

Green House Gas Emission Calculation Standards in China

SESEC V

June 2024 by Dr. Betty XU



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**.



Agenda

- 01 **Overview**
- 02 **Key National Policies**
- 03 **Key Standardization Policies**
- 04 **SDOs and Standard Development Status**
- 05 **Conclusions**



01. Overview

Overview – China’s Carbon Strategy and Goals

“Dual Carbon”

The phrase that commonly uses to describe the concepts “carbon peak” and “carbon neutrality”



China’s goals on achieving “dual carbon”

Announced on 22 September 2020, at the 75th United Nations General Assembly



China’s general approach to achieve the carbon goals

Stated in the keynote speech of President Xi Jinping when addressing the COP15 gathering on biodiversity held in Kunming, China, during 11-15 October 2021

Overview – Emission Objectives in the 14th Five-year Plan

Outline of the 14th Five-year Plan (2021-2025) for National Economic and Social Development and Vision 2035 of China (issued by the National People's Congress on Mar 11, 2021)

- **14th Five-year Plan period:**
 - the country's Carbon dioxide emissions per unit of GDP should reduce 18%.
 - implement a system with carbon intensity control as the main focus and total carbon emission control as the supplement
 - promote market-based carbon emission trading
- **2035 vision:**

After achieving carbon peak, carbon emission will be stabilized and decreased.



Overview – Emission Objectives in the “Dual Carbon” Guidelines 1 of the (1 +n)

The Working Guidance for Carbon Dioxide Peaking and Carbon Neutrality in Full and Faithful Implementation of the New Development Philosophy (issued by the State Council on Oct 24, 2021)

- **By 2025:**
 - The country’s Carbon dioxide emissions per unit of GDP should reduce 18% comparing with 2020.
- **By 2030:**
 - The country’s Carbon dioxide emissions per unit of GDP should reduce 65% comparing with 2005.
 - Achieve carbon peak and keep the level steadily decrease.
- **Regarding carbon emission accounting standards**
 - Speed up the improvement of regional, industrial, enterprise and product carbon emissions verification and accounting reporting standards.
 - Establish a unified and standardized carbon accounting system.
 - Formulate greenhouse gas emission standards for key industries and products.

Overview – Significant Role in Carbon Trading Markets

The GHG/carbon calculation standards play very important role in supporting:

National Carbon Emission Trading Market - **Mandatory**

Legal basis:

- Ministerial: *Measures for the Administration of Carbon Emissions Trading (for trial implementation, by MEE and implemented on Feb 1, 2021)*
 - *Guidelines for Accounting and Verification of Corporate GHG Emission Reporting (interim) – by MEE in March 2021*
- National: *Interim Regulation on the Administration of Carbon Emission Trading (implemented on May 1, 2024)*

Covering **8** sectors for now

China Certified Emission Reduction (CCER) - **Voluntary**

Legal basis:

- *Measures for the Administration of Voluntary Greenhouse Gas Emission Reduction Trading (for trial implementation) (implemented on Oct 19, 2023)*





02. Key National Policies

Key National Policies

The Action Plan for Carbon Dioxide Peaking Before 2030

(issued by the State Council on Oct 24, 2021)

- Key energy units should sort out and calculate their own carbon emissions, and deeply study the path of carbon emission reduction.
- Relevant listed companies and bond issuing enterprises shall regularly publish corporate carbon emission information in accordance with the legal requirements.
- Accelerate the establishment of a unified and standardized statistical accounting system for carbon emissions
- Actively participate in international research on carbon emission accounting methods, and promote the establishment of a more fair and reasonable system in China.
- Establish standards for carbon emission accounting, reporting and verification of key enterprises.



Key National Policies

Work Plan for Energy Conservation and Carbon Reduction of 2024-2025 (issued by the State Council on May 29, 2024)

- **Strengthen accounting on energy consumption and carbon emission**
 - Establish energy consumption and carbon emission statistic systems for managing tasks on energy-saving and carbon reduction.
 - Actively carry out monitor and analysis on energy consumption and carbon emission accounting based on data from the power data and that from the carbon market
- **Encourage financial support on regional level within existing funding channels to improve:**
 - renovations of energy-saving and carbon reduction.
 - Update of energy consuming equipment.
 - Statistical and accounting capabilities on energy and carbon emission.



03. Key Standardization Policies

Key Standardization Policies

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

(issued by MEE, NDRC and National Bureau of Statistics on Apr 22, 2022)

Key goals by 2023

- Establish clear and coordinated cooperating system among ministries
- Carbon emission accounting has proceeded stably in sectors
- Supportive ability of carbon emission data for the work of carbon peak and carbon neutrality will be significantly enhanced.
- A unified and standardized carbon emission statistical accounting system has been preliminarily established.

Key goals by 2025

- The unified and standardized statistical accounting system of carbon emissions has been further improved.
- The statistical basis of carbon emissions has been more solid.
- Accounting methods have been more scientific.
- Technical means have been more advanced
- Data quality has been comprehensively improved, providing comprehensive, scientific and reliable data support for the work of carbon peak and carbon neutrality

Key Standardization Policies

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

(issued by MEE, NDRC and National Bureau of Statistics on Apr 22, 2022)

- **Establish a national and local carbon emission statistics and accounting system**
 - Establish national level first, the regional and the levels below follow the national framework
- **Improve the carbon emission accounting mechanism of sectors and enterprises**
 - Key sectors including power, steel, nonferrous, building materials, petrochemical, chemical, construction etc.
- **Establish and improve carbon emission accounting methods for key products**
 - Prioritize raw materials, semi-finished products and finished products of key sectors (electric power, steel, electrolytic aluminum, cement, lime, flat glass, oil refining, ethylene, synthetic ammonia, calcium carbide, methanol and modern coal chemical industry etc.)
- **Improve the compilation mechanism of national greenhouse gas inventory**

Key Standardization Policies

Contents related with accounting standards in *the Implementation Plan for Accelerating the Establishment of a Unified and Standardized Statistical and Accounting System for Carbon Emissions*

(issued by MEE, NDRC and National Bureau of Statistics on Apr 22, 2022)

- Transit accounting methods with good applicability and high maturity into national standards, and guide enterprises and third-party institutions to carry out product carbon emission accounting.
- Strengthen international exchanges on carbon emission accounting, and actively participate in the formulation of relevant international standards



Key Standardization Policies – Dual Carbon Standard System

Implementation Plan on Establishing Comprehensive Standard and Measurement System of Carbon Peak and Carbon Neutrality (issued by 9 ministries on Oct 18, 2022)

- **Main goals:**
 - by 2025, carbon emission technology and management standards are basically sound, and carbon accounting and verification standards in major industries are fully covered.
- **Key Missions:**
 - Improve carbon emission monitoring, accounting, reporting and verification standards at different levels such as regions, sectors, enterprises and products
 - Explore and promote the transformation of qualified industries from macro "carbon accounting" to precise "carbon measurement"



Key Standardization Policies – Dual Carbon Standard System

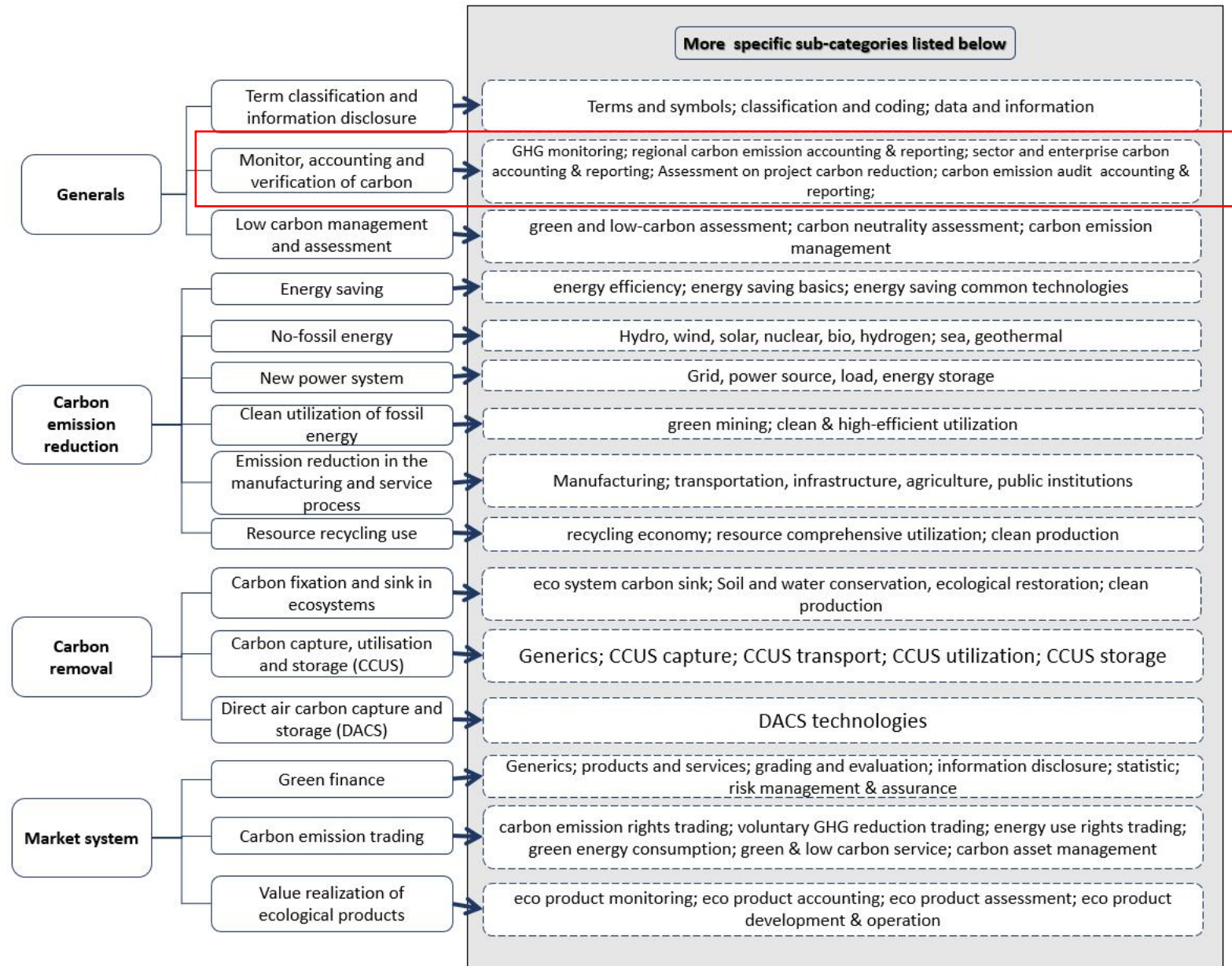
Guidelines on the Construction of Carbon Peak and Carbon Neutrality Standard System (issued by 11 ministries on Apr 1, 2023)

- **Main goals:** by 2025, carbon accounting and verification standards in major industries are fully covered.
- **Specified Contents on carbon/GHG emission accounting**
 - 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 (energy, metallurgy, building materials, chemicals, nonferrous metals, textiles, machinery, information and communications, transportation, and livestock and poultry breeding), 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

Key Standardization Policies – Dual Carbon Standard System

Dual Carbon Standard System
in
the Guidelines on the Construction of Carbon Peak and Carbon Neutrality Standard System

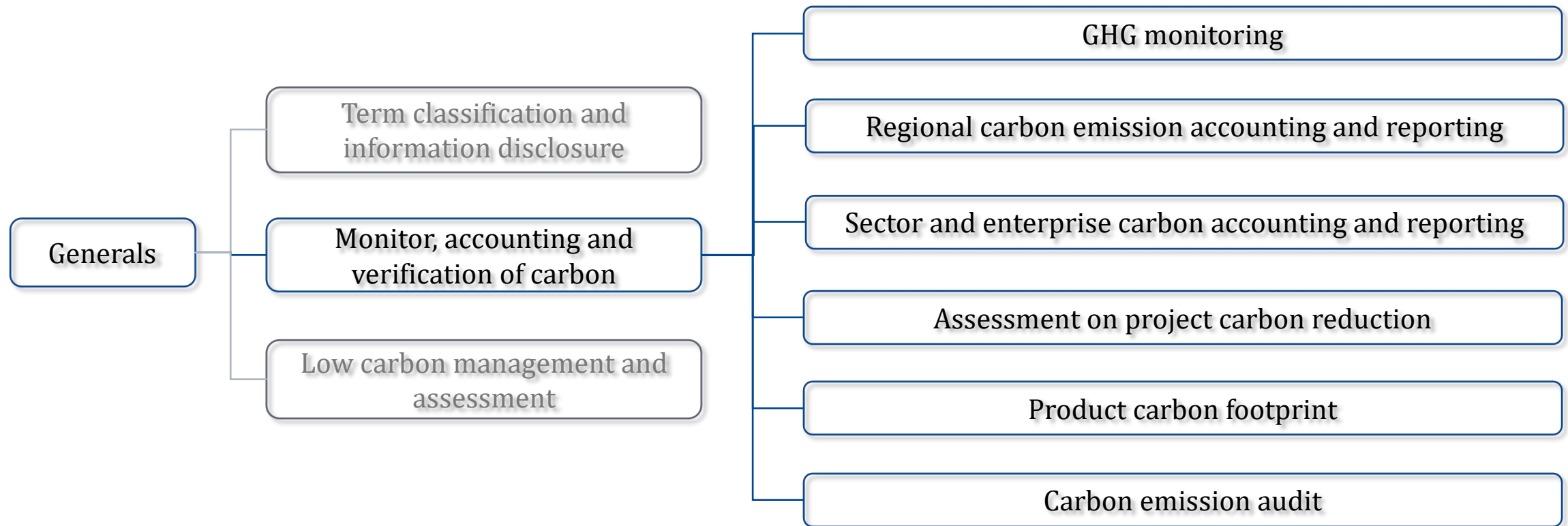
(issued by 11 ministries on Apr 1, 2023)



Key Standardization Policies – Dual Carbon Standard System

Guidelines on the Construction of Carbon Peak and Carbon Neutrality Standard System (issued by 11 ministries on Apr 1, 2023)

Carbon/GHG emission accounting standard framework



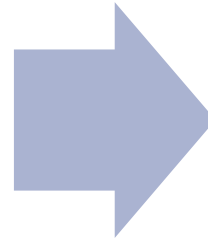


04. SDOs and Standard Development Status

Overview – Standardization for Carbon Calculation

Before 2018

National
Development and
Reform Commission
(NDRC)



Since 2018 to now

**Ministry of Ecology
and Environment
(MEE)**

(WEE)

Overview – Special Working Group

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

Overview – Special Working Group

National Carbon Peak and Carbon Neutrality Standardization Group



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

- **Name:** 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

Standard Development Status - Statistics

Standard Quantity of China on Carbon/GHG Emission Accounting



Up to May 31, 2024
Data source: SESEC Calculation based on
China's official standard information platform

Full List of currently effective or to be effective standards

Standard Development Status - National

- Totally 60 standards
- 18** standards currently effective or to be effective on Jul 1, 2024.

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

42 standard projects in progress

No.	Standard/Project No.	Standard Name	Status	No.	Standard/Project No.	Standard Name	Status
1	20232550-T-609	Requirements of the carbon dioxide emission accounting and reporting—Part X:Building waterproof material enterprise	Called for comments	22	20230984-T-467	Requirements of the carbon emission accounting and reporting Part X: Domestic wastewater treatment enterprises	Under development
2	20232551-T-610	Requirements of the carbon emissions accounting and reporting —Part XX: Silicon metal production enterprise	Called for comments	23	20220803-T-467	Requirements of the greenhouse gas emission accounting and reporting Part X Urban gas supply enterprise	Called for comments
3	20232552-T-610	Requirements of the carbon emission accounting and reporting—Part XX: Copper smelting enterprises	Called for comments	24	20220799-T-432	Requirements of the greenhouse gas emissions accounting and reporting—Part 22: Wood industry enterprise	Under approval
4	20232553-T-605	Carbon accounting and reporting requirements-part xx: Carbon material enterprises	Called for comments	25	20220806-T-467	Requirements of the greenhouse gas emission accounting and reporting Part X: Municipal Solid waste landfill enterprises	Called for comments
5	20232554-T-610	Requirement of the carbon emission accounting and reporting—Part XX: Lead smelting enterprises	Called for comments	26	20220850-T-607	Requirements of the greenhouse gas emissions accounting and reporting -Part XX: Cold store operating enterprise	Called for comments
6	20232526-T-469	Requirements of the carbon emission accounting and reporting—Part XX: chemical fiber enterprise	Called for comments	27	20220839-T-469	Requirements of the carbon emissions accounting and reporting—Part XX: Forging enterprise	Under approval
7	20232528-T-607	Requirements of the carbon emission accounting and reporting —Part XX: Furniture production enterprise	Called for comments	28	20220840-T-469	Requirements of the greenhouse gas emissions accounting and reporting—Part XX: Heat treatment enterprise	Under development
8	20232532-T-606	Requirements of the carbon dioxide emissions accounting and reporting Sulfuric acid enterprise	Called for comments	29	20220830-T-469	Requirements of the greenhouse gas emission accounting and reporting—Part XX: Foundry enterprise	Under approval
9	20232545-T-609	Requirements of the carbon dioxide emission accounting and reporting—Part X: Cement product enterprise	Called for comments	30	20192397-T-303	Requirements of the greenhouse gas emission accounting and reporting for water transport enterprise	Under approval-long pending from 2019
10	20232546-T-609	Requirements of the carbon dioxide emission accounting and reporting— Thermal insulation enterprise	Called for comments	31	20173634-T-303	Requirements of the greenhouse gas emissions accounting and reporting—Foods, Tobacco, Liquor ,Drink and Tea enterprise	Under approval-long pending from 2018
11	20232547-T-606	Requirements of the carbon emissions accounting and reporting — Pigment production enterprise	Called for comments	32	20173627-T-303	Requirements of the greenhouse gas emissions accounting and reporting—Electronic equipment production enterprise	Under approval-long pending from 2018
12	20232548-T-609	Requirements of the carbon emission accounting and the reporting Part X : Sintering wall materials production enterprise	Called for comments	33	20173623-T-303	Requirements of the Greenhouse Gas Emissions Accounting and Reporting for the Agricultural Farming Enterprises	Under approval-long pending from 2017
13	20232534-T-606	Requirements of the greenhouse gas emissions accounting and reporting — Paint production enterprise	Called for comments	34	20173630-T-303	Requirements of the greenhouse gas emissions accounting and reporting— Machinery and equipment production enterprise	Under approval-long pending from 2018
14	20232582-T-607	Recycled Plastics—Calculation of carbon emission from physical recovery	Under development	35	20173631-T-303	Requirements of the greenhouse gas emission accounting and reporting—Mining enterprise	Under approval-long pending from 2018
15	20232583-T-607	Requirements of the greenhouse gas emission accounting and reporting—Part XX: Domestic ceramics enterprise	Under development	36	20173629-T-303	Requirements of the greenhouse gas emissions accounting and reporting—Public building operating organization (enterprise)	Under review-long pending since 2018
16	20232536-T-606	Requirements of the greenhouse gas emissions accounting and reporting—Waste battery treatment and disposal enterprise	Called for comments	37	20173622-T-303	Requirements of the greenhouse gas emissions accounting and reporting—Paper production enterprise	Under approval-long pending from 2018
17	20232540-T-606	Requirements of the greenhouse gas emissions accounting and reporting — phosphoric acid and phosphate enterprises	Called for comments	38	20173625-T-303	Guidelines of the greenhouse gas emissions accounting and reporting for the concentrated livestock operations	Under approval-long pending from 2018
18	20232544-T-609	Requirements of the carbon dioxide emission accounting and reporting— Part X: Glass fibre and products enterprise	Called for comments	39	20173620-T-303	Requirements of the greenhouse gas emissions accounting and reporting— Road transport sector enterprise	Under approval-long pending from 2019
19	20232556-T-610	Requirements of the carbon emission accounting and reporting—Part XX: Zinc smelting enterprises	Under development	40	20131608-T-469	Requirements of the greenhouse gas emissions accounting and reporting textile printing and dyeing enterprise	Pending
20	20232580-T-469	Requirements of the greenhouse gas emission accounting and reporting—Part XX: Stamping enterprises	Called for comments	41	20240602-T-334	Requirements of the carbon emissions accounting and reporting - land use, land use change and forestry requirements	Under development
21	20232581-T-604	Life cycle carbon emission accounting specification for internal combustion engine	Under development	42	20232549-T-609	Requirements for carbon dioxide emission accounting and reporting—Part X: Calcined gypsum enterprises	Called for comments

Standard Development Status – Sector, local and association

Sector Standards: 7

- **Time frame:** range from March 2013 to August 2023.
- **Sector covered:** logistics management, accreditation and certification, oil and gas, non-ferrous metal

Local Standards: 33

- **Time frame:** range from January 2012 to May 2024.
- **Sector covered:** a variety of sectors, such as agriculture, finance, transportation, oil etc.
- **Issuing regions:** majority in Beijing (15), others ranges from province level to municipal level

Association Standards 71

- **Time frame:** range from December 2016 to May 2024.
- **Sector covered:** wider sector coverage than local standards, such as agriculture, construction, manufacturing, consumer goods and transportation etc.
- **Issuing Associations:** more than 30 associations from different sectors.

Standard Development Status – Sector Standard List

No.	Relating Sector	Standard Name	Implementation Date (YYYY/MM/DD)
1	Logistics management	Requirements of the greenhouse gas emission accounting and reporting for logistics service provider	2023/8/1
2	Agriculture	Method for calculating greenhouse gas emissions of livestock and poultry farm	2023/3/1
3	Accreditation and certification	Guideline of accounting and reporting for greenhouse gas emissions in the dairy farming	2023/1/1
4	Accreditation and certification	Guideline of accounting and reporting for greenhouse gas emissions of crops	2023/1/1
5	Oil and gas	Greenhouse gas inventory and reporting guidelines for unconventional oil and gas production companies	2022/2/16
6	Oil and gas	Calculation method of CO ₂ emission with petroleum and natural gas production	2017/5/1
7	Non-ferrous metal	Calculation methods for carbon dioxide emissions resulting from aluminium reduction processes	2013/3/1

Standard Development Status – Partial Local Standard List – Beijing (Examples)

No.	Standard/Project No.	Implementation Date (YYYY/MM/DD)	Standard Name
1	DB11/T 1422-2017	2017/10/1	Greenhouse Gas Emissions Accounting Guidelines for Animal Husbandry and Breeding Enterprises
2	DB11/T 1421-2017	2017/10/1	Guidelines for Accounting Greenhouse Gas Emissions for Facility Agribusiness
3	DB11/T 1416-2017	2017/10/1	Greenhouse Gas Emissions Accounting Guidelines for Household Waste Incineration Enterprises
4	DB11/T 1616-2019	2019/7/1	General Rules for Accounting Greenhouse Gas Emissions of Agricultural Products
5	DB11/T 1565-2018	2019/1/1	Guidelines for Accounting Greenhouse Gas Emissions of Livestock Products
6	DB11/T 1564-2018	2019/1/1	Guidelines for Accounting Greenhouse Gas Emissions from Planting Agricultural Products
7	DB11/T 1563-2018	2019/1/1	General Rules for Accounting and Reporting Greenhouse Gas Emissions of Agricultural Enterprises (Organizations)
8	DB11/T 2057-2022	2023/4/1	CO ₂ Emissions Accounting and Reporting Requirements for the Civil Air Transport Industry
9	DB11/T 1787-2020	2021/1/1	CO ₂ accounting and reporting requirements for other industries
10	DB11/T 1786-2020	2021/1/1	CO ₂ Accounting and Reporting Requirements for the Road Transport Industry
11	DB11/T 1785-2020	2021/1/1	CO ₂ Emissions Accounting and Reporting Requirements Service Sectors
12	DB11/T 1784-2020	2021/1/1	CO ₂ Emissions Accounting and Reporting Requirements for the Heat Production and Supply Industry
13	DB11/T 1783-2020	2021/1/1	CO ₂ Emissions Accounting and Reporting Requirements for the Petrochemical Production Industry
14	DB11/T 1782-2020	2021/1/1	CO ₂ Accounting and Reporting Requirements for Cement Manufacturing
15	DB11/T 1781-2020	2021/1/1	CO ₂ Emissions Accounting and Reporting Requirements for Electricity Production Industries

Other Key Documents on Managing GHG/Carbon Emission Accounting

MEE: Guidelines on corporate GHG emission accounting and reporting

- *Guidelines for Accounting and Verification of Corporate GHG Emission Reporting (interim)* – March 2021
 - Clearly stated as the supportive document to the key regulation for China's carbon trading market: **Measures for the Administration of Carbon Emissions Trading (for trial implementation)**, marking a direct link to the management system under this carbon trading market (mandatory for the 8 sectors within the market's managing scope)
- *Guidelines for Accounting and Verification of Corporate GHG Emission Reporting: power equipment* – December 2022
- Annexes in the *Notice on the Reporting and Verification of Greenhouse Gas Emissions of Enterprises in Some Key Sectors from 2023 to 2025* – October 2023
 - *Guidelines for Accounting and Verification of Corporate GHG Emission Reporting: cement clinker*
 - *Guidelines for Accounting and Verification of Corporate GHG Emission Reporting: aluminum smelting*
 - *Guidelines for Accounting and Verification of Corporate GHG Emission Reporting: iron and steel production*
 - Stated that ethylene production enterprises should follow the technical requirements of the *Accounting methods and Reporting guidelines for greenhouse gas emissions of Chinese petrochemical enterprises* (issued by NDRC in December 2014, the second batch)

Other Key Documents on Managing GHG/Carbon Emission Accounting

NDRC: 24 guidelines on corporate GHG emission accounting and reporting format

- **Issued in three batches:**

- October 2013: first batch with **10** guidelines.
- December 2014: second batch with **4** guidelines.
- July 2015: third batch with **10** guidelines.

- **Covering sectors:**

- Power generation
- Power grid
- Iron and steel production
- Chemical production
- Electrolytic aluminium
- Magnesium smelting production
- Flat glass
- Cement

- Ceramic production
- Civil aviation
- Oil and gas production
- Refinery and petrochemical
- Independent coking
- Coal production
- Paper production
- Other non-ferrous metal smelting and processing

- Electronic equipment production
- Machinery and equipment production
- Mining
- Foods, tobacco, liquor, drink and tea
- Public building operating organization (enterprise)
- Road transport sector
- Fluorochemical
- Other industrial enterprises

- **Present status:** Unknown, very likely have been converted into national standards (the GB/T 32151 series, firstly published in November 2015)

Most of them are
merged into Standards

Other Key Documents on Managing GHG/Carbon Emission Accounting

Potential national standards: China Certified Emission Reduction (CCER) methodologies

According to the regulation of CCER, *Measures for the Administration of Voluntary Greenhouse Gas Emission Reduction Trading (for trial implementation)*, the methodologies established for sectors under CCER can be integrated into national standard system when conditions are fit.

Existing methodologies for CCER: 4 items (up to May 2024)

- Methodology for Voluntary Greenhouse Gas Emission Reduction Projects: Afforestation Carbon Sink (CCER-14-001-V01)
- Methodology for Voluntary Greenhouse Gas Emission Reduction Projects: Grid-connected Solar Thermal Power Generation (CCER-01-001-V01)
- Methodology for Voluntary Greenhouse Gas Emission Reduction Projects: Grid-Connected Offshore Wind Power Generation (CCER-01-002-V01)
- Methodology for Voluntary Greenhouse Gas Emission Reduction Projects: Mangrove Construction (CCER-14-002-V01)





05. Conclusions

Uncertainties in Existing Accounting Managing System

- Parallel systems on enterprises for GHG/carbon emission accounting and reporting: national standard series, and the guidelines issued by NDRC and MEE.
- The issuing/publishing of MEE accounting guidelines are mixed with national standards, despite the fact that the national TC on carbon management (SAC/TC548) is also under the management of MEE.
- Statement in relevant regulations remains clarified in regards of which system shall prevail for different sectors.



Conclusions

For the accounting standards of GHG/carbon emission in China in the 14th Five Year Plan period:



Wider coverage



China's GHG and carbon emission accounting standard system will no doubt continue to grow and cover more sectors

Stricter Control



Standard revisions present stricter technical specifications comparing with previous version

Further Optimization and Clarification



Different "systems" remains further clarified and optimized to coordinate and unify for actual practice, especially considering the wider coverage of sectors and stakeholders.

Thank You

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