



Action Plan for Beijing Olympic Games 2008



Sub-plan on Energy Development and Energy Mix Readjustment

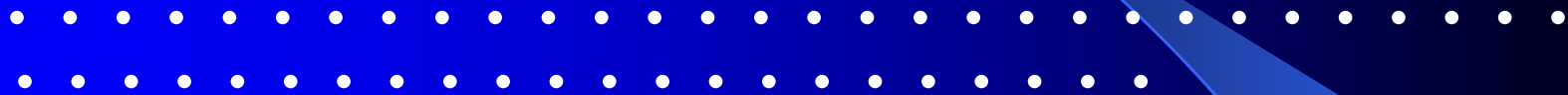


Beijing Municipal Commission of Development Planning



2003. 4

(2) The energy resources in Beijing are very limited. All oil and natural gas demand in Beijing must be supplied from outside, electricity is mostly transmitted from North China Power Grid, and coal is mostly transported from Shanxi and other regions.



1.2 Features of energy demand and supply and existing issues



(1) Features of energy demand and supply



- Beijing is a city with a large amount of energy consumption



• Most energy is consumed for industrial production

• • • • • • • • • •

• Coal-dominated in energy mix of Beijing

• • • • • • • •

• There is a downward trend in the growth rate of energy consumption

• • • • • • • • • • • • • •

• Energy is mostly supplied from outside

• • • • • • • • • •

2 Guidelines and primary objectives



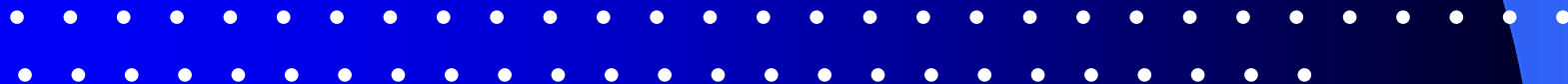
2.1 Guidelines



- (1) Adhering to the sustainable development strategies, with the central objectives of improving the urban air quality to meet the environmental requirements in the run-up to the Olympic Games.



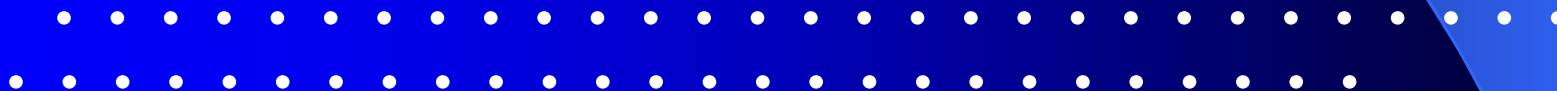
- 2 • Devoting major efforts to importing and developing clean energies in a more cost-effective manner to phase in the fuel switch from coal-dominance to more shares of clean energy types such as natural gas and electricity.



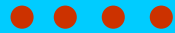
• 3 • Accelerating of the industrial and product restructuring so as to mitigate the growth rate of energy consumption.



• 4 • Promoting the application of new and high technologies for energy supply and consumption, so as to increase the energy efficiency and help build Beijing into an energy-efficient, clean and beautiful international metropolis.



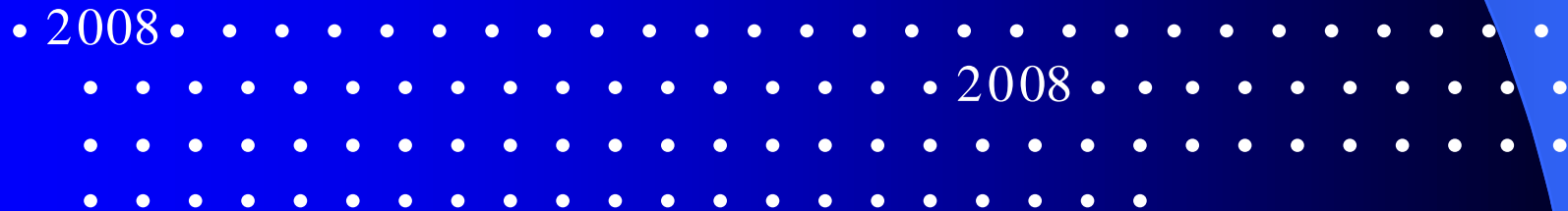
2.2 Primary Objectives



(1) Air environmental Quality



The urban atmospheric quality should be improved to reach the national standard in 2008 with ever reducing pollutant emissions from now, and an obvious improvement in the whole ecological environment in surrounding Beijing-Tianjin area. In the course of Beijing Olympic Games 2008, the concentrations of SO₂, NO₂, and O₃ in urban area will reach the WHO-issued standard, and the concentration of particulate will reach the average level of big cities in developed countries.



(3)Energy mix readjustment



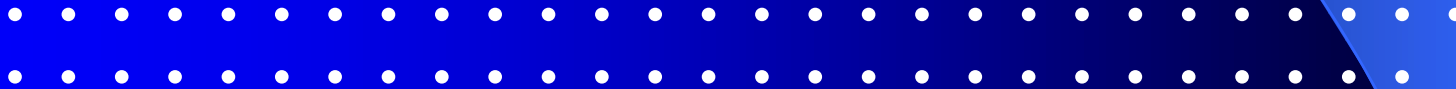
The share of clean and efficient energy in the final energy consumption mix in 2008 will account for 80% over, and 50% over in fuel consumption mix.

2008 80% . . .
. 50% . .

(4)Energy supply



By using all possible sources of clean energy supply, the diversification of clean and efficient energy supply will be promoted. A secure and reliable energy supply security system should be established. Ultimately, the stable and sufficient energy supply will be ensured.



3 Energy mix readjustment programme



In this plan, the base year is 2000 and the target planned period is 2001-2008.

2000—2008

3.1 Reducing coal use and switch to clean energy



In Beijing the coal consumption was 27.03 million tons in 2000 • the coal demand in 2008 is projected as 31.60 million tons under the business-as-usual(BAU) scenario. While under the coal reduction and switch programme, the coal consumption in 2008 will be reduced to less than 15 million tons, which can be broken down as follows:

2000	• • • • • • • • • •	2703	• • • • • • • • • •	2008	• • • • • • • • • •
3160	• • • • • • • • • •		• • • • • • • • • •	1500	• • •
	• • • •				

• 1 • Coal used for power generation

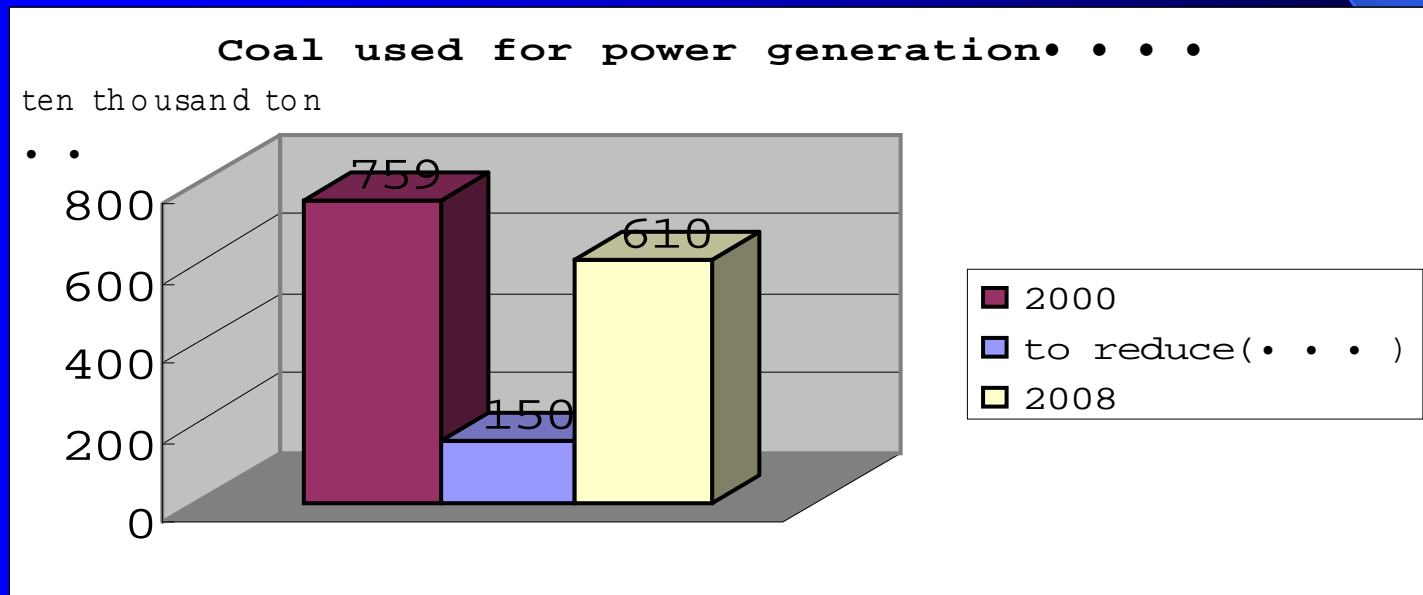
• • • •

In 2000: 7.09 million tons +0.5 million tons

2000 • • • • • • • • • • 709 • • • • • • • • • • 50 • •

In 2008: 6.10 million tons

• 2008 • • • • • 610 • •



• 2 • Coal used for district heating from urban heat-supply network



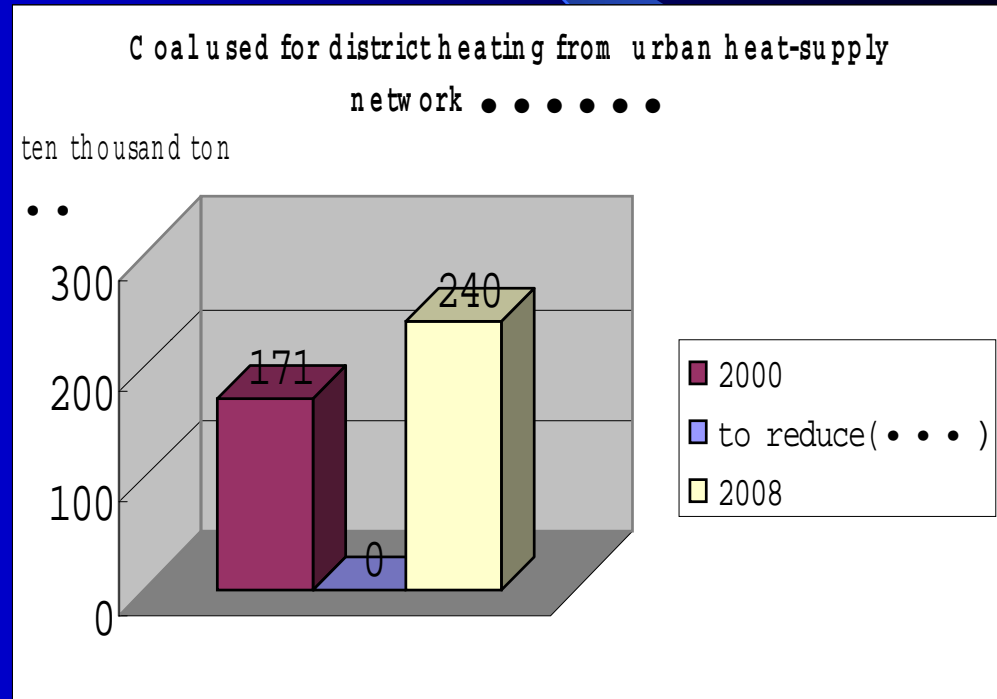
In 2000: 1.71 million tons

2000 ••••• 171 ••

In 2008: 2.40 million tons

2008 ••••• 240 ••

no cut is planned for this use



• 3 • Coal used for coking and gasification



5.50 million tons in 2000

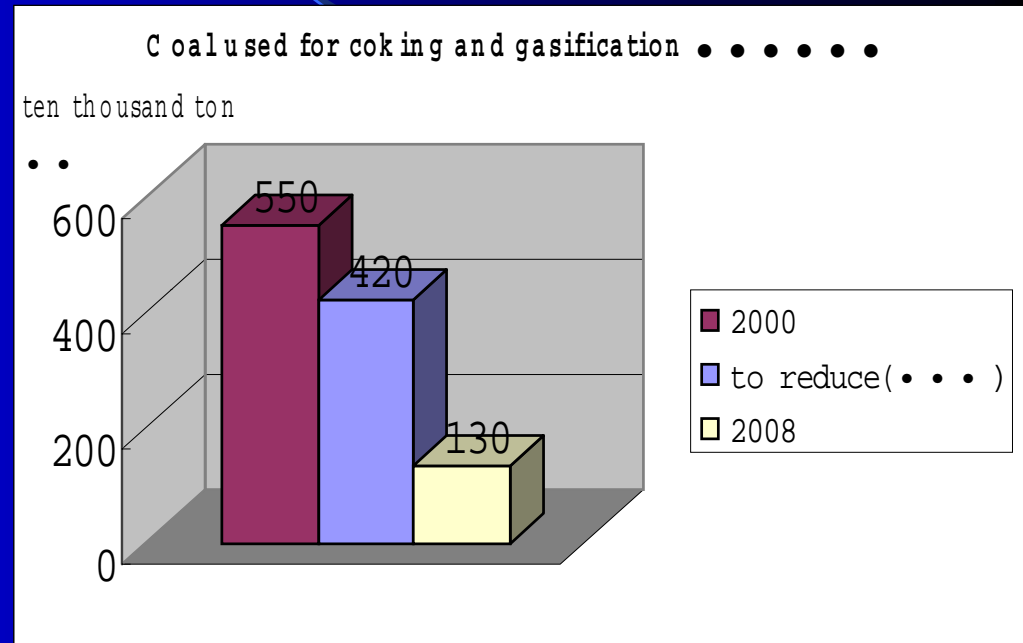
2000 ••••• 550 ••

To reduce 4.20 million tons

••• 420 ••

1.30million tion in 2008

• 2008 ••••• 130 ••



• 4 • Coal used for final energy consumption

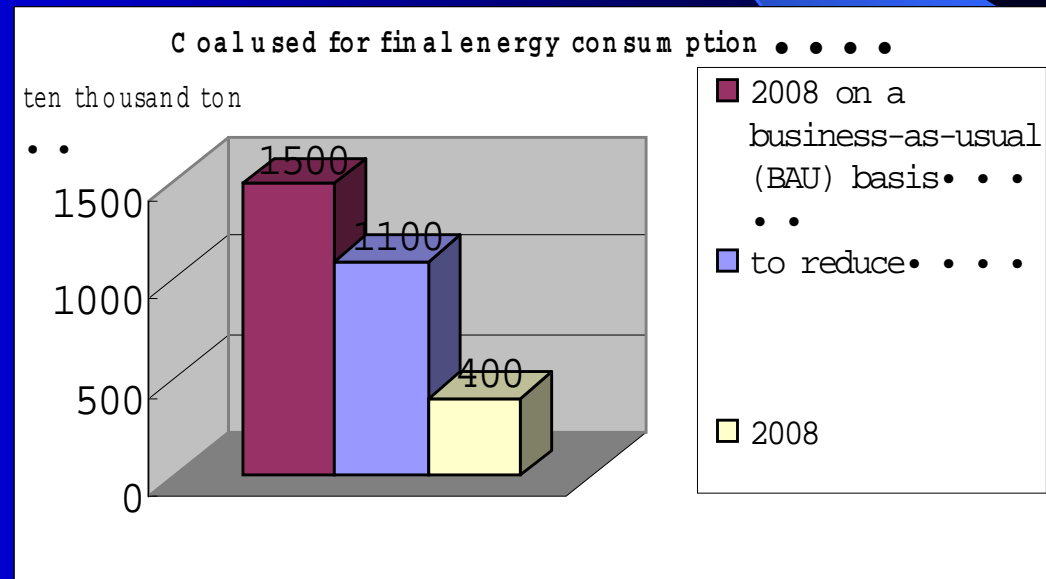
••••

The final coal consumption amounted to 12.78 million tons in 2000, and is predicted to come up to about 15 million tons by 2008 on a business-as-usual (BAU) basis.

2000 ••••• 1278 ••••• 2008 •••••
 1500 ••••

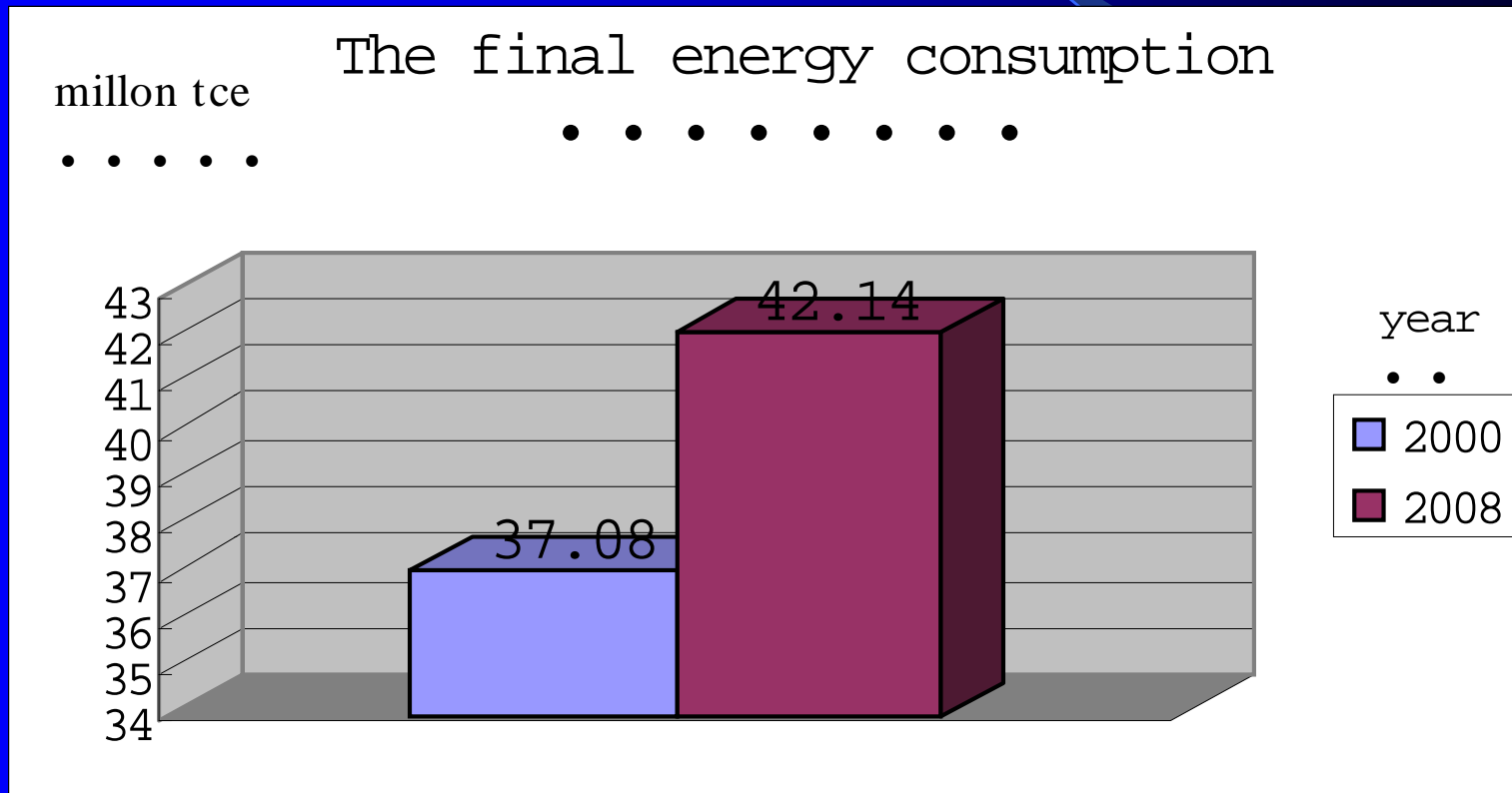
cut the amount by 11 million tons

••••• 1100 •••••



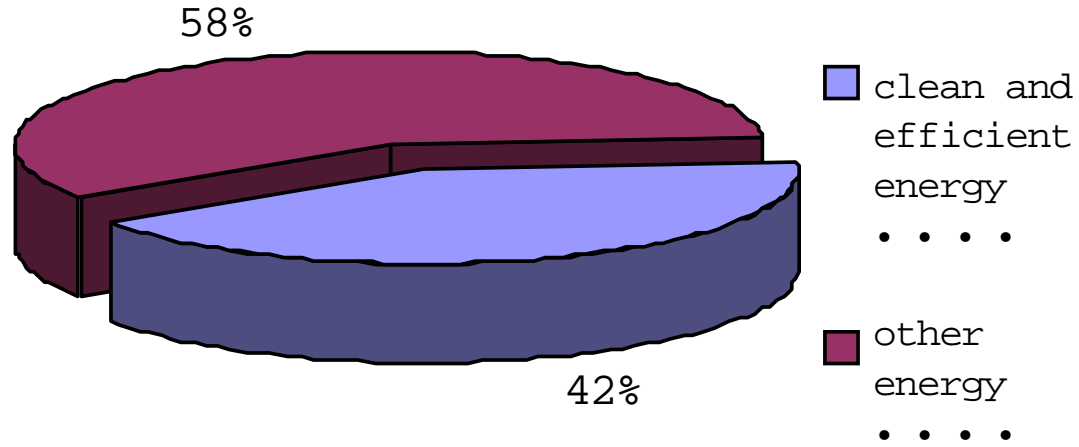
3.2 Expected energy mix in 2008 in Beijing

2008 ●●●●●●●●



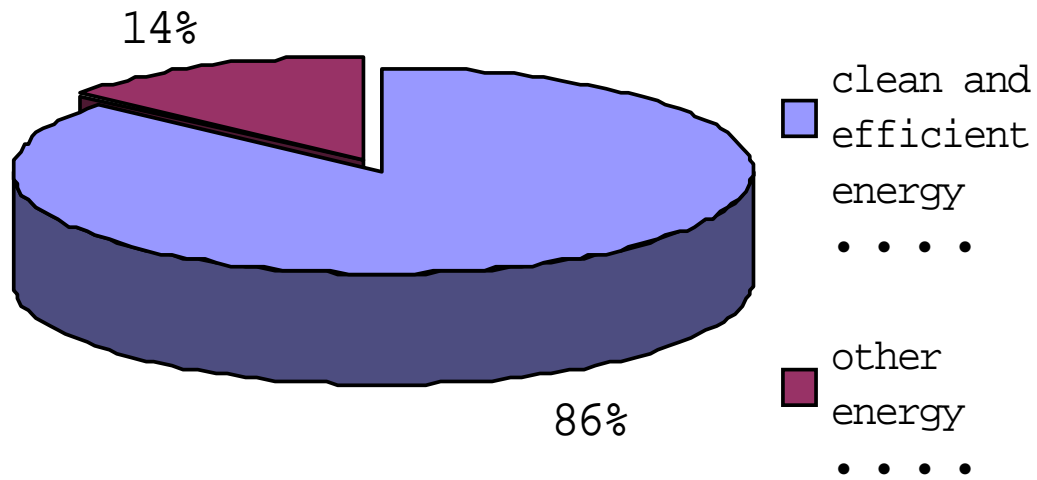
The Share of Clean and Efficient Energy in 2000

2000 • • • • •



The Share of Clean and Efficient Energy in 2008

2008 • • • • •



(4) Other clean and efficient energies (such as LPG and light diesel) will be 1.15 million tons, taking 3.9% of the final energy consumption

..... 115 .. , ..
... 3.9%;

(5) No coal as fuel directly for final energy consumption will exist in urban area, while it will be reduced by 1/3 in outer suburbs (about 4 million tons remain).

.....
400 ..

4 Main clean energy projects



4.1 Natural gas . . .

- Gas source . . .
- Urban distribution network
- Gas stations
- Fuel-switch projects for boilers

4.2 Electricity • •

- Generation projects • • • • •
- Power grid projects • • • • •
- Electric space heating projects in Old City Reserve Zone
• • • • •

4.4 New energy and new energy technology



- Space heating with geothermal energy
- Solar energy
- Wind power
- Utilization of energy from underground water or soil
. . . .

- Small scale natural gas-fired combined cooling, heating, and power generation projects

• • • • • • • • • •

- Cooling technologies driven by hot water

• • • • • • • • • • • •

- Biomass energy • • • •

- Fuel cells and electric vehicles

• • • • • • • • • •

5.2 Measures of rational use of coal



- High quality and low sulfur content coal, washed coal, and briquette



- Clean combustion technologies



- Control technologies for coal-firing induced pollution



6 Policy instruments



6.1 Preferential policies encouraging use of clean energy



6.2 Strict pollutants emission standards on boiler to limit the use of non-clean energy



6.3 Dissemination and application of hi-tech in energy supply and energy consumption



**6.4 Dissemination and application of renewable energy
such as solar, geothermal and biomass energy**



**6.5 Phased establishment and improvement of market
competition mechanism**



THANK YOU!

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