

China's energy Policy and China-US cooperation

Aimin Ma
Economic Affairs Office,
Embassy of the People's Republic of China in the U.S.

It is my great pleasure to participate in this interesting conference. First of all, I would like to thank the organizer of this event, thanks for inviting me to this event, and thanks for your hospitality.

My presentation today will include three parts:

- China's energy production and consumption;
- China's Energy challenges and Strategy; and
- China-US energy cooperation

I. China's energy production and consumption

In the past two decades, china experienced rapid economic development. Energy sector played very important role in ensuring the sustained development.

China is not only a big energy consumer, but also a big energy producer. In total, the production of primary energy in 2005 equals to 2.06 billion tons coal equivalent, about 99.7% of the US primary production. Coal account for 76% of the total production.(2.19 billion tons), crude oil 13% (181 million tons), natural gas 3% (50 billion cubic meters), hydropower and others 8% (453 billion kwh). In 2006, the total primary energy production was 2.21 billion tons coal equivalent, increased 7.3% than the previous year.

With the continuous economic development, China's energy consumption has increasing. In 2006, china's energy consumption totaled 2.46 billion tons coal equivalent, 9.3% more than the previous year, including 2.37 billion tons of raw coal, 0.32 billion tons of crude oil, 55.6 billion cubic meters natural gas, 417 billion kwh from hydro power and 54.3 billion kwh from nuclear power.

However, we should keep one thing in mind: China supported its rapid economy development with lower energy increase. From 1978 to 2005, primary energy consumption increased 5.16% annually, and supported the economy growth at 9.6% annually at the same period. At the same time, Energy consumption for per unit GDP has decreased 45% from 1990 to 2004. In 2006, energy consumption for per 10000 yuan GDP was 1.21 ton coal equivalent, 1.23% less than that in 2005.

While china's energy consumption increased in recent years, its per capita consumption is still low. Per capita energy consumption was about 1.9 ton coal equivalent in 2006, much lower than that in developed countries. In rural areas, much more energy will be needed in the future. For example, every 100 families in cities and towns owns 91 refrigerators, the figure is only 20 in rural areas. That means at least 210 million more refrigerators will be needed for the farmers to enjoy the life as the urban citizens do.

As one of the biggest energy producer and consumer, China also contributed to the world energy security :

----More than 90% of energy consumption are from domestic sources, about 20 percentage point higher than the average level in OECD countries.

----China also supplies energy to the world market. In 2005, China exported 80 million tons of coal, and 13 million tons of charcoal, accounting for 60% of world charcoal trading.

----China's oversea oil investment helps expand production capacity and hence world oil supply.

----China also helps improve global energy security through exporting energy-intensive products.

II. China's Energy challenges and Strategy

As a big developing country, China faces challenges in the energy sector:

First, with the rapid economic development and the improvement of people's living standard, energy demand will naturally continue to increase;

Second, China's reliance on imported oil and gas will rise and the imbalance between supply and demand will be with us for a long time to come;

Third, energy consumption causes environmental problems, such as the emission of sulfur dioxide and carbon dioxide. We have to use the energy in a more environment friendly manner.

To meet these challenges, Chinese government will follow a policy that gives top priority to energy conservation, rely primarily on domestic resources, go in for diversified development, environmental protection and strengthen mutually beneficial international cooperation, in an effort to build up a stable, efficient

and clean energy supply.

In the 11th Five Year Plan (2006—2010), two major energy-related objectives were set up. One is to reduce energy use for per unit GDP by 20%, another one is to ensure a more secure supply of energy and major mineral resources.

China intends to archive the energy conservation targets through four major approaches, that is:

----Structural adjustment. To restructure industrial, agriculture and service sectors, accelerate the development of the service sector, and non energy intensive industries, optimize energy utilization structure.

----Technical improvement. Accelerate R&D on advanced energy conservation techniques and products and their dissemination and application; Implement key energy conservation projects; Promote the development of energy conservation service framework; and Strengthen international cooperation

----Enhancement of management. Improve Energy Efficiency legal regulations and standards system; Establish EE objective based responsibility system & evaluation system; Establish EE evaluation and appraisal framework for fixed capital investment projects; Strengthen EE management in major energy consumption enterprises; Improve EE labeling system and EE product certification system.

----Deepening reform. Strengthen energy pricing reform and give the market correct price signals; Broaden the sources of fund to provide stable energy efficiency investments; Implement preferential Energy Efficiency tax policies; Improve urban heating system reform; provide Energy Efficiency incentives

To ensure the energy supply, China will Increase domestic energy production and improve preparedness for emergencies.

We will develop efficient and clean use of coal, such as coal liquefaction, gasification, and coal mine gas, accelerate the development of nuclear and hydro power , and stabilize and increase the production of oil while augmenting that of natural gas and improving our national oil and gas pipeline network.

To improve preparedness for emergencies, China will speed up the building up of China's national oil reserves. Four oil reserves bases are under construction in Zhoushan, Ningbo, Qingdao and Dalian. As first step, the object is to hold around 10 million tons of oil reserve. China will also establish management mechanism and relevant governing laws and regulations for national oil

reserves.

To deal with the environment problems caused by energy consumption, china plans to expand the use of renewable energy. The total utilized renewable energy (excludes biomass utilized by traditional methods) is about 166 million tons tce, 7.5% of the primary energy consumption of the year. China will promote renewable energy development through establishing a reliable and sustainable renewable energy market, providing financial investment and tax incentives, and establishing renewable energy Industry service system.

III. China-US energy cooperation

With the economic globalization, countries share the same energy market. China will further expand international energy cooperation with foreign countries:

----Complement our domestic energy production through international trade and upstream development.

----continue to participate in international energy cooperation in both bilateral and multilateral dimensions and step up its dialogue and cooperation with international organizations and transnationals to jointly secure the stability of world energy market.

----continue to conduct extensive cooperation on energy security, including better strategic dialogue on energy, greater technological progress in the exploration, development and utilization of energy, enhanced fruitful cooperation on clean coal, renewable energy and higher energy efficiency, in a joint effort to boost global oil production and stabilize its supply.

China and US has great potential for energy cooperation, both countries will benefit from energy cooperation. The cooperation will help ensure energy supply for both countries, it will encourage energy technology development, transfer and deploy, create business opportunities and contribute to global environment protection.

Today, energy cooperation has become one of the important contents in bilateral relations between US and China.

At the government level, china and U.S. has signed some bilateral cooperation Agreements, for example,

----Memorandum of Understanding on Bilateral Energy Consultation between SDPC and DOE

- Energy and Environment Cooperation Initiative between the Chinese Government and the US Government
- Agreement of Intent on Cooperation Concerning Peaceful Uses of Nuclear Technology between SDPC and DOE
- Statement of Intent on Cleaner Air and Cleaner Energy Technology Cooperation between SDPC and the US EPA
- Statement of Intent on a Cooperative Study of Natural Gas Utilization in China between SDPC and the US EPA
- Memorandum of Understanding on Bilateral Energy Policy Dialogue between NDRC and USDOE
- Cooperation Protocol for Clean Energy Tech for 2008 Beijing Olympics

China and US also cooperate under multilateral frameworks,

- APEC(energy working group)
- International Energy Forum(IEF)
- Asia Pacific Partnership on clean Development and Climate(APP)
- Global Nuclear Energy Partnership(GNEP)
- Carbon sequestration Leadership Forum(CSLF)
- International Partnership for the hydrogen economy(IPHE)

There are a lot of energy cooperation activities going on at the government level:

- Energy Policy Dialogue between USDOE and NDRC of China since 2005;

- Oil and Natural Gas Forum since 1998. The main topics includes the development and policies for oil, natural gas, LNG, and coal bed methane, the responsibilities of governmental organizations in these areas. Governmental agencies and oil and gas industries from both sides participated in the forums.

- Five-Country energy Ministers roundtable in 2006. Energy ministers from China, India, Japan, Korea and US attended the meeting in Beijing. The objective of the meeting is to exchange views of energy policy, strengthen cooperation on energy conservation, improvement of energy efficiency, energy technologies, environmental protection so that the countries will be able to contribute to the stability, security and sustainable development of global energy market.

In addition to the cooperation between two governments, a lot of US companies invested in China. From 1980s, American oil companies participated cooperation of exploring China's oil and NG on land and under ocean and signed 57 exploring projects.

China-US Energy Co-operations also take place in third countries. One of the examples is the 16 block fields in Ecuador. Sinochem Corporation and MURPHY SWITCH owned the field's shares and keep a fine relationship. Sinochem holds 14% while MURPHY SWITCH holds 20%.

In conclusion, China will continue to make efforts to safeguard its energy security by strengthening energy conservation policies and measures, and further increasing domestic energy supply. At the same, China will work together with other countries, including United States, to ensure a stable world energy market.