

国合会

中国低碳发展的战略转型

Strategy Transfer of Low Carbon Development in China

Tsinghua University

He Jiankun

2012.12.13

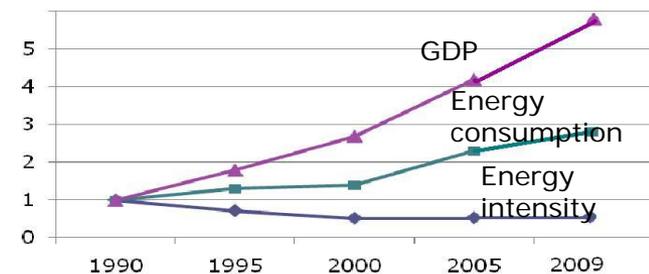


1. 中国当前经济社会发展面临的资源环境制约日趋强化，在全球应对气候变化增强CO₂减排力度方面也将面临空前的压力，加快经济社会低碳转型的需求日益紧迫（1）

There are increasingly enhanced resources and environment constraints in economic and social development in China, and there are also unprecedented pressures on reducing CO₂ emissions to address global climate changes . It is urgent to accelerate the economic and social transformation to low-carbon development model. (1)

□ 国内资源依赖型、粗放扩张的高碳发展模式已难以为继

Domestically, high carbon development model, characterized by resource-dependent and extensive expansion, is unsustainable.



The comparison among growth index of GDP, energy consumption and energy intensity

- 1990-2011年，单位GDP能源强度下降56%，CO₂强度下降58%，但由于GDP增长8倍，能源消费总量增长3.5倍。煤炭产量达35亿吨，石油进口比例达55%。
From 1990 to 2011, energy intensity per GDP declined by 56%, and CO₂ intensity per GDP decreased by 58%. The total energy consumption still increased by 3.5 times, because GDP grew 8 times. The coal production has reached 3.5 billion tons and the proportion of imported oil has reached to 55%.
- 与能源开发利用相关的环境问题仍未得到遏制。
Environmental issues related to energy development and utilization have not been curbed.

1. 中国当前经济社会发展面临的资源环境制约日趋强化，在全球应对气候变化增强CO₂减排力度方面也将面临空前的压力，加快经济社会低碳转型的需求日益紧迫（2）

There are increasingly enhanced resources and environment constraints in economic and social development in China, and there are also unprecedented pressures on reducing CO₂ emissions to address global climate changes . It is urgent to accelerate the economic and social transformation to low-carbon development model. (2)

- 国际上应对气候变化“德班平台”谈判，我国将面临排放空间不足的严峻挑战

Under the circumstances of “Durban Platform” negotiations to address global climate change, China will confront serious challenges of lacking emissions space

- 实现2°C目标，各国都需加大减排力度。

In order to achieve 2 °C goals, all nations in the world have to enhance efforts to reduce CO₂ emissions.

- 中国CO₂排放总量大，增长快，迫切需要走出低碳发展路径。

The total CO₂ emissions in China are still extensive and growing fast. It is urgent to develop low-carbon path in China.



2. 统筹国内和国际两个大局，统筹近期和长远，统筹全国和地区，确立低碳发展中长期分阶段目标

To coordinate the relations of domestic and international issues, the short-term and long-term, and the national and regional situations. China will establish the phased goals of low-carbon development in medium- and long-term.

- 2020年，单位GDP的CO₂强度比2005年下降40-45%
The CO₂ intensity per GDP will be decreased by 40% - 45% in 2020 than in 2005.



- 东部较发达地区要在2020年前率先实行CO₂排放总量控制和峰值目标

In the developed cities located in east of China, the control objectives of all CO₂ emissions and peak target around 2020 will be practiced.



- 全国逐步实行能源消费总量控制和CO₂排放总量控制目标，探索CO₂排放峰值目标

China will practice the control objectives of total energy consumption and all CO₂ emissions gradually, and will explore the peak target in the future.

3. 研究并制定低碳能源发展的中长期战略，逐步建立并形成以新能源和可再生能源为支撑的可持续能源体系(1) To research and formulate China's medium-and long-term strategy of low-carbon energy development, and to gradually establish sustainable energy system supported by new and renewable energies(1)

- 中长期能源战略要从传统保障供给转向同时引导需求
The medium-and long-term energy strategies will be transformed from traditional security supply to guiding demands simultaneously.
- 强化节能优先，提高能效，同时引导需求，合理控制能源消费总量。
It will be strengthened that to prioritize energy saving, to improve energy efficiency and to guide demand simultaneously. It will be important to control the total energy consumption.
 - 中国工程院提出基于科学产能和用能的2020、2030、2050年能源需求总量的控制目标分别约为40、45和55亿tce。按目前趋势，2020年将达50亿tce，2030年将达60亿tce。
The control objectives of total energy demand based on the scientific capacity and energy use was presented by Chinese Academy of Engineering: About 4 billion tce in 2020, 4.5 billion tce in 2030, and 5.5 billion tce in 2050. According to current development situation, total energy demand will reach 5.0 billion tce in 2020, 6.0 billion tce in 2030.
 - 2005~2020，GDP的CO₂强度下降>45%。“十二五”能源消费总量控制目标41~42亿tce。
From 2005 to 2020, CO₂ intensity per GDP will decrease by over 45%. The control objectives of total energy consumption during 12th FYP is 4.1~4.2 billion tce



3. 研究并制定低碳能源发展的中长期战略，逐步建立并形成以新能源和可再生能源为支撑的可持续能源体系(2) To research and formulate China's medium-and long-term strategy of low-carbon energy development, and to gradually establish sustainable energy system supported by new and renewable energies(2)

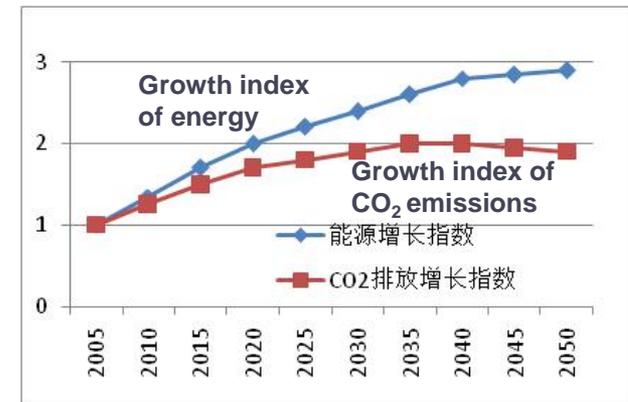
- 积极发展新能源和可再生能源，加快能源结构的低碳化。

To actively develop new and renewable energies, and to accelerate low-carbon energy structure.

- 2020、2030、2050年非化石能源比重：15%、20~25%、30%~1/3。

The future proportion of non-fossil fuel in China: 15% in 2020, 20~25% in 2030, 30%~1/3 in 2050.

- 加强常规和非常规天然气的勘探开发。
To strengthen the exploration and development of conventional and unconventional natural gas
- 在确保安全的基础上，稳步、高效发展核电
On the condition of safety guarantee, to develop and deploy nuclear power in a more prudent and efficient way.



能源与CO₂排放增长指数
Growth Index of energy and CO₂ emissions

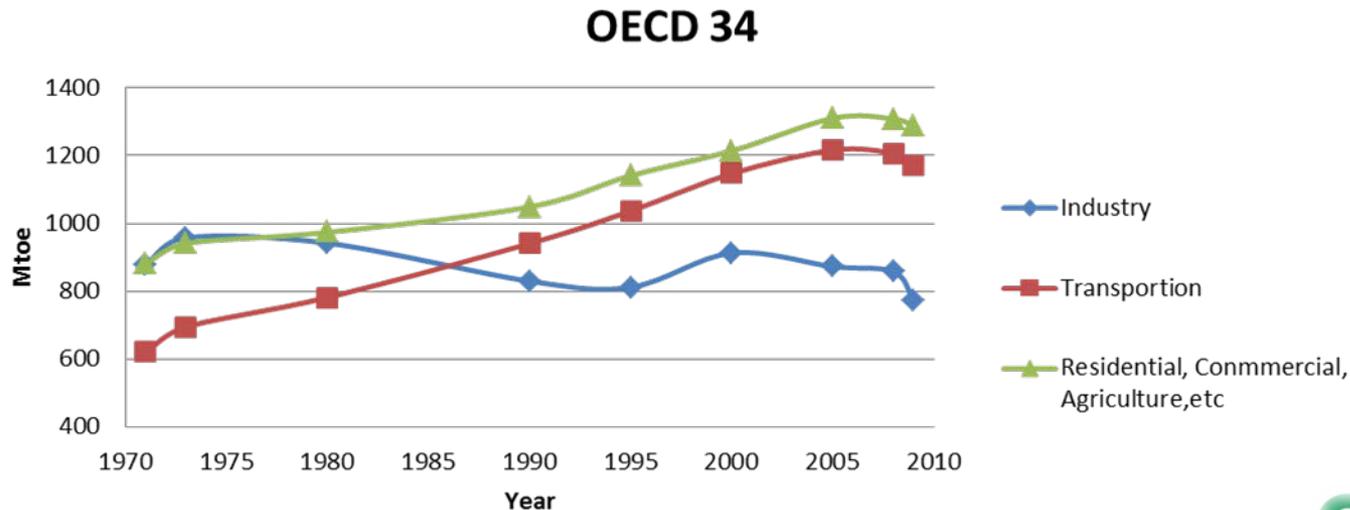


4. 我国工业化、城市化进程要走上绿色低碳发展路径，首先要促进产业转型，建立以低碳排放为特征的产业体系，工业部门的能源消费和CO₂排放要率先达到峰值

In order to transform China's industrialization and urbanization to low carbon development, China will focus on promoting industrial transformation, establishing industrial system indicated by low carbon emissions, and achieving peak of energy consumptions and CO₂ emissions in Industries at first.

- 实现CO₂排放峰值，必须工业部门能耗持续下降，交通、建筑能耗的增加依靠发展新能源和可再生能源满足，化石能源消费和CO₂排放趋于稳定并逐步下降。

In order to achieve the peak target, the energy consumption in industries must steadily decline, the new additional energy consumption in transportation and construction will depend on new and renewable energies. The fossil fuel consumptions and CO₂ emissions will be stable and declining gradually.



5. 加快转变发展方式是我国实现低碳发展的核心和关键，必须改变以投资和出口为主要驱动力的增长方式，扩大最终消费对经济的拉动作用

Accelerating the transformation of the pattern of development is the key factor to achieve low carbon development in China. China will change the mode of economic growth to expanding final consumption from investment and exports.

- 投资的快速增长刺激基础设施建设和工业产能扩张，拉动高耗能产业的快速发展，不利于产业结构调整和GDP能源强度下降。

Rapid growth of investment stimulate the infrastructure construction and industrial capacity, encouraging the rapid development of energy-intensive industry. It will adverse to adjusting industrial structure and reducing energy intensity per GDP.



- 投资在GDP中比重下降1个百分点，相应消费增长1个百分点，GDP能源强度可下降0.45个百分点。
Reducing the share of investment in GDP by 1% and increasing the share of final consumption in GDP by 1%, it will contribute declining energy intensity per GDP by 0.45%.



6. 明确低碳发展在国家和地区总体发展战略中的定位，加强政策保障体系的建设

To define the position of low-carbon development in the overall development strategies nationally and regionally, and to strengthen the construction of policy support system

- 未来10-20年，加快发展方式转型，由经济大国转变为经济强国
In the next 10-20 years, China will accelerate transforming development model from economic powers to economic power
 - 资源依赖型、粗放扩张→技术创新型、内涵提高；
Resource-dependent, extensive expansion → Technologies-innovative, connotation improved;
 - 盲目追求经济增长速度→注重经济增长的质量和效益；
Blindly pursuing economic growth rate → Focusing on the quality and efficiency of economic growth
 - 模仿追赶型的高碳发展路径→自主创新型的绿色、低碳发展路径。
High-carbon development path characterized by copying and pursuing → Low-carbon development path characterized by independent innovation and green

- 加强支持低碳发展的法律和财税金融政策体系的建设。
To strengthen the constructions of the legal ,fiscal and financial policies system which supporting low-carbon development.



Thanks !

