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China's Energy Diplomacy and its Implications for Global Energy Security

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1 Introduction

One of the five essential elements for the survival of people, energy functions as a core strategic material for national economies and social development. The security of energy supply is not only associated with the rapid growth of the economy in China but also with the overall security and strategic development of the nation. The sustainable development of the Chinese economy is closely related to the sustainable development of the world economy. Thus China's energy security is a very important part of global energy security; China's energy diplomacy therefore has great implications for global energy security.

Owing to China's rapid economic growth, along with its increasing need for energy optimization, China's crude oil consumption has multiplied. In 2010, China's oil consumption will reach 350-380 million tons; consumption of natural gas will increase from 24.5 billion cubic meters to 100-120 billion cubic meters. However, in 2010 domestic supply will have increased only moderately, reaching an amount of 170 to 190 million tons. Thus increasing demand for oil will have to be met mainly through imports. Domestic production of natural gas will increase drastically, reaching 80 to 100 billion cubic meters in 2010, while additional imports will still be needed to meet demand.¹ Thus energy diplomacy has become more and more important for China's energy security.

The "Petersburg Declaration" of the G8 Summit in 2006 laid out the principles, aims and proposals for action, and it constitutes a very meaningful framework for a global, cooperative energy policy, stressing open, transparent, efficient and competitive markets, transparent, equitable, stable and effective legal and regulatory frameworks, enhanced dialogue on relevant stakeholder perspectives, environmentally sound development and use of energy, etc.

The present article seeks to illustrate the current situation of China's energy development, to identify the problems the Chinese government has been facing, and to work out the key elements of China's energy diplomacy. The objective is to fathom the commonalities between China's energy diplomacy and global energy policy, to identify compatible interests, and to point out

areas of potential conflict. By comparing the framework for a global, cooperative energy policy outlined in the "Petersburg Declaration" with China's energy diplomacy, we can explore the kinds of circumstances and conditions under which China would be willing to contribute to solving global energy problems.

2 Overview of the Development of China's Energy Industry: Achievements and Problems

Based on its development over the past fifty plus years, China's energy industry has achieved an outcome that catches the attention of the entire world. The capacity of energy supply has been strengthened step by step. In 2005, the total output of primary energy in China reached 2.06 billion tons of standard coal, which was 87 times that achieved in the period shortly after the founding of the new China as well as 3.29 times of that posted during the early period of the policy of reform and opening. The output of coal amounted to 2.19 billion tons, ranking first in the world for years. The country's output of crude oil reached 181 million tons, ranking sixth in the world. Its output of natural gas amounted to 50 billion cubic meters. Its power generation and installed capacity exceeded 500 million KW. Its annual power generation reached 2474.7 billion KWh, ranking on average second in the world. Renewable energies have been developing quickly over the past few years. The installed capacity for SHP stations has reached 38 million KW. The total solar collector area of solar water heaters was equivalent to 80 million square meters, which accounted for over half of the amount installed in the world. The installed capacity for nuclear power plants reached almost 7 million KW. The country's annual output of methane amounted to around 8 billion cubic meters. The amount of methane-generating pits for family use reached more than 17 million.²

In addition, the structure of China's energy consumption was optimized. In 2005, consuming energy totaling 2.225 billion tons of standard coal, China became the second largest energy-consuming country in the world. Over recent years, based on efforts to actively modify the energy consumption structure, the general trend has been characterized by a relative decrease of coal consumption and a gradual relative increase in the consumption of high-quality clean energy. From 1990 to 2005, the ratio of coal consumption dropped from 76.2% to 68.7%, that of oil/gas consumption increased from 18.7% to

¹ The data comes from: "China Industry Annual Report," China Economic Information net, www.ceiceo.cn/Exweb/2005Report/www/AdInfo.asp?id=6#石油, cited in Xu Qinhu, *New Geopolitics: Central Asian Energy and China*, Beijing 1997: The World Contemporary World Publishing House.

² The data comes from The Ministry of Land and Resources P.R.C.

24%, and that of consumption of hydroelectric and nuclear power jumped from 5.1% to 7.3%.³

Since the 1990s, consumption of oil/gas has been increasing in step with the increase of the level of industrialization, urbanization and market orientation in China. In 1993, China turned from an exporter of crude oil into a pure importer. Since then the annual volume of imports has been increasing considerably. In 2005, net imports reached 136 million tons. China's dependence on imported crude oil was up to 44%. It is anticipated that demand for oil/gas in the Chinese market will continue to increase for a long time. Generally speaking, the increase of China's demand for oil and natural gas is growing much faster than that of domestic supply, and the gap between supply and demand is widening year for year.

China's Oil Demand, Net Imports and Degree of Dependence on Imports⁴

Year	2000	2010	2020
Demand volume (Mt)	224		
Energy Research Institute of NDRC		335~357	430~475
IEA		377	552
EIA		340	525
Import volume (Mt)	69.6		
Energy Research Institute NDRC		155~187	240~295
IEA		230	425
EIA		185	380
Degree of dependence on imports (%)	31.0		
Energy Research Institute NDRC		46~52	59~62
IEA		61	77
EIA		54	72

There are mainly four approaches that could be applied to tackle these problems: First, to keep making efficiency of oil/gas use the top priority

³ Ibid.

⁴ The data comes from IEA, China Energy Outlook 2002, and DOE/EIA, International Energy Outlook 2002.

and to control and lower the increase of demand. Second, to make use of the vast potential offered by domestic resources, to increase prospecting and development efforts, and to explore energy potentials. Third, to use policy to boost energy development in a variety of aspects, by engaging actively in technology development, and taking major steps to develop and use new energies and renewable energy. Fourth, to make efficient use of international oil/gas resources.

In order to make efficient use of international energy resources, China must further enhance its understanding of the importance, necessity and urgency of international energy cooperation; accurately grasp the possibility of embarking on international energy cooperation; manage the important opportunity for strategic development given in the coming fifteen years (to 2020). China needs to firmly establish and adopt the new concept of energy security, which is characterized by mutually beneficial cooperation, diverse development and coordinated guarantees. The country needs to improve its ability to seize opportunities in the international energy market and avoid risks in the market; set up multiple, stable and reliable systems designed to ensure China's energy supply; and maintain the security of international energy with an open-markets approach. This is the key strategic choice for China at present, and it will continue to be for a long time in the future.

The will and practice of joining in bilateral and multilateral energy cooperation has induced the Chinese government to set up its own strategy of energy diplomacy.

3 Analysis of China's Energy Diplomacy: Policy and Practice

Policy

In earlier years, energy diplomacy was not given much emphasis in the country's overall diplomacy. With the Chinese economy booming and demand for imported energy rising rapidly, the objective of greatly expanding the channels for supply of imported energy has become an important task for China's energy strategy. According to the latest statistics of international energy organizations, in 2003 China's consumption of oil exceeded that of Japan for the first time, ranking just below that of the United States as second in the world.

Chinese oil consumption on a daily basis has reached 5.46 million barrels (the figure for Japan is 5.43 million barrels), accounting for 6.5% of global consumption, just below that of the United States (25.5%). And China's ratio of dependence on imported oil is close to 1/3.⁵

Due to the special strategic value of oil, the center of world oil production has become the focus of competition by different kinds of political forces. Impelled by the need of every country in the world to survive and to develop, competition for oil will be very intense and harsh. China will face substantially increased pressure from competition for oil resources. And safeguarding oil security will be more difficult in the future. In a regime designed to meet the rapidly developing economy's demand for energy, the Chinese government is starting to step up the construction of a national oil security supply system centering on national oil reserves and diverse sources of imported oil. That has meant lowering China's dependence on a single oil producing region and a single oil transport route. Energy diplomacy has thus become an important part of the country's general diplomacy. Over the past few years, it has even become an important part of summit diplomacy. Meanwhile, the diplomatic characteristics of the international activities of key Chinese energy enterprises is becoming increasingly obvious.

In March 2006, the 11th Five-Years Plan for National Economic and Social Development of the People's Republic of China clearly stated: Expand cooperation in international oil/gas development on the basis of equality and mutual benefit, actively engage with the international energy system, make full use of the international market, and ensure the security of China's energy supply.⁶ In July 2006, Chinese president Hu Jintao emphasized at the G8 Summit in St. Petersburg: "The fundamental content of China's energy strategy is to keep making energy use efficiency the top priority, to center on domestic conditions, to engage in diverse development, to protect the environment, to strengthen international, mutually beneficial cooperation, and to undertake efforts toward building up a stable, economic and clean energy supply system. We shall strengthen our cooperation with all energy producing and con-

suming countries under the principle of equality, mutual benefit and win-win to jointly maintain global energy security."⁷ The above documents and speeches all embody the requirements for a diplomatic energy strategy in relation to the Chinese national energy strategy.

The "11th Five-Year Plan" sets out detailed planning for China's economic and social development at present and for a period in the future. According to the planning, China's national development strategy can generally be summarized as: to properly handle different problems arising during development; to promote the strategic adjustment of the country's economic structure; to guarantee the fast, stable and sustainable development of the economy; to ensure a several-fold increase of GDP by 2020; to meet the demands of the people for increasing improvements of their living standards; to guarantee the stability and harmony of society; to decrease the environmental pollution caused by economic development; and to ensure improvement of the environment. In December 2006, the central economy work conference proposed a new standard of "good and fast" economic development. It emphasized that only the realization of "three coordinations", i.e. coordination of speed, quality and return; coordination of consumption, investment and export; and coordination of population, resources and the environment can guarantee good and rapid development. The strategic task of laying the groundwork for a "good and fast" development of the national economy implies a greater need for sustainable development of energy and the environment.⁸ For this reason, the Chinese national development strategy is the basis on which China's energy diplomacy is formulated.

Energy diplomacy also functions as an important boost for adopting the "going-out" strategy, an important part of the national development strategy. The development of international energy relationships can be promoted through energy diplomacy in such a way as to create a favorable international operating environment for energy enterprises and to strongly encourage other enterprises to develop international markets, increase sales of commodities, undertake engineering projects, and promote the advancement of the technology of the Chinese enterprises by

⁵ Ren Haiping, Yang Qinglong, 'New Change in World Energy Geopolitical Structure', *China Military (Use) to Civilian (Use)*, April, 2004; Ni Jianmin ed., National Energy Security Report, Beijing: People's Publishing House, pp.153-156.

⁶ <http://politics.people.com.cn/GB/1026/4208451.html>.

⁷ http://news.xinhuanet.com/newscenter/2006-07/18/content_4846539.htm.

⁸ <http://finance.people.com.cn/GB/71364/5141487.html>.

adopting new technologies and engaging in joint research and development.

China's energy diplomacy is therefore faced with difficult tasks, including the need to maintain the adequacy and stability of energy supply from abroad, to guarantee transportation security, and also to accelerate the improvement of energy technology and boost energy efficiency and environmental protection.

Practice

"Diverse development" refers to developing energy relationships in diverse directions, forms and fields. International energy relationships function as the foundation and carrier for every international actor engaged in energy activities to realize its energy interests. As a large energy importer, China must undertake steps to resolutely develop energy relationships with different actors to ensure that its international energy interests are realized.

Until now, a clear and complete Chinese international energy policy was still lacking, but this does not mean that the Chinese government has no energy diplomacy. With the objective of developing diversified energy relations, the Chinese have accomplished a lot in the practice of energy diplomacy. The followings two examples can give a general picture.

One example is China's energy cooperation with Central Asian energy suppliers. Central Asia is one of China's core areas of international energy cooperation. Over the course of more than ten years of exploration, experimentation and practice, a pattern has emerged in the gas and oil cooperation between China and Central Asian countries. This pattern is characterized by investment primarily in Kazakhstan, devotion of great efforts to building gas and oil pipelines between China and Kazakhstan,⁹ and active participation in the gas and oil exploitation of other countries, such as Turkmenistan and Uzbekistan, etc. With China's increasing dependence on imported energy, it has become imperative for China to "pluralize" gas and oil sources and increase the "security" of energy transportation with a view to ensuring state energy security. Under such circumstances, Central Asia's status in the deployment of China's energy strategy has been heightened even further.

Another example is China's energy cooperation with India, which, like China, is a large energy

consumer. Though both are energy competitors, China and India have started to cooperate in exploiting oil in Kazakhstan, jointly entering into the Sudan oil exploitation project, thus becoming business partners. They have also begun to work together in Iran. In future, China and India should work hand in hand, taking part in international energy exploitation and distribution, diversifying risks, so as to gain access to a supply of energy larger than that currently available. In June 2005, the ministers of foreign affairs from China, Russia and India held an informal meeting in Vladivostok, Russia. They released a Joint Communiqué stressing that the three countries will develop cooperation in the fields of agriculture, energy and high technology, and will take this as an opportunity to build a strategic energy triangle. One of the most important motives behind India's application for membership to the Shanghai Cooperation Organisation is its desire to seek opportunities in cooperation on oil and gas exploitation in Central Asia.

In order to understand China's energy diplomacy, we must place it in the wider context of the international energy regime.

4 The International Energy Regime: Opportunities and Challenges

The international energy regime is the institutional arrangement governing the relationship among the international energy powers, including a set of rules and mechanisms of several international organs for energy activities. The current international energy regime displays a balance between the forces and interests of key actors of international energy activities, and this is the outcome of the long-term competition between energy exporters and importers and different kinds of international energy organizations.

The current international energy regime is for the most part made and led by developed countries, with the United States as its leader. Meanwhile, with the growing shortage of oil/gas resources, the increasing rise in status of oil/gas exporters, increased competition and the forging of strategic alliances between different actors, it requires more and more effort to safeguard the rights and interests of energy importers. Efforts to use dialogue and compromise to seek common ground with different forces with different interests are at the same time being stepped up with a view to striking a favorable balance among the different parties involved.¹⁰

⁹ The CCPC Oil Pipeline from Kazakhstan to China Xinjiang began to transport oil at the end of 2006.

¹⁰ The Petersburg Declaration reflected a trend of this kind in the present international energy regime,

The current international energy regime is changeable. It is influenced not only by economic, political, and social factors of resource-rich countries but also by international political factors, particularly change in the international balance of power, adjustment of relationships among countries and changes to international rules. Meanwhile, it is also influenced by unexpected events like armed conflicts and natural disasters and international financial activities. Due to the constant change of the aforesaid factors, the international energy regime is also changeable.

The unreasonable and unfair aspects of the international economic regime are very obvious in the international energy regime. The developed countries and the international energy organizations led by them for the most part control the making of rules for different international energy activities. And most of the developing countries, and particularly the newly emerging countries, mostly have no choice but to accept the rules. The rights and interests of these countries are not appropriately reflected here. The developed countries have important political, economic and military impacts on key oil/gas producing regions, controlling the main oil transport corridors and strategic points in the world. That means, some countries control the energy security of other countries. The multinational companies, monitored by the developed countries, control most of the oil/gas resources across the world. Thus emerging countries have only the option of purchasing "second-hand" resources at a high price or engaging in energy development in politically unstable regions. In fact, there is inequality in the use of global energy resources.

China's new energy security concept is winning recognition from more and more countries. As President Hu Jintao stated at the G8 Summit in St. Petersburg, Russia, on July 17, 2006: "Most countries cannot safeguard their energy security without international cooperation. In regimes designed to safeguard global energy security, we should establish and adopt the new notion of energy security based on mutually beneficial cooperation, diverse development and coordinated assurance."¹¹ As Chinese officials from the Ministry of Foreign Affairs stated in a foreign energy policy statement: "China supports efforts

to create a stable political environment for global energy security, to resolve disputes and conflicts via dialogue and consultation according to the U.N. Charter and the rules of international law, and to develop a mutually beneficial and win-win international energy cooperation, which is the foundation and goal of Chinese foreign energy policy."

The new concept of energy security is in conformity with the needs of the era and is popular with more and more countries in the world, and it will surely serve as an enormous boost to the formation of a new international energy regime. In promoting the new Chinese concept of energy security, and by deepening the development of the globalized economy, more and more countries are coming to realize the inseparability of international energy markets. This will serve to generally increase the awareness of the need to strengthen cooperation and jointly maintain global energy security.

5 Ensuring Sustainable Development

For ensuring sustainable development, China's energy diplomacy will undoubtedly carry out the guidelines of "coexistence between energy development and eco-safety; coexistence between energy supply and technology progress". Thus, to secure access to advanced and affordable energy technologies and to promote cleaner and renewable energy sources will be focal points of China's energy diplomacy.

Energy supply and technical progress have direct connections with the sustainable development of economy and society. The realization of long-term stability of the energy supply is the central goal of sustainable development of energy. The improvement of technology is a major channel to enhance energy efficiency and to make up for the shortage of energy resources. Energy diplomacy can not only ensure a stable energy supply, but can also play a major role in accelerating technical progress.

Energy diplomacy can ensure technological progress in various aspects: by assuring access to energy-saving technologies as well as renewable energy technologies; by contributing to the diversification of energy utilization, to the optimization of industrial and consumption structure, and to the reduction of energy consumption and pollution. Forging ahead in development technology and gaining authority to formulate technical standards for new energy resources will be the focus of international competition in the field of energy technology. Especially the tech-

exemplified the spirit of energy cooperation and expressed a strong will for a better international energy environment.

¹¹ http://news.xinhuanet.com/newscenter/2006-07/18/content_4846539.htm

nical development of new energy sources will have a significant influence in sustainable energy development. Energy diplomacy must play a prominent role in this field through effective international energy technology cooperation. By now, e.g. China and EU countries have made great progress in energy technology cooperation.

There is an inherent contradiction between energy development and eco-safety. Under no condition should we seek energy development at the expense of the eco-safety or delay the former for the sake of the latter. We must find a well-balanced way for them to coexist harmoniously. Considering the progressing deterioration of the environment, it is necessary to integrate eco-safety appropriately.

China is confronted with tremendous ecological distress at home. China's large population concentrates mainly in the eastern areas, where the great increase in energy consumption causes serious environmental pollution. The country has an unreasonable structure of energy consumption: a higher proportion of energy sources with a high degree of environmental pollution such as petroleum and coal, and a lower proportion of clean energy such as natural gas and nuclear energy. China's energy is used at relatively low efficiency, with the energy-saving technique lagging far behind the international advanced level. The index of energy consumption by far exceeds that of developed countries and is higher than the world average level.

The best way to realize the coexistence between energy development and eco-safety is to carry out the Energy-Saving Law, the Renewable Energy Law, the currently pending Energy Law and other administrative statutes as supplements; to adhere to the principles of "ecology acceptance" and "ecology priority" in fields such as energy exploitation, transportation and processing; to implement the "Green GDP Strategy", to promote international technical cooperation among enterprises in the fields of discharge-reducing, energy-efficiency, as well as the development and utilization of renewable energy; to effectively maintain the eco-environment safety, to gradually reduce the dependence on import petroleum; to establish a clean, secure, economical and reliable energy supply system worldwide in the future; to fully utilize the international discharge-reducing and trade mechanism.

In terms of eco-safety, China's energy diplomacy will pay close attention to the acquisition of clean energy, and the introduction of advanced

technologies for energy-saving and pollution control. Requirements of environmental protection will be enforced as the standard for the entrance of foreign investment, gradually changing the industrial structure from high-energy-consumption and high-polluting enterprises. International cooperation can obtain financial and technical assistance for environment protection through "clean development mechanisms". The establishment and refinement of laws, rules, and systems of sanctions supervising that energy enterprises should strictly meet the requirements of eco-safety in their business activities both abroad and at home. China should enhance the international consensus and cooperation with developed countries in dealing with climate change, and practically carry out regulations such as the "National Program of Dealing With Climate Change" as well as "Energy-Saving and Discharge-Reducing Comprehensive Program". In a word, we should do our part in the global management of the environment.

6 Conclusion

As one of the five "Outreach States," one with the largest population in the world, China faces much more fierce challenges. So the seven core aims of the "St. Petersburg Action Plan" - viz. increasing the transparency, predictability and stability of global energy markets; improving the investment climate in the energy sector; enhancing energy efficiency and energy saving; diversifying the energy mix; securing critical energy infrastructure; reducing energy poverty; and addressing climate change and sustainable development - are extremely important for China. We can note that the new energy security concept proposed by Chinese President Hu is the theoretical principle guiding the formulation of China's energy diplomacy policy, which is almost completely compatible with the spirit of the Action Plan. As long as all countries, no matter what kind of countries they are - e.g. developing or developed, energy-affluent or not - are able to strengthen energy dialogue, seeking common ground while accepting existing differences, the aims of the Action Plan will be achieved.

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