

Responding to Climate Change: China's Policies and Actions

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Preface

Climate change is a challenge for all of humanity. The sustainable development of the Chinese nation and the future of the planet depend on tackling it successfully.

China attaches great importance to its response to climate change. As the largest developing country in the world, China has adopted a number of policies, measures and actions to tackle climate change and take part in global climate governance, despite the difficulties this creates for its own economic and social development. These efforts have achieved positive results.

Since the 18th National Congress of the Communist Party of China (CPC) convened in 2012, guided by Xi Jinping thought on eco-civilization and committed to the new development philosophy, China has made the response to climate change a higher priority in state governance. It has steadily reduced the intensity of its carbon

emissions, reinforced the effort to achieve its Nationally Determined Contributions (NDCs), and maximized its drive to mitigate climate change. It has adopted green and low-carbon approaches in its economic and social development, and worked to build a modernized country in which humanity and nature coexist in harmony.

At the general debate of the 75th Session of the United Nations General Assembly on September 22, 2020, President Xi Jinping announced that China would scale up its NDCs by adopting more vigorous policies and measures, strive to peak CO₂ emissions before 2030, and achieve carbon neutrality before 2060. China is taking pragmatic actions towards these goals.

As a responsible country, China is committed to building a global climate governance system that is fair, rational, cooperative and beneficial to all, and makes its due contribution to tackling climate change using its greatest strengths and most effective solutions. Confronted by the challenges of climate change, China is willing to work together with the international community to ensure the Paris Agreement delivers steady and lasting results, and make greater contribution to the global response.

The Chinese government is publishing this white paper to document its progress in mitigating climate change, and to share its experience and approaches with the rest of the international community.

I. China's New Responses to Climate Change

China's responses to climate change are an important part of its efforts to achieve eco-environmental progress and high-quality development. Based on the requirements of its internal sustainable development, and its due responsibility for building a global community of shared future, China has formulated new principles on tackling climate change and is contributing its solutions to global climate governance.

1. Building a Strong Sense of Common Community

China advocates a joint effort to build a global community of shared future. The earth is the only home we have. Human beings share a common future in the face of the challenges presented by global climate change, and no country can make itself immune from the impact. Therefore, all countries should strengthen solidarity and cooperation, and build a global community of shared future together. This is China's new vision for human development, in the common interest of all peoples.

China also advocates a community of harmony between humanity and nature. The Chinese people have always valued the idea that human beings are an integral part of nature and should follow the laws of nature. Industrial civilization, which has created massive material wealth, has also laid bare the growing tensions in the relationship between humans and nature. The ongoing Covid-19 pandemic has further stimulated profound reflection on that relationship. Mother Nature has nourished us, and we must treat her as our root, respect her, protect her, and follow her laws. Through a sense of responsibility to human civilization, China is making every effort to fight climate change, build a community of harmony between humanity and nature, and help foster a new relationship where humanity and nature can both live and prosper in harmony.

2. Implementing the New Development Philosophy

Actions are driven by philosophies. In this new development stage, China pursues a philosophy that development must be innovative, coordinated, green, open and shared, and accelerates the pace in creating a new development dynamic. Among the five axes of the new philosophy, green development is a necessary condition for sustainability. It represents the people's aspiration for a better life, and is a key guide for China's climate actions. China holds the view that clear waters and green mountains are invaluable assets, and that eco-environmental protection and improvement lead to greater productivity. Mitigating climate change reflects the overall global transition towards green and low-carbon living. China has abandoned its previous development model that damaged or even destroyed the eco-environment. Instead, following the current technological revolution and industrial trends, it has seized the opportunities created by green transition, transformed and upgraded its economic and industrial structure and energy mix through innovation, and achieved a green recovery from the Covid-19 pandemic. A better eco-environment is boosting China's sustainable economic and social development.

3. Taking a People-Centered Approach

Climate change poses a severe threat to the economic and social development of all countries and to people's lives and property. Therefore our responses affect the fundamental interests of all people. Mitigating and adapting to climate change are essential for increasing the people's sense of eco-environmental gain, and will provide them with a fairer, more sustainable and safer environment that promotes higher quality and more efficient development. China puts people and lives first, and cherishes the life, value and dignity of every individual. Taking into full consideration the people's aspiration for a better life, their expectation of a sound eco-environment, and their responsibility for future generations, China is pioneering a new approach

that synergizes the efforts to fight climate change, develop the economy, generate employment, eliminate poverty, and protect the environment. It guarantees and improves people's wellbeing through development, strives for social equity and justice in the process of green transition, and increases people's sense of gain, happiness and security.

4. Striving for Carbon Neutrality

To achieve the goals of peaking carbon emissions and subsequent carbon neutrality is one of China's major strategies, defined after careful consideration. This is a must-do in order to relieve the serious constraints imposed by resources and the environment on China's economic growth, and to achieve sustainable development. It is also a solemn commitment towards building a global community of shared future. China has incorporated this decision into its overall economic and social development, adopting a holistic approach and balancing the relationships between economic growth and emissions reduction, between overall and regional interests, and between short, medium, and long-term growth. Led by the green economic and social transition, China is focusing on green and low-carbon development of the energy sector, and accelerating the formation of industrial structures, production modes, ways of work and life and spatial configurations that help to conserve resources and protect the environment. It is fully committed to high-quality development that prioritize eco-environmental protection and green and low-carbon way of life.

5. Synergizing the Reduction of Pollution and Carbon Emissions

Carbon dioxide and other ordinary pollutants often come from the same sources, mainly from the burning and utilization of fossil fuels. Controlling the use of fossil fuels and consequently reducing carbon emissions have a lasting impact on the economic structure, energy mix, forms of transport, modes of production, and ways of life. It will boost high-quality development by pressing for the green transition of the economy; it will be conducive to mitigating climate change and the damage it causes to life, property, society, and the economy; it will facilitate the source control of pollution, achieving synergy between pollution and carbon reduction and improvement of the eco-environment; it will help conserve biodiversity and improve ecosystems.

China sees pollution prevention and control as an integral part of the response to climate change. Through structural adjustment, optimized configuration, policy synergy and innovative mechanisms, efforts to reduce pollution and carbon emissions are planned and carried out in tandem, and the performance assessment of the two is also conducted jointly. Balancing environmental, climate and economic gains, China

has found a unique path to reducing greenhouse gas emissions that conforms to its actual conditions.

II. Implementing a National Strategy of Actively Responding to Climate Change

As the largest developing country, with a population of over 1.4 billion, China faces major challenges across a range of important areas including economic development, improving the people's lives, pollution control, and eco-environmental protection. In order to meet its targets in response to climate change, China has risen to these challenges and formulated and implemented a variety of strategies, regulations, policies, standards, and actions.

1. Intensifying Efforts in Response to Climate Change

It will not be easy for China to achieve its new NDC targets; it will take approximately 30 years of painstaking effort to transit from peak carbon emissions to achieving carbon neutrality and the largest reduction in carbon dioxide emissions per unit of GDP ("carbon intensity") in the world. Walking the talk, China has already begun to implement positive and effective moves in its strategy to peak carbon emissions and achieve carbon neutrality.

Improving overall planning and coordination in response to climate change. The response to climate change covers a wide range of areas; therefore, to improve coordination and pool strengths, China has set up a national leading group headed by Premier of the State Council and with officials from 30 ministries and commissions as members. Its remit is responding to climate change, conserving energy, and reducing emissions, and all provinces, autonomous regions, and municipalities directly under the central government (PARMs) have set up corresponding groups. In April 2018, China adjusted the functions of relevant government departments, and put the newly established Ministry of Ecology and Environment in charge of responding to climate change, thus reinforcing the coordination between responding to climate change and protecting the eco-environment. In 2021, China set up a special leading group to guide and coordinate the work related to peaking carbon emissions and achieving carbon neutrality. All PARMs have established leading groups for peaking carbon emissions and achieving carbon neutrality, so as to strengthen the coordination of their efforts.

Incorporating the response to climate change into national economic and social development plans. Starting from the 12th Five-year Plan period (2011-2015),

China has incorporated reducing carbon intensity into the outline of the plans for national economic and social development as binding targets, and defined key tasks, priority areas, and major projects. China's Outline of the 14th Five-Year Plan (2021-2025) for National Economic and Social Development and the Long-Range Objectives Through the Year 2035 sets a binding target of slashing carbon intensity by 18 percent from 2020 to 2025. All PARMs have taken on the response to climate change as an important part of the 14th Five-year Plan, and set themselves specific targets and tasks.

Establishing a mechanism of breaking down and meeting the targets for responding to climate change. To meet its targets, China has set tiered provincial-level carbon emission caps for its PARMs based on factors such as their development stage, resource endowment, strategic positioning, and eco-environmental protection. It has assessed the performance of the relevant governments in meeting the targets and fulfilling the responsibilities for controlling greenhouse gas emissions, and uses the results as an important reference for the comprehensive performance assessment and appraisal of officials holding principal posts and leadership teams in the PARMs, as well as for the appointment, reward, sanction, and removal of officials. PARM governments have also assessed the performance of administrative divisions at lower levels in meeting their targets and fulfilling their responsibilities for controlling greenhouse gas emissions, thus ensuring that the effort is coordinated and effective.

Continuing to update NDC targets. In 2015, China set its nationally determined action objectives by 2030: to peak carbon dioxide emissions around 2030 at the latest and make every effort to peak early. By the end of 2019, China had delivered on its 2020 climate action target ahead of schedule. In 2020, China announced new NDC targets and measures. China aims to:

- peak carbon dioxide emissions before 2030 and achieve carbon neutrality before 2060.
- lower its carbon intensity by over 65 percent by 2030 from the 2005 level.
- increase the share of non-fossil fuels in primary energy consumption to around 25 percent by 2030.
- increase the forest stock volume by 6 billion cubic meters by 2030 from the 2005 level.
- bring its total installed capacity of wind and solar power to over 1.2 billion kW by 2030.

Compared with the objectives set in 2015, the new targets are more ambitious in timeframe. They involve a steeper cut in carbon intensity, an increase of another five percentage points in the share of non-fossil fuels in primary energy consumption, a new target for installed capacity of non-fossil fuels, an additional forest stock of 1.5

billion cubic meters, and a clear announcement to aim for carbon neutrality before 2060. China has announced in 2021 a decision to stop building new coal-fired power projects overseas, demonstrating its concrete actions in response to climate change.

Accelerating work on 1+N policies for peaking carbon emissions and achieving carbon neutrality. The country has formulated and released a top-level design document for peaking carbon emissions and achieving carbon neutrality, and is working on an action plan for peaking carbon emissions before 2030, with implementation plans for fields and sectors such as energy, industry, urban and rural construction, transport, and agriculture and rural areas. Support plans are being created in areas such as science and technology, fiscal funding, finance, pricing, carbon sinks, energy transition and coordination of pollution reduction and carbon emission reduction, with clearer timetables, roadmaps, and working plans. The country is shaping policies and actions with clear objectives, reasonable assignment of labor, effective measures, and sound coordination, ensuring that all efforts deliver positive results.

2. Staying Committed to a Green and Low-Carbon Path to Development

China has been actively responding to climate change in a responsible manner. Considering this to be a major opportunity to transform its growth model, China is actively exploring a green and low-carbon path to development, one that remains within the limits of resources, energy, and the environment, and is protective of our planet.

Making coordinated efforts to reduce pollution and carbon emissions. It is essential for China to coordinate its efforts to pursue all-round and greener economic and social development in the new development stage. The country amended the Law on the Prevention and Control of Atmospheric Pollution in 2015 and added specific provisions, providing a legal basis for the coordinated control of atmospheric pollutants and greenhouse gases and reduction of pollution and carbon emissions. To further coordinate the functions, initiatives, and mechanisms for responding to climate change and protecting the eco-environment, China has defined major areas and key tasks covering strategic planning, policies and regulations, institutions, pilots and demonstrations, and international cooperation. China has invested a major effort in seven landmark campaigns to keep the skies blue, control pollution caused by diesel trucks, protect and restore the Yangtze River ecosystem, improve the water environment of the Bohai Sea region, improve black and fetid water bodies in cities, protect water sources, and control pollution in agriculture and rural areas. With action plans and concrete targets and measures, these campaigns serve to drive the overall progress and bring notable improvements to the eco-environment.

Creating a spatial configuration for green development. Since territorial space is where we pursue eco-environmental progress, we must create time and room for natural ecosystems to rehabilitate themselves. China has created orderly and science-based strategies for agricultural, ecological, urban, and other areas. It has piloted the policy of designating permanent basic cropland areas, drawing redlines for protecting ecosystems, and delineating boundaries for urban development. It has drawn redlines for identified protected areas (PAs), areas that are ecologically vital and vulnerable but not included in PAs, and areas with important potential ecological value, thus increasing their carbon sequestration capacity.

Developing green and low-carbon industries. The basic solutions to resource, environmental, and ecological problems are to establish and improve an economic system featuring green, low-carbon, and circular development, and to pursue greener economic and social development in all respects. To shape green development models and green ways of life, China has formulated a plan for national strategic emerging industries with the aim to:

- guide green consumption, promote green products and increase the proportion of new-energy vehicles and new energy use, with an emphasis on innovation and the application of green and low-carbon technologies.
- promote industry systems for efficient energy conservation, state-of-the-art environmental protection, and resource recycling, boosting the growth of the new-energy vehicle industry, new energy industries and energy-saving and environmental protection industries.
- develop a unified certification and labeling system for green products and foster a green market by increasing the supply of green products.

It has also pressed ahead with industrial restructuring through the following measures:

- issuing and continuously updating the catalog for guiding industry restructuring to steer non-governmental investment.
- transforming and upgrading traditional industries.
- boosting high-quality development of manufacturing.
- cultivating and developing emerging industries.
- providing greater support to green and low-carbon industries such as energy conservation, environmental protection, clean production, and clean energy.

Resolutely curbing the haphazard development of energy-intensive and high-emission projects. China has strictly controlled the haphazard expansion of energy-intensive and high-emission projects, shutting down outdated production facilities in accordance with laws and regulations, and scaling down overcapacity at a faster pace. To achieve this, it has:

- implemented strict market access standards for 13 industries including iron & steel, ferroalloy, and coking, tightening requirements on land, environmental protection, energy conservation, technology, and safety.
- put in place the national policy on differential electricity prices, raising standards for the differential electricity prices for energy-intensive products and expanding the scope of differential electricity prices.
- released, 12 times, lists of enterprises in key industrial fields that were required to shut down outdated production facilities, and conducted annual supervision and inspection from 2018 to 2020 to ensure the elimination of outdated production facilities in accordance with laws and regulations.
- made the expansion control a top priority in the effort to peak carbon emissions and achieve carbon neutrality. It required local governments to clearly identify all energy-intensive and high-emission projects, produce category-based management proposals, carry out special inspections, strictly punish any such projects constructed or operated in contravention of regulations, and implement list management, category-based handling, and dynamic monitoring of energy-intensive and high-emission projects. It has established working mechanisms on openly criticizing entities for wrong-doing, early warnings on energy use, regulatory talks, and accountability, gradually forming sound working and regulatory systems.

Improving and adjusting the energy mix. The energy sector is a major source of greenhouse gas emissions. China has continuously intensified its efforts in energy conservation and emissions reduction and accelerated energy mix readjustment to build a clean, low-carbon, safe, and efficient energy system. To achieve this, it has:

- defined a new strategy for energy security that promotes a green revolution in energy consumption, supply, technology, and systems, strengthens international cooperation in an all-round way, prioritizes the development of non-fossil fuels, promotes the green development of hydropower, makes comprehensive and coordinated progress in wind and solar power development, pursues the orderly development of nuclear power under the precondition of guaranteed safety, develops biomass energy, geothermal energy, and marine energy based on local conditions, comprehensively increasing the rate of renewable energy use.
- driven the supply-side structural reform of coal by cutting overcapacity in coal, strengthening safe, intelligent, green, and efficient exploitation and clean and efficient use of coal, promoting clean, efficient, and high-quality development of coal-fired power industries, reducing the consumption of coal and replacing it with other fuels, taking comprehensive measures to manage the use of coal in

non-industrial sectors, and promoting the substitution of coal and petroleum by electricity as end-use energy.

- expanded reform of the energy system, promoting efficient allocation of energy and resources.

Reinforcing efforts in energy conservation and greater energy efficiency. To further guarantee the fulfillment of responsibilities in meeting energy conservation and energy efficiency enhancement targets, China has:

- implemented a system for controlling energy intensity and energy consumption, and set targets for both at the provincial level with supervision and performance evaluation.
- incorporated energy conservation indexes into the index system for evaluating the performance in environmental progress and green development to facilitate the transformation in development philosophy.
- strengthened energy conservation management of major energy-using entities, organized the implementation of key energy conservation projects, and popularized advanced energy conservation technologies by releasing 260 key energy conservation technologies in 13 industries, including coal, electricity, iron & steel, nonferrous metals, petrochemicals, chemicals, and building materials.
- established a “Frontrunner” system for energy efficiency, and improved the energy efficiency labeling system by issuing 15 batches of catalogs for products with energy efficiency labels and related implementation rules.
- implemented Energy Performance Contracting and strengthened regulations and standards on energy conservation. It has issued and implemented over 340 national standards on energy conservation and promoted the certification of energy-saving products accordingly. To date, almost 50,000 energy-saving product certificates have been issued, thus boosting the energy conservation industry.
- required public institutions to play an exemplary role in energy conservation and energy efficiency enhancement. Approximately 35 percent of Party and government offices at and above county level, and all central CPC and government departments have shifted onto an energy-saving trajectory. In all, 5,114 public institutions have become demonstrative units for energy conservation.
- strengthened energy conservation in the industrial sector by carrying out special national inspections on energy conservation alongside campaigns on energy-saving diagnosis, on increasing the energy efficiency of general

equipment, and on promoting energy conservation and establishing standards for green development.

- strengthened demand-side management by setting up demonstrative enterprises/industrial parks and selecting reference products/technologies in the demand-side management of electricity in industrial fields, which would have achieved the visualized, automated, and intelligent management of electricity consumption.

Pushing for the economical and intensive use of natural resources. To further ecological progress, China has designated conserving resources and protecting the environment as a fundamental national policy. To achieve the economical and intensive use of natural resources, it has:

- pursued fundamental changes in the way of using resources and pressured all PARMs to put their existing resources to good use by improving the mechanism for coordinating the consumption of existing resources and the arrangements for additional resources, and by reforming the way of managing land use plans.
- imposed strict controls on land use through standards, having organized the formulation and revision of land use standards for highways, industries, photovoltaic (PV) projects, and airports and strictly reviewed the land use of construction projects in accordance with the standards.
- carried out assessment and evaluation on economical and intensive land use and worked hard to popularize land-saving technologies and models.
- driven the green development of the mining industry and intensified efforts to develop eco-friendly mines by establishing and implementing index management systems for the minimum exploitation and use of mineral resources and for the evaluation of “Frontrunners”. It has released 360 advanced and applicable technologies for the conservation and comprehensive use of mineral resources.
- strengthened regulation and control over the use of marine resources and prohibited all coastal reclamation activities except those for major national projects.
- promoted the protection and restoration of ecosystems in areas with problems carried over from reclamation activities of the past and strictly protected natural shorelines.

Actively exploring new, low-carbon models of development. China has actively explored low-carbon models of development. It has encouraged local governments, industries, and enterprises to explore low-carbon paths to development based on their individual conditions, and launched pilots and demonstrations on green

and low-carbon development in fields such as energy, industry, construction, and transport, thus shaping a basic comprehensive and multi-tiered system for low-carbon piloting. It has launched low-carbon pilots in 10 provincial-level units and 77 cities, and explored low-carbon models of development and institutional innovations in respects including organizational leadership, support policies, market mechanisms, statistical systems, evaluation and assessment, coordination and demonstration, and cooperation and exchanges. The carbon intensity of these pilot areas has fallen faster than the national average, and a number of low-carbon models of development with distinctive features have emerged.

3. Tightening Control over Greenhouse Gas Emissions

China has incorporated climate action into every aspect of its overall strategy for economic and social development. It has taken active steps to control greenhouse gas emissions in key industries, and promote green and low-carbon development in urban and rural construction and the building sector. It has worked to develop a green and low-carbon transport system and reduce non-carbon dioxide emissions. It has taken a coordinated approach to the governance of mountains, rivers, forests, farmland, lakes, grasslands and deserts, and strictly implemented relevant measures to enhance its biological carbon sink capacity.

Controlling greenhouse gas emissions in key industries. China has:

- strengthened the management of targets for energy consumption and carbon emissions in key industries, including the iron & steel, building material, chemical, and non-ferrous metal sectors.
- carried out low-carbon demonstration projects and benchmarking campaigns to reduce carbon emissions in those industries.
- advanced green manufacturing and the transformation of industries towards green development.
- tightened control over greenhouse gas emissions from industrial processes through substituting raw materials, improving production techniques, and updating equipment utilization.
- increased the recycling and utilization of renewable resources for higher resource utilization efficiency and lower carbon dioxide emissions in the whole life cycle of resources.

Promoting green and low-carbon development in urban and rural construction. China is building energy-saving and low-carbon cities and infrastructure and boosting rural revitalization through green development. It has:

- encouraged the construction of eco-friendly buildings and improved relevant assessment standard systems.

- carried out demonstration programs for cities with ultra-low and nearly zero energy consumption.
- promoted energy-saving renovation of existing buildings and improved the energy efficiency of public buildings.
- facilitated the application of renewable energy in the building sector.
- taken measures to build green and low-carbon villages and towns, encouraging farmers to build energy-saving houses through energy efficiency demonstration projects during the process of renovating dilapidated rural housing, and accelerating the use of clean energy for winter heating in northern China.

Developing a green and low-carbon transportation system. China has taken the following measures:

- adjusted the mix of transport by increasing the proportion of rail and water transport for bulk goods and decreasing that of highway transport.
- launched a project to build “model cities of green freight distribution”, as part of the efforts to accelerate the establishment of an intensive, efficient, green, and smart urban freight distribution system.
- expanded the electrification of railways and promoted the use of natural gas vehicles and vessels, with improved electric charging and hydrogen fueling infrastructure to facilitate the use of new energy vehicles (NEVs) and encourage anchored ships and parked civil aircraft to use shore power.
- improved institutions and standards for green transportation by launching relevant standards, action plans and solutions. It has published 221 standards on energy-saving and carbon reduction.
- encouraged green travel, with more than 100 cities joining the campaign to advocate green travel, and annual nation-wide publicity month for green travel and publicity week for public transit.
- accelerated the substitution and optimization of transport fuels and upgraded the standards on transport emissions and oil products.
- improved transport efficiency through the application of information technology.

Reducing non-carbon dioxide emissions. China attaches importance to the reduction of non-carbon dioxide emissions, and has introduced specific policies and measures in the National Plan on Climate Change (2014-2020) and the Work Plan for Controlling Greenhouse Gas Emissions. The Chinese government has:

- offered subsidies for the handling of HFC-23 since 2014. As of 2019, subsidies worth RMB1.4 billion yuan had been paid, reducing 65,300 tonnes of HFC-23, equivalent to 966 million tonnes of carbon dioxide.

- stepped up the development of environmentally friendly refrigerants and actively promoted the reuse and harmless treatment of refrigerants, in strict accordance with the Regulations on the Management of Ozone-Depleting Substances and the Montreal Protocol on Substances That Deplete the Ozone Layer.
- supported enterprises to employ air-conditioner production lines using low global warming potential (GWP) refrigerants, phase out hydrochlorofluorocarbon (HCFC) refrigerants, and limit the use of hydrofluorocarbons (HFCs).
- set up an alliance of Chinese oil and gas enterprises to advance methane emission control across the industry chain.
- accepted the Kigali Amendment to the Montreal Protocol on Substances That Deplete the Ozone Layer, representing a new stage in protecting the ozone layer and addressing climate change in the country.

Enhancing biological carbon sink capacity. China has done the following:

- taken a coordinated approach to conserving the mountains, rivers, forests, farmland, lakes, grasslands and deserts, and carried out large-scale land afforestation. Efforts have continued on key projects, including protecting shelterbelts and natural forests, especially those in northwest, northeast and northern China and along the Yangtze River, conserving chernozem soils in northeast China, building high-quality farmland, protecting and restoring wetlands, returning cropland back to forests and grasslands, restoring grasslands, controlling the sources of dust storms affecting Beijing and Tianjin, and comprehensively addressing desertification and stony desertification.
- achieved steady progress in urban and rural greening and improved the carbon sink capacity of forests, grasslands, wetlands and other ecosystems by tending and managing forests in a science-based approach, taking targeted measures to improve the quality of forests, developing biomass energy, strengthening the protection of forest and grassland resources, and increasing their total volume.
- developed a PA system composed mainly of national parks and established its first five national parks as part of the efforts to integrate and optimize nature reserves.
- introduced an ecological protection and restoration system, formulated relevant plans, and carried out the Blue Bay environmental improvement initiative, the coastal belts protection and restoration project, the comprehensive management of the Bohai Sea region's water environment, and a special action for mangrove conservation and restoration.

- carried out ecological restoration of abandoned mines in key areas, such as both sides of the main stream and major tributaries of the Yangtze River, key cities around the Beijing-Tianjin-Hebei region and in the Fenwei Plains, and key regions in the Yellow River basin.
- implemented major projects for ecological conservation and restoration in seven key areas, including the Qinghai-Tibet Plateau, the Yellow River, and the Yangtze River.
- supported 25 trials to conserve and restore the ecosystems of mountains, rivers, forests, farmland, lakes, and grasslands.
- issued a series of documents to encourage private capital to participate in ecological conservation and restoration, in an effort to establish a market-based and diversified investment mechanism.

China's proposal – Drawing a “Red Line” for Ecological Protection to Mitigate and Adapt to Climate Change – has been selected by the UN as one of the 15 best Nature-based Solutions around the globe.

4. Giving Full Play to the Role of the Market

The carbon market provides an effective approach to managing the relationship between economic development and carbon emissions reduction. The national carbon emissions trading market (national carbon market) is a major institutional innovation that uses market mechanisms to control and reduce greenhouse gas emissions and promote green and low-carbon development. It is also an important policy tool for China to reach peak carbon emissions by 2030 and achieve carbon neutrality by 2060.

Carrying out pilot programs on carbon emissions trading. The carbon market institutions motivate companies to commit to curbing their emissions and use market-based instruments to price carbon reasonably, thus better allocating carbon emission resources. Starting from October 2011, seven provinces and municipalities – Beijing, Chongqing, Guangdong, Hubei, Shanghai, Shenzhen, and Tianjin – were selected to pilot projects for carbon emissions trading. Since 2013, seven local-level pilot carbon markets have been launched, covering nearly 3,000 key emissions companies in more than 20 industries, including power, steel, and cement. As of September 30, 2021, the total trading volume of the seven pilot carbon markets had reached 495 million tonnes of carbon dioxide equivalent, representing a value of approximately RMB12 billion. Major emitters in the pilot carbon markets have maintained a relatively high level of compliance rate, with both volume and intensity of carbon emissions within the market coverage maintaining a downward trend. This has given a significant boost to enterprises' contribution to emissions reduction, and raised the awareness of low-carbon development in all sectors of society. The local-level pilot projects have accumulated valuable experience for the launch of the

national carbon market in terms of providing institutional references and training personnel.

Building a national carbon market system. Systems are key in advancing carbon market development. To better regulate the carbon market, the Chinese government promulgated the National Carbon Emissions Trading Market Construction Plan (Power Generation Industry), Measures for the Administration of Carbon Emissions Trading (for Trial Implementation), and a quota allocation plan for the national carbon market in the first compliance period. In 2021, with the release of guidelines for accounting and reporting corporate greenhouse gas emissions and three sets of management rules for carbon emission rights regarding registration, trading, and settlement, a basic national carbon market system was established. The legislative process has moved forward on the Interim Rules on the Administration of Carbon Emissions Trading, which consolidated the legal basis for carbon emissions trading, and ensured standardized operation and management in the key links of the national carbon market.

Launching the national carbon market. On July 16, 2021, the national carbon market started online trading. A total of 2,162 power generation companies were involved, representing 4.5 billion tonnes of carbon dioxide emissions, making this the world's largest emissions trading system. The launch attracted great attention and positive comments in China and elsewhere. As of September 30, 2021, the total trading volume in the market had reached 17.65 million tonnes, with turnover of RMB801 million. In general, the operation of the market has been stable and orderly.

Establishing a greenhouse gas voluntary emission reduction program. The China Greenhouse Gas Voluntary Emission Reduction Program was established in 2012. Its goals are to encourage the whole of society to participate in emissions reduction activities, ensure that the transaction entities fulfill their social responsibilities, pursue a low-carbon development path, and promote a low-carbon industrial structure and low-carbon energy consumption. As of September 30, 2021, the total trading volume of greenhouse gas voluntary emission reduction had exceeded 334 million tonnes of carbon dioxide equivalent, with turnover approaching RMB3 billion. China Certified Emission Reduction (CCER) has been introduced to pilot markets in offsetting carbon emissions, or writing off emissions occurred for public welfare purposes, effectively optimizing China's national energy mix and its compensation mechanism for eco-environmental conservation.

5. Reinforcing Ability to Adapt to Climate Change

Due to ecological and environmental constraints, limitations imposed by the industrial structure, and the level of social and economic development, developing countries are generally weaker in terms of their ability to adapt to climate change, and

are more vulnerable to the adverse effects of climate change than developed countries. China is a climate sensitive region, and has witnessed a profound impact. Regarding adaptation as a major component in executing the national strategy for actively responding to climate change, the Chinese government has promoted and implemented major adaptation strategies, launching adaptation actions in key areas and sectors, and strengthening monitoring, early warning, and disaster prevention and mitigation capabilities.

Pressing ahead with major national strategies to improve climate resilience. In order to carry out the climate adaptation related work in a coordinated way, China formulated the National Strategy for Climate Change Adaptation in 2013, identifying guidelines, principles, and main targets of this undertaking from 2014 to 2020, and supervised the formulation and implementation of seven major tasks involving infrastructure, agriculture, water resources, coastal zone and related sea areas, forests and other ecosystems, human health, tourism and other industries. In 2020, China started the preparation of the National Strategy for Climate Change Adaptation 2035, which focused on overall guidance, communication, coordination, strengthening observation and assessment of climate change impacts, and improving the ability of major sectors and key vulnerable regions to adapt to climate change.

Launching climate change adaptation actions in key regions. In urban areas, action plan for cities to adapt to climate change has been formulated, and pilot projects for “sponge cities” and climate-adaptive cities have been carried out to improve the resilience of urban infrastructure. The urban cluster configuration and urban afforestation efforts such as corridors, greenways, and parks have effectively alleviated the urban heat island (UHI) effect and other climate risks, and improved the national transport network’s ability to adapt to extreme weather conditions such as unusually high or low levels of rain or snow, temperature fluctuations, typhoons, and other phenomena. In coastal areas, nationwide sea level change monitoring and surveys and assessments have been carried out annually, and land reclamation from the sea has been strictly regulated. The government has strengthened protection of coastal wetland, and improved the ability of key coastal areas to deal with climate change risks. In other key eco-environmental areas including ecologically fragile areas of the Qinghai-Tibet Plateau, transition areas between cropland and grassland in the northwest, stony deserts in the southwest, and the Yangtze River and the Yellow River basins, China has carried out climate adaption and ecological restoration efforts to improve the overall ability to adapt to climate change.

Promoting climate change adaptation actions in key sectors. In the agricultural sector, China has promoted sustainable agricultural development by transforming agricultural growth models. Capacity for agricultural emissions

reduction and carbon sequestration has been strengthened thanks to the implementation of five major agricultural green development actions in Northeast China, including straw processing. The government has made every effort to develop and promote new technologies for the prevention and adaptation of agrometeorological disasters, such as those related to preventing and mitigating disaster, increasing production, and utilizing climate resources. It has completed more than 5,000 exercises in agrometeorological disaster risk zoning. In forestry and grassland, afforestation and greening efforts have been carried out scientifically in line with local conditions and suitable tree types. The optimized afforestation models guarantee forest health, thus comprehensively increasing the ability of forestry to adapt to climate change. The government has strengthened the protection and management of various types of forest lands, built a nature reserve system with a focus on national parks, implemented major grassland protection and restoration projects, and restored and reinforced grassland ecological functions. In the water resources sector, China has improved the flood prevention and disaster reduction system, strengthened the construction of water conservancy infrastructure, and optimized the allocation of water resources to prevent floods and droughts. In order to control the total amount and intensity of water consumption and ensure its intensive and economical use, nationwide water-saving campaigns have been launched and a rigid restraint system has been established. In the public health sector, the government has organized and carried out climate change related health risk assessment, and worked to improve the country's ability to protect public health in the context of climate change. China has launched Healthy Environment Promotion Action, carried out prevention and control of climate-sensitive diseases, and reinforced safeguards in response to the climate change health emergency.

Strengthening monitoring, early warning and disaster prevention and mitigation capabilities. Systems for natural disaster risk monitoring, investigation and assessment, early warning and forecasting, and comprehensive risk prevention have been optimized. China has established a nationwide long-term sequences disaster database for various meteorological disasters, and completed a national-level refined meteorological disaster risk early warning service platform. With the establishment of a comprehensive system that integrates air, space and land, China now publishes regular reports on national natural disaster risks. The government has promulgated national disaster prevention and mitigation plans to guide disaster prevention, mitigation and relief work in the context of climate change, carried out nine key projects for strengthening natural disaster prevention and control, monitoring, early warning, consultation and evaluation of severe convective weather, melting glaciers, and dammed lakes. Territorial space planning plays a key role in preventing and

controlling natural disasters, and ensures that local-level meteorological disaster prevention and mitigation standards apply to all counties (districts) across the country.

6. Increasing Support for Addressing Climate Change

China attaches great importance to developing support capacity to address climate change. It has continuously improved the statistical and accounting system for greenhouse gas emissions, given a key role to green finance, and leveraged the supporting role of scientific and technological innovation to promote the transfer and application of climate change technologies.

Improving the statistical and accounting systems of greenhouse gas emissions. China has established and improved a basic statistical system for measuring greenhouse gas emissions. It has proposed a statistical indicator system on climate change response involving 36 indicators grouped into 5 categories, including climate change and impact. It has launched a statistical report on climate change response on this basis, and continued to update and revise the report. It has compiled a greenhouse gas inventory, and submitted two national reports and two two-year update reports based on the Initial National Report on Climate Change of the People's Republic of China. The government has urged enterprises to improve their accounting and reporting of greenhouse gas emissions, issued appropriate guidelines for 24 industries, and organized companies to prepare greenhouse gas emission reports. The Office of the Leading Group on Carbon Peaking and Carbon Neutrality has formed a taskforce to speed up efforts to upgrade the carbon emission statistical and accounting system.

Increasing green finance support. China continues to increase investment to support efforts to tackle climate change. It has improved the top-level design of green finance, and set up nine pilot zones for reform and innovation of green finance in six provincial-level administrative units, namely, Gansu, Guangdong, Guizhou, Jiangxi, Xinjiang, and Zhejiang. It has strengthened financial support for green and low-carbon transformation, and encouraged pilot zones to introduce successful practices to more regions. It has introduced comprehensive support policies for climate investment and financing, and pressed for building a standard system accordingly. It has also strengthened market funding guidance and promoted pilot work in climate investment and financing. It has encouraged the development of green credit mechanisms, improved supporting policies for green bonds, and published a catalog of related supporting projects, effectively guiding private capital in addressing climate change. As of the end of 2020, China's balance of green loans amounted to RMB11.95 trillion, of which the clean energy loan balance was RMB3.2 trillion. China has issued a total of about RMB1.2 trillion of green bonds, with roughly RMB800 billion outstanding, making it the world's second-biggest green bond market.

Strengthening the role of scientific and technological innovation. Scientific and technological innovation plays a fundamental role in identifying, analyzing, and responding to issues related to climate change, and is set to play a crucial role in promoting the green and low-carbon transition. China has issued a series of climate change-related special plans for technological innovation, technology promotion lists, and green industry catalogs. The government has committed to basic scientific research on climate change, emphasized the consulting function of think tanks, and promoted the research, development, and application of low-carbon technologies. More than 10 major climate change-related research and development projects have been carried out, and the application of 143 technologies in the field of greenhouse gas reduction and utilization has been promoted under the national key research and development plan. The government has encouraged enterprises to take the lead in green technology research and development, supported the transfer and application of green technology achievements, established a comprehensive national-level green technology trading market, and guided enterprises to adopt advanced and applicable energy-saving and low-carbon new technologies. China has established a carbon capture, utilization, and storage (CCUS) entrepreneurial technology innovation strategic alliance, along with a special committee and other institutions, to promote technical progress and the application of scientific and technological achievements in the field.

III. Significant Changes in China's Response to Climate Change

China upholds the vision of innovative, coordinated, green, open and shared development. Based on domestic realities and taking into consideration the international situation, China continues to employ its wisdom and apply its solutions to the transition to green and low-carbon social and economic development. As a responsible major country, it is making its due contribution to the global response to climate change.

1. Coordinating Economic Development with Reductions in Pollution and Carbon Emissions

China follows the path of green, low-carbon and sustainable development, and is committed to integrating green development into the whole process of economic development. Greenness has become an integral component of sustained and

high-quality social and economic development, and China’s carbon intensity has decreased significantly.

China’s carbon intensity in 2020 was 18.8 percent lower than that in 2015, a better result than the binding target set in the 13th Five-year Plan (2016-2020). The figure was also 48.4 percent less than that in 2005, which means that China had more than fulfilled its commitment to the international community – to achieve a 40-45 percent reduction in carbon intensity from the 2005 level by 2020. The drop in carbon intensity translates to a total reduction of about 5.8 billion tonnes of carbon dioxide emissions from 2005 to 2020, and demonstrates that China has largely reversed the rapid growth of its carbon dioxide emissions.

At the same time, China’s economy has achieved leapfrog development. Its GDP in 2020 was more than four times greater than in 2005. It has achieved a great victory in moving nearly 100 million rural poor out of poverty, and succeeded in the arduous task of eliminating absolute poverty.

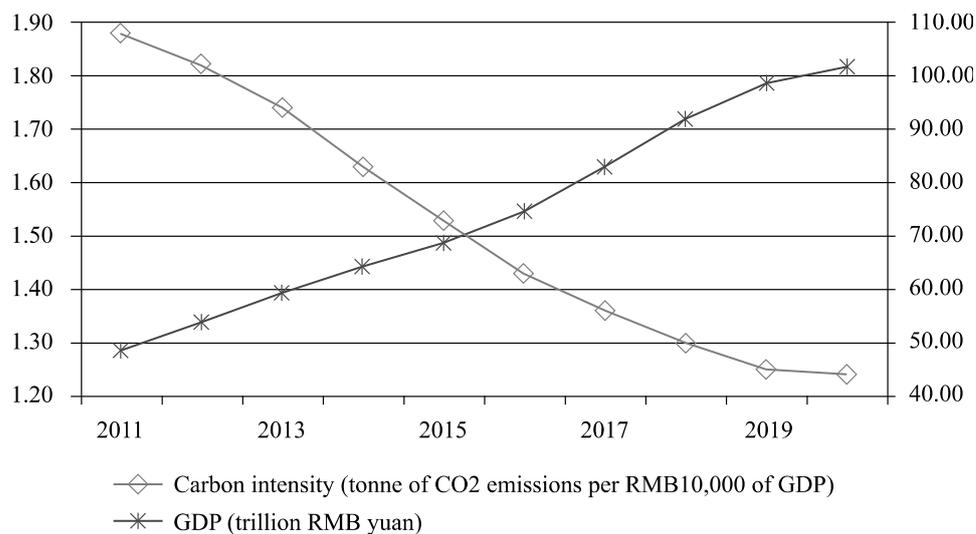


Figure 1 China’s Carbon intensity and GDP (2011-2020)

China has also achieved remarkable successes in eco-environmental protection, and the overall environment is becoming more beautiful. It has taken solid steps to build a beautiful China. The binding eco-environmental targets set in the 13th Five-year Plan have all been exceeded. The following results were achieved in 2020:

- The ratio of days with “excellent” air quality in cities at and above prefecture level was 87 percent (against a target of 84.5 percent).
- The average concentration of PM2.5 in cities at and above prefecture level went down by 28.8 percent from the 2015 level (against a target of 18 percent).

- The combined proportion of state-controlled water sections with good-quality surface water increased to 83.4 percent (against a target of 70 percent).
- The proportion of water sections with bad quality surface water below Grade V decreased to 0.6 percent (against a target of 5 percent).
- Sulfur dioxide, nitrogen oxides, chemical oxygen demand, ammonia nitrogen emissions and carbon dioxide emissions per unit of GDP have continued to decline after China completed the 13th Five-year Plan ahead of schedule in 2019. The phased objectives and tasks of pollution prevention and control have been completed to a high standard. The battles to defend blue skies, clear waters and clean land and the seven landmark campaigns for pollution prevention and control have achieved decisive results. The number of days with heavy pollution has decreased significantly.

2. Remarkable Results in Revolutionizing Energy Production and Consumption

China has committed to implementing a new energy security strategy, with major changes made in energy production and utilization, and historic achievements in energy development. These provide vital momentum to achieve high-quality development, win the battle against poverty, and build a moderately prosperous society in all respects. They also contribute to China's drive to mitigate climate change and build a clean and beautiful world.

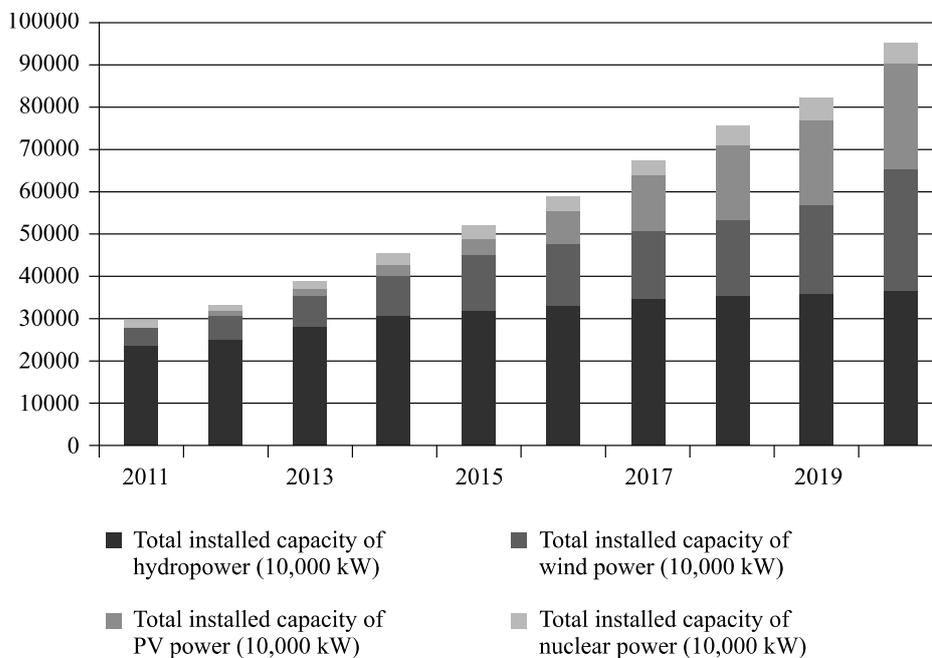


Figure 2 Installed capacity of non-fossil energy power generation in China (2011-2020)

Non-fossil energy is developing rapidly. China gives priority to the development of non-fossil energy. It is vigorously developing and utilizing alternative energy sources, and promoting a green and low-carbon transformation of its energy industry. Preliminary calculations show that in 2020, non-fossil energy contributed 15.9 percent to China's total energy consumption, a significant increase of 8.5 percentage points compared with 2005. The total installed capacity of non-fossil energy power generation in China reached 980 million kW, accounting for 44.7 percent of total installed capacity. Within this figure, wind represented 280 million kW, PV 250 million kW, hydro 370 million kW, biomass 29.52 million kW, and nuclear power 49.89 million kW. PV power increased by a factor of more than 3,000 compared with 2005, and wind by a factor of more than 200. Electricity generated by non-fossil energy reached 2.6 trillion kWh, representing more than one third of the power consumption of the country.

China is rapidly reducing its energy consumption intensity. Preliminary calculations show that the reduction from 2011 to 2020 reached 28.7 percent, one of the fastest in the world. During the 13th Five-year Plan period (2016-2020), China fueled an average annual economic growth of 5.7 percent with an average annual energy consumption growth of 2.8 percent, and the amount of energy it saved accounted for about half of the global energy savings in the same period. China has been ranked among leading countries in the efficiency of coal consumption in its coal-fired power generation units. By the end of 2020, it had approximately 950 million kW of installed capacity in ultra-low emission units, and over 800 million kW of installed capacity in units that had undergone energy-saving transformation. The average coal consumption of thermal power plants had decreased to 305.8 grams of standard coal per kWh, down more than 27 grams compared with 2010. The energy saved represents a reduction of 370 million tonnes of carbon dioxide emission by coal-fired power generation units in 2020 compared with 2010.

From 2016 to 2020, China issued 16 mandatory energy consumption quota standards, achieving an annual energy saving of 77 million tonnes of standard coal, equivalent to 148 million tonnes of carbon dioxide emissions; it issued 26 mandatory product and equipment energy efficiency standards, realizing an annual power saving of 49 billion kWh.

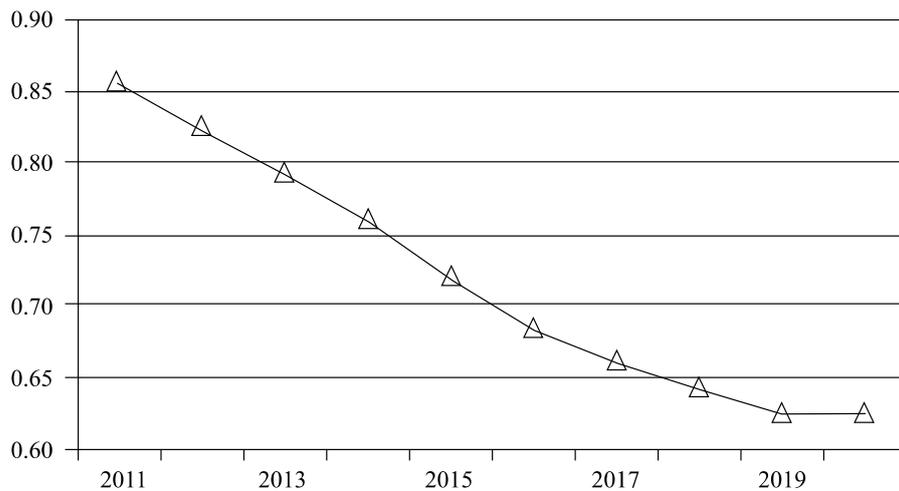


Figure 3 China's energy consumption intensity (2011-2020)
(unit: tonne of standard coal per RMB10,000 of GDP)

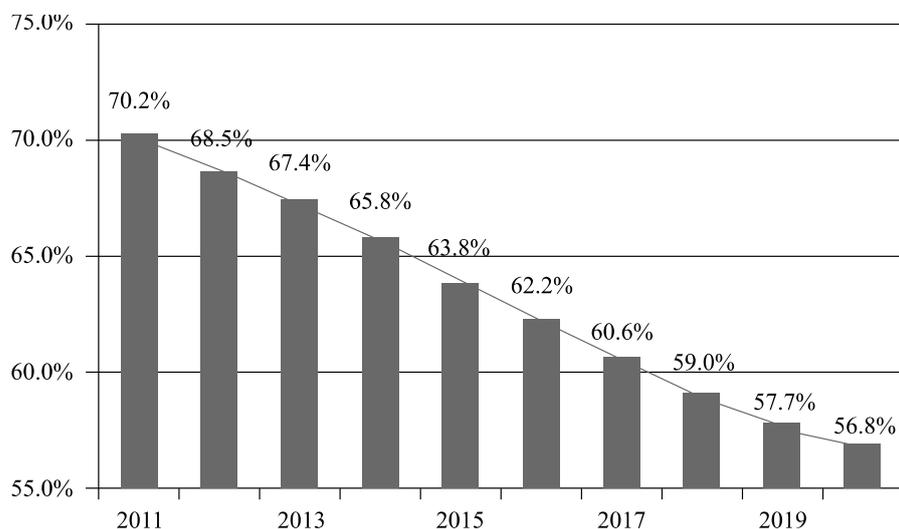


Figure 4 The share of coal consumption in China's total energy consumption (2011-2020)

China has accelerated the transformation to a clean and low-carbon energy consumption structure. In order to address pollution and climate change caused by fossil fuel combustion, China has strictly controlled coal consumption, and the proportion of coal consumption has continued to decline significantly. In 2020, China's total energy consumption was kept under 5 billion tonnes of standard coal. The proportion of coal in its total energy consumption dropped from 72.4 percent in 2005 to 56.8 percent in 2020. China exceeded the target for reducing coal production capacity and eliminated more than 45 million kW of outdated coal and electricity production capacity during the 2016-2020 period. By the end of 2020, the clean heating rate in winter in northern China had increased to more than 60 percent. Coal

for non-industrial sectors has been replaced with cleaner energy in the power supply to around 25 million households in Beijing, Tianjin, Hebei and surrounding areas and on the Fenwei Plain, representing a reduction of around 50 million tonnes of coal for non-industrial sectors, which is equivalent to cutting about 92 million tonnes of carbon dioxide emissions.

Energy development significantly contributes to poverty alleviation. China has implemented a project to alleviate poverty through the rational development and utilization of energy resources in poor areas, effectively boosting their economic development capacity. China has built a total of more than 26 million kW of PV poverty-alleviation power stations, and thousands of “sunshine banks” in poor rural areas, benefiting about 60,000 poor villages and 4.15 million poor households. This innovative model for the integrated development of PV energy and agriculture is helping to win the battle against poverty.

3. Low-Carbon Industrial Transition Fueling Green Development

China has incorporated the concepts of putting the environment first and pursuing green development into its industrial upgrading. Through green, low carbon transformation of industries and the application of green, low carbon solutions, it has opened a new path to progress in both industrial development and environmental protection.

China is improving its industrial structure. Responding to climate change is a new mission for Chinese industry in its pursuit of green, low-carbon development, which also opens up new opportunities. The added value of tertiary industry made up 54.5 percent of China’s GDP in 2020, 3.7 percentage points above that of 2015 and 16.7 percentage points higher than the figure for secondary industry. Strategic emerging industries such as energy conservation and environmental protection are growing rapidly and becoming pillars of the economy. Hi-tech manufacturing now accounts for 15.1 percent of the added value of industrial firms of designated size – with a revenue of RMB20 million and above per annum.

During the 2016-2020 period, China effectively reined in the expansion of energy-intensive industries, and accelerated the upgrading and transformation of key industries, including petrochemicals, chemicals, and iron & steel. Having set the goal of reducing the overcapacity of iron & steel production by up to 150 million tonnes during this period, it met the goal two years ahead of schedule, and decommissioned facilities producing substandard steel products to a total volume exceeding 100 million tonnes. It is estimated that from 2015 to 2020 carbon dioxide emissions per unit of added value of Chinese industries fell by about 22 percent.

In 2020, major resource productivity rose by approximately 26 percent from the 2015 level. About 260 million tonnes of scrap steel and 54.9 million tonnes of waste

paper were reused, and the output of recycled non-ferrous metals reached 14.5 million tonnes.

The new energy industry is witnessing strong growth. The latest revolution in science and technology and industrial transformation has accelerated the growth of the NEV industry. China has topped the world in NEV output and sales for the last six years. In June 2021 the country's NEV fleet reached 6.03 million.

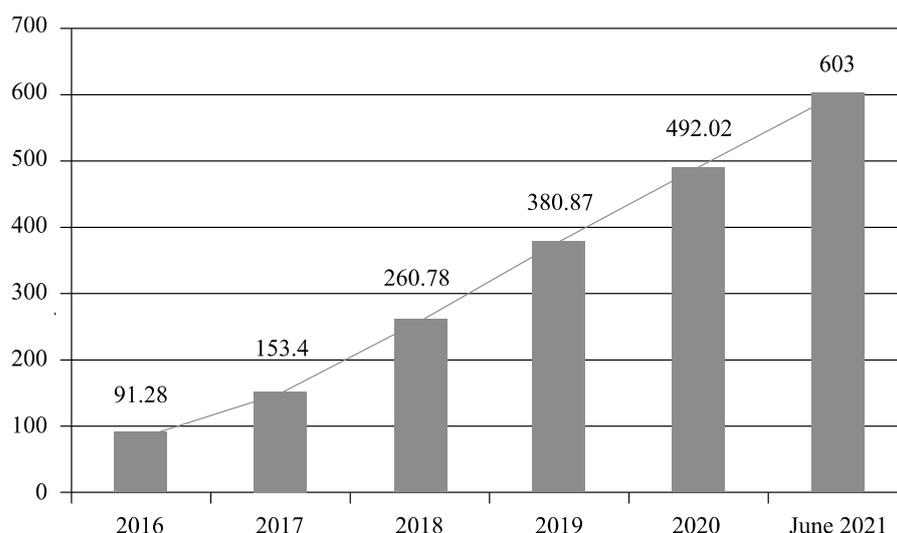


Chart 5 NEV parc in China (unit: 10,000 vehicles)

In the manufacture of wind power and PV power generation equipment, China has established the most complete industrial chain in the world, and is the global leader in terms of technology and output. The steady maturing of China's industrial chain for new energy storage and the diversity of its technology lend strength to the clean, low-carbon transition of the global energy sector. As of the end of 2020, China had secured the largest share in the global output of polycrystalline silicon, PV cells, and PV modules, and led the world in PV capacity additions for eight consecutive years; it had exported PV products to more than 200 countries and regions worldwide, helping to bring down the cost of clean energy globally; its installed capacity for new energy storage stood at 3.3 million kW, the largest in the world.

Green, energy-efficient buildings are growing rapidly. Under its green development philosophy, China has made sweeping efforts to promote eco-friendly and energy-efficient buildings, in a bid to harness the full potential for carbon emissions reduction in the architectural sector. By the end of 2020 the floorage of China's green buildings had exceeded 6.6 billion square meters, with as many as 77 percent of urban buildings completed in the year meeting the green standard. The

floorage of energy-efficient buildings had surpassed 23.8 billion square meters, accounting for more than 63 percent of the total floor space of urban civic buildings.

During the 2016-2020 period China further raised its energy conservation standard for newly built urban buildings. It improved energy efficiency over 514 million square meters of floor space in existing civic buildings and 185 million square meters in public buildings, and increased the share of renewable energy in energy use by civic buildings to six percent.

Steady progress is being made in green transport. China is firmly committed to energy conservation and emissions reduction in the transport industry. It has therefore devised a means of reducing energy consumption and carbon emissions while maintaining economic growth. With steady improvements to the integrated transport system, more bulk cargos are carried by train and ship instead of truck, and river-sea shipping and multimodal transport continue to expand. By 2020 the share of railways in China's total freight volume had increased by nearly two percentage points over 2017, and the volume of river and sea freight had grown by 3.83 billion tonnes compared to 2010. Between 2016 and 2020 the volume of intermodal rail-water freight grew by an average of 23 percent year on year.

Notable progress has also been made in building low-carbon urban transport systems. As of the end of 2020, 87 cities on China's mainland had joined the national program to improve public transport, and 43 cities had launched urban rail transit networks. During the 2016-2020 period, trips by urban public transport exceeded 427 billion, signifying a steady increase in the proportion of city dwellers using public transport.

4. Marked Increase in the Carbon Sink Capacity of Ecosystems

China has taken various measures to build up the carbon sink capacity of ecosystems and ensure that forests, grasslands, wetlands, oceans, soil and frigid zones play their role in carbon sequestration. With the highest growth in forest coverage and the largest area of man-made forests, China leads the world in greening the planet. In the decade between 2010 and 2020, 7.2 million ha of marginal farmland were turned into forest and grassland. By 2020, vegetation coverage of its grasslands was 56.1 percent, and more than half of its wetland areas were under protection.

In the 2016-2020 period, 36.3 million ha of forests were planted, and 42.5 million ha of forests were tended. At the end of 2020, China's forest area stood at 220 million ha, its forest coverage reached 23 percent, and forest carbon storage approached 9.19 billion tonnes. Forests, the lungs of the earth, are playing their due role as an important carbon sink.

During the five years from 2016 to 2020, China conducted desertification control on almost 11 million ha, addressed stony desertification on 1.65 million ha, and

applied comprehensive treatment of soil erosion to an additional 310,000 square kilometers of land. Saihanba and Kubuqi are two shining examples of this “desert to oasis” miracle China has created. China also restored 467,400 ha of degraded wetlands, and added 202,600 ha of new wetlands.

By the end of 2020 China had established 474 national nature reserves, which accounted for more than one tenth of its land mass. It had cultivated 53.3 million ha of high-quality farmland, and restored 1,200 km of coastline and 23,000 ha of coastal wetlands. As a result, ecosystems are better conserved and geared to play their role as carbon sinks.

5. Green and Low Carbon Lifestyles Gaining Popularity

Green living is a prerequisite for building a beautiful China, and every member of society has become conscious of the need and is ready to act. Through regular activities, including those for National Energy Conservation Week, National Low Carbon Day and World Environment Day, China educates the public about climate change. It also promotes the concept of eco-civilization, including climate change and green development, in the national education system, and organizes training courses for the public on responding to climate change.

The “Beautiful China, I’m a Contributor” campaign is sweeping the nation, attracting large numbers of participants. Urban public vehicles, mainly buses and subways, carry over 200 million passengers every day, roads and facilities friendly to cycling and walking are expanding in urban areas, and more people are favoring green, low-carbon modes of transport.

In addition, tens of thousands of households are practicing thrift through actions such as saving food, water, paper, and energy, choosing eco-friendly materials for home decoration, and saying no to over-packaging and disposable products. The nation is turning towards a thrifty, healthy, green and low-carbon lifestyle.

IV. Building a Fair and Rational Global Climate Governance System for Win-Win Results

Due to the complexity of the problem and the many facets of the challenge, addressing climate change remains a long and arduous task that demands wide participation and a concerted effort from around the globe. China calls on the

international community to take immediate action, strengthen solidarity and cooperation, and remain committed to multilateralism. The whole world should safeguard the international system with the UN at its core and the international order underpinned by international law. All countries should uphold the goals, principles and framework set in the United Nations Framework Convention on Climate Change and the Paris Agreement, implement the latter in full, and build a fair and rational global climate governance system for win-win results.

1. Severe Challenges to Global Efforts on Climate Change

Human activity since the Industrial Revolution, particularly the cumulative carbon dioxide emissions resulting from the huge consumption of fossil fuels by developed countries, have led to a significant increase in the atmospheric concentration of greenhouse gases exacerbating climate change characterized by global warming. As is stated in the State of the Global Climate 2020 released by the World Meteorological Organization, the global mean temperature for 2020 was around 1.2 °C warmer than pre-industrial times, and the last 10-year average (2011-2020) was the warmest on record. The Working Group I report of the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), which was released in 2021, showed that human activity has caused unprecedented changes to the climate system. According to the report, the five decades since 1970 was the warmest period in the last 2,000 years. It was projected that climate warming will continue beyond the middle of the century.

Climate change has had a significant impact on the Earth's natural ecosystems. In many regions across the world, the probability and the frequency of concurrent extreme weather and climate events and compound events have risen notably. Heatwaves and droughts have hit simultaneously, and extreme sea levels and strong precipitation have caused more frequent and severe compound flooding. In 2021, some areas have been battered by heavy rainfall and consequent floods; some have seen new temperature highs; some have been ravaged by wildfires. Global warming is affecting every region on our planet, and many of the changes are irreversible. Rising temperatures and sea levels and frequent extreme climate events pose a serious challenge for the very survival of humanity and are long-term major threats to the security of global food, water, ecology, energy and infrastructure, and to people's lives and property. Therefore, addressing climate change is a task of great urgency.

2. China Provides Powerful Impetus for Global Climate Governance

China attaches great importance to international cooperation on climate change. It is an active participant in climate talks; it has contributed to the conclusion and quick implementation of the Paris Agreement; with its own vision and action it has

charted the course for a new form of global climate governance. It has thus gradually moved onto the center stage of global climate governance.

China has contributed to global unity on climate governance through its leaders' climate diplomacy. President Xi Jinping has elaborated China's view on global climate governance at many events, facilitating major progress at the global level.

In 2015, he gave a keynote speech at the Paris Conference on Climate Change, making a historic contribution to the conclusion of the Paris Agreement on global climate action after 2020.

In September 2016, he deposited in person the legal instrument of China's ratification of the Paris Agreement. This was a forceful push for the agreement to take effect quickly, showing China's ambition and resolution in tackling climate change.

At critical moments when global climate governance is facing great uncertainties, President Xi has repeatedly expressed China's firm support for the Paris Agreement, pointing the direction of global climate governance and adding powerful impetus.

In September 2020, at the general debate of the 75th session of the United Nations General Assembly, he announced that China will scale up its NDC, demonstrating China's resolve in applying its new development philosophy and its clear attitude to make further contributions to global efforts against climate change.

In December 2020, at the Climate Ambition Summit, President Xi announced China's further commitments for 2030 pertaining to matters such as the reduction of carbon dioxide emissions, the increase in use of non-fossil fuels, and the forest stock volume.

In September 2021, at the general debate of the 76th session of the United Nations General Assembly, he stated that China will step up support for other developing countries in developing green and low-carbon energy, and will build no new coal-fired power projects abroad, manifesting China's sense of responsibility as a major country.

In October 2021, President Xi attended the Leaders' Summit of the 15th Meeting of the Conference of the Parties to the Convention on Biological Diversity and delivered a keynote speech, in which he emphasized that to achieve its carbon peak and neutrality targets, China will release implementation plans for peaking carbon dioxide emissions in key areas and sectors as well as a series of supporting measures, and will put in place a "1+N" policy framework for carbon peak and carbon neutrality. China will continue to readjust its industrial structure and energy mix, vigorously develop renewable energy, and make faster progress in planning and developing large wind power and photovoltaic bases in sandy areas, rocky areas and deserts. The first

phase of projects with an installed capacity of approximately 100 million kW has recently started construction in a smooth fashion.

China has been an active and constructive participant in international climate talks. It is committed to the principles of equity, common but differentiated responsibilities, and respective capabilities, and maintains that negotiations should be open, transparent, inclusive, party-driven and consensus-based. It played a leading role in and pressed ahead with the conclusion of key documents including the Paris Agreement. China initiated the establishment of multilateral negotiation mechanisms such as the BASIC Ministerial Meeting on Climate Change and the Ministerial on Climate Action. It actively coordinates the positions of countries within climate negotiation blocs such as the BASIC countries, the Like-Minded Developing Countries, and the Group of 77 and China, playing an important role in maintaining the unity of developing countries and defending their common interests. China actively participates in climate negotiations through the Group of 20, the International Civil Aviation Organization, the International Maritime Organization, the BRICS meetings and so forth, promoting the synergy of multiple channels and multilateral processes.

China provides assistance and support within its means to other developing countries to tackle climate change. China engages in South-South cooperation on climate change with other developing countries. It has done its best to help those countries – in particular small island states, the least developed countries, and African countries – to build capacity to fight climate change and reduce the adverse impact of climate change. This cooperation has yielded real, tangible and solid results. Since 2011, China has allocated about RMB1.2 billion for South-South climate cooperation and signed 40 cooperation documents with 35 countries. It has helped countries to build low-carbon demonstration zones and provided them with climate-related supplies such as meteorological satellites, PV power generation and lighting equipment, NEVs, environmental monitoring devices, and clean cookstoves. It has trained about 2,000 officials and professionals in the field of climate change for nearly 120 developing countries.

China offers its approach to global climate governance through building a green silk road. China aims to promote green development and is working with relevant partners to build a green silk road. It emphasizes the importance of an active response to the challenges of climate change and calls for closer results-oriented cooperation in implementing the Paris Agreement and in other areas. In 2021, China and 28 other countries launched the Initiative for Belt and Road Partnership on Green Development, advocating that climate change can be addressed through actions guided by the principles of equity and common but differentiated responsibilities and

respective capabilities, weighted against different national circumstances. China is working with relevant countries to implement the Belt and Road South-South Cooperation Initiative on Climate Change, establish the Belt and Road Energy Partnership, and facilitate actions on ecological conservation and climate change.

3. Tackling Climate Change: China's Initiatives

Addressing climate change is a cause shared by all of humanity. Faced with unprecedented challenges in global climate governance, the international community needs to respond with unprecedented ambition and action. We need to act with a sense of responsibility and unity, take proactive measures, and work together to pursue harmony between humanity and nature.

We must commit to sustainable development. Climate change results from unsustainable development models, thus it can be fundamentally resolved only by taking coordinated actions within the framework of sustainable development. All countries should integrate climate action into their national overall plans for sustainable development, promote a green, low-carbon, circular and sustainable approach to life and work, and foster a model of sustainable development featuring increased output, higher living standards, and healthy ecosystems.

We must commit to multilateralism. International affairs should be addressed by all parties involved through consultation, and the future of the world should be shaped by all countries acting together. In meeting the climate challenge, no one can isolate themselves and unilateralism will get us nowhere. Only by upholding multilateralism, unity and cooperation can we deliver shared benefits for all nations. State-to-state relations should be coordinated and regulated through proper institutions and rules. The strong should not abuse the weak. Rules, once made, should be followed by all. They should never be options which are observed or abandoned according to national interests. This is an effective way of jointly addressing climate change that must be respected by all of the international community.

We must commit to the principle of common but differentiated responsibilities. This is the cornerstone of global climate governance. Developed and developing countries shoulder different historical responsibilities for climate change, and they also have different development needs and capabilities. Therefore, it is unreasonable and unfair to enforce uniform restrictions on them. We should take into account different national circumstances and capabilities, and uphold the institutions according to which every country determines its contribution and does its part to the best of its ability. No one-size-fits-all standards should be adopted. Particular difficulties and concerns of developing countries should be accommodated. Developed countries should play an exemplary role in climate action and support developing countries in financing, technology, and capacity building.

We must commit to win-win cooperation. The world is undergoing changes of a scale unseen in a century, and humanity is in an era in which challenges emerge one after another and risks increase with each passing day. Non-conventional security threats including climate change are spreading. No country is immune from such challenges. The whole world needs to work together in solidarity and engage in cooperation. Countries should learn from each other and make common progress in a global effort to combat climate change, with the goal of achieving shared development for all.

We must commit to concrete actions. The key to addressing climate change lies in action. In implementing the Paris Agreement, we must maintain continuity and honor commitments. We must not be diverted from our course, turn about, or pay lip service. All countries should actively fulfill the NDCs they themselves have set, and turn goals into concrete policies, measures and actions.

Conclusion

China has succeeded in building a moderately prosperous society in all respects, and has now embarked on a new journey to build a modern country and achieve national rejuvenation. To realize high-quality development, it is essential for China to tackle climate change, a key issue that will have an impact on the wellbeing not only of the people of China, but of all the peoples throughout the world.

On the way forward into a new development stage, China will implement its new development philosophy and create a new development dynamic to boost high-quality development. With the reduction in carbon emissions as a major strategic goal for eco-environmental progress, it will incorporate the goals of peaking carbon emissions and reaching carbon neutrality into the overall economic and social development . It will decrease the emissions of both pollution and carbon, and strive to achieve synergy and efficiency. It will promote a comprehensive transition to green and low-carbon economic and social development, bring a fundamental change to its eco-environment by accumulating small changes, and achieve a model of modernization in which humanity and nature exist harmoniously.

Challenges posed by climate change are real, severe and lasting. The response requires the joint effort of all the international community, if we are to leave a clean and beautiful world to future generations. China will honor its promises and continue to support multilateralism, however the global situation changes. It will work with other parties to achieve the full, balanced, effective and sustained implementation of the United Nations Framework Convention on Climate Change and the Paris

Agreement, to fulfill its NDC goals, to control greenhouse gas emissions, and to increase its ability to adapt to climate change. It will redouble its efforts to promote a global community of shared future, and make a greater contribution to a better home planet for all humanity.