



China Standardization as of May 2025

Sector Summary

27 May 2025

SESEC INTRODUCTION

Partners and Role



SESEC is a visibility project co-financed by five European partners

SESEC Partners

- **European Commission (EC)**-The executive body of the European Union; Responsible for proposing legislation, implementing decisions, upholding the treaties and day-to-day management of the EU; DG Grow is the main partner (80%)
- **European Free Trade Association (EFTA)**-Iceland, Liechtenstein, Norway and Switzerland; Intergovernmental organisation set up for the promotion of free trade and economic integration to the benefit of its four Member States; None EU members;
- **CEN**-European Committee for Standardization
- **CENELEC**-European Committee for Electrotechnical Standardization
- **ETSI**-European Telecommunications Standards Institute



CENELEC



SESEC INTRODUCTION

A Project co-funded by EC, EFTA, CEN CENELEC & ETSI

- ❖ **Promote** European and International standards in China
- ❖ **Improve** contacts between Project Partners and different levels of the Chinese administration, industry and standardization bodies
- ❖ **Enhance** visibility and understanding of the European Standardization System (ESS) in China.
- ❖ **Gather** regulatory and standardization intelligence
- ❖ **Undertake** technical lobbying



Goals

- The SESEC initiative supports **EC policy** and **ESOs strategic objectives** in China.
- Our ultimate goal is the enhancement of **EU-China dialogue and cooperation** in the field of standardization.
- It is notably expected to support the Framework Cooperation Agreement in place **between the ESOs and SAC**.

Project's Priorities

Priorities of SESEC

Horizontal:

- China Standards 2035
- Belt and Road Initiative
- Standardization Reform
- Institutional Changes in Chinese Government
- **Market Access (e.g CCC)**

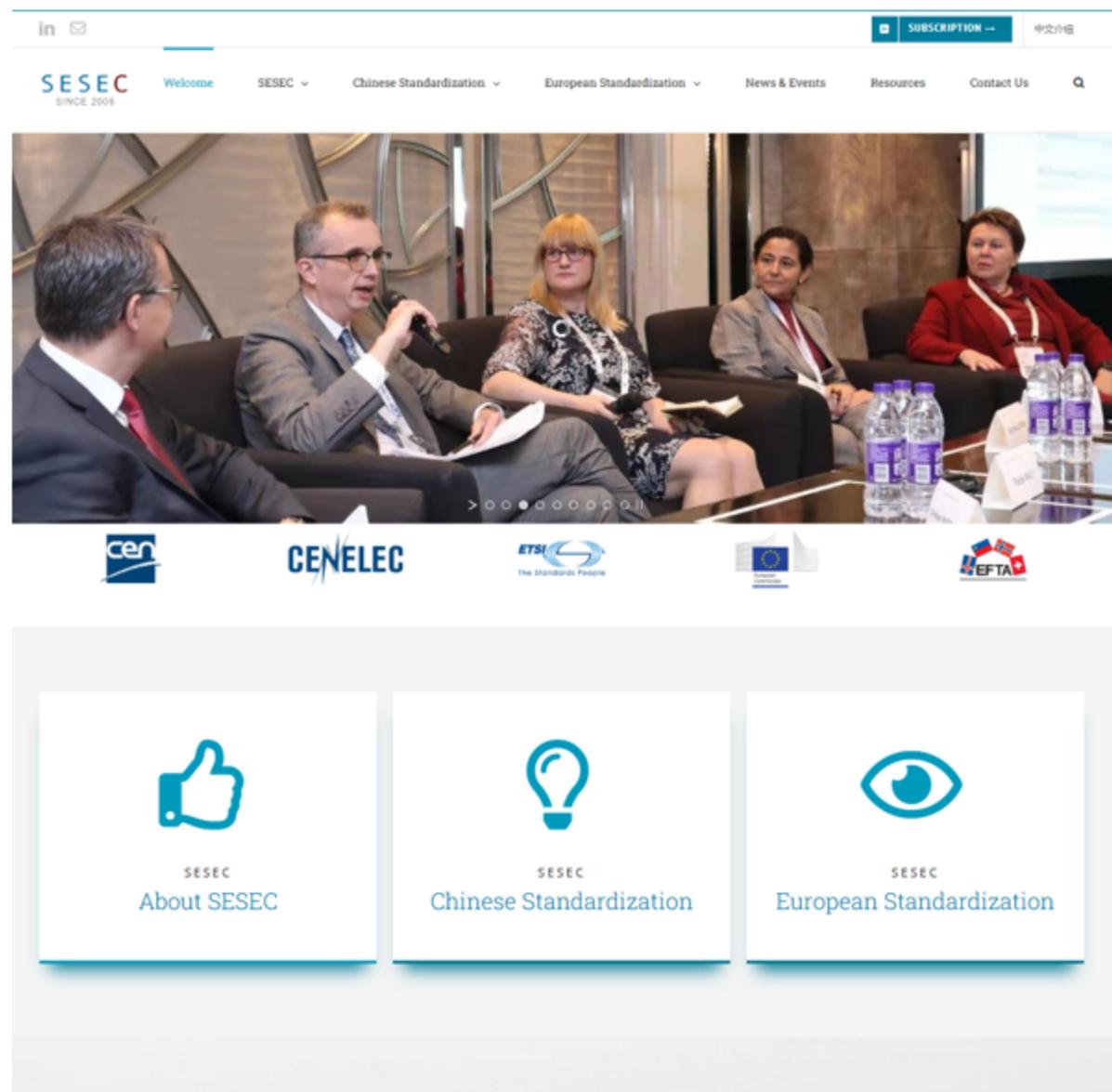
Digital Transition

- IT in General
- Data
- Artificial Intelligence
- Quantum
- Industrial IoT
- 5G/6G

Green Transition:

- Energy Efficiency
- China RoHS
- Green Product Assessment
- Decarbonization
- New Energy (e.g. Hydrogen)
- Recycling

SESEC's English Website For European stakeholders www.sesec.eu





Chinese Standardization – Green

Energy Efficiency

"Administrative Measures for Energy Efficiency labeling", by NDRC + SAMR, *first released in 2004, updated in 2016*

- NDRC, together with SAMR formulates and promulgates the **"Catalogue of Products of Implementing Energy Efficiency Labeling"**.
- They stipulates uniformly applicable standards, implementation rules, and energy efficiency label.

- **Self-Declaration.** Producers and importers of energy-using products included in the Catalogue may use their own testing laboratories or entrust third-party inspection and testing institutions to test the products and determine the energy efficiency level of the products in accordance with the mandatory national standards designated by NDRC and SAMR

The
Catalogue has
contained

46

Products



Code	Product Name (English)
CEL 001	Household Refrigerators
CEL 002	Room Air Conditioners
CEL 003	Electric Washing Machines
CEL 004	Packaged Air Conditioners
CEL 005	Self-ballasted Fluorescent Lamps for General Lighting
CEL 006	High-Pressure Sodium Lamps
CEL 007	Small and Medium Three-phase Asynchronous Motors
CEL 008	Chillers
CEL 009	Household Gas Instantaneous Water Heaters and Gas Heating Water Boilers
CEL 010	Variable-speed Room Air Conditioners
CEL 011	Multi-connected (VRF) Air Conditioning (Heat Pump) Units
CEL 012	Storage-type Electric Water Heaters
CEL 013	Household Induction Cookers
CEL 014	Computer Monitors
CEL 015	Copiers, Printers, and Fax Machines
CEL 016	Automatic Electric Rice Cookers
CEL 017	AC Electric Fans
CEL 018	AC Contactors
CEL 019	Positive Displacement Air Compressors
CEL 020	Power Transformers
CEL 021	Ventilation Fans
CEL 022	Flat-panel TVs (LCD TVs)
CEL 023	Household and Similar Microwave Ovens
CEL 024	Digital TV Set-top Boxes

Code	Product name
CEL 025	Remote Condensing Refrigerated Display Cabinets
CEL 026	Household Solar Water Heating Systems
CEL 027	Personal Computers
CEL 028	Range Hoods
CEL 029	Heat Pump Water Heaters
CEL 030	Household Gas Stoves
CEL 031	Commercial Gas Stoves
CEL 032	Water (Ground) Source Heat Pump Units
CEL 033	Lithium Bromide Absorption Chillers
CEL 034	Non-directional Self-ballasted LED Lamps for General Lighting
CEL 035	Camcorders
CEL 036	Household and Similar AC Ventilation Fans
CEL 037	Copiers, Printers, and Fax Machines (duplicate of CEL 015)
CEL 038	Permanent Magnet Synchronous Motors
CEL 039	Air Purifiers
CEL 040	LED Luminaires for Road and Tunnel Lighting
CEL 041	Ducted Air Conditioning Units
CEL 042	Low Ambient Temperature Air-source Heat Pump (Chiller) Units
CEL 043	Resistance Welding Machines
CEL 044	LED Panel Lights for General Lighting
CEL 045	Commercial Induction Cookers
CEL 046	Tower and Rack Servers



SAC TC20 has developed

68

Mandatory national standards (current effective).

Some are under revision recently, including permanent-magnet synchronous motor, cage three-phase high voltage induction motor, power transformer, and water chillers.

Among the 68 standards,

46 are adopted by

"Catalog of Products subject to Energy Efficiency Label"



20 are adopted by

"Advanced, Energy-Saving, and Admission Levels of Key Energy Consuming Products"

- Admission level == current energy efficiency level necessary for market access
- Energy-saving level == energy efficiency level for market access 3-5 years later
- Advanced level == the highest energy efficiency level at present

2 standards that haven't been adopted by above schemes must be followed as well due to their mandatory nature.

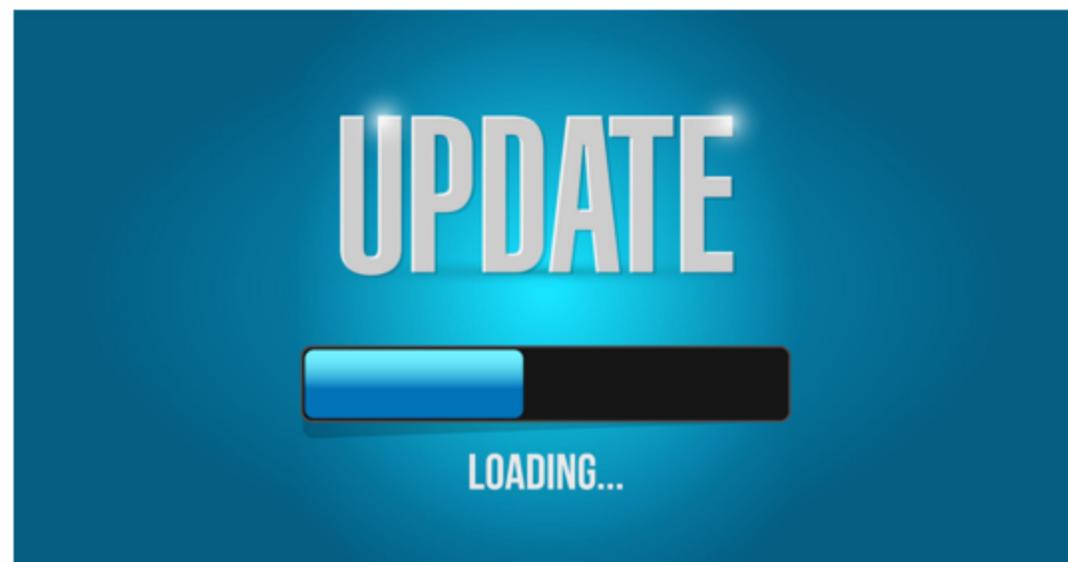
Latest Development

17th Batch of the Energy Efficiency Labeling Product Catalogue, on Jan 13 2025

- tower and rack servers

New Standards proposal since June 2024 –

- crystalline silicon photovoltaic modules and photovoltaic inverters
- data storage devices
- Dehumidifiers
- floor cleaning appliances
- centrifugal pump units for fresh water
- fiber lasers
- medical, laboratory and similar refrigerating appliance
- electric vehicle conductive charging system
- Lithium-ion battery system,
- Household and similar health appliances and sports appliances



MIIT -Green Design Product Assessment

"Made in China 2025" released by the State Council in 2016

- Build a green manufacturing system: support enterprises to implement green strategy, green standards, green management and green production.
- strengthen green oversight and improve the system of regulations and standards for energy conservation and environmental protection.

"Guidelines for Establishing Green Manufacturing Standards System" released by MIIT + SAC in 2016

- The green manufacturing standards system consists of comprehensive basis, green products, green factories, green enterprise, green park, green supply chain and green evaluation and service.

MIIT has selected standards for

159

Products

Green Design Product Assessment



2

2

General Rules

159

Product-specific Standards

6

National and Sector TCs

13

Associations

- MIIT publish and frequently update the "*list of green design product assessment standards*". The list now contains 2 general standards + 159 product-specific standards.
- 2 general standards: GB/T 32161-2015 (general assessment rules) and GB/T 32162-2015 (labelling requirements).
- 159 product-specific standards include a number of national standards and sector standards developed by 6 national and sector TCs, and more association standards developed by 13 associations.
- All these standards can support green design product assessment activities in 9 sectors, namely, petrochemicals, iron and steel, Non-ferrous metals, building materials, machinery, textile, communications, packaging, and light industry.

These standards have been used in

- 1. MIIT's "green manufacturing enterprises recommendation" initiative.**
 - 2. MIIT's "green design industrial product demonstration enterprise" initiative.**
- Passing the "green design products" assessment is a key indicator for their manufacturers to obtain the title of "green manufacturing enterprises" or "green design industrial product demonstration enterprise".



3

Green Products Assessment

"Opinions on Establishing a Unified Green Product Standards, Certification, Label System"
released by the State Council in 2016

- The existing environmental protection, energy saving, water saving, recycling, low-carbon, regenerative and organic product certifications shall be integrated into a unified green product certification system

- SAMR, together with relevant departments, will issue the green product certification label, the certification catalog, and relevant standards in a unified manner.
- (Enterprises should) carry out green product certification according to the standards in the standard lists.

"Administrative Measures for the Use of Green Product Label" released by SAMR in 2019

- Provide mark for the certification

The **Catalogue**
has contained

20

Products



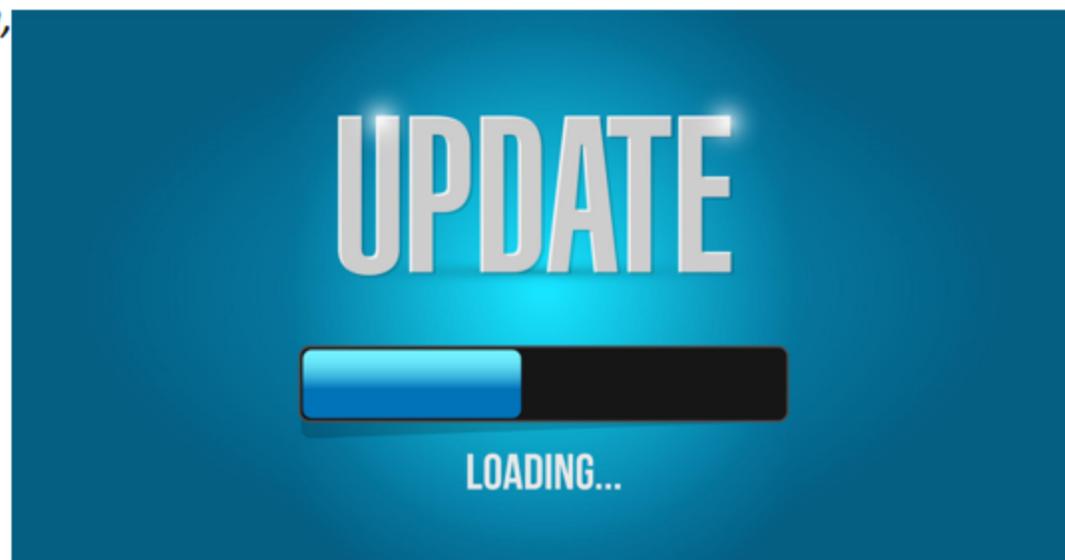


Standardization

- A "National Green Product Assessment Standardization General Working Group" (hosted by CNIS) has been set up in 2016 to coordinate standardization
- **20 product-specific standards** + GB/T 33761-2017" General principles for green product assessment"
- GB/T 33761-2017 is under revision. Its draft for comments issued for opinions from 18 October to 18 December 2023.
 - Aims to enhance the consideration of low-carbon attributes, to support "carbon peak and neutrality" goals.
 - Will incorporate "Low Carbon Attribute Indicators", "Encouraging Requirements Indicators", "Product Carbon Reduction Report Framework and Requirements," as well as "Product Carbon Footprint Quantification Method and Declaration Report Framework."

Latest Development

- Revision of the core standard for green product assessment: *GB/T 33761 General Principles for Green Product Assessment*
 - Support the State Council's policy *Opinions on Establishing a Unified System for Green Product Standards, Certification, and Labeling*
 - Under the final stage of approval
- Release of revised standards for the assessment of green furniture
 - GB/T 35607—2024 Green Product Assessment—Furniture*
 - GB/T 26694—2024 Specification for Green Design Assessment of Furniture.*
- Expansion of Coverage of Green Building Materials Certification
 - A total of 21 types of products are included in the new version of the certification catalogue
 - Corresponding standards to be developed and adopted



China RoHS

"Administrative Measures for Restriction of Hazardous Substances in Electrical and Electronic Products" released by 8 ministries in 2016

- The state establishes the conformity assessment scheme for restricting the use of hazardous substances in electrical and electronic products.
- Electrical and electronic products included in the China RoHS Catalog must comply with relevant national standards and sector standards.

"Catalog of Compliance Management for the Restriction of Hazardous Substances in Electrical and Electronic Products (First Batch)" released by MIIT in 2018

- 12 products are subject to China RoHS scheme

"Implementation Arrangements for the Conformity Assessment System on Restriction of Hazardous Substances in Electrical and Electronic Products" released by MIIT + SAMR in 2019

The **Catalogue** has contained

12

Products



Standardization

Many standards have been adopted, with GB/T 26572-2011 (limiting values), SJ/T 11364-2014 (Label), and GB/T 26125-2011 (test methods) at its core.

Other important standards include, among others,

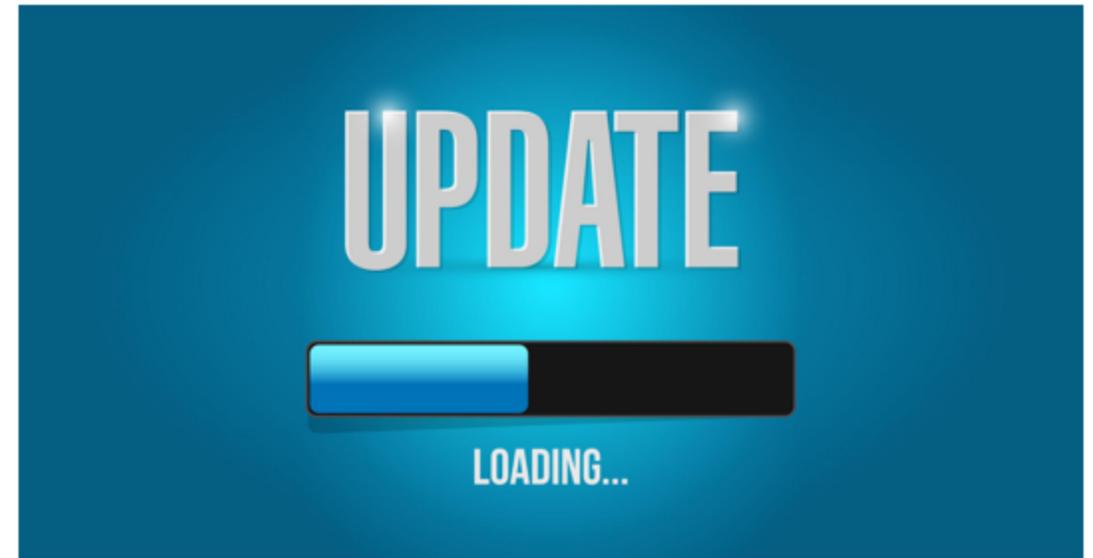
- GB 37876-2019 for conformity assessment
- GB 31274-2014 for management system
- SJ/T 11692-2017 for samples
- SJ/T 11467-2014 for risk assessment
- SJ/Z 11388-2009 for use period



Latest Development

[New Mandatory Standard for China RoHS Nears Completion](#)

- 10 restricted substances—lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB), polybrominated diphenyl ethers (PBDE), and four phthalates (DEHP, DBP, BBP, DIBP)—**with limit values consistent with those in the EU RoHS Directive (2011/65/EU), ensuring international alignment**
- **Scope and Standard Integration**
This new standard will integrate and replace GB/T 26572-2011 (including its amendment) and is expected to render SJ/T 11364-2024 obsolete. It applies to all electrical and electronic products falling under the scope of China RoHS, not limited to specific categories.
- **Implementation Timeline and Transition Period**
A two-year transition period is proposed following the standard's official release to allow enterprises sufficient time to adapt. Additionally, a one-year grace period is suggested for stock products manufactured or imported before the implementation date, enabling smooth market transition.

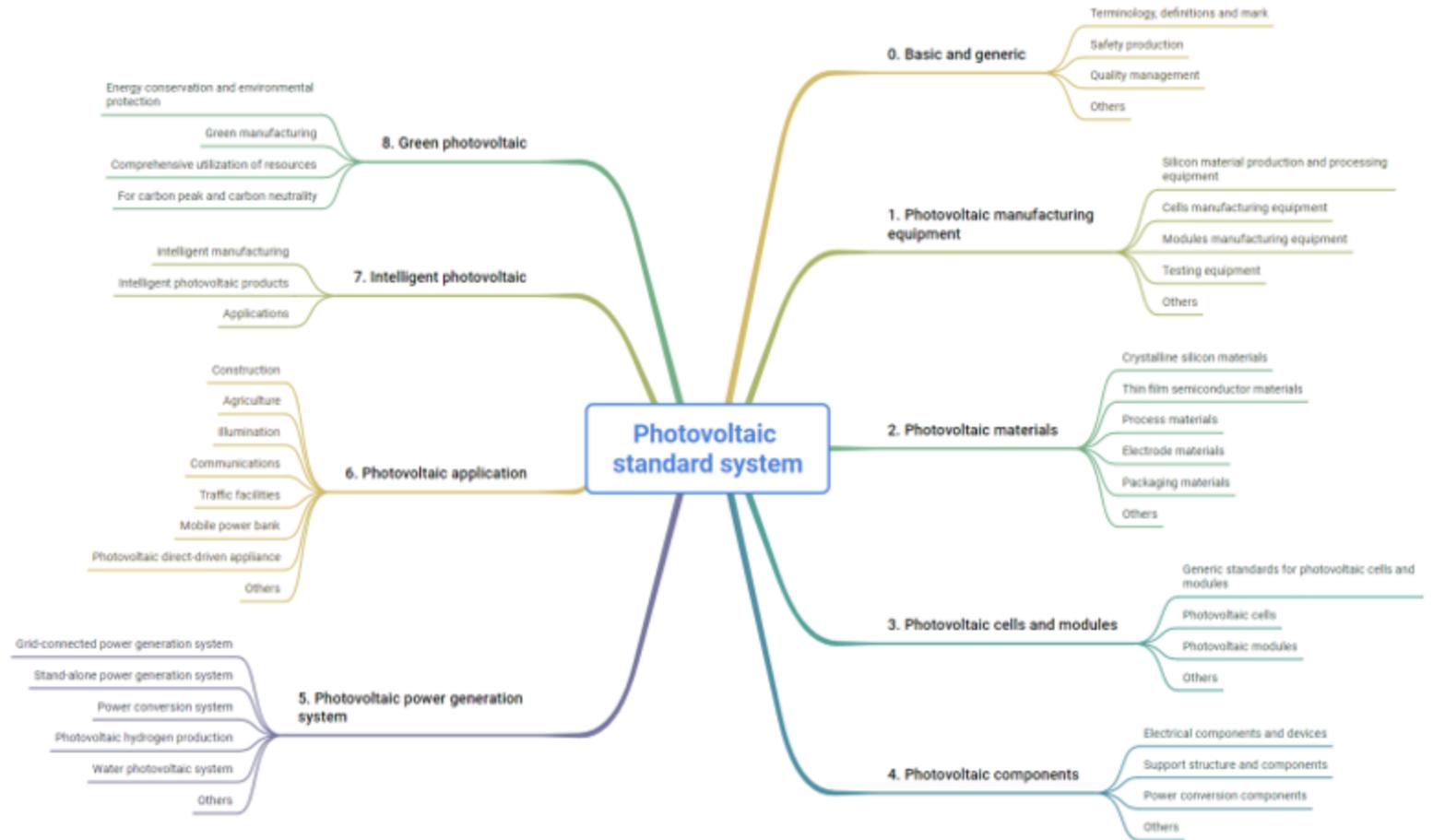


Latest Standardization for New Energy

Comprehensive Standardization Technical System for Solar Photovoltaic Industry (2023 version) , by MIIT on December 19, 2023,

Core content:

- Overview of the photovoltaic industry development
- General requirements
- Standard system
- Priorities
- List of standards



Latest Standardization for Recycling



- Standardization supporting recovery and graded utilization of traction battery used in electric vehicles
 - Development of *GB/T 34015.5 Recovery of Traction Battery Used in Electric Vehicle — Echelon Use — Part 5: Battery Design Guide for Echelon Use*
 - The first four parts of this standard (GB/T 34015.1~4) have already been issued, addressing residual energy testing, dismantling requirements, echelon use requirements, and product labeling, respectively.
 - These standards are adopted by governmental policies and regulations like the *administrative measures for the graded utilization of power batteries used in new energy vehicles*.
 - China has developed over ten national and sector standards in power battery graded utilization.



Chinese Standardization – Decarbonization

Standardization-related Policies

Implementation Plan for Accelerating the Establishment of a Unified and Standardized Statistical and Accounting System for Carbon Emissions,

22 April 2022, by MEE, NDRC and National Bureau of Statistics

Establish a national and local carbon emission statistics and accounting system

Improve the carbon emission accounting mechanism of sectors and enterprises

Establish and improve carbon emission accounting methods for key products

Improve the compilation mechanism of national GHG inventory

Implementation Plan on Establishing Comprehensive Standard and Measurement System of Carbon Peak and Carbon Neutrality,

18 October 2022, by 9 ministries.

Formulate and revise regional carbon emission accounting and reporting standards

Accelerate the formulation and revision of carbon emission accounting and reporting standards for enterprises in key sectors, as well as relevant standards and specifications related to data quality.

Explore the formulation of carbon emission accounting and carbon footprint standards for key products.

Promote the formulation and revision of standards and specifications such as emission reduction accounting methods for voluntary emission reduction projects in key areas

Opinions on Accelerating the Establishment of a Product Carbon Footprint Management System,

13 November 2023, by 5 ministries

Establish a unified and standardized product carbon labeling certification system at the national level.

Formulate standards for calculating product carbon footprints

Standardization-related Policies 2

Guidelines for Establishing the Green and Low-carbon Standards System for the Communications Industry (2023 Version),

14 December 2023, by MIIT

Identify 14 priorities

Include 132 standards and standard projects

Set quantitative goal to be completed by 2025

Provide rationale in developing standards

Guidelines on Construction of the Standards System for Carbon Peak and Neutrality in the Industrial Sectors,

4 February 2024, by MIIT

Put forward the framework of the standards system, and provides the development direction of key standards

Integrate the existing standards system for industrial energy conservation and comprehensive utilization, and the green manufacturing standards system.

Action Plan for Further Strengthening the Carbon Peaking and Carbon Neutrality Standardization and Measurement System (2024-2025),

30 July 2024, by MIIT

Plan to release 70 national standards covering carbon accounting, carbon footprints, carbon emission reduction, energy efficiency, and carbon capture, utilization, and storage (CCUS) by 2024

Eight tasks in basic and generic standards, standards for CO₂ emission reduction, and standards for CO₂ removal.

traditional industries such as thermal power, steel, petrochemical, chemical, nonferrous and building materials are identified as key areas of energy consumption and carbon emissions

proposes revising and tightening the energy consumption limit standards for key industries such as steel, oil refining, thermal power generation, pulp and paper, industrial caustic soda, and rare earth smelting, with the goal of comprehensively improving energy efficiency.

National Carbon Peak and Carbon Neutrality Standardization Group

- **Founding Date:** 2 March 2022
- **Secretariate :** SAC
- **Key Objective:** Reinforce the coordination and overall planning on standardization work for “dual carbon”
- **Regular Operation:** Transportation Energy and Environmental Resource Division of Standard Technology Department, and the ISO Liaison Office of Standard Innovation Division in State Administration for Market Regulation will be in charge of daily contact and other relevant routine works.
- **Key Members:** Experts from relevant fields(environmental resources, energy-saving, energy, standardization etc.) from research institutions, associations, academic organizations and corporates
- **Working Scope:**
 - Suggest and lead on construction of carbon peak and carbon neutrality standard system
 - Guide the development, implementation and internationalization of national standard (standard sample)
 - Coordinate technical suggestions on relevant standards
 - Support technical consistency for carbon peak and carbon neutrality, as well as for standards (standard samples)



Key SDO – SAC/TC548 (Carbon Management)

- **Organizer:** MEE (before 2018 was NDRC)
- **Founding Time:** April of 2014
- **Mirror Groups:**
 - ISO/TC207/SC7: Greenhouse gas and climate change management and related activities
 - ISO/TC265: Carbon dioxide capture, transportation, and geological storage
- **Working Scope:** terminology, statistics, monitoring of carbon emission management, regional carbon emission inventory preparation methods, enterprise and project level carbon emission accounting and reporting, low-carbon products, carbon capture and carbon storage and other low-carbon technologies and equipment, carbon neutrality and carbon sink and other fields



Key SDO –Standard Managing Organization/Organizers

Some existing, especially newly drafted national standards are formulated mainly by:

Sector TC as the main organizer



Co- organizer

National TC of specific sector:

SAC/TC243 (Nonferrous Metals)
SAC/TC586(Chemical Fibers)
SAC/TC405(Domestic Ceramic)
Etc.

or

Sector associations:

China Building Materials Federation
China Petroleum and Chemical Industry Federation
China Iron and Steel Association
Etc.

SAC/TC548

Key SDO – Sample Standard Lists with Multiple Organizers

- Examples: currently effective or to-be implemented

Standard/Project No.	Standard Name	Standard to be replaced	Status	Implementation Date (YYYY/MM/DD)	Standards Organization(s)
GB/T 32151.7-2023	Requirements of the carbon emissions accounting and reporting— Part 7: Flat glass enterprise	GB/T 32151.7-2015	Revision	2024/7/1	China Building Materials Federation + TC548
GB/T 32151.10-2023	Requirements of the carbon emissions accounting and reporting— Part 10: Chemical production enterprise	GB/T 32151.10-2015	Revision	2024/7/1	China Petroleum and Chemical Industry Federation + TC548
GB/T 32151.13-2023	Requirements of the carbon emissions accounting and reporting— Part 13: Independent coking enterprise		Currently effective	2024/7/1	China Iron and Steel Association + TC548

- Examples: in progress

Standard/Project No.	Standard Name	Status	Standards Organization(s)
20232551-T-610	Requirements of the carbon emissions accounting and reporting —Part XX: Silicon metal production enterprise	Called for comments	TC243 + TC548
20232552-T-610	Requirements of the carbon emission accounting and reporting—Part XX: Copper smelting enterprises	Called for comments	TC243 + TC548
20232526-T-469	Requirements of the carbon emission accounting and reporting— part XX: chemical fiber enterprise	Called for comments	TC586 + TC548
20232532-T-606	Requirements of the carbon dioxide emissions accounting and reporting Sulfuric acid enterprise	Called for comments	China Petroleum and Chemical Industry Federation + TC548
20232583-T-607	Requirements of the greenhouse gas emission accounting and reporting—Part XX: Domestic ceramics enterprise	Under development	TC405+ TC548

Full List of currently effective standards

No.	Standard/Project No.	Standard Name	Standard to be replaced	Status	Implementation Date (YYYY/MM/DD)
1	GB/T 32150-2015	General guideline of the greenhouse gas emissions accounting and reporting for industrial enterprises		Revision under progress	2016/6/1
2	GB/T 32151.1-2015	Requirements of the greenhouse gas emission accounting and reporting-Part 1: Power generation enterprise		Revision under approval	2016/6/1
3	GB/T 32151.2-2015	Requirements of the greenhouse gas emissions accounting and reporting—Part 2: Power grid enterprise		Currently effective	2016/6/1
4	GB/T 32151.3-2015	Requirements of the greenhouse gas emission accounting and reporting —Part 3: Magnesium smelting production enterprise		Currently effective	2016/6/1
5	GB/T 32151.4-2015	Requirements of the greenhouse gas emission accounting and reporting —Part 4: Aluminum smelting production enterprise		Revision under progress	2016/6/1
6	GB/T 32151.5-2015	Requirements of the greenhouse gas emission accounting and reporting —Part 5: Iron and steel production enterprises		Revision under progress	2016/6/1
7	GB/T 32151.6-2015	Requirements of the greenhouse gas emissions accounting and reporting —Part 6: Civil aviation enterprises		Currently effective	2016/6/1
8	GB/T 32151.7-2023	Requirements of the carbon emissions accounting and reporting—Part 7: Flat glass enterprise	GB/T 32151.7-2015	Revision	2024/7/1
9	GB/T 32151.8-2023	Requirements of the carbon emissions accounting and reporting—Part 8: Cement enterprise	GB/T 32151.8-2015	Revision	2024/7/1
10	GB/T 32151.9-2023	Requirements of the carbon emissions accounting and reporting—Part 9: Ceramic production enterprise	GB/T 32151.9-2015	Revision	2024/7/1
11	GB/T 32151.10-2023	Requirements of the carbon emissions accounting and reporting—Part 10: Chemical production enterprise	GB/T 32151.10-2015	Revision	2024/7/1
12	GB/T 32151.11-2018	Requirements of the greenhouse gas emissions accounting and reporting—Part 11: Coal production enterprise		Currently effective	2019/4/1
13	GB/T 32151.12-2018	Requirements of the greenhouse gas emissions accounting and reporting—Part 12: Textile and garment enterprise		Currently effective	2019/4/1
14	GB/T 32151.13-2023	Requirements of the carbon emissions accounting and reporting—Part 13: Independent coking enterprise		Currently effective	2024/7/1
15	GB/T 32151.14-2023	Requirements of the carbon emissions accounting and reporting—Part 14: Other non-ferrous metal smelting and processing enterprise		Newly-developed	2024/7/1
16	GB/T 32151.15-2023	Requirements of the carbon emissions accounting and reporting—Part 15: Refinery and petrochemical enterprise		Newly-developed	2024/7/1
17	GB/T 32151.16-2023	Requirements of the carbon emissions accounting and reporting—Part 16: Oil and gas production enterprise		Newly-developed	2024/7/1
18	GB/T 32151.17-2023	Requirements of the carbon emissions accounting and reporting—Part 17: Fluorochemical enterprise		Newly-developed	2024/7/1

Standard Development Status – National standards

- Totally **60** standards
- **18** standards currently effective.

Latest Standardization for Product Carbon Footprint

- General requirements
 - Adoption (MOD) of *ISO 14067:2018 Greenhouse gases- Carbon footprint of products-Requirements and guidelines for quantification*.
- Sector-specific requirements:
 - Developing standards for
 - product category rules (PCR) regarding carbon footprint for electrical and electronic products
 - photovoltaic products (PV Products), lithium-ion batteries, and electric vehicles (EVs)
 - Furniture, cold store, and more
 - CESI established a carbon footprint accounting system for lithium batteries in June 2024, aiming to assist enterprises in assessing carbon reduction opportunities across all stages of a product's lifecycle. One of the key components of the accounting system is a standard system composed of more than 70 planned standards, including technical requirements for evaluating the carbon footprint of lithium-ion cells and batteries.



Latest Standardization for Product Carbon Footprint

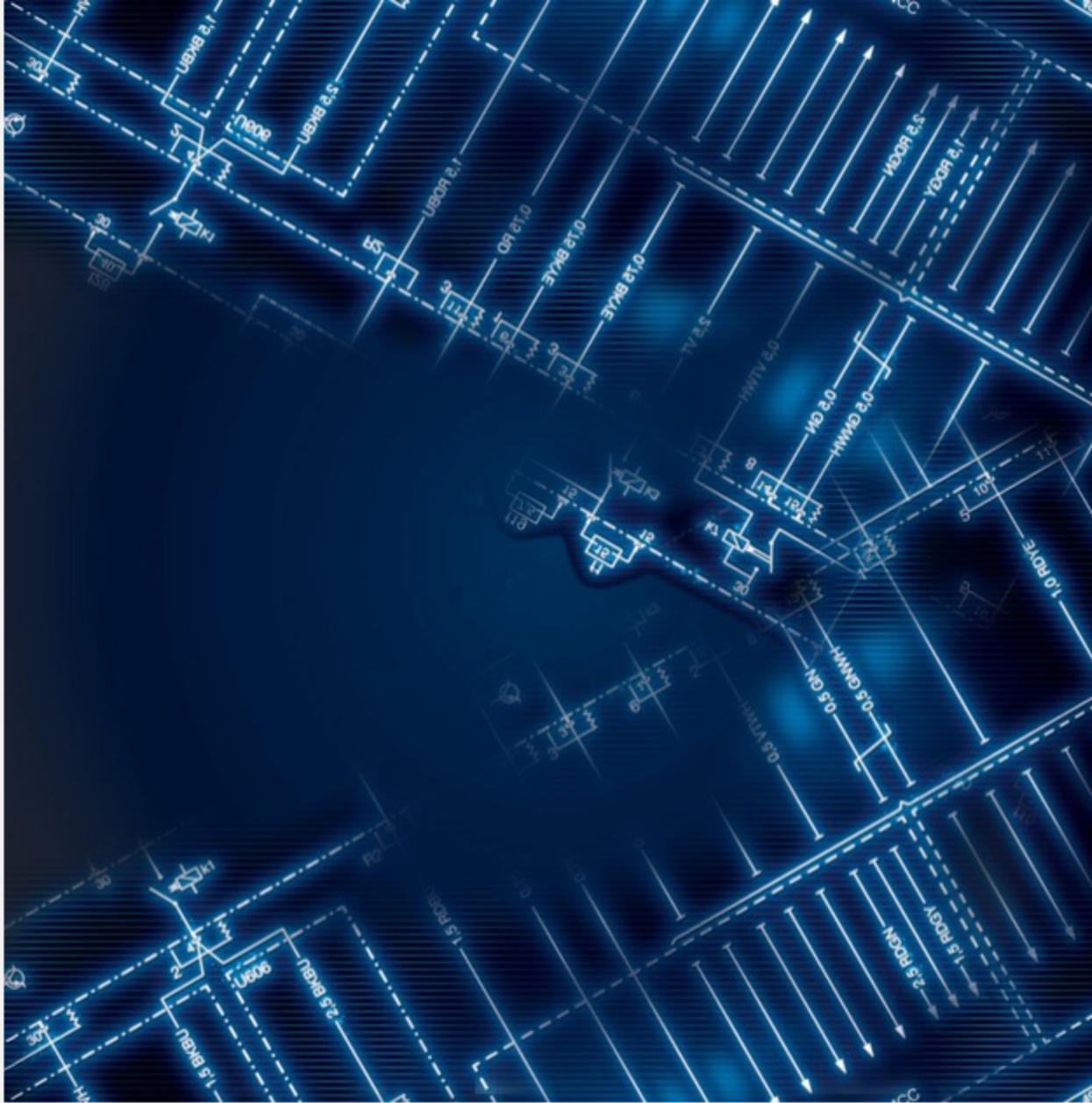
- On March 20 2025, CNCA issued the General Implementation Rules for Product Carbon Footprint Labeling Certification (Trial) which is the country's first systematic document on product carbon footprint labeling certification and has taken effect from the date of issuance.
- Applicable to products falling under the catalogue of the [product carbon footprint labeling certification's pilot program](#) published by CNCA in 2024
- Other products may use as a reference for their own labeling certification activities.
- Guideline of Product Carbon Footprint Review,
- GB/T 24076-2024 Greenhouse gases—Carbon footprint of products—Requirements and guidelines for quantification



Latest Standardization for Digital Product Passport



- On April 25, 2025, MIIT, CNIS, and CAICT, jointly released the **Product Digital Passport (DPP) Technology Development Report (2025)**. It outlines a clear understanding of product digital passports, systematically reviews the latest international and domestic developments in policies, standards, and industry, and provides insights into global trends. It proposes an overall framework and development roadmap for DPP implementation in China, aiming to serve as a reference for accelerating the establishment of a DPP system and advancing the digital and green transformation of industry.
- On September 26, 2024, the IEEE Standards Association officially approved the project proposal for *IEEE SA P3828 Standard for Digital Product Passport – Reference Architecture and Technical Requirements*. This initiative, led CAICT, aims to establish a standardized global framework for digital product passports (DPPs). The project development will be overseen by Chi Cheng, chair of the standard's working group and a member of CAICT's Industrial Internet and Internet of Things Institute. To support the initiative, CAICT invited worldwide experts to contribute to the project; the channels for submitting feedback closed on October 30, 2024.
- **In April 2025 Online Meeting between CEN-CENELEC and China Battery Industry Association Regarding Battery Passport Standards** - CBIA introduced 3 upcoming association standards for Power Battery Passports, which are currently open for public comments:
 - Power Battery Digital Passport – Data Classification List
 - Power Battery Digital Passport -Access Control Management
 - Power Battery Digital Passport – System and Data Certification



Thank you!