

[講演 2]

Coal Demand/Supply and Coal Policy in China

Dr. Xiao Xinjian
Associate Research Fellow
Center for Energy Economics & Development Strategy
Energy Research Institute
National Development and Reform Commission, China

Coal Demand/Supply and Coal Policy in China

Xiao Xinjian
Jan.25, 2008, Tokyo

Outline:

- 1. China energy security ----the energy domestic dependence and
oversea dependence**
- 2. The importance of coal and the recent years demands in
anticipation in China**
 1. the importance of coal in China
 2. coal demand and supply
- 3. The policies in China (Energy Security Enhancing Measures)**
 1. China's coal production base development
 2. energy saving
 3. clean energy development
 4. energy cooperation

1、 Energy security of china

----domestic dependence & oversea dependence

- 2006, China consume 349 million tones oil, and 185 million tones oil are supplied by domestic production, the domestic supply is down to 53%, and the oil consumption oversea dependence is up to 47%.
- But, the oversea dependence of total energy consumption of China is lower, and it is no more than 10% in recent years.
- Why there is such lower oversea dependence of total energy consumption in China?
- When we concern the energy security of China, we must thought what is the most important energy in China?

The following data indicate that the most demands of energy consumption in China are supplied by domestic production.

Tab.1 Energy production and consumption in China in recent years

year	Energy production (10thousands tce)	Energy consumption (10thousands tce)	Domestic supply (%)
2002	143810	151797	94.7
2003	163842	174990	93.6
2004	187341	203227	92.2
2005	205876	224682	91.6
2006	221056	246270	89.8

- Why China could supply the most energy by domestic production?
- China have enough coal resources, and China's energy consumptions are dominated by coal resources. So coal is the most important energy in China.

2、 The importance of coal energy and the recent years demands anticipation

2.1 coal is the dominant energy in China

2.2 coal power is the dominant power in China

2.3 the energy consumption with coal energy dominance supported the rapid economic growth in recent years

2.4 the coal demands in coming years

2.1 Coal is the dominant energy in China

Tab.2 the energy consumption fix in recent years in China

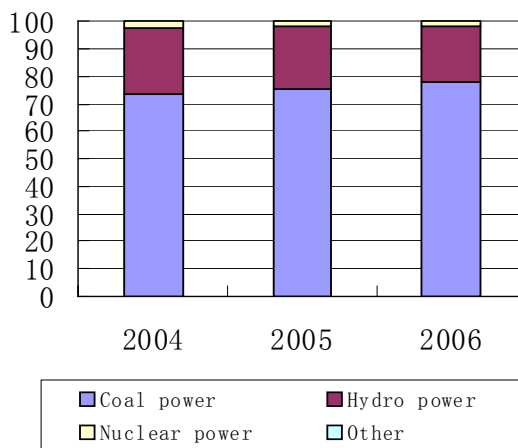
year	Energy consumption (10 thousands tce)	Energy Fix (%)			
		Coal	Oil	gas	Hydro power, nuclear power, wind power
2002	151797	66.3	23.4	2.6	7.7
2003	174990	68.4	22.2	2.6	6.8
2004	203227	68.0	22.3	2.6	7.1
2005	224682	69.1	21.0	2.8	7.1
2006	246270	69.4	20.4	3.0	7.2

the coal proportion is high to two third in the energy consumption from 2002 to 2006. coal is the dominant energy in China.

2.2. Coal power is the dominant power in China

Tab.3 the fix of electric power(%)

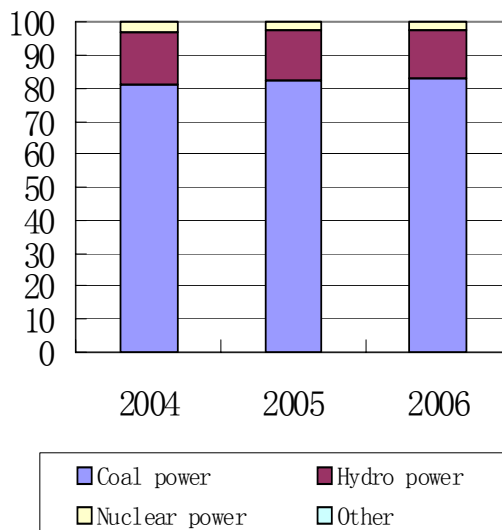
	2004	2005	2006
Coal power	73.7	75.6	77.8
Hydro power	24.5	22.8	20.7
Nuclear power	1.6	1.5	1.40
Other	0.2	0.1	0.1



2.2. Coal power is the dominant power in China

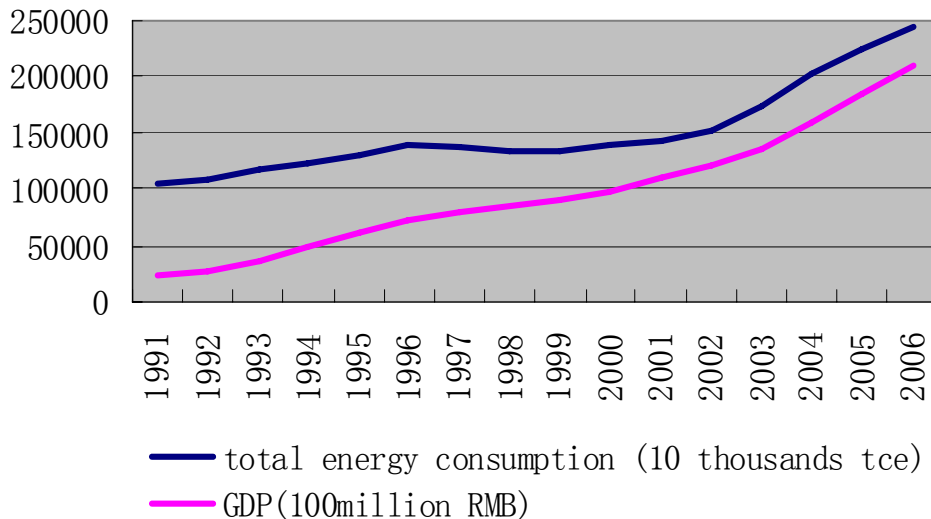
Tab.4 the fix of generate electricity(%)

	2004	2005	2006
Coal power	81.5	81.9	82.7
Hydro power	16.0	15.9	15.2
Nuclear power	2.3	2.1	1.9
Other	0.2	0.1	0.2



2.3 Energy consumption support the rapid economic growth

The energy consumption support the rapid economic growth in China in the two decades.



2.3 Energy consumption support the rapid economic growth

Research indicate: when per GDP is between 1000 with 10000US\$, the energy will consume quickly.

China's per GDP is up to 1000US\$ in 2001 and is up to 2000US\$ in 2006, the energy will consume more in future in China.

And coal is such important, so we must exploit and supervise our coal energy resources with high efficiency, that is one of reasons why we will construct the coal production base.

2.4 The coal demands in coming years

1. There have not the statistic coal consumption and production data of 2007, but I think it will show the general balance
2. During 2007, in different quarters, the coal export decreased and the import increased in China, there are some reasons,

Price and cost are the most important reasons,

- (1)The withdraw of export drawback by China's government, which makes the reduction of profit in coal companies by the coal exports, and bring to the decreasing export other than long-term contract export.
- (2) The coal price are raising, which makes some coal consumption provinces import more cheap coal resources in neighboring countries.

For example, the costs of Guangdong province coal import from Vietnam or Indonesia is lower than the buy from Shanxi province

2.4 The coal demands in coming years

The coal demand and supply

years	2005	2010	2020
Supply (billion tones)	2.005	2.6	3.0
Demand (billion tones)	2.16	2.55	2.96

3. The policies in China

main measures

- (1) To enhance coal production
- (2) To save energy. Which equal increasing coal production
- (3) To develop clean energy, to decrease coal consumption
- (4) To intensify energy cooperation with other country

3. The policies in China

One of policies: China's coal production base development__

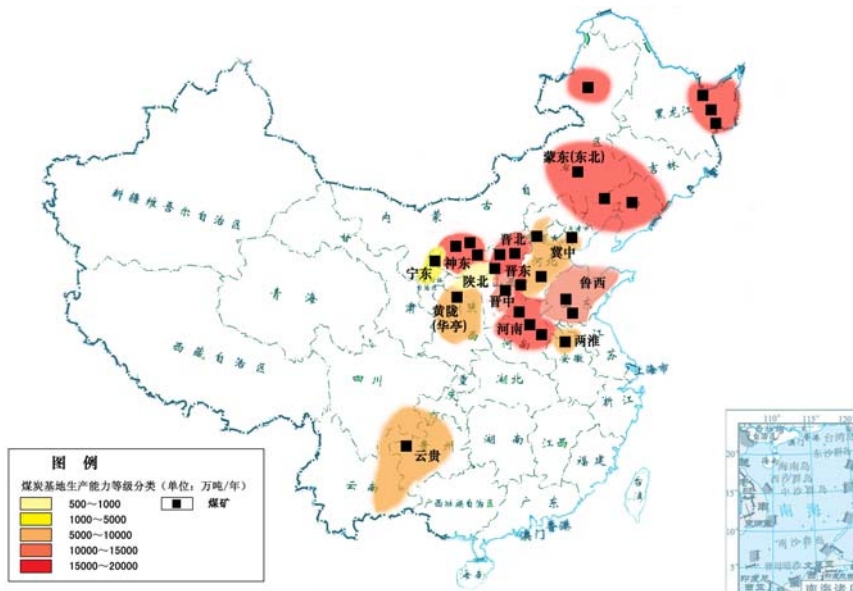
- 3.1 The position and distribution of coal production base**
- 3.2 The importance of coal production base in coal industry**
- 3.3 The development status of coal production base and it's future**

3.1 The position and distribution of coal production base

1. In 2006, the NDRC (National Development and Reform Commission, P.R.China) publicize the plan of 13 coal production bases.
2. 13 coal production bases: Shendong, North Shanxi, East Shanxi, East Inner Mongonlia (North East of China), Yun-Gui (Yunnan -Guizhou), He'nan, West Shandong, Shanxi Center, Lianghuai, Huanglong, Hebei Center, East Ningxia and North Shaanxi. Including 98 coal fields.
3. The 13 coal production bases distribute in 14 provinces, and the coal fields areas are about 287,000 sq.km.

The following is the sketch map of 13 coal production bases distribution.

3.1 The position and distribution of coal production base



3.2 The importance of coal production base in coal industry

- 1. At the end of 2004, the coal reserves of the 13 coal production bases are about 85% of the reserves of whole country**
- 2. At the end of 2004, the unemployed coal reserves of bases are about 75.7% of the China's unemployed reserves.**
- 3. In 2004, the coal output of bases is about 2 third of the total coal output in China**

3.3 The development status of coal production base and future plan

- 1. In 2005, the coal outputs of the whole country is up to 2.05billion tones, and the 13 bases is up to 1 billion, nearly to 50% of total coal output in China.**
- 2. The coal production base will build several 10-million tones scale size modern open pit, and several 10-million tones scale size secure and high efficiency modern coal mine, and will setup 6 to 8 100-million tones scale size and 8 to 10 10-million tones scale size coal corporation group.**
- 3. The outputs of 13 coal production base will up to 1.3~1.5 billion tones in2010, and up to 1.7 ~2.0 billion tones at 2020.**
- 4. The coal outputs of 13 bases will to 57.7% of total coal outputs in 2010 and will to 66.7% in 2020.**

3.3 The development status of coal production base and future plan

Coal production (billion tones)

	2005	2010	2020
Whole country	2.005	2.6	3.0
13 coal bases	1.0	1.5	2.0
Percentage (bases/whole country)	49.9	57.7	66.7

One of policies: energy saving, which equal increasing coal production

3.4 the governmental energy saving plan

One of policies: To develop clean energy, to decrease coal consumption

3.5 Clean coal technology

3.6 develop nuclear power

3.7 renewable energy power plan

3.6 State documentation: “The mid-long term development plan of nuclear power”, promulgated on Nov. 2, 2007 at the NDRC web:

http://www.sdpc.gov.cn/zjgx/t20071102_170162.htm

Aim to 2020, the nuclear power is up to 40 million kW, and constructing 18 million kW,

3.7 State documentation: “The mid-long term development plan of renewable energy power”,

To 2010, the hydro power will up to 190 million kW, bio-energy power will up to 5.5 million kW, and wind power to 5 million, solar power to 0.3 million kW.

To 2020, the hydrop power will up to 300 million kW, bio-energy power will up to 30 million kW, and wind power to 30 million, solar power to 1.8 million kW.

3.8 energy cooperation with other country

one of policies: To intensify energy cooperation with other country

As the large energy consumption countries, and China and Japan need to intensify energy cooperation, including constructing intergovernmental collaborative mechanism on energy cooperation, Communicating in energy technology, saving energy, and maintaining security of global common energy market.

Thanks!

Dr. Xiao Xinjian

Associate Research Fellow
Centre for Energy Economics & Development Strategy
Energy Research Institute
National Development and Reform Commission
P. R. China



Education

1. July, 1998, Graduated from Ji Lin University, bachelor of science
2. July, 2001, Graduated from Nan Jing University, master of science
3. August, 2004, Graduated from Beijing Third Research Institute of CNNC (China National Nuclear Corporation), technology doctor

Major Fields

1. Uranium resources prospecting,
2. Nuclear power economy
3. Coal economy

Work Experience

1. August 2004 to October 2006, work in Beijing Research Institute of Uranium Geology, prospecting for uranium resources and doing correlation policy consultation.
2. November 2006 to now, work in Energy Research Institute of NDRC, undertaking the researches of nuclear power economy and coal economy,