



中华人民共和国国家发展和改革委员会
National Development and Reform Commission



第八届油气

Introduction to the 11th Five-Year Plan on Energy Development

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September 10, 2007



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I. Present energy situation

1. New starting point for energy development

During the period of the “10th Five-Year Plan”, energy development in our country made significant achievements, which satisfied the needs of national economic and social development and has laid solid foundations for further development in the “11th Five-Year Plan” and the longer term. Facing the future, we find our energy industry is again at a new starting point.



I. Present energy situation

1. New starting point for energy development

- (1) Energy production grew rapidly, supply-demand contradiction lessened;
- (2) Structural adjustment strengthened, with the “*Constructing big projects while reducing small ones*” policy producing good results;
- (3) Technical innovation made progress, equipment level raised noticeably;
- (4) System reform accelerated, market mechanism continuously improved;
- (5) Energy efficiency increased, environment better protected.



I. Present energy situation

2. Major problems and challenges

- (1) Consumption demand grew steadily, resource constraints intensified;
- (2) Structural problems worsened, sustainable development faced challenges;
- (3) International market fluctuated dramatically, hidden risks increased continuously;
- (4) Energy efficiency needed to be further enhanced; great efforts to be made in saving energy and cutting consumption;
- (5) Technological level proved relatively low, self-renovation had a long way to go;
- (6) System constraints remained serious, reforms to be deepened;
- (7) Rural energy problem became distinct, stagnation should be tackled.



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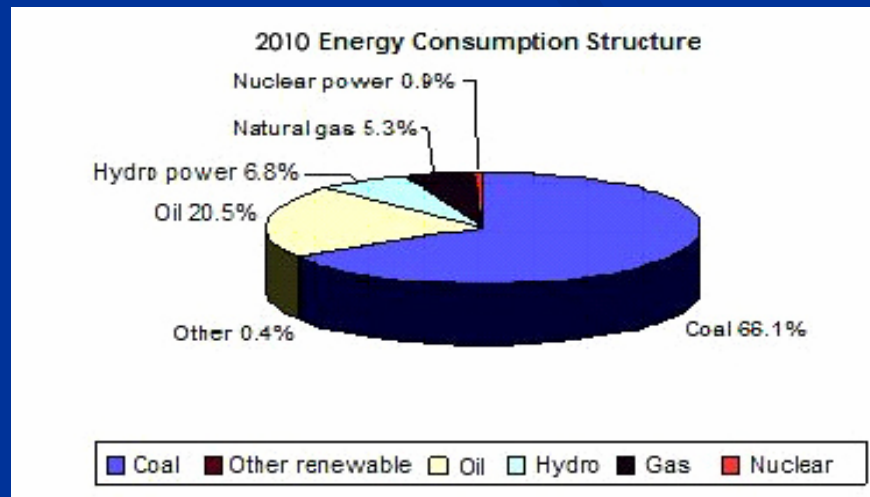
II. Guiding principle

Uphold Deng Xiaoping Theory and the important thought of “Three Represents” as the guideline and put the two strategic thoughts of the Scientific Concept of Development and Constructing a Harmonious Socialist Society in command of energy work, carrying out an energy strategy focusing on putting conservation first, reliance on the domestic market, diversified development, environmental protection and strengthening mutually beneficial international cooperation, along with efforts to build a stable, economical and clean energy supply system to support the sustainable development of our economy and society with the sustainable development of energy.



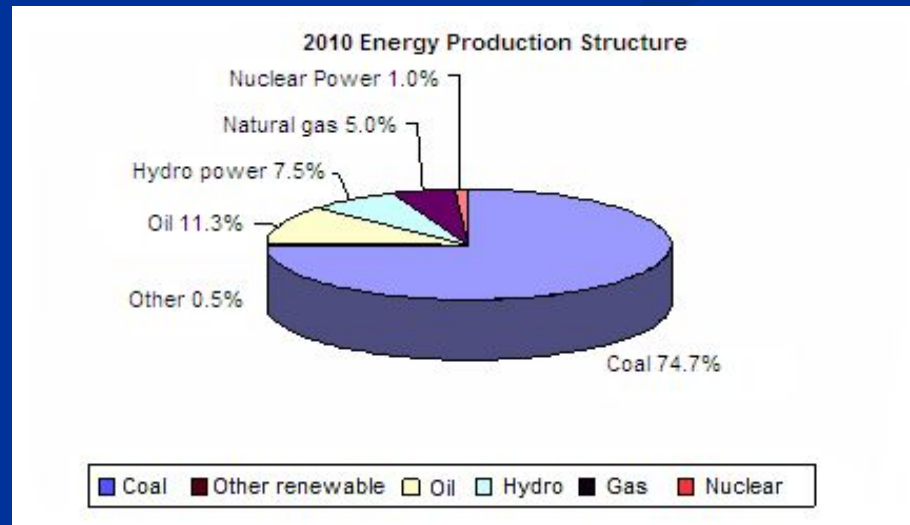
III. Development objectives

1. Total consumption and structure In 2010 the total controlled consumption of primary energy will be about **2.7 billion** tons of standard coal, with annual average growth of **4%**.





2. Total production and structure In 2010 the total production output of primary energy will be about **2.446 billion** tons of standard coal, with annual average growth of **5%**.





IV. Construction emphasis

Based on the existing conditions, and according to the principle of “structural optimization, regional coordination, production-sale balance, and planning for the future”, we will make a general plan for energy industry development during the period of the “11th Five-Year Plan”, which mainly includes: orderly development of the coal industry; accelerating the development of oil and natural gas; actively developing hydropower generation on the premise of better environmental protection and arrangements for relocation, optimizing the development of coal-fired power generation and promoting the construction of nuclear power; vigorously developing the renewable energy industry.

Five key construction projects will be launched.



1. Construction of energy bases

- Orderly develop coal bases.
- Accelerate the construction of oil and gas bases Actively develop hydropower bases.
- Optimize the construction of coal-fired power generation bases.
- Vigorously develop nuclear power bases, and support the construction of exemplary high-temperature gas-cooled reactor nuclear power production bases.



1. Construction of energy bases

■ Orderly develop coal bases

Accelerate the development of the six large high-quality coal bases in Shendong, Shanbei, Huanglong (including Huating), Jinbei, Jindong and Ningdong, with the aim of constructing large-scale and modern coal mines to increase production. Development will be carried out in the Jinzhong metallurgical coal base to build large-scale mines while integrating smaller mines and maintaining the rational strength of development. Properly manage the continued production of old mines in the three bases of Luxi, Jizhong and Henan and maintain a stable production capacity. Promote the construction and reconstruction of coal bases in Huainan-Huaibei. Promote the development of Mengdong (Northeast China) coal bases with priority given to the construction of the large modern surface coal mine in Inner Mongolia. Support the “West-to-East Power Transmission” project, reasonably accelerate up the development of the coal bases in Yunnan and Guizhou.



1. Construction of energy bases

■ Accelerate the development of oil & gas industry

In accordance with the strategy of “tapping the potential of the east, developing the west, accelerating the sea area and exploring the south”, by way of innovative geological theories, utilizing new technology and increasing investment to realize the a crude oil and natural gas output in 2010 of **193 million tons** and **92 billion cubic meters**.



1. Construction of energy bases

■ Develop actively the hydropower base

Based on the model of drainage ladder rolling development, giant hydropower bases will be constructed, with key locations in the upper reaches of the Yellow River, the middle-upper reaches of the Yangtze River and its branches, the Lancang, Hongshui and Wujiang rivers. In remote areas with an abundance of hydro energy, small- and medium-scale hydropower stations shall be constructed.



1. Construction of energy bases

■ Optimize the construction of coal bases

Following the principle of “west-to-east transmission, coal and hydro coordination, strengthen support and promote safety”, priority is attached to the construction of bases in Shanxi, Shaanxi, Inner Mongolia, Guizhou and the east of Yunnan, where the coal reserves are rich, so as to implement “west-to-east power transmission”. Power station in Henan and Ningxia near coal mines shall be reasonably allocated to realize regional hydro-coal coordination. Accelerate the construction of Huainan-Huaibei power stations near coal mines to carry out “Anhui-to-east transmission”. In eastern and central China, efforts shall be directed towards the construction of ports, roads, and loading centre stations that are favorable of enhancing power transmission capability, in order to increase operation stability and security of the transmission-line system.



1. Construction of energy bases

- Accelerate the construction of nuclear power bases

During the period of the “11th Five-Year Plan”, nuclear power projects such as Tianwan First Phase and Guangdong Ling’ao Second Phase will be completed, and the construction of the Zhejiang Sanmen and Guangdong Yangjiang projects will be commenced. Preparatory work for the construction of nuclear power plants shall take place, while there will also be support for high-temperature gas-cooled reactor nuclear power production.



2. Energy storage and transportation

■ Coal transportation channel and ports

During the period of the “11th Five-Year Plan”, with the growth in coal production, the “north-to-south and west-to-east” coal transmission pattern will become more obvious. Under such circumstances, more efforts will be made to extend the “three xi” (Shanxi, Shaanxi and the west of Inner Mongolia) coal transportation channels and construct ports for coal transportation in coastal regions in the north; plan and start construction of the new “west-to-east” channel for coal transportation; and strengthen transportation capabilities in Northwest, Southwest and Central China.



2. Energy storage and transportation

■ Oil and gas transmission pipeline network

During the period of the “11th Five-Year Plan”, based on the pattern of “west to east, northeast to south and ocean to land”, backbone pipeline networks across the country and major regional networks shall be built.



2. Energy storage and transportation

Power grid facilities

Based on the principle of attaching priority to hydropower and ensuring reasonable supplies of coal-fired power, we will continue with the construction of the three channels for “west-to-east power transmission”; strengthen the construction of regional grids; promote the construction and renovation of the urban and rural power grids; and promote the coordinated development of primary and secondary systems.



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3. Oil alternative project

Accelerate the development of coal-based and bio liquid fuels and coal-related chemical industry following the principle of “making full use of advantages, relying on advanced technology and progressing actively and steadily” and make overall plans to ensure the orderly construction of key projects, laying solid foundations for the oil alternative industry during the period of the “12th Five-Year Plan” and the longer term.



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4. Renewable energy development

During the period of the “11th Five-Year Plan”, the emphasis will be placed on the development of renewable energies with potentiality and mature technology, such as wind power generation, bio generation, biomass pellet fuel and solar energy. We will promote the development of renewable energy through major projects.



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5. New rural energy development

Following the policy of “diverse development based on local conditions”, with the acceleration in the development of small-scale hydropower stations and rural power grids, we will make more efforts in the development of renewable energy such as wind power, biomass power and solar energy that suit local needs.



V. Major objectives for energy saving and environmental protection

The achievement of the objectives for energy saving and environmental protection must depend on the efforts of the whole of society and the development of technology. To this end, we shall take measures to modify our mode of economic growth to improve the quality and efficiency of economic development. When taking action to achieve energy saving and environmental protection, we shall vigorously develop the cyclical economy, accelerate the development of the high-tech industry, increase the importance of the modern service sector and improve energy saving and environmental protection through optimizing the economic structure.



1. Major objectives

General objectives

In 2010, for every 10,000 yuan of GDP (at constant price of 2005, hereafter the same), energy consumption will be reduced from 1.22 tons of standard coal in 2005 to about 0.98 tons of standard coal. The average annual conservation rate will be 4.4% during period of the “11th Five-Year Plan”, and accordingly, the emission of SO₂ will be reduced by 8.4 million tons and CO₂ by 360 million tons.



1. Major objectives

Main energy-consumption product (volume) and equipment target

In 2010, the environmental protection level in key energy-consuming industries and the unit energy consumption of major products shall reach or be close to internationally advanced levels at the beginning of the century. The energy efficiency of major energy-consuming equipment shall reach the internationally advanced level of mid-1990s, with part of the energy efficiency of automobiles and domestic appliances reaching current internationally advanced level.



1. Major objectives

Energy industry targets

In 2010, the average recovery ratio of coal mines across the country shall reach 60%, increasing 4%; the utilizing rate of the mine water and coal gangue shall rise respectively by 27% and 26% to 70%; the mine water discharge attainment rate shall reach 100%, increasing 20%; the coal washing waste water closed circuit circulation rate shall increase 5% to 90%. The crude oil recovery ratio shall remain at 32%. In terms of coal-fired power, the standard coal consumption per KWH shall be 355g, a reduction of 15g; factory power utilization 4.5%, down 1.4%; line loss rate 7%, down 0.18%; total power plant SO₂ emissions will fall by more than 10%.



2. Major areas

During the period of the “11th Five-Year Plan”, based on the strategy of “comprehensively promoting and stressing key projects”, the emphasis of our work shall be on energy saving and environmental protection in key industries, transportation, construction, commercial and civil use. Ten major projects will be carried out, including the renovation of coal-fired boilers, regional power-heat combined production, residual heat utilization, oil saving and alternatives, electro-mechanical system energy saving, energy system optimization, architecture energy saving, environmentally friendly lighting, institution energy saving, energy saving monitoring and technical support systems.



3. Major energy industries

- Coal
- Oil and natural gas
- Electric power



3. Major energy industries

Coal

By 2010, the average mine recovery ratio shall reach 50%, an increase from 46% in 2005; the number of small coal mines shall fall from 22,000 to 10,000, therefore greatly reducing sources of pollution and preventing ground water seepage and earth surface subsidence. Utilization of coal gangue shall increase from 150 million tons in 2005 to 390 million tons, an increase of 27%, with the discharge attainment rate rising from 80% to 100%; the utilization of mine gas shall increase from 1.1 billion cubic meters to 3.6 billion cubic meters. The recultivated area in mine fields shall be increased to 22,000 hectares from 9,000 hectares and soil erosion area being treated shall increase from 11,000 hectares to 26,000 hectares, so as to stop the environment from worsening.



3. Major industries

Oil and natural gas

By 2010, the crude oil recovery ratio of the whole country shall be maintained at about 32%; comprehensive energy consumption of oil and gas field development, especially the oil and gas self-use rate, shall be further reduced; pollution caused by natural gas venting and waste water discharge shall be dealt with satisfactorily.

More efforts shall be made on oil conservation and the development of oil alternatives.



3. Major industries

Power

By 2010, coal consumption per KWH shall fall from 370g to 355g, the rate of electricity use by factory shall fall from 5.9% to 4.5%; the coverage for central heating in cities shall rise from 30% to 40% with 40 million KW of newly added heat-supplying combination production units to reduce standard coal use by 35 million tons a year and help improve urban air quality.

By 2010, smoke and dust emissions from coal-fired generation plants shall be controlled at 1.2g/KWH, SO₂ emissions shall fall to 2.7g/KWH and the waste water discharge attainment rate shall reach 100%.

The line loss rate shall be reduced to about 7% by 2010.



VI. Supportive measures

1. Increase exploration investment
2. Manage with control and adjustment, regulate development and construction order
3. Accelerate the constitution of laws, improve industry governance
4. Deepen system reform, perfect pricing system
5. Strengthen resource conservation, protect the environment
6. Broaden opening to the outside world, seek more international cooperation
7. Establish emergency response system, intensify safety guard



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Thank you!