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China's Energy Security and Geo-Economic Interests in Central Asia

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Introduction

Energy security, a relatively new term in international relations jargon, implies states (or other political communities) securing adequate and reliable energy supplies at stable prices. Currently, this involves securing so-called primary energy supplies which include, coal, petroleum, natural gas, hydro-electricity as well as a variety of other, alternative resources. A large proportion of primary energy is converted into electricity and indeed, the more advanced an economy, the larger the proportion electricity represents of final energy consumption.

At a growth rate consistently hovering around 9 %, the rapid and somewhat gluttonous economic development in China has produced negative echo effects such as environmental degradation, economic disparities and, recently, an energy crisis. As a state develops economically, especially at the rate China has, its level of energy consumption rises as well. As long as China's population growth and economic boom continue at rapid pace, its energy consumption will continue to climb sharply as well. Recently, China became the second highest energy consumer in the world, surpassing Japan though still significantly trailing after the US. The constant and safe importation of oil has thus become a crucial issue in China's energy sector (Yang, 2001). In addition to the Middle East – China's main import conduit – most other Chinese energy investments are made in its western, Central Asian neighbors, particularly Kazakhstan. Investments to the Central Asian republics usually gravitate around constructing or repairing infrastructure that may be used for energy importation such as road works and railroad networks.

Central Asia is a significant raw materials and market place for China. Historically, China has done little to influence Central Asia, partly due to its own instability along its periphery, and internal problems in the Chinese heartland.

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The emerging arena of China's new posture is Central Asia, where, with Russia, it co-dominates the Shanghai Cooperation Organization (SCO), a nascent multilateral venture. China has gone to great lengths to foster warm relations with each of the newly independent Central Asia states. However, economic competition in Central Asia will intensify in the coming years and it is worried that more powerful competitors such as the US and Russia may become more assertive in the quest to secure regional oil supplies. Similarly, other powers such as Japan, the EU, Iran and Turkey, will also assert their influence in the region. How can we make sense the views of China regarding energy security in Central Asia and the ensuing economic benefits such energy security will likely induce? This article examines Chinese engagement in the energy sector of Central Asia by asking the question: how geo-economic factors affect China's energy strategy in Central Asia and correspond to China's economic development and social transformation.

Increasing Energy Demand and Challenges for China

China is the world's most populous country and has a rapidly growing economy. The real gross domestic product (GDP) is estimated to have grown at 11.4% in 2007, and is expected at average at 6.6% (per annum) until 2020 (World Bank, 1997). China's spectacular economic growth is largely responsible for its rising energy demands, and most projections assume that rapid growth will continue. China's rising energy demands have quickly become an issue of international politics because the sudden surge in oil imports since 2004 exceeded most predictions. At the same time there is great publicity generated as Chinese oil and gas companies seeks to acquire foreign oil assets to meet domestic demands, raising concerns among other energy dependant states that such a large and increasingly prosperous state will corner a large portion of the international energy market.

China's rapidly growing economy will drive energy demand growth of about 4-5 % annually through 2015 (China Statistic Bureau, 2008). As shown in Figure 1, total primary energy consumption in China increased from less than 18 quadrillion Btu in 1980 to 37.1 quadrillion Btu in 1996. It is projected to reach 82 quadrillion Btu by 2015 (EIA, 2008). While energy producation in China sharply increased since 1980, consumption exceeded production by the end of the 1990s, and the gap between consumption and production is continuing.

China's rapid growth in energy demand over the past two years poses challenges to its energy security. This consumption spike is fuelled by rapid general economic growth; the speed of industrialization; rapid urbanization; and growth of exports. Influence of China's rising energy demand on the world's energy and political stability can be highlighted by several points. Firstly, since 2001 the average annual growth rate of energy consumption, 4-5%, is far behind that of the GDP, which hovers around 9% annually (EIA, 2008). Secondly, in the

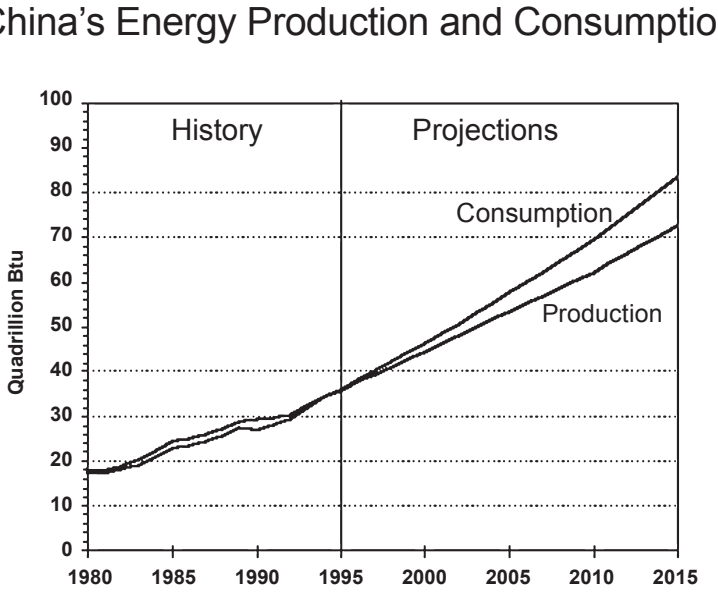

Figure 1.

Source: EIA, China Energy Situation, 2008

first two decades of economic reform, the size of China's economy quadrupled while energy consumption only doubled, a fact that can be attributed to improved energy utilization. Thirdly, China's energy demand will continue to rise despite the potential reduction in energy intensity, because its per capita energy consumption lags behind the global average. Fourthly, coal is the principal fuel source for China, accounting for nearly 60 % of primary energy production and over 70% of electricity generation (EIA, 2008).

Furthermore, China's demand for oil and gas will rise faster than its demand for coal. Oil consumption alone has risen four fold in the last two decades (Xu, 2006). Since domestic oil production has been consistent, imported oil has steadily increased since 1993. This is reflected in the figures; China's dependence on foreign oil, 6.3% in 1993 has jumped to 30% in 2000 and to 46% in 2004 (EIA, 2006). The reason oil consumption continues to rise is due to the government's desire to change the country's fuel mix; to reduce such wide reliance on coal. Also, China has signed and ratified the Kyoto Protocol (May 2008), which binds states to decrease carbon emissions in a bid to retard climate change. Coal usage is wide spread in China because of two factors: its abundance and as a result, its relatively stable and inexpensive costs. As of 2004, in China's energy mix coal consumption accounted for more than 70%, a much higher figure than the 25.5% international average (China daily, 2004).

At the same time, China is heavily investing in renewable energy sources. For instance, China envisions that 15% of its energy supplies will stem from solar power, wind power and biomass conversion by 2020 (Hayes, 2006).

Another reason for further heightened energy demand concerns the proliferation of private family cars. In 2007, energy consumption for transportation and telecommunication services accounted for 7.5% of total energy consumption. The pace of automobile ownership demands in China will create a serious challenge to energy supplies, especially oil (Xu, 2006) as the Chinese automobile industry continues to be focused on the internal combustion engine.

Domestic rescources will be unable to meet China's energy demands in general terms. Although China is rich in energy resources, it is poorly endowed on a per capita basis due to its huge population. China's vast coal reserves will continue to provide most of its electricity needs for the foreseeable future, however coal will increasingly be unable to satisfy the demands of China's ever-increasing industrial base which is starting to rely on easily accessed sweet oil for competitive production. As such, China's oil supply situation is precarious. China has proven oil reserves of 16 billion barrels (bb), which constitutes a mere 2.3% of the global total, a relative trickle for a country that contains 22% of the world's total population (BPC, 2006). This estimate includes 390 million barrels (mb) of onshore reserves and 290 mb of offshore reserves, divided between the East China Sea, the South China Sea (including the Taiwan Strait), the Yellow Sea, and the Bohai Gulf (Downs, 2000). The uneven production, consumption, and distributaion of energy will be one of China's greatest challenges over the coming years.

China's growing demand for oil production is exacerbated by the fact that the major oil fields in eastern China, which account for about 90% of total crude production, have peaked and are currently in decline. Furthermore, efforts to develop both offshore reserves and the Tarim Basin in Xinjiang Uighur Autonomous Region have proved disappointing. Offshore production for 1996 was around 7.3 mb, only 10% of the total output at a cost of more than double that of onshore wells (Sheives, 2006)**.** The potential profitability of oil exploration in the Tarim Basin, once likened to Saudi Arabia, is being seriously questioned. Investment is declining because of the failure of both Chinese and foreign companies to make the kind of discovery that would confirm the basin, which has proven reserves of only 1.5 bb, as a major oil source (Sheives, 2006). In all, China's oil production will not be able to keep pace with consumption, which is projected to increase from 3.5 mb per day (mb/d) to 8.8 mb/d over the same period (EIA, 2008).

China's natural gas supply is even more limited than oil. Proven gas reserves are listed at 41 trillion cubic feet, 0.8% of the world total. These reserves are largely undeveloped as a result of policies based on the view that natural gas exploration and prodcution is subordinate to oil leading to a lack of investment, infrasturctural development, and technological advances. However,

environemtal concerms, chronic energy imbalances and shortages, and rising petroleum imports have motivated the Chinese government to begin to develop its natural gas reserves. Most of China's natural gas is currently used for industrial purposes, but the share used for power generation and residential cooking and heating is expected to expand significantly. Natural gas prodction in China is projected to increase from 654.6 billion cubic feet in 1995 to 3.8 trillion cubic feet in 2020, with demand expected to increase from 654.6 billion cubic feet in 1995 to 5.5 trillion cubic feet in 2020 (EIA, 2006).

The widening gap between China's oil supply and demand and the projected gap between natural gas supply and demand implies that China will increasingly rely on imported oil and gas. As shown in Figure 1 above the shortfall between oil consumption and production was 400,000 barrels per day in 1996 and is projected to grow to around 5.2 mb/d in 2020 (EIA, 2008). Without new discoveries, this means that China's oil import dependence will increase from around 11% in 1996 to almost 60% in 2020 (EIA, 2008). China began importing natural gas in 2005. The share of imports in China's natural gas consumption is expected to be at least 30% by 2020 (EIA, 2008). Without the discovery of substantial new reserves or a decision by the Chinese government to reverse its policy of market reform and restrict imports, these statistics indicate that China's reliance on foreign sources of oil and gas will continue to grow over the next two decades.

China's Energy Policy and Economic Interests in Central Asia

China's foreign energy investment adopted by the government was disjointed, often fixed on multiple, mutually exclusive objectives, and designed to meet political ends at the expense of economic considerations (Xu, 2006). China's economic development has significant implications for national and global energy supplies. In the first two decades, in all three energy sub-sectors, the emphasis was on reforming industry and making it more efficient to meet domestic demands. The main foreign policy concern at the time was to ensure foreign investment and China was quite successful in targeting its energy sector (IEA, 2000). However, there was no integrated policy directing the country's energy development.

In present day China, foreign policy rather than energy policy is prioritised. The result of increased dependence on imported energy makes China's government very uncomfortable, and its foreign energy policy is about adopting a much broader strategic and diplomatic perspective than energy policy alone. China, with a share of 12% of the world's total energy consumption, is a significant player in the global energy market in its own right. It wants to be treated as a major player; demands its 'right' to share the world's energy resources; to sit at the international energy table; and is determined to do what other oil majors do in international energy markets (Xu, 2006).

China's recent foreign energy strategy has evolved into a four-pronged approach: to develop multiple import sources and import locations by increasing oil imports from Russia and Central Asia, raising the proportion of crude oil imports from Africa and Latin America, and diversifying oil imports from the Middle East to different countries; to build up oil reserves to avoid unexpected interruption; to promote and strengthen regional and bilateral energy cooperation; and to participate in the Energy Charter Treaty. To secure and diversify its access to overseas energy resources, China listed Central Asia as one of "three strategy regions" for Chinese oil companies to target. This was due to the fact that this regional focus occurred in the shadow of the US-led 'war on terror' in Afghanistan and later Iraq (Xu, 2006). However, Central Asia as part of China's energy strategy, has drawn significant international attention and the powers interested in the region tend to regard China as a regional competitor rather than a strategic partner.

Geo-economic interests in Central Asia relate to the ability of states to aquire raw materials and corner regional markets. In relation to raw material reserves, Central Asia is vital to China as it is second only to the Arabian Gulf in terms of oil resources. The Central Asian region has vast oil and gas resources – re: Kazakhstan, Turkmenistan, and to a lesser extent Uzbekistan – and China has begun to link-up energy pipelines from these states to China's western border. In June 1997, the Chinese National Petroleum Corporation (CNPC) purchased 60% of Kazakhstan's Aktyubinsk Oil Company for $4.3 billion (USD). The CNPC also announced the construction of a 3000km pipeline linking western Kazakhstan too China's Xinjiang province with a price tag of $3.5 billion (USD). In total, between 1997 and early 2005, "CNPC invested nearly $10 billion in Kazakhstan" (Fu and Han 2005; Xu 1999). It also reached preliminary agreements on oil and gas development and other Chinese investments in Uzbekistan. Considering regional stability, developmental projects in China's northwest bring some economic benefits to the Muslims in Xinjiang and may assuage some of the separatist tendencies, notwithstanding resentment towards such projects by the Muslim population to improve their standard of living (Ong, 2005). China sees the development of its western region, including increasing oil production in Xinjiang, as vital to its economic security.

The stability of China's western region, including Xinjiang, is interlaced with China's energy security and its eastern regional economic development. In terms of improving indigenous supply security, the Chinese government launched a programme of "developing the West" of which constructing a pipeline between Tarim and Shanghai was an important component to link the pipeline from Central Asia to Tarim in Xinjiang. China expects the Tarim Basin in Xinjiang to replace the northeast as its new energy base, supplying over one fifth of its total oil by 2010, including an output of 35 million tonnes and an import of 10 million tonnes of crude oil from Kazakhstan. The CNPC

raised the issue of constructing a west-east pipeline in 1996 but it was not endorsed until 2000 when the central government decided to pull the country out of the economic slow-down with the injection of huge public spending (Chung 2004).

China and Other Powers in Central Asia

As mentioned, Central Asia is an oil rich region, in which global and regional powers are interested in economic investment, providing and receiving military assistance, and carving out permanent influence in the region. US involvement in Central Asia is primarily strategic in nature, which is not only associated with access to energy but also an attempt to democratize the region. The US' concerns gravitate around the regions oil and as an important theatre in the 'war on terrorism.' Additionally, the US view this theatre as a convenient platform to counter an increasingly assertive Russia and/or China, or to blunt extensions of Iranian influence.

US officials have prioritised preventing Russia and China forming competitive blocs and alliances in Central Asia. It is these processes that reduce opportunities for genuine regional cooperation, actions permitting the free exercise of national sovereignty (Blank, 2008). The US's policy of defending the independence, integrity, and security of the Central Asian states serves to extend the vital geo-strategic interests of the US in forestalling the possible rise of a Eurasian 'empire' on either continent. Of all the major rivals for influence in Central Asia, the US is the region's foremost champion when it comes to matters of sovereignty and independence.

The US perspective on China's interests and investments in Central Asia is that of a direct threat to its interests and consequently to regional stability. The argument is that China took advantage of the absence of the US military in the region and allowing China to avoid over-reliance on sea-lanes – dominated by the US Navy – and to pass through regions where China's land power has the advantage (Blank, 2008) to ensure energy supplies. In doing so, US dominance in the region is severely constrained (Downs 2000).

The US is also continuously seeking to prevent the emergence of a Russian energy monopoly related to oil markets in the region. The US views Central Asia's large energy holdings as dominated by Russia due mainly to the dearth of pipelines which regional governments are unable to exercise effective economic or foreign policy control over thus reducing their independence and increasing their dependence on Russia. Therefore, energy access on equal terms with the US is closely linked to regional states' independence and sovereignty but 'safeguarded' by US security guarantees. The objective of US energy policy has been focused on fostering the development of multiple pipelines and links to foreign consumers and producers of energy, one recent example includes providing electricity to India (Blank, 2008).

Alternatively, China's energy policies in Central Asia reflect its foreign policy, which itself is primarily derived from perceptions of thereat to domestic security. One central motive is the need to forestall any possible threat to China's internal stability and integrity originating form the borderlands (He, 2008). Chinese foreign policy towards Central Asia is not merely energy centric, but also concerns maintaining ethno-political stability in its unstable northwest province of Xinjiang. Separatist movements in Xinjiang have actively and violently pursued independence, or at the least greater autonomy, since the PRC fully consolidated the province into China in the 1950s (Sheives, 2006). Much of the violence engaged in by this movement occurred during the 1990s, and was spurned on by a host of economic, social and political issues, such as urbanization, Han migration, and economic underdevelopment compared to China's east coast (Blank, 2008). To insure China's integrity and domestic stability, it has taken action against movements within the Turkic Ughur population; actions that escalated by Pan-Turkic nationalism in Xingjian which also began to actively and, in some cases, violently pursue similar independence commencing with the declaration of a new state called East Turestan.

Additionally and related to its energy policy towards Central Asia, China's rising energy demand became an issue of international politics due to three reasons: first, because its sudden surge in oil imports in 2004 exceeded most predictions; second because of the publicity generated by Chinese oil and gas companies seeking to acquire new foreign oil assets; and because of the perceived security implications of such demands. Both strategically and geographically, Central Asia's proximity to China provides a more secure route for accessing and transporting energy supplies. Politically, China and Russia are co-leaders of the SCO, and China shares some important political challenges with the members of this organization, including issues related to energy sector developments. Economically, the prospects are mixed, for energy products including oil, gas distillates, coal and hydroelectricity remain an excellent natural resources to the Central Asian states. However, one significant economic disadvantage is the tendency for these Central Asian States to delay investment in the transportation infrastructure needed for healthy energy trade (Sheives, 2006).

Russia, for its part, attempts to monopolize regional pipelines for its own use. In 2006, Russia proposed a SCO and Iranian gas and oil amalgamation in which Russia sought to prevent Central Asian states from selling natural gas on the open international market to customers of their choice (Blank, 2008). Attempts at establishing a Russia-led cartel would facilitate Russia's ability to squeeze European customers for economic, political, and strategic gains at the expense of Western interests. However these strategies are vital for Russia because its production costs are too high to compete on an even playing field (Blank, 2006). Central Asia's abundant energy deposits, if marketed abroad, are large enough to restrict Russia's ability to compete in world markets,

particularly the markets of India, Japan, China and South Korea, which are widely expected to surge in the next 20 years.

Regarding Russia, another objective in Central Asia relates to its fear of a growing US military challenge, particularly air strikes originating from the south of Russia, Central Asia, or possibly the Indian Ocean. Russian military planners clearly regard the US and NATO forces as its primary regional – and international – opponent. Apparently Russia is constructing an integrated land, sea and air force throughout the Caspian basin, and unified air defenses are critical to the protection of US forces in forward theatres of potential combat. Therefore, Russia is steadily moving to implement a comprehensive economic-political-military strategy in Central Asia emphasizing the safe-guarding of the regional status quo against any possible foreign threat. The Central Asian republics are members of the Commonwealth of Independent States (CIS), and their regional safety is important for Russian military planning.

China is a very keen promoter of the SCO. This is because it is aware that Central Asia is Russia's traditional stronghold and therefore considerable time and diplomatic efforts must be invested to counter Russia dominance there. The SCO is an important ingredient for economic cooperation in the energy field, in which Russia, Kazakhstan, Uzbekistan and Iran are big exporters, and China and India are significant importers. The size of the armed forces of China and Russia belong to the top three in the world (Haas, 2007). Maintaining a considerable territory in and around Central Asia, containing some 30% of the world's total population, controlling considerable energy resources, nuclear arms and significant conventional armed forces, the SCO is, in theory, a formidable economic, political and military superpower (Haas, 2007). Historically, China is less influence in Central Asia for the reason that China primarily concentrated on domestic development. China's participation in the SCO serves as an indication of a shift away from playing the role of an insular state to fulfilling a more constructive role in shaping regional security.

Furthermore, China and Russia share strategic interests in balancing against the US in Central Asia, possibly through platforms such as the SCO. Such balancing may stem from the quest to counter US encroachers in Central Asia, but may very well constrict US unilateralism in world politics. The US's economic motives and military presence in Central Asia is a part of plot to control energy resources in the Caspian Sea to reduce its import dependence on Persian Gulf supplies (Ong, 2005). The US maintains a strategy to keep the Baku-Tiblisi-Ceyhan pipeline open, thus avoiding hostile states such as Iran, and unpredictable states such as Russia.

Although China's preferred instrument for most political transactions in Central Asia is the SCO, energy deals are typically handled separately outside of this context. Despite rhetoric about multilateralism, China tends to shy away from multilateral discussions about its access to energy (Blank, 2006). It has good reasons for doing so; its success with both Russian and Central Asian

energy suppliers is inconsistent. In fact, Russia has regularly obstructed China's quest for independent access to, or ownership of, Central Asian or Russian energy. In addition to the US, China also competes with Russia for influence in Central Asia. This competition can be viewed as a continuation of the rivalry that has existed since czarist Russia expanded eastwards from the Urals.

While not as influential as the US or Russia, Iran and Turkey have also made bids at mastery of the Central Asian region. Iran's influence is not yet comprehensive enough to make a significant impact and is largely restricted to Tajikistan – the only Persian-speaking country in Central Asia. Turkey's influence is more tangible. It was the first state to recognize the independence of the post-Soviet Central Asian republics and the first to open embassies in those states. The first Turkic summit lead by Turkey, with its members: Azerbaijan, Kazakhstan, Kyrgyzstan, Turkmenistan and Uzbekistan, was held in Ankara in 1992. Since then however, the call for some form of pan-Turkism has somewhat petered out (Ong, 2005).

Other powers such as Japan and the EU also play important roles in Central Asia. The EU pays increasing attention to Central Asia for the specific purpose of gaining unhindered access to various pipelines, permitting petrol-states to sell their resources abroad without fear of Russian interventions (Matveeva, 2006). Nonetheless, the economic and political implications of Russia's control over Central Asia's relationship to the EU could have serious repercussions for all parties. As a result of this fear of continuing Russian influence, a harmony of interests has developed between the US and EU. This cooperative spirit is especially strong in light of Russia's push to establish a gas cartel between the gas-producing states of Central Asia and the Persian Gulf, through its state-owned conglomerate, Gazprom (Blank, 2008). While Russia seeks to consolidate its position, the EU has commenced an enhanced (and regular) energy dialogue with Central Asia states in the framework of the so-called Baku Initiative – a forum for energy policy dialogue between the EU, the Caspian and Black Sea States – to involve the energy market and technological cooperation with Central Asia.[2] Through this initiative, the EU intends to provide political support to Central Asian countries in developing a Caspian Sea-Black Sea-EU energy transport corridor.

Japan has also begun to seize the opportunities offered by the resource rich and stabilizing states of Central Asia. Japanese engagement in Central Asia, which although still limited, has materialized in the eighteen years since the collapse of the USSR. In terms of energy resources, Japan aims to compensate for its own lack of resources and over-dependence on Middle Eastern supplies. This may be achieved through, firstly, Japan's 'Central Asia plus Japan' dialogue initiative announced in 2004. This initiative is distinct in that it encourages Central Asian regional integration to enhance the capacities of these countries

[2] See: http://ec.europa.eu/dgs/energy_transport/international/regional/caspian/index_en.htm.

to deal with regional problems by themselves. This is in sharp contrast to the policies of China, the US, Russia and the EU, which attempt to provide political coverage for the members, or establish a type of regional hegemony. The intention of Japan is to actively and assertively pursue Central Asia diplomacy, to help the states in the region gain much needed confidence. This has both normative and realist dimensions as Japan knows that its competitive edge rests in establishing a cooperative network in which it plays a key, coordinating role. This more thoughtful approach comes as Japan realizes that it does not have the political or financial weight to counter the more aggressive Russian, Chinese and US policies in the region. Japan hopes that it can undermine these states' influence through the art of diplomacy rather than the exercise of more traditional means of power (Dadabaev, 2006). Another term of international standing, Japan's Central Asian or Silk Road diplomacy attempts to send a message to its Chinese and Russian neighbors that its policy towards Central Asian region is not motivated by a competitive drive for natural resources and geopolitical influence.

Conclusion

Post-Cold War China has vital security interests in the Central Asian region and these will increase over time due largely to considerations of domestic instability and economic advancements. China's energy strategy in Central Asia focuses on behaving like a normal player in energy markets, buying as much oil as it can, and investing in as many places as it can afford to. It is unlikely that China would be willing to seek the energy supplies at the expense of a peaceful regional and continuing economic developments.

Politically, the growth of militant Islam in Central Asia concerns China as it may act as a spark to increased separatist agitation in the Xinjiang province which would further complicate the long-anticipated stability in China's northwestern frontier. Economically, China realizes that it must compete with other great powers to secure future energy supplies in resource-rich Central Asia. Therefore, regional policy has been prioritised. In geopolitical terms, Central Asia is one of the key areas of power competition. The Central Asian states are relatively weak, and few can resist the penetration of exogenous great powers. Currently, as China and Russia are partners in the SCO, they have committed themselves to mutually compete against the US in the region. This should not undervalue China's realization of its own vulnerabilities, particularly in the area of energy security, as China is well aware of the challenges it faces from a its more traditional adversary the US and its new-found-friend, Russia. Indeed, China has recognized the challenge of a potential energy monopoly it faces from Russia as well as energy market competition with the US, Japan and the EU. One way for China to enhance its role in Central Asia is through diplomacy, and it therefore maintains good relations with the nascent Central

Asian states for regional security. Diplomacy may not always produce the results that China seeks however, and as all great powers, diplomacy veils more traditional power. For present day China, as energy security has been hoisted atop its security planning, it may become increasingly sensitive to alterations in the regional status quo. This may very well heighten already tense regional relations, though China seems well placed to positively contribute to regional security both unilaterally and through multilateral forums such as the SCO. Ultimately, time will tell as the whether Central Asia's resources and they wealth their sale generates will go towards further cooperative development projects or if a new "Great Game" will once again shape the political relationships in the Asian heartland.

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