

中国的国家自主贡献和能源转型

China's Energy Transition under its INDC Targets

李俊峰

Li Junfeng

2016/3/9

主要内容 Contents

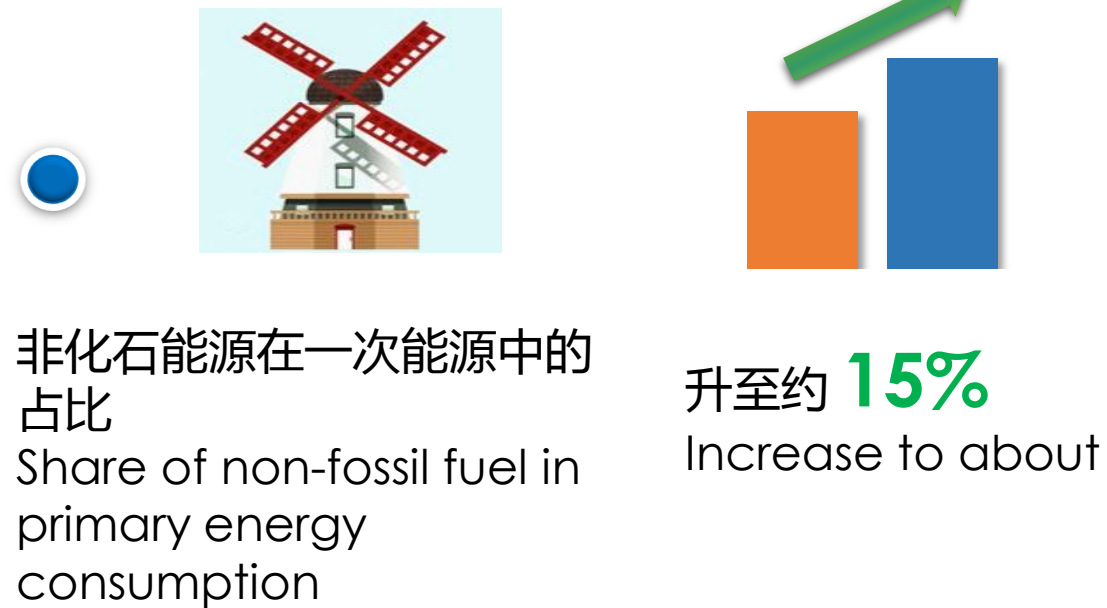
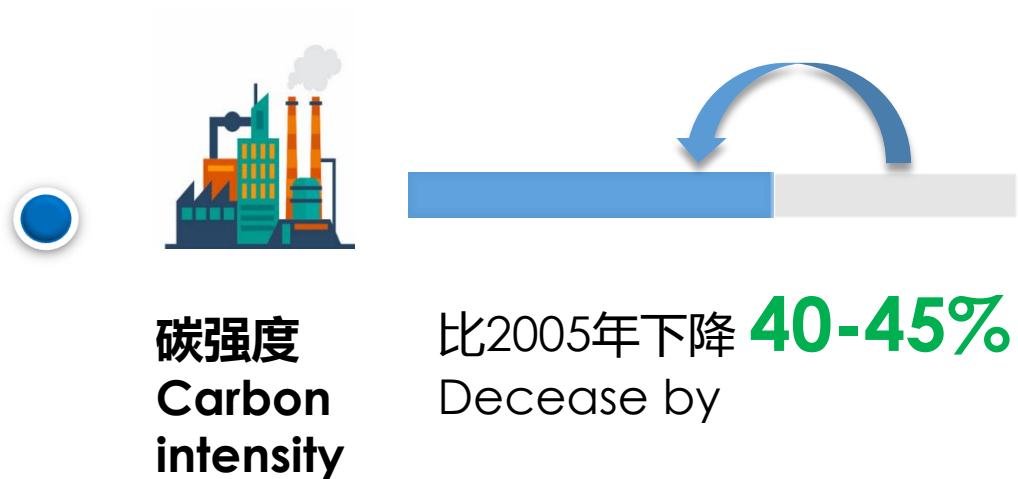
- 中国减缓气候变化行动目标
- China's Mitigation Targets
- 中国能源转型战略
- China's Strategy of Energy Transition
- 中国推动全球能源转型
- China's Role to Promote Global Energy Transition

中国减缓气候变化行动目标

China's mitigation targets

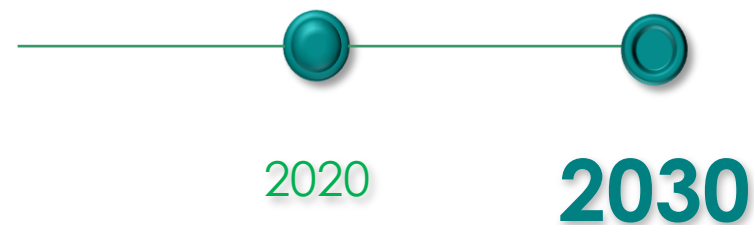
中国减缓气候变化的目标2020

China's targets for 2020 on climate change



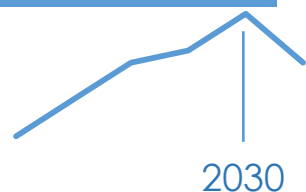
中国减缓气候变化的目标2030——国家自主贡献

China's targets for 2030 on climate change——INDC



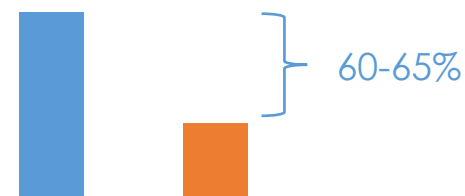
减缓 Mitigation

二氧化碳排放
CO₂ emission



在2030年左右达到峰值
Peak around 2030

碳强度
Carbon intensity



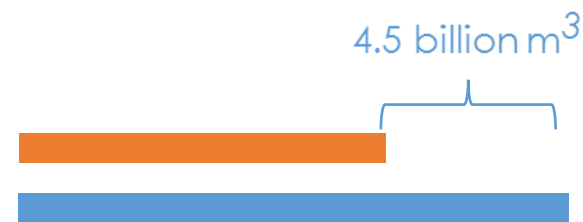
比2005年下降 **60-65%**
Decrease by

非化石能源占比
Share of non-fossil fuel



提高至 **20%**

森林蓄积量
Forest stock volume



比2005年增加
45亿立方米

中国减缓气候变化行动进展 (2014)

China's achievements in mitigating climate change (2014)



碳强度
Carbon Intensity



33.8 %

lower than 2005 level



碳汇
Carbon sink

森林蓄积量 **+**

21.88 亿立方米

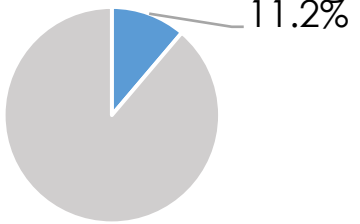
Forest stock
volume 2.188

森林面积 **2160** 万公顷 **+**

Forested area 21.6 million ha. billion m³

能源结构 Energy Structure

一次能源消费
Primary Energy Consumption



■ Non-Fossil Fuel ■ Others



300 GW
Hydro Power
水电



95.81 GW
Wind Power
风电



28.05 GW
Solar Power
光伏



19.88 GW
Nuclear Power
核电

中国能源转型战略

China's strategy of energy transition

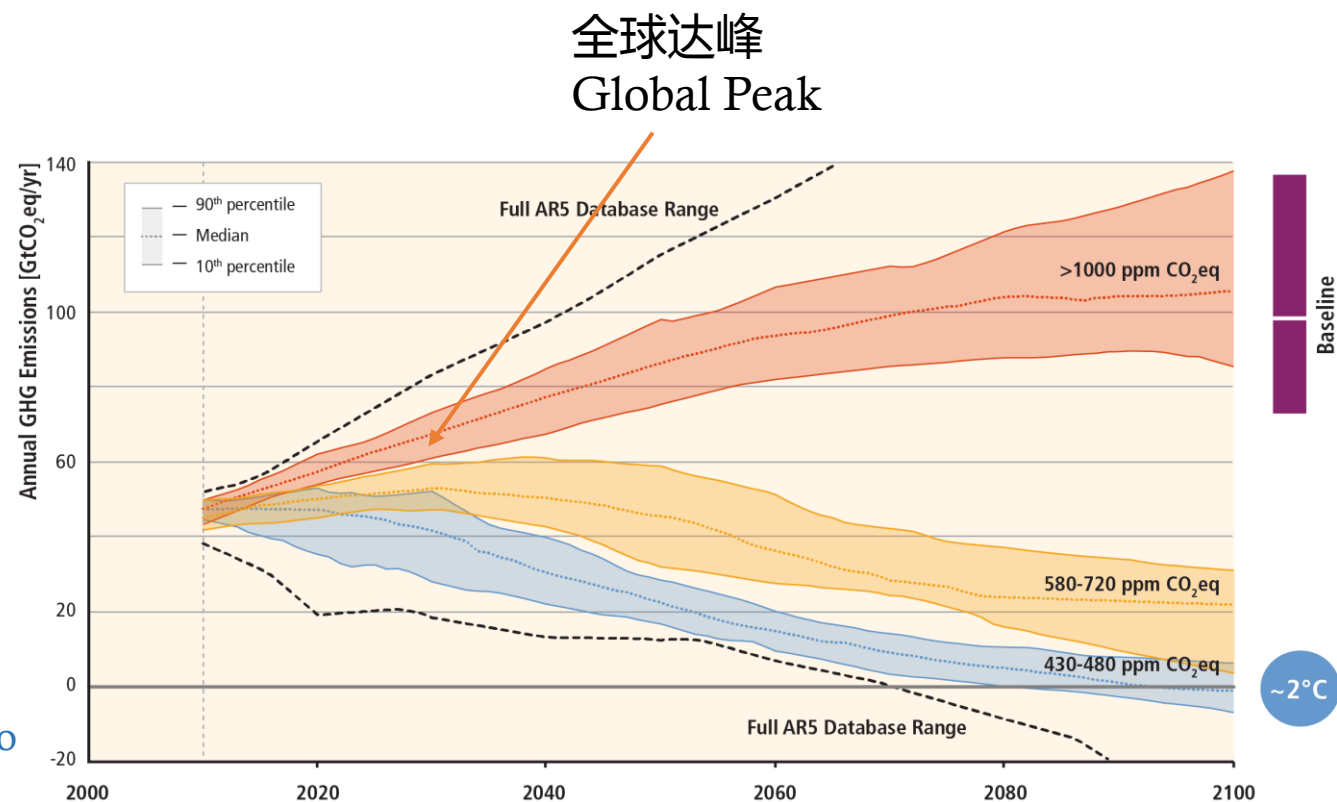
巴黎协定确定的全球长期目标和国家自主贡献对中国能源转型提出了要求。
China's energy transition is crucial for the achievements of the global long-term goals set in the Paris Agreement and mitigation targets in its INDC.

- 《巴黎协定》进一步明确了应对气候变化全球目标
Global long-term goals set in the Paris Agreement

- 到世纪末实现2/1.5°C温控目标 (Article 2)
2/1.5 °C Temperature limits by the end of the century
- 尽早达峰目标 (Article 4.1)
To reach global peaking of GHG as soon as possible
- 本世纪下半叶人为温室气体源汇平衡(Article 4.1)
A balance between anthropogenic emissions by sources and removals by sinks of GHG in the second half of this century

- 国家自主贡献目标 INDC targets

- 到2030年左右达到CO₂排放峰值
To peak the CO₂ emission around 2030
- 非化石能源20%
To increase the share of non-fossil fuel in primary energy use to about 20%



中国将能源转型作为长期国家战略

China has made energy transition a long-term national strategy

- 中国将能源转型作为长期国家战略

Energy transition set as a long-term national strategy

- 2013年9月，国务院颁布大气污染防治“国十条”，指向能源转型

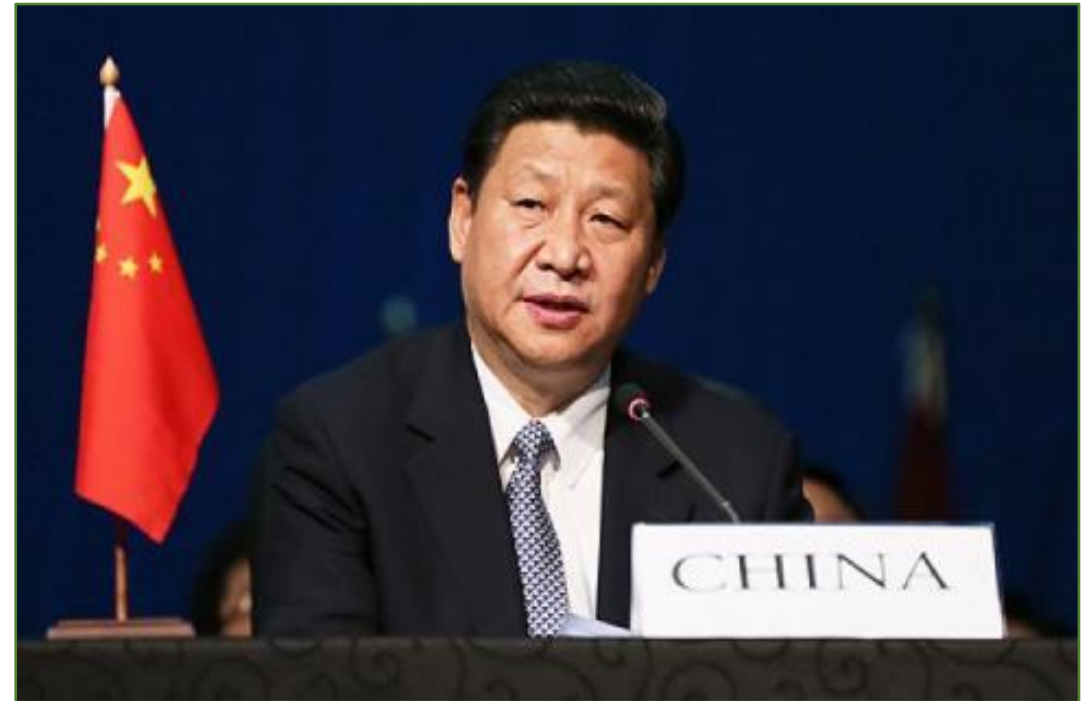
September 2013, the State Council *released the Action Plan for Air Pollution Prevention and Control* , with goals of air pollution control and measures of energy transition.

- 2014年4月，李克强总理在国家能源委员会会议上提出了国家能源变革的要求。

April 2014, Premier Li Keqiang pledged the country's crucial needs of energy evolution.

- 2014年6月，习近平总书记在中央财经领导小组第六次会议上提出中国能源革命的五大任务，把能源的清洁化、低碳化发展作为能源转型的首要目标。

June 2014, President Xi Jinping called for an Energy Revolution in energy production and consumption.



中国已开始能源转型的征程，并取得重要进展。 China has made significant achievements in energy transition.

- 中国能源转型取得重要进展

Significant achievements have been achieved

- 2014年，中国首次实现燃煤发电量和煤炭消费量的负增长。

By 2014, China for the first time witnessed decrease in coal-fire power generation and coal consumption.

- 2015年，中国发电总量首次下降2%，但非化石能源发电量净增1500亿千瓦时。

In 2015, China's output of electric power dropped 2%, meanwhile non-fossil power generation increased 150GWh.

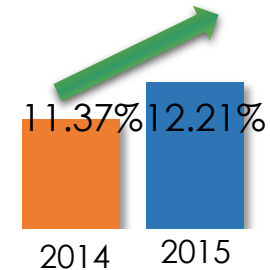
- 2015年，中国可再生能源发电量占比达到24.8%，较2012年提高4.8%。

In 2015, China's renewable energy power generation reached 24.8%, with an increase of 4.8 in 3 years.



可再生能源发电量
Renewable energy power

比2013年提高 **4.8%**
RE power share increased by 4.8% from 2013.



非化石能源占比
Share of non-fossil fuel in primary energy

升至约 **12.2%**
Increase to 12.21% from 11.37%

中国能源转型未来形势预测。 China's energy transition outlook.

中国能源转型未来形势预测

China's energy transition forecast

- 中国未来能源消费总量预期调整，较此前有所下降。

China's future energy consumption will be lower than previous expectation.

- 2020年，全国能源消费总量约46~48亿吨标准煤，非化石能源占比约15%。

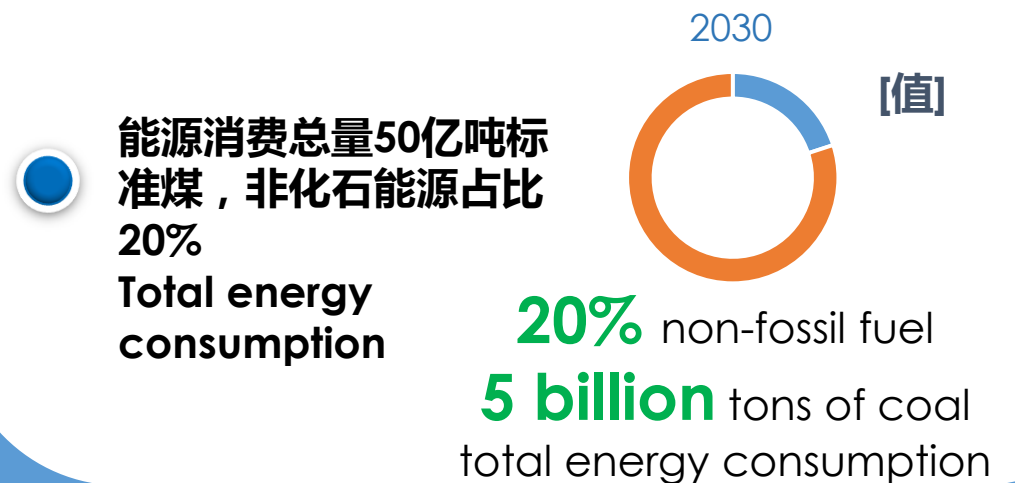
By 2020, China's total energy consumption will reach 4.6-4.8 billion tons of coal, with 15% non-fossil energy.

- 2030年，全国能源消费总量约50亿吨标准煤，非化石能源占比约20%。

By 2030, China's total energy consumption will reach 5 billion tons of coal, with 20% non-fossil energy.

- 二氧化碳峰值预测由120亿吨下调至约100亿吨。

The CO₂ emission will peak at 10 billion tons, from 2 billion tons less than previous expectation.



中国推动全球能源转型

China's role to promote global energy transition

推动低碳能源转型已经成为世界主要经济体的共识。

To promote the transition of energy system towards a low-carbon one has already become a consensus among major economies.

- 2016年6月，七国集团(G7)领导人在德国举行的会议上表示，全球应于本世纪末结束使用化石燃料。
The G7 members have agreed to phase out the use of fossil fuels by the year 2100



2015年6月在德国举行的G7峰会
G7 summit at Elmau Castle hotel in Germany in June 2015

实现全球能源转型需要加强国际合作。

Enhanced international cooperation is needed for the global energy transition.

- 能源转型同应对气候变化一样，需要全球共同行动才能实现。

Energy transition needs global collective action to be realized, the same way as joint efforts tackling climate change.

- 能源转型需要各国合作，共同维护安全稳定的能源供给。

Energy transition needs every country to collaborate on securing global energy supply.

- 中国愿坚持创新、协调、绿色、开放、共享的发展理念，与各国一道推动全球能源转型。

China is willing to have an innovative, harmonious, green, open and sharing strategy of energy development, to achieve global energy transition together with all countries.

谢谢！

Thanks for your attention !

李俊峰 LI Junfeng

lijf@ncsc.org.cn

国家应对气候变化战略研究和国际合作中心

National Center for Climate Change and International Cooperation