as recommended national standards according to the *Interim Provisions on the Adoption of Association Standards as Recommended National Standards*.

e)Develop the association standard of Quality Grading and 'Forerunner' Evaluation Requirements and standardize the evaluation for "Forerunner" enterprise standards. CEEIA will continue implementing the standards comparison and evaluation actions in fields such as high-efficiency motors, low-voltage electrical appliances, wires and cables, and electrical accessories to strengthen the effectiveness and influence of the enterprise standards "Forerunner" system.

3. Development of Chinese Association Standards

Mr. Xiao Han, Director-General of the Standards Innovation Department of the Standardization Administration of China (SAC) attended the meeting online. He commended the achievements of CEEIA in association standardization, analyzed the current development status of Chinese association standardization, and offered suggestions for its future development. He highlighted the following points:

Currently, over 9,000 association standardization organizations in China have issued approximately 85,000 association standards. However, there are still some issues within Chinese association standard organizations that hinder development. These issues include weak responsibility awareness of the issuing bodies, insufficient awareness of intellectual property management, and lack of professionalism and influence of the organizations. To address these issues, SAC is establishing a comprehensive performance evaluation system for association standards organizations to guide their high-quality development.

To enhance the international influence of Chinese association standards, he emphasized that although it is currently challenging for overseas companies to directly participate in the formulation of Chinese association standards, foreign experts can directly engage in the standard-setting process of Chinese association standards organizations.

4. Summary

CEEIA is developing a new power system electrical equipment standards system in response to the Chinese government's *Guidelines for the Construction of a Carbon Peak and Carbon Neutrality Standard System* and the *Standardization Improvement Action Plan for Carbon Peak and Carbon Neutrality in the Energy Industry*. These standards will shape the future direction of electrical equipment in China's power system.

In addition, despite leading the formulation of numerous government standards, CEEIA has noticeably shifted its focus towards association standards. By establishing "Dual Carbon" and "Digital and Intelligent" association standards, CEEIA aims to spearhead the technological upgrade and green transformation of electrical equipment in China's power system. These association standards may potentially be adopted as government standards through the "Pilot Project for the Adoption of Association Standards as Recommended National Standards," thereby gaining greater market influence.

Finally, SAC pointed out at the meeting that foreign experts can participate in the development of Chinese association standards in their individual capacity. This provides a path for overseas stakeholders to influence Chinese standards. It is recommended that European standardization experts proficient in Chinese consider joining influential Chinese association standardization organizations to explore ways and methods to directly impact Chinese association standards.

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 four SESEC projects in China, SESEC I (2006-2009). SESEC II (2009- 2012), SESEC III (2014-2017), SESEC IV (2018- 2022) and SESEC V (2022-2025). Dr. Betty XU is 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 sectoral 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 & labeling, as well as environmental performance of buildings).