中国“十一五”节能减排回顾与“十二五”展望

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Development Trajectories, Emission Profile and Policy Actions in China: Assessment of Contributions on Realizing the 11th FYP Targets and Perspective to 12th FYP

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Energy Research Institute

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发展现状（Current Situation）

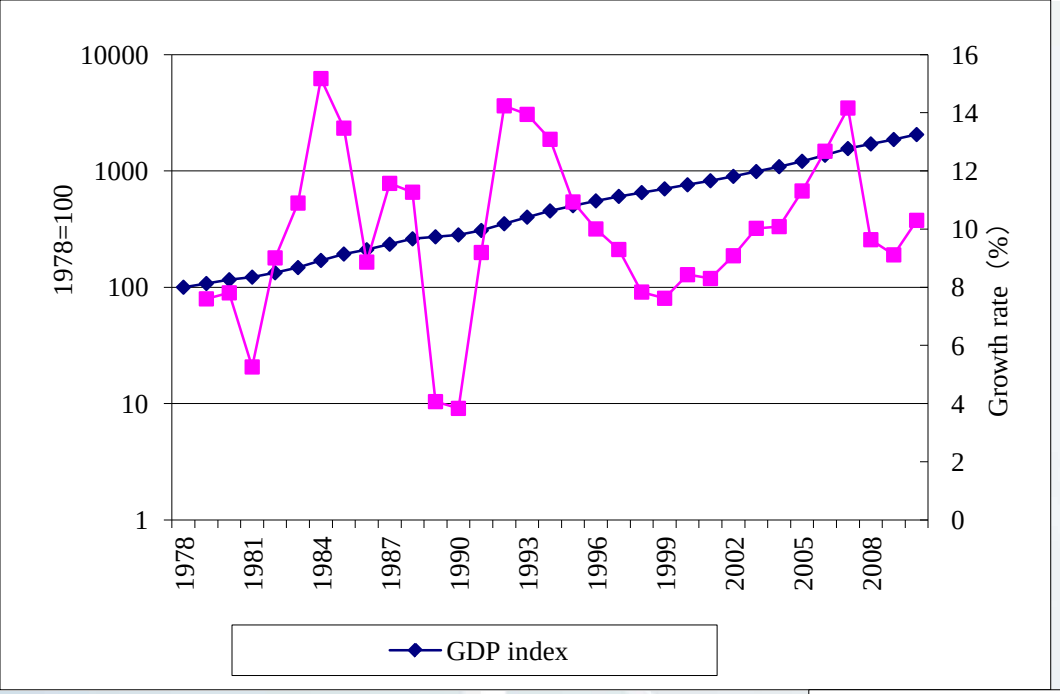
Hongkong?

Chongqing, western region!

Sydney?

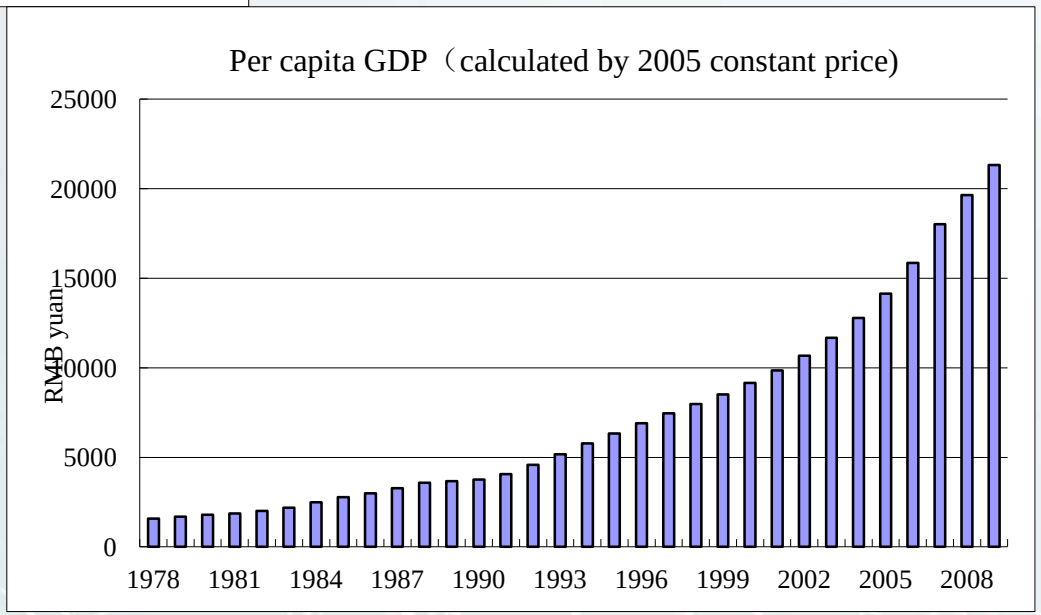
Qingdao, Shandong Province


London?
Shanghai

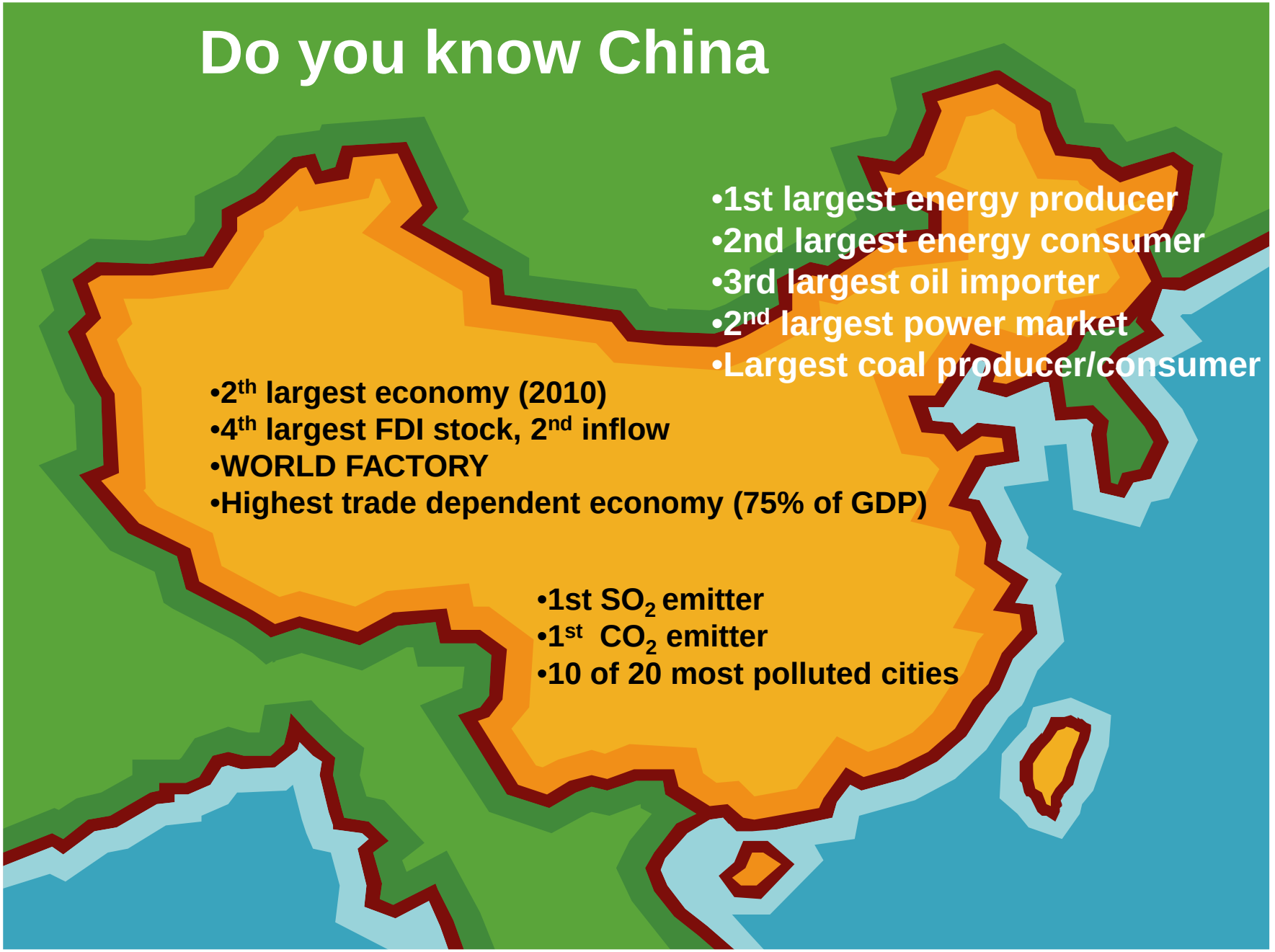


经过30多年的改革开放，中国经济社会取得了长远发展

Great achievements yielded with the reform and opening-up of 30 years



Do you know China

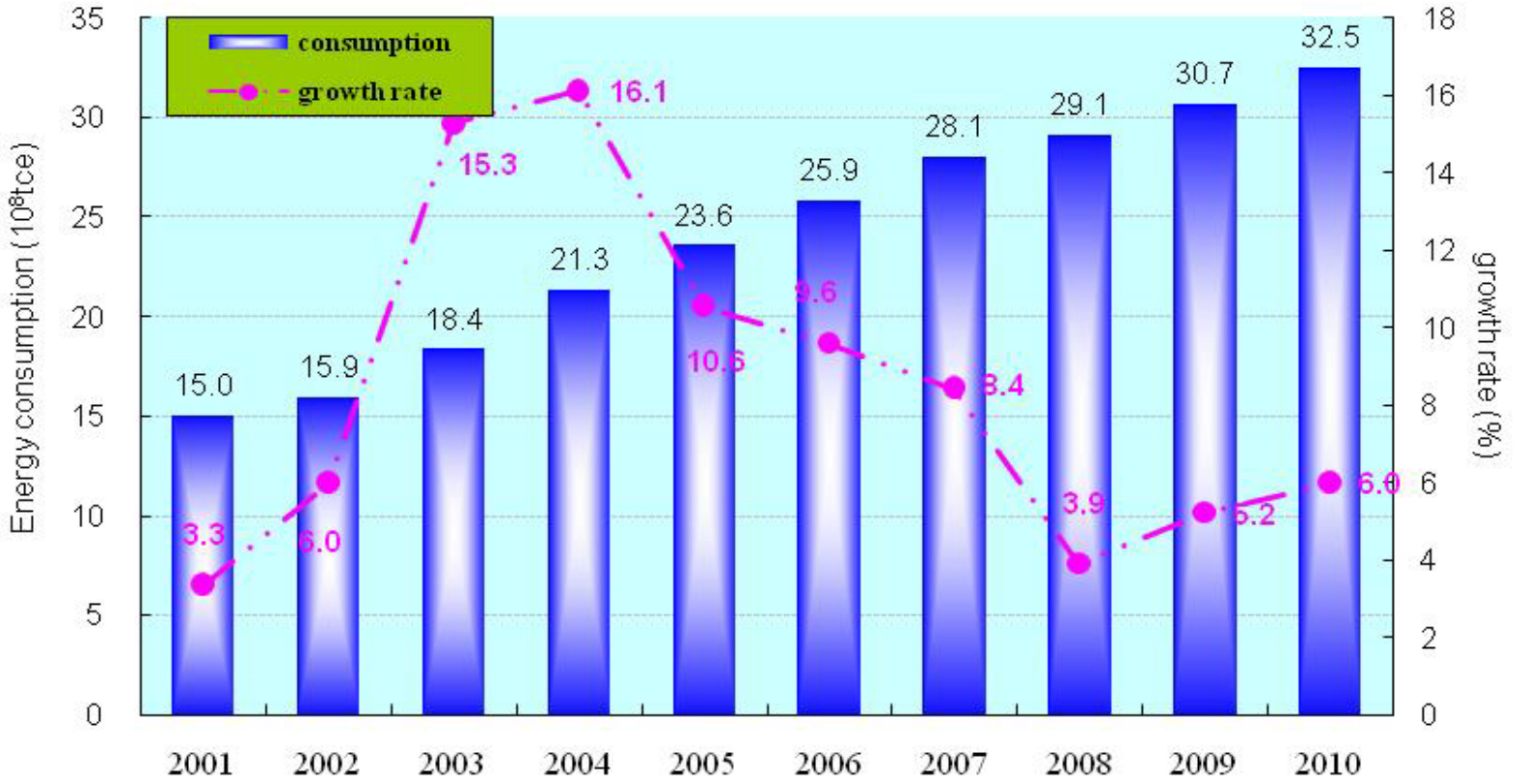


- 1st largest energy producer
- 2nd largest energy consumer
- 3rd largest oil importer
- 2nd largest power market
- Largest coal producer/consumer

- 2th largest economy (2010)
- 4th largest FDI stock, 2nd inflow
- WORLD FACTORY
- Highest trade dependent economy (75% of GDP)

- 1st SO_2 emitter
- 1st CO_2 emitter
- 10 of 20 most polluted cities

中国一次能源消费状况
Primary Energy Consumption in China



2000~2010年，中国国内生产总值年均增长1Comparison为9.8%，“十一五”为1.Comparison能源消费年均增长8.4%。其中“十五”为10.2%，“十一五”年均增长6.6%。相应能源消费弹性系数分别为0.8、1.04和0.59.

During 2000-2010, average annual GDP growth is 10.5%, average annual growth for 2000-2005 is 9.8%, for 2006-2010 is 11.2%. Meanwhile, average annual energy consumption growth for 2000-2010 is 8.4%, for 2000-2005 is 10.2%, for 2006-2010 is 6.6%. Corresponding Elasticity of energy consumption was 0.8, 1.04 and 0.59.

International Comparison

	Population	GDP	Per capita GDP	Primary Energy Consumption	Per capita Energy Consumption	CO_2 Emission	Per capita CO_2 emission
	Million	Billion US$	US$/ person	Mtoe	toe/ person	Mt-CO_2	t-CO_2/ person
China	1312	2096	1598	1653	1.26	5627	4.29
US	299	11315	37843	2321	7.76	5766	19.28
India	1110	715	644	406	0.37	1264	1.14
France	61.3	1468	23970	273	4.45	381	6.21
OECD	1175	29218	24863	5537	4.71	12967	11.04
World	6511	37868	5816	10583	1.63	27347	4.2

Source: Handbook of Energy & Economic Statistics in Japan, 2009

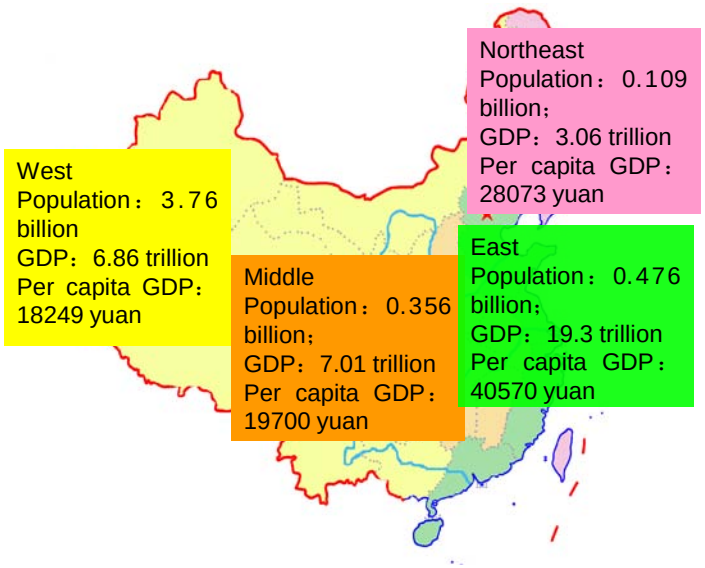
Some rural area in China's west




Service *Building* *Transportation* *Education*




Some urban area in China's southeast

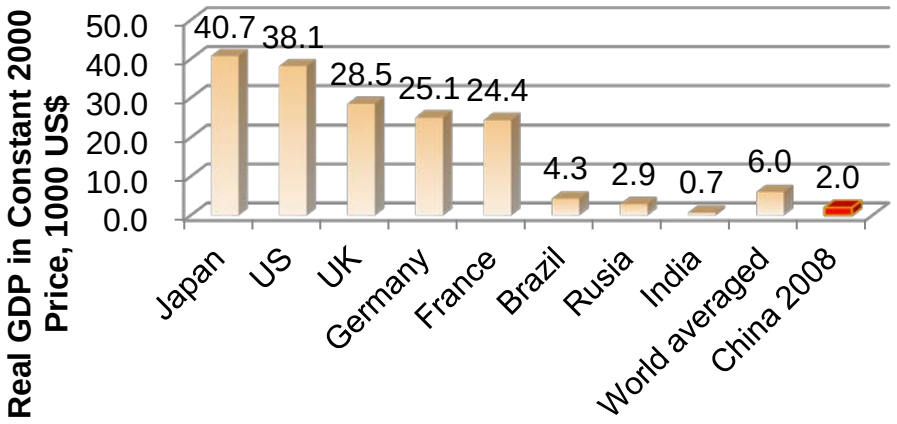


China is still the largest developing country in the world, although the economic aggregate ranked the top 2.

There are obvious difference among region, urban and rural, there is still a long way to go

尽管中国经济总量已经居于世界前列，但依然是世界上最大的发展中国家，要消除地区差异、城乡差异仍有很长的路要走

International Comparison of Per Capita GDP in Selected Countries



生态环境破坏非常严峻
Deterioration of ecological environment

Health Impacts

- **Air pollution levels exceed WHO standards**
- **China has 10 of the 20 most air polluted cities globally**

Every year:

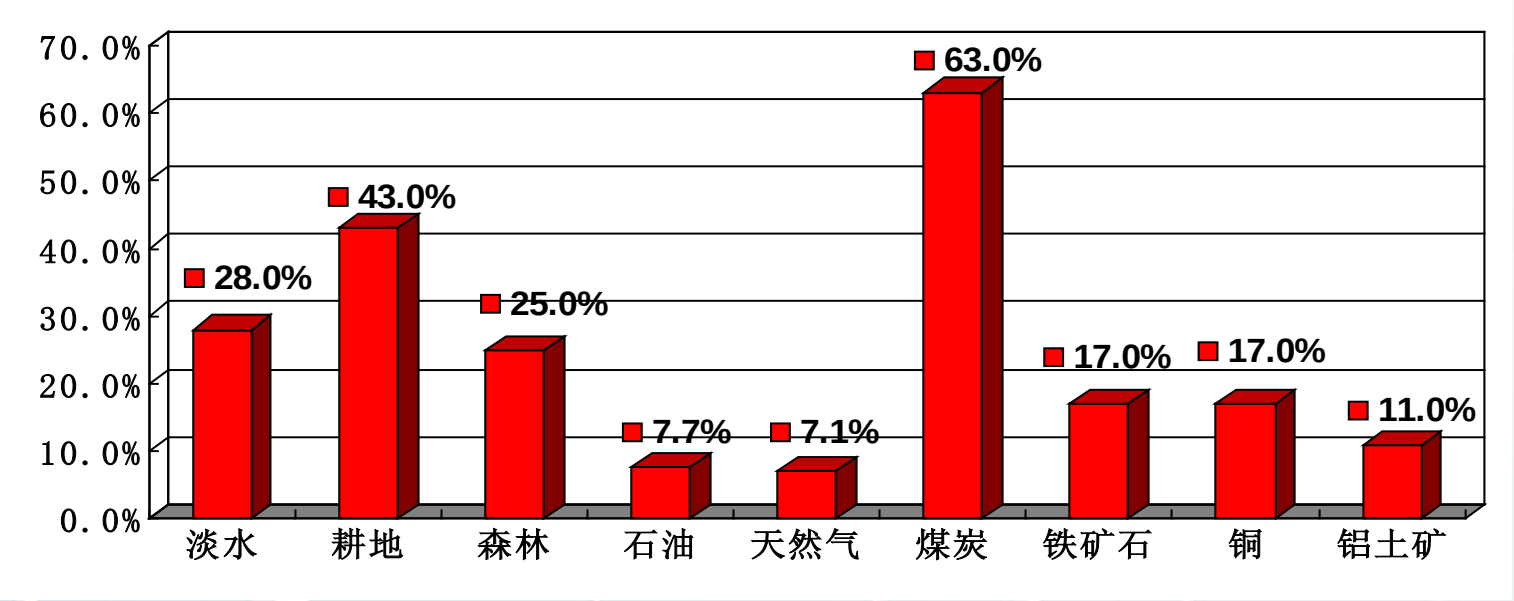
500,000 premature deaths

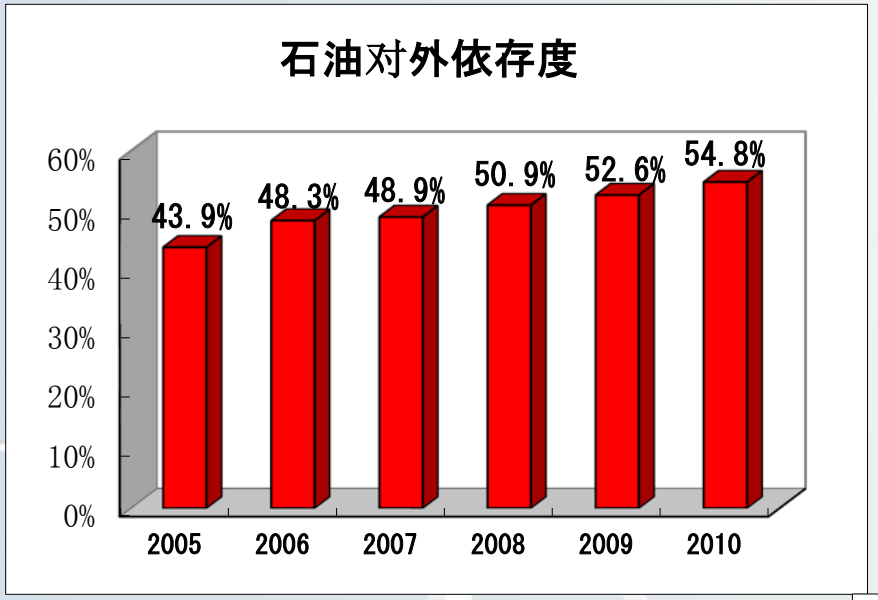
75,155,000 asthma attacks

Source: World Bank; World Health Organization

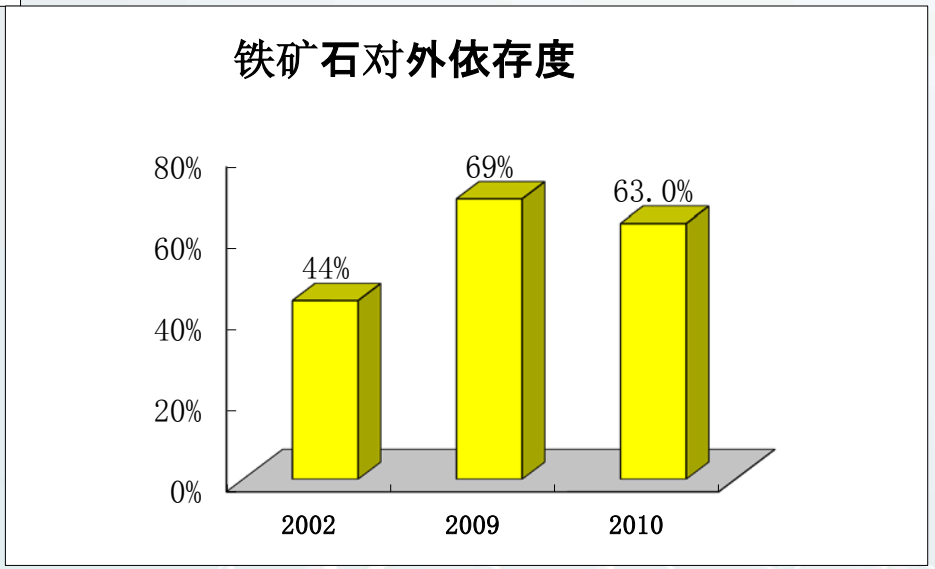
资源相对不足，供应安全面临严峻挑战

重要资源人均占有量与世界人均水平比较



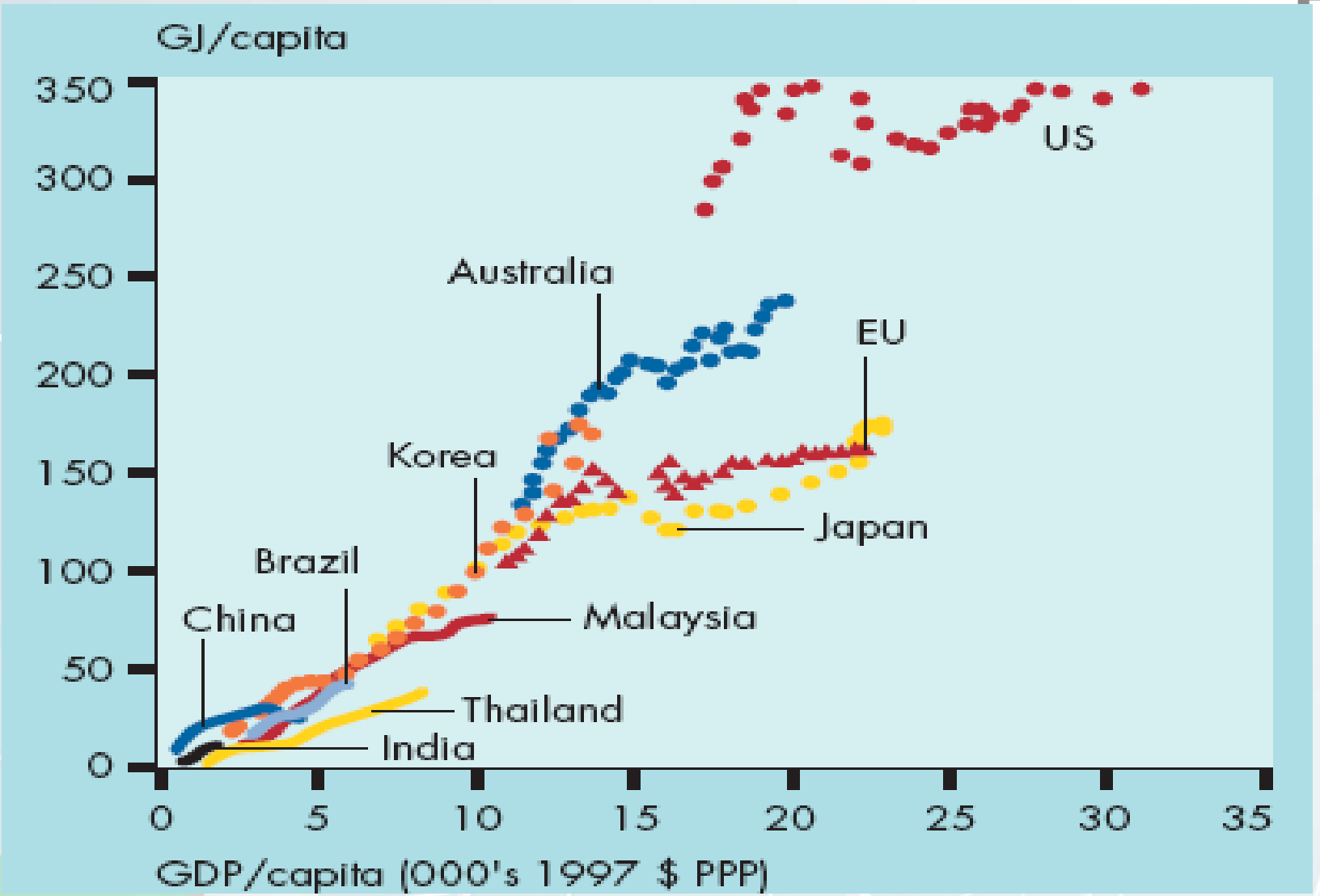

石油对外依存度
60%
50%
40%
30%
20%
10%
0%
43.9%
48.3%
48.9%
50.9%
52.6%
54.8%
2005
2006
2007
2008
2009
2010

- **重要资源对外依存度高**

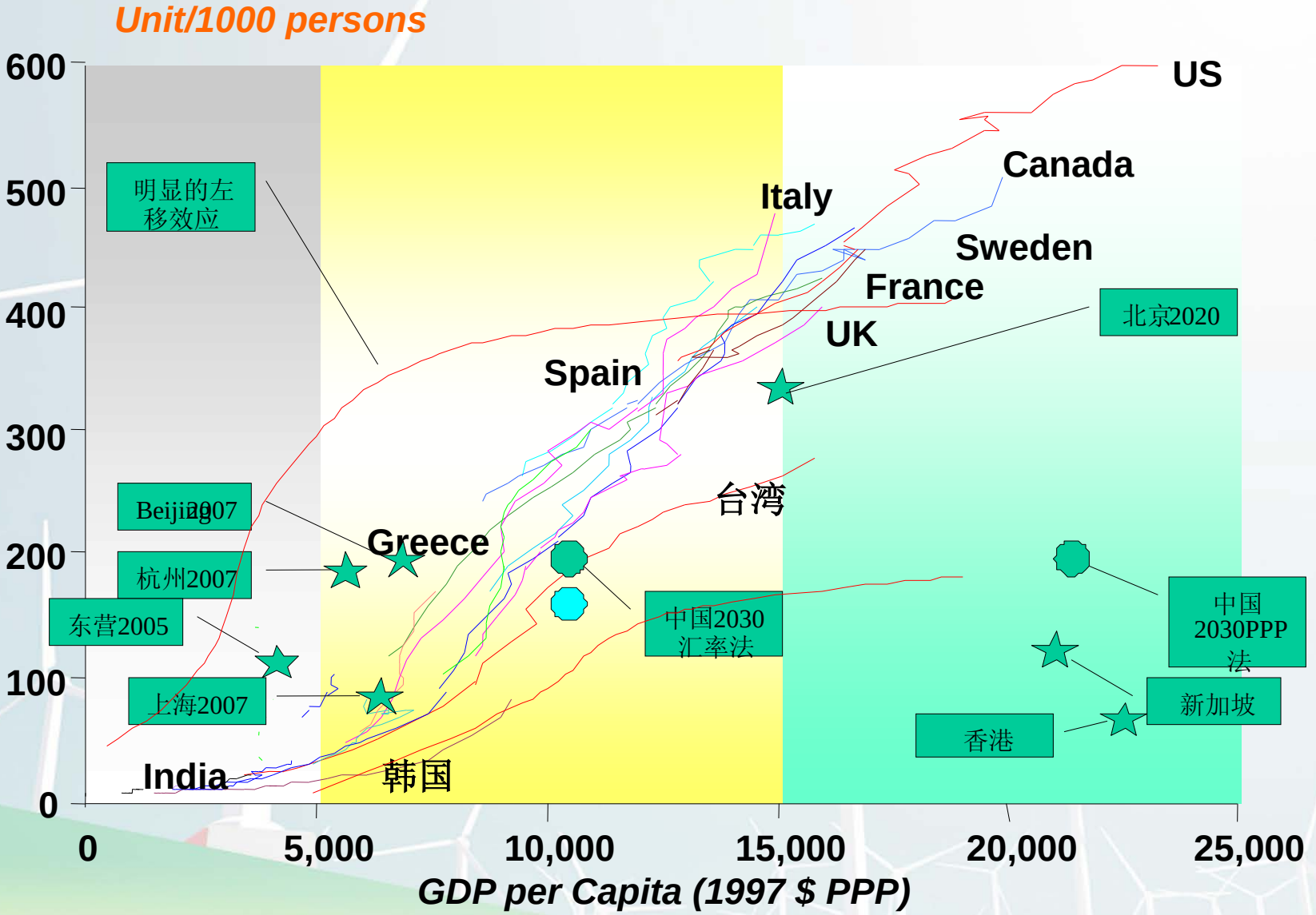

铁矿石对外依存度
80%
60%
40%
20%
0%
44%
69%
63.0%
2002
2009
2010

未来展望（Perspective）

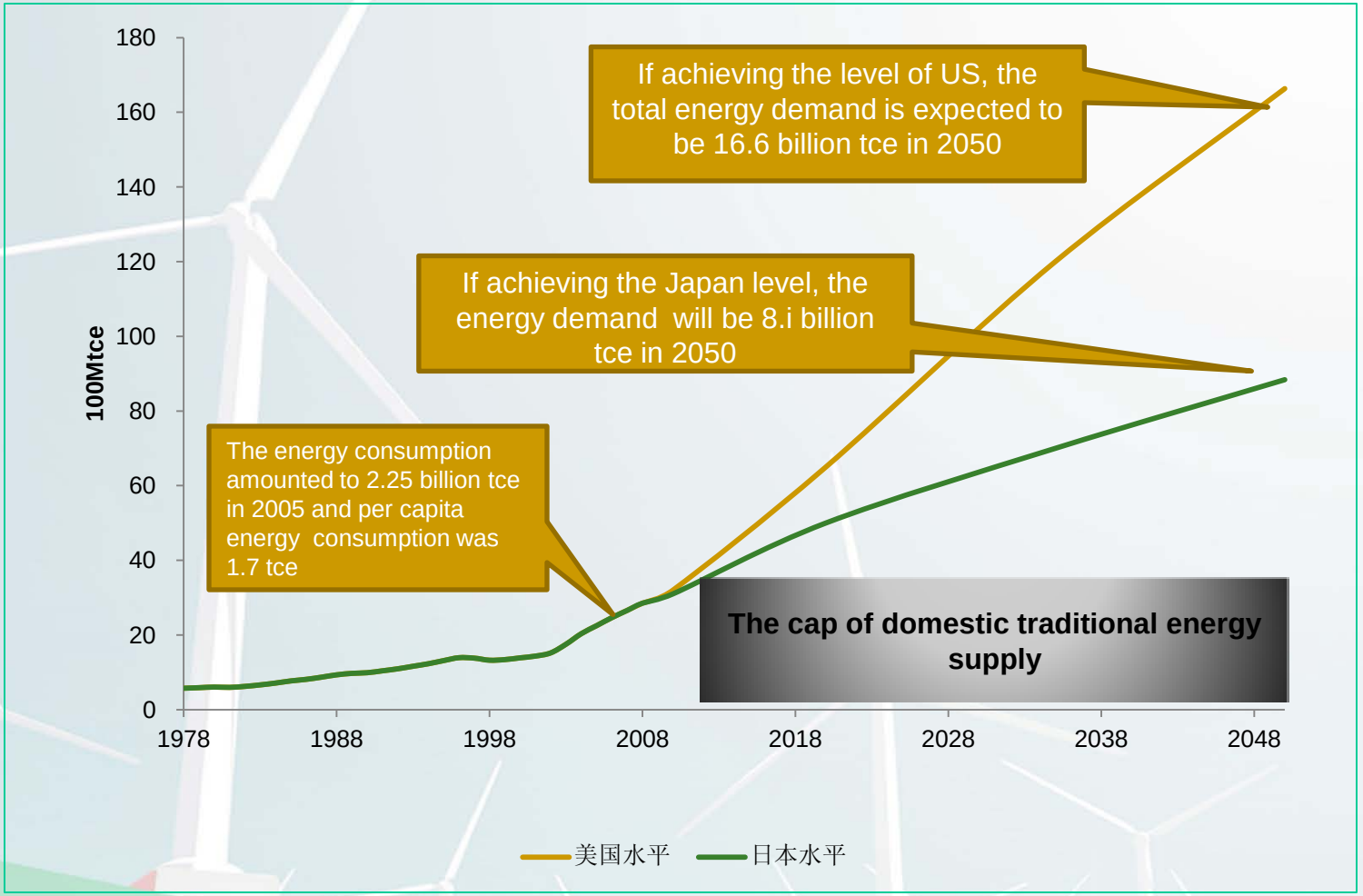
Fighting Against the Growth Gravity



The relation between the income and motor vehicle possession



China's future energy perspective following the track of developed economies



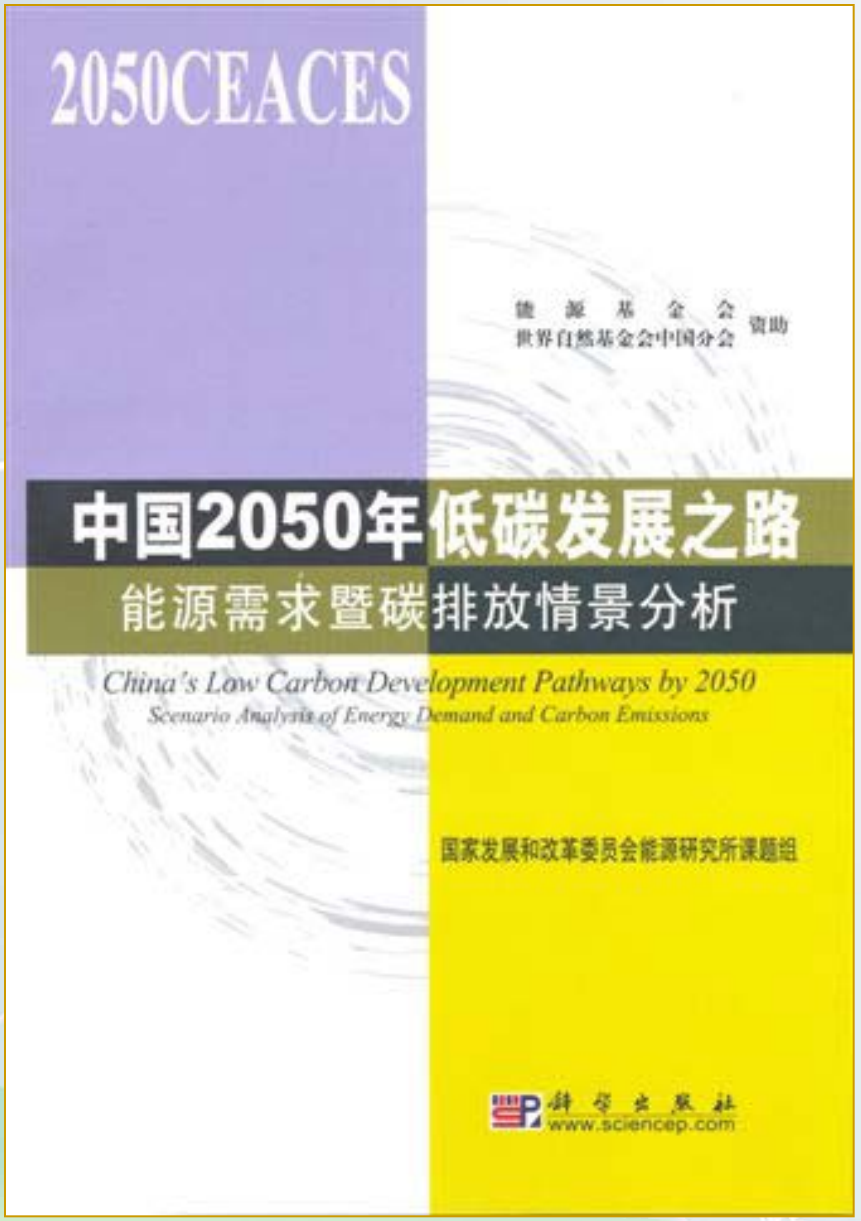
China's Energy Demand by International Institutions (Mtce)

	2007	2015	2020	2025	2030	2035	Averaged annual growth rate of GDP(%)
IEA	2808	3980	4450		5470		6.9
EIA	2808	3650	4370	5127	5857	6549	6.3
IEEJ	2130(2005)		3600		4470		6.2

Source: World Energy Outlook (WEO) 2009(IEA), International Energy Outlook(IEO) 2010 (EIA)
Handbook of Energy & Economics Statistics in Japan 2009

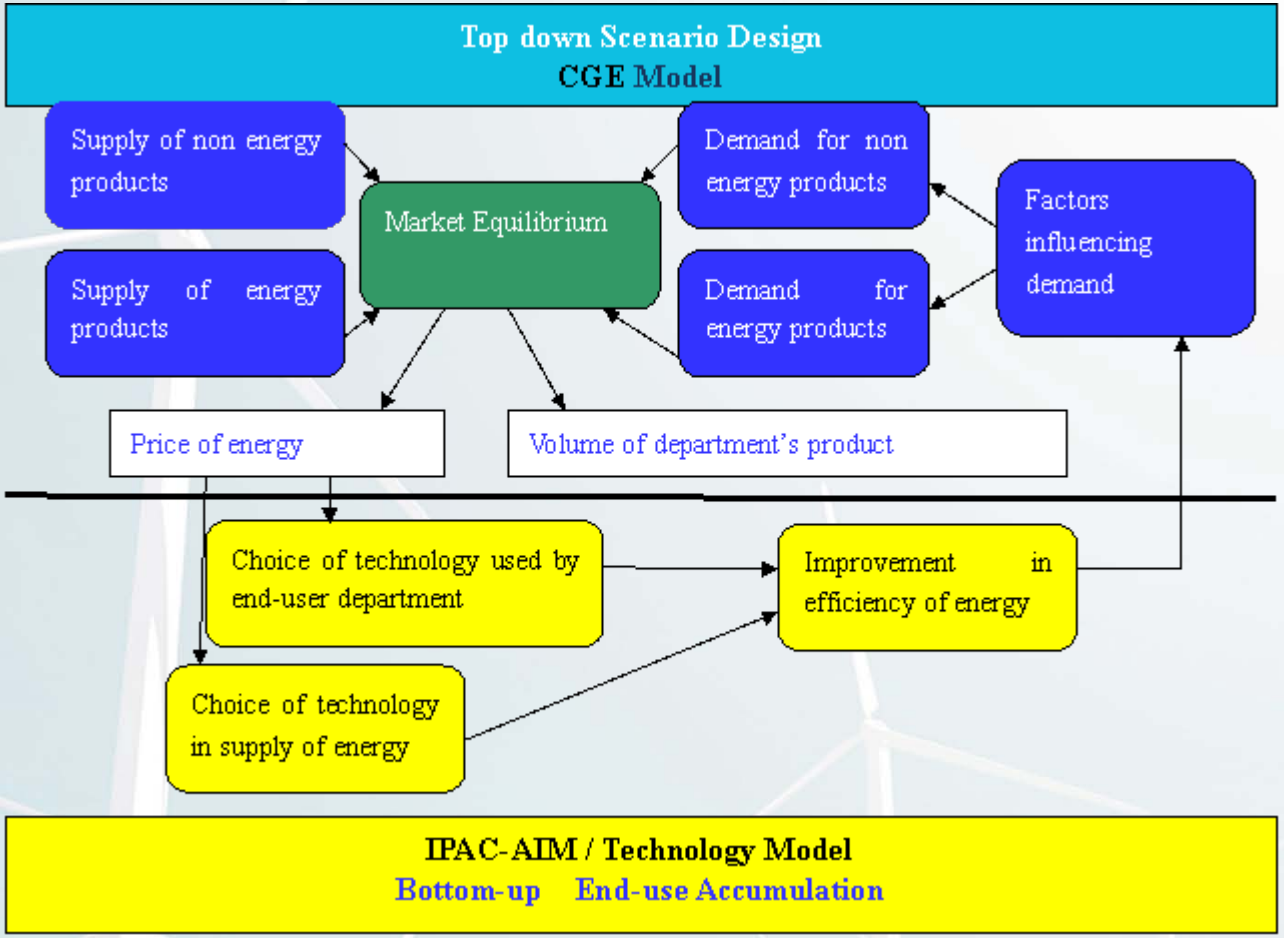
China's Energy Demand by Domestic Institutions (Mtce)

		2005	2010	2020	2030	2050	Averaged annual growth rate of GDP(%)
State Information Center	Ref.	2247	3079	4302	5266		8.2
	Best-case	2247	2825	3604	4292		7.9
	High Economic Development	2247	3423	5231	6573		8.5
AE & ERI (Best-case,btce)				4~4.2	4.5~4.6	5.5~5.6	



- **Title: *Chinas' Low Carbon Development Pathways by 2050: Scenario Analysis of Energy Demand and Carbon Emissions***
- **Led by ERI research team**
- **Under the support of Energy Foundation and WWF**
- **Launched in June of 2009**

The Schematic Map for Scenarios Analysis of 2050 Sustainable Energy Development Research



Scenarios Design and Description

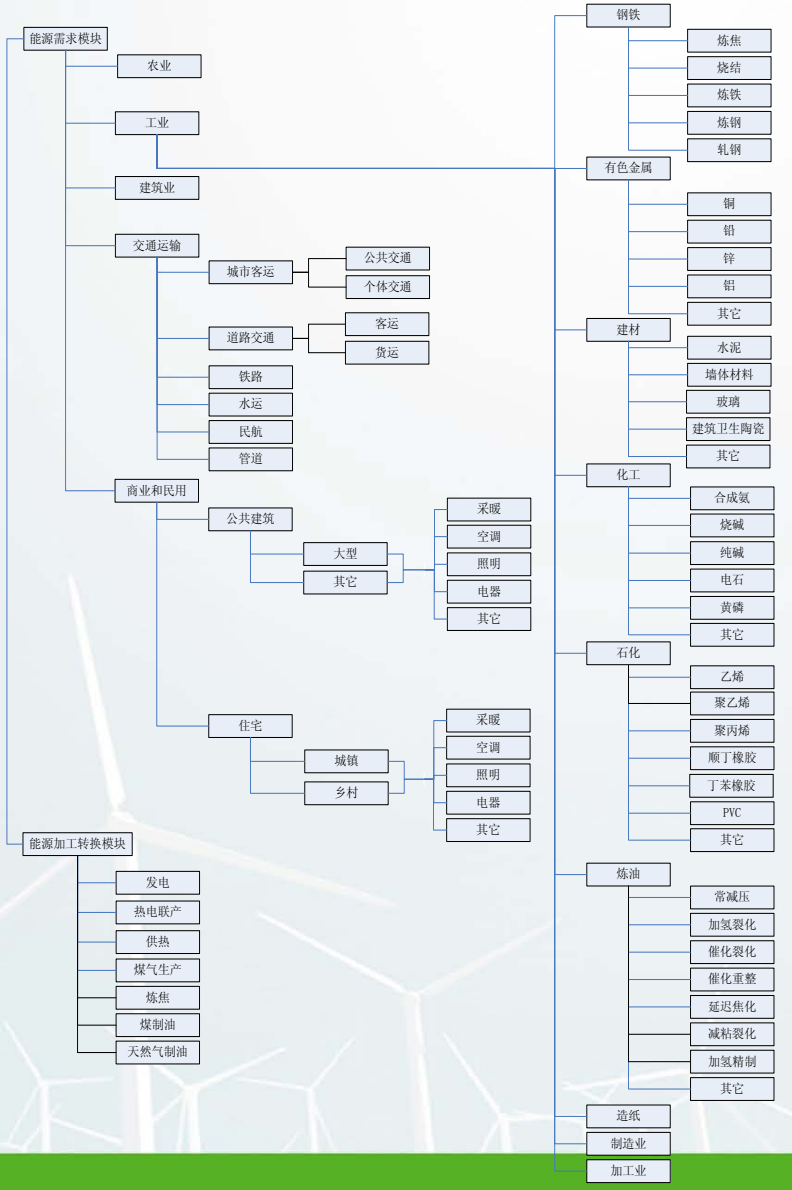
Scenario	Description
Baseline scenario	**Fully considers the needs of domestic development and aspirations, and assumes that by the middle of this century when the level of moderately developed countries is reached, the per capita energy consumption is 10% lower than the most energy efficient country currently.** Economic development follows the universal law of economics, following to a certain extent the process of industrialization in developed countries where technological advances will improve energy efficiency, and it is expected that by the mid-century, per capita energy consumption is 10% less than the most energy efficiency country in 2005, reaching to about 7.8 billion tce.
Energy-saving scenario	**Takes into account fully the current energy-saving measures to reduce emissions, but does not take special measures to address climate change scenarios.** In this scenario, the economic development model undergoes certain changes; the use of energy intensive products is maintained in the near to medium term; urban transport is focused on convenience and speed; the public transport system is not very developed; the energy equipment manufacturing industry, nuclear power and renewable energy industries undergo certain developments; major technological breakthrough in emission reduction technology is not significant, penetration of carbon capture and storage (CCS) technology is low; saving energy as a way of life and consumer philosophy has not taken off, the phenomenon of pollution is being eliminated or post-treating is not fully present in the development process, and there is much technological contributions.
Low-carbon scenario	**Considers 's sustainable development, energy security, economic competitiveness and the capacity of energy-saving emission reduction and takes the initiative to try to change the models of economic development, changing the patterns of production and consumption, strengthening technological advances, and fully striving to achieve a realistic low-carbon scenario.** In this scenario, the energy-saving equipment manufacturing industry, nuclear power industry, and the renewable energy industry has accelerated their development, and have become fairly large scale; at the same time, CCS technology is applied, having a higher penetration rate especially in the power generation department; contributing more towards the development of a low-carbon economy under the economic development circumstances of China, energy-saving production and ways of living have basically taken shape.
Enhanced low-carbon scenario	**Further considers international cooperation and global emissions reduction, realizing the goal of a lower concentration of greenhouse gases.** In this scenario, the developed countries and developing countries unite and work together, the main emission reduction technologies have been developed further, and there is a major breakthrough in key low-carbon technologies and a significant decline, more rapid reduction in the cost of energy-saving technologies and universal application of it. In this scenario, 's low-carbon energy obtains better external coverage, moving towards the development of low-carbon in research cooperation efforts, development of new technologies and capital funding, and smooth progress in the application of various international high-quality energy resources and development of diverse energy resources. At the same time, the Chinese government invests more in low-carbon economies, great breakthroughs has been made in the fields of clean coal technology and CCS, especially in the large-scale popularization of the use of CCS technology.

Base Year and Milestones

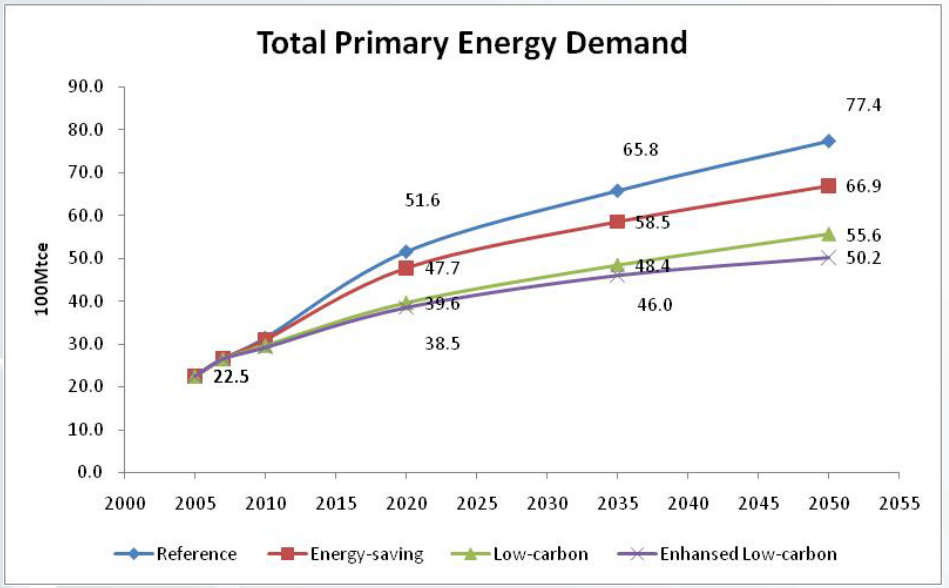
- **Base year: 2005**
- **Forecast year:**
  - 2020 (nearly achieving the target of “Xiaokang” or “Well-off” society)
  - 2035 (entering into the post-industrialization stage)
  - 2050 (reaching the standard of moderately developed economies)

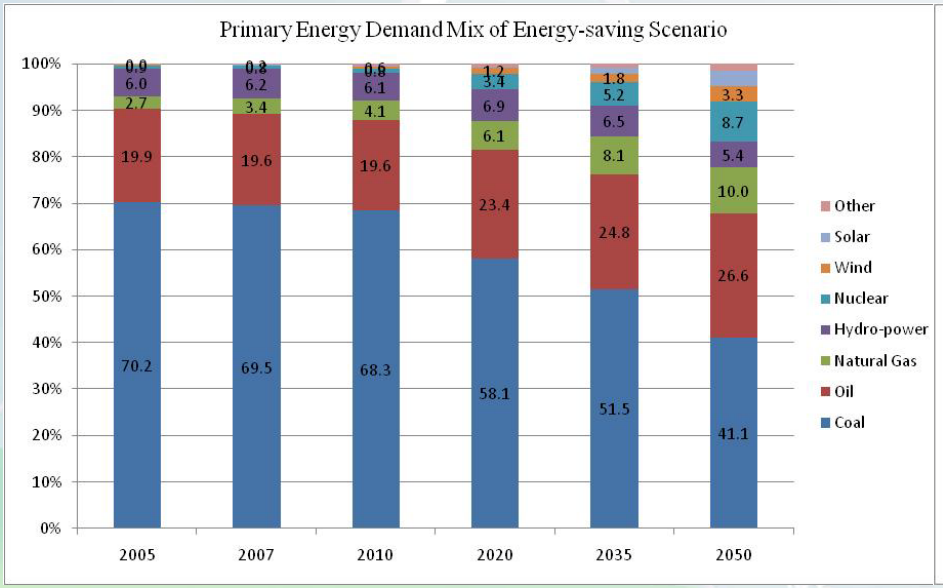
Sector Division

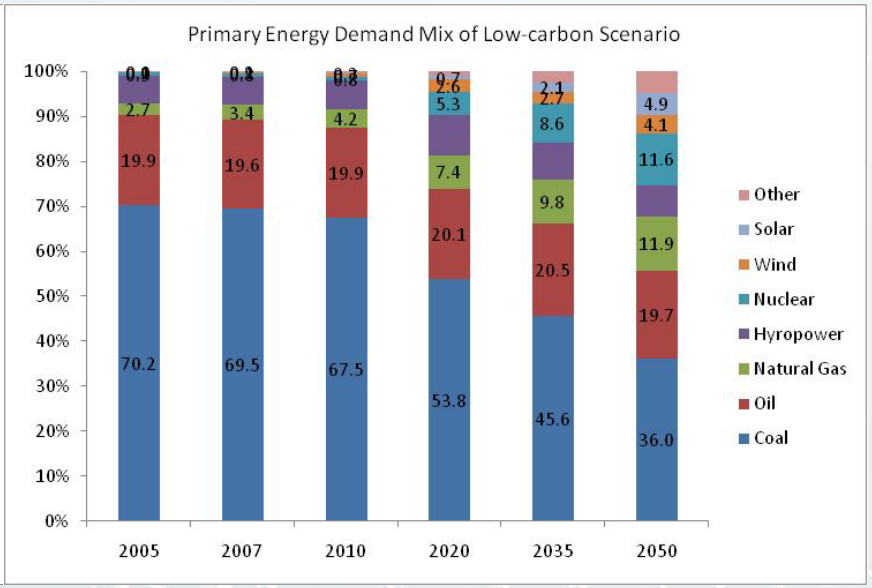
- Bottom-up End Use Approach
- Industrial Sector: 9 modules
- Transportation Sector: 6 modules
- Building sector: Commercial and residential modules
- Transformation sector: 7 modules



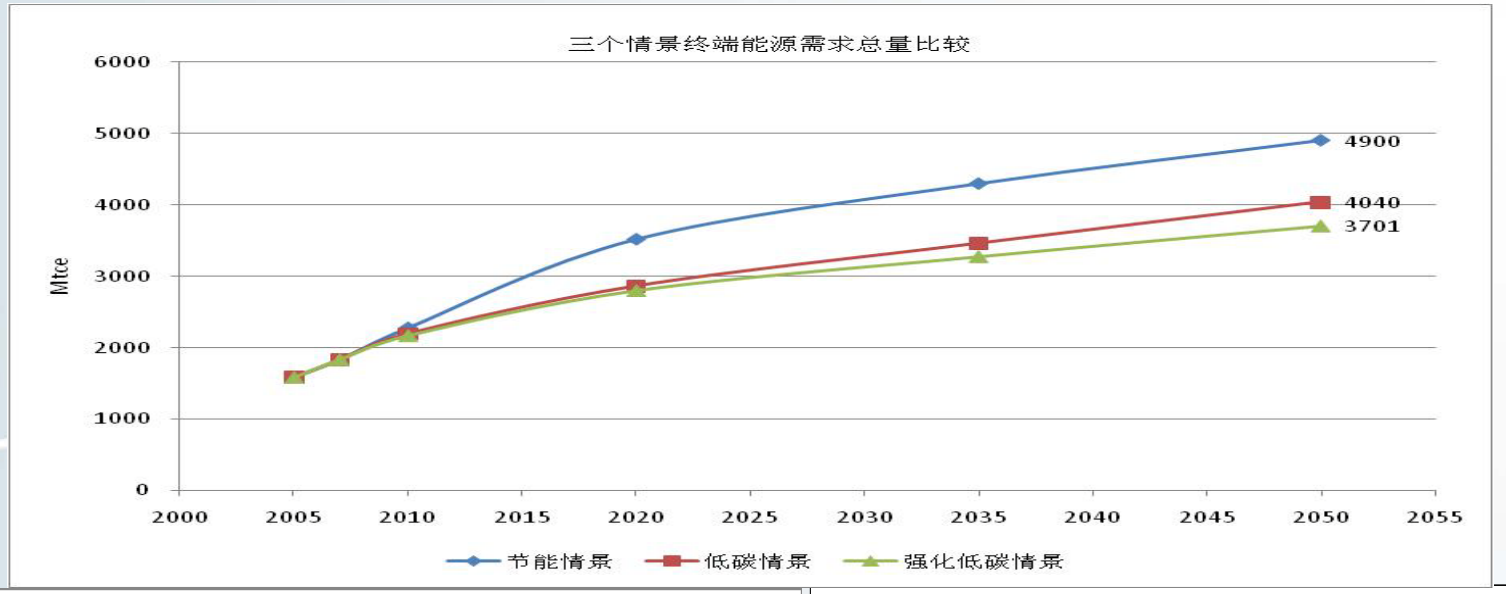
Scenarios Results

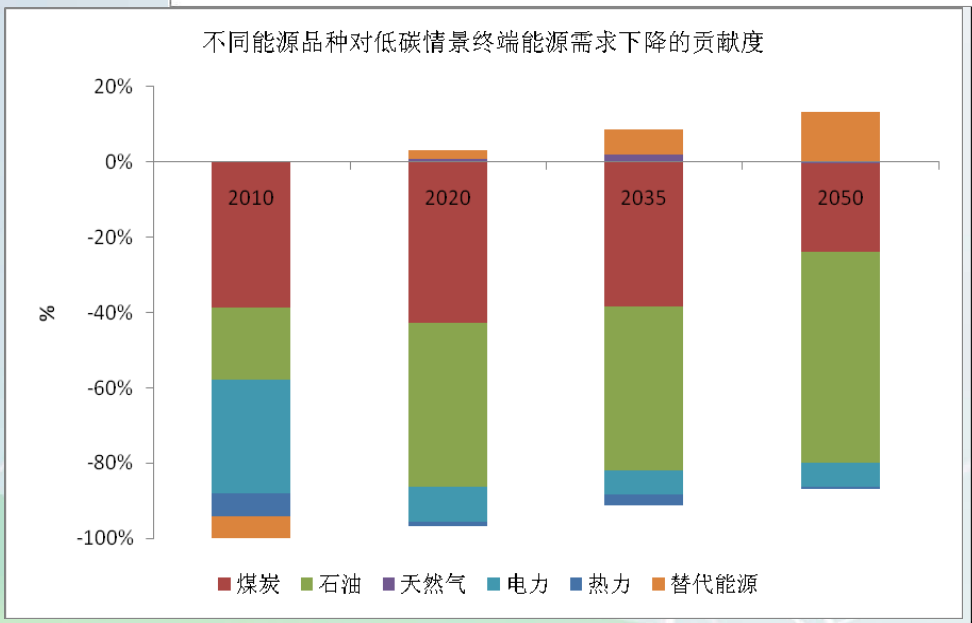


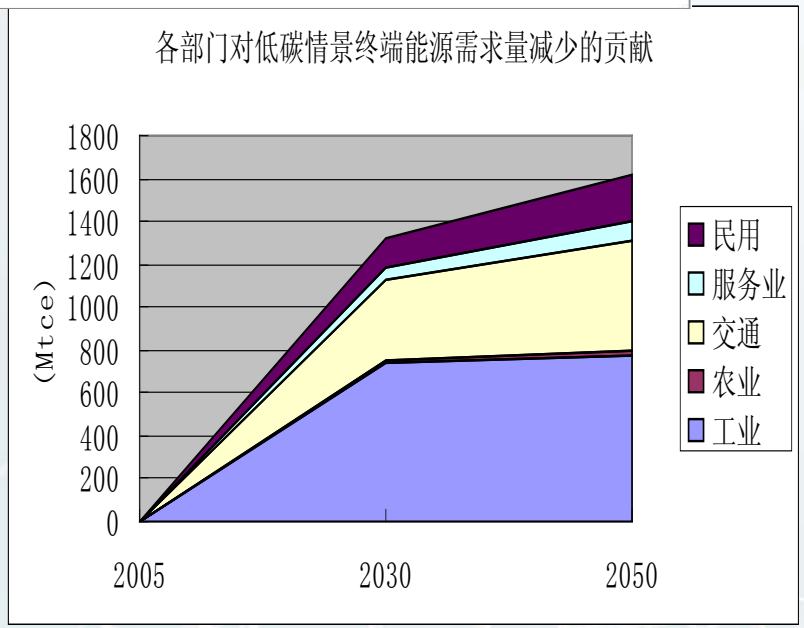




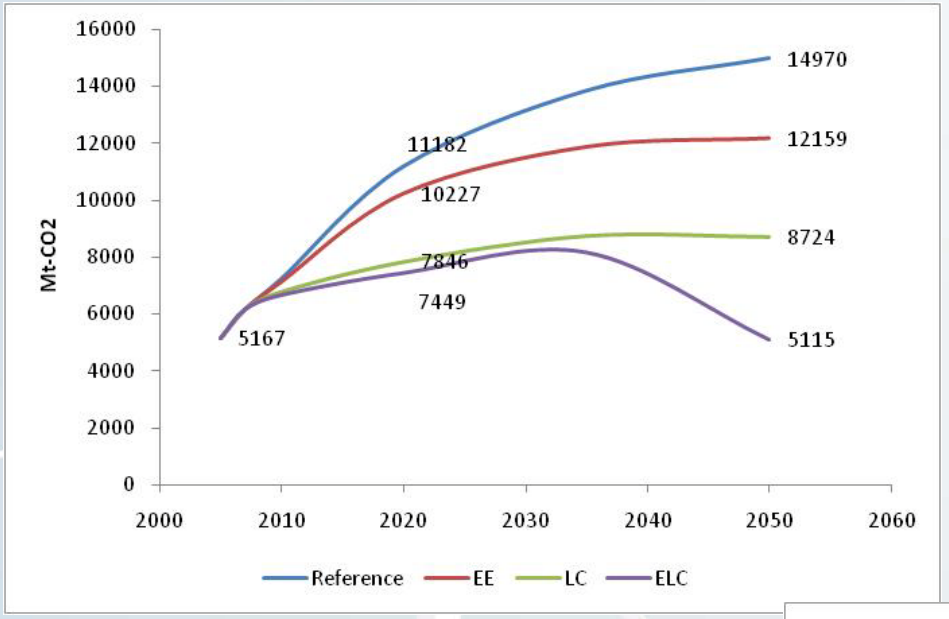
Final Energy Demand





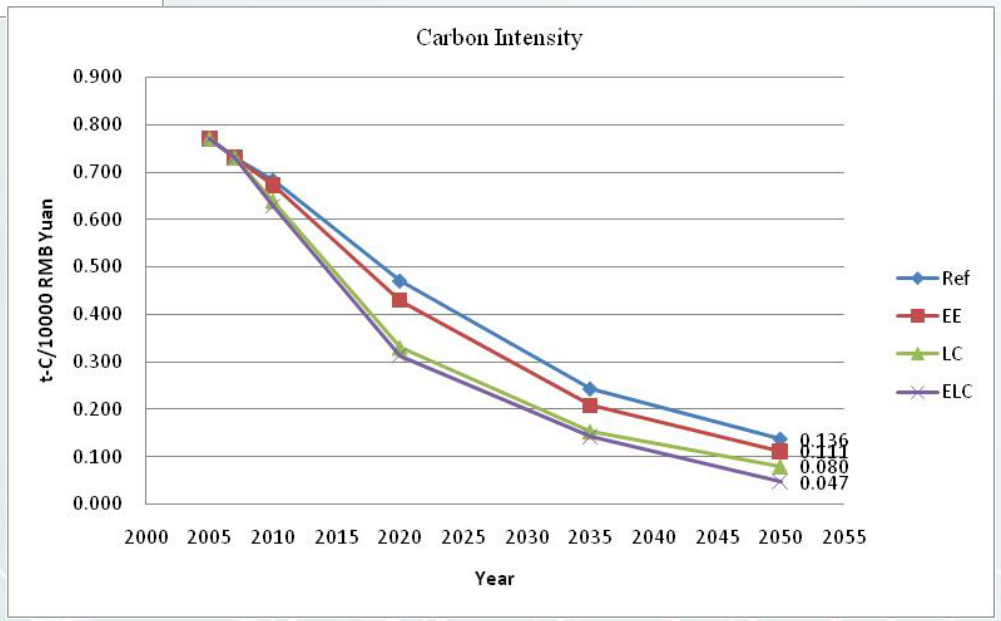


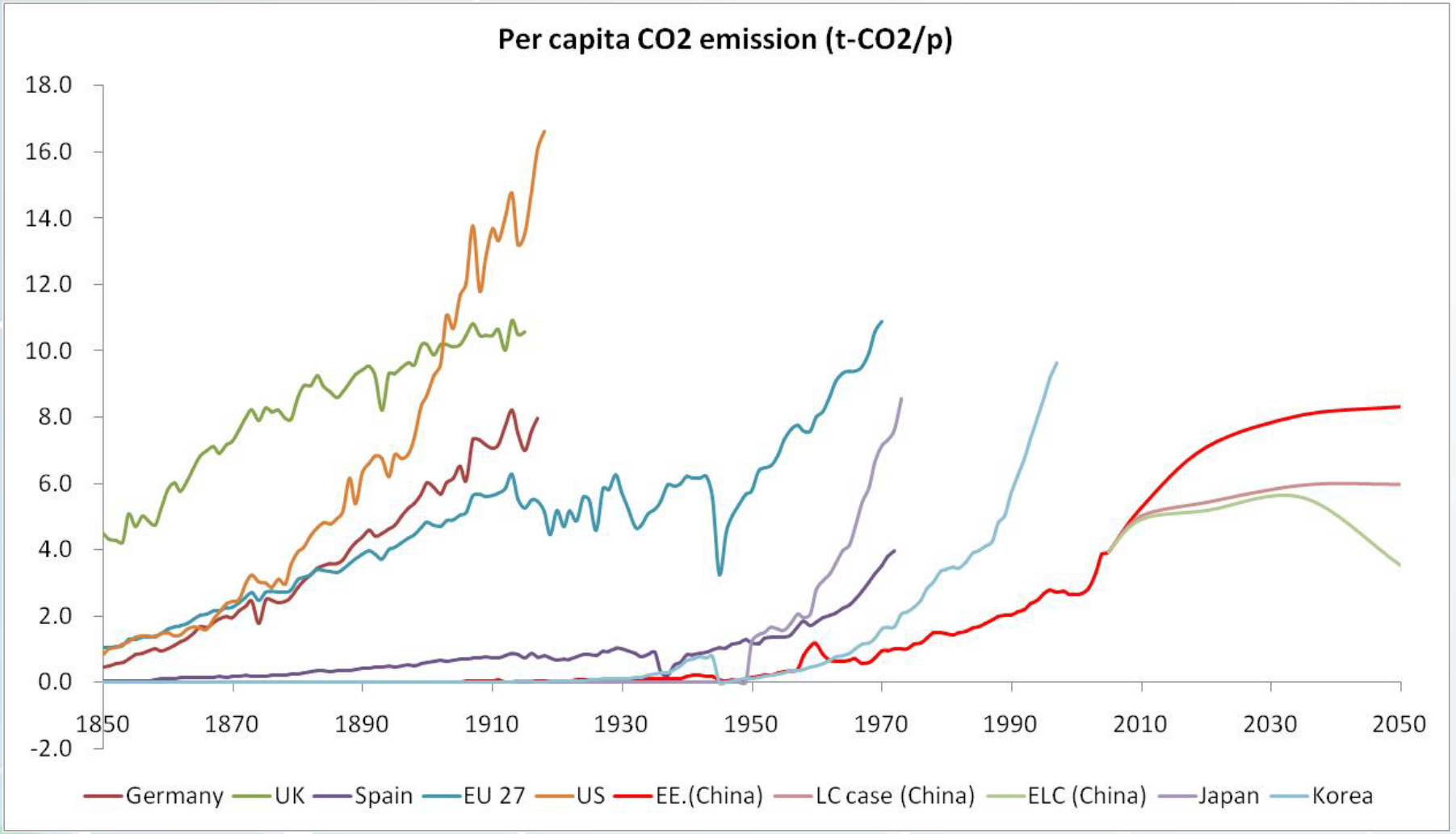
Carbon Emission

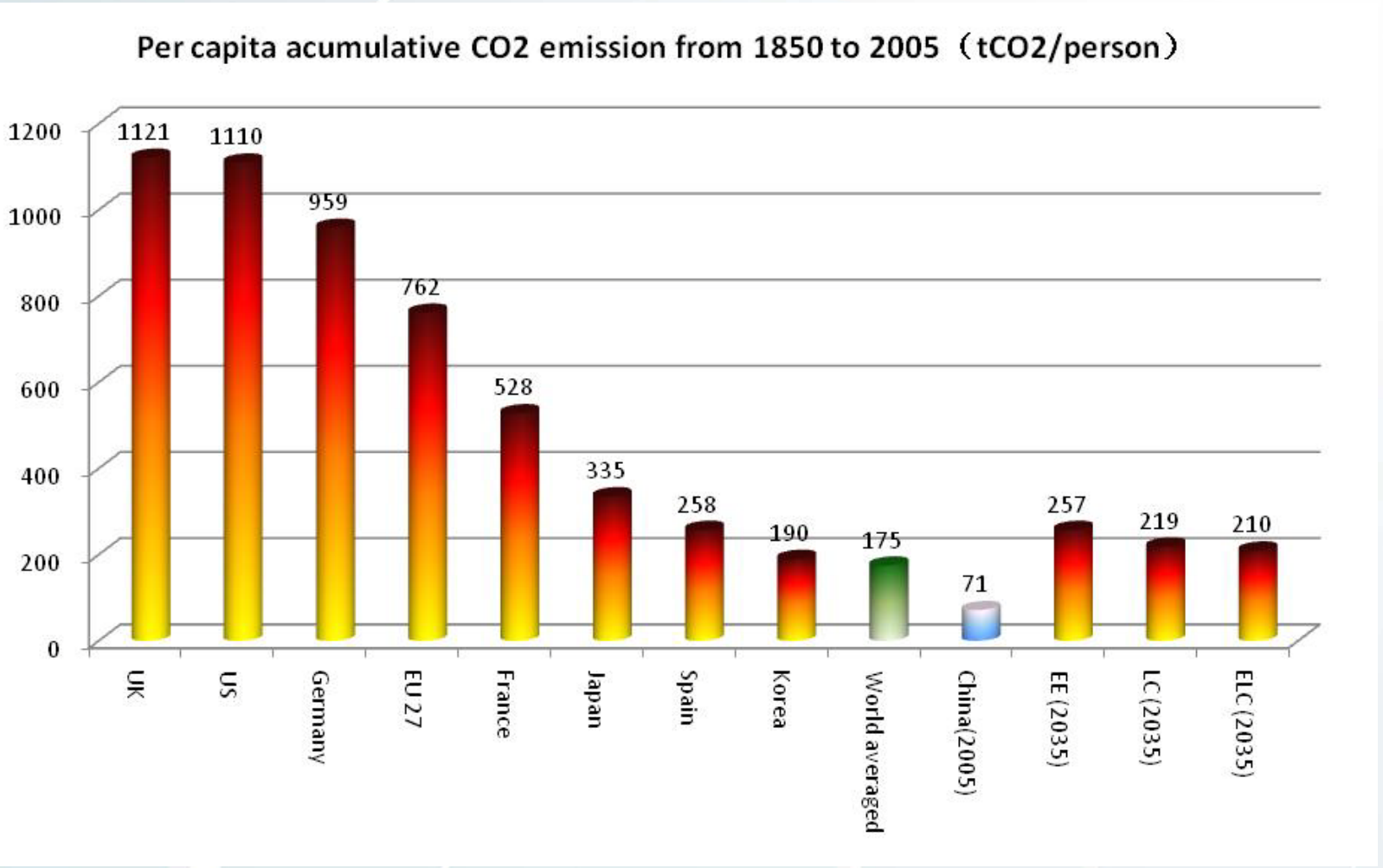


Based on the scenario results, China's carbon emission will experience 3 historic stages in the coming decades:

- Presnet~2020, rapid increase of carbon emission and obviously decrease of Carbon intensity
- 2021~2035, the growth rate of carbon emission could be slower apparently
- 2036~2050, it is possible to make the per capita carbon emission decreased to the 2005




Per capita CO2 emission (t-CO2/p)
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
-2.0
1850
1870
1890
1910
1930
1950
1970
1990
2010
2030
2050
Germany
UK
Spain
EU 27
US
EE.(China)
LC case (China)
ELC (China)
Japan
Korea


Per capita acumulative CO2 emission from 1850 to 2005（tCO2/person）
1200
1000
800
600
400
200
0
1121
1110
959
762
528
335
258
190
175
71
257
219
210
UK
US
Germany
EU 27
France
Japan
Spain
Korea
World averaged
China(2005)
EE (2035)
LC (2035)
ELC (2035)

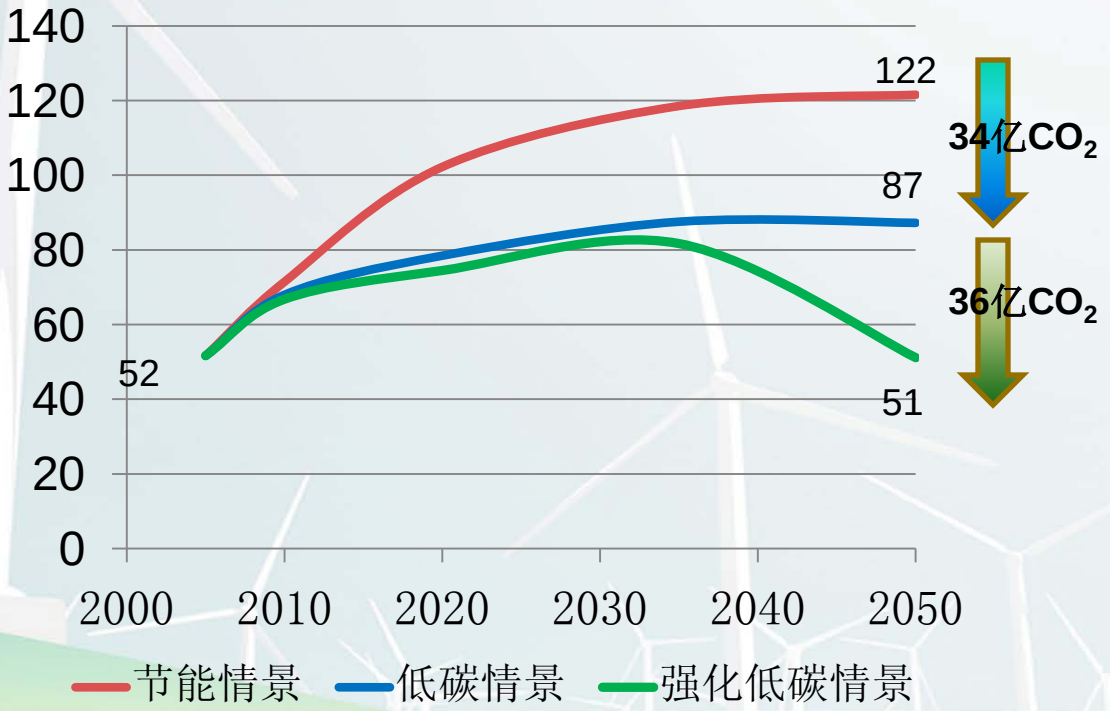
The carbon emission varied in different scenarios based on different key assumptions

From the technical innovation level

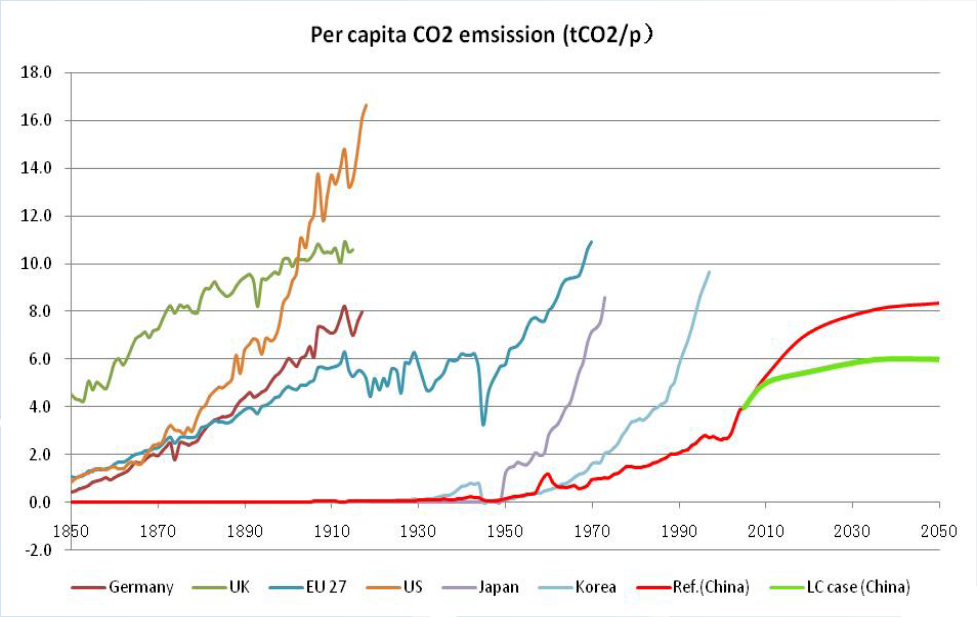
- the degree of popularity of advanced efficient technologies
- the development scale of low-carbon alternative technologies
- The R&D of CCS technology

From the policy-decision level

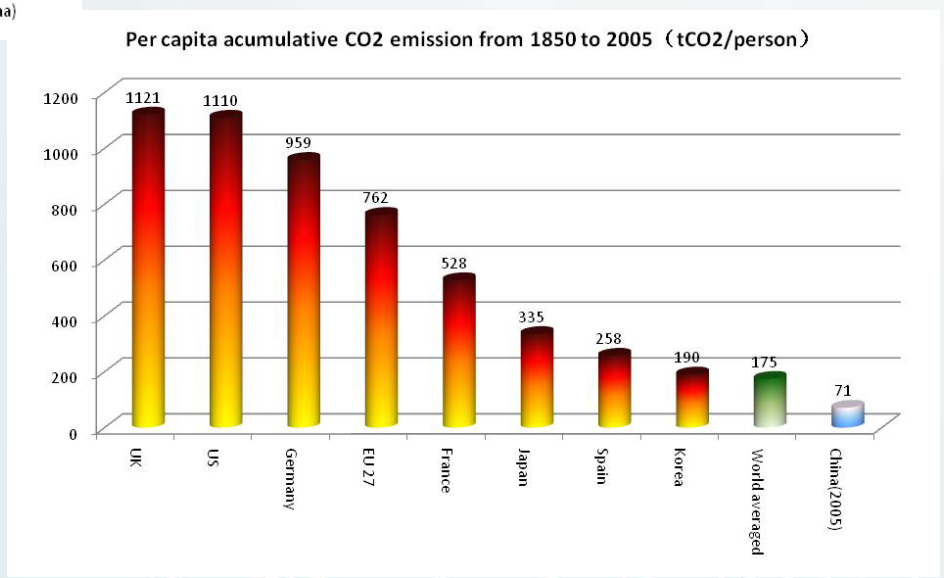
- Awareness on climate change issue
- Uncertainty of low-carbon technology
- Substantial progress of international cooperation



Although growing with lower energy and carbon intensity in the past 30 years, the economic development is still following the traditional pattern



The per capita carbon footprint is much lower than that in the same period among the industralisation, the attention on carbon emission from China is increasing



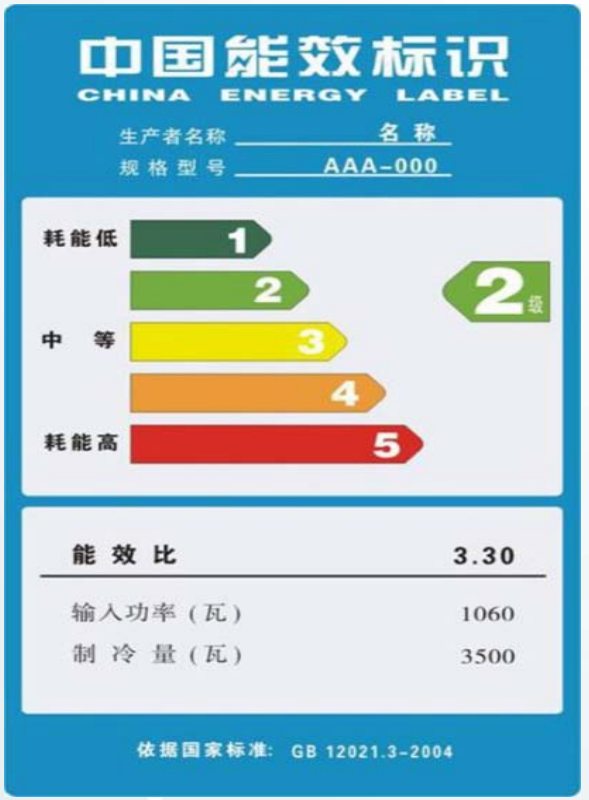
“十一五”节能减排目标、对策与效果（Targets, Actions and Achievements during the 11th FYP）

The related energy efficiency and emission targets issued by the government for 11th FYP

- Energy consumption per 10 thousand GDP should reduce by about 20% from 1.28 ton of coal equivalent in 2005 by 2010;
- Water usage per industrial value added should reduce by 30%;
- Total emission amount of major pollutants should reduce by 10%;
- SO_2 emission amount should reduce from 25.49 million tons in year 2005 to 22.95 million tons by 2010;
- COD should reduce from 14.14 million tons in 2005 to 12.73 million tons in 2010;
- Urban sewage disposal rate should not below 70%;
- Comprehensive utilization rate of industrial solid waste should reach 60% or above.

Actions Adopted

- In order to fulfill the pledges for 11th FYP, a series of policies have been formulated and implemented to promote energy efficiency in industrial sectors, including phasing out the backward production capacity, carrying out Ten Key Energy Conservation Projects, Implementing Energy Conservation Action in Top-1000 Enterprises, etc.
- Generally, the Chinese government's effort in promoting energy efficiency improvement and pollutants emission reduction is unique as following:
  - Enhanced organization and capacity construction for energy saving and carbon emission
  - Developed and issued a series of energy saving laws and regulations
  - Decomposed the National Energy Intensity Objective and Carried out Assessment and Evaluation annually
  - Increased fiscal budget of central and local governments to encourage energy saving
  - Adjusted tax, price, financial policies to enhance energy saving and emission reduction
  - Speeded up eliminating backward production capacity
  - Implemented national key energy conservation activities

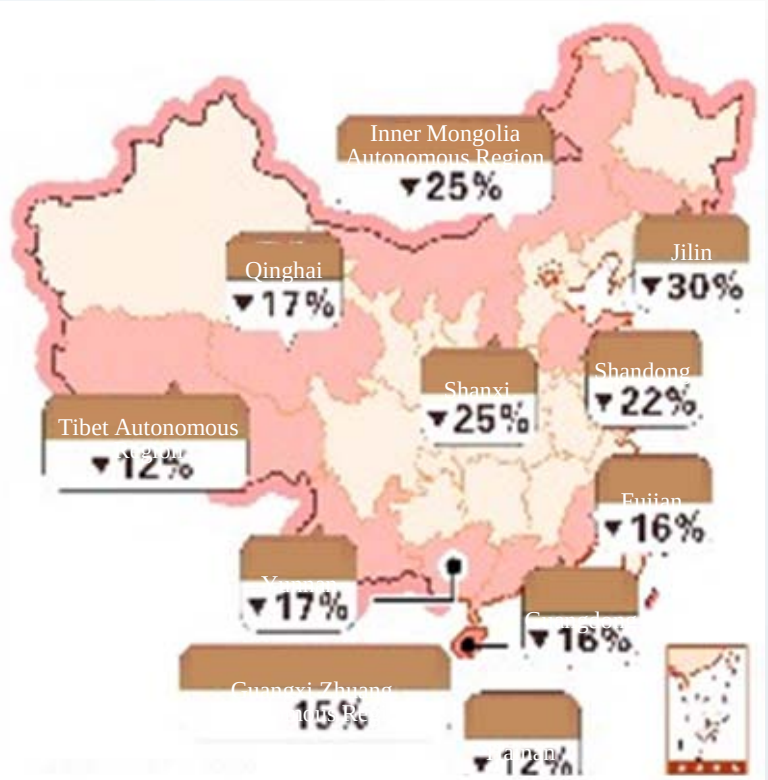


- The energy certification and energy labeling has been gradually improved . For example, the Energy Labeling is initiated by the NDRC and the AQSIQ. In August 2004, the two departments jointly issued the Regulations on Energy Efficiency Labeling Management, which stipulated that from 1st September 2005 onwards, all the refrigerators and air conditioners listed in the Product Catalogue subject to Energy Efficiency Labels of the People's Republic of China must be pasted with Grade 5 Energy Label. So far, China has released five batches of product catalogue subject to energy labels

- **In August 2006, the State Council promulgated the Decision on Strengthening Energy Conservation, assigning energy saving tasks to various regions, demanding to include the index of unit GDP energy consumption reduction into the local comprehensive assessment and annual evaluation system for economic and social development, and implementing energy conservation accountability system for leadership and cadres of the people's government at all levels**
- **The central government assesses the energy saving performance of various regions each year. The assessment includes the fulfillment of energy saving targets and the implementation of energy-saving measures in the previous year. As a consequence, most of the provincial governments have developed their own energy saving target evaluation and assessment systems to assess the performance of energy conservation of lower levels of government under jurisdiction. The assessment results are also publicized periodically.**

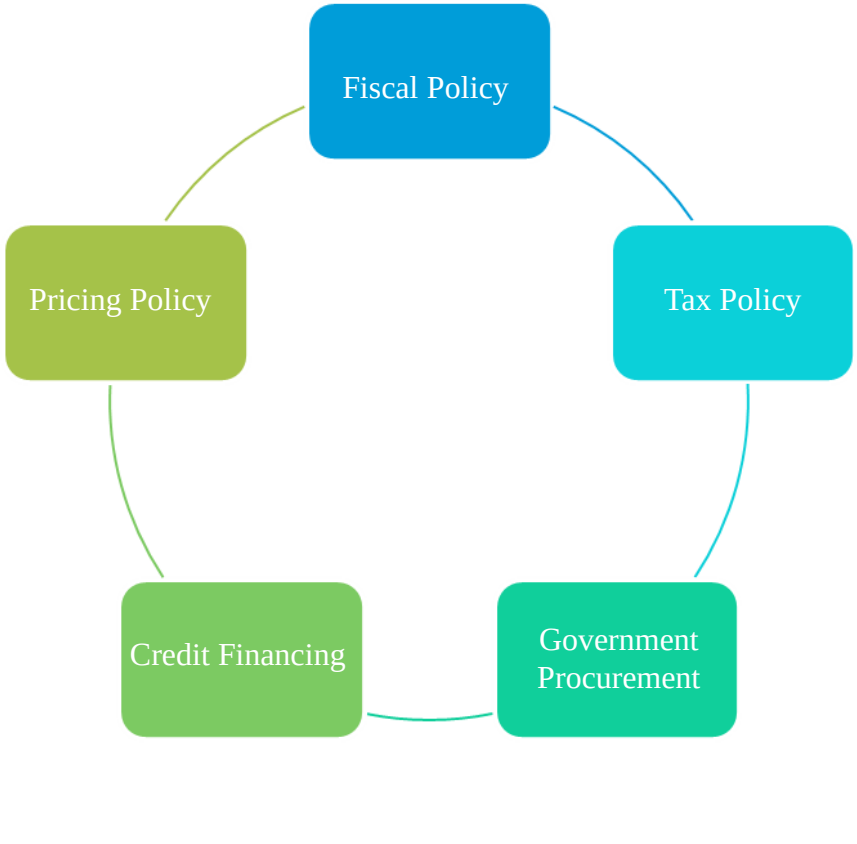
Decline Rate of Unit GDP Energy Consumption in All Regions of China

Decline rate of other provinces: 20%

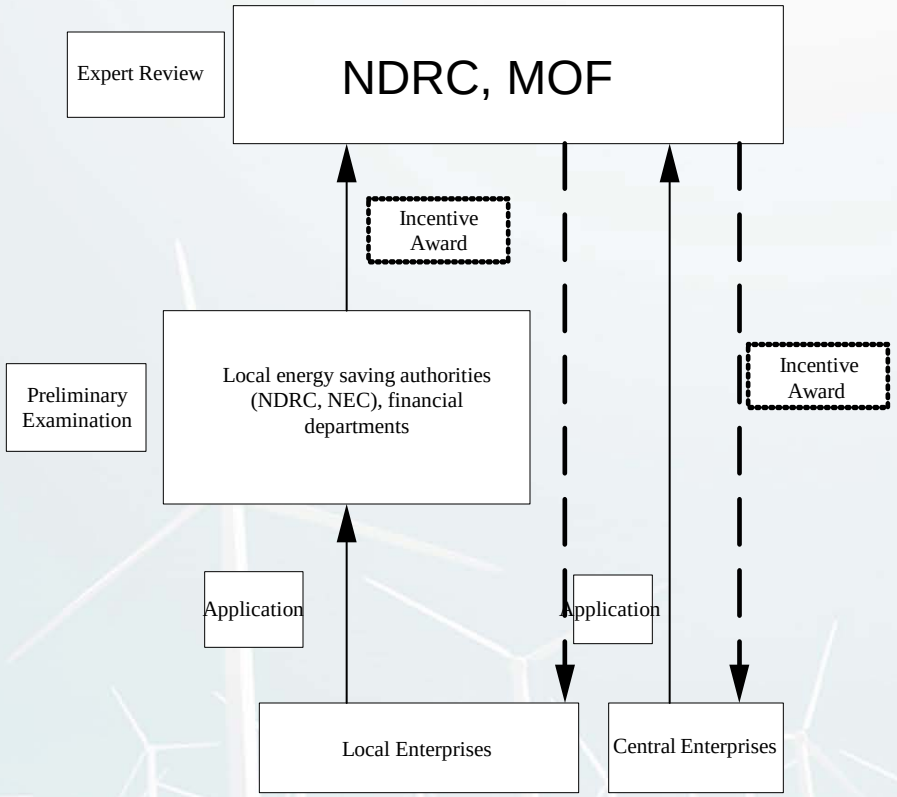


Economic Incentive Policies for Energy Conservation

Same priority to "controlling" and "guiding"



- **Procedures of Application for Reward of Energy-Saving Technological Transformation**



Financial Investment on Energy Efficiency and Reduction from Central Government during the 11th FYP

Year	Investment on Energy Efficiency and Pollutants Reduction (Billion Yuan)	Investment on Energy Efficiency (billion Yuan)	The Share of total Investment (%)
2006	17.35	5.23	30.2
2007	23.5	12	51.1
2008	42.3	20.3	48
2009	56.75	25.55	45
2010	83.3	33	39.6
Total	223.2	96.1	43

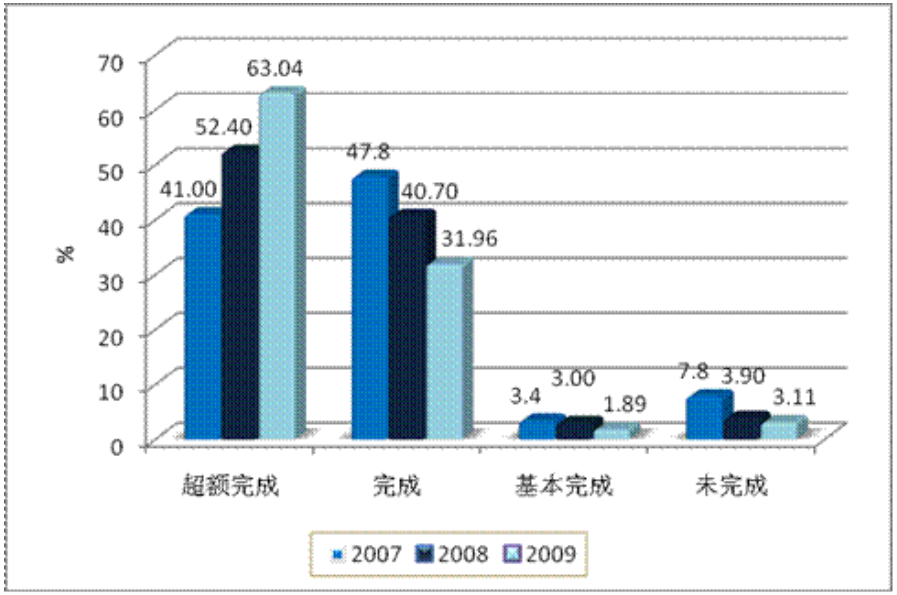
To speed up structural adjustment and promote the phase-out of outdated production capacity, in the "Eleventh Five-Year Plan" period, the central finance set up special funds, granting transfer payment for economically underdeveloped regions to encourage them to eliminate outdated production capacity, and mainly address the issues of personnel settlement, asset compensation and land handling.

According to incomplete statistics, the total financial investment amounted to 223.2 billion RMB Yuan to encourage the energy efficiency improvement and pollutants reduction on from the central government during the 11th FYP, among which, the investment on energy efficiency fields amounted to 96.1 billion Yuan, taking the share of 43%, which also bring about the whole society's investment on energy efficiency circle, it's estimated that the total investment from the whole society on energy efficiency was about 862 billion yuan during the 11th FYP.

Major Energy-Saving Activities

- **Ten Key Energy-Saving Projects**

- **Top 1,000 Energy-Consuming Enterprises Program**
  - Saved 150 million tce of energy from 2006 to 2010, achieving the goal of the “Eleventh Five-Year Plan” period ahead of schedule



Eliminated Backward Production Capacity during 11th FYP

Industry	Contents	Unit	Goals in the "Eleventh Five-Year Plan" Period
Electricity	Implement "setting up large units & shutting down small units" policy, shut down small thermal power generating units	GW	50
Iron Making	below blast furnaces	Mt	100
Steel Making	Small converters and electric furnaces with annual capacity of 20 tons below	Mt	55
Electrolytic Aluminium	Small pre-baked cell	Mt	0.65
Ferroalloy	6,300 kVA below electric resistance furnaces	Mt	4
Calcium Carbide	6,300 kVA below furnace calcium carbide	Mt	2
Coke	Small coking enterprise with coking chamber blast furnace below 4.3-meter	Mt	80
Cement	Substitution machine equivalent to clinker vertical shaft kilns	Mt	250
Glass	Outdated sheet glass	M-weight cases	30
Paper Making	Straw pulp production facilities with an annual output of less than 34,000 tons; chemical pulping lines with an annual output of less than 17,000 tons; paper making plants with an annual output of less than 10,000 tons, which take waste paper as raw materials and do not meet emission standard.	Mt	6.5
Alcohol	Outdated alcohol production process; enterprises with an annual output of less than 30,000 tons (except those producing alcohol with waste molasses)	Mt	1.6
Monosodium Glutamate	Monosodium glutamate enterprises with an annual output of less than 30,000 tons	Mt	0.2
Citric Acid	Citric acid enterprises that do not comply with environmental protection standard	1000 ton	80

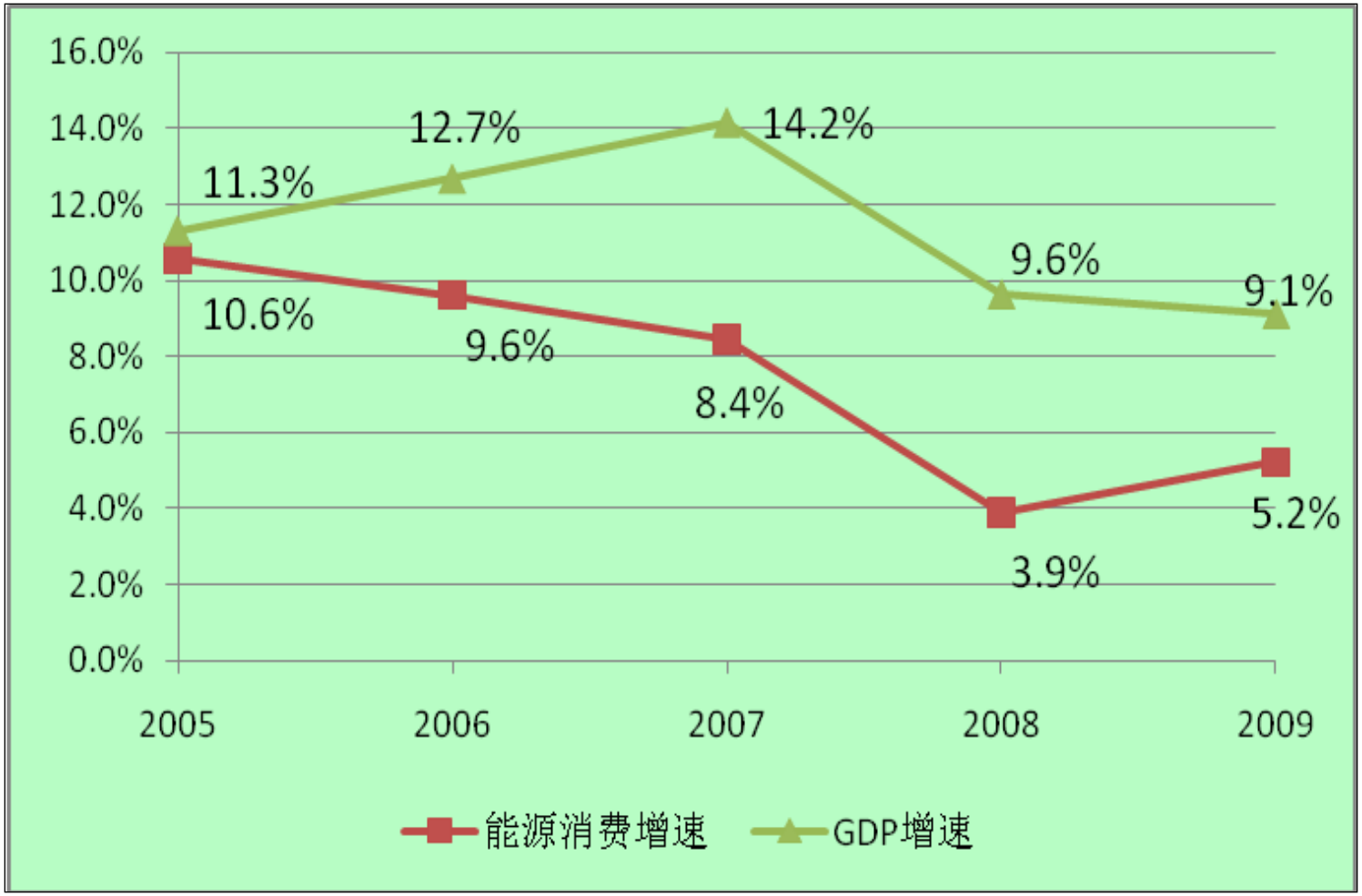
Comparison of Target and Current Status for 11th FYP

	Target of 11th FYP	Completion status
Energy saving	Energy consumption per unit GDP reduced by 20% in 2010 than that of 2005.	19.06% reduction till 2010.
Non-fossil fuel energy use	The ratio of non-fossil fuel energy to primary energy consumption should increase from 7.5% in 2005 to 10% in 2010.	8.3% in 2010.
hydro installed capacity	190 million kW in 2010	210 million kW in 2010
Wind installed capacity	5 million kW in 2010	connected capacity 31.07 million kW in year 2010
Photovoltaic installed capacity	0.3 million kW in 2010	0.7 million kW in 2010
Biomass generation installed capacity	5.5 million kW in 2010	4.5 million kW in
Bio ethanol production	3.02 million tons in 2010	1.8 million tons in 2010
Rural household biogas	19 billion cubic meters in 2010	13 billion cubic meters in 2010
Nuclear power under construction	12.44 million kW under construction during 2006-2010	million kW under construction in late 2010
forest coverage	from 18. 2% in year 2005 to 20%	reached 20.36% in late 2009

Main achievement during the 11th FYP

- The achievements have been gradually emerged for China's energy efficiency improvement and pollutant reduction.
  - In 2006, China reversed the upward momentum of energy intensity– a decline of 2.72%，with 5.01%, 5.23% decline rate in 2007 and 2008 respectively
  - Affected by the Financial Crisis, the decline rate of energy intensity still kept the dropping trends, with 3.57% in 2009
  - The total reduction amounts to 19.06% in 11th FYP.
- Energy Efficiency of key energy-intensive products improved significantly during the 11th FYP, i.e., the energy consumption for
  - unit copper smelting reduced by 35.9%;
  - unit caustic soda reduced by 34.8%;
  - one ton cement reduced by 28.6%;
  - crude oil reduced by 28.4%;
  - standard coal consumption for power plant reduced by 16.1%;
  - one ton steel reduced by 12.1%;
  - unit electrolytic aluminum reduced by 12.0%;
  - Unit ethylene reduced by 11.5%

The growth rate of GDP and energy use



促进了产业结构的优化和调整
（Industrial Structure Optimized apparently ）

The optimization of industrial structure was promoted, the share of advanced capacity of key industrial and sectors increased

Sector	Content	2005 （%）	2010 （%）	Increase length (Percentage)
Power	Share of generation capacity with 300 MW and above of total	47	71	24
Iron & Steel	Share of large furnace of 1000 cubic meters and above	21	52	29
Electrolytic aluminum	Share of production from large pre-baked electrolytic cell	80	92	12
Building Material	Share of new dry cement production	56	81	25

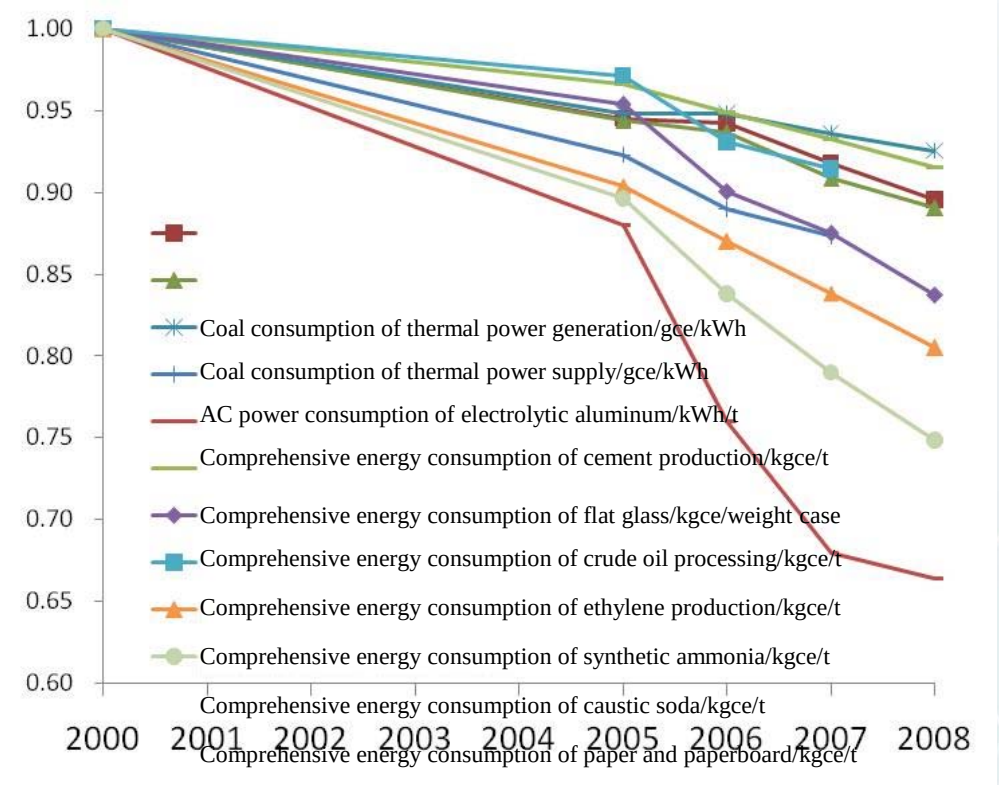
环境质量有所改善
（Environmental Quality Improved gradually ）

- 2010年与2005年相比，
  - 113个环保重点城市空气质量达到二级标准以上的城市比例由42.5%上升到72.6%
  - 地表水国控断面劣五类水质比例由27%下降到16.4%
  - 七大水系国控断面好于三类比例由41%上升到59.9%

- Compared with 2005 in 2010
  - Among the 113 cities, the share of cities with urban air quality standards achieving the II level and above increased from 42.5% to 72.6%
  - The share of cities with water quality lower than standard IV decreased from 27% to 16.4%
  - The share of cities with water quality better than standard III increased from 41% to 59.9%

能源效率水平大幅提高
Energy Efficiency Improvement Sped up

- **Decline speed of energy consumption per unit of product accelerated**
- **Industrial development quality and enterprise management level greatly improved**



落后产能淘汰效果显著
（Success of elimination of backward production capacity）

- shut down small thermal power plants exceeding 70 million kWh
- elimination of backward iron production capacity of 0.11 billion tons
- elimination of backward steel production capacity of 68 million tons
- elimination of backward cement production capacity of 0.33 billion tons
- shut down more than 9000 small coal pit

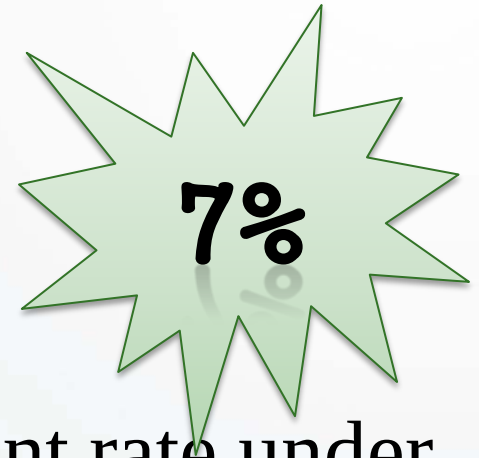
为应对全球气候变化做出贡献
（Contributions to Global Climate Change）

- During the 11th FYP, the reduced energy consumption amounted to 690 Million ton of coal equivalent (tce) by energy conservation, accordingly, the carbon emission was decreased 1.4 billion ton-CO2, which shows the responsibility of Chinese government .

“十二五”及2020年展望

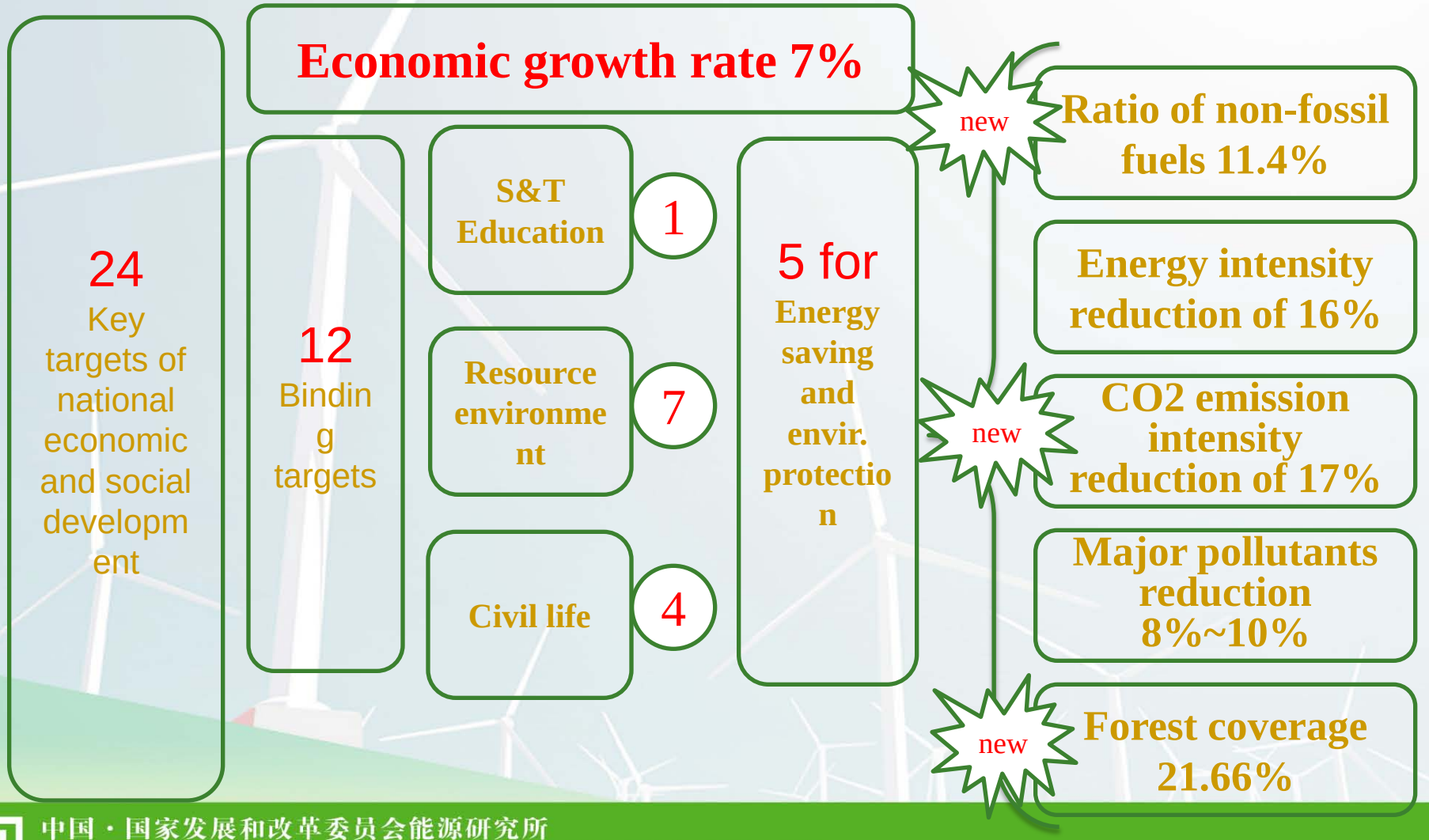
Latest Pledges and Potential Actions for China’s 12th FYP and Beyond

Economic and social development target for China's 12th FYP



- GDP annual growth rate 7%
- Urban new employment population 45 million
- Urban registered unemployment rate under 5%
- Overall price level stable
- Balanced international payments
- Improved economic growth quality and benefits

Energy saving and emission reduction target for China's 12th FYP



Pledges for energy efficiency and emission reduction for 12th FYP

- Ratio of non-fossil fuel energy to primary energy consumption up to 11.4%
- Energy consumption per unit GDP reduces 16%
- CO2 emission per unit GDP reduces 17%
- Total major pollutants reduce by 8% to 10%
  - COD, SO_2 emissions reduce by 8% respectively
  - ammonia nitrogen, NO_x emissions reduce by 10% respectively
- Forest stocking volume increases 0.6 billion cubic meters, and forest coverage reaches 21.66%
- Urban sewage treated rate and garbage innocent treatment rate reach 85% and 80% respectively

National energy saving target is 16% in 12th FYP

	Province、municipalities、autonomous regions	Energy consumption per unit GDP
First category	Tianjin、Shanghai、Jiangsu、Zhejiang、Guangdong	18%
Second category	Beijing、Hebei、Liaoning、Shandong	17%
Third category	Shanxi、Jilin、Heilongjiang、Anhui、Fujian、Jiangxi、Henan、Hubei、Hunan、Chongqing、Sichuan、Shaanxi	16%
Fourth category	Inner Mongolia、Guangxi、Guizhou、Yunnan、Gansu、Ningxia	15%
Fifth category	Hainan、Xizang、Qinghai、Xinjiang	10%

2020年的控制温室气体排放目标
GHG Emissions Control Target in 2020

- 单位国内生产总值二氧化碳排放比2005年下降40%~45%，并作为约束性指标纳入国民经济和社会发展中长期规划，同时制定相应的国内统计、监测、考核办法.
- China's carbon dioxide emissions per unit of GDP will reduce by 40% - 45% by 2020 compared with 2005 level. This target will be incorporated into mid and long term national economic and social development plan as a binding target , at the same time develop appropriate national statistics, monitoring and assessment methods.

实现“十二五”节能减排目标的政策和措施

- 合理调控经济增长速度，国内生产总值年均增长7%
- 合理控制能源消费总量，严格用能管理，加快制定能源发展规划，明确总量控制目标和分解落实机制
- 建立两个制度，培育一个市场，探索建立低碳产品标准、标识和认证制度，建立完善温室气体排放统计核算制度，逐步建立碳排放交易市场
- 强化节能减排目标责任考核，把资源节约和环境保护贯穿于生产、流通、消费、建设各领域各环节

Potential Actions and Measures to fulfill the energy saving and emission reduction target for 12th FYP

- Control economic growth rate to a reasonable level: GDP annual growth rate 7%.
- Control energy consumption amount: enhance energy management, develop energy developing plan, and issue total cap target and implementing mechanism.
- Build two mechanisms and a market: build low carbon product standards and certification system, construct a well-developed GHG accounts and statistics system, and develop carbon emission trading market gradually.
- Improve energy saving and emission reduction responsibility examining: implement resource conservation and environment protection through production, circulation, consumption and construction.

实现“十二五”节能减排目标的政策和措施

- 抑制高耗能产业过快增长，突出抓好工业、建筑、交通、公共机构等领域节能，加强重点用能单位节能管理。
- 强化节能目标责任考核，健全奖惩制度。完善节能法规和标准，制订完善并严格执行主要耗能产品能耗限额和产品能效标准，加强固定资产投资项目节能评估和审查。
- 健全节能市场化机制，加快推行合同能源管理和电力需求侧管理，完善能效标识、节能产品认证和节能产品政府强制采购制度。
- 推广先进节能技术和产品。
- 加强节能能力建设。开展万家企业节能低碳行动，深入推进节能减排全民行动。

Policies and measures to fulfill the energy saving and emission reduction 12th FYP target

- Curb excessive growth of energy intensive industries: focus on energy saving of industry, building, transportation and public institutions, and improve energy conservation management of key energy consumption entities.
- Improve energy saving responsibility examining and better reward and penalty system. Enhance energy saving rules and regulations, form and implement strictly of energy consumption cap and energy efficiency standards of major energy intensive products, as well as improve evaluating and reviewing projects investing fixed assets.
- Enhance energy saving market mechanism, push the implementation of Energy Performance Contract and Demand Side Management, as well as better energy efficiency standards, energy efficient product certification and government mandatory procurement of energy efficient products.
- Deployment of energy efficient technology and products.
- Energy saving ability construction. Develop energy saving and low carbon activity of 10000 enterprises and push national campaign of energy saving and emission reduction.