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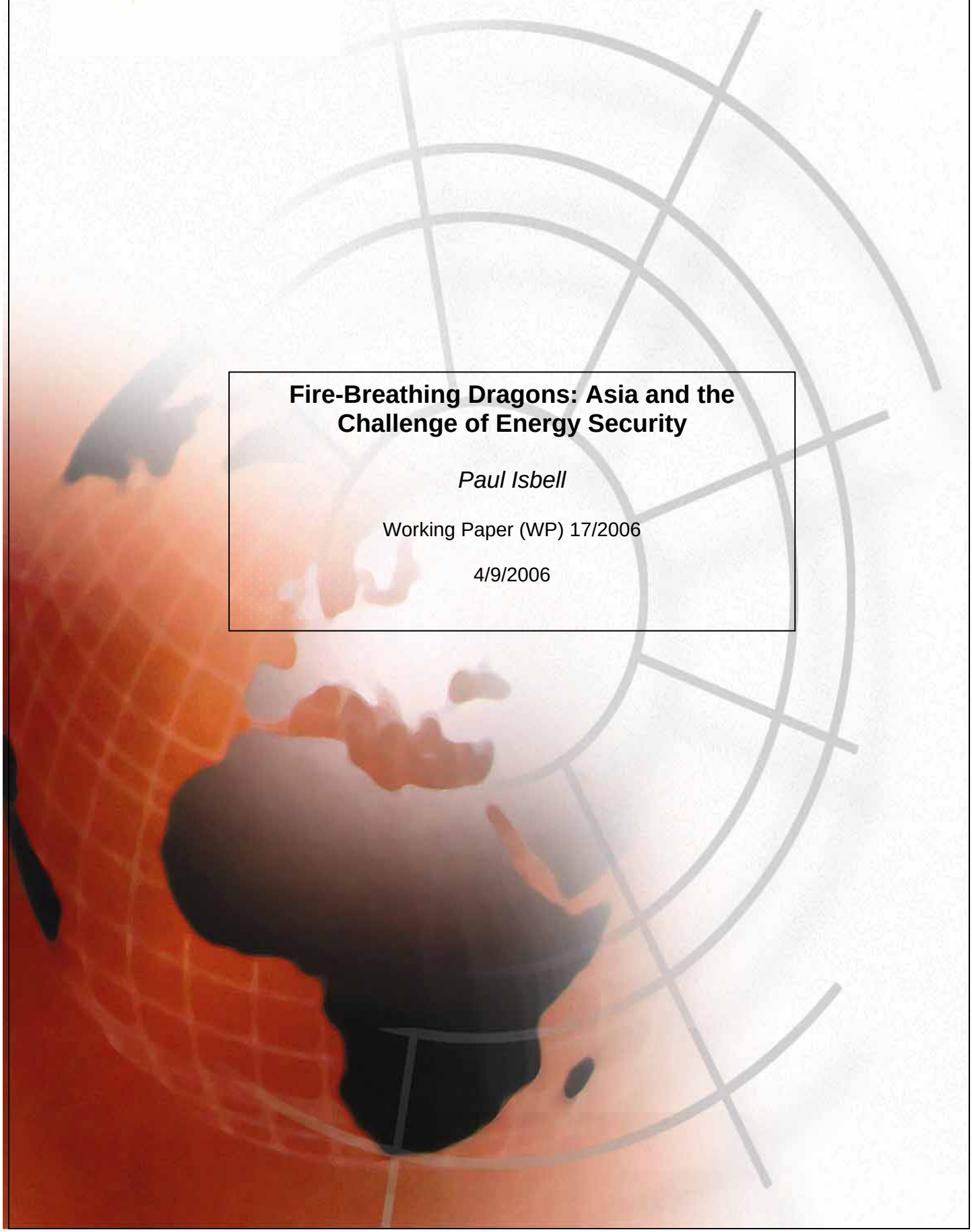

Fire-Breathing Dragons: Asia and the Challenge of Energy Security[1]

Paul Isbell *

Summary: Energy issues have recently moved to centre stage on the world arena. Oil and gas prices increased significantly during 2003 and 2004, and continued to do so throughout 2005 and 2006. Related to these price trends has been the emergence of Asia within the world economy and on the global energy scene. Fast-rising Asian demand for oil and gas has been responsible for much of the upward pressure on international prices during the past years.

Introduction

Energy issues have recently moved to centre stage on the world arena. Oil and gas prices increased significantly during 2003 and 2004, and continued to do so throughout 2005 and 2006. Related to these price trends has been the emergence of Asia within the world economy and on the global energy scene. Fast-rising Asian demand for oil and gas has been responsible for much of the upward pressure on international prices during the past years. Moreover, Asian energy firms have also exploded onto the international energy stage, generating the widespread perception of much fiercer competition among the world's private and state-run oil and gas firms, and raising the spectre of geopolitical competition for energy resources, both within Asia and around the globe.

The remarkable growth of the Asian economies and the contribution of this growth to a stronger demand for energy, on the one hand, and the relative scarcity of oil and gas in Asia, on the other, are the two factors at the root of Asia's new significance on the global energy scene. With each passing year, Asia becomes more dependent on energy imports. Although there has been some movement in recent years to begin to diversify supply, as Central Asian energy exporters and Russia begin to look east, even rapid developments in this regard will leave Asian consumer nations increasingly dependent on greater imports from the Middle East (both in absolute and relative terms) over the coming years. This is as true for the countries of relatively developed north-eastern Asia (South Korea, Japan and Taiwan), whose energy demand growth is now slowing down, as it is for developing Asia –including China, South-East Asia and India–, where energy demand growth is set to continue increasing for years to come.

Increasing oil demand and heightened dependence on the Middle East raise a number of important issues for Asian countries. First, these developments imply increasing economic exposure to the volatility of world energy prices, which are likely to continuing rising in the mid-term, particularly as Asian demand expands. Secondly, the possibility that Asian countries will face growing competition with Europe and North America for the resources primarily of the Middle East, but also of the ex-USSR, Africa and Latin America will

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continue to grow. Finally, such intensified competition also poses important challenges within Asia. The widening gap between demand for and supply of oil and gas, along with the potential for exploiting certain energy resources within Asia, will present the members of the broader Asian community (ie, ASEAN + 3, along with southern Asia) with a stark dilemma between the nationalist pursuit of energy security and the attempt to forge deeper Asian cooperation and integration.

Asian Energy Demand

Asian economic growth has been strong in recent years and such strength, barring another very significant and extended spike in energy prices, is likely to carry on into the future. China continues to register growth of over 9% annually. South Asia is growing on average around 7% per year. South-East Asia is experiencing annual growth of between 5% and 6%, while South Korea and Taiwan have growth rates in the 3%-4% range. Even Japan is experiencing a recovery and in 2004 and 2005 growth has hovered around 3%.

Such strong growth has translated into significant increases in energy demand, particularly for the principal hydrocarbons, oil and gas. Between 1990 and 2003, annual world oil demand grew by 1.3% on average, while for China and India combined it expanded by 7% annually. Together, these two new emerging giants have accounted for nearly 40% of the growth in world oil demand since 1990. Asia as a whole accounted for some 75% of this world demand growth. Since 2000, world oil demand has grown by 7mbd, of which 2mbd (or nearly 30%) have gone to China. In 2004 alone, demand for oil grew by 16% in China and by over 5% in the entire Asia-Pacific region (well above the 3.8% world increase), with some countries like Singapore (12.4%) and Thailand (9.2%) just trailing behind China. Although oil demand growth in both Asia and the world slowed noticeably in 2005, as China's demand eased significantly to a mere 2.9% annual growth (due to a significant expansion in electricity capacity which mitigated the demand for diesel used to fire generators), demand growth across Asia is expected to surge again in 2006 and to remain strong into the future. Chinese oil demand, for example, is expected to rise again this year by more than 5%. At any event, Asia's oil consumption exceeded that of North America for the first time in 2005. Half of the total growth in oil consumption expected for the next 15 years will come from Asia.

Meanwhile, consumption of natural gas in the Asia-Pacific region (including Japan, Australia and New Zealand) has grown substantially, more than doubling between 1990 and 2004, compared with an increase in world demand of barely more than one-third. Gas consumption in China and India nearly trebled during the same period. In China, gas will likely rise to 10% of the primary energy mix by 2010; by 2020 gas consumption is expected to increase from the current 30bcm to an estimated 200bcm, of which 120bcm will be imported.

There are a number of factors suggesting continued strong growth in energy demand in Asia. First, Asian countries have a relatively high income elasticity of demand for oil. The two large emerging economies of China and India exhibit an elasticity that is around 50% higher than in the rest of the world. Most Asian countries (with notable exceptions including Japan and Hong Kong, two of the most advanced Asian economies) suffer from an inefficient use of energy compared with the G7 average. For every unit of GDP generated, developing Asia uses 3.2 times as much energy as do the G7 countries on average (Japan, on the other hand, needs only 70% as much). East Asia (excluding Japan) exhibits an energy intensity of 3.2, compared with the G7's 1.0, South-East Asia's 2.7 and South Asia's 3.0.

Table 1. World Energy Demand and Selected Asian Countries, 2005-25

(%)	Japan and South Korea	China	India	Total
Share of world energy demand	7	14	4	25
Share of coal in fuel mix	24	70	55	
Share of world oil demand	11	8	3	22
Per capita energy demand (kgoe)	4,100	900	500	
Energy demand growth to 2030	1	2.6	2.5	
Share of world oil demand in 2030	7	11	5	23
Share of world energy demand in 2030	8	20	8	36

Source: Philip Andrews-Speed, Centre for Energy, Petroleum and Mineral Law and Policy, University of Dundee, based on various sources and presented at the RUSI, London, December 2005.

As Asian economic growth proceeds apace, therefore, energy demand will continue to grow strongly. Compounding this energy intensity is the fact that while the G7 countries today consume 18.6 barrels of oil per capita (Japan 16 and the US over 25), developing Asia consumes a mere 1.7 barrels per capita, and China consumes even less (1.6). This implies that Asian energy demand has ample room for increasing even further in the future, placing pressure on oil and gas supplies in the medium term –unless replacement fuels for oil and gas are introduced soon–. But given that developing Asia already relies on oil (35%) for less of its energy mix than does the G7 (40%) –and China uses oil for only 25% of its primary energy needs, with coal currently playing the largest role (70%)– there is less margin for engaging hypothetical oil substitutes.

In addition, vehicles are the single largest source of oil demand in Asia and vehicle ownership is poised for spectacular growth. Despite some moderation in demand stemming from a short-term levelling off in the growth of its vehicle fleet, China is expected to become the world's second-largest automobile market by 2015. Continued economic growth across the Asia-Pacific region is therefore bound to compound this trend, and with it, increase oil demand.

Import Dependence

Against this backdrop of rising Asian energy demand, we encounter another basic fact defining Asia's energy scenario: insignificant oil and gas reserves. Although the Asia-Pacific region (excluding Central Asia) currently produces nearly 10% of the world's oil, it consumes nearly 30% of the world total. More importantly, however, at the end of 2005 the region possessed a mere 3.4% of the world's proved reserves of oil –less than any other region of the world save Europe (2%)–. The situation with gas, while not quite so stark, is broadly similar. Currently, Asia-Pacific produces 13% of the world's gas, but consumes slightly more (14.8%). However, the region's gas reserves amount to only 8.3% of the world's total, roughly equal to the reserves of Africa, approximately double those of Latin America, North America and Europe (each around 4%) but far less than those of the ex-Soviet Union (31%) and the Middle East (41%). Given increasing future demand and a heightened share of the world's total oil and energy demand over the next 20 years, coupled with such scant reserves, increasing dependence on imports of oil and gas is almost assured.

China currently imports only 36% of its oil needs, but East Asia as a whole (even excluding Japan, which imports nearly all of its oil) depends on imports for 60% of its oil demand, while South Asia depends on imports for nearly 70% (compared with 59% in the G7 and 56% in the US). Only South-East Asia (28%) is better situated in this regard, as a result of the oil production of Vietnam, Malaysia and Indonesia. On the other hand, Central Asia is a net exporter, as is the developing Pacific region, mainly due to the exports of Papua New Guinea (although the rest of the developing Pacific island nations depend exclusively on oil imports). The developing Asia-Pacific region as a whole currently imports nearly 45% of its oil, up from only 10% in the mid-1980s.

Nevertheless, already four of the world's top-ten petroleum consuming countries are Asian (China, Japan, India and South Korea), as are five of the top-ten oil importing countries (Japan, China, South Korea, India and Taiwan). Furthermore, all projections foresee import dependence rising in Asia, including those areas which currently exhibit relatively low dependency ratios (like China, or even Indonesia, the one-time powerful exporter which became a net importer for the first time in 2004). In 2025, China is likely to import over 70% of its by then much larger oil consumption, while India will import nearly 90% and South Korea and Japan 100% (see Table 2). This likely future trend, underpinned by strong economic growth, high energy intensity and currently low per capita energy consumption, implies that Asia is certain to continue exerting a strong pressure on the world energy markets and to place an increasingly important claim on the world's hydrocarbon resources. Indeed, many projections envision Asian oil imports of more than 30mbd in 2030 (up from less than 20mbd in 2005). Adding the expected oil imports of the US and Europe to this total would require OPEC to nearly double its current output of 30mbd.

Table 2. Oil Imports, Asia, 2005-25

Country/Region	Imports in 2025 (mbd)	Increase 2025/2005 (mbd)	% of Demand Covered by Imports in 2025
Asia (total)	29	+11.9	79
South Korea	2.5	+0.6	100
India	4.5	+2.7	87
Japan	4.0	-1.7	100
China	10.2	+6.1	71
Europe	12.5	+2.4	80
US	17.0	+4.0	72

Source: Herman Franssen, Chairman, International Energy Associates Inc., based on data from various sources, presentation at the RUSI, London, December 2005.

Economic Vulnerability

Of course, Asian economic growth, and with it energy demand (particularly for petroleum) could be undermined at some point by continued significant price increases on the world markets. Indeed, Asia's high energy intensity, low per capita consumption and continued heightened reliance on imports make the region particularly vulnerable economically to spikes in the world price of oil. Last year an ABD study approximated the effects on the oil import bill and economic growth of a 75% price increase (more or less the increase from the beginning of 2005 through to the end of August of the same year) sustained over one year. While the simulated effects suggested a reduction of 0.5pp in growth for the US, the euro zone, Japan and South Korea, the indicated impact on the rest of East and South-East Asia would be more than twice as large (-1.0pp in China, -1.1pp in India, -1.3pp in Singapore, -1.4pp in the Philippines and -1.8pp in Thailand). Only Taiwan (-0.2pp) would be relatively unscathed. After considering a number of similar studies undertaken by the IMF, along with a wide range of uncertainties with respect to public and private sector responses, the ADB concluded that oil prices at US$70/bbl through to the end of 2006 would cut growth by more than 1.0pp in a number of Asian countries, particularly in South-East and South Asia.

Nevertheless, the ADB also pointed out that Asia is now better positioned to withstand significant oil price increases than it was during previous oil shocks, particularly given generally healthy external positions, large foreign exchange reserves, more credible and disciplined monetary and fiscal policies, more flexible economies and declining –if still high– oil intensities. Indeed, the effect on Asian inflation during the past three years of significant oil price increases has been essentially nil.

On the other hand, widespread state subsidies for fuel products, which keep end-user prices low, have had much to do with this benign inflationary scenario. Although fuel subsidy schemes vary widely across the region, direct and indirect subsidies on final energy products now total between 1% and 3% of GDP in many Asian countries, even despite some recent progress in reducing or eliminating certain subsidies, as occurred during 2005 in Thailand, Malaysia and Indonesia. Furthermore, taxes on fuel products in Asia remain very low. Aside from encouraging consumption and waste, this combination of high state subsidies and low energy taxes undermines the market mechanisms which might curtail energy demand growth, encourage clean and environmentally-sound alternatives (and a broader diversification of the primary energy mix in general) and channel resources efficiently. It also undermines the investment climate in the energy sector. While such a policy may temporarily shield consumers from the adverse effect of significantly higher world prices, mitigating the negative impacts on growth and inflation, should prices remain high and continue to rise, this policy would place severe pressure on the external finances and budget positions of most Asian countries engaging in such policies. Eventually adjustments in domestic demand will have to occur.

Strategic Energy Concerns and Geopolitical Competition

Despite the potential for further exploration and development of oil and gas in Asia, particularly in the East and South China Seas, many Asian oil producers have entered a period of production decline. This is certainly the case of Indonesia, traditionally the region's largest exporter but which is now importing oil. Indonesian production has fallen steadily from its peak of 1.7mbd in 1991 to 1.1mbd in 2004, while consumption has basically doubled, from 670,000bd to 1.15mbd.

The largest producer, China, continues to increase production but rising demand continues to require higher imports. In a positive development, Sinopec (one of China's three national hydrocarbons companies) discovered a large oil and gas field, estimated to contain 8bn barrels of oil and 56bcm in the remote province of Xinjiang in north-western China at the beginning of 2005. This would imply an increase in Chinese crude reserves of over 33% (from 17bn barrels to 25bn barrels). However, some experts believe reserves from the new field could reach as much as 19bn barrels, which would double Chinese reserves. Based on current national consumption (which, admittedly, is set to rise inexorably), the new find could potentially increase the current life of Chinese reserves by between 4 and 15 years. Nevertheless, to tap this oil will require very large investment while rising demand will continue to push up imports.

Although there is some further potential for hydrocarbon discoveries in Asia, it remains relatively small and will likely only serve to partially supply national consumption in the countries where new oil or gas is produced, making little impact on the large Asian consumers' increasing need to rely on imports from the major energy producing regions of the world. As we have mentioned elsewhere, South and East Asia will be increasingly dependent, first and foremost, upon the so-called 'Great Crescent' –the long arc running from the Arabian peninsula, up through the Persian Gulf, passing through the Caucasus and the Caspian Sea region, along the Urals and then sweeping across Western and Eastern Siberia to the Pacific Coast and Russia's Sakhalin Island– where upwards of 70% of the world's proved oil and gas reserves are located; and then, secondarily, on the so-called 'Minor Crescent' –stretching from Alaska down the Pacific Coast and the Rocky Mountains, curling through the Gulf of Mexico and the Andean Region of South America, passing through Brazil and across the Atlantic to the Gulf of Guinea–, where approximately 20% of the remaining proved reserves are to be found.

In such a context the possibility of geopolitical rivalry for energy resources –both within Asia and between Asia and the West– is real, and the strategic manoeuvring has already

begun. This can be seen in at least three developments. First, the intense political battles between Asians, on the one hand, and Europeans and North Americans, on the other, over the trajectories of oil and gas pipelines out of the Middle East, Central Asia and Russia. Secondly, the recent surge in investments by Asia's state-owned oil and gas companies in producing regions around the world, often in cooperation with the state-owned firms of these same producing countries, creating competition not just among Asian firms but also between state-owned firms in general (so-called NOCs) and the predominantly private energy firms of the Western consumer nations (so-called IOCs). Finally, such geopolitical competition is also evident in the slew of strategic accords signed at the highest levels between the major consuming nations of Asia and the producer states of the Great and Minor crescents.

In particular, Asian strategic competition is now developing around Russian and Iranian oil and gas resources within the 'Great Crescent', and around the promising unconventional oil of the 'Minor Crescent', including Canada's oil shales and tar sands and Venezuela's super heavy oils. Out of such competition a number of geopolitical triangles have emerged in which strategic rivalries are now being played out. These include the Sino-Japanese rivalry to secure access to Russian energy resources, the East-West rivalry for influence over key energy producers in the Middle East and Central Asia, the rivalry between Asian national oil companies (NOCs) and Western international oil companies (IOCs) for access to oil and gas reserves in Central Asia, Africa and Latin America, and the East-West rivalry for influence over regimes in both the Great and Minor crescents with increasingly statist and nationalist energy policies. The challenge for China, the broader Asian community and the world will be to transform these potential geopolitical rivalries into sustainable channels for cooperation within the context of an open, fluid and integrated globalised economy.

Chinese Energy Security: The Lynchpin to Energy Geopolitics in Asia

As the single most dynamic economy in the world –and potentially the largest– China is exerting the most significant growing pressure on the world energy system today. Chinese energy security –or at least the world's perception of China's energy security– has therefore become one of the most important and potentially dangerous geopolitical issues.

The Evolution of Chinese Energy Security
Back in 1959, on the eve of the Sino-Soviet split, China's annual oil production was a mere 75,000 barrels a day (b/d). That year the giant Daqing oil field was discovered in north-east China and by 1963 it was producing 86,350 b/d, some two-thirds of China's total 130,000 b/d of domestic production, allowing China to put an end to a century of oil import dependence.

From then on, oil (and also coal) became a primary export commodity for China and proved crucial in securing hard currency to pay for imports of capital goods and technology. During the 1973-74 oil crisis, China exported critical crude oil supplies to Thailand, the Philippines and other Asian countries, including Japan, helping to lay the foundation for a favourable regional environment for modernisation, development and regional and international economic integration.

China's crude oil exports peaked in 1985 at over 600,000 b/d, as slower growth in domestic oil production and increasingly strong domestic demand led to a fall in net exports. Beginning in 1988, Chinese imports of crude and oil products began to grow significantly under the weight of domestic demand pressures. As the Chinese economy continued to boom, the country had once again became a net importer of both oil products and crude petroleum by 1996.

Renewed concern over Chinese energy security (both inside and outside the country) emerged in 2000 when oil imports doubled from 735,000 b/d to over 1.4mbd. Throughout the 1990s, domestic oil production continued to climb (by nearly 18% during the decade) but its rate of increase slowed significantly, barely rising by 7% during the first five years of this decade. Nevertheless, oil consumption more than trebled during those 15 years. By 2005, oil imports had risen to 4.1mbd and now China is fast closing in on the import level of Japan (5.7mbd in 2005), the world's second-largest importer of oil after the United States.

This scenario has caught everyone off guard –including the Chinese themselves–. Only recently has energy policy become a priority in China, but its energy policy mechanisms remain underdeveloped and untested. While its state-owned hydrocarbons companies have also recently ventured abroad with increasing intensity, this trend is unlikely to resolve the energy security issue by itself. In the best-case scenario, China will have to improve its overall economic and political relationships with the world in order to improve its sense of energy security.

The Revamping of Chinese Energy Policy

Although Li Peng inaugurated China's ambitious energy diplomacy as far back as 1997, only since 2003, when China overtook Japan as the world's second-largest consumer of oil, and prices began their long ascent, has a sense of urgency with respect to energy security descended upon the broader Chinese policy elite. Since May 2003, a new national energy strategy has been under design by a task force of 150 experts led by Premier Wen Jiabao. Beijing hopes that this new centralisation of energy policy will provide a coherent response to what Li Peng perceived as an urgent need to improve Chinese energy security.

One of the reforms, announced as recently as May 2005, has been the creation of a powerful new central agency to improve China's energy security. The new State Energy Office replaces the smaller Energy Institute of the National Development and Reform Commission (NDRC). Led by the former NDRC Director Ma Kai (with former PetroChina General Manager Ma Fucai as Deputy Director) the new Energy Office is intended to lend clarity, authority and strategic vision to China's energy policy, something which was distinctively lacking throughout the two previous decades during which China became a significant net importer of petroleum.

Another reform in China's energy infrastructure stemming from the new strategy has been the creation of a national strategic petroleum reserve (SPR). The government plans to build four national strategic oil reserve sites (at Ningbo and Zhoushan in Zhejiang province, at Qingdao in Shandong and at Dalian in Liaoning). Construction is scheduled to be conclude by 2008, bringing China's total oil storage (including 'commercial' storage tanks) to 30 days of self-reliant consumption (up from less than 7 days at the beginning of the SPR plan).

A Sense of Isolation

For better or for worse, much of what is driving China's recent search for energy security is a lingering fear of being isolated economically and politically from vital future sources of energy. While China has never been the victim of a politically-motivated blockade of its energy trade, the risk of military conflict continues to linger in the Taiwan Strait. Nevertheless, the worst case scenario –a comprehensive maritime blockade provoked by a Chinese attack on Taiwan– is something which China itself can do much to avoid. While the Asian costs of such an embargo rise continually for China's Asian neighbours –as China becomes more deeply embedded in the regional and global economy– China's own economic interdependence with the region and the world now serves as the most powerful disincentive to any such attack.

A similar scenario faces China with respect to the Middle East, the source of 60% of its current imports of oil. While China has diversified its dependence on the Middle East to some degree, it has been forced to pursue a balanced foreign policy towards the area, maintaining a middle ground on the Arab-Israeli conflict, engaging the Gulf Cooperation Council (GCC) with the prospect of a free trade agreement and broadening its bilateral economic linkages with individual countries in the region.

Iran is a case in point. China has much more to lose from a confrontation between the West and Iran than simply its direct economic and energy interests. A military intervention in Iran by Western powers (or merely the application of sanctions) might conceivably provoke an Iranian attempt to cut off the Straits of Hormuz –through which more than 25% of the world's oil passes every day–, an outcome which would be very damaging to all economies, including (but certainly not only) China's. In any case, growing economic interdependence is the single best insurance policy against an embargo by Middle East producers –aimed specifically at China or not– or against a potential closure of the Straits.

But in all these scenarios China itself is a key actor –if not the key actor–. Growing Chinese dependence on the world markets acts as a powerful deterrent to the only Chinese action (an attack on Taiwan) which might provoke a China-targeted set of interruptions in import flows. Inevitably, China will increasingly need to view energy security in terms of economic vulnerabilities and global market solutions.

The Overseas Expansion of Chinese Energy Companies

Still, rapidly growing dependence on energy imports has led China to pursue an aggressive overseas energy diplomacy which does raise the spectre of geopolitical competition for energy supplies. Indeed, China is now on the diplomatic defensive with regard to the strategy of its three major state-owned hydrocarbons companies (CNPC, Sinopec and CNOOC) to penetrate upstream markets around the world.

Chinese national oil companies (NOCs) began going abroad as early as 1993, acquiring concession rights in foreign upstream sectors. The trend began with CNPC's purchase of the Talara Block in Peru for US$25 million and has continued and intensified recently with Chinese NOCs gaining various types of presence in the Andean region, the Caribbean (including Cuba) and Brazil, the Gulf of Guinea (particularly Nigeria and Angola) and Sudan, the Middle East, South-East Asia (including the South China Sea) and even Russia and Canada (see Table 3). While such investments are unlikely to be able to offset Chinese import dependence in the long run, any new net production added by Chinese NOCs operating abroad will likely enter the international market and possibly be swapped for other oil that could more easily enter the Chinese market.

Table 3. Recent Overseas Upstream Acquisitions by Chinese and Indian NOCs

Company	Target	Value (US$ mn)	Country	Date	Comment
Sinopec	Stakes in three offshore blocks	–	Angola	2006	Sinopec has acquired stakes in three offshore blocks together with the Angolan NOC Sonangol
CNPC	Four oil exploration licences	4,000	Nigeria	2006	China has proposed US$4bn in investments to secure first refusal rights for CNPC on four oil exploration licences
ONGC	BC-10	1,400	Brazil	2006	ONGC has announced its intention to acquire ExxonMobil's 30% stake in an offshore block in Brazil's Campos basin
CNPC/ONGC	Al-Furat Petroleum	586	Syria	2006	JV acquired Petro-Canada's 17% stake in AFPC
CNOOC	Block 130	2,270	Nigeria	2006	Acquired a 45% stake in this deep-water block
CNPC	PetroKazakhstan	4,200	Kazakhstan	2005	Canadian listed E&P company with operations in Kazakhstan
ONGC	Block 128	70	Vietnam	2005	ONGC awarded a 100% stake in a new offshore exploration block (its fifth concession in the country)
CNPC/Sinopec	EnCana	1,420	Ecuador	2006	CNPC holds 55% of Andes, Sinopec holds 45%
ONGC	Several blocks	–	Cuba	2005	ONGC acquired a 30% stake in seven oil and gas blocks from Repsol-YPF (the operator)
Sinopec	Synenco Energy	83	Canada	2005	A 40% stake in Synenco's planned Northern Lights oil-sands project
CNOOC	MEG Energy	124	Canada	2005	CNOOC acquired 17% in this company focused on oil sands
PetroChina	Enbridge	–	Canada	2005	Enbridge signed an MOU with PetroChina to supply 200,000 bd from the Gateway pipeline project (an export route for oil-sands output)
Sinopec	First International Oil	150	Kazakhstan	2004	–
CNPC	Sheer Energy	–	Iran	2004	–
CNPC	Pluspetrol Norte	200	Peru	2004	CNPC bought 45% of Pluspetrol Norte

Note: ONGC is India's principal NOC.
Source:Booz Allen Hamilton, published by John McCreery and Adrian Del Maestro, 'Unocal: a bump in the Road', *Petroleum Economist*, April 2006, and other sources.

China's quest for hydrocarbons supplies overseas has also led it to directly pursue closer diplomatic links with a number of oil and gas producing countries considered to be pariahs by the US (and often by Europe as well), including Iran, Sudan, Uzbekistan and Venezuela –to say nothing of the strategic energy accords signed by China with Russia, Saudi Arabia and India–. This new diplomatic trend raises questions in the West about the strategic intent of Chinese policy: Should this be interpreted as geopolitical competition or simply the result an uncoordinated Chinese energy policy that often appears to clash with US and European interests or preferences?

It is not yet clear whether the Chinese government is directing its state-owned energy companies or whether these same energy companies simply seek to secure diplomatic backing from the Chinese state. China has long lacked a central government agency to oversee and regulate its energy industry, and this lack has only recently begun to be addressed. Chinese energy companies also have a short history of managing the economic and political risks inherent in entering foreign markets. In many cases, particularly in Africa and Latin America, Chinese firms have been able to secure exploration and development concessions, or to buy participations in existing oil and gas operations, simply because they are willing to endure a much higher degree of economic risk and political uncertainty than their private sector counterparts from the West.

In any event, two things are clear. On the one hand, thus far Chinese energy firms have only had a minimal impact on world energy output and on direct access to imports, acting as they do, more often than not, as substitutes for Western firms that are more sensitive to their shareholders' wariness about operating in highly unstable or dangerous areas of the world. On the other hand, to the extent that Chinese energy companies are capable over the years of adding significantly to world output, this potential outcome should be welcomed by everyone as it would add greater quantities of petroleum to a fungible world market –even if much of the newly produced oil goes back to China–. After all China, like every other economy in the world, will have to get its energy from somewhere; if it diversifies its imports to Africa, for instance, this same development –far from locking up petroleum resources for China– will actually free up other oil supplies to the world market moving westward.

Still, the international environment has not been hospitable for China's NOCs. In 2003 both CNOOC and Sinopec were denied participation in the development of a Caspian oil field when existing partners decided to increase their own participation rather than allow entry to the Chinese. At the same time, China has blocked western private companies from entering its domestic onshore market (although it has been more flexible with access to its offshore zones, where China is still more dependent on foreign technology and expertise). The US has replicated with a similar policy, stopping the much higher profile attempt by CNOOC to purchase UNOCAL. Such a nationalist, competitive dynamic has continued in recent years –to the detriment of the preferred dynamic of cooperation that the international energy scenario and globalisation naturally call for– and has created even more mutual misunderstanding and distrust.

The Middle East

Since the 1980s, China's diplomacy in the Middle East, the source of 60% of its current oil imports, has been problematic for the West, particularly considering the accusation that China sells military hardware in order to secure access to oil supplies, potentially undermining anti-proliferation efforts. Over last decade, China has developed strong relationships with Libya, Saudi Arabia, Syria and Iran. Nevertheless, China's behaviour has moderated as it has begun to see its interest in the stability of oil flows from the Middle East to be basically the same as that of the US and the rest of the world economy. Still, China has become more active in region with energy security serving as the apparent primary objective.

China's energy diplomacy with Iran has been particularly controversial. In 2004 Sinopec –which handles 80% of Chinese oil imports– bid for development rights for 16 Iranian oil fields despite US efforts to stop it. Later in the year, Sinopec eventually signed a US$70 billion deal with the Iranians to develop the Yadavaran oil field, which the US Department of Energy estimates could eventually produce 300,000 barrels a day. This affair provoked a cooling of Sino-US relations, and perhaps even played a role in shaping the new US policy towards India which explicitly bids to create a regional superpower out of India to counterbalance Chinese influence in Asia and even involves cooperation with India on nuclear technology. Such a US response of course strengthens hard-liners in China who may view geopolitics and diplomacy as the only viable means for achieving energy security.

Africa

President Hu Jintao's first trip to Africa in early 2004 –the year in which Chinese oil demand shot up dramatically– was clearly a sign that China considered the continent to have a vital role in supplying energy to China. Premier Wen Jiabao's recent trip in June 2006 followed closely on the heels of Foreign Minister Li Zhaoxing's African tour in January and President Hu Jintao's most recent visit to Morocco, Nigeria and Kenya in April. Between them, these three Chinese leaders visited 15 African countries in six

months, underlying the intensity of China's current diplomatic efforts to secure access to African resources, particularly its energy. Not only has China recently overtaken the UK as Africa's third most important trading partner (after the US and France), but now Africa supplies nearly a third of China's oil imports, with Angola now second only to Saudi Arabia as the single most significant foreign source for Chinese crude.

China's energy relationship with the Sudan, where CNPC has significant stakes in currently producing oil fields, has been as controversial as its links with Iran. China's presence there is widely considered to have contributed to undermining any quick international resolution of the human rights crisis in Darfur. A growing number of Africa and China experts, both in the West and in China itself, are also increasingly wary of the risk to CNPC of local attacks similar to those which have recently plagued oil production in the Delta region of Nigeria, particularly if oil benefits are not perceived to trickle down into the local economy.

Latin America
Even in Latin America, the traditional geopolitical 'backyard' of the US, China is courting the region's energy-producing countries, particularly in the troubled Andean region – including Venezuela, Bolivia, Ecuador and Peru– but also Brazil and potentially, one day soon, Argentina. The simple idea that Chinese NOCs –possibly alongside, or in tandem with, Russian NOCs– might be able to replace private international energy firms in the development of energy resources in the Andean countries has been an indirect stimulus to the renewed nationalisation trend evident today in Venezuela and Bolivia (and to some extent Ecuador) which has private international energy firms rethinking the logic of their activities, and even their presence, in these countries.

Eurasia
In the Eurasia region there are some encouraging signs of potential Chinese cooperation on energy issues with its neighbours. A series of co-development agreements has recently opened up the possibility of unlocking the potential energy resources of the South China Sea, an offshore zone which for years has been plagued by territorial disputes between China and its neighbours. Furthermore, the two major energy consuming nations of developing Asia, China and India, signed their own agreement of strategic cooperation in the energy field in 2005, with the objective of avoiding the negative affects of unnecessary competition between their respective NOCs in third-country producer markets.

Nevertheless, a string of controversial incidents during 2005 and 2006 over survey work in the Chunxiao gas field, between Okinawa and China, and in other potential oil and gas fields in the East China Sea, underline the geopolitical sensitivities associated with increasing supply from this area.

In the end, Eurasia as a whole (with the obvious exception of the Middle East) and the Pacific region still supply very little of China's energy needs. Despite the future prospects of growing liquefied natural gas (LNG) imports from Malaysia and Australia, and partly as a result of consumer competition from the US and Japan, energy supplies from Asia-Pacific countries still amount to less than 18% of China's total imports.

Kazakhstan is the only Central Asia country which supplies energy to China at present, and in very limited quantities. The Kazakhstan-China pipeline currently under construction could augment this flow, and possibly affect both countries' energy dependence on Russia, but it is difficult to envision how Caspian energy could do anything more than help to improve the energy mix in north-western China. To transport gas from the Caspian all the way to Shanghai could not effectively compete with alternative imports of LNG to

China's east coast. Currently, Russian and Central Asian energy constitutes only about 6% of China's total energy supplies.

Given the tight world energy balance projected for 2030, and in light of current debates over energy nationalisms embracing most of the major producer and consumer nations, there seems to be a clear need for cooperation between China and the international community in the energy field. China's at least indirect support for pariah states like the Sudan and Iran, only fuels the sense of impending geopolitical competition over energy resources between China and the West.

The great irony in all this is that, for better or for worse, a fungible commodity like oil cannot be locked up by one state or another. One country's growing consumption competes with any other country's growing consumption in the world oil market and the ultimate arbiter is price. But aggressive strategies to produce more oil abroad do not compete directly with each other: in the worst-case scenario, Chinese NOC activities act as substitutes for the retreating activities of more wary western firms in the more unstable areas where Chinese firms have penetrated; in the best-case scenario, they complement each other, adding to total world output. Observing this scenario with a cold eye, one sees that there is really no rational place for geopolitical competition in the realm of oil. While there might be in the realm of pipeline-transported natural gas, in the long run the prospect of an international market in LNG also turns the logic of resource competition on its head.

The truth is that the entire economic logic of globalisation would have to be suspended – or break down– for energy resource competition to become a rational path to pursue. China, perhaps more than any other country is well aware that its future (regardless of its ideological stripe) is intimately wed to an open, fluid, integrated global economy. Energy is the bedrock of that global economy; if world energy resources are chopped up and taken off the market by competing nationalisms, not only would the result be far more inefficient for everyone, but the open integrated global economy itself would be under threat, and we would be closer to the pre-World War I dynamic than ever before.

Conclusion

The last two years have seen Asia in general and China in particular surging onto the international energy scene. This can be seen with respect to rising Asian demand for oil and gas and the subsequent increase in pressure on world prices. It can also be observed in the growing presence of Chinese and Indian national oil companies in the upstream markets of producer countries around the world, but particularly in Central Asia, the Middle East, Africa and Latin America. Finally, Asian countries –with China, India and Japan at the forefront of this trend– have become increasingly active in international energy geopolitics, competing among themselves and with major consuming countries in the West for influence over energy producing countries and access to their resources.

Nevertheless, a number of cooperative initiatives have developed among Asian countries which receive little attention and work to offset intra-Asian competitive tendencies. For example, the 2004 Qingdao Initiative, under the auspices of the Asian Cooperation Dialogue, attempts to bring 25 Asian member states together for the purpose of supporting energy infrastructure that serves the interests of all of Asia. The recent strategic accord between China and India to avoid unnecessary competition in the international upstream sector is also illustrative that China's energy policy does have certain integrative characteristics. Indeed, while energy resources are bound to foster geopolitical competition, such rivalry is at least as likely to develop between Asia and the West as between China and Japan, on the one hand, or between China and India, on the other.

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