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Dragon by the Tail: China's Energy Quandary

by John Calabrese

China's rapid economic expansion has propelled it into the position of a major actor in the international petroleum marketplace. The Chinese leadership recognizes that sustaining economic growth hinges on securing ever larger quantities of oil, much of it from abroad. Not surprisingly, therefore, they have unleashed China's three dominant energy enterprises, which are aggressively pursuing oil and gas contracts throughout the world in an effort to satisfy the country's skyrocketing energy consumption requirements. This paper examines the implications for the United States of China's emergence as a major oil importer, and of China's reliance on Middle Eastern oil in particular. To the extent that Chinese authorities consider this dependence to be a strategic liability, what adjustments have they made to minimize the risks associated with it? In what ways does China's increasing dependence on foreign oil imports intersect with American interests? Given the overall climate of Sino-American relations, what can the United States do, or refrain from doing, to help ensure that China manages its growing energy dependence in a manner that contributes to stability and prosperity in the Middle East and East Asia?

China's Energy Profile and Energy Future

Three features of China's energy profile warrant special consideration:

- the growing reliance on fossil fuels as a proportion of overall primary energy sources

· the widening "gap" between oil demand and domestic oil production

· the narrow concentration of oil import dependence on a single region, the Middle East

The impressive economic growth rates that China has recorded since the early 1990s have come with costs. One of these costs is increased dependence on foreign sources of oil. China first became a net oil importing country in 1993. With total oil demand having reached 5.26 million barrels per day (b/d), China today is the world's third largest consumer of petroleum products, ranked behind only the United States and Japan; and is the world's second-leading oil importing country after Japan.[1] It is also worth mentioning that during the years 1996-2001 — the same period in which the Asian financial crisis occurred and, as a result, most East Asian economies sharply contracted — China's net oil imports increased by 50% annually.[2]

In the past couple of years, both China's demand for oil and its oil import dependence have continued to rise. China's oil demand rose 10% in 2003, while oil imports grew by a record 31%. This surge in demand and in oil imports drove China's energy import bill up by 55%.[3] According to the International Energy Agency (IEA), China is the driving force of world energy demand, representing 35% of global demand growth in 2003.[4]

Energy analysts disagree not about whether, but about how much China's oil consumption and dependence on foreign oil supplies will grow in the coming years.[5] The Chinese government projects that oil demand will rise to about 300 mn tons by the year 2010, while the IEA provides the much larger estimate of 523 mn tons. Using the relatively conservative figure of 300 mn tons, Chinese authorities nonetheless expect to have to import half that amount to meet the country's consumption requirements.[6] The IEA estimates that, by 2020, China will have to import 70% of its crude oil and 50% of its gas.[7]

Accentuating China's dependence on foreign sources of oil is the fact that, since 1996, the lion's share of China crude oil imports (about 60%) has come from a single region, the Middle East. Furthermore, this dependence has been highly concentrated *within* that region. In 2002, for example, China's oil purchases from just three Middle Eastern countries — Saudi Arabia (11.53 mn tons), Iran

(10.73 mn tons), and Oman (8.31 mn tons) — accounted for 43.3% of its overall oil imports.[8]

What, then, is responsible for China's unquenchable thirst for oil? The most important factor driving this demand is the prodigious growth of the Chinese industrial, petrochemical, and manufacturing sectors — all of which are oil-intensive. In addition, changes in social status and behavior associated with China's economic modernization, particularly surging vehicle ownership rates, have contributed to increased oil consumption. Critically important environmental policy decisions, most notably the decision to limit the use of coal, have also led to greater reliance on oil and gas as primary energy sources.

The widening oil consumption-production gap is attributable to supply-side constraints as well. While in recent years the rate of oil demand has risen by over 4% annually, domestic oil production has grown on average at only 1.7% per year.[9] The production shortfall is partly due to bottlenecks and inefficiencies in the Chinese energy sector, as well as to the fact that some of China's oilfields have reached, or are fast approaching, maturity (e.g., output from Daqing, from which China has traditionally drawn much of its oil, is declining). In addition, in exploring and developing new fields, China is struggling with formidable geological challenges and its own technological limitations. Meanwhile, Western oil companies have been somewhat cautious in investing in energy exploration and development in China, given the bureaucratic roadblocks and uncertainties that they have encountered in doing business there. The long delay in development of the Tarim Basin in Xinjiang is a case in point, where joint venture negotiations involving an assortment of Chinese government ministries and foreign firms (Royal Dutch/Shell, Exxon Mobil, and Gazprom) have been complex and torturously slow.[10]

Though these experiences help to explain why China has become increasingly dependent on foreign sources of oil, they leave unaddressed the question of why China has become dependent, to such a high degree, on *Middle Eastern* oil. Yet, this dependence should come as no surprise, given the pivotal position that the Middle East occupies in the global oil market. After all, the Middle East contains 64% of the world's recoverable oil reserves and 25% of the world's unproven recoverable oil reserves. According to the International Energy Agency (IEA), Persian Gulf oil production is expected to reach about 30.7 million b/d by 2010, and 42.9 million bbl/d by 2020, compared to about 21.7 million bbl/d in

2000. This would increase Persian Gulf oil production capacity to 35% of the world total by 2020.[11] Of great significance also is that the Middle East is home to an estimated 90% of the world's excess production capacity. And, of course, well-head production costs for Middle Eastern oil are relatively low. The Middle East has become an increasingly attractive source of oil for China for two additional reasons: (1) the intensifying competition in East Asia for access to that region's dwindling oil/gas resources; and (2) growing demand by Chinese industries for particular grades of oil (i.e., "sweet" oil available from Saudi Arabia and Iran).

Framing China's Response to the Energy Challenge

Chinese official thinking about the implications of the country's growing oil consumption and increasing reliance on foreign sources of supply is informed by three sets of factors. The first is the relatively limited ability that China has to absorb oil supply disruptions and price spikes. The second is the prevailing climate of Sino-American bilateral relations (especially in the political-security sphere) in the context of US global supremacy (particularly the projection and use of American military power). And the third are the lessons of experience.

1. Inadequate "cushioning mechanisms": Conspicuously missing or deficient in the case of China are many of the capabilities upon which other leading oil consuming countries rely to manage the adverse effects of possible oil supply crises. At the present time, all of China's imported oil is delivered by tanker. Safeguarding these deliveries therefore means protecting sea lanes. Yet, military self-help is not a realistic option for China, which is decades away from having the assets (i.e., naval and air power, and logistical and communications technology) needed to cover the 7,000 miles of sea lanes that lie between Shanghai and the Straits of Hormuz. Nor does China have military basing rights or facilities along that route. Military cooperation to protect the maritime oil lifeline is also beyond its immediate grasp for the simple reasons that Beijing is not allied with any Western industrialized country, nor has China developed with its East Asian neighbors a region-wide collective security structure.

What of *non-military* means for buffering the Chinese economy against potential crises? At the regional level, there is no obvious or simple solution to the problem of growing oil tanker congestion and possible accidents or collisions in the Malacca Straits — the narrow passageway which most oil bound for China traverses. At the international level, China is not a member of the IEA and therefore does not have complete access to that institution's resources. At the domestic level, China's crisis preparedness is wanting. The plan to develop a 90-day national strategic oil reserve is in its nascent stage.[12] China lacks a comprehensive set of domestic laws/regulations to deal with supply disruptions. To make matters worse, China's capacity for systematic data collection, analysis, and processing about the oil market is limited.

China is vulnerable not just to supply disruptions but to price fluctuations. An example of how these reverberate throughout the Chinese economy is the OPEC decision in November 2003 to decrease production. The combination of rising crude oil prices on the international market and declining inventories in China (due to speculative hoarding and rising demand) triggered price increases in diesel oil. While profitable for the Chinese oil sector, this price hike caused a number of headaches and readjustments. It put the government in an awkward position since Chinese authorities had previously kept diesel prices artificially low for the sake of assisting industrial firms.[13] It led Sinopec and PetroChina to suspend or reduce diesel exports in order to divert supply to the domestic market.[14] This diversion, in turn, affected the regional market, especially Japan, South Korea, and Vietnam (major importers of Chinese refined oil).

2. Sino-US Relations in a Global Geopolitical Context: The Chinese leadership's concerns about energy security are partly shaped, and lately tempered, by the overall climate of Sino-American relations. This climate has unmistakably improved since 9/11. The intermittent crises that afflicted Sino-American relations in the 1990s (i.e., over Taiwan in 1995-1996, over the accidental bombing of the Chinese embassy in Belgrade in 1999) seem now a distant memory. Indeed, Sino-American relations recovered from their most recent low point (the April 2001 EP-3 US reconnaissance plane incident) with remarkable rapidity, as the Chinese leadership joined the campaign against Islamic terrorism after the September 11th attacks.

That said, the relationship with the United States had been widely regarded in Beijing as China's most important bilateral relationship long before 9/11. From the Chinese vantage point, the salience of this relationship stems partly from the pivotal role that the United States has played with respect to Taiwan — the one issue over which the US and China could fight the war that neither side wants. But it stems mainly from the ever-thickening economic linkages binding the Chinese and American economies together. Today, China's modernization depends more than ever on the United States in three respects: (1) on the performance of the US economy in generating worldwide economic growth, (2) on the US role in helping to ensure that global financial markets remain stable, and (3) on the American economy itself, both as a market for Chinese manufactures and as a source of foreign investment capital.

The Chinese leadership's concerns about energy security are also informed by their reading of the global geopolitical landscape. By far the most prominent feature of this landscape is US global supremacy. Having long favored a multipolar balance of power, the Chinese leadership has come to accept, albeit reluctantly, American preeminence as a fact that is unalterable, at least for the foreseeable future. Nevertheless, the Chinese leadership is ill at ease with the prevailing world order (read American predominance), and has strong reservations about what it regards as the unilateralist tendencies of US foreign policy. Furthermore, in light of the war in, and occupation of, Iraq as well as the penetration of US military forces into South and Central Asia, China is deeply suspicious of American intentions.

3. History's Warning: The energy trends and geopolitical conditions just described have prompted much thinking, discussion, and planning in China. The Chinese leadership, which has come to accept many of the hazards and risks associated with economic interdependence, nonetheless regards increasing reliance on foreign sources of oil as a strategic vulnerability. Comments by Chinese officials and industry analysts about China's energy situation are replete with references to the long maritime supply line and to China's heightening exposure to possible supply disruptions.

These concerns are rooted partly in China's historical experiences, which include the bitter memories of Cold War-era Western embargoes and the breakdown of Sino-Soviet relations in the

1960s. In addition, the mere fact of being dependent on the outside world — at odds with the traditional Chinese Communist Party notion of self-sufficiency — is relatively unfamiliar and unsettling. So, too, is the practice of vying for long-term access to foreign oil supplies, for China is still more accustomed to exercising leverage over foreign multinational firms for access to the domestic energy market than to competing with them for stakes in other countries. Also shaping Chinese views about dependence on energy imports are the recent experiences of others, such as that of Ukraine, whose reliance on imports from Russia has made it susceptible to political pressure by Moscow.

China's External Adjustments

Energy security is no longer a marginal factor either in China's approach to modernization or in its foreign policy decision-making and conduct. China's 10th Five Year Plan (2001-2005) refers explicitly and for the first time publicly to "energy security." There, energy security is defined in terms of guaranteeing oil supplies from abroad, and securing these supplies is viewed as essential to China's continued economic growth and modernization.

China's approach to minimizing the risks associated with growing dependence on foreign oil imports is not a coherent strategy as such. Rather, it is a collection of measures at various stages of conceptualization and execution. On the domestic front, these initiatives range from efforts to draft new fuel economy rules for motor vehicles, to the establishment of a special bureau within the State Development and Reform Commission charged with coordinating the establishment of a national strategic oil stockpile, to discussions about expanding the Chinese tanker fleet and stepping up the pace of oil terminal construction in the coastal cities.[15]

On the international front, China's efforts to offset the risks of increasing dependence on foreign oil consist mainly of state-mandated and state-supported energy industry initiatives aimed at secure long-term access to oil supplies through broadening the scope of its energy partnerships and by diversifying energy suppliers both within, and away from, the Middle East and North Africa (MENA) region. What, then, have these steps entailed? What progress has China made in achieving this aim? These questions are addressed below.

1. The Primacy of the Middle East

In mapping out a broad vision of the requirements for "energy security," the Chinese leadership has identified several "strategic regions." As a result, Chinese energy diplomacy and business activity today have become globalized. Nevertheless, most analysts believe that even if China succeeds in meeting its goals to ramp up domestic production and diversify its foreign sources of supply, the MENA region, particularly the Persian Gulf, will continue to be a vitally important source of oil for China. In fact, some Chinese energy experts predict that the country's dependence on the Middle East will grow to as much as 70-80% of total imports in the coming decade.[16] Until now, China's main Gulf partners have been Saudi Arabia, Iran, Oman, and Iraq. Though China's purchases of oil from Oman are expected to taper off in the coming years, China has already set its sights on increasing its take from Saudi Arabia and Iran, while at the same time forging new energy partnerships elsewhere in the Gulf and in the wider Middle East and North Africa (MENA) region.

Saudi Arabia: In recent years, China and Saudi Arabia have attempted to expand the scope of their energy relationship. This interest was marked by several high-profile official visits. In 1998, Crown Prince Abdullah traveled to China; a year later, then-President Jiang Zemin visited Saudi Arabia. Sandwiched between these visits, Saudi Aramco established a marketing office in Beijing. Aramco has two strategic objectives: boosting oil sales contracts and forging a strategic relationship with China, especially in the petrochemical sector.[17] Aramco's Chinese counterparts likewise have broad business agendas, seeking footholds in the downstream and upstream sectors.

There are signs of progress in the development of the Sino-Saudi energy relationship. China's oil sales contracts with Aramco have surged to 86,000 b/d.[18] Sinopec, Asia's largest refining company, which has joined China's two other energy giants in competing for overseas exploration and development contracts, recently won the bid for a natural gas project in a northwestern block of the Rub al-Khali gas fields — an area that Saudi Arabia opened up to foreign firms for the first time in 25 years.[19] Meanwhile, Sinopec is pursuing Aramco investment in construction of a $13 billion refinery in Qingdao in eastern

Shandong province,[20] and is partnering with ExxonMobil and Aramco to construct a petrochemical complex to process Saudi crude oil in Quanzhou city in the southeastern province of Fujian province.[21]

Iran: The Sino-Iranian relationship is a multifaceted one that has grown to encompass cooperation in the political, military, economic and cultural spheres. The development of this relationship has not been propelled exclusively by, but has nonetheless profited from the gridlock in US-Iranian relations. This is especially so in the energy sector, where American companies have been barred from doing business in Iran, Chinese state firms have competed with other foreign companies for access.

Both Sinopec and CNPC are active in Iran. In January 2000, Sinopec signed a contract with the National Iranian Oil Company (NIOC) to explore for oil in Zavaneh and Kashan.[22] Three years later, Sinopec's efforts bore fruit, with the drilling of a high-yield oil-gas well in Kashan. CNPC officials have reportedly been discussing oil and gas exploration options with the Mostazafan and Janbazan Foundation (MJF), Iran's largest and most powerful religious *bonyad*, which is under the ultimate control of Supreme Leader Ayatollah 'Ali Khamenei.[23]

During a visit to Iran, Mou Shuling, the head of Sinopec, reaffirmed his company's interest in entering additional joint ventures for the development of oil, gas, and petrochemicals.[24] Deputy Oil Minister Hadi Nejad Hosseinnian led an Iranian delegation on a one-week visit to China.[25]

Iraq: During the 1990s, China was among the leading purchasers of Iraqi crude oil under the United Nations oil-for-food program. According to Tian Chunrong, a senior market analyst with Sinopec, China imported 400,000 tons of crude oil from Iraq in 2001.[26] By the time of the launching of Operation Iraqi Freedom in March 2003, China had become Iraq's third-ranked oil customer.

While Saddam was still in power, China had sought to lock in long-term access to Iraqi crude oil. In June 1997, CNPC signed a preliminary contract to develop part of the Al-Adhab field, thereby hoping to obtain about 90,000 b/d.[27] Yet, all oil contracts signed during Saddam's last years in power remain suspended. Though China remains eager to enter the Iraqi energy sweepstakes, uncertainty surrounding the status of the Al-Adhab contract and questions about when and how new contracts will be awarded, have further spurred efforts to diversify supplies within the Gulf and wider Middle East, as well as in other regions.

Sudan: In recent years, Sudan has been one of China's prime targets for energy cooperation outside the Gulf.[28] In August 2003, CNPC signed a deal to build a 730-kilometer (455-mile) oil pipeline from the Fula oilfields in Western Kordofan State, central Sudan, to the main oil refinery in Khartoum. CNPC also sealed an accord to upgrade Khartoum's oil refinery in al-Jaily, 50 km. (31 mi.) north of the capital, to process 100,000 bpd, double its current capacity of 50,000 bpd.[29] It is noteworthy that CNPC officials regard Sudan as an operational base from which to conduct business elsewhere in Africa.[30]

The case of China's involvement in the Sudanese energy sector sheds light on some interesting cross-regional linkages as well. For example, officials of the Indian-owned ONGC Videsh Ltd (OVL), the overseas investment arm of ONGC reportedly approached their CNPC counterparts to discuss possible cooperation in developing a large oilfield in Sudan's Malut basin in which the latter company holds a 41% cent stake. (The remaining shares are held by Gulf Petroleum of Qatar and two Sudanese companies.) CNPC and OVL are already partners in another oilfield in Sudan's Greater Nile basin.

Algeria: In recent years, Chinese firms have steadily increased their presence in Algeria's oil and gas sector. In 2002, Sinopec struck a $25 million deal to develop the Zarzaitine field in the Shara desert, and subsequently reached an agreement to build an oil refinery in Adran.[31] CNPC and Sonatrach signed an oil and gas prospecting contract in 2003. According to the terms of the contract, CNPC is to invest $31 million and granted in return a share of production if efforts prove successful.[32]

In support of these business activities, President Hu Jintao led a delegation on a state visit to Algeria in February 2004. During the visit, the two sides produced a framework agreement whereby China pledged to provide preferential loans and expressed support for Algeria's entry into the WTO.[33]

2. The Central Asia Connection

China's attempt to gain an energy foothold in Central Asia and the Caspian is of relatively recent vintage. In the immediate aftermath of the collapse of the Soviet Union, the main objectives of China's involvement in this region were to boost cross-border agricultural and merchandise trade, and to curb transnational security threats. In the latter half of the 1990s, however, the Chinese leadership added a third objective: cooperation in the energy sector. The primary target of Chinese efforts to access Central Asian/Caspian oil and natural gas has been Kazakhstan.

China's efforts to forge energy ties with Kazakhstan have produced some tangible results. In 1997, CNPC acquired a 60% stake in the Kazakh state oil company, Aktyubinskneft, later renamed Aktobemunaygaz (Aktobe Oil and Gas). The events of the past year, particularly the war in Iraq, have prompted a new round of Chinese energy diplomacy in Central Asia. Witness the renewed interest in bringing to fruition the 3,000-mile Kazakhstan-China pipeline, long deemed by many analysts to be uneconomical.[34] Foreign Minister Li Xhaoxing's visit to the region laid the groundwork for President Hu Jintao's trip on June 2-3, 2003.[35] During the latter visit, two landmark documents were signed — a general agreement aimed at reviving a previously negotiated oil pipeline project and an agreement on increasing China's investment in oil and gas in Kazakhstan.[36] In October 2003, CNPC finalized purchase of ChevronTexaco's 65% stake of the North Buzachi oilfield. (CNPC had previously bought out Saudi Arabia's Nimir Petroleum share.)

3. The Russia Factor

The groundwork for Sino-Russian energy cooperation was laid in 1996, when a bilateral mechanism for holding regular meetings was established. In June 2001, Moscow and Beijing joined forces with four of the Central Asian states to establish the Shanghai Cooperation Organization. The next month China and Russia signed a Treaty of Friendship and Cooperation.[37]

Sino-Russian energy ties are being forged within a broad framework of economic cooperation that has produced significant gains for both countries. In 2002, two-way trade surged to $12 billion. In the first quarter of 2003, the value of trade grew by 30% over the previous year.[38] Specifically with respect to energy cooperation, China is attracted to Russia for several reasons. First, Russia possesses over 30% of the world's proven natural gas reserves — an environment-friendly and efficient fuel. Second, Eastern Siberia, where large deposits of oil and gas are concentrated, offers the advantage of proximity to China. Third, an overland supply route mitigates the risks and costs associated with maritime transport of oil, upon which China depends so heavily. In 2003, China purchased 5.25 million tons of Russian crude oil. And Chinese firms have eagerly pursued contracts to secure even greater amounts of oil over the long term.

Sino-Russian energy cooperation seems a natural match — consistent with Russia's evolution from a regional to a major global energy supplier and with China's emergence as a dynamic economic actor in the global system. But it is worth noting that China's interest in boosting such cooperation appeared to peak with the war in Iraq. In the weeks leading up to the war, Chinese scholars called for a reassessment of the role that Russia and Central Asia can and should play in the country's energy future in light of the US' dominant geopolitical position in the Persian Gulf and Caspian.[39] Clearly, this recommendation dovetailed with the thinking of the Chinese leadership. Just days after American troops entered Baghdad, Presidents Vladimir Putin and Hu Jintao (on the occasion of the latter's visit to Russia) declared an energy partnership to be a priority. Following the summit, CNPC signed a long-term supply agreement with Yukos.[40] The deal contemplates the building of an oil pipeline connecting Angarsk (in Russian Siberia) and Daqing (in China). This trunkline would allow 700 million tons of Russian crude to be shipped to China over the next 25 years. However, as will be shown, this deal has yet to be approved by the Kremlin. Indeed, it is far from clear that such approval will ever be granted.

Energy Wild Cards and Worries for China

Chinese oil companies registered record profits in the first half of 2003.[41] Flush with cash, they also enjoy a mandate from the Chinese government to spend it. But their eagerness to go on an acquisition spree occurs against a backdrop of recent disappointments and persistent ambiguities.

China's efforts to broaden and deepen energy cooperation in the Middle East have thus far fallen short of expectations. In the case of Iran, it is Japanese firms that recently landed the contract to explore and develop the Azadegan oilfield. In the case of Saudi Arabia, the opening to foreign involvement is cautious and limited, and competition fierce; meanwhile, Aramco, its recent successes notwithstanding, is still struggling to understand how the Chinese energy market works.[42] In the case of Iraq, as previously mentioned, the CNPC Al-Adhab contract remains in limbo. Furthermore, there is neither a process nor a structure yet in place for bidding for new contracts. It is also unclear how long it will take to rehabilitate Iraq's oil infrastructure, damaged by years of neglect and abuse, such that high levels of production can be reached and sustained. For the time being, therefore, long-term access to large quantities of Iraqi oil is something that China can wish for, but not count on.

Similarly, in trying to secure Central Asian oil and gas, China has had to contend with perhaps more variables than constants. First, attempts by CNOOC and Sinopec to buy from BG a stake in the Kashagan oil field were preempted by the other shareholders.[43] Second, though fully implementing the scheme to link two oilfields in west-central Kazakhstan to the Chinese market has lately received the strong backing of both governments, there remain doubts about whether the eventual payoff will be worth the sizable investment. Third, Central Asian oil production is still relatively low, and oil exports to the Asia Pacific region are minuscule. Although Central Asian oil production is expected to increase over the next decade, some experts contend that even under the brightest scenario, just a small fraction of it is likely to go to East Asia. Obstacles range from investment costs, to continuing strong influence of Russia, to the policies of the United States with respect to pipeline routing.[44] Finally, it remains to be seen what dividends China's investments will yield. The North Buzachi oilfield, for example, whose reserves are estimated at 1.5 billion barrels, had been under-performing prior to its acquisition by China. There is no assurance that this will change.[45]

Sino-Russian energy ties have yet to materialize in ways that match the pledges and the hype. It has been hard to insulate bilateral energy cooperation from Russia's political economy. Russia's oil industry remains divided over the issue of how soon and how much to invest in the Chinese market. Mikhail Khodorkovsky, chief executive of Yukos, who had lobbied for the China pipeline route from eastern Siberia, is in jail awaiting trial. Meanwhile, the Transneft state pipeline company and Rosneft oil company have been pushing for the Kremlin to approve construction of an alternative route to the Japanese market.[46] The wrangling over the pipeline route has been further complicated by centerperiphery politics in Russia, where at least one governor, Sergei Darkin, who was reportedly strongly lobbied by the Japanese, appears to have weighed in on the issue.[47] There is also dissatisfaction in Russia concerning the overall structure of Sino-Russian trade, heavily based on raw materials.[48]

China might be waiting for a favorable decision from the Kremlin for some time to come. Part of the reason for this may be the geopolitical implications of tying eastern Siberian energy fields to the Chinese market. Here, it is important to keep in mind Russia's historic fears of Chinese encroachment and demographic problem (sparse and thinning population in the Russian Far East and an otherwise dormant economy around Nakhodka). The Pacific pipeline option (favored by Tokyo) spares Russia the risk of having to depend solely on the Chinese market were the Angarsk-Daqing route chosen.

Russia's vacillation is all the more unsettling to China, given the setback that CNPC had encountered just weeks earlier in trying to buy into the Kashgan oilfield in Kazakhstan. Owing to the fact that the Siberian pipeline scheme remains deadlocked, the Chinese side has had to lower its expectations. In February 2003, China struck a new deal with Russia, scaling down the amount of oil (to 15 million tonnes) and time frame (to 6-7 years) and arranging for the oil to be shipped by rail.[49] China has also had to employ stopgap measures such as reducing production at the Daqing field as a way of prolonging its life span. This decision, in turn, has provoked concern at the local level, where the adjustment will cut substantially into the province's revenue base.[50]

Policy Implications and Recommendations for the United States

Because in recent years China has cast its net ever more widely to meet its energy requirements, Chinese interests have perforce intersected with those of the United States — in the Middle East, in Central Asia, in Russia, and in East Asia. Because of the key role that the Persian Gulf has played, and will continue to play, in the global energy marketplace (including in China's own energy future), and because of the American military presence there and in the surrounding area, the stakes for both countries are arguably higher than they are anywhere else.

The stability of the oil market, and by extension peace and security in the Middle East, are interests that China holds in common with the United States. Chinese officials might take some comfort from the fact that the United States, whether by design or default, has borne the chief responsibility for guaranteeing the safe passage of oil from the world's leading supply region, the Persian Gulf, to the global market. Yet, however indebted to American power, China is nonetheless hostage to US policies. The higher the degree of its dependence on Persian Gulf oil, the deeper are China's apprehensions that it might become susceptible to American pressure, especially should Sino-US relations sour. Mirroring these misgivings are suspicions by US officials, not of Chinese penetration of the Middle East energy market *per se*, but of the lengths to which Beijing might go to secure long-term access to the region's oil, or to earn hard currency, or simply to curry favor with Middle Eastern governments as a way of countering American influence.

With respect to US Middle East policy, up til now China has preferred to play the role of the "free rider" rather than that of the "spoiler." Beijing was scrupulous in adhering to the UN sanctions regime against Iraq, and was tenacious in insisting that the United Nations Security Council is the proper locus of authority for dealing with Iraq. Beijing has been opportunistic in attempting to penetrate the Iranian and Sudanese energy markets, has been cautious in reacting to the vicissitudes of the Israeli-Palestinian conflict, and has been circumspect in weighing when and how to register disapproval of US actions in the region.

In the area of proliferation, however, China's conduct has been at variance with its claims and arguably with its own interests. The sale of Chinese missile technology to Iran has long been of grave concern to the United States. These proliferation practices, from which China has profited financially and to an uncertain degree politically as well, have, in addition to complicating Sino-American relations, run the risk of destabilizing the very region upon whose peace and security China's own economic future rests. The most recent evidence that China has not desisted from this practice surfaced in July 2003. Following this disclosure, Washington slapped sanctions on Norinco, four other Chinese firms and a North Korean company for missile sales to Iran.[51] The United States can ill afford either to exaggerate the importance of the Norinco case by writing it off as confirmation of Chinese perfidy or to dismiss it as inconsequential.

A responsible and effective US approach to the possible geopolitical implications of China's emergence as a major actor in the international energy marketplace requires an honest reckoning of some basic facts. Fact number one is that, with respect to China's activities in the Gulf, the Norinco case represents the exception, rather than the rule. Fact number two is that China's emergence as a large and growing oil/gas consumer and importer is not a transitory phenomenon. Fact number three is that whether to classify this as constituting a threat to US interests is a matter of Washington's own choosing.

The wise choice would be for US officials to distinguish between China's efforts to manage its growing energy dependence, which in themselves are not inherently threatening, and those practices (in narrowly defined military categories) that are. Wiser still would be for American officials to treat Beijing's pursuit of energy security as an opportunity to facilitate China's further integration into the international economic system. There is no better time than the present — with Sino-US relations still on a positive trajectory, America at the apex of its power and China's economy experiencing rapid growth and its energy requirements steeply ascending — to seize this opportunity. But how?

First of all, it would be prudent for US officials to avoid tantalizing but simplistic zero-sum thinking. It is one thing to be alert to the possibility that a countervailing axis of power led, or joined, by China might some day emerge. However, it is another thing to speak or behave as though the formation of such an axis is imminent or inevitable. Yet, before 9/11 some policy analysts had warned of the emergence of an anti-US axis of power with China and Russia at its core. After 9/11, the pendulum appeared to have swung in favor of the view that the United States might have more to fear from Russia's weakness than from its strength. Now, with China and Russia seeking to forge closer energy ties, it is tempting to resurrect the image of a potentially menacing Beijing-Moscow strategic partnership. But, as this study has shown, Sino-Russian energy cooperation has yet to blossom fully. Moscow has its sights on the wider Pacific energy market. Furthermore, mistrust between Beijing and Moscow runs deep. The formation of a Sino-Russian strategic partnership anchored in energy cooperation and aimed at undercutting the United States geopolitically seems highly unlikely. There is little purpose in concocting such nightmarish scenarios. Trying to drive a wedge between Beijing and Moscow is unnecessary and might ultimately prove to be counter-productive.

A similar dose of realism is needed in assessing China's hunt for Central Asian oil and gas. China is far from becoming the predominant extra-regional power in that region. While this might some day be the case, that day is many decades away. As China's experience in Kazakhstan has shown, getting energy projects to materialize is tough going. Neither the Kremlin nor Russian oil companies are about to surrender their positions in Central Asia, and Japan is competing fiercely for business there.

Nor is it prudent for the United States to overreact to China's longstanding courtship of Iran. China is likely to do business with Iran whether the United States approves of it or not. While this may rankle US officials, holding China to a different standard from that of the US' principal European allies and Japan is difficult to justify. In the short term, Washington must differentiate clearly between the Sino-Iranian energy trade (which is not inherently threatening) and potentially destabilizing forms of arms trade. In the longer term, Washington must find a formula for setting US-Iran relations on a positive track. More generally with respect to Chinese involvement in the Gulf, the United States must avoid giving the impression that it is following a new strategy of containment. This it can do by adopting a strict *laissez-faire* approach to the awarding of oil contracts by Iraq, and by fostering a Gulf security dialogue in which the world's major powers, including China and India, have a voice as well as responsibilities.

Vigilance and creativity are also needed in responding to the way in which the hunt for oil is playing out in East Asia. While the alarmist claim that a Sino-Japanese "energy war" is underway is unsupported by the facts, there is no question that China and Japan are direct competitors. In at least two notable instances, the (Russian) Siberian pipeline and (Iranian) Azadegan oilfield development cases, they have competed head to head, both times with Japanese firms prevailing. Chinese and Japanese political leaders have thrown their weight behind their firms' bids for business, offering a variety of deal sweeteners.[52] And indicative of the risk that such rivalry might inflame Sino-Japanese relations, China terminated oil exports to Japan..[53] This, in turn, is likely to make the United States' East Asian balancing acts more difficult.

The United States should balance recent efforts to consolidate its military alliances and relationships with steps aimed at nurturing region-wide energy cooperation in East Asia and cross-regional energy alliances. Until now, China's energy business and diplomacy have been conducted mainly on a bilateral level. The Iraq war, however, has stimulated discussion within ASEAN and between this grouping and China, Japan, and South Korea to address energy security problems within a regional context.[54] These initial discussions led to the creation of a research unit, the "ASEAN-plus-three Governing Group," tasked with looking into several areas of possible cooperation including a security network, oil market study, natural gas and recoverable energy, and regional stockpiling[55] The US should lend whatever technical and political support it can to foster this cooperation. Further, the US should encourage its allies in the region to take Beijing up on its offer to develop constructive joint projects in the energy sector.[56] Finally, the US should encourage and assist continued cooperation between the IEA and China in the development of the latter's national strategic oil stockpile and of its capacity to collect accurate oil data in a timely manner.

Conclusion

As documented in the November 13, 2003 issue of the IEA *Monthly Oil Market Report,* "the breakneck pace of Chinese economic expansion is rapidly changing the oil-demand map."[57] The Chinese leadership has explicitly acknowledged that growing dependence on imported oil is unavoidable. Initially slow to accept and then to react to this development, Beijing has had to scramble to cope with surging energy oil demand and dependency on foreign sources of supply — working simultaneously on both the domestic and international fronts to plan and execute a variety of stopgap and long-term measures. On the international front, Chinese energy diplomacy is on full throttle, paving the way for and supporting the initiatives of the country's leading energy enterprises. Meanwhile, China's oil giants are vying and partnering with foreign firms to secure long-term access to oil in all of the world's new and traditional supply sources. Among the "strategic regions" targeted in the push to expand and diversify energy operations abroad are Russia and Central Asia, which together offer the advantages of proximity of supply sources and of lessening China's reliance on maritime transport.

Yet, as this study has shown, while some of China's efforts to meet its rising oil consumption requirements largely through diversifying suppliers and securing long-term access to oil supplies have borne fruit, others have not. Thus, China, much like its neighbor Japan — with which competition in the oil market has intensified — remains tethered to the Persian Gulf. This fact alone is unsettling to Beijing. Of additional concern is the fact that, given this energy vulnerability, the United States has strengthened its strategic position in the Gulf, as well as in South and Central Asia, further exposing China, in a worst-case scenario, to American pressure.

For the United States, China's energy quandary presents more of an opportunity than a threat, provided that US officials are prepared to think of it that way and to act accordingly. China's diplomatic and business activity in the Persian Gulf, part of a broader effort to carve out niches in the global energy market, is driven mainly by an economic imperative. For China to sustain economic growth depends on the success of these efforts. The United States, whose overall policy of engagement aims to integrate China further into the international system and for which China is an increasingly significant economic partner, would be best served by finding ways to support such efforts, rather than seeking to thwart them.

[1] International Energy Agency (IEA) China Country Analysis Brief (June 2003). Available at http://www.eia.doe.gov/emeu/cabs/china.html

[2] Sizhi Guo, "Oil Security: A Crucial Strategic Issue for the Economic Development of China," (Sewptember 2002) http://216.239.51.104/search?q=cache:P90-eYqMPPkJ:eneken.ieej.or.jp/en/data/pdf/157.pdf+%22crude+oil%22+china+growth&hl=en&ie=UTF-8

[3] *Associated Press*, February 3, 2004 and *Australian Financial Review*, February 9, 2004.

[4] *Agence France Presse*, December 1, 2003 and *Xinhua New Agency*, February 24, 2004.

[5] Regarding the reasons for the varying assessments, including the fact that China publishes no data on oil demand, see *Petroleum Intelligence Weekly*, December 17, 2003.

[6] *Xinhua News Agency*, December 11, 2003.

[7] See *Global News Wire*, March 9 and March 10, 2003; *Agence France Presse*, March 9, 2003; and *Australian Financial Review*, May 30, 2003.

[8] Wulei, "Oil: The Next Conflict in Sino-US Relations?" *Middle East Economic Survey (MEES)* 46:21 (May 26, 2003), p. D1.

[9] *Japan Economic Newswire*, December 11, 2003, citing a study by the Chinese Ministry of Communications.

[10] *The New York Times,* July 3, 2002.

[11] International Energy Agency (IEA), *International Energy Outlook 2002.*

[12] The rough outline of the plan was presented for the first time publicly at the end of 2003. See, for example, *Agence France Presse*, December 1, 2003.

[13] See account of the "oil crisis" in *Agence France Presse*, December 10, 2003.

[14] *Xinhua News Agency*, December 18, 2003.

[15] On new fuel economy regulations, see *The Straits Times*, December 20, 2003; on the creation of the special unit to coordinate the strategic oil reserve, see *China Daily*, December 1, 2003; and on the need for more tankers, given that 90% of the oil chipped to China is carried by foreign-owned vessels, see *Xinhua*, August 8, 2003. On oil terminal construction, see *AFX-Asia*, February 2, 2004.

[16] See statement by Liu Keyu, Researcher, China Petroleum Economics and Information Research, China National Petroleum Corporation, reported in *AFX-Asia*, December 12, 2003.

[17] *China Daily*, September 17, 2001.

[18] *Middle East Economic Digest*, November 30, 2001, p. 16.

[19] *International Oil Daily*, January 27, 2004.

[20] *China Daily*, August 5, 2003.

[21] *Agence France Presse*, September 18, 2001; *Middle East Economic Digest*, March 7, 2002, p. 27; and *Al-Hayat*, September 23, 2002.

[22] Xiaojie Xu. "China's Oil Strategy Towards the Middle East," working paper, Houston, Baker Institute for Public Policy, Rice University, September 2002. Available online at: http://www.rice.edu/projects/baker/Pubs/workingpapers/pecupdate/PECXu.pdf

[23] *Energy Compass*, July 10, 2003.

[24] *Iran News Agency*, in *BBC Summary of World Broadcasts*, July 6, 2003.

[25] *China People's Daily*, March 5, 2004.

[26] *Peoples' Daily*, in *BBC Summary of World Broadcasts*, September 12, 2003.

[27] *Global News Wire,* June 5, 2003.

[28] *The Times of India*, August 4, 2003.

[29] *Agence France Presse*, August 29, 2003.

[30] See Xiaojie Xu, "China's Oil Strategy Towards the Middle East." Though perhaps not common knowledge, nearly 23% of China's oil imports comes from Africa.

[31] *Xinhua*, February 5, 2004.

[32] *Xinhua*, December 23, 2003.

[33] See, for example, *Xinhua*, in *BBC-SWB-FES,* February 6, 2004.

[34] *Agence France Presse*, October 10, 2003. Declared intention to implement the project in stages. A 1,100-kilometre (690-mile) section from Atasu in central Kazakhstan to the Chinese border town of Alashankou is the first stage in a projected 3,000-kilometre pipeline which would bring Caspian Sea oil to the expanding Chinese market.

[35] *Global News Wire*, June 20, 2003.

[36] See, for example, *China Daily*, June 6, 2003; *Wall Street Journal*, December 3, 2003.

[37] *China Daily*, May 26, 2003.

[38] *Ibid.*

[39] *Wen Wei Po*, in *US Foreign Broadcast Information Service [FBIS] Daily Reports*, February 11, 2003.

[40] *China Daily*, May 29, 2003.

[41] *International Oil Daily*, August 22, 2003.

[42] *Middle East Economic Digest*, November 30, 2001, p. 16.

[43] *The New York Times*, March 8, 2003; *Global News Wire*, June 6, 2003.

[44] Wu, Kang and Fereidun Fesharaki. Managing Asia Pacific's Energy Dependence on the Middle East: Is There a Role for Central Asia? Asia Pacific Issue, no. 60 (East-West Center, Honolulu, June 2002). Available online at: http://www.eastwestcenter.org/stored/pdfs/api060.pdf

[45] *Energy Compass,* August 7, 2003; *International Oil Daily*, August 6, 2003; *Eurasianet.org,* October 21, 2003.

[46] *The Washington Post,* July 13, 2003.

[47] *Ibid.*

[48] *ITAR-TASS*, in *FBIS Daily Reports*, August 5, 2003.

[49] *Australian Financial Review*, February 9, 2004.

[50] *Agence France Presse*, February 6, 2004.

[51] In September of that year, additional sanctions were imposed under the US Arms Export Act (applied also against the Chinese government). The sanctions placed a two-year ban on US export licenses and new US government contracts for "all activities of the Chinese government relating to the development or production of missile equipment or technology and all activities of the Chinese government affecting the development or production of electronics, space systems or equipment and military aircraft." *Agence France Presse*, September 19, 2003.

[52] *ITAR-TASS*, in *FBIS Daily Reports*, July 11, 2003.

[53] *Interfax*, in *FBIS Daily Reports*, July 11, 2003 and *Iran News Agency*, in *FBIS Daily Reports*, July 6, 2003.

[54] *Agence France Presse*, July 3, 2003.

[55] *Agence France Presse*, June 10 and July 2, 2003.

[56] Wu Bangguo, Chairman of National People's Congress Standing Committee, recently suggested shared drilling rights to the oil/gas deposits of the Spratly islands. This suggestion follows upon a treaty with ASEAN aimed at preventing escalation of tensions over the islands. See *Asia Times*, September 6, 2003.

[57] IEA *Monthly Oil Market Report*, November 13, 2003, p. 6.