

CHAPTER 1

East Asian Energy Policies: Foreign and Military Implications

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In economic and military terms, East and Southeast Asia is the most dynamic region in the world. Since the Global Financial Crisis that began with the Lehman Brothers collapse in 2008, the region has been behind two-thirds of global economic growth. Asia's share of energy consumption is forecast to grow from about 35% currently to 47% in 2035 according to International Energy Agency (IEA) figures.¹ For the first time in history, Asia's collective military spending has overtaken Europe's, and growth in military spending is the most rapid of any region in the world.²

This has given rise to an expanding literature about imminent or likely “resource wars” between East Asia's great powers, especially over energy resources. Such arguments are based on the notion that scarcity will drive competition and exacerbate tensions in a region where military spending is rising and strategic competition is intensifying. This often leads to the conclusion that the more self-sufficient East Asian countries are when it comes to energy, the more secure they will become—possibly reducing regional strategic and military competition.

1. International Energy Agency, *World Energy Outlook 2016*, Paris: Organization for Economic Cooperation and Development/IEA, 2013.

2. International Institute for Strategic Studies, *The Military Balance 2013*, London: IISS, 2013.

These assumptions and arguments should not be taken for granted but put under greater scrutiny. Using China as a primary case study and also as a central player in terms of how its energy policy will determine strategic and military relations in East Asia, the paper will make the following arguments.

First, energy security as a stand-alone issue is important but not a dominant driver and shaper of current strategic affairs and military posture, and China's strategic and military posture in particular. Instead, energy security feeds into broader geostrategic and structural tensions in the region.

Second, enhancing energy security in the form of greater self-sufficiency for all countries will not necessarily lead to a more benign and stable strategic and military environment. On the contrary, reliance on open, efficient, and impartial commodity markets is the most effective approach in meeting one's energy needs. Attempting to own or lock-in a foreign energy asset is far less efficient and ill-suited to meeting regional demand. The risk that needs to be managed is ill-considered energy policies and developments in the future that might deepen the energy insecurity of East Asian countries, encourage the militarization of energy-related policies, and worsen pre-existing geostrategic and political tensions.

Third, encouraging market based energy interdependence and reliance on sea-borne trade might even have a dampening effect on strategic and military competition. This is so since it raises the domestic economic cost of regional instability, thereby increasing the incentives for strategic restraint if not cooperation.

The paper will then conclude with some suggested principles for energy policy and futures in East Asia, and the strategic benefits of market-based rather than securitized (or even militarized) self-help energy security approaches.

China as the Central Variable in East Asian Strategic and Energy Futures

China-centric analyses will often oversimplify the complexity of relations in East and Southeast Asia. Moreover, the energy (and related strategic policies of other East Asian countries) will also shape the future strategic and military landscape of the region, and influence China's responses in turn. However, focusing on China's rise in shaping the future strategic environment in East Asia is appropriate for a number of reasons.

The first reason is based on economics and development, which will drive future regional growth in energy consumption. While Asia will account for a projected 47% of global energy demand in 2035 according to IEA estimates, China could well account for almost half of this at 18% of global energy usage—rising from around 14% currently.³ Up to 2030, China will alone account for an estimated 25-40% of the increase in world energy usage. By 2030, China will match American energy demand even if energy usage per person remains significantly lower.

In contrast, the forecast for energy usage by other East Asian powers in Japan and South Korea will decline in relative terms. For Japan, the decline in energy demand as a proportion of global demand will fall from about 15% currently to 9% in 2030. Over the same period, South Korea's will decline from about 7% currently to 6%.

The strategic ramifications of energy use are generally caused by rapid changes in demand and/or supply. Leaving aside the supply question, it is clear that projected increases in Chinese demand will be the greatest driver of change and therefore uncertainty in terms of energy security in the region. In other words, if significant increases in energy demand (or significant disruption to energy supply) is a major driver of potential instability and tension, then China's economic rise is the primary regional factor in that equation.

3. All figures are from the *World Energy Outlook 2013*.

Second, in examining any correlation between energy security and strategic/military posture, it is noteworthy that China dominates defense spending in the region. Of the \$20.96 billion in Asian spending increases between 2011 and 2012, 62.4% was accounted for by East Asia, followed by Southeast Asia (13.8%), South Asia (12.4%), and Australasia (11.4%). Within East Asia, China was behind 50.9% of defense spending, Japan 29.5%, and South Korea 14.4%.⁴

When Asia (which includes South Asia) is taken as a whole, China heads the list at 32.5% of spending, Japan second at 18.9%, and South Korea third at 9.2%. If one considers that the most powerful Southeast Asian countries such as Singapore, Indonesia, and Thailand accounted for 3.1%, 2.5% and 1.7% of regional spending respectively, Chinese military dominance over the region in budgetary terms is clear.

Moreover, when one considers that Chinese spending on the People's Liberation Army (PLA) has been growing at rates exceeding gross domestic product (GDP) growth over the past decade at over 15% growth per annum since 2001, and is projected to continue this trend in the years ahead, Chinese dominance in military spending will be even more pronounced. This is particularly true since Japan—with an almost stagnant economy—is unlikely to increase defense spending beyond 1.5% of GDP for the foreseeable future. Indeed, China is expected to match American defense spending in dollar terms by around 2030, based on current projections.

Third, the most significant change in the regional military balance is the dramatic increase in Chinese capabilities over the past two decades—even if these capabilities remain untested.

Of high relevance is that the PLA's rapidly improving capabilities in so-called anti-access/area denial technologies (based on submarines, ballistic missile technology, and cyber and other net-worked disruption enhancements) threaten to deny American and Japanese forces capacity for sea-control over the so-called First Island Chain

4. All figures are from *The Military Balance 2013*.

which surrounds China's maritime periphery and stretches from the Kuril Islands in the Russian far east, to Japan, northern Philippines, Borneo and Malaysia—something which the U.S. Seventh Fleet has enjoyed for over five decades.⁵

The possible change in the military balance—even if one assumes that the PLA Navy cannot exercise sea control over the First Island Chain into the future—has a number of ramifications. One is growing uncertainty as to the American willingness to suffer significant military costs as a result of any conflict with China (e.g., over Taiwan or in defending its Japanese ally in a battle over control of the disputed Senkaku/Diaoyu Islands)—casting doubt upon the reliability of the American capacity and/or willingness to protect the maritime commons and interests of its Asian allies.

These fears are in turn encouraging capitals such as Tokyo to enhance their capabilities (both stand-alone and inter-operable with the Seventh Fleet) as a form of balance against China—particularly in ballistic missile technology, intelligence, surveillance, and reconnaissance capacity, and cyber capacity.

In the past, uncontested American military and naval supremacy as well as allied reliance on its unrivaled security guarantees have kept East Asian rivalries suppressed. But any future transition away from security “free-riding” towards a “self-help” system of military balancing has unpredictable consequences. This is due to the historical rivalries that have been largely suppressed during the era of American primacy but not entirely eliminated. In East Asia, historical animosity and rivalry between Tokyo and Seoul remains, as do territorial disputes over the Takeshima/Dokdo/Liancourt islets between these two countries. Although both countries identify

5. See, Dean Cheng, “Countering China’s A2/AD Challenge,” *The National Interest*, September 20, 2013, available from <http://nationalinterest.org/commentary/countering-china%E2%80%99s-a2-ad-challenge-9099> and James Holmes, “China’s Selective Access-Denial Strategy,” *The National Interest*, December 3, 2013, available from <http://nationalinterest.org/commentary/chinas-selective-access-denial-strategy-9482>.

nuclear-armed North Korea as a common threat, the South Korean response to a rearming Japan—exacerbated by declining American military dominance—would be unpredictable.

All of this is to simply emphasize that analysis of the foreign and military implications of energy policies in East Asia cannot fail to place what China chooses to do, and how regional powers respond, at the center of any inquiry. In contrast, the energy policies of Japan and South Korea are not likely to change significantly over time, unless Tokyo and/or Seoul are reacting to adverse developments in Beijing's energy policy. Far more dependent on energy imports than China, Japan and South Korea are nevertheless highly comfortable with market-based approaches to meeting their energy needs that has depended on American strategic and military pre-eminence in Asia as the guarantor of peace and stability.

Geostrategic Mindset Versus Economic Pragmatism

China's future energy policies and strategic preferences are somewhat less predictable. Indeed, the point about the centrality of China in forecasting possible strategic and military futures vis-à-vis changes and developments in energy policy is further emphasized by the prevalence of a highly political mindset when it comes to the organization of the Chinese political-economy, especially with respect to the energy sector.

To be sure, Beijing is not alone in viewing access to energy imports as an inherent component of national interest. But in China, the definition of "energy security" is much stricter than in other energy-importing countries such as Japan or South Korea since Beijing considers not just reliable and uninterrupted access as critical, but also cheap supply of energy as essential to its national and domestic political interest. Moreover, while securing cheap and reliable access to foreign oil is seen as essential for mitigating economic risk in all oil-importing countries, securing such access is also essential for mitigating risks to the survival of the Chinese Communist Party's

(CCP) hold on power. In other words, the politicization of energy security in China occurs in a manner that does not apply to the same extent in oil-importing East Asian democracies.

Conflating economic risk and risk to the regime in China stems from the fact that the modern CCP largely stakes its legitimacy on the capacity to deliver rapid economic growth. A significant disruption to China's oil supply or a jump in prices is likely to lead to the twin forces of mass discontent: A stagnating economy and inflation caused by spikes in domestic energy prices. At a minimum, rapid growth is required to generate sufficient jobs and sustainability of incomes; it is not lost on modern Chinese authorities that double-digit inflation was one of the major reasons behind countrywide protests in 1989.

This link between energy security and maintaining rapid growth (and therefore regime security) has deepened due to the evolving drivers of China's growth in place since the mid-1990s. From this period onwards, fixed asset investment (and exports) replaced domestic consumption as the driver of economic growth.

Indeed, fixed-asset investment was behind around 40% of Chinese growth at the turn of this century, rising to current levels of 50-60%. During the global financial crisis (2008-2010), it drove over three-quarters of GDP growth. At current levels, the contribution made by fixed-asset investment is the highest of any major economy in recorded history.⁶ Fixed-asset investment is an immensely energy-intensive form of economic activity, especially in an economy that uses energy extremely inefficiently compared to advanced industrialized peers.⁷ Examining Chinese oil consumption over the last two decades makes this clear. From 1993-2010, oil consumption

6. See David Li, "Large Domestic Non-Intermediated Investments and Government Liabilities," working paper, Tsinghua University's Center for China in the World Economy, Beijing, April 4, 2006.

7. See Yuan Hu, "Energy conservation assessment of fixed-asset investment projects: An attempt to improve energy efficiency in China," *Energy Policy* 43, April 2012, pp. 327-334.

increased from 140 million metric tons to about 440 million metric tons.⁸

China's gradual realization that access to foreign oil was becoming an issue of utmost importance must be understood alongside the evolution of the Chinese political-economy from being largely household-driven driven in the first 10 years of reform from 1979-1989 to state-sector driven from the mid-1990s onwards—the opposite of what occurred in industrializing neighbors such as Japan, South Korea, and Taiwan. This means that the state-owned sector is disproportionately driving energy consumption and growth in demand in the economy. For example, in the first five months of 2011, it was estimated that six energy intensive sectors—electricity, steel, building materials, mining, chemical engineering, and petroleum which are all state-dominated—accounted for 43% of China's power consumption growth in 2011.⁹

Moreover, it is not surprising that in this state-dominated political-economy, energy is explicitly designated a “strategic sector,” meaning that political officers and bodies are to exercise extensive control and oversight over all aspects of that sector. This is important because it is a structure that tends to conflate political with commercial interest more so than any other East Asian power (with the exception of North Korea).

This is clear from closer examination of the energy sector in China. In the first years after oil self-sufficiency ended in 1993, Beijing reorganized its oil (and gas) assets into two state-owned firms: The China National Petroleum Corporation (CNPC) and the China Petroleum and Chemical Corporation (Sinopec). CNPC is the dominant upstream player in the sector, and along with its listed entity, PetroChina, accounts for over 66% of China's oil output. Sinopec

8. *BP Statistical Review of World Energy 2011*, London: BP plc, June 2011.

9. “Energy-intensive industries account for 43% of China's power consumption growth,” *Xinhua*, July 8, 2011, available from http://www.chinadaily.com.cn/business/2011-07/09/content_12869411.htm.

accounts for at least half of the country's downstream activities such as refining and distribution. The state-owned China National Offshore Oil Corporation (CNOOC) is close to being a monopolistic player in offshore oil exploration and production, with other state-owned giants such as Sinochem Group becoming more prominent in offshore oil distribution.

This is a contrast to Japan's domestic economy where the electricity industry, for instance, is dominated by 10 private firms, albeit in a vertically integrated structure and each enjoying virtual regional monopolies. Generating around 85% of the country's power, the balance is generated by the Electric Power Development Co. and Japan Atomic Power Company (both formerly state-owned but now privatized.)

Although Chinese state-owned enterprises (SOEs) are not mere puppets of the CCP and generally behave as normal commercial entities, the authority of political officials over these SOEs goes beyond what occurs in industrialized East Asian economies such as Japan and South Korea where many oil and gas SOEs have been privatized, and remaining SOEs almost fully commercialized.¹⁰

In China, the shares, and therefore assets, of SOEs are held by the State Assets Supervision and Administrative Commission (SA-

10. It is granted that to compete against Chinese oil and gas SOEs which receive generous lines of credit and other benefits from the CCP, Tokyo in particular is increasing government assistance to Japanese firms. For example, the Japanese government established Japan Oil, Gas and Metals National Corporation (JOG-MEC), formerly the Japan National Oil Corporation, is tasked with ensuring stable supply of oil and gas to the Japanese market. It does this through JOG-MEC administering subsidies to private Japanese oil and gas companies seeking upstream acquisitions offshore. However, unlike in China, Tokyo seeks to ensure energy security through public-private partnerships where private firms take the lead, in addition to a deregulation agenda domestically to improve efficiency and competitiveness. Moreover, political officials in Japan do not oversee major personnel appointments in Japanese energy companies or take the lead in defining objectives and targets for Japanese energy firms operating domestically or abroad. See, Petroleum Association of Japan, *Petroleum Industry in Japan 2012*, September 2012.

SAC), which in turn is controlled by and answerable to China's top administrative and legislative body, the State Council of the National People's Congress. The higher strategic objectives and purpose of SOEs are set by the leadership of the CCP. The vast, opaque and complicated system means that it is not always easy to trace the chain of decision-making throughout the country's political economy. But it is clear that the senior managers of all central SOEs are almost all senior members of the CCP.¹¹ The three most senior corporate positions (Party Secretary, Chairman, and CEO) of the largest centrally managed SOEs which include the energy companies are all appointed by the CCP's Central Organization Department (COD), after review and approval by the all-powerful Standing Committee of the Politburo. Almost all appointees are CCP members, and in many cases the CEO and Party Secretary is the same person. The appointment of all remaining senior executives is carried out by the SASAC, which consults with the COD.

By ensuring that only state-owned entities become the dominant and influential Chinese players in upstream and downstream domestic and international markets, the ability of powerful entities and individuals within the CCP to shape and execute energy policy is immeasurably enhanced. Since private-sector and independent entities are prevented from playing major roles in the energy sectors, commercial decisions tend to be disproportionately influenced by political interests and considerations—whether they are shaped by individual, Party, or national interests.

A mindset of maximizing control over all aspects of energy production, supply, and distribution is one thing. But if Beijing is hardwired to adopt a far more politicized mindset when it comes to thinking about domestic and international energy policy, it is also clear that China is nevertheless forced to pragmatically rely on the operation of free-markets when it comes to actually securing reliable and cheap access to foreign energy resources. This stems from

11. See Minxin Pei, *China's Trapped Transition*, Cambridge, MA: Harvard University Press, 2006.

the fact that the CCP has no choice but to do so.

Figures for 2010 reveal that 23% of China's offshore equity oil production was in Kazakhstan, 15% in both Sudan and Venezuela, 14% in Angola, 5% in Syria, 4% in Russia, and 3% in Tunisia. Nigeria, Indonesia, Peru, Ecuador, Oman, Colombia, Canada, Yemen, Cameroon, Gabon, Iraq, Azerbaijan, and Uzbekistan make up the remaining 20%.¹² Chinese offshore equity production amounts to around 28% of total current Chinese importing requirements, which were 4.8 million barrels per day in 2010.¹³ National oil company (NOC) owned/controlled offshore sites are currently producing around 1.37 million barrels per day, and known new purchases of offshore sites suggest that Chinese NOCs' overseas equity production will reach around 2 million barrels per day by 2020,¹⁴ which is significantly less than the official 2020 target of 4 million.¹⁵

For Beijing, diversifying its guaranteed sources of oil around the world is an essential hedge against disruption in normal offshore supply caused by commodity markets. The economic approach of heavy reliance on purchasing oil in international commodity markets leaves the Chinese economy exposed to spikes in oil prices. Such price spikes could be the result of political unrest in a major oil exporting country such as Saudi Arabia, geopolitical events that might lead to Western sanctions against a major supplier such as Iran, or a rise in global demand, which occurred just prior to 2008.

Hedging against the whims and vagaries of commodity markets means that Chinese NOCs participate in global commodity markets when conditions are benign. Although Chinese companies are not

12. Julie Jiang and Jonathan Sinton, *Overseas Investments by Chinese National Oil Companies*, Paris: International Energy Agency, February 2011, available from www.iea.org/publications/freepublications/publication/overseas_china.pdf.

13. U.S. Energy Information Administration, "Country Analysis Briefs—China."

14. Ibid.

15. Ibid.

transparent about transactions in oil markets, there is strong anecdotal evidence from 2008-2010 that Chinese NOCs sold a significant portion of their offshore equity oil on local and international markets under benign conditions instead of shipping the resource back into China.¹⁶ This makes sense given the high cost of transporting oil from distant fields. Also, China does not have the domestic refining capabilities necessary to handle such additional volume, meaning it would have to rely on costly third-party refineries. This would be much more expensive than sourcing oil on international markets. But locking up resources through offshore equity oil gives China the option of hedging, or of bypassing commodity markets should they deteriorate.

The important point to be made here is that China is deeply conflicted when it comes to energy policy. On the one hand, the prevailing view in Beijing is that energy is “too important to be left to market forces alone,” as one expert on Chinese energy policy puts it.¹⁷ But its ownership of energy assets offshore will not be sufficient to meet its needs while procuring oil from outside commodity markets is inefficient and expensive.

The bottom line is that Beijing and the CCP will continue to feel deeply uncomfortable in relying on open markets to secure its energy and market-forces to determine pricing, and will persist in hedging against disruptions to supply and price spikes—without knowing whether its offshore hedging strategy will actually adequately shield its economy from such potential disruptions and price increases. This suggests that Beijing is reliant on regional and global commodity markets, but not necessarily committed to these.

But other countries can shape China’s energy policies, even if they cannot change its distrustful mindset. So long as open market systems remain non-discriminatory, blind to strategic rivalries, and

16. Jiang and Sinton, p. 17.

17. Heinrich Kreft, “China’s quest for energy,” *Policy Review*, no. 139, October/November 2006.

continue to meet Chinese needs, Beijing will have little reason to deviate from pragmatic participation and support for such open systems, despite the persistent geo-strategic energy security mindset. This means that in energy policy, at least, one has the prospect of encouraging and persuading Beijing to behave as a “responsible stakeholder” within a liberal economic order.

Energy Security and China’s Military Build-up

If Beijing’s mindset towards energy security is inherently politicized and geostrategic in nature, is the country’s strategic and military policy increasingly shaped by energy security concerns as proponents of future East Asian “resource wars” tend to assume?

Even though China can meet 90% of its energy needs from domestic sources, it continues to import around half of its oil. With oil still making up about 20% of its energy mix, it is projected that over 80% of the country’s oil will be imported from foreign sources, rising from about 50% currently.¹⁸ Even if China increases its use of coal, gas, and nuclear in its energy mix, oil will remain the dominant fuel for commercial and consumer transportation.

Moreover, almost all of China’s oil imports now and into the future are received from oil tankers (currently about 80-85% foreign flagged)¹⁹ passing through the Malacca Straits—with oil from pipelines from Russia and Central Asia unable to significantly meet China’s needs. Even if the proposed pipeline through Myanmar, which begins in the Bay of Bengal and runs into Yunnan province, is completed, this has the capacity to import about 440,000 barrels

18. All figures are from the *World Energy Outlook 2013*.

19. See “China’s Oil Security: Diplomacy, Economics and the prospects for Peaceful Growth,” *StratRisks*, July 25, 2013 and Gabriel B. Collins and Andrew S. Erikson, “Chinese Efforts To Create A National Tanker Fleet,” in Gabriel B. Collins, Andrew S. Erikson, Lyle J. Goldstein and William S. Murray, eds., *China’s Energy Strategy: The Impact on Beijing’s Maritime Policies*, Annapolis, MD: Naval Institute Press, 2008, pp. 84-85.

per day (bpd). A pipeline from Siberia can pump about 620,000 bpd into China's northern regions. A proposed pipeline from Kazakhstan has a likely capacity of 400,000 bpd.²⁰ Even if all goes well with these alternative oil routes, China currently imports around 5 million bpd, meaning that the majority of its oil imports will still be from tankers passing through the Malacca Straits. Besides, Chinese reliance on imported oil will grow to an estimated 13 million bpd by 2030. Given likely declining oil production from Russia and Central Asia in 2030, the overwhelming majority of this will be shipped from the Middle East.

This has given rise to a common perception that China's military build-up is primarily or largely the result of its energy insecurity.²¹ In 2003, and recognizing China's increasing reliance on oil tankers through sea-lines-of-communication (SLOCs), China's then-President Hu Jintao spoke ominously about China's worsening "Malacca Dilemma." Although the Malacca Straits is a body of water stretching 1000km, parts of the Straits are as narrow as 15km wide. Those emphasizing absolute security (i.e., control) over security of supply fear a hostile power (namely the United States) controlling the Straits and blocking nearly all of its energy imports in order to cripple its economy—as occurred against the Japanese prior to and during World War Two.

Subsequently, and in addition to the seabeds in China's periphery being rich in hydrocarbons, it is widely assumed that China's naval build-up and maritime claims in the East and South China Seas are primarily about alleviating its own energy insecurities through eventually enjoying "command of the commons" in critical maritime zones. Short of sea control, some Chinese strategists emphasize the fact that China cannot even protect its seaborne energy sup-

20. "Weber Weekly Tanker Report—Week 25", Greenwich, CT: Charles R. Weber Company, June 21, 2013.

21. See, for example, Robert Kaplan, *Monsoon: The Indian Ocean and the Future of American Power*, New York: Random House, 2011.

plies, and this deficiency needs to be remedied.²² In other words, energy security is intimately tied to Chinese strategic thinking and military posture, and therefore to the future strategic and military environment in East Asia.

When one examines these propositions in greater depth, it becomes clear that energy security is just one of several factors determining Chinese strategic and military decisions—and alleviating China’s energy insecurity or changing its energy mix (between oil, gas, coal, and nuclear) will not necessarily lead to reduced instability and military competition in East Asia.

China’s Military Modernization Program

Although “energy security”—and the threat of sea-based interdiction of supply—has been an official concern since 2003, there is little evidence to suggest that such concerns are primarily driving Chinese force posture and modernization over the past decade.

For a start, the 2006, 2008, and 2010 *Defense White Papers* only briefly alluded to energy and oil security as one amongst many factors. In the chapter on “Supporting Economic and Social Development” in the 2013 version, it merely states that the PLA exists, *inter alia*, to offer “security support for oil and gas exploration,” and merely notes that “Security issues are increasingly prominent, involving overseas energy and resources, strategic sea lines of communication (SLOCs). . . .”²³ The point is that PLA Navy (PLAN) assets will be used to provide greater security now and into the future for Chinese energy interests. But energy security concerns are not primarily driving force posture as such. Indeed, it is clear that the

22. See, Saira Basit and Oystein Tunsjo, “Emerging naval powers in Asia: China’s and India’s quest for sea power,” *Oslo Files on Defense and Security*, no. 2/2012, Oslo: Norwegian Institute for Defense Studies, June 2012.

23. *The Diversified Employment of Chinese Armed Forces*, Information Office of the State Council, People’s Republic of China, April 2013.

shift beyond “near coast defense” in developing a blue-water navy is primarily about “safeguarding national sovereignty, security and territorial integrity.”²⁴ That Chinese claims in the East and South China Seas are not primarily about claiming seabed energy resources will be discussed shortly.

There is no doubt that these new “historic missions” as former President Hu calls them encompasses considerations about energy security and China’s access to SLOCs. But Chinese defense planners realize that there is simply no way to adequately solve its Malacca Dilemma. For example, the Malacca Straits is seemingly beyond the PLA’s emerging capabilities designed to deny the U.S. sea-control. At best, the PLA will be able to only defend coastal SLOCs for the next several decades through inflicting “prohibitive costs” on U.S. ships operating in these coastal areas. Even if the PLA eventually “neutralizes” the Malacca Dilemma, China is powerless to stop U.S. blockading other potential energy-related chokepoints such as the Gulf of Aden or Straits of Hormuz—and will lack the capacity to do so for many decades beyond 2030.

Indeed, whether a U.S. blockade of oil supplies into China is a realistic option at all, and therefore a plausible concern for China, will be discussed below.

Is Blockade a Plausible and Genuine Concern for China?

Although writings by some Chinese strategists are replete with concerns about U.S. blockade,²⁵ more sensible and measured strategists and officials recognize that such a scenario is highly unlikely if not inconceivable. The first thing to note is that such an American action

24. Ibid.

25. See, for example, a summary by Andrew Erickson and Lyle Goldstein, “Gunboats for China’s New ‘Grand Canals’? Probing the Intersection of Beijing’s Naval and Oil Security Policies,” *Naval War College Review* 62, no. 2, Spring 2009, pp. 43-76.

would be illegal according to international and trade law, and would be only contemplated in the event of a major war against China. In other words, any blockade is an extreme action and is itself an act of war against China. The United States would suffer significant diplomatic fallout were it to attempt the blockage of China outside the confines of a major war. Indeed, U.S. attempts at a blockade would not be supported by its allies unless a full-scale war was occurring, due to the economic fallout that would invariably occur from disruption to the Chinese economy and turmoil in petroleum markets affecting the global economy. Put differently, the threat of blockade is only conceivable after a violent breakdown in relations between the U.S.-China; it is not a peacetime threat.

Second, it is highly dubious that a blockade could actually succeed. If the Malacca Straits were closed to China, there would be other deep-water passages through the Indonesian archipelago available to China.²⁶ Even if the United States managed to block these routes (e.g., through the Lombok, Makassar, and Mindoro Straits) tankers could re-route around Australia—causing an acceptable 4-16 day delay for Chinese ports according to expert estimates.²⁷ Furthermore, even if the United States decided to impose a more “up-stream” blockade in the Gulf of Aden or the Straits of Hormuz, this would not prevent energy shipments reaching China from Africa or South America. Because oil is a genuine global commodity, China would be able to obtain supply from non-blockaded sources.

Third, there would be an operational problem. As a globally traded commodity, it is very difficult to know where oil from Africa or the Middle East actually ends up. As a tanker leaves the Middle East towards Asia, its final destination can change a dozen times while

26. See Michael McDevitt, “The strategic and operational context driving PLA Navy building,” in Roy Kamphausen and Andrew Scobell, eds., *Right Sizing the People’s Liberation Army: Exploring the Contours of China’s Military*, Carlisle, PA: Strategic Studies Institute, 2007.

27. See Gabriel B. Collins and William S. Murray, “No Oil for the Lamps of China?” *Naval War College Review* 61, no. 2, Spring 2008, pp. 35-58.

it is at sea, based on ongoing trading for the commodity. Tankers also often carry oil for customers in multiple countries, while bills of landing can be forged or fabricated to bypass blockages.²⁸ It would be an almost impossible task for one country (and its allies) to monitor and inspect all ships passing through chokepoints.

Furthermore, even if the United States somehow successfully blockaded Chinese bound oil tankers, Chinese NOCs could still purchase oil contracts on commodity markets and tankers already in the South China Sea could re-route to Chinese ports. In other words, unless the United States imposed direct control over oil commodity markets and imposed a market ban against supply to China—a clear impossibility—a blockade is unlikely to succeed. Besides, as the 1973 Arab oil embargo demonstrated, the embargoed country can simply purchase oil from third parties, even if it is at increased prices.

Fourth, a blockade assumes acquiescence and cooperation from key countries: Singapore, Malaysia, and Indonesia into the South China Sea; Saudi Arabia in the Middle East. For the Southeast Asian countries, free and unimpeded trade is their lifeblood. For Saudi Arabia, selling oil on commodity markets is critical to national income and therefore regime security. In 2013, the Saudi government received around \$375 billion in revenue from oil exports, up from about \$179 billion in 2010.²⁹ Oil imports from Saudi Arabia to China have more than doubled over the past five years and currently stand at over one million bpd.³⁰ It is difficult to envisage a scenario extreme enough for these countries to support an American blockade against China.

28. Ibid.

29. See “Saudi Arabia’s Dependency on high oil prices courts disaster,” *South China Morning Post*, November 13, 2013, available from www.scmp.com/business/commodities/article/1354720/saudi-arabias-reliance-high-oil-prices-courts-disaster.

30. See Michael Lelyveld, “China Ups Persian Gulf Imports,” *Radio Free Asia*, February 4, 2013, available from www.rfa.org/english/commentaries/energy_watch/oil-02042013105305.html.

Are East Asian (Especially Chinese) Maritime Claims Primarily about Energy Security?

Strategists from East Asia and the United States have frequently asserted that interest in sea-bed resources is a major driver of growing interest in disputed regions of the East and South China Seas. However, talk about potential “resource conflicts” obscures the fact that the increasingly strident Chinese claims in these areas are more driven by considerations of political legitimacy and nationalism than it is about energy security. This is so for several reasons.

For a start, much confusion is caused by the failure to distinguish between hydro-carbons in “uncontested coastal areas” (which are already being mined for hydro-carbons), “contested coastal areas” (where disputes over bidding blocks are the primary issue of contention), and more distant and contested deep-water areas with largely unknown hydrocarbon potential.

Reports drawing from Chinese speculation that there could be 200 billion barrels of oil in the South China Sea—making the region a mini-Saudi Arabia—are highly misleading for a number of reasons.

First, this is a completely unverified estimate and there is no evidence that officials in Beijing actually believe the estimate to be even vaguely accurate (even though the estimate has been repeated by official bodies).³¹ The 200 billion barrel figure is produced by a fundamentally unsound extrapolation of what may lie in the contested areas of the South China Sea that simply takes the known reserves in uncontested coastal zones (about 11.2 billion barrels of oil and 190 trillion cubic feet (Tcf) of gas) and assumes that contested areas will be as similarly rich.

Besides lacking credibility, the 200 billion barrel figure is based on what is beneath the sea-bed, not what is actually recoverable. In compiling a “best guess” of recoverable resources in the contested

31. For example, see, Will Rogers, “Beijing’s South China Sea Gamble,” *The Diplomat*, February 4, 2012, available from <http://thediplomat.com/2012/02/beijings-south-china-sea-gamble/>.

zones, experts offer the figure of 1.6-6 billion barrels, which would deliver about 650,000 bpd for a decade before declining sharply when based on standard deep water depletion curves.³² Given that China currently imports over 4 million bpd, which will rise to around 10 million bpd by 2020, even the best case estimate for contested areas in the South China Sea will not provide oil security for China.

Second, the deep water, strong undersea currents, and prevalence of tropical storms in these areas will make extraction enormously difficult and expensive, if not impossible. In any event, given that affordability is an essential element of Chinese energy security, the expense of extracting deep water oil would likely render it prohibitive. Indeed, mining of seabeds is much more feasible in the shallower waters of uncontested areas of the South China Sea. When one looks at the East China Sea, the importance of energy in the dispute between Japan and China is even less pronounced. While some Chinese sources predict some 160 billion barrels of oil and 250 Tcf of gas, International Energy Agency estimates are closer to 60-100 million barrels of oil and 1-2 Tcf of gas.³³ With a record of consistently over-stating energy repositories in contested regions such as Xinjiang and the South China Sea for domestic political reasons, there is little evidence that sensible Chinese officials actually rely on their own elevated estimates. Once again, there is no estimate of recoverable oil and gas amounts. In any event, there is little prospect that China and/or Japan would initiate a highly costly and disruptive resource conflict (which would likely involve American forces) over a region whose seabed resources are almost entirely unproven and speculative.

In summary, even if realistic best case scenarios of recoverable re-

32. See Nick Owen, "Oil Disputes in the South China Sea in Context," in Clive Schofield, ed., *Maritime Energy Resources in Asia: Energy and Politics*, NBR Special Report, no. 35, Washington DC: National Bureau for Asian Research, December 2011, pp. 31-35.

33. See U.S. Energy Information Administration, "East China Sea Analysis Brief," September 4, 2012.

sources for the East and South China Seas are assumed, a successful Chinese attempt at colonizing these entire domains and extracting its resources would deliver China only a few years' worth of oil and a decade or more of gas needs.³⁴

Instead, resource issues and appeals to “national energy security” are generally used to harden domestic resolve in claiming these territories. If extracting resources were the primary motivation, China would be far more prepared to engage in joint ventures with other claimants in order to provide a political opening through which it can exploit its share of the resources—something China has generally resisted.

These worsening disputes in the East and South China Seas are therefore better understood as a function of rising nationalism. They are also a function of structural conflict (caused by China's rise outside the Western alliance system) and geostrategic competition within which China feels acutely uncomfortable with the American and allied military presence within in its First Island Chain.³⁵

Relying on the American Seventh Fleet to preserve the stability and openness of SLOCs is part of China's broader strategic dilemma: It continues to free ride under the American security umbrella because it has no choice but to do so since no other country is capable of fulfilling the role of ensuring stability and providing order for commerce to take place. At the same time, structural and strategic competition is deepening between China on the one hand, and the United States and its allies on the other.

34. See, U.S.-China Economic and Security Review Commission, “China's Maritime Disputes in the East and South China Seas,” Opening Statement of Dr. Steven W. Lewis, Hearing before the U.S.-China Economic and Security Review Commission, 113th Cong., 1st sess., April 4, 2013, Washington: DC, U.S. Government Printing Office, 2013, p. 108.

35. For example, see, Aaron Friedberg, *A Contest for Supremacy: China, America and the Struggle for Mastery in Asia*, New York, W.W. Norton & Co, 2012, for an argument on the inevitability of structural tension between the two countries.

Implications for East Asian Energy Futures and Markets

Japanese force posture since the end of the Second World War is limited by a coastal defense doctrine while South Korean force posture is largely determined by tensions with North Korea in the Peninsula. Even though China has a more expansive military and naval force posture and doctrine, this paper has so far argued that one should not overstate the role of energy security in shaping this posture and doctrine. A stated desire to take on more responsibility in patrolling the SLOCs that its energy imports depend upon does not equate to strategic planning being defined primarily by energy security concerns. More broadly, one should not over-emphasize the role of energy in shaping the strategic and military future of East Asia.

One critical implication of all this is that energy self-sufficiency—even if it were possible for East Asian countries—is not likely to dampen geostrategic and military competition between them. The preceding section is also provided as a counter to the common assumption that “resource wars” are primarily driven by scarcity when such wars are caused by political and economic policies (in response to scarce resources) rather than scarcity itself.

None of this is to imply that the future shape of energy policies and energy markets is irrelevant, or that we should remain complacent.

On the contrary, in order to ensure that energy policies do not contribute to a worsening of existing structural and geostrategic tension, one ought to keep three things in mind:

1. As argued earlier, all major East Asian states, especially China, have adopted a securitized approach to energy security, in that supply of energy is seen as a core element of national and regime interest. However, none of the major East Asian states have abandoned a market-first view in favor of a militarized-first view of energy security—for the reason that the latter would actually lead to far more inefficient energy supply and price outcomes. For example, China’s offshore equity assets would only provide it with

one-quarter of its import needs if these offshore sites were utilized at full capacity. Even now, less than 20% of offshore oil owned by its NOCs is shipped back to China.

If any of the major East Asian states were to take a military-first view of energy security—with the effect of increasing the energy insecurity of one’s own country and that of the region—then existing geostrategic tension and competition could worsen and possibly spiral towards a violent scenario. Being outside the American alliance system and an entrenched political-economy that is intimately tied to the CCP, this paper argues that China is the most likely East Asian power to revert to a “self-help” energy security posture. However, it has strong pragmatic and economic reasons to resist that option, which would lead to worse energy security outcomes for itself and the region.

2. Decreasing a militarized view of energy means increasing (not decreasing) reliance on regional and global commodity markets, and also seaborne trade which serves as a restraint on the prospect of naval conflict. A loss of faith in commodity markets would invariably lead to a much more militarized “self-help” system as states and governments increasingly adopt a zero-sum approach to energy security.
3. Paradoxically, in an era in which no East Asian state will gain sea control of the maritime commons (even if their sea denial capabilities are enhanced), increased reliance on seaborne energy imports will increase the vulnerability of energy importers—thereby making the costs of partial disruption of supply and volatility in prices which would result in the event of major war in the East or South China Seas increasingly prohibitive.

For Japan and South Korea, which import virtually all of its fossil fuels, and China, which imports more than half

of its oil needs, the above logic is particularly compelling even if military planners in all three countries prepare for a more violent future.

What does all this mean for a set of desirable trajectories as to how future energy mixes and markets develop? The below are a set of suggested broad guidelines and suggestions.

A. A more commoditized and openly traded energy resource (from supply, to delivery, to market pricing) tends to lower the effectiveness of militarized approaches to energy security.

- It is far more difficult to “lock in” supply for oneself in commoditized and open markets. Indeed, as long as major suppliers remain committed to freely traded commoditized markets, clients in East Asia have no option but to rely on and trust these markets to meet energy demand.
- Blockades and other military actions are far less effective when supply and delivery of resources are determined by the operation of well-functioning markets.
- When prices are set by the market rather than being based on bilateral agreements, the leverage of dominant suppliers and/or dominant buyers is diluted—which will help to take the politics out of the energy trade.

B. In terms of energy mix for East Asian powers, the greater the future reliance on openly traded resources in commodity markets, the less militarized energy policies are likely to be.

- Oil markets are deeply commoditized. Natural gas markets, by contrast, are more fragmented than oil markets and countries like China seek greater vertical ownership and control (e.g., through off-shore equity or else exclusive supply deals, along the pipeline or a liquid natural

gas transport chain). Countries are likely to seek greater control when it comes to pipeline gas as this is easy to disrupt, while seaborne trade is much harder to disrupt. This is where a lack of a commonly patrolled and supervised East Asian gas pipeline network is a problem.

- Nuclear currently provides about 1% of China's energy needs. Even if reliance on nuclear is increased significantly, China will still require an increasing amount of oil and gas imports from the Middle East, Africa, Southeast Asia, and Australia. In other words, China will remain dependent on oil and gas commodity markets regardless of the nuclear energy equation. Nuclear provides about 10% and 30% of Japan's and South Korea's energy needs respectively.

C. The greater the prevalence of private sector actors in markets (encompassing suppliers, intermediaries such as transporters, and buyers), the less confluence between geostrategic and political interest on the one hand, and energy policy on the other—therefore, the less securitized energy policy becomes.

- The more interventionist the state is in the economy, the greater the role of the government in energy policy tends to be since energy security is considered too important to be left entirely alone to “market forces.”³⁶ A nationalistic approach seeks to use state-owned-enterprises (SOEs) to own and control energy across the vertical spectrum from exploration and extraction, refinement, transportation, and consumption—with military support and protection offered to the interests and activities of these SOEs.
- Energy SOEs tend to be far less efficient than Western

36. See John Lee, “China’s Geo-Strategic Search for Oil,” *Washington Quarterly* 35, no. 3, Summer 2012, pp. 75-92.

multinational energy companies meaning that countries like China actually rely on efficient private sector firms to meet demand from global markets. Even if East Asian SOEs resist privatization (and the momentum for this largely depends on continued economic reform in countries such as China,) the genuine commercialization of energy SOEs would be a step in the right direction. This decreases the prospect that they will be used to pursue national strategic and political interests and strengthens the development of better functioning commodity and market-driven energy sectors. In this context, companies such as Malaysia's state-owned company, Petronas, serves as a good model for Chinese SOEs.

D. The greater the volume and diversity of players committed to market-based supply of fossil fuels, the better.

- This is where America has a potentially critical role to play into the future. If America becomes a major net exporter of energy (gas and oil) over the next two decades, it is critical that private sector energy companies are allowed to sell to export markets based on commercial considerations alone, and eschew strategic or political reasoning that may be favored by Washington.

This will have one of two beneficial effects. First, it will provide extra buffeting against political shocks and risks that might afflict some energy producing areas and nations, hence alleviating the energy insecurity and vulnerability of East Asian countries who might otherwise take a much more self-help view of meeting energy needs in order to insure against such shocks.

For example, the increased American oil production since 2008 of around 2.7 million bpd amounts to three times the total oil pro-

duction lost to world markets as a result of the Arab Spring.³⁷

Second, it will reduce the capacity of oil and gas exporters such as Russia to use energy exports as a political weapon. It will also lower East Asian reliance on “rogue states” such as Iran.

E. The more buy-in from “outsiders” such as China into regional and global organizations such as the International Energy Agency, the more institutionalized open energy markets become—leading to reduced securitization.

- This is a “chicken versus egg” problem: China has refused invitations to join the IEA as an associate member as it believes that releasing trade and energy data will jeopardize its national strategic and energy interests.

Conclusion

China will remain wary of the American and allied naval presence in East and Southeast Asia due to inevitable geostrategic tensions triggered by China’s rise and deep discomfort with American strategic staying power in the region. While not decisive, energy policies and mindsets can either exacerbate these tensions or serve as a restraint from such tensions escalating into conflict.

In particular, the deepening of collective reliance on an open market based approach to securing energy imports will mean that China will have little option but rely on the American naval presence to supervise the SLOCs used to bring energy imports into the region since no other country will have the capability to fulfill this role in the foreseeable future. In this context, Beijing is more likely to continue to grudgingly accept that the American presence is essential

37. See, Amy Myers Jaffe and Edward L. Morse, “Liquefied Natural Profits,” *Foreign Affairs*, September 16, 2013, available from www.foreignaffairs.com/articles/united-states/2013-09-16/liquefied-natural-profits.

as a stabilizing force in the region needed to ensure uninterrupted supply of energy resources to China—even if the PLA Navy takes on more responsibility for patrolling SLOCs in the Indo-Pacific.

Washington has a critical role to play here in de-securitizing the operation of energy markets and how energy resources are bought and transported to China, particularly if it emerges as a significant energy exporter to the region. Remember that as far as China is concerned, its primary strategic competitor is also the self-assigned champion of open market systems in the region and world. While strategic competition between the United States and China will likely deepen over time, it is in America's and the region's interest to do whatever it can to convince Beijing that Washington is at least committed to supporting and protecting open market systems, universal access to SLOCs, and other essential economic processes that benefit all East Asian powers.

Moreover, creating incentives for the region to view energy security in economic rather than military terms will offer further encouragement for American allies such as Japan to see the security relationship as one required to preserve stability, freedom of commerce and rule of law required for energy and other trade, and less as a security arrangement that can be used to boost their escalatory options in bolstering their claims in disputed territories—something the United States has been trying to avoid whilst at the same time keeping its alliances robust. Indeed, greater collective reliance on SLOCs in the East and South China Seas is likely to strengthen regional convention and norms that “freedom of passage” for all commercial shipping is applied to SLOCs, even if the SLOCs pass through disputed maritime regions.³⁸

None of this is any guarantee that tensions will subside between China and other powers in Asia. But, it means that the dire predictions about “resources wars” in the region are less likely to come to pass.

38. The issue of whether freedom of “navigation” which extends to military vessels is a more fraught question.