CHINESE ENERGY POLICY AND ITS IMPLICATION FOR GLOBAL SUPPLY SECURITY

Antje Nötzold
Chemnitz University of Technology, Germany

Abstract

China is by now the world's largest energy consumer, accounting for 11 percent of oil, 3.5 percent of natural gas, and nearly half of all coal consumption worldwide. The IEA projects that solely China will account for 30 percent of global growth in energy demand until 2035 and its share of global energy consumption will increase to 23 percent. Since the turn of the millennium this immense rise of demand encounters increasingly tight resource markets and Beijing shows an extraordinary pragmatism to enforce its interests in terms of energy policy abroad. All political, economic and diplomatic capacities are utilized to diversify its supplies. Accordingly, the Chinese energy policy affects the world markets as well as the global supply security. Although the assessments regarding the Chinese impact on global energy supply security are quite diverse, a policy of wait and see is not sufficient. The article elaborates options to react to the challenges evolving from the Chinese energy policy.

Key Words: Chinese Energy Policy, Global Supply Security, Energy Cooperation with China,

INTRODUCTION

The energy landscape is always in a state of flux with strategic adjustments of energy politics as well as sudden occurrences like

the turmoil in the Middle East or the Fukushima disaster. Nevertheless, some basic trends could be identified to characterize major developments in terms of energy demand and supply in the mid-term until 2035[1]. World primary energy demand is projected to grow by 1.3 percent per year, which means a total increase in global energy demand of 40 percent until 2035 (International Energy Agency 2011, p.70). Fossil fuels will account for 59 percent of the increase worldwide, thus their share of world primary energy demand will only slightly decrease from 81 percent to 75 percent in 2035 (International Energy Agency 2011, pp.71, 76). Oil demand will rise from 84 million barrels per day (mb/d) in 2009 to 99 mb/d in 2035 (International Energy Agency 2011, p.76). So, "despite energy security and climate concerns, oil demand continues to grow and the global economy relies on oil more than on any other fuel" (International Energy Agency 2011, p.76). Demand for coal will increase about 25 percent (International Energy Agency 2011, p.76), while the absolute growth of natural gas consumption is nearly equal to that of oil and coal combined reaching a 54 percent increase through 2035 (International Energy Agency 2011, p.78).

Besides their increasing import dependency regarding fossil fuels the OECD (Organization for Economic Cooperation and Development) countries as traditional major energy consumers are exposed to an intensified competition with emerging countries especially those in Asia. Thus, the focus of growth in energy demand moves away from the OECD as non-OECD countries become accountable for 90 percent of global demand growth through 2035 because of higher growth rates in population, economic development, and urbanization. Their share in global energy demand will rise from 54 percent in 2010 to 64 percent in 2035 (International Energy Agency 2011, p.80). With regard to different energy sources non-OECD countries will generate 73 percent of the global increase in nuclear power, 55 percent of the increase in non-hydro renewable

1 The following figures and statements are based on the New Policies Scenario from the World Energy Outlook 2011, which takes both existing government policies and declared policy intentions into account (IEA 2011, pp.51-55).

energy and 88 percent of the increase in hydropower generation. But they will also account for all of the global growth in coal and oil demand as well as 80 percent of additional demand of natural gas (International Energy Agency 2011, pp.42, 80). However, the region "Asia Pacific" holds only 3.3 percent of global oil and 8.7 percent of global natural gas reserves meaning that four-fifths of the oil consumed in non-OECD Asia will have to come from imports in 2035, compared with just over half in 2010 (British Petroleum 2011, pp.6, 20; International Energy Agency 2011, p.41). "The rising dependence on imports in some non-OECD regions, particularly in Asia, will inevitably heighten concerns about supply security, as reliance grows on supplies from a small number of producers, especially in the Middle East and North Africa" (International Energy Agency 2011, p.136).

INCREASE OF CHINESE DEMAND

These trends are much more pronounced with regard to the People's Republic of China. Today (2010) China consumes 11 percent of oil, 3.5 percent of natural gas, and nearly half of all coal worldwide (British Petroleum 2011, pp.9, 23, 33). Already by now the country is the world's largest energy consumer. The growth of Chinese energy demand had been tremendous and will continue: "From consuming less than half as much energy as the United States in 2000, it now consumes slightly more and is projected to consume nearly 70% more than the United States in 2035" (International Energy Agency 2011, p.80). Nevertheless, China's per-capita energy consumption is still around one third of OECD average (International Energy Agency 2007, p.265). Meaning that regardless of the varying degrees of economic growth the Chinese energy demand will keep increasing. The IEA projects that until 2035 China will account solely for 30 percent of global growth in energy demand and its share of global energy consumption will increase from 11 percent in 2000 to 23 percent in 2035 (International Energy Agency 2011, p.80).

The enormous increase in oil and natural gas demand could not be covered from China's own deposits. From being currently the third largest oil importer after the United States and Japan, China will overtake the United States in terms of oil imports around 2020. By 2030 the country will become the largest oil consumer in the world, doubling the amount used in 2009 and consuming around 15 mb/d (International Energy Agency 2011, p.80). Furthermore, China has been a net importer of natural gas since 2006 and of coal since 2007. By dominating global coal consumption, China will be the pivotal actor determining the future development and importance of coal (International Energy Agency 2011, p.78).

Hence, China has a strengthening role in global resource markets. Regarding the trade in global oil, coal and increasingly natural gas, China's demand and politics will be of essential importance for the relationship with energy producers and other energy importing countries, and for the global supply situation. Therefore, this article analyses the characteristics of the Chinese energy policy and their implications for other energy importing countries in practical terms. The analysis elaborates the guiding principles of Beijing's energy supply strategy and subsequently assesses possible critical effects based on the evaluation of the global supply situation in general. Thus, this study follows the concept of foreign policy evaluation by being oriented at an effectiveness analysis of politics. The evaluation of Chinese energy policy is not narrowed to specific dependent and independent variables on purpose rather to enlighten global interdendences and their implications.

GLOBAL SUPPLY SITUATION

On the questions of existing influencing factors and risks affecting

2 With regard to global challenges for energy supplies, the analysis will focus on crude oil and natural gas, although coal is of major significance to cover China's energy needs. However, global coal trade is to a far lesser extent subject to risks and possible bottlenecks than oil and natural gas supply.

global energy supplies[2] the geopolitical situation of the reserves shall be considered first. With around 70 percent of the conventional global oil and gas reserves (British Petroleum 2011, pp.6, 20), the so-called "strategic ellipsis" represents the region with the largest remaining reserves. It comprises the regions of the Middle East, Central Asia and the Caspian Sea area plus Russia. In the long-term, the entire global energy demand will therefore have to concentrate on these three regions, since their reserves will be the last to run out. In spite of the dominating production volumes in the Middle East and Russia, there will still be opportunities for diversification in the medium term. For oil, slight increases in production are expected in Russia, Africa and the Caspian Sea area. For gas, the significance of the Caspian Sea area, Africa and especially the Middle East will grow. In this context, the technology of liquified natural gas in particular, referred to as LNG[3], will allow gas to be imported cost-effectively from more remote regions as well. But all consumers are affected by the fundamental problems of those regions, namely their political and socio-economic instabilities, which make it more difficult to eliminate possible energy bottlenecks through drastic price increases or even more seriously through supply crises. Today, 10 of the 14 leading oil exporting states are classified as unstable, which means that 50 percent of the worldwide energy demand is covered by countries, whose domestic political instability represents a high risk for a reliable supply of all fuel importers. Those instabilities could result in temporary supply disruptions or stoppages. Furthermore, they particularly affect the conditions for investments in the production and export installations of the regions and also the possible production volumes in the long-term. Investments of nearly 20 trillion US dollars will be required only within the oil and gas sector in the period to 2035 which correspond to several hundred billion US dollars a year. Most of the investment will be required in the field of exploration and development of deposits, including bringing new fields on stream and sustaining

3 Natural gas is liquified by cooling it to minus 160 degree Celsius.

output at existing fields (International Energy Agency 2011, p.97). To cover the expected oil demand of around 100 million barrels a day in 2035 (International Energy Agency 2011, p.76), it will be necessary to develop an additional 20 million barrels of daily production capacity. A large proportion of the current production of around 80 million barrels also needs to be replaced within the coming years, since many producing fields are becoming depleted. Furthermore, the export infrastructure needs to be refurbished and expanded, and reserve production capacities need to be increased.

Another influencing factor is the geographic distance between the areas of fossil fuel production and consumption. The fuel needs to be transported around the world, many times over vast distances. By 2035 inter-regional oil trade will have increased sharply by around 30 percent and trade in natural gas will have doubled (International Energy Agency 2011, p.69). Crude oil and natural gas are transported mainly by tanker ships or pipelines. While pipelines are reliable, unaffected by environmental factors and most economical within the same continent, they do require high investment, take a long time to build and are inflexible since they are tied to a specific route. In most cases, they also cross transit countries, whose willingness to cooperate and whose political stability is also crucial for a steady supply. Transporting oil is relatively competitive, even over long distances. In general, the transportation of natural gas is considerably more cost-intensive and over longer distances the use of pipelines are not economical. However, natural gas can be transported in special tankers as LNG (Liquefied Natural Gas). This alternative initially is more capital-intensive since liquefaction installations, special tankers, terminals with storage containers and regasification installations are required. Technological advances have made LNG and the transportation of gas over large distances more economical within the last decade. This means that LNG might open up new import regions especially in Europe, which obtains its natural gas predominantly via pipelines. Hence, LNG might establish a limited spot market for natural gas, which could compensate short-term

supply disruptions.

Three quarters of all crude oil is already transported by tanker, since this form of transport is cheaper and provides flexibility. However, an additional growing LNG trade will increase the risks involved in tanker transportation. The main shipping routes of oil transportation are characterized by so-called choke points. A total of roughly 37 million barrels of crude oil are transported through these canals, straits and waterways every day. Virtually all oil from the Middle East is exported through these strategically crucial choke points. Some 17 million barrels per day (around 20 percent of the worldwide oil demand) pass through the Strait of Hormuz. For exports to Europe, the tankers also have to pass through the Bab el-Mandab passage and the Suez Canal, and those bound for Asia through the Strait of Malacca. Besides these waterways becoming overcrowded, the security of the tankers represents an even greater risk. In these very narrow areas, they are vulnerable to piracy, terror attacks and accidents. The mentioned choke points therefore represent high risk areas. There is the threat of leaking oil or the explosion hazard of LNG tankers to be considered. The blockade of an important trade route would seriously disrupt the transportation chains and thereby the global supplies of oil and gas. At the same time "globally, reliance grows on a relatively small number of producers, mainly in the MENA (Middle East and North Africa) region, with oil shipped along vulnerable supply routes" (International Energy Agency 2011, p.41).

Such supply disruptions would affect all consumers through repercussions for the global markets and oil pricing, especially with regard to low levels of free production capacities. Up to the onset of the economic crisis in the middle of 2008, there was a dramatic decline in free production capacities over a several year period. In addition to the enormous increase in demand since 2004, amajor reason was the phase of low oil prices at the end of the 90s. This was a result of the financial crisis in Asia. Between the end of 1998 and the beginning of 1999, the oil prices fell below 10 US dollars per barrel. In combination with uncertainty about future demand, exploration activities and investments for

long-term capacity increases were put on hold. Due to the long planning time involved, this cannot be remedied at short notice. Consequently, the entire production capacity had to be used to satisfy rising demand. This meant that there was hardly any reserve supply available to compensate possible supply disruptions in times of crisis or conflict by temporarily increasing production. If there is hardly any reserve supply available, the market reaction is very sensitive to the smallest losses of production because of the lack of a buffer. Examples of this included fears of unrest in the Middle East or sanctions against Iran, as well as hurricanes in the Gulf of Mexico such as Katrina, which were immediately reflected in sudden jumps of prices in the oil market.

As a consequence of the large drop in oil prices at the breakout of the worldwide economic crisis in 2008, there is a threat of this situation recurring. The IEA has already forecast possible bottlenecks in the supply of oil, since many production countries postponed investment plans for projects to develop new fields which are getting more and more costly.

CHARACTERISTICS OF CHINESE POLICY TO SECURE ENERGY SUPPLIES

The challenge for traditional energy consumers and importers does not arise just from the sheer quantity of rising Chinese demand for imports, most notably for oil. According to current prognoses, the global reserves and resources of fossil fuels are in the mid-term sufficient to meet growing worldwide demand. The stress for the global supply situation rather results from the enormous dynamics characterizing the development of Chinese energy consumption within the last two decades and will continue to do so in the foreseeable future. Until 1993, China had been a gross exporter of all fossil fuels. However, "[i]n less than a generation, China has moved from being a minor and largely self-sufficient energy consumer to becoming the world's fastest-growing energy consumer and a major player on the global energy

market." (International Energy Agency 2007, p.262) Since the turn of the millennium this immense rise of demand encounters increasingly tight resource markets, particularly regarding crude oil. Accordingly, the Chinese policy to secure their energy demand affects the world market as well as the global supply security and therefore does for sure have an impact on the supply situation of other major energy consumers. In the following, this article elaborates the characteristics of the Chinese energy policy, which is often simply stigmatized as "aggressive," subsequently to deduce possible effects on the global state of supply security and the need for action from other consumers as appropriate.

The Chinese leadership assesses supply security as a primary and strategic objective in terms of energy policy. Social peace and stability requires on-going economic growth, which in turn is dependent on a continuous supply with the necessary sources of raw material and energy. Hence, for the Chinese leadership supply security correlates with the maintenance of their claim of power, their authority and hegemony in the country. Consequently, the permanent availability of energy is a center for Chinese politics. Yet, Beijing believes it is subjected to significant disadvantages and faces considerable threats regarding possible supply disruptions, because China as a consumer entered the global resource markets comparatively late and with a tremendous rising demand.

Beijing considers securing supplies through state supervision and funding as a central governmental duty. This is a way to assert and direct its energy interests domestically and abroad. The Chinese government deems energy security is too essential to dedicate it to the markets (Kreft 2006, p.53). The reason behind this is the skepticism towards the view of Western consumers as the European Union holds. This view is that oil, other fuels, and raw materials will always be available on the world market and supply could be secured by paying appropriate prices. In contrast, the Chinese approaches to endeavor to control over exploitation of energy sources abroad through state controlled oil companies, which should provide more secure and lower-priced supplies than the world market (Andrews-Speed, Liao, Dannreuther 2002, p.37).

In the event of a crisis, Beijing expects national oil companies to provide supplies for China with the so called "equity oil"[4] they produced abroad (Rudyak 2008, p.5).

The pursuit of state control over energy supplies is connected with the impetus of the Chinese leadership to retain independence as far as possible in the field of energy supplies as well as of foreign affairs in general. Although in the course of becoming dependent on imports of raw materials and energy sources as well as on foreign sales markets, China was forced to drop the idea of autarky. Nevertheless, the leitmotiv of independence still exerts considerable influence on the strategic approach of Chinese politics. As imports of oil and since some years of natural gas could not be prevented the Chinese leadership turns its attention to the management of the dependences and risks involved. Therefore, "equity oil" is seen as an appropriate instrument to maintain independence and state control despite import needs.

Beijing shows an extraordinary pragmatism to enforce its interests in terms of energy policy abroad. All political, economic and diplomatic capacities are utilized to diversify its supplies, to gain concessions for oil and natural gas exploration and exploitation, to establish good trade relations and so to accomplish the strategic objective of securing supplies (Sandschneider 2007, p.213). Therefore, the Chinese government supports the national oil companies with intensive diplomatic activities in all corners of the world. At the same time energy related interests are incorporated in a broad spectrum of trade and development issues like infrastructure projects or loans to enhance the incentives to cooperate with Chinese companies.

During a meeting of the Forum China–Africa Cooperation in November 2006, China for instance announced an action plan which included three billion US–Dollar development aids until 2009 as well as a considerable debt relief for the poorest African countries (Rudyak 2008, p.5). Furthermore, Beijing offered favorable

4 Equity oil means the proportion of production that a concession owner has the legal and contractual right to retain.

conditions for loans for resource rich countries, for example, two billion US-Dollar over 17 year at a rate of 1.5 per cent for Angola where was destroyed by civil war (Evans, Downs 2006, p.3). Nevertheless, prestige's buildings like palaces or sports stadiums are only a part of Beijing gift portfolio. Meanwhile China's broad investment policy covers all relevant infrastructural areas from the transport sector to electricity and telecommunications through to water supply and health care.

Western countries increasingly denounce this practice because it undermines their efforts to promote good governance, human rights and free trade by linking their investments with conditions for economic and political reforms and the protection of human rights. In contrast, Beijing refers to the "Five Principles of Peaceful Coexistence" in its foreign affairs which consists of mutual respect for sovereignty and territorial integrity, mutual non-aggression, non-interference in each other's internal affairs, equality and mutual benefit, and peaceful coexistence. Correspondingly, China officially does not combine any political conditions[5] with its investment in energy issues referring to the principle of non-interference in domestic affairs of other countries.

Beijing purposely aims to represent an alternative and attractive model to the Western conception for isolated and not strategically bound states to compensate for the disadvantages they perceive being a late entrant at the global resource markets. China had to acquiesce backstrokes during the pursuit of its energy interest in some countries, thus takes the protection of its investment seriously. Hence, especially its investments in Iran and Sudan are assessed of pivotal importance because they are shielded against Western competitors (Tull 2005, p.21).

Therefore, as a part of this "niche strategy" the Chinese government on the one hand is pragmatic and politically resolute, not to impose conditionson domestic circumstances or reform requirements. On the other hand it is willing to bear higher costs

5 Except the acknowledgment of the "One-China principle": the official doctrine that Taiwan is a province of China.

and risks. For the Chinese leadership the benefit of investment is not only measured according to economic criteria but also with regard to strategic aspects. So state controlled companies also invest under difficult conditions and in risky projects, which private international energy companies would not value as profitable. Nevertheless, the investment of Chinese energy companies represents only isolated arrangements corresponding to afforded opportunities (Rudyak 2008, p.17). Although Chinese energy companies are active in numerous countries and could achieve equity shares in over 30 states, those projects mainly are relatively small and bear higher costs and risks (Mitchell, Lahn 2007, p.7). So the "shopping policy" of Chinese companies is affected by state support and subsidies rather than a solid evaluation of financial risks. However, from Beijing's point of view China is forced to use these risky and political questionable niches in order to secure their energy supplies, because Western companies already dominate the business and have divided the big oil and gas producers among them.

CONSEQUENCES OF THE CHINESE ENERGY POLICY

The picture of experts draw regarding the consequences of these characteristics of Chinese energy policy for other consumers worldwide stretch from black to white as summarized below. At first glance, the late entrant, China, appears to be a disruptive element or even a troublemaker, who neglects the well-established rules of the game attempting to put competitors out of the narrowing market. This competitive approach of a zero-sum game regarding the access to the remaining resource deposits, the influence on energy exporting countries, and the perception of energy supplies is dominant in China but could be noticed in the U.S. and European countries with varying degrees of intensity, too (Bremner 2006; Müller 2006, pp.19-20; Hatemie, Wedemann 2007, pp.108-9). The assessment of Beijing as a dangerous rival expresses fears of policy makers and businesspersons with regard to the fast growing energy demand of China in conjunction with

the increased investment activity of Chinese companies abroad. The Chinese efforts to secure their energy needs and diversify their imports are criticized as aggressive, risky in regional and international stability and security as well as in causing conflict. On top of that, the tremendous growth of energy consumption in China has been blamed as a crucial factor for rising oil prices since 2000 (Cornelius 2005, pp.21–22).

Other authors do not complain about the fast rising energy demand in China or increasing competition on resource markets as a result of the market entry of China in general. Rather they criticize the strategic approach of the government by trying to secure energy supplies through massive diplomatic state backing and subsidies and through "equity oil" (Tang 2006, p.6; Rosen, Houser 2007, p.32; Kreft 2006, pp.54–55; Mayer 2007, p.63). The efforts of the Chinese leadership to control resource deposits and production abroad through their national oil companies and the aim to transfer the fossil fuels past the market if circumstances require awakens anxieties regarding a disturbance or even breakdown of existing supply structures. Some analysts are concerned, that "equity oil," which would be transferred directly to China, is out of reach for other consumers. Therefore it would reduce the flexibility of the global oil market to balance unexpected supply disruptions or jumps in demand.

Basically, direct imports of "equity oil" constrain the functioning of global market forces to balance supply and demand. However, the effects of Chinese "equity oil" for other energy consumers worldwide have to be relativized with regard of three aspects: First, until now and in the foreseeable future, Chinese companies control just around one percent of the global crude oil production which would satisfy ten percent of the Chinese oil demand at most (Mayer 2007, p.63). Second, the critical assessment of this "equity oil" strategy is based on the assumption, that Chinese oil companies automatically and solely transport their overseas production to China and do not sell it on the world market. But Chinese oil companies indeed do sell their "equity oil" mainly on the world market as a result of state price regulations for energy

fuels and products in China as well as due to difficult transport conditions, long distances, and missing pipeline links to the country. Hence, in practice the anticipated company profit outweighs political and strategic considerations so far. Third, the input of "equity oil" in the domestic market would reduce the Chinese demand to buy oil on the global market. Consequently oil, which then is not bought by the Chinese, would be available for other consumers (Downs 2007, p.47; Rosen, Houser 2007, p.33). Against the background of these arguments and in comparison with the behavior of other import dependent countries' some experts assess China as an ordinary market player. They argue that in all objectivity Beijing acts in a similar way and likewise as forceful as other countries (Mayer 2007, p.64).

Furthermore, estimations differentiate with regard to the potential threat for private energy companies and global supply security resulting from the control and massive support of the Chinese government for national companies. On one hand, the companies capitalize on Beijing's financial and diplomatic support, but on the other hand they act in their own, profit-oriented interest. Hence, the behavior of the Chinese companies being the backbone of securing supplies is often evaluated as cooperative and market-oriented but highly pragmatic (Mayer 2007, p.64). Despite of their competition-distorting state support, Chinese oil companies could only acquire a few attractive deposits and projects so far. In Africa, for example, they have equity shares in oil production in 15 countries, which all together yielded less then 300,000 barrels per day and so less than the production of any other big international energy company (Downs 2007, p.43). In reference to foreign reserves and production, Chinese oil companies are still relatively minor players in comparison with big international private energy companies like Exxon Mobile, Chevron, Royal Dutch Shell, or British Petroleum.

Apart from these negative or more neutral evaluations of Chinese politics some aspects of Beijing's energy supply activities are welcomed by other consumers. The outlined "niche strategy" admittedly generates political, strategic and humanitarian challenges

for the international community even though it does not necessarily threaten the international supply situation. It is rather an issue to expose a positive effect. In the course of the "niche strategy," China also invests in risky regions as well as sparsely profit-making explorations and exploitation projects. As a result, it expands global production of fossil fuels. Being far less restricted by political or profit-oriented constraints like Western energy companies, Chinese firms could get involved in smaller deposits as well as in countries others have to stay outside for instance due to political reasons or economic sanctions (Zweig, Bi 2005, p.26). In this way, China lifts crude oil and natural gas which otherwise would probably not have been exploited. Furthermore, the exploitation of smaller and alternative deposits is conducive to reduce the dependency on some dominating resource regions like the Middle East or the former Soviet Union and therefore improves the global supply situation.

NECESSITY TO REACT

Although the assessments presented are quite diverseregarding the Chinese impact on global energy supply security, with the exception of the extreme position – China grasps the resources from other consumers – they all apply depending on the situation or region and are part of the overall picture. Many traditional energy importers like the OECD countries focus on a market-based approach to secure their energy supplies. This means they bank on the forces of the global market to bring supply into accordance with their demand for appropriate prices. For them, the effects of the Chinese energy policy on the future functioning of the world market will be the crucial issue. Within the last decades, the industrialized countries as major consumers of energy based their supply politics on the principles of interdependence with producers, on market-based regulations, and on a common trade policy. Currently, Chinese energy policy challenges the existing supply system because Beijing does not aspire to fully

integrate in the world market and to commit itself to the rules the others have laid down. Instead, China aims to get an exclusive access to resources by utilizing both economic incentives and political instruments.

Beijing is not the sole or first player pursuing a strategic approach and counteracting free market-forces. Nevertheless, China's rising economic and political influence all over the world in combination with the enormous dynamic of its further demand increase implies a new challenge for global resource markets. In contrast to other countries following a strategic approach in order to secure energy supplies, China progressively acts global and pragmatically cooperates with any regime. Beijing emphasizes a strategic supply policy with regard to the importance of secure and continuous energy supplies for further economic development, the social stability of the country, the maintenance of leadership of the communist party, as well as ensuring maximum independence, and expanding international influence.

In the course of this strategic approach, China's supply activities increasingly cause interactions with other policy areas which are instrumentalized to conduce to the major objective of supply security. Consequently, this involves the risk that economic competition about the access to remaining resources is entangled in political issues. Gaining more and more significance China and its strategic energy approach interfere with the functioning of the so far prevailing market-based system. Since the beginning of the millennium, nexus between energy policy and strategic geopolitical interests in foreign and security issues strengthen. Foreign policy calculations incorporate energy resources as strategic goods instead of only evaluating them from an economic point of view. This trend could have a crucial impact for energy consumers who trust in a market-based approach to secure their supplies. A successful performance of their energy policy could be sorely affected through strategic interferences in the functioning of the world market.

ANSWERS TO THE CHINESE CHALLENGE

Even though the assessment of the Chinese energy policy and its impacts on other consumers are diverse, a policy of wait and see is not sufficient. In the mid-term, Beijing will emerge as the biggest energy consumer worldwide with rising import dependence and become a global actor, which interests should be taken seriously. Yet, the Chinese government does not entirely isolate themselves, rather it relatively open to consultations with foreign experts and international organizations and their lessons learned in some fields of energy politics. European expertise, for instance, was included in the process of restructuring Chinese energy administration as well as in the new comprehensive energy law (Wang 2007).

Hence, the article elaborates options to react to the perceived challenges evolving from the Chinese energy policy from a European perspective. The areas of climate protection and energy supply security could be important fields for a closer partnership between Brussels and Beijing based on global challenges and their political priorities and could offer opportunities of influence for Europe within the next decades. But any attempt for cooperation in terms of primary energy policy has to target the respective perception of risks for secure energy supplies. Within the worldwide energy supply system, producers and consumers have common interests. They depend on one another and they all intent on diversifying their import respectively export markets. Both desire reliable, transparent and consistent trade relationships and both need secure transport channels. Similarly, energy consumers among themselves share common interests. Their individual supply situation is shaped by the same influencing factors and risks for all consumers, as outlined earlier. Thus, energy supply is characterized by a worldwide interdependence and no player can bring about a lasting solution on its own. Hence, the understanding has to become prevalent in China as well as other energy importing countries that securing energy supplies is not a zero sum game. This perception contradicts the existing supply interdependences between energy consumers.

Since the 1990s, the number of buyers on global resource markets has increased as the volume of energy imports significantly. Simultaneously the number of energy exporters decreased. To put it simply, more and more consumers urge to gain access to energy imports from fewer producers. As a result, the balance of power between energy producing and energy consumer countries shifts in favor of the producers. Furthermore, state owned or controlled energy companies command 51 percent of global oil and natural gas production as well as 71 percent of the remaining reserves (Umbach 2006, p.52). Against this background, increasing communication and networking between major energy consumers would instead be the best insurance against politically motivated supply disruptions (Zha 2006, p.2).

The global financial and economic crisis since 2008 has visualized the interdependence within the global economy and its trade flows. Therefore, it must be in the interest of every energy consumer that other countries are able to satisfy their energy requirements and sustain their economic strength, too. If the Chinese, European or U.S. economy would collapse in the wake of massive energy supply bottlenecks, the economic development and stability of others would also be at risk due to international division of labor and global sales markets. Securing energy supplies should be perceived as a collective problem and concomitant as a chance for cooperative rather confrontative relations between consumers. Therefore, OECD countries should engage in the field of supply security which is of crucial importance for Beijing, for mutual benefits.

An essential starting point for cooperation would basically be to assess the rising energy demand as a normal phenomenon of economic development, rather than to demonize China. Terms like "energy thirst" send a wrong signal to Beijing. Similarly, the increase of Chinese oil imports should not be misrepresented as a global problem, rather than utilized as a growing connection between Beijing and the rest of the world. Politicians should comprehend, that an uninterrupted energy supply is crucial for the economic and social situation of a country (Zweig, Bi 2005,

p.38). Instead of constantly naming and shaming Beijing for rising energy prices and difficult supply situations, OECD countries should try to incorporate China in the global energy market.

Furthermore, China should not be assessed as unique rather than different in regard of its size, cultural background and the quantity of its energy needs. If the country really is unique, it could refuse its integration in international systems under the existing regulations as well as reject policy suggestions being irrelevant for China (Andrews-Speed 2004, p.366). Instead, OECD countries should strive to integrate China in the global resource markets. However, this would require allowing Beijing to co-determine their configuration and regulations. Only then, would China be interested in their compliance and protection.

Within the last few years China's attitude towards the international system and its regulations shifted from initial rejection to acceptance in some cases and to some attempts to influence it from inside (Hilpert 2005, p.6). This development should be welcomed. At the same time, Beijing still is dissatisfied with that it did not participate in the development of the configuration such as in the field of energy politics (Hilpert 2005, p.36). Thus, China should be included in the advancement of international regulations to enhance their power of self-assertion, in particular within the field of energy trading. The cooperation could be based on common interests of all energy importing countries like affordable energy prices, secure transport channels, and a stable international environment. These attempts could refer to China's white paper "China's Energy Conditions and Policies":

> China is an active participant in international energy cooperation. […]In international cooperation in the field of energy, China has not only shouldered a wide range of international obligations, but also played an active and constructive role. […] China will actively expand international energy trade, promote the complementary advantages of the international energy market and maintain the stability of this market. China will pursue energy imports and exports, and improve

> policies for fair trade in accordance with its commitments to the WTO and the WTO rules. […] To realize a steady and orderly development of the world economy, it is necessary to promote economic globalization to develop in a direction featuring balance, universal benefit and win-win, and it is necessary for the international community to foster a new concept of energy security characterized by mutual benefit and cooperation, diversified development and coordinated guarantee (Information Office of the State Council of the People's Republic of China 2007).

As an important energy consuming and importing country, China increasingly gets involved in global energy trading by default. This trend should be taken advantage of to actively incorporate this important player in the world market. Especially against the backdrop of a beginning discourse in China about the efficiency and benefits of its "equity oil" strategy, which despite some successful diversification efforts fail to provide neither independence in Chinese energy supply nor a status of absolute supply security. "These Chinese investment forays often in faraway lands do not really promise China any real energy security" (Blair, Chen, Hagt 2006, p.35).

On one hand, from Beijing this would require substantial confidence in the capability of the world market to provide sufficient oil for China and its growing demand. On the other hand, Western politics have to take into account that within the global market China transformed from an onlooker to an important player. Thus, Beijing should be granted more opportunities and out of this more responsibility for the backing of the world market (Mao 2006, p.114). The traditional main actors ought to hand over some of their arrangement authority to take the increased role of new actors into account and improve the supply security through the world market for all energy consumers (International Energy Agency 2007, pp.230-31).

China should become a member of organizations related to energy the International Energy Agency (IEA) in order to be engaged in

the determination of resource markets and energy trading. Beijing would benefit from the profound knowledge and best practice expertise of the IEA, especially in the field of effective arrangement of administrative institutions, implementation of political measures as well as know-how transfer regarding energy efficiency, renewable energies and clean-coal-technology. OECD countries could gather more information about development within the Chinese energy sector. Furthermore, the International Energy Agency would maintain its original conception to counterbalance producer organizations, especially the Organization of Petroleum Exporting Countries (OPEC). While OPEC will become more and more important to expand global oil production and its production share will increase with certainty, the proportion of IEA members of global oil consumption is rapidly decreasing. However, neither the International Energy Agency nor any other existing organization in the field of energy politics provides a facility to discipline aggressive investment methods – not to mention that China would not be forced to join and comply (Rosen, Houser 2007, pp.41-43).

To motivate Beijing to cooperate by its own choice, possible partnerships should apply to areas of special interest for China like technologies and experiences regarding exploitation and applications of fossil and renewable fuels as well as energy efficiency. China would get the opportunity to limit or avoid former mistakes in these fields and create a comparatively modern energy system. However, it is essential for the cooperation partners to mind their economic and political interests and take their enforcement seriously. In this way cooperation regarding energy technologies would not only facilitate know-how transfer for China but also opens huge business opportunities for foreign companies. The giant Chinese market offers the possibility for quicker amortization of investment costs, thus to keep a technological leadership role. While Europe on the one hand is a source of alternative and more efficient energy technologies, on the other hand it needs big sales markets like China to generate the critical mass and economies of scale in production and application in order to rapidly enhance and distribute new technologies (International Energy Agency 2007,

p.236; Cossick, Reuter 2007, p.28).

The ambitious targets of the Chinese government regarding improvements of energy efficiency and renewable energy usage formulated in the eleventh and twelfth Five Year Plan could be utilized to intensify cooperation in these areas. OECD countries or regional organizations like the European Union and China should exchange their experiences regarding the application of new energy sources and agree upon common product standards to generate economies of scale and improve the learning curve effects (Cossick, Reuter 2007, pp.38-39). Together they could determine global standards for energy efficient products as well as enhance the quality and availability of technical equipment regarding renewable energies and the sustainability of coal usage (Royal Institute of International Affairs 2007, pp.70-73). It will be crucial for the mutual benefit of the cooperation that partners would not only deliver technology and know-how to China but also connect this to realizable concessions from Beijing in other areas like an easier access to the Chinese market, a dialogue about policies to secure energy supplies or more transparency with regard to Chinese data in energy related terms.

Furthermore, different actors and partners should improve the coordination of their approaches, methods and demands. This is especially relevant for the European Union namely both between the single member states as well as within European institutions (Algieri 2009, p.169). Despite EU strategies regarding a European China policy, member statesde facto do not oblige to the common outline rather than pursue their national economic interests (Stumbaum 2009, p.219). Beijing effectively uses the attractiveness of the Chinese market to play off investors and possible cooperation partners against each other, thus succeed in getting the best conditions for itself. In areas corresponding to its interests China is a cooperative partner, even though it always gives strong support to its own benefits. The less coordinated action and the economic rivalry between EU members as well as between OECD countries provides various opportunities for Beijing to implement this approach not alone in the field of energy. Unless Europe and

other possible cooperation partners perform en bloc they weaken their negotiation position against China.

Nevertheless, the international community should not just blame Beijing and try to domesticate the dragon, they should face the changes. This means with regard to global supply security that on one hand countries trusting in market forces should adjust their energy policy to short-and mid-term risks resulting from astrategic oriented approach that more and more new and traditional actors pursue. On the other hand the international community should promote the persuasion in Beijing that in the long-term Chinese interests are preserved best through cooperation with the international community. But first and foremost, politicians need to react in time in order to make sure that the economy would not leak its "lifeblood"as a sustained and affordable supply with energy whichis essential for the economic and social welfare of each country.

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