

# Combat Climate Change China is acting

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# More active function in international process

- China played very important role in the preparation and reaching Paris Agreement
- Although some negative events occurred with few of the key parties, China will insist the firm stand of active combating the Climate Change
- All the commitment will be completely fulfilled, and try to do more
- Keep on strengthening the scientific bases on climate change sciences, and improve the consensus and awareness of the whole society
- To be a more active partner and collaborator in the on-going implementation of Paris Agreement
- Will work together with more countries to enhance the action of mitigate climate change

# Confirm the domestic policy of climate change

- China declare five new concepts of social and economic development: innovative, harmonious, GREEN, open, and sharing
- Green development become more effective and accountable objective for China
- Climate change is the urgent and important component of Green Development
- Chinese leaders, especially President Xi, stated many time on the significance of active combat climate change
- “To actively combat climate change is not pushed by others, but our own desires”
- Low carbon transition is firmly the policy orientation of energy development

# 100% fulfil the commitment, and better

- All commitment for 2020 will be fulfilled earlier and much better:
- Carbon intensity compared with 2005, already decreased 46% in 2017, exceeding the committed 40%-45% target for 2020
- Carbon intensity will decrease more than 50% by 2020
- Non-fossil fuel share already around 14.5% of the total primary energy consumption in 2018, very near the target of 15% for 2020
- Energy efficiency improvement and coal reduction have been enhanced
- Wood storage increased by 2017 2.1billion cubic meters, far surpassing the committed target of 1.3 billion cubic meters for 2020, due to effort on reforestation and forest protection.

# Further enhance the action

- Positively and actively consult with party countries on further enhance climate change actions
- Ensure the fulfilment of existing NDC targets should be discussed firstly
- Fund to help developing countries on climate change combating
- South South collaboration activity included
- The China's commitment for 2030 will certainly be fulfilled
- Many technical and policy researches are carried out to explore how to enhance our actions
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# When will China peak the GHG emission

- To achieve the lower 2 degree target need to cut down the global GHG emission ASAP
- Current commitments not fit to the 2 degree achievement, including China
- China committed to peak the emission by around 2030, and effort to peak earlier
- Current mitigation achievement support to peak earlier
- Some studies suggest that China may peak the emission by 2025 or even earlier
- Uncertainty exists, to form consensus need more effort and time
- Current uncertainty of world economy attract more attention of decision making, and the trade war may induce more uncertainty or difficulty
- Keep optimistic on faster low carbon transition, as response to induced pressures

# Low carbon transition is a system change

- China is still a developing country, with per capita GDP near only 10,000 USD
- China need to keep relatively high growth rate for another decades, although not as high as before
- The rapid economic expansion will lead to higher GHG emission if still follow traditional development pattern
- the new pattern of development, with more appropriate value added production and allocation necessary
- Peoples' welfare and happiness, environment, and natural resources should have sufficient value production
- Green and low carbon development will change all the production and consumption pattern, as well as the technology and efficiency of all sectors

# Low carbon urbanization

- China is under the process of urbanization
- Previous pattern of urbanization is under review and change
- More than 100 cities, including big metropolis as Beijing, and smaller cities, are practicing the innovation and creation of new type of city development, as demonstration of low carbon cities in China
- Many of the demo cities plan to peak GHG emission earlier than 2025, even 2020
- Economic structure change, new type of land use planning, ultra low energy consuming building development, and public and track based transport system, high efficiency and low carbon emission technology development and spreading, become popular



# low carbon transportation

- Transportation system is one of the key sector for future zero carbon world
- Railway system is a new choice of low carbon transportation
- A high speed railway system has been constructed, with 29,000 km by the end of 2018, added new 4,100 km a year
- Develop the electric car: 579,000 sold in 2017, and 1,250,000 sold in 2018 in China, 62% of the total sold in the world
- Hainan province declares to stop all the fossil fuel car sale in the province
- When stop fuel car production under study

# Low carbon energy

- Energy efficiency first is number one objective of energy revolution of China, not only technology but also consumption pattern, should not meet the wasteful consumption
- Adjust the energy mix, decrease the share of coal, increase non-fossil energy, more natural gas to replace coal as transitional lower carbon fuel
- Green and Low carbon is the target for longer change
- In 2017, China invested in renewable energy as 45% of the world total investment to renewables
- New increased hydro, wind and solar power capacities contributed 37%, 29% and 54% of the world total increases in 2017
- By the end of 2018, China's wind power capacity up to 184 Gw, and solar 174 Gw, and hydro 352 Gw, all the highest in the world
- Still keep the momentum of development

# Future target of non-fossil energy

- Energy system transit to zero carbon emission will be the foreseen objective
- Long term target
  - Hydro power more than 500 Gw,
  - Wind power capacity 1350-2600 Gw
  - Solar power capacity 1900-2800 Gw
- Preferential policy will help the further development of renewable energy

# Technology improvement and scale economy

- Technology innovation support the renewable energy speed up
- Quality improvement significant
- The high speed development and huge scale of the manufacture, engineering and installation, and operation of renewable power plants, push the technology innovation
- Due to higher efficiency, stronger system manufacturing and integrating capacity, the investment cost decrease significantly
- The total investment for wind power and solar PV plants came down to 6800-7000 rmb and 5000-6000 rmb per kw
- Competing feed in price of wind and solar electricity down to 0.31 rmb per kwh for good resource condition

# Green development for more countries

- Green development is one of important criteria for Belt Road cooperation
- Share the technology and policy with all countries
- Up to now, : about 320 hydro power plants with total 81 Gw capacity commissioned or under construction in other countries
- Nuclear power is also important solution for zero carbon energy