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Report Highlights:

On November 7, 2023, the People's Republic of China (PRC) released its long-awaited Methane Emissions Control Action Plan. The plan, jointly released by 11 PRC departments, provides "Key Tasks" for methane emissions control in eight major areas, including the agricultural sector, through 2035. Though focused on methane, much of the agricultural related tasks outlined mirror previously issued Ministry of Agriculture and Rural Affairs (MARA) plans for the sector and provide few metrics or targets for measuring reductions. This report includes an unofficial translation of the plan.

Summary:

On November 7, 2023, 11 PRC departments including the Ministry of Ecology and Environment of China (MEE), the Ministry of Foreign Affairs (MOFA), the National Development and Reform Commission (NDRC), the Ministry of Science and Technology (MOST), the Ministry of Industry and Information Technology (MIIT), the Ministry of Finance (MOF), the Ministry of Natural Resources (MNR), the Ministry of Housing and Urban-Rural Development (MHURD), the Ministry of Agriculture and Rural Affairs (MARA), the Ministry of Emergency Management (MEM), and the National Energy Administration (NEA) jointly released the Methane Emissions Control Action Plan (link in Chinese); the PRC's first high-level document for methane emissions management and control.

The plan highlights eight areas and sectors for engagement, including monitoring and reporting systems, energy, agriculture, garbage and sewage treatment, technical coordination, technical innovation, regulatory standards and policies, and global coordination. Many aspects of the plan mirror existing departmental plans such as MARA's Implementation Plan for Carbon Reduction and Carbon Sequestration in Agriculture and Rural Areas (see GAIN Report CH2023-0136 Annex V) and lack specific targets for reduction.

The plan's focus on monitoring methane emissions echoes parts of the U.S.-China Joint Glasgow Declaration on Enhancing Climate Action in the 2020s which states that "the United States and China intend to convene a meeting in the first half of 2022 to focus on the specifics of enhancing measurement and mitigation of methane, including through standards to reduce methane from the fossil and waste sectors, as well as incentives and programs to reduce methane from the agricultural sector;" a commitment thus far unfulfilled.

Within the agricultural sector, the plan focuses on livestock and manure management, enteric fermentation in livestock, and rice field management. Combined, these three areas account for more than 95 percent of the PRC's reported agricultural methane emissions. As presented elsewhere in the plan, much of the goals in the agricultural sector are general and omit specific reduction targets. One specific target stated, that by 2025 "the comprehensive utilization rate of livestock and poultry manure will reach over 80 percent, and by 2030, it will reach over 85 percent" fails to recognize that by MARA's own data, as of July 2023, the comprehensive utilization rate of livestock and poultry manure already reached 78 percent.

For additional information on agriculture and climate in China, please see GAIN report Agricultural Climate Goals and Policy Overview.

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Methane Emissions Control Action Plan

In order to implement the ""The Outline of the 14th Five-Year Plan for Economic and Social Development and Long-Range Objectives through the Year 2035 of the People's Republic of China" and the "Opinions of the CPC Central Committee and the State Council on Completely, Accurately and Comprehensively Implementing the New Development Concept and Doing a Good Job in Carbon Peaking and Carbon Neutralization", implement the national strategy of actively responding to climate

change, strengthen the coordination of air pollution prevention and methane emission control, control methane emissions in a scientific, reasonable and orderly manner, this action plan was formulate.

1. Situation Faced

Methane is the second largest greenhouse gas in the world, with high warming potential and short life. Active, steady and orderly control of methane emissions has the climate benefits of slowing global temperature rise, the economic benefits of energy resource utilization, the environmental benefits of collaborative control of pollutants, and the safety benefits of reducing production accidents. In recent years, China has achieved certain results in the utilization of methane resources. However, methane emission control still faces problems such as a weak statistical monitoring foundation and an incomplete regulatory and standard system. Technical and management capabilities need to be improved urgently, and more powerful measures need to be taken to effectively improve basic capabilities such as methane emission statistics and accounting, monitoring and supervision, comprehensively and orderly promote methane emission control, and actively participate in global governance of climate change.

2. Overall Requirements

(1) Guiding ideology.

Guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, fully implement the spirit of the 20th National Congress of the Communist Party of China, thoroughly implement Xi Jinping Thought on Ecological Civilization, implement the deployment of the National Ecological Environmental Protection Conference, and adhere to the coordinated advancement of carbon reduction, pollution reduction, green expansion, and growth. Unswervingly implement the national strategy to actively respond to climate change, adhere to the system concept, properly handle the relationship between emission reduction, development and security, take the comprehensive green transformation of economic and social development as the guide, and consolidate basic capabilities as the key, use efficient utilization, technological innovation, and collaborative control as means to accelerate the formation of a methane emission supervision system, promote synergy in pollution reduction and carbon reduction, and effectively control methane emissions in an orderly and effective manner.

(2) Working principles.

Adhere to overall planning and coordination. Adhere to the system concept, strengthen resource utilization and source control, and strengthen collaborative governance of pollution reduction and carbon reduction. Make overall plans, take multiple measures at the same time, and jointly manage multiple parties to create a new situation in comprehensive control of methane emissions.

Persist in laying a solid foundation. Rely on the construction of laws, regulations and systems, guided by technological innovation and application, and guaranteed by the construction of statistical accounting, monitoring and supervision capabilities, lay a solid foundation for methane emission control.

Adhere to classified policies. Follow the scientific laws of methane emission management, give consideration to the characteristics and differences of different fields and regions, implement classified policies, pilot exploration, and solidly promote methane emission control.

Maintain stability and orderliness. Fully consider the actual capabilities of the relevant industries, reasonably set work goals and tasks, scientifically identify key and difficult work points, adhere to a step-by-step work rhythm of starting with easy things and then difficult ones, so as to achieve strong, orderly and effective advancement.

Keep on guarding against risks. Strengthen risk awareness, adhere to bottom-line thinking, proceed from the actual national conditions, properly handle the relationship between methane emission control and energy security, food security, industrial chain supply chain security and safe production, and prevent and resolve various major risks.

(3) Main objectives

During the "14th Five-Year Plan" period, methane emission control policy, technology and standard systems will be gradually established, basic capabilities such as methane emission statistics and accounting, monitoring and supervision will be effectively improved, and methane resource utilization and emission control work will make positive progress. The methane emission intensity of agricultural products from units in the planting and animal/aquatic farming industries will maintain stable with slight decline trend, and the resource utilization rate of urban domestic waste and the harmless disposal rate of urban sludge will continue to increase across the country.

During the "15th Five-Year Plan" period, methane emission control policies, technologies and standard systems will be further improved, basic capabilities such as methane emission statistics and accounting, monitoring and supervision will be significantly improved, and methane emission control capabilities and management levels have will be effectively improved. The utilization level of coal mine gas will be further improved, and the methane emission intensity of agricultural products per unit of planting and animal/aquatic farming will be further reduced. Thereafter, the oil and gas extraction industry will strive to gradually achieve zero conventional flaring for onshore oil and gas extraction.

3. Key Tasks

(1) Strengthen the construction of methane emission monitoring, accounting, reporting and verification systems.

1) Strengthen methane emission monitoring. Explore and carry out methane emission monitoring pilot projects and promote methane emission source monitoring in key areas. According to the characteristics of China’s methane emissions, methane environmental concentration monitoring should be carried out under the existing ecological environment monitoring system, and a sky-ground integrated methane monitoring system such as ground monitoring, drones and satellite remote sensing should be gradually established.

2) Study and establish a methane emission accounting, reporting and verification system. Research and promote the establishment of a methane emission accounting and reporting system for enterprises in key industries and promote regular reporting of methane emission data from large emission sources such as coal mines, oil and gas fields, livestock farms, landfills, and sewage treatment plants. Combined with the preparation of national and provincial greenhouse gas inventories, the normalized accounting of methane emissions will be gradually realized. Organize and carry out data

verification, spot checks and on-site inspections to steadily improve the quality of methane emission data.

3) Improve the level of information management of methane emission data. Promote the construction of a comprehensive management system for greenhouse gas emission data, strengthen the integration of methane emission data collection, analysis and utilization information, and promote cross-departmental data sharing. Explore and carry out research on atmospheric methane concentration inversion emission models and strengthen the verification of accounting data with inversion data.

(2) Promote methane emission control in the energy sector.

4) Strengthen the comprehensive utilization of methane. Promote the control of methane emissions from oil and gas field venting and encourage companies to recycle associated gas and vented air according to local conditions. Those that cannot be recycled or are difficult to recycle should be burned and vented. Encourage and guide coal enterprises to increase the extraction and utilization of coal mine gas. By 2025, the annual utilization of coal mine gas will reach 6 billion cubic meters; by 2030, the gas collection rate of oilfield associated gas will reach the internationally advanced level.

5) Promote the application of leak detection and repair technology. Explore and gradually improve the technical specification system for leak detection and repair in the oil and gas field and promote normalized application of leak detection and repair throughout the entire industry chain. Strengthen the research and application of advanced pipeline maintenance technologies and equipment to effectively improve methane leakage control capabilities.

6) Promote the gradual reduction of conventional flaring in oil and gas systems. Optimize the construction and management of oil and gas field to reduce the amount of natural gas burned in the flare system. Scientifically plan and design new oil and gas operation projects and strive to gradually reduce conventional flares on the basis of ensuring production safety.

(3) Promote methane emission control in the agricultural sector.

7) Promote the resource utilization of livestock and poultry manure. Focusing on large-scale livestock and poultry farms, improve livestock and poultry manure storage and treatment facilities and equipment, promote technologies such as closed treatment of manure, gas collection and utilization or treatment, establish a ledger for resource utilization of manure, explore the implementation of nutrient balance management of livestock and poultry manure, and improve the level of livestock and poultry manure treatment and resource utilization. Develop rural biogas according to local conditions, encourage qualified areas to build large-scale biogas//bio natural gas projects, explore incentive and constraint mechanisms for biogas//bio natural gas terminal utilization, promote centralized biogas supply for heating, power generation and grid, and biogas vehicle use or integration into gas pipe network and other applications. By 2025, the comprehensive utilization rate of livestock and poultry manure will reach over 80 percent, and by 2030, it will reach over 85 percent.[1]

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[1].

8) Scientifically control methane emissions from enteric fermentation. Focusing on large-scale livestock and poultry farms, select and promote high-yield and low-emission livestock and poultry varieties, promote technologies such as low-protein diets, whole-plant silage, etc. and rationally use plant extracts, probiotics and other feed additives and multi-functional nutritional licking bricks. Improve livestock and poultry feeding management, implement precision feeding, explore high-yield and low-emission technology models, and guide the reduction of intestinal methane emissions per unit of livestock products.

9) Promote methane emission control in rice fields in an orderly manner. Focusing on the main rice-producing areas, strengthen rice field water management, promote water-saving irrigation technology in rice fields according to local conditions, shorten the anaerobic environment time in rice fields, and reduce methane production and emissions per unit of rice. Improve fertilization management in rice fields and promote the return of composted organic fertilizer to the fields. Breed and promote high-yield, high-quality, water-saving and drought-resistant rice varieties, demonstrate key technologies such as aerobic farming, and form a high-yield and low-emission rice planting model.

(4) Strengthen the methane emissions control from garbage and sewage treatment.

10) Promote methane emission control from garbage disposal. Promote source reduction, classified recycling and resource utilization of domestic waste, and improve the resource utilization system of urban domestic waste. Promote the construction of food waste treatment facilities in an orderly manner. Strengthen the comprehensive improvement of domestic waste landfills and improve the level of landfill gas recycling. By 2025, the resource utilization rate of urban domestic waste nationwide will reach about 60%.

11) Strengthen the collection and utilization of methane in the field of sewage treatment. Comprehensively improve the efficiency of urban domestic sewage collection and treatment, and steadily improve the level of harmless and resource utilization of sludge. Encourage qualified sewage treatment projects to use sludge anaerobic digestion and other methods to generate biogas and strengthen recycling. By 2025, the harmless disposal rate of urban sludge will reach more than 90%.

(5) Strengthen the coordinated control of pollutants and methane.

12) Strengthen coordinated control measures for pollutants and methane. Make full use of existing ecological and environmental regulations, standards and policies to build a governance system that integrates pollutant emission reduction and methane emission control. Strengthen the coordinated control of volatile organic compounds and methane, and properly dispose of methane-containing flammable gases generated from industrial production. Promote the coordinated control of odor pollutants and methane in landfills. Encourage industries with high organic content in wastewater and good biodegradability to negotiate with urban sewage treatment plants on the concentration of water pollutants in accordance with laws and regulations to reduce methane production. Promote the technological advancement of motor vehicle and ship power systems to achieve coordinated control of pollutants and methane. By 2025, the collaborative control capabilities of pollution control and methane emissions will be significantly improved.

13) Optimize the technical route of collaborative governance. Develop technical guidelines for collaborative control of pollutants and methane in key areas. Promote the use of integrated control technologies such as hydrocarbon vapor recovery and utilization, operation containment transformation, and safe oxidation combustion in the field of oil and gas exploration. Promote livestock and poultry breeding manure solid-liquid separation, quality separation treatment, and deep application back to the field management technology. Promote the use of high-efficiency methane production technology for high-concentration organic industrial wastewater and supporting efficient treatment technology.

(6) Strengthen technological innovation and methane emission control supervision.

14) Strengthen innovation on key technology. Strengthen research on the characteristics and laws of methane emissions in different fields, continue to carry out research and innovation in key technologies such as resource utilization, high-yield and low-emission breeding, and monitoring, strengthen the construction of methane emission control technology demonstration projects, and incorporate methane emission control-related technologies into the technology catalog of low-carbon key promotion projects of the country. Accelerate the integration and industrialization of methane emission control equipment and technology in key areas and deploy and build a number of national key R&D innovation projects and major projects.

15) Strengthen supervision on methane emission control. Comprehensively implement standards for coal mine gas emission limits, domestic waste landfill pollution control, and urban sewage treatment plant pollutant emission standards, strengthen supervision of methane emission data quality, and explore the use of satellite remote sensing and other technologies to monitor abnormal methane emissions. Ensure funding for methane emission supervision and continue to improve professional supervision capabilities.

(7) Accelerate the construction of a regulatory, standards and policy system.

16) Strengthen the construction of laws and regulations. Improve methane emission control regulations and systems. Promote the revision of laws and standards related to coal mine safety in a timely manner. Research and introduce regulations and systems related to source reduction and efficient resource utilization of organic waste.

17) Establish and improve the technical standards system. Further improve methane emission standards for coal mine gas and oil and gas methane leakage in a timely manner and strictly enforce methane emission control requirements. Formulate technical specifications for methane emission control from rice, livestock and poultry breeding, and waste resource utilization. Formulate and revise technical specifications for methane emission monitoring, accounting, reporting, and verification, improve greenhouse gas emission reduction accounting methods for methane utilization projects, and update default emission factors in a timely manner.

18) Innovate and improve economic incentive policies. Promote projects with methane emission reduction benefits to be included in the ecological environment-oriented development project library. Explore and study reward and subsidy policies for methane emission reduction in ruminant breeding and main rice growing areas. Improve the voluntary greenhouse gas emission reduction trading mechanism and support qualified methane utilization and emission reduction projects to carry out voluntary

greenhouse gas emission reduction trading. Encourage climate investment and financing for methane emission control projects.

(8) Strengthen global methane governance and cooperation

19) Actively participate in global methane governance. Adhere to multilateralism, follow the principles of common but differentiated responsibilities, fairness and respective capabilities, and actively and constructively participate in global methane governance.

20) Carry out global methane exchange and cooperation. Through South-South cooperation on climate change, the "Belt and Road" Green Development International Alliance and other platforms, jointly promote global methane exchanges and cooperation. Participate in dialogue and cooperation related to low methane emission technologies, equipment and product certification standards.

4. Organization and implementation

(1) Strengthen overall planning and coordination. The Ministry of Ecology and Environment will establish a coordination and cooperation working mechanism with relevant departments, organize the implementation of the methane emission control action plan, and coordinate to solve major problems encountered during implementation. Give full play to the role of social groups such as industry associations and urge enterprises to consciously fulfill their social responsibilities.

(2) Strengthen the implementation of responsibilities. Relevant departments and key industries and enterprises in all regions must fully understand the importance of methane emission control, carry out methane emission control work in a steady and orderly manner, clarify the division of tasks, and ensure that all key measures are implemented and effective.

(3) Strengthen publicity and training. Popularize knowledge related to the preparation of methane emission inventories, and conduct relevant training on the establishment of methane emission monitoring, accounting, reporting and verification systems, as well as pollutant and methane control. Guide enterprises, universities, and scientific research units to carry out industry-university-research cooperation and cultivate a group of technical talents in energy, agriculture, and waste methane emission control. Increase publicity about the climate, economic, environmental and safety benefits of methane emissions control. Carry out publicity on typical experiences and practices in methane emission control.

(4) Improve evaluation and supervision. The Ministry of Ecology and Environment, together with relevant departments, will strengthen the tracking, dispatching and analysis of the implementation of the action plan, and regularly dispatch the progress of the implementation of methane emission control targets.
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Attachments:

No Attachments.