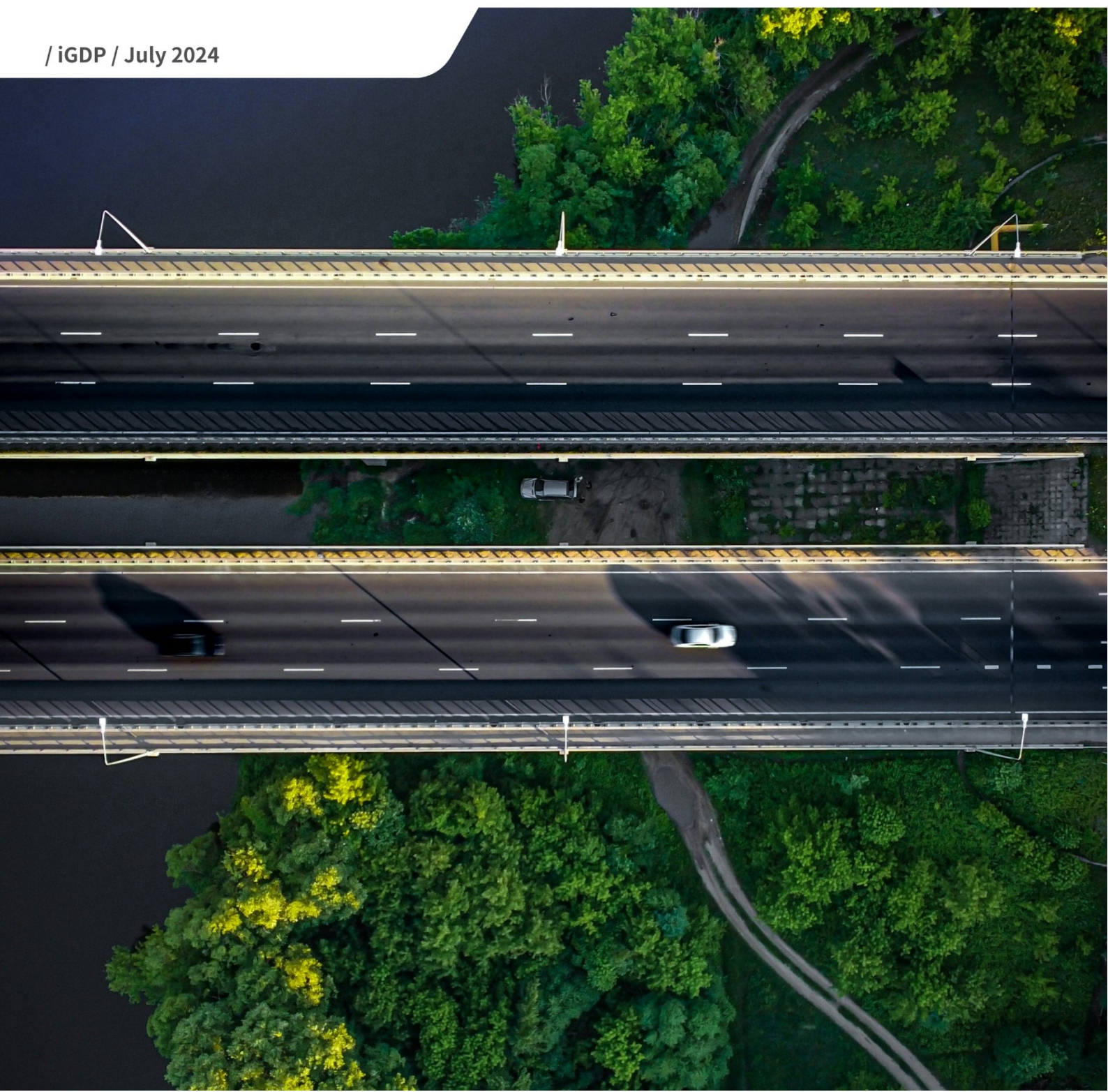


Aligning Green Finance Classification Standards with the “Dual Carbon Goals”

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To implement the major decisions of the Party Central Committee and the State Council on peaking carbon dioxide emissions and achieving carbon neutrality, and to make significant strides in green finance, the People's Bank of China, in collaboration with the National Development and Reform Commission, the Ministry of Industry and Information Technology, the Ministry of Finance, the Ministry of Ecology and Environment, the China Banking and Insurance Regulatory Commission, and the China Securities Regulatory Commission, recently issued the “Guiding Opinions on Further Strengthening Financial Support for Green and Low-Carbon Development”.¹ The Opinions call for establishing a uniform green finance standard framework, as well as expanding research and development of transformative financial standards.

How far off are the present domestic green finance categorization criteria from building a cohesive system that can effectively support green and low-carbon growth, specifically in assisting China in achieving its carbon neutrality goal? This article compares and evaluates existing domestic green classification standards to identify prospective areas of attention for building new classification standards with carbon neutrality goals, and then makes policy recommendations.

1. Current Green Finance Classification Standards in China:

Introduction and Comparison

China currently has four national green finance classification standards: *Green Low-Carbon Transformation Industry Guidance Catalog (2024 Edition)*, *Green Bond Endorsed Projects Catalogue (2021 Edition)*, *Sustainable Finance Joint Classification Catalog (Updated Edition, Climate Mitigation Section)*, and *Reference Standards for Local Climate Financing Pilot Climate Financing Projects*.

The four green finance classification standards establish quantitative targets for endorsed economic actions or projects, frequently making reference to the grade criteria of industry-specific or equipment energy efficiency standards. They rarely provide details regarding the required carbon emission intensity, total carbon emissions, or energy efficiency standards that certain economic activities, technologically upgraded equipment, or production products need to achieve.

¹ Central People's Government of the People's Republic of China.
https://www.gov.cn/zhengce/202404/content_6944448.htm

Therefore, it remains uncertain whether the specific energy efficiency standards and carbon emission requirements outlined in these classification standards can meet China's "dual carbon" goals.

1.1. Green Low-Carbon Transformation Industry Guidance Catalog (2024 Edition)

In February 2024, the National Development and Reform Commission (NDRC) released the *Guidance Catalog for Green and Low-Carbon Transformation Industries (2024 Edition)* (referred to as the "Green Industry Catalog" below). The 2024 edition classifies green industries into seven primary sectors: energy-saving and carbon-reduction, environmental protection, resource recycling, infrastructure green upgrading, green services, energy green low-carbon utilization, and ecological protection, restoration, and utilization. This catalog is organized into three tiers, each containing unique sectors and projects accompanied by detailed explanations and quantified energy efficiency or other indicator thresholds. For instance, it delineates the energy efficiency grades or national/industry benchmarks that products must conform to.

The 2024 edition continues to follow the framework and major coverage areas of the 2019 and 2023 editions. In terms of specific quantitative standards, the 2024 edition is essentially consistent with the 2023 edition. For example, both the 2023 and 2024 editions specify that industrial boiler efficiency should not be lower than the Level 1 efficiency outlined in the *Energy Efficiency Limit Values and Energy Efficiency Grades for Industrial Boilers* (GB 24500).

In summary, the 2024 Edition has implemented two notable updates compared to its predecessors:

1. Regarding emission reduction efforts in high-carbon industries, the 2024 edition not only maintains support for environmental pollution control and waste recovery activities in industries like steel and cement, as seen in the 2023 edition, but also enhances support for initiatives that aim to decrease greenhouse gas emissions and promote energy efficiency and carbon reduction in the production processes of these industries.
2. In expanding the control of all greenhouse gases, the 2024 edition not only upholds the 2023 edition's measures for controlling non-CO₂ greenhouse gases (such as HFCs) and ozone-depleting substances in industrial

processes but also adds requirements for managing non-CO₂ greenhouse gases (such as HFCs) and ozone-depleting substances in the manufacturing of green building materials, efficient energy-saving commercial equipment, and efficient energy-saving household appliances.

1.2. Green Bond Endorsed Projects Catalogue (2021 Edition)

On April 21, 2021, the People's Bank of China, the National Development and Reform Commission, and the China Securities Regulatory Commission collaborated to issue an updated edition of the *Green Bond Endorsed Project Catalog* (2021 Edition) (henceforth referred to as *the Green Bond Catalog*)², with the goal of standardizing the definition of “green” among financial regulatory authorities. A list of environmentally friendly projects and industries that qualify for different forms of green bond aid and usage is defined and chosen using the *Green Bond Catalog*.

The catalog categorizes green projects into six primary domains: clean production, clean energy, ecological environment, infrastructure green upgrading, green services, and energy conservation and environmental protection. It provides specific explanations and requirements for each of the four classification levels, including mandated energy efficiency ratings for products and relevant industry or national standards.

The four-level classification system in the *Green Bond Catalog* closely aligns with the three-level classification system in *the Guidance Catalog for Green Industry* (2019 Edition), ensuring harmonization in national green finance standards. However, the *Green Bond Catalog* no longer encompasses high-carbon emission initiatives, such as the clean utilization of fossil energy like coal.

² Green Bond Endorsed Projects Catalogue (2021 Edition)

<http://www.pbc.gov.cn/goutongjiaoliu/113456/113469/4342400/2021091617180089879.pdf>

1.3. Joint Classification Catalog for Sustainable Finance (Updated Version) (Climate Mitigation Section)

On June 3, 2022, the European Union and China jointly published the *Joint Classification Catalog for Sustainable Finance* (Updated Version) (Climate Mitigation Section) under the International Platform on Sustainable Finance (IPSF). This catalog incorporates 72 economic activities recognized by both the *Green Bond Endorsed Project Catalog* (2021 Edition) and the *Sustainable Finance Classification Scheme - Climate Authorisation Act*, for their substantial efforts in climate change mitigation.³ *The Joint Classification Catalog* is derived from the EU's Sustainable Finance Classification Scheme - Climate Authorisation Act. As such, it establishes project emission reduction contributions by assessing their alignment with the EU's climate objective of attaining a 55% decrease in emissions by 2030, relative to the levels recorded in 1990.

The latest iteration of the *Joint Classification Catalog* categorizes activities into three categories from the perspective of emission reduction contributions: zero-carbon activities, transitional activities, and supporting activities. The document encompasses the primary economic endeavors across six prominent sectors: energy, manufacturing, construction, transportation, solid waste, and forestry. There are a total of seven main categories, 16 secondary categories, and 72 tertiary categories. *The Joint Classification Catalog* establishes precise criteria for determining “substantial contribution” in relation to each economic activity and furnishes corresponding technical support document references.

1.4. Reference Standards for Incorporating Local Climate Investment and Financing Projects into Climate Investment and Financing Pilots

In October 2022, the *Ministry of Ecology and Environment released the Reference Standards for Incorporating Local Climate Investment and Financing Projects into Climate Investment and Financing Pilots* (referred to as the Climate Investment and Financing Inclusion Standards). These standards are

³ The IPSF Sustainable Finance Taxonomy Working Group, co-chaired by China and the EU, released the report titled *Joint Classification Catalog for Sustainable Finance – User Guide for Climate Change Mitigation*. 20220603.[R]. http://www.greenfinance.org.cn/upfile/file/20220619205551_655187_49211.pdf

designed to guide provinces and cities in building climate investment and financing project databases.

The standards clearly delineate the extent of support for climate investment and financing into two categories: “mitigating climate change” and “adapting to climate change.” The correlation between mitigation initiatives and other pertinent requirements can be referenced in the *Classification Guide for Climate Investment and Financing Projects* (TCSTE 0061-2021).

The Classification Guide for Climate Investment and Financing Projects (TCSTE 0061-2021) offers an extensive inventory of projects aimed at mitigating climate change. It encompasses five main categories: Low-Carbon Industrial Systems; Low-Carbon Energy; Carbon Capture, Utilization, and Storage (CCUS) Pilots and Demonstrations; Control of Greenhouse Gas Emissions from Non-Energy Activities; and Increasing Carbon Sinks. These primary categories are subdivided into secondary, tertiary, and quaternary categories. For projects under the quaternary categories, the Classification Guide for Climate Investment and Financing Projects references detailed standards for specific industry categories from the *Guidance Catalog for Green Industry* (2019 Edition).

As per the Climate Investment and Financing Inclusion Standards, climate change mitigation initiatives must satisfy three constraint indicators: project category compliance, project compliance, and significant climate benefits. However, the assessment requirements for emission reduction measurements under the major climate benefits indicator are not yet completely defined.

2. Comparison of Coverage Areas Across Four Green Classification Standards

The four green finance classification standards have connections. Both the *Climate Investment and Financing Inclusion Standards* and the *Green Bond Catalog* make specific reference to specific industry classifications and indicators outlined in the *Guidance Catalog for Green Industry* (2019 Edition) at the fourth level of classification. Although these four green finance classification standards share consistency in framework construction and primary support areas, they

exhibit significant differences in their intended audiences, supported climate goals, and specific sub-sectors.

Target audiences perceive the *Green Industry Guidance Catalog* as being centered around industry, while the *Joint Classification Catalog*, *Climate Investment and Financing Inclusion Standards*, and *Green Bond Catalog* are perceived as being centered around specific projects.

The *Joint Classification Catalog* establishes precise thresholds for different economic activities that can contribute to the EU's climate goals, in terms of the connection between approved climate pledges and quantitative targets. The threshold targets set in the *Green Industry Guidance Catalog* (2023 Edition) (Draft for Comments), *Climate Investment and Financing Inclusion Standards*, and the *Green Bond Catalog* require clear quantitative analysis to assess their efficacy in supporting China's "dual carbon" goals and the Beautiful China initiative.

Presently, there exist notable disparities among the primary green finance standards regarding the sectors they endorse. *The Green Industry Guidance Catalog* is the only green finance standard that endorses economic endeavors in the fossil energy sector, encompassing clean production and storage/transport of natural gas, clean production and efficient use of coal, and coal-fired power unit retrofitting. Only *the Green Industry Guidance Catalog* and *the Green Bond Catalog* exclusively endorse nuclear power projects. All standards endorse the manufacturing and use of renewable energy equipment. However, in the *Common Classification Catalog*, indexes D2.4-D2.7 specify that the energy sources for combined heat and power (CHP) must come from clean sources such as solar energy, geothermal energy, renewable non-fossil gases and liquid fuels, and biomass energy. Such tight classifications exclude traditional coal-fired power plants from combined heat and power projects, overlooking China's power sector's ongoing in current low-carbon transformation and emissions reduction initiatives.

All industry standards facilitate the production of high-efficiency energy-saving equipment. However, when it comes to regulating greenhouse gas emissions generated during industrial processes, only the Climate Finance Project Repository Standards and the Green Industry Directory explicitly address the

control of emissions of carbon and hydrofluorocarbons (HFCs) in production processes. The Green Bond Directory and the Joint Classification Catalog, on the other hand, do not incorporate provisions for controlling industrial process emissions.

All standards in the construction sector advocate the use of green low-carbon materials, green construction processes, and energy efficiency standards. Only the *Climate Finance Project Repository Standards* endorse the construction of roads for urban and rural public transit in the transportation sector. *The Green Industry Directory* (2023 Edition) (Draft for Comments) offers the most extensive assistance within the low-carbon services industry. *The Climate Finance Project Repository Standards* are the exclusive source of support for climate adaption efforts.

Table 1: Comparison of Major Green Classification Standards Supporting Industries/Projects in China

	The Reference Standards for Local Climate Financing Pilot Climate Financing Projects (2022)	Green Low-Carbon Transformation Industry Guidance Catalog (2024 Edition)	Sustainable Finance Joint Classification Catalog (Updated Edition) (2022)	Green Bond Endorsed Projects Catalogue (2021 Edition)
Natural Gas Power Generation		√		√
Clean Production and Efficient Utilization of Coal		√		
Coal-Fired Power Unit Retrofits		√		
Clean Fuel Production		√		
Unconventional Oil and Gas Resource Development		√		
Nuclear Power		√		√
Waste Incineration			√	√
Solid Waste Recycling and Utilization	√	√		√
Wastewater Treatment, Recycling, and Sludge Treatment and Disposal Facility Construction and Operation	√	√	√	√
Carbon Capture	√	√	√	√
Groundwater Protection		√		√
Sponge Cities		√		√
Renewable Energy Green Certificates and Green Power Trading		√		√
Manufacturing of High-Efficiency Generators and Generator Sets		√	√	√
Wind Power Facility Construction and Operation	√	√	√	√
Solar Power Equipment	√	√	√	√

Manufacturing and Operation				
Biomass Energy Utilization Facility Construction and Operation	√	√	√	√
Hydropower Facility Construction and Operation	√	√	√	√
Geothermal Energy Utilization Facility Construction and Operation	√	√	√	√
Ocean Energy Utilization Facility Construction and Operation	√	√	√	√
Hydrogen Energy Utilization Facility Construction and Operation	√	√	√	√
Energy Storage Facilities	√	√	√	√
Manufacturing of High-Efficiency Energy-Saving Equipment	√	√	√	√
Manufacturing of Energy-Saving Pumps and Vacuum Equipment	√	√	√	√
Manufacturing of Energy-Saving Fans and Blowers	√	√	√	√
Manufacturing of Energy-Saving Motors	√	√	√	√
Manufacturing of High-Efficiency Lighting Products and Systems	√	√	√	√
Manufacturing of Green Building Materials	√	√	√	√
Construction of Ultra-Low Energy Buildings	√	√	√	√
Green Buildings	√	√	√	√
Energy Efficiency and Green Retrofits of Existing Buildings	√	√	√	√
Prefabricated Buildings	√	√		√
Renewable Energy Applications in Buildings	√	√	√	√
Manufacturing of New Energy Vehicles and Green Ships	√	√	√	√
Urban and Rural Public Transportation Road Construction	√	√		
Green Retrofitting of Urban and Rural Public Transportation Roads	√	√	√	√
Construction and Operation of Urban and Rural Public Transportation Infrastructure	√	√	√	√
Green Logistics	√	√	√	√
Green Services	√	√	√	√
Demand-Side Management of Electricity		√		√
Green Technology Transactions		√		

Carbon Emission Trading		√		√
Energy Use Rights Trading		√		√
Water Use Rights Trading		√		√
Pollution Discharge Rights Trading		√		√
Forest Rights Trading		√		
Ecosystem Carbon Sequestration Projects	√	√	√	√
Forest Carbon Sequestration Projects	√	√	√	√
Green Agriculture	√	√	√	√
Climate Adaptation Projects	√			

Source: Table created by the author

3. Proposals for Further Development of Domestic Green Finance Classification Standards

3.1. Aligning Major Chinese Green Finance Classification Standards with China's Carbon Neutrality Goals by Establishing Clear Quantitative Targets

Currently, the four green finance classification standards lack clear and specific requirements for carbon emission intensity, total carbon emissions, and energy efficiency standards for different economic activities, technologically upgraded equipment, and production products. Instead, the quantitative targets for supported economic activities or projects are typically referenced from industry-specific or equipment-specific energy efficiency standards. Consequently, it is uncertain whether China's "dual carbon" targets can be achieved with the precise energy efficiency criteria and carbon emission constraints specified in these categorization standards.

Stakeholders are advised to carry out quantitative research to establish a connection between green finance and transformation finance standards and China's "dual carbon" goals, specifically with regard to carbon neutrality objectives. Efforts should be directed towards creating time-bound quantitative targets for diverse economic activities based on plausible approaches for China to achieve its "dual carbon" goals.

3.2. Gradual Reduction of Transitional Projects in Domestic Green Finance Classification Standards in Accordance with China's Carbon Neutrality Goals

Presently, China has four main green finance categorization criteria that contain the essential aspects of green and low-carbon transformation, aligning with China's "dual carbon" objectives. As China's "dual carbon" initiatives are being implemented, it is imperative to exercise greater caution and foresight in the development and enhancement of China's green finance regulations.

To align with China's carbon neutrality goals and comply with current and future emission reduction pathways, it is imperative that we conduct dynamic assessments of the economic activities supported by domestic green finance standards. A coverage scope that prevents promoting "greenwashing" or pseudo-transitional projects should be carefully defined. Using road infrastructure construction as an example, the inclusion of such projects in green classification standards could significantly influence the construction of large-scale transportation infrastructure. Policymakers should also unambiguously establish the parameters and restrictions of support for the transition of industries with substantial emissions. This method limits support to their attempts to undergo transformation in a comparatively short amount of time, thereby avoiding aiding non-transformative growth that encourages proliferation. Additional analysis is necessary to ascertain if the current support for clean coal production, efficient coal utilization, clean fuel production, unconventional oil and gas development, and associated industries will be terminated in the next iteration of green finance classification standards.

3.3. Aligning Domestic Green Finance Classification Standards with China's Carbon Neutrality Goals by Gradually Reducing Coverage of Transitional Projects

China's carbon neutrality target states that the scope of mitigating greenhouse gases other than carbon dioxide should be actively expanded via green finance classification criteria. Guided by achieving carbon neutrality, priority emission reduction sectors that correspond with the Paris Agreement's 1.5-degree Celsius temperature control target should be incorporated in green finance classification standards as soon as possible. Presently, the four prevailing green finance classification standards have fewer prerequisites for growing sectors focused on reducing emissions. In sectors such as agriculture, animal

husbandry, and food systems, there should be strengthened control requirements for non-CO₂ greenhouse gases and ozone-depleting substances.

It is important to clearly forbid the provision of green funding for the manufacturing of pesticides and soil fumigants that contain methyl bromide. Additionally, economic activities and initiatives in the agriculture and food sectors must rigorously refrain from utilizing these compounds. Strengthening comprehensive control requirements for non-CO₂ greenhouse gas emissions in green finance classification standards can effectively stimulate economic activities aimed at reducing emissions from relevant substances, thereby robustly supporting China's achievement of its "dual carbon" goals, particularly the implementation of *the Methane Emission Control Action Plan*.

iGDP

The Institute for Global Decarbonization Progress (iGDP), is a non-profit think tank focusing on green and low-carbon development. Established in Beijing in 2014, it is an internationally recognized think tank with global influence. iGDP is deeply rooted in China's local green and low-carbon practices and provides decision-makers, investors, and communities with solutions and public knowledge products that have a forward-thinking international perspective.

CCNT

China Carbon Neutrality Tracker (CCNT, <https://ccnt.igdp.cn>) is designed to comprehensively track national, sectoral, and provincial/municipal carbon neutrality actions. It is committed to analyzing and interpreting policy practices and innovative actions on the road to carbon neutrality. The platform shares China's efforts and contributions to addressing climate change from an objective perspective. Through an online database and interactive information platform, CCNT serves individuals and entities interested in carbon neutrality actions.

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