

Advancing Non-CO₂ Greenhouse Gas Mitigation in China: Outlook to 2035



September 2025

Executive Summary

The Disproportionate Impact of Non-CO₂ Greenhouse Gases

Non-CO₂ greenhouse gases (GHGs), including methane (CH₄), nitrous oxide (N₂O), and fluorinated gases (HFCs, PFCs, SF₆, NF₃), making up only about 25% of global anthropogenic GHG emissions, but their cumulative radiative forcing has contributed nearly half of historical warming.

With global warming nearing the 1.5° C threshold, mitigating non-CO₂ GHGs is essential for avoiding climate overshoot. Action on short-lived climate pollutants such as CH₄ and HFCs is particularly urgent, as mitigation can deliver rapid climate benefits (CCAC, 2024). Moreover, reducing CH₄ and N₂O also improves air quality, strengthens food security, and enhances public health, amplifying the benefits of climate action.

International Action to Reduce Non-CO₂ Greenhouse Gas Emissions

As the climate crisis deepens, global efforts to cut non-CO₂ GHG emissions are accelerating. Countries and regions are incorporating non-CO₂ targets into their Nationally Determined Contributions (NDCs), developing national or sector-specific mitigation programs, and advancing international cooperation.

Key initiatives include the Global Methane Pledge, launched at COP 26 in 2021, under which 160 countries committed to reducing methane emissions by at least 30% from 2020 levels by 2030. Another milestone is the European Union’s revised F-gas Regulation, adopted in 2024, which introduces comprehensive controls on fluorinated gases and sets a long-term goal of phasing out HFCs production and consumption by 2050.

The table below highlights major national and international mitigation policies and collaborative efforts underway.

	National Mitigation Policies	International Mitigation Cooperation
Methane (CH ₄)	<ul style="list-style-type: none"> • United States: Methane Reduction Action Plan, 2021. • Canada: Faster and Further: Canada's Methane Strategy, 2022. • European Union: Methane Reduction Strategy, 2020; EU New Methane Regulation, 2024. • Brazil: National Zero Methane Plan, 2022; Guidelines to Promote Decarbonization in Oil and Gas Exploration, 2024. 	<ul style="list-style-type: none"> • Global Methane Pledge, 2021, endorsed by 160 countries: Commitment to reduce methane emissions by at least 30% from 2020 levels by 2030. • Declaration on Reducing Methane from Organic Waste, 2024, endorsed by 65 countries: Commitment to establish sectoral targets or measurable actions, roadmaps, and policies to reduce CH₄ emissions from organic waste in future NDCs.
Nitrous Oxide (N ₂ O)	<ul style="list-style-type: none"> • European Union: Inclusion of N₂O emissions from nitric acid and adipic acid production in the carbon market, 2013; Farm to Fork Strategy, 2020. • Australia: Carbon Credit Units Scheme providing economic incentives for agricultural N₂O mitigation. 	<ul style="list-style-type: none"> • Nitric Acid Climate Action Group, 2015, endorsed by 16 countries: Promotes installation of N₂O abatement equipment in nitric acid and urea plants. • United States–Brazil Fertilize 4 Life research collaboration, 2023: Enhances fertilizer application efficiency and reduces fertilizer-related GHG emissions.
Fluorinated Gases (F-Gases)	<ul style="list-style-type: none"> • United States: Innovation and Manufacturing Act, 2020. • European Union: Inclusion of PFC emissions from aluminum production in the carbon market; revised F-gas Regulation, 2024. • Japan: Lifecycle management of fluorinated gases. 	<ul style="list-style-type: none"> • Kigali Amendment of Montreal Protocol on Substances that Deplete the Ozone Layer, 2019, ratified by 163 countries and regions: Controls the production and consumption of HFCs. • Global Cooling Pledge, 2023, endorsed by 72 countries and 16 subnational participants: Targets at least a 68% reduction in cooling-related emissions across all sectors by 2050 compared to current levels, a substantial increase in sustainable cooling by 2030, and a 50% improvement in the average efficiency of new air conditioners.

Under the Paris Agreement, all Parties are required to submit updated NDCs by 2025, setting mitigation targets through 2035. These updates are expected to enhance ambition, offers an important opportunity to limit near-term warming and prevent climate overshoot. Among the NDCs submitted for 2025 so far, several countries have already included specific commitments on non-CO₂ GHG mitigation (see map and table below):

Commitment Type	Parties
Quantified commitments separately for non-CO ₂ GHGs	Uruguay, Canada, Republic of Moldova, New Zealand, Saint Lucia, Zimbabwe, United States ¹
Sector-specific quantified commitments involving non-CO ₂ GHGs	United Arab Emirates, Switzerland, Zimbabwe, Nepal, Somalia, Belize
Mitigation measures or actions addressing non-CO ₂ GHGs	United Arab Emirates, Brazil, United States, Uruguay, United Kingdom, Ecuador, Singapore, Republic of the Marshall Islands, Zimbabwe, Canada, Montenegro, Cuba, Maldives, Republic of Moldova, Nepal, Somalia, Belize



China's Actions to Mitigate Non-CO₂ Greenhouse Gas Emissions

China's national leaders have announced at multiple international forums, including the United Nations Climate Change Conference and the Leaders' Summit on Climate and Just Transition, that the country will submit a NDC for 2035 covering all economic sectors and all greenhouse gases. Enhancing ambition in non-CO₂ GHG mitigation in this upcoming NDC update would underscore China's commitment as a major actor in addressing climate change.

In pursuit of its dual-carbon goals of peaking carbon emissions and achieving carbon neutrality, China has steadily increased its focus on non-CO₂ GHG mitigation. Key policy documents, such as the *Outline of the 14th Five-Year Plan for National Economic and Social Development and the Long-Range Objectives through the Year 2035*, as well as the *Working Guidance for Carbon Dioxide Peaking and Carbon Neutrality in Full and Faithful Implementation of the New Development Philosophy*, explicitly call for “intensifying control of methane (CH₄), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and other greenhouse gases,” and for “gradually establishing and improving the statistical accounting system, policy framework, and management system for non-CO₂ GHG emissions.”

¹ The United States has not set a specific target commitment for non-CO₂ greenhouse gas reductions, but it has projected that CH₄ emissions could be reduced by at least 35% from 2005 levels by 2035.

Building on this policy framework, China has issued a series of control plans targeting specific non-CO₂ GHGs, including the *Methane Emission Control Action Plan* and the *Country Program for Implementing Montreal Protocol on Substances that Deplete the Ozone Layer (2025–2030)*. Sector-specific mitigation efforts are also underway. For example, the *Work Plan for the inclusion of the Cement, Iron and Steel, and Aluminum Industries in National Carbon Trading Market* incorporates PFC emissions from aluminum smelting under regulatory oversight. In August 2025, the *Action Plan for Controlling Nitrous Oxide Emissions in the Industrial Sector* was released, setting out measures to strengthen emission control policies, enhance innovation capacity in abatement technologies and emission management, and improve N₂O recovery and mitigation performance across the industrial sector.

Alongside these policy measures, China has developed a set of relatively mature and scalable technologies and practical cases for mitigating non-CO₂ GHG emissions (see table below). Pilot initiatives at both sectoral and local levels provide valuable lessons to guide future mitigation efforts and support the ongoing refinement of non-CO₂ mitigation policies.

Sector	Field	Technology	Case	Challenges
CH ₄				
Energy	Coal mining	Comprehensive utilization of coal mine gas	Yangquan No.2 Coal Mine, Shanxi – Ventilation Air Methane (VAM) Oxidation Combined Heat and Power (CHP) Project	Low profitability and significant technical barriers lead to limited enterprise motivation.
Agriculture	Livestock farming	Feed structure adjustment / additives	Nanchang, Jiangxi – Livestock manure resource and energy utilization project	Emissions are highly dispersed due to China’s predominantly small-scale farming structure, with limited economic incentives for mitigation.
		Manure management / fertilizer & energy utilization		
	Rice cultivation	Adjustment of irrigation patterns	Kunming, Yunnan & Jianyang, Sichuan – Climate-friendly rice farming	
		Farmland management: reduced or no-tillage / straw incorporation		
		High-yield low-emission rice varieties		
Waste	Solid waste treatment	Source reduction & waste sorting	Shenzhen, Guangdong – Xiaping Landfill gas utilization project	Regional disparities in waste and wastewater treatment capacity, along with outdated equipment in some areas, make effective management more challenging.
		Kitchen waste anaerobic digestion		
		Landfill gas recovery and utilization		
	Wastewater treatment	Sewer dredging & maintenance	Gao’antun Reclaimed Water Plant, Beijing – Co-digestion of kitchen waste and sludge	
		Anaerobic digestion systems for sludge		
		Biogas extraction from open anaerobic ponds		

Sector	Field	Technology	Case	Challenges
N ₂ O				
Agriculture	Fertilizer management	Fertilizer improvement: organic fertilizers / biochar / controlled-release fertilizers / nitrification inhibitors	Sinochem Fertilizer Co. – Intelligent fertilizer blending service	Fertilizer use intensity remains above internationally recognized safe limits, highlighting the need for multi-dimensional technological and model innovations.
		Application methods improvement: soil testing & formulated fertilization / deep placement / fertigation / precision agriculture		
	Livestock farming	Manure management optimization	Muyuan Group, Henan – High-rise pig farming	
Industry	Adipic acid production	Benzene oxidation / distillation / thermal and catalytic decomposition	Huafeng Chemical, Chongqing – Low-temperature catalyst for N ₂ O decomposition from adipic acid tail gas	Limited adoption of N ₂ O abatement devices in adipic acid and nitric acid production. Delayed start in domestic catalyst R&D.
	Nitric acid production	Primary: ammonia oxidation catalyst	Shutai Chemical, Sichuan – In-furnace N ₂ O reduction catalyst for nitric acid	
		Secondary: high-temperature decomposition catalyst after primary catalyst		
		Tertiary: catalytic decomposition or reduction of N ₂ O in tail gas		
HFCs				
Industrial processes & product use	Refrigerants	Low-GWP alternatives development	Midea Industrial Park, Wuhu – R290 high-efficiency AC production Huanxin fluorine materials Co., Ltd – produces HFO-1234fy by using trifluoroethylene as raw material	Safety, cost, and efficiency challenges for natural refrigerants. Potential ecological risks of HFOs.
		Refrigerant recovery & reclamation	Auhong Environmental Materials Co., Tianjin	Low recovery rates and reclamation ratios.
	Byproduct HFC-23	Process improvement	Zhejiang Chemical Research Institute & Zhonghao Chenguang Research Institute – HFC-23 conversion technology	
		Resource utilization		
PFCs				
Industrial processes & product use	Electrolytic aluminum	Low-anode-effect design & control	Huasheng Aluminum Co., Ltd., Shanxi – 300kA electrolytic cell application	Insufficient policy incentives and regulatory frameworks.
SF ₆				
Industrial processes & product use	Power	Development of alternatives in power equipment	State Grid – SF ₆ /N ₂ gas-insulated switchgear	Insufficient policy incentives and regulatory frameworks.
		SF ₆ recycling technology	State Grid – Provincial SF ₆ recycling centers	
End-of-life F-Gases				
Industrial processes & product use	Safe disposal	Plasma technology	Zhonghao Chenguang Research Institute – HFC-23 plasma decomposition project China Southern Power Grid – low-temperature plasma SF ₆ degradation device	Potential formation of toxic by-products during plasma treatment.

Recommendations for Strengthening China's Non-CO₂ GHGs Emission Reduction Actions

Improving China's policy framework for non-CO₂ GHG mitigation is a long-term and systematic effort. The 2025 NDC update provides an important opportunity to integrate targeted mitigation commitments and actions, informed by the current status of China's non-CO₂ GHG emissions, existing mitigation policies, available technologies and practices, as well as key implementation challenges (see Annex 1 for details).

Looking beyond the 2025 NDC update, China's medium- and long-term domestic policy framework should focus on further refining the top-level design, identifying priority sectors for emission reductions, and strengthening supporting mechanisms. Specific recommendations are as follows:

	CH ₄	N ₂ O	F-Gases
Top-level design and mitigation cooperation			
International Mechanisms	<ul style="list-style-type: none"> Strengthen non-CO₂ GHGs mitigation commitments in the 2025 NDC, propose quantified reduction targets, and integrate sector-specific actions into the NDC. Accelerate implementation of the <i>Kigali Amendment</i> and expedite domestic HFC mitigation efforts to meet international demand for environmentally friendly refrigeration products. Promote emission reduction cooperation across regions, cities, industries, enterprises, and NGOs. Leverage the Belt and Road Initiative and South-South cooperation platforms to facilitate international exchange of China's non-CO₂ mitigation practices in agriculture, refrigeration, and other fields. 		
Domestic policies	<ul style="list-style-type: none"> Develop comprehensive, gas-specific non-CO₂ mitigation plans. For key sectors with large emissions, diverse gases, and complex mitigation challenges, consider issuing integrated control plans, e.g., a comprehensive agricultural non-CO₂ mitigation action plan. Incorporate non-CO₂ GHGs mitigation into the "synergy of pollution reduction and carbon abatement" policy framework to foster the most cost-effective mitigation measures and maximize co-benefits. 		
	<ul style="list-style-type: none"> Accelerate local methane mitigation actions. 	<ul style="list-style-type: none"> Issue a dedicated N₂O control plan. 	<ul style="list-style-type: none"> Update the <i>National Cooling Plan</i> to advance HFC mitigation while also raising energy efficiency standards.
Priority mitigation measures for key sectors/industries			
Agriculture	<ul style="list-style-type: none"> Promote comprehensive non-CO₂ mitigation actions that support food security and rural revitalization. In light of China's predominantly small-scale farming structure, focus on identifying cost-effective mitigation practices and scaling up high-yield low-emission technologies via agricultural technology service centers and new agricultural business/service entities. Improve agricultural resilience to climate change while ensuring food security. 		
Industry		<ul style="list-style-type: none"> Implement the <i>Action Plan for Controlling Nitrous Oxide Emissions in the Industrial Sector</i>, providing economic incentives for industrial N₂O mitigation through inclusion in the <i>Green Finance-Supported Projects Catalogue</i> and innovative market mechanisms. 	<ul style="list-style-type: none"> Advance HFC reduction through improved end-use treatment and updated product standards; revise refrigerant standards to foster low-GWP refrigerant adoption. Develop targeted mitigation policies for PFCs and SF₆ based on enterprise emission reduction practices.

Energy	<ul style="list-style-type: none"> • Building on existing policies by further developing diversified financial products and align green finance measures with mitigation projects to strengthen the control and integrated utilization of ultra-low concentration coal mine methane. • Improve monitoring of methane emissions from abandoned mines and advance technologies for their capture and utilization; accelerate emission baseline assessment and enhance the accuracy of methane accounting for abandoned mines. 		
Supporting measures			
Data foundation	<ul style="list-style-type: none"> • Improve measurement, reporting, and verification (MRV) systems for non-CO₂ GHG emissions by integrating “top-down” and “bottom-up” monitoring approaches for cross-validation, enhancing the accuracy and transparency of China’s non-CO₂ emission data. • Align MRV improvements with both mandatory and voluntary corporate environmental disclosure requirements. 		
Market mechanisms	<ul style="list-style-type: none"> • Explore the inclusion of additional non-CO₂ emission sources in the carbon market and provide market incentives for mitigation practices that are not yet cost-effective or for technologies requiring upfront R&D investments. 		
Finance and fiscal policy	<ul style="list-style-type: none"> • Increase public investment in non-CO₂ mitigation technologies. • Support financial institutions in developing green credit, green bonds, green insurance, and other green financial products for diverse non-CO₂ mitigation projects and technologies. • Further incorporate non-CO₂ mitigation technologies into the <i>Guidelines for Green and Low-Carbon Industry Transformation</i>, <i>Green Finance-Supported Projects Catalogue</i>, and <i>Green Bond Endorsed Projects Catalogue</i>; expand the coverage of non-CO₂ mitigation projects in the <i>Reference Standards for Climate Investment and Financing Pilot Projects</i>, supported by ongoing financial innovation in implementation. 		
Green consumption	<ul style="list-style-type: none"> • Consider integrating green consumption incentives into broader policy frameworks; use fiscal and pricing tools to steer consumers toward green and low-carbon products. In the agricultural sector, the carbon-labeling and certification system for agricultural products can shape production and consumption expectations, gradually enhancing market recognition of green low-carbon agricultural products. • Encourage governments to scale up green procurement while respecting market development principles. 		
Technological innovation	<ul style="list-style-type: none"> • Strengthen R&D and innovation for non-CO₂ GHG mitigation and substitution technologies in key fields; improve technology dissemination and align efforts with sectoral and local non-CO₂ mitigation policies. For example, coordinate the <i>National Catalogue of Key Low-Carbon Technologies for Promotion</i> with <i>Green Bond/Finance Projects Catalogue</i>. 		

Annex 1: Non-CO₂ GHG commitments in the 2021 NDC and Proposed Updates for the 2025 NDC

Overall Non-CO₂ GHG Policies in the 2021 NDC and Recommendations for the 2025 NDC

Sector	The 2021 NDC	Proposed Updates for the 2025 NDC	Policy References
All Non CO ₂ -GHGs	China will step up the control of key non-CO ₂ GHG emissions. China will research and implement an action plan to control non-CO ₂ GHG emissions; continue to improve the technical system for monitoring, reporting and evaluation of non-CO ₂ GHG emissions; and gradually establish sound statistical accounting system, policy system and management system for non-CO ₂ GHG emissions. Furthermore, it will form a raft of applicable non-CO ₂ GHG emission control technologies, build a batch of major projects with great emission reduction effects, and promote a group of replicable pilot and demonstration projects.	<ul style="list-style-type: none"> Strengthen the control of methane and other non-CO₂ greenhouse gas emissions. Integrate all greenhouse gas controls into environmental impact assessment management. 	<ul style="list-style-type: none"> <i>Opinions of the CPC Central Committee and the State Council on Winning the Battle Against Pollution</i> <i>Implementation Plan for Synergizing Pollution Control and Carbon Reduction</i>

Methane (CH₄) Emission Reduction Policies in the 2021 NDC and Recommendations for the 2025 NDC

Sector	The 2021 NDC	Proposed Updates for the 2025 NDC	Policy References
Coal Mine Methane	Rational control of coal production capacity; increase of gas extraction and utilization rate; application of technologies for recovering associated gas.	<ul style="list-style-type: none"> Enforce the <i>Emission Standards</i> to prohibit coal mine methane emissions with a concentration above 8% and an extraction rate exceeding 10 cubic meters per minute. Implement the <i>Methodology</i> to encourage comprehensive utilization of extracted coal mine gas with 2–8% methane concentration and ventilation air methane. 	<ul style="list-style-type: none"> <i>Emission Standards of Coalbed Methane/Coal Mine Gas</i> <i>Notice on Further Strengthening Environmental Impact Assessment Management of Coal Resource Development</i> <i>Methodology for Voluntary Greenhouse Gas Emission Reduction Projects: Utilization of Low-concentration Coal Mine Gas with Methane Concentration below 8% and Ventilation Air Methane</i>
Oil & Gas Methane	Application of technologies for recovering associated gas.	<ul style="list-style-type: none"> Increase methane recovery and utilization from oil and gas fields. Gradually reduce routine flaring emissions. 	<ul style="list-style-type: none"> <i>Methane Emission Control Action Plan</i> <i>14th Five-Year Plan for a Modern Energy System</i>
Livestock	Improve treatment and utilization of livestock manure to reduce greenhouse gas emissions from animal husbandry.	<ul style="list-style-type: none"> Further lower methane emission intensity per unit of livestock product. By 2030, achieve a comprehensive utilization rate of over 85% for livestock manure. 	<ul style="list-style-type: none"> <i>Methane Emission Control Action Plan</i> <i>Implementation Plan for Agricultural and Rural Emission Reduction and Carbon Sequestration</i>
Rice Cultivation		<ul style="list-style-type: none"> Reduce methane emission intensity per unit of rice yield. 	

Sector	The 2021 NDC	Proposed Updates for the 2025 NDC	Policy References
Waste	Accelerate development of circular economy.	<ul style="list-style-type: none"> • Achieve "zero landfill" of untreated municipal solid waste in regions with daily collection exceeding 3 million tons. • Improve landfill gas recovery and utilization. • Encourage wastewater treatment projects to adopt sludge anaerobic digestion for biogas production and strengthen biogas recovery and utilization. 	<ul style="list-style-type: none"> • <i>Implementation Plan for Strengthening Urban Household Waste Sorting and Treatment Infrastructure</i> • <i>Methane Emission Control Action Plan</i>
Policy Framework	Gradually establish sound statistical accounting system, policy system, and management system for non-CO ₂ GHG emissions	<ul style="list-style-type: none"> • Enhance methane emission standards for oil and gas leaks and enforce stringent control measures. • Formulate technical specifications for methane emission control in rice cultivation, livestock farming, and waste resource utilization. 	<ul style="list-style-type: none"> • <i>Methane Emission Control Action Plan</i>
Economic Incentives	<p>While perfecting the national carbon market management system, the registration system, trading system and other infrastructure will be enhanced. The trading system of voluntary GHG emission reductions will be improved.</p> <p>Promote national certified voluntary emission reductions inclusion in the national carbon market trading system.</p>	<ul style="list-style-type: none"> • Promote projects with methane emission reduction benefits into the ecological environment-oriented development project database. • Explore subsidy and incentive policies for methane reduction in key production areas of ruminant livestock and rice cultivation. • Improve voluntary greenhouse gas emission trading mechanisms and support eligible methane utilization and emission reduction projects to participate in voluntary GHG trading. 	<ul style="list-style-type: none"> • <i>Methane Emission Control Action Plan</i>

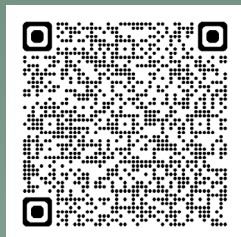
N₂O Emission Reduction Policies in the 2021 NDC and Recommendations for the 2025 NDC

Major Emission Source	The 2021 NDC	Proposed Updates for the 2025 NDC	Policy References
Nitrogen Fertilizer Use	Enhance the reduction and efficiency of chemical fertilizers and pesticides, including deepening the implementation of soil testing and formulated fertilization; promote the substitution of organic fertilizers for chemical fertilizers.	<ul style="list-style-type: none"> Develop and scale up high-efficiency fertilizers with improved crop nutrient uptake and expand the use of efficient fertilization techniques such as fertigation. Expand the application of controlled-release fertilizers, water-soluble fertilizers and other new innovative fertilizer products, fostering green circular agriculture models that integrate crop production and livestock farming. 	<ul style="list-style-type: none"> <i>Implementation Plan for Agricultural and Rural Emission Reduction and Carbon Sequestration</i> <i>Implementation Plan for Building National Pilot Zones for Green Agricultural Development and Promoting Comprehensive Green Transformation of Demonstration Zones for Agricultural Modernization</i>
Livestock Manure	Ways to treat and utilize livestock and poultry manure will be refined to reduce GHG emissions from livestock and poultry breeding.	<ul style="list-style-type: none"> Enhance the resource utilization of livestock manure, reducing methane and nitrous oxide emissions from manure management. 	<ul style="list-style-type: none"> <i>Implementation Plan for Agricultural and Rural Emission Reduction and Carbon Sequestration</i>
Nitric Acid and Adipic Acid Production	Implementation plan will be designed for promoting major low-carbon technologies in the industrial sector by facilitating the promotion and application of advanced and applicable low-carbon technologies, processes, equipment and materials.	<ul style="list-style-type: none"> Achieve progressive reductions in N₂O emissions per unit of product in the adipic acid, nitric acid, and caprolactam industries, reaching internationally leading levels by 2030. Explore available funding sources to support the construction of N₂O recovery and purification facilities, as well as N₂O abatement installations in these industries. Implement demonstration projects for N₂O emission control technologies. Support the inclusion of relevant industrial N₂O control technologies in the National Catalogue of Key Low-Carbon Technologies for Promotion and promote the development and application of N₂O abatement catalysts. Strengthen synergistic management of industrial N₂O emissions along with nitrogen oxides (NO_x) and volatile organic compounds (VOCs) and explore policies to coordinate N₂O reduction with ozone layer protection. Enhance the MRV system for N₂O emissions in the industrial sector. 	<ul style="list-style-type: none"> <i>Implementation Plan for Science and Technology Support for Carbon Dioxide Peaking and Carbon Neutrality (2022–2030)</i> <i>Action Plan for Controlling Nitrous Oxide Emissions in the Industrial Sector</i>
Sewage Treatment	Expedite development of circular economy.	<ul style="list-style-type: none"> Strengthen the application of low-carbon technologies for efficient nitrogen and phosphorus removal, reducing nitrous oxide emissions during the denitrification process. 	<ul style="list-style-type: none"> <i>Opinions on Implementing Measures for Promoting Synergy in Reducing Pollution and Carbon Emissions from Sewage Treatment</i>

F-Gases Emission Reduction Policies in the 2021 NDC and Recommendations for the 2025 NDC

Gas	The 2021 NDC	Proposed Updates for the 2025 NDC	Policy References
HFCs	Strengthen hydrogen fluorocarbon emission control.	<ul style="list-style-type: none"> From 2029, HFC production and use must not exceed 90% of the baseline; from 2035, not exceed 70%. Improve product standards, safety standards, energy efficiency standards, and technical specifications for substitutes and alternative technologies in home appliances, commercial and industrial cooling systems, automotive, fire protection, foam, industrial cleaning, and refrigeration maintenance. Prioritize HFC reduction efforts in automotive, home appliance, and commercial refrigeration sectors. Encourage and support scientific research, technological development, and promotion of alternative technologies. Ensure proper recovery and storage of refrigerants, and encourage recycling and reclamation of recovered refrigerants. Encourage local governments to establish regional centers for the safe disposal of controlled substances. Strengthen HFC emission accounting capacity, and conduct research on emission factors and emission identification through production and use processes. Explore the feasibility and scientific pathways for developing voluntary emission reduction methodologies for HFC substitution, recovery, reclamation, and destruction. 	<ul style="list-style-type: none"> <i>The Kigali Amendment to Montreal Protocol on Substances that Deplete the Ozone Layer</i> <i>Country Program for Implementing Montreal Protocol on Substances that Deplete the Ozone Layer (2025–2030)</i> <i>Regulations on Administration of Ozone Depleting Substances</i> <i>Green and high-Efficiency Cooling Action Plan (2019)</i>
	Promote HFC-23 destruction	<ul style="list-style-type: none"> Strengthen the supervision of HFC-23 by-product generation and destruction facilities. Promote technological innovation and upgrading in production to reduce HFC-23 by-product rate; promote resource utilization technologies for HFC-23 as feedstock. 	<ul style="list-style-type: none"> <i>Notice on Strengthening the Control of HFC-23 Emissions as By-Product</i> <i>Country Program for Implementing Montreal Protocol on Substances that Deplete the Ozone Layer (2025–2030)</i>
SF ₆	Promote low-GWP power facilities	<ul style="list-style-type: none"> Accelerate the development and deployment of environmentally friendly insulating gases. 	<ul style="list-style-type: none"> <i>Action Plan for Expediting the Green and Low-carbon Development of Electrical Equipment</i>

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About iGDP

The Institute for Global Decarbonization Progress (iGDP) is a non-profit think tank focusing on green and low-carbon development. Established in 2014, iGDP is committed to China's decarbonization and the global effort to address climate change. iGDP provides policymakers, impact investors, and practitioners with forward-thinking solutions and knowledge products from an international perspective. Through interdisciplinary, systematic, and empirical policy research, iGDP promotes robust energy and climate solutions with high implementation and investment feasibility. iGDP works with its partners to promote a zero emissions future.

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