Progress in China's efforts to address climate change

Since China announced the targets of a carbon peak in 2030 and carbon neutrality in 2060 in September 2020, the central government and energy administrative departments have held a series of public meetings to deploy specific action plans. Issues such as ecological civilization, energy conservation and environmental protection have also been reiterated in addition to the development of renewable energy. For example, the central government emphasizes that the 14th Five-Year Plan period is a critical period for the promotion of a comprehensive green transition for the economy and society, and carbon reduction is a key strategic direction for the construction of an ecological civilization.[7] The government will strictly control the growth of coal consumption during the 14th Five-Year Plan period and subsequently reduce incremental coal consumption during the 15th Five-Year Plan period gradually.[8] Furthermore, the NDRC aims to limit the development of energy-intensive and high-emission industries.[9]

On 21 April, 2021, the Information Office of the State Council gave a news briefing on how the government plans to handle climate change. In the briefing the Department of Climate Change of the Ministry of Ecology and Environment (MEE) responded to public concerns, including:[10]

Q1 Will the *2030 Action Plan for CO_2 Peaking* take the total CO_2 emission control into consideration?

Answers: China will implement a mechanism with carbon intensity control as the mainstay and total carbon emission control as a supplement. At present, CO2 emissions in China are still in the growth stage, and the carbon intensity control can better balance economic and social development and emission reduction, as well as reflecting the efforts of emission reduction work in different regions. Therefore, the control over carbon intensity remain China's main control method before carbon emissions peak. Nevertheless, the government will consider how to better combine intensity control with total capacity control in the next step. For example, the currently promoted national carbon market can effectively play its role in total emissions control for high-emission industries.

Q2 In China's climate change policies, which industries will be prioritized for renovation, such as coal power, steel, or new energy vehicles?

Answers: China is going to focus on adjusting its industrial structure and eliminating high-emissions and low-efficiency production capacity. First, the role of coal power has been shifted from the main power source to a flexible power source to guarantee energy security. For China, keeping a certain amount of coal power is not only ensuring a basic living standard, but also providing a certain level of power grid security. This is to assist in the rapid development of renewable energy before the power grid reliability and energy storage technology has reached a certain level. Yet China will no longer develop coal power on a large scale, and new coal power plants will not always operate under full load, and their CO2emissions will be significantly reduced. In addition, the steel and metallurgical industries are considering the further use of new technologies to improve resource utilization efficiency and reduce CO2 and pollutant emissions. New energy vehicles will also maintain its sustained and rapid development momentum.

Q3 What is the importance and progress of China's climate change legislation?

Answers: In China, it is necessary to have a law for the climate change to facilitate the achievement of the 30-60 carbon targets. Therefore, the central government hopes to formulate a comprehensive and specialized legal instrument. Laws on renewable energy, pollution control, forestry, agriculture, and land in China's current legal system are also related to climate change, the government will also take the factors of climate change into account when further revising these laws.

Q4 How is China going to carry out the control over non-CO_2 greenhouse gas emission?

Answers: China will gradually extend the control of HFCs to control of all non-CO2greenhouse gases (GHG) including methane and nitrous oxide. This is also an important issue of the 14th Five-Year Plan. China has already carried out specific tasks such as reducing the use of agricultural fertilizers, promoting garbage classification, and building biogas facilities in rural areas. Next, China will further improve its emission monitoring, reporting, and evaluation system, increase the frequency of updating the emission inventory compilation to better follow up on the conditions and trends of emissions.

Development goals proposed in various energy related fields in the context of carbon neutrality as of April 2021

Overall	▪ Strive to achieve carbon peak by 2030 and achieve carbon neutrality by 2060 ▪ CO_2 emissions per unit of GDP in 2030 will be more than 65% lower than in 2005	[11] [12]
Energy	▪ By 2030, non-fossil energy in primary energy consumption to app. 25% ▪ Strictly control the growth of coal consumption during the 14th Five-Year Plan period and gradually decrease during the 15th Five-Year-Plan period	[12] [8]
Power	▪ By 2025, wind power and photovoltaic power generation accounts for about 16.5% of total electricity consumption* ▪ The operating nuclear power capacity to reach 70 GW in 2025 ▪ By 2030, the total installed capacity of wind power and photovoltaics will reach 1200 GW or more	[13] [14] [12]
Industry	▪ The steel industry carbon emissions peak in 2025, and decrease by 30% from the peak by 2023* ▪ The cement industry to achieve carbon peak by 2023*	[15] [16]
Transportation	▪ In 2025, the sales of new-energy vehicles to reach about 20% of the total sales of new cars ▪ New energy vehicles account for about 40% of total sales of new cars in 2030, and reach more than 50% in 2035* ▪ There will be 100,000 hydrogen vehicles in 2025, and about 1 million in 2030*	[17] [18] [18]
Building	▪ The building materials industry aims to achieve the carbon peak by 2025* ▪ In 2022, green buildings should account for 70% of new urban buildings	[16] [19]
Agriculture and Forestry	▪ In 2030, the amount of forest reserve should increase by 6 billion cubic meters compared to 2005 ▪ In 2025, the national forest coverage rate should reach 24.1%, and the forest reserve should reach 19 billion cubic meters; the grassland comprehensive vegetation coverage should reach 57%, the wetland protection rate should reach 55%, and 60% of the controllable desertified land should be treated*	[12] [20]
Non-CO_2	▪ Accept the "Montreal Protocol" Kigali Amendment to strengthen the control of non-carbon dioxide greenhouse gas emissions	[8]

*Note: Those marked with * are not officially issued by the government yet. They come from plans and policies being formulated by the government, technical roadmaps formulated by the government, and proposals put forward by social groups that are supervised and managed by government departments.*

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