The Chinese Energy Security Debate*

Erica S. Downs

ABSTRACT China's shift to a net oil importer has generated much speculation outside China about how China's growing dependence on foreign oil will affect its international behaviour. This discussion is framed by two competing models of China's future approach to energy security: one that foresees deeper integration into global energy markets and another that predicts efforts to minimize reliance on these markets in potentially destabilizing ways. Less attention has been paid, however, to the parallel debate unfolding inside China over how to ensure the country's oil needs are met without undermining national security. This article introduces the main participants in the debate, how the debate relates to energy security decision-making, and some of the measures to enhance energy security under consideration. It concludes with a discussion of some of the factors that will shape China's emerging approach to energy security.

China became a net importer of oil in 1993, ending three decades of self-sufficiency, and is likely soon to become the second largest oil consumer in the world after the United States. Its entry into the club of oil-importing nations – as an emerging great power whose intentions towards the international system are uncertain – has stimulated a debate outside China over whether its need for ever greater quantities of imported oil will radicalize or moderate its international behaviour. The parameters of this discussion are informed by two competing archetypes of China as a rising power. On the one hand, analysts who foresee the emergence of a belligerent, revisionist state speculate that China's oil needs could prompt it to pursue destabilizing policies. The possibilities include a naval build-up to protect potential energy resources in disputed parts of the South and East China Seas and the exchange of arms for oil with nations hostile to the United States.[1] On the other hand, analysts who foresee the rise of a benign, status quo power contend that China's reliance on foreign oil could facilitate its deeper integration into the international system. The predictions include Chinese co-operation with neighbouring states to bring remote resources to consumers and the development of an interest, shared by other major

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1. Kent Calder, "Asia's empty gas tank," *Foreign Affairs*, Vol. 75, No. 2 (March/April 1996), pp. 55–69; Mamdouh G. Salameh, "China, oil and the risk of regional conflict," *Survival*, Vol. 37, No. 4 (Winter 1995–96), pp. 133–146; Thomas M. Kane and Lawrence W. Serewicz, "China's hunger: the consequences of a rising demand for food and energy," *Parameters*, Vol. 31 (Autumn 2001), pp. 63–75; and Ross H. Munro, "Chinese energy strategy," in "Energy strategies and military strategies in Asia," report prepared for the Office of Net Assessment, Department of Defense (September 1999).

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oil-importing nations, in the free flow of oil from the Persian Gulf and the protection of the sea lanes by the United States.[2]

Despite the interest among the international community in China's approach to energy security, the debate over this topic outside China has paid little attention to the similar debate unfolding inside the country.[3] The Chinese discussion of what its energy security strategy should look like is, in some ways, a mirror image of the external debate. Just as foreign analysts are divided over the implications of China's growing oil deficit for international security, Chinese analysts are split over what greater reliance on foreign oil means for Chinese security. This debate over how China can meet its growing demand for foreign oil without undermining national security escalated sharply in 2000, when China's crude oil imports doubled and the import bill tripled.

The Chinese energy security debate merits attention for at least two reasons. First, an examination of Chinese perspectives on energy security not only helps to establish the range of possible policy outcomes, but also sets a baseline from which to measure any changes in Chinese thinking on energy security.[4] Secondly, the energy security debate is indicative of a more pluralized decision-making process. The large number of participants in the debate increases the likelihood that a diversity of viewpoints will reach the top leadership and result in more informed decision-making, albeit at a slower place.

This article provides a road map to the Chinese energy security debate. It introduces the key participants, some of the main energy security measures under discussion, and the probable impact of the debate on energy security decision-making. The main conclusion is that while China's growing demand for foreign oil to fuel economic development is likely to spur its continued integration into global energy markets, how this process unfolds will depend on a number of factors. These include how well decision makers and the individuals they rely on for advice understand global oil markets, Chinese perceptions of American intentions towards China, and the relationship between the central government and the Chinese oil companies.

China's Energy Security Problem

The objective of energy security, according to Daniel Yergin, "is to assure adequate, reliable supplies of energy at reasonable prices and in

2. Robert A. Manning, *The Asian Energy Factor* (New York: Palgrave, 2000); Felix K. Chang, "Chinese energy and Asian security," *Orbis*, Vol. 45, No. 2 (Spring 2001), pp. 1–25; and Daniel Yergin, Dennis Eklof and Jefferson Edwards, "Fueling Asia's recovery," *Foreign Affairs*, Vol. 77, No. 2 (March/April 1998), pp. 34–50.

3. Exceptions include Philip Andrews-Speed, Xuanli Liao and Roland Dannreuther, *The Strategic Implications of China's Energy Needs* (New York: Oxford University Press, 2002); and George Gilboy, "China's energy security policy after September 11: crossing the river when the stones are moving," *CERA Private Report*, February 2002.

4. This reason for studying the debate is from Michael Pillsbury, *China Debates the Future Security Environment* (Washington, DC: National Defense University Press, 2000), http://www.fas.org/nuke/guide/china/doctrine/pills2/index.html.

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ways that do not jeopardize major national values and objectives."[5] These include sovereignty and the normal functioning of the economy.[6] Traditional thinking on energy security is state-centric, supply-side biased, overwhelmingly focused on oil and tends to equate security with self-sufficiency.[7] Mainstream thinking on energy security in China shares these characteristics.[8]

China's energy security problem is its growing oil deficit. Between 1993 and 2002, China's oil consumption surged from 2.9 million barrels per day (b/d) to 5.4 million b/d, while oil production only grew from 2.9 million b/d to 3.4 million b/d over the same period. In 2002, the share of oil consumption constituted by imports was 37 per cent.[9]

Both foreign and Chinese energy analysts predict that China's oil imports will continue to grow, although Chinese estimates tend to be lower than foreign estimates, as indicated by Table 1. International observers project China will import 5.9–6.9 million b/d in 2020, constituting 63–70 per cent of oil consumption. In contrast, Chinese observers expect imports of only 3.6–5.0 million b/d in 2020, comprising 46–54 per cent of oil consumption. China is expected to begin importing liquefied natural gas in 2005.[10]

Despite increasing oil imports, China will continue to rely on domestic resources for most of its energy needs. This is largely because of its abundant coal reserves and coal-based economy. According to the International Energy Agency, coal constituted 69 per cent of China's total primary energy demand in 2000 and is projected to decline to 60 per cent by 2030. Oil will remain China's second most important fuel over the next two decades, with its share of the energy mix projected to increase slightly from 25 per cent in 2000 to 27 per cent in 2030. The proportion of Chinese energy consumption constituted by natural gas is projected to increase from 3 per cent in 2000 to 7 per cent in 2030. The share of

5. Daniel Yergin, "Energy security in the 1990s," *Foreign Affairs*, Vol. 67, No. 1 (Fall 1988), p. 11.

6. Paul B. Stares, "Introduction and overview," in Paul B. Stares (ed.), *Rethinking Energy Security in East Asia* (Tokyo: Japan Center for International Exchange, 2000), p. 22.

7. *Ibid*.; and Edward R. Fried and Philip H. Trezise, *Oil Security: Retrospect and Prospect* (Washington, DC: Brookings Institution, 1993), p. 1.

8. See, for example, State Development Planning Commission, National Economic Department (NED), "Zhongguo shiyou chubei de jiben shexiang" ("Basic plans for China's oil reserve"), *Jingji yanjiu cankao* (*Economic Research Reference*), 9 January 2002, *China Infobank* (*CI*); China Institute of Contemporary International Relations (CICIR), *Guoji zhanlüe yu anquan xingshi pinggu 2001/2002* (*Strategic and Security Review 2001/2002*) (Beijing: Shishi chubanshe, 2002), pp 129–130; and Zhu Xingshan and Zhou Dadi, "Ruhe kandai Zhongguo de nengyuan anquan wenti" ("How to think about China's energy security problem"), *Guoji shiyou jingji* (*International Petroleum Economics*), No. 10 (2001), in *Zhongguo shiyou shihua chanye jingji yanjiu niandu baogao* (*China Petroleum and Petrochemical Industry Economics Research Annual Report*) (Beijing: Zhongguo shihua jituan gongsi jingji jishu yanjiuyuan, 2002), pp. 440–45.

9. British Petroleum, *BP Statistical Review of World Energy 2003* (London: British Petroleum, 2003), pp. 6 and 9, www.bp.com.

10. International Energy Agency, *World Energy Outlook 2002* (Paris: OECD/IEA, 2002), p. 258, www.iea.org.

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Table 1. **Estimates of Chinese Oil Imports (million barrels per day)**

	2005	*2010*	*2015*	*2020*	*2025*	*2030*
IEA (2002)		4.2		6.9		9.9
US EIA (2003)	2.0	2.9	4.2	5.9	7.5	
APERC (2002)	2.0	3.5	5.1	6.9		
Sinopec (2003)		2.0–2.4		3.6–4.0		
ERI/SDPC (2002)	1.6	2.5		4.1		
PRC Industry (2002)		3.4		5		

Sources:
International Energy Agency (IEA) figures from *World Energy Outlook 2002* (Paris: OECD/IEA, 2002), pp. 92 and 96, www.iea.org; United States Energy Information Administration (US EIA) from *International Energy Outlook 2003*, May 2003, pp. 185 and 235, www.eia.doe.gov; Asia Pacific Energy Research Center (APERC) figures from *APEC Energy Demand and Supply Outlook 2002* (Tokyo: APERC, 2002), pp. 57 and 58, www.ieej.or.jp; Sinopec figures from Zhu He, "Some thoughts on oil stockpile," presentation at *Oil Stockpiles and Regional Cooperation: An Interactive Academic Exchange on Energy Security*, sponsored by UFJ Institute Ltd, and organized by BOODC Research in association with the Institute of West Asian and African Studies of the Chinese Academy of Social Sciences and the James A. Baker III Institute for Public Policy, Beijing, China, 14 March 2003; Energy Research Institute, State Development Planning Commission (ERI/SDPC) figures from Zhou Dadi and Zhu Xingshan, "Zhongguo shiyou gongying xingshi he ziyuan ji anquan zhanlüe" ("China's oil supply situation, resources and security strategy"), *Guoji shiyou jingji* (*International Petroleum Economics*), 20 October 2002, *China Infobank*; and PRC Industry figures from Yang Qing, "Zhongguo shiyou wenti de zhanlüe diwei fenxi" ("Analysis of China's oil problem and strategic position"), *Zhongguo shiyou* (*China Oil*), 1 January 2002, *China Infobank*.

energy consumption occupied by nuclear power and hydropower is expected to grow from 2 per cent in 2000 to 6 per cent in 2030.[11]

Debate Participants

Actors throughout the Chinese bureaucracy are involved in the energy security debate.[12] The most powerful stakeholders are the Chinese oil companies and the State Development Planning Commission (SDPC), followed by the now defunct State Economic and Trade Commission (SETC), the Ministry of Foreign Affairs (MFA) and the military. Less

11. *Ibid*. p. 249.
12. This section builds on Gilboy, "China's energy security," pp. 12–13; and Andrews-Speed, Liao and Dannreuther, *Strategic Implications*, pp. 46–53.

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powerful stakeholders include economic and foreign policy research institutes, academics, and the media.

Oil companies. The major Chinese oil companies, the China National Petroleum Corporation (CNPC), the China National Petrochemical Corporation (Sinopec) and the China National Offshore Oil Corporation (CNOOC), and their partially privatized subsidiaries, are the key drivers of China's "supply side" energy security policies.[13] The influence of these companies is a result of both their oil expertise and their political clout, derived from the Chinese government's increasing fiscal dependence on them and from the fact that their top positions are appointed by the Central Committee of the Chinese Communist Party (CCP), which gives them direct access to the Chinese leadership.[14] The oil companies are routinely consulted by the government on policy matters.[15] For example, in 1997 the office of the Central Financial and Economic Affairs Leading Group (CFEALG), the most important body in economic decision-making, tasked CNPC to undertake a study on national oil security at the request of the top leaders.[16] The oil companies are strong advocates of investment in overseas oilfields because it helps them to realize their twin objectives of enhancing national energy security and gaining the international experience critical to the realization of their ambitions to be competitive with the world's top oil companies.

State Development Planning Commission. The SDPC, renamed the National Development and Reform Commission during the March 2003 session of the National People's Congress (NPC),[17] is the most important government agency involved in energy policy.[18] The SDPC plays a critical role in the drafting of five-year energy plans, sets energy prices, and vets projects larger than US$30 million, which includes most energy projects. The oil security strategy outlined in 2002 by SDPC and SETC calls for a number of measures aimed at increasing China's control over its energy supplies, including investment in overseas oil fields, the construction of a strategic petroleum reserve (SPR) system, "shutting in"

13. Telephone interview with longtime analyst of the Chinese oil industry (Longtime Analyst), 9 May 2002.

14. Steven W. Lewis, "China energy study 2000: the effects of decentralization and privatization on energy infrastructure development," unpublished manuscript.

15. *China: Energy Policy and Natural Gas Use* (Perth: Asia Research Centre, Murdoch University, Western Australia, September 2001), p. 12, http://wwwarc.murdoch.edu.au/reports/China_Energy_Policy_and_Natural_Gas_Use1.pdf.

16. "Zhongguo shiyou anquan ma?" ("Is China's oil secure?"), c2000, www.sinopeclongyu.com.cn/news/news005.htm (retrieved 14 May 2002; no longer available).

17. This article uses SDPC throughout because all references are based on materials that predate the name change.

18. This paragraph and the following paragraph are based on "China: the players," *Energy Compass*, 19 September 2002, *Dow Jones Factiva* (*DJF*); Philip Andrews-Speed, Stephen Dow and Zhiguo Gao, "The ongoing reforms to China's government and state sector: the case of the energy industry," *Journal of Contemporary China*, Vol. 9, No. 23 (2000), pp. 5–20; *China's Worldwide Quest for Energy Security* (Paris: OECD/IEA, 2000), p. 36; and telephone interviews with Longtime Analyst, 9 May and 18 December 2002.

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oil fields in western China for emergency use, and the development of Chinese naval and air forces to protect China's energy supplies.[19]

State Economic and Trade Commission. The SETC, which was eliminated during the March 2003 NPC session, was in charge of the day-to-day operation of the economy. The SETC had regulatory and implementation authority and helped to formulate energy plans. The division of labour between the SETC and the SDPC regarding energy security was not always clear, but the SETC had much less influence. SETC officials were vocal in the public energy security debate, and they tended to favour greater integration into global energy markets more than their SDPC counterparts.

Ministry of Foreign Affairs. The MFA advocates the cultivation of close relationships between China and oil-producing states as a means to enhance energy security. Chinese diplomats are involved in planning the overseas investments of the Chinese oil companies, and they played an important role in CNPC's successful bids for oil projects in Venezuela, Sudan and Kazakhstan.[20] Energy projects top the agenda of China's diplomatic missions to hydrocarbon-rich countries. Indeed, Chinese foreign policy towards these countries reportedly is increasingly determined by energy interests.[21]

Military. It is difficult to determine the exact role of the military in the energy security debate due to data limitations. Most military research on energy security is conducted internally and is focused on ensuring adequate oil supplies in wartime. There is concern that in the event of a Sino-US conflict over Taiwan, the United States could interrupt China's seaborne oil imports.[22] Consequently, some military analysts advocate the development of China's naval and air forces to protect its oil supply lines.[23] Other measures to enhance energy security recommended by members of the military establishment include decreased reliance on oil imports from the Middle East and the establishment of a SPR.[24]

19. "Zhongguo gaoding 21 shiji shiyou zhanlüe" ("China outlines 21st century oil strategy"), *Zhongxinshe* (*China News Service*), 11 November 2002, *CI.*

20. Xu Xiaojie, "China's oil strategy toward the Middle East," *Baker Institute Working Paper*, Rice University, Houston, September 2002, p. 12, www.bakerinstitute.org; and interview with an interlocutor from a Chinese oil company, New York, 18 October 2003.

21. Xu Yihe, "China energy watch: diplomacy, politics, energy security," *Dow Jones Energy Service* (*DJES*), 11 September 2002, *DJF.*

22. Interview, Beijing, March 2003; and the comments of Yang Yi in "Zhongguo de anquan huanjing zenme yang" ("How is China's security environment?"), *Shijie zhishi* (*World Knowledge*), No. 9 (2002), http://www.shijie.org/article/sjz200209/471.html.

23. Interview, Beijing, March 2003; "Junshi zhuanjia: 2020 nian Zhongguo haikongjun zuozhan banjing fugai Taiwan" ("Military expert: the operational radius of China's naval and air forces will cover Taiwan in 2020"), *Sohu xinwen* (*Sohu News*), 19 September 2003, http://text.news.sohu.com/14/51/news213425114.shtml; and Jiang Chunliang, "21 shiji shijie shiyou jingzheng yu Zhongguo shiyou anquan" ("21st century world oil competition and China's oil security") in *21 shiji Zhongguo shiyou fazhan zhanlüe* (*21st Century China's Oil Development Strategy*) (Beijing: Shiyou gongye chubanshe, 2000), p. 35.

24. Qian Xiaohu, "Jundui zhengxie weiyuan Wan Xiaoyuan: guanzhu women de shiyou anquan" ("Armed forces political consultative conference member Wan Xiaoyuan: pay

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Development Research Centre. The Development Research Centre (DRC) is an influential research institution directly under the State Council. Its primary function is to provide advice on demand to the State Council.[25] The DRC's Market Economy Institute has been studying China's oil strategy since the late 1990s. In 1998, it launched a project on state oil security, led by its deputy director, Chen Huai.[26] DRC economists advocate greater involvement in global energy markets, some with the hope of increasing China's influence over these markets.[27] Articles reflective of the DRC position on energy security are often published in the *China Economic Times*, a newspaper affiliated with the DRC that has been a mouthpiece for economic reform policy makers close to Zhu Rongji.[28]

Energy Research Institute. The Energy Research Institute (ERI) of the SDPC, whose work is often driven by requests from above, submits reports and policy recommendations to the SDPC and to the top leadership. The ERI focuses on macroeconomic analysis rather than on project assessment.[29] It has tremendous influence on "demand side" issues such as efficiency but virtually no impact on "supply side" policies such as exploration.[30] Nevertheless, ERI researchers argue for a radical shift away from China's coal-based energy structure towards one dominated by oil and natural gas for sustainable development.[31]

Foreign policy research institutes. Analysts at foreign policy research institutes seek to provide top decision makers with advice on how to enhance the security of China's oil imports. They are especially concerned with the possibility that the United States could deny China oil.

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footnote continued

attention to our oil security"), *Jiefangjun bao* (*Liberation Army Daily*), 13 March 2003, www.pladaily.com.cn; and Jiang Chunliang, "China's oil security," pp. 34–35.

25. Barry Naughton, "Economic think tanks in China: their role in the 1990s," *The China Quarterly*, No. 171 (September 2002), pp. 625–635.

26. Tang Yuankai, "Greater stress on oil security," *Beijing Review*, Vol. 46, No. 12 (20 March 2003), pp. 39–40.

27. Chen Huai, "Active role needed in oil," *China Daily*, 6 July 2002; "Zhongguo guanzhu shiyou anquan zhuanjia zhi 'zou chu qu' zhanlüe shi zai bi you bei wu" ("Chinese oil security experts point out that the 'go abroad' strategy is a necessary precaution to avoid disaster"), *Xianggang shangbao* (*Hong Kong Business News*), 22 January 2001, *CI*; and Wang Mengkui, "Ba shiyou wenti fang dao jingji fazhan zhanlüe gaodu lai yanjiu" ("The question of oil should be viewed from a strategic perspective of economic development"), *Zhongguo jingji shibao* (*China Economic Times*), 16 January 2001, www.cet.com.cn/20010116/SPECIAL/20010116.htm.

28. I thank an anonymous reviewer for this point.

29. Interview with Xavier Chen, former China Manager at the International Energy Agency, New York, 28 January 2003 (Xavier Chen Interview).

30. Telephone interview with Longtime Analyst, 9 May 2002.

31. Zhou Fengqi and Zhou Dadi (chief eds.), *Zhongguo zhongchangqi nengyuan zhanlüe* (*Study on Long-term Energy Development Strategies of China*) (Beijing: Zhongguo jihua chubanshe, 1999).

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Consequently, many analysts recommend mitigating this vulnerability through overland pipeline imports and the cultivation of close ties with oil-rich states.

The China Institute of International Studies (CIIS), the research arm of the MFA, is one of the most influential civilian foreign policy research institutes.[32] It produces analyses of medium and long-term international issues for the MFA. CIIS has hosted at least two internal conferences on energy security.[33] It advocates energy diplomacy, and is studying this topic at the request of the central government.[34]

Scholars at the China Institute of International Studies (CICIR) and the Shanghai Institute of International Studies (SIIS) also write on energy security issues.[35] CICIR, institutionally under the Ministry of State Security, is the primary civilian intelligence organ and has direct access to the Politburo Standing Committee. SIIS, administratively under the Shanghai municipal government, has direct channels to Jiang Zemin and Zhu Rongji.

Academics. Scholars at universities including Beijing University, Qinghua University, Nankai University and the University of Petroleum also offer advice on how to enhance energy security. Publications and conferences are the main vehicles used by academics to express their opinions, and their impact on policy depends on their access to decision makers.[36] Many of the academics writing about energy security do not exercise policy influence. One exception is Hu Angang of Qinghua University and the Chinese Academy of Sciences, who has advised the government on energy matters.[37]

32. For more information on CIIS, see David Shambaugh, "China's international relations think tanks: evolving structure and process," *The China Quarterly*, No. 171 (September 2002), pp. 583–585; and Bonnie S. Glaser and Phillip C. Saunders, "Chinese civilian foreign policy research institutes: evolving roles and increasing influence," *The China Quarterly*, No. 171 (September 2002), pp. 597–616.

33. Xia Yishan, "'Zhongguo nengyuan zhanlüe yu nengyuan waijiao' yantaohui zai Beijing juxing" (" 'China's energy strategy and energy diplomacy' seminar held in Beijing"), *Guoji wenti yanjiu* (*International Studies*), No.1 (2001), p. 55, *China Academic Journals*, Tsinghua Tongfang Optical Disc Co., Ltd./Eastview Publications (*CAJ*); and "Zhuanjia tichu, quebao Zhongguo nengyuan gongying anquan keburonghuan" ("Scholars say ensuring China's energy supply security demands immediate attention"), Xinhua News Agency, 25 March 2002, www.xinhuanet.com (retrieved 7 May 2002; no longer available).

34. Interview, Beijing, March 2003.

35. For more information on these institutions, see Shambaugh, "International relations think tanks," and Glaser and Saunders, "Chinese civilian."

36. Glaser and Saunders, "Chinese civilian," p. 604; Naughton, "Economic think tanks," pp. 625 and 630–32; and Lu Ning, *The Dynamics of Foreign-Policy Decisionmaking in China* (Boulder, CO: Westview Press, 2000), pp. 145–156.

37. Interview with Hu Angang, Beijing, March 2003.

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Media. The media do not just form a stage for the other stakeholders in the energy security debate but are also independent actors. Chinese journalists have helped to shape the debate by raising questions about the role of the Chinese oil companies in safeguarding China's energy security. In late 2002, the media accused Sinopec of undermining national energy security when it depleted its product inventory to take advantage of higher oil prices.[38] In early 2003, the media expressed concern that CNOOC's co-operation with foreign oil companies in China constituted a threat to China's energy security in the form of an "oil drain" out of the territory.[39] In both cases, the companies responded to the accusations through interviews with the media.[40]

The Energy Security Debate and Energy Security Policy-making

Policy debates in China are different from those in the West. They are often hidden and the participants frequently do not acknowledge that differences of opinion exist.[41] Economic issues are more likely to be publicly debated than sensitive national security issues, such as China's future role in the international system, open discussion of which is taboo.[42] It can be difficult to obtain information about debates ongoing in China as detailed accounts normally do not appear until one side has decisively won and its victory can be safely explained.[43]

Discussions of energy security conform to the Chinese style of debate.[44] They occur both internally and publicly. The participants tend to talk past rather than towards each other. This lack of dialogue between the stakeholders comes from the Chinese Communist practice of not directly citing and challenging the arguments of one's opponents[45] and to

38. Wang Jing, "Zhongshihua xuejian kucun baoluchu Zhongguo shiyou zhanlüe chubeizhi de zhiming quexian" ("Sinopec's reduction of its stocks reveals a fatal defect in China's strategic petroleum reserve system"), *Zhongguo jingying bao* (*China Business*), 31 October 2002, *CI*; and Jing Ji, "Sinopec's move stirs controversy," *China Daily*, 5 November 2002, *DJF*.

39. " 'Haishang Daqing' yuanyou yanzhong wailiu shiyou zhengce wangyang-bulao" ("Serious drain of crude oil from 'offshore Daqing'; oil policy should mend the fold after the sheep is lost"), *Caijing shibao* (*Business Post*), 19 January 2003, *CI*; and Bian Yi, "Firm officials disagree with oil drain reports," *China Daily*, 31 January 2003, *DJF*.

40. "Zhongguo Zhongshihua yuan zhichi guojia jianli shiyou chubei xitong" ("China's Sinopec promises to support national construction of an oil reserve system"), *Zhongguo jingying bao* (*China Business*), 14 November 2002, *CI*; and Yang Qing, "Hezi kaifa haishang youtian meiyou daozhi yuanyou wailiu" ("Joint development of offshore oil fields does not result in a drain of crude oil"), *Beijing qingnian bao* (*Beijing Youth Daily*), 28 January 2003, *CI*.

41. Pillsbury, *China Debates.*

42. *Ibid.*

43. Joseph Fewsmith, "Review of Jiaofeng sanci sixiang shilu (Crossed swords: a true story of the three periods of ideological liberation)," *Foreign Policy*, No. 113 (Winter 1998–99), p. 107.

44. This and the following paragraph draw and expand on Gilboy, "China's energy security," pp. 13–14.

45. *Ibid.*; and comments of an anonymous reviewer.

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the bureaucratic tradition of "stove-piping."[46] Analysts within China's bureaucracies transfer their work products vertically to their institutional masters but rarely horizontally to their counterparts in other bureaucracies. Consequently, the Chinese energy security debate resembles a series of "competitive campaigns" in which the stakeholders advocate their preferred energy security policies but generally do not acknowledge the existence of alternative viewpoints, let alone explain why their policies are better than those proposed by their opponents.[47]

China does not have an energy ministry to co-ordinate all the energy security studies conducted by actors throughout the Chinese bureaucracy. Consequently, the debate participants seek to influence the top 25 to 35 leaders who articulate national policy.[48] This group consists mainly of the Politburo but also includes members of the Secretariat of the CCP, the Standing Committee of the State Council, senior military commanders and provincial leaders.[49] In their study of Chinese energy policy-making, Kenneth Lieberthal and Michel Oksenberg concluded that authority below the apex of Chinese political system is fragmented. This "fragmented authoritarianism" results in a decision-making process in which issues tend to rise to higher levels in the system, consensus-building among central bureaucratic actors is necessary to maintain momentum, and the enthusiastic support of at least one senior leader is required for a major project to be approved.[50]

The fragmented authoritarianism model generally explains Chinese energy security decision-making. The major initiatives China is pursuing to enhance energy security have been endorsed by the top leadership. In the case of investment in overseas oil fields, proposed transnational pipelines and oil diplomacy, leaders such as Li Peng, Jiang Zemin and Zhu Rongji have played a direct role. Decisions about energy security policies, however, have not been reached exclusively by the top leaders. They do not generate energy security policy initiatives but rather vet proposals that emanate from below.[51] The implementation of actual policies involves the interaction of key stakeholders. For example, the decision to acquire equity in overseas oil fields resulted from the melding of the parochial interest of the Chinese oil companies in becoming world-class players and the national interest of the top leadership in obtaining overseas oil supply bases.[52] Interlocutors from Chinese oil

46. Murray Scot Tanner, "Changing windows on a changing China: the evolving 'think tank' system and the case of the public security sector," *The China Quarterly*, No. 171 (September 2002), p. 563; Lu Ning, *Dynamics*, p. 37; and email correspondence with Scott Roberts, 4 March 2002.

47. I thank an anonymous reviewer for this point. See also Gilboy, "China's energy security," pp. 13–14.

48. *Ibid.* p. 13.

49. Kenneth Lieberthal and Michel Oksenberg, *Policy Making in China: Leaders, Structures and Processes* (Princeton: Princeton University Press, 1988), pp. 35–41.

50. *Ibid*. p. 22–34.

51. Xavier Chen Interview; and Gilboy, "China's energy security," pp. 13–14.

52. Erica Strecker Downs, *China's Quest for Energy Security* (Santa Monica, CA: RAND, 2000), pp. 50–52; and Philip Andrews-Speed and Sergei Vinogradov, "China's involvement in Central Asia petroleum," *Asian Survey*, Vol. 40, No. 2 (March/April 2000), pp. 390–93.

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companies indicate that the idea of investing abroad originated with CNPC.[53] Actual investments have resulted from negotiations among the top leaders, the oil companies, the SDPC, the MFA and the People's Liberation Army (PLA).[54]

The stakeholders in the energy security debate vary in their access to and thus their ability to influence the top leaders. Some participants, such as the heads of the major Chinese oil companies and the SDPC, can convey their opinions during meetings with senior leaders. This direct access may explain why these more powerful actors do not actively engage in the public debate over energy security. Other participants, such as analysts at research institutes and universities, have to employ indirect channels of influence. The two main avenues are appearances in the media and participation in internal and public conferences, which are sometimes attended by individuals with direct access to the top leadership.[55]

Sources of Energy Insecurity

Chinese analysts consider oil price volatility and physical supply disruptions to be the main threats to energy security. They are especially concerned about the negative impact of oil price fluctuations on China's economy and social stability.[56] The top leadership reportedly fears high oil prices because of the link established by some Chinese economists between high energy prices and the inflation that was one of the grievances behind the 1989 demonstrations in Tiananmen Square.[57] As a developing country, China is more vulnerable to oil price swings than industrialized nations.[58]

Chinese analysts are also worried about physical supply disruptions, particularly a deliberate interruption by the United States, despite the fact that it could be difficult for the US to stem the flow of oil to China effectively.[59] China is in the uncomfortable position of dependence on the

53. Interviews, Beijing, May 2000 and March 2003.

54. According to one knowledgeable foreign observer, CNPC officials have had to seek the approval of the MFA and the PLA for major overseas investments. See also Mehmet Ögütçü, "Foreign direct investment and the importance of the 'go west' strategy in China's energy sector," March 2002, www.oecd.org/dataoecd/1/35/2085596.pdf.

55. "Fulu yi – '21 shiji Zhongguo shiyou zhanlüe gaoji yantaohui' daibiao mingce" ("Appendix 1 – 'High-level symposium on 21st century China's oil strategy' representative register"), in *21 shiji Zhongguo shiyou fazhan zhanlüe – Zhongguo shiyou luntan baogao wenji* (*21st Century China's Oil Development Strategy – Reports from the China Oil Forum*) (Beijing: Shiyou gongye chubanshe, 2000), pp. 228–231.

56. Lin Yu and Chen Xiaobin, "Nengyuan zhuanjia tan Zhongguo yingdui shiyou anquan de jinmouyuanlüe ("Energy experts discuss short and long-range strategies for China's oil security"), *Zhongguo kuangye bao* (*China Mining News*), 10 June 2003, *CI*; and "Jiu guoji youjia baozhang yiji guojia shiyou anquan wenti fang Zhongguo shichang jingji yanjiusuo suozhang Chen Huai boshi" ("Interview with Dr Chen Huai, deputy director of the Market Economy Research Institute about the sharp increase in international oil prices and national oil security"), *Zhongguo jingji shibao* (*China Economic Times*), 20 September 2000, *CI*.

57. Interview with representative of an international consulting firm, Beijing, March 2003.

58. "High oil prices hurt poor countries more than rich," 20 March 2000, http://www.iea.org/new/releases/2000/oilprice.htm.

59. For more information on these difficulties, see Michael May, "Energy and security in East Asia," Asia/Pacific Research Center, Stanford University, January 1998, pp. 25–26.

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United States, a potential adversary, for the security of its imported oil. China does not possess the military capabilities to secure the sea-lines of communication, through which the majority of its oil imports travel, and must rely on the United States to guarantee safe passage. Although it has been argued that the Chinese goal of secure oil supply lines can be more easily and cheaply satisfied by "free riding" on American protection of the communication lines than by China attempting to secure these import channels itself,[60] not all Chinese strategists are comfortable with this situation. Chinese writings on energy security, especially those by military and foreign policy analysts who consider worst case scenarios, identify China's growing reliance on imported oil as a vulnerability that could be exploited by the US. They worry that the United States and its allies could disrupt the flow of oil China during a Sino-American conflict.[61]

Analysts at foreign policy research institutes and the SDPC are also concerned that the United States could use its influence in oil-rich countries to limit China's ability to gain access to oil from these areas. CICIR analysts have argued that the United States has implemented "energy containment" against China, seeking to deny China oil from Central Asia and the Middle East.[62] SDPC and CIIS analysts have also indicated that the United States could interfere with China's efforts to obtain oil abroad.[63]

Debated Energy Security Measures

This section examines some of the key measures to enhance energy security articulated in the Chinese debate. Consistent with the state-centric, supply-side biased and oil-centric nature of Chinese thinking on energy security, the focus here is on state-driven, supply-side oil policies. These include plans for a SPR, investment in overseas oil fields, the construction of transnational pipelines and oil diplomacy.

Strategic petroleum reserve. The construction of a SPR is the most important step China can take to cope with an oil supply disruption. It is also one of the most contentious energy security topics under discussion. Both participants in and observers of the SPR debate acknowledge that

60. Evan A. Feigenbaum, "China's military posture and the new economic geopolitics," *Survival*, Vol. 41, No. 2 (Summer 1999), pp. 79–80.

61. Zhang Wenmu, "Jingji quanqiuhua yu Zhongguo haiquan" ("Economic globalization and China's seapower"), *Zhanlüe yu guanli* (*Strategy and Management*), No. 1 (2003), p. 90; Jiang Luming, "Certain issues on countering future economic sanctions," *Military Economics Study*, November 2001, www.uscc.gov; Yang Fan, "How can China 'subdue its enemy without fighting'? – on the significance of readjusting economy and culture for the war of national unification," *Century China*, 18 July 2001, www.uscc.gov; and "How is China's security environment?"

62. CICIR, *Strategic and Security Review 2001/2002*, p. 146; and Zhang Wenmu, "Meiguo de shiyou diyuan zhanlüe yu Zhongguo Xizang Xinjiang diqu anquan" ("US petroleum geopolitics and the security of China's Tibet and Xinjiang regions"), *Zhanlüe yu guanli*, No. 2, 1998, pp. 100–104.

63. See, for example, NED, "Basic plans"; and Xia Yishan, "Zhongguo nengyuan xingshi yu zhanlüe zhi wojian" ("My view on China's energy situation and strategy"), *Renmin ribao* (*People's Daily*), 10 August 2001, http://www.people.com.cn/GB/jinji/20010810/531971.html.

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conflicting opinions exist and that these differences have delayed progress on the project, which is included in the Tenth Five-Year Plan (2001–2005).

A SPR is the most effective way to prevent the political use of oil as a weapon and to minimize the impact of supply disruption.[64] Oil price increases are felt world-wide and are most damaging to countries with energy-intensive economies, such as China. Two benefits of a SPR are avoided GDP losses and avoided net import costs of oil.[65] SPR supporters include individuals from the SDPC, SETC, DRC, ERI and CICIR.[66]

Domestic opposition to the construction of a SPR at the highest levels of the Chinese government has stalled this project. Although the Chinese media and SDPC officials have indicated that support for a SPR is the mainstream position within China,[67] the influence of the "don't build" faction has been quite strong.[68] This faction reportedly includes former Premier Zhu Rongji.[69] While Zhu has not publicly voiced his opposition, less powerful but like-minded stakeholders have argued against a SPR for reasons of cost and effectiveness.[70]

First, opponents from SETC, CNPC and Beijing University argue that China cannot afford a SPR. Individuals from SETC and CNPC maintain that China does not have the money to build a SPR large enough to be effective and that establishing a smaller reserve would be "an utterly inadequate measure" (*bei shui che xin*).[71] Beijing University economist Song Guoqing argues that China cannot afford the luxury of a SPR because it has more essential economic tasks to which it needs to devote scarce resources.[72] Indeed, one international observer has noted that there are too many projects competing for limited capital and that Chinese decision makers prefer to allocate investment to projects that will affect current rather than future economic problems.[73]

Secondly, members of the "don't build" faction maintain that there are

64. I thank Edward Morse for this point.

65. Paul N. Leiby and David Bowman, *The Value of Expanding Asian Pacific Strategic Oil Stocks* (Oak Ridge, TN: Oak Ridge National Laboratory, 23 January 2000), pp. 1–5, http://pzl1.ed.ornl.gov/ORNL1999_39_APECSizeStudy012300.pdf.

66. An Ti, "Zhongguo shiyou anquan zhengzai dengdai zhanzheng de kaoyan" ("China's oil security is awaiting the test of war"), *21 shiji huanqiu baodao* (*21st Century World Herald*), 16 October 2002, http://military.china.com/zh_cn/critical/25/20021016/11346147.html; NED, "Basic plans"; "Quanqiu shiyou fazhan qushi" ("Global oil development trends"), *Qihuo ribao* (*Futures Daily*), 31 July 2001, *CI*; and Gao Lu and Lin Yu, "Zhuanjia jianyi yao jinkuai jianli Zhongguo shiyou zhanlüe chubei" ("Experts recommend establishing China's strategic petroleum reserve as soon as possible"), *Jingji cankao bao* (*Economic Reference News*), 2 August 2000, *CI*.

67. *Ibid*.

68. Interviews with close observers of the SPR debate in the Chinese media, Beijing, March 2003 (Media Interview).

69. Keith Bradsher, "China feeling a need to build an oil reserve," *New York Times*, 22 March 2003, p. 2.

70. I thank David Pietz for identifying cost and effectiveness as the main sources of opposition.

71. NED, "Basic plans"; Zhang Jie, "9/11 yujing Zhongguo shiyou anquan" ("9/11 advance warning for China's oil security"), *Jingji guancha bao* (*Economic Observer*), 1 October 2001, www.eobserver.com.cn; and "Global oil development trends."

72. NED, "Basic plans"; and "Global oil development trends."

73. Xu Yihe, "China energy watch: building oil stocks not a priority," *DJES*, 19 December 2000, *DJF*.

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more effective ways to enhance energy security. One SETC official, apparently unaware of the increasing portion of China's oil demand that comes from transport, for which there currently are few substitutes for oil, contends that stockpiles are not necessary because of China's heavy reliance on coal.[74] Oil company officials have also questioned the need for stockpiles when the chances of a drawdown are slim.[75] Other opponents argue that energy security is better enhanced through the acquisition of equity positions in overseas oil fields, increasing overland imports or substituting other sources of energy for oil.[76]

Progress on the SPR has also been impeded by disagreements among key stakeholders over how to finance the project. Both the Chinese government and the oil companies would prefer that the other pay for the reserve, which is estimated to cost billions of dollars. The debate over this issue intensified in late 2002 when Sinopec reduced its product inventory despite concern about a potential conflict in Iraq.[77] Sinopec's actions highlighted the issue of how to balance the commercial interests of the increasingly profit-oriented oil companies with the national security interests of the state.[78] The Chinese media, viewing the companies as arms of state policy, accused Sinopec of threatening national energy security. The board of directors of Sinopec's partially privatized subsidiary responded that the company's ability to complete its basic task, maximizing shareholder income, would be jeopardized if it had to fund oil reserves. Some SETC officials, however, maintain that the huge costs should not be borne by the government alone, and that the oil enterprises with the relevant facilities should take responsibility. A close observer of the SPR debate has noted that the oil companies would undoubtedly be willing to participate if they can pass the costs of stockpiling on to consumers.[79]

Overseas investment. The Chinese oil companies are the key drivers of investment in overseas oil fields. This initiative has broad support throughout the Chinese system as a source of energy security, and is encouraged by senior leaders.[80] Chinese oil companies began to establish an international presence in 1992. They have projects in countries including Algeria, Azerbaijan, Indonesia, Iran, Iraq, Kazakhstan, Peru, Sudan and Venezuela.

74. NED, "Basic plans"; and "Global oil development trends."
75. Winnie Lee, "IEA official says China open to building oil stockpile," *Platt's Oilgram News*, 1 November 2000, p. 4, *DJF*.
76. Media Interview.
77. Jing Ji, "Sinopec's move"; and Wang Jing, "Sinopec's reduction."
78. Guan Jian and Lin Nuo, "Zhongguo shiyou jiage zaoyu jiegui kunjing" ("China's oil prices encounter difficulties joining tracks"), *Caijing* (*Caijing Magazine*), 5 March 2002, *CI*; and NED, "Basic plans."
79. Xavier Chen Interview.
80. Zhang Kaiyu, "CNPC jiakuai shishi 'zou chu qu' zhanlüe" ("CNPC accelerates implementation of the 'go abroad' strategy") *Shiyou qiye guanli* (*Petroleum Enterprise Management*), No. 9 (2000), p. 10, *CAJ*; and "Li Peng zongli tan Zhongguo shiyou gongye de fazhan" ("Premier Li Peng on the development of China's oil industry"), *Liaowang*, No. 41 (13 October 1997), pp. 4–5.

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The oil companies' overseas investments have focused on the purchase of equity positions in already discovered oil fields rather than on exploration, which is more risky and costly. In most countries, the government owns the oil in the ground, and the foreign company buys into an agreement, such as a production sharing contract, under which the company pays a certain amount to extract oil and the company and the government split the output. In 2001, Chinese oil companies produced 180,000 b/d of "equity oil" (*fen'e you*) overseas, constituting about 15 per cent of oil imports for that year.[81] Analysts at SETC, DRC and Beijing University consider the acquisition of equity oil to be less expensive and more secure than buying oil on the international market. They advocate increasing the proportion of China's oil imports constituted by equity oil to as much as 30 per cent.[82] Additionally, analysts at SDPC, SETC and DRC have recommended increasing the amount of equity oil produced by Chinese oil companies overseas that is shipped to China,[83] despite the significant cost for long haul transportation. Support for this proposal appears to be nationalistic: Beijing would probably prefer to have the oil China imports lifted by Chinese companies and transported by Chinese-flagged tankers.

The purchase of equity interests in oil fields abroad can have several advantages over buying oil on the international market.[84] First, buying equity barrels can eliminate market price risk because it enables the investor to predict exactly how much oil it will receive and at what cost over the life of the field. Secondly, over time, equity oil can provide the buyer with a price generally much lower than the price at which oil is trading on the international market because the buyer, as an equity owner, usually produces and transports its oil below the market clearing price. When sold at the market clearing price, the sale produces a profit. Thirdly, equity ownership can enhance security of supply by eliminating the need for middlemen between the oil in the ground and the consumer, such as other oil companies, which could cut off supply.

The acquisition of equity positions, however, does not necessarily enhance energy security. There is nothing inherently attractive about equity oil.[85] Whether it is cheaper than oil purchased on the inter-

81. "2001 nian Zhongguo shiyou jinchukou zhuangkuang fenxi" ("Analysis of China's oil imports and exports in 2001"), *Guoji shiyou jingji* (*International Petroleum Economics*), 20 March 2002, *CI*; and Xu Yihe, "China energy watch: look over Great Wall for oil," *DJES*, 7 March 2002, *DJF*.

82. State Economic Trade Commission (SETC), "Zhongguo shiyou gongye 'shi wu' guihua" ("The tenth five-year plan for China's petroleum industry"), *Zhongguo shiyou bao* (*China Oil News*), 26 July 2001, *CI*; Chen Huai, "Zhongguo shiyou anquan xin zhanlüe" ("China's new oil security strategy"), *Zhongguo jingji daobao* (*China Economic Herald*), 12 June 2001, *CI*; and Wu Qiang and Qian Xuemei, "Zhongguo yu Zhongdong de nengyuan hezuo" ("China's energy co-operation with the Middle East"), *Zhanlüe yu guanli*, No. 2 (1999), p. 51.

83. SETC, "Tenth five-year plan"; Chen Huai, "China's new oil security strategy"; and Zhang Yuqing, "Shishi shiyou gongye 'zou chu qu' de fazhan zhanlüe" ("Implement the oil industry's 'go abroad' development strategy," *Hongguan jingji guanli* (*Macroeconomic Management*), No. 10 (2000), p. 21, *CAJ*.

84. This paragraph is based on my interview of a not-for-attribution source at a major American oil company.

85. I thank Amy Jaffe for this point.

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national market depends on whether the foreign oil company negotiates an attractive deal with the host country. The Chinese oil companies, for example, have a history of overpaying for equity positions.[86] Furthermore, equity barrels cannot protect against oil price volatility. An equity margin of a few dollars per barrel will do little to mitigate the impact of a large price spike. In terms of access to physical barrels, whether the overseas equity oil of the Chinese oil companies would be available to consumers in China during a crisis depends on the nature of the crisis, the location of the investments and whether the Chinese oil companies have title to the oil or title to the revenue. In the event of a conflict with the United States over Taiwan, a SPR would be more helpful to China than overseas equity barrels.

Transnational oil pipelines. Concern about the security of China's seaborne imports and a desire to diversify its oil supplies away from the Middle East has sparked Chinese interest in investing in Central Asian and Russian oil field development projects and in the construction of large diameter, long-distance pipelines to China from these regions. Analysts from CICIR, ERI and academia regard participation in the development of Central Asian and Russian energy resources as an important source of energy security because China lacks a navy that can protect its seaborne imports.[87] They maintain that oil imported overland by pipeline would be less vulnerable to disruption by the United States than oil arriving by tanker. Indeed, Zhang Wenmu of CICIR argues that pipeline imports are safer because China has an advantage vis-à-vis the United States and its allies in land power.[88]

However, they are not necessarily safer. Pump stations, critical to moving oil through the pipeline, are highly vulnerable to air assault or sabotage that could result in the pipeline being shut down. The destruction of one or more pump stations will reduce, if not stop, the flow of oil through the line, making pipelines as susceptible to closure as sea-lanes. The replacement of large pumps and drivers can take up to a year. Pipeline operators rarely stock spare pumps of this size because they are expensive, usually costing millions of dollars.[89]

The United States certainly has the military capabilities to destroy any transnational pipelines the Chinese are interested in constructing. Pumping stations could easily be damaged with cruise missiles launched from

86. Frederik Balfour, "A global shopping spree for the Chinese – Mainland companies are snapping up more overseas assets," *BusinessWeek*, 18 November 2002, p. 24, *DJF;* and "Eager Chinese pay dearly for foreign assets," *Petroleum Intelligence Weekly*, 29 April 2002, *DJF*.

87. "ZhongE nengyuan hezuo qianjing guangkuo" ("Broad prospects for Sino-Russian energy co-operation"), *Zhongguo maoyi bao* (*China Trade News*), 13 June 2003, *CI*; Yang Zhongqiang and Cai Juan, "Zhongguo tingjin ZhongYa youqi kaifa" ("China presses onward with Central Asian oil and gas development"), *Zhongguo guoqing guoli* (*China's National Conditions and National Strength*), 7 March 2002, *CI*; and Zhang Wenmu, "US petroleum geopolitics," p. 103.

88. Zhang Wenmu, "US petroleum geopolitics," p. 103.

89. This paragraph is based on my conversations and correspondence with an anonymous oil industry analyst.

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long-range bombers. During the Gulf War, a US-led alliance bombed a pump station on the Iraq-Turkey export pipeline, which reduced the throughput capacity from 1.5 million b/d to 1 million b/d. It is likely that had the next pump station along the pipeline been destroyed, the throughput capacity would have been reduced to zero.[90]

One security advantage that overland pipelines may have over tanker imports, which Chinese sources do not mention, is political. In order for the United States to disable a pipeline supplying China, it would have to attack the territory of China or a third country. In contrast, a blockade could in theory be enforced without having to attack a sovereign state.[91]

The case of the Kazakhstan–China oil pipeline indicates that future decisions about transnational pipelines will involve balancing the security interests articulated by foreign policy and other analysts against the commercial interests of the Chinese oil companies. In 1997, CNPC offered to conduct a feasibility study on a 3,000-km pipeline, estimated to cost US$3.5 billion, from Kazakhstan to China as part of its successful bid for a 60 per cent stake in Kazakhstan's Aktyubinsk Oil Company. The questionable economics of this pipeline and then Premier Li Peng's involvement in the bidding process led Chinese and foreign analysts to speculate that the project was politically motivated. Beijing may have offered to provide Almaty with a non-Russian outlet for its oil in return for curbs on the activities of Uyghur separatists in Kazakhstan.[92] CNPC did not just regard this project as a means to further its objective of becoming a global player. Company officials also hoped that the throughput from the Kazakhstan–China pipeline combined with the output of oil fields in Xinjiang would be sufficient to make the construction of a pipeline from western to eastern China profitable.[93] In 1999, however, CNPC shelved the pipeline on economic grounds.[94] During the previous year, the Chinese government had transformed CNPC and Sinopec from companies motivated by production targets to ones motivated by profit. Consequently, the construction of an economically questionable pipeline held little appeal. This outcome indicates the Chinese oil companies are unlikely to build commercially dubious pipelines for national security without financial support from Beijing.

Oil diplomacy. Beijing is cultivating closer relationships with major oil-producing states as a means to enhance energy security. Oil has

90. *Ibid*.

91. Email correspondence with Roger Cliff, 2 April 2002.

92. Ahmed Rashid and Trish Saywell, "Beijing gusher," *Far Eastern Economic Review*, 26 February 1998, p. 48; David B. Ottaway and Dan Morgan, "China pursues ambitious role in oil market," *Washington Post*, 26 December 1997, p. 1; Anthony Davis, "China/Kazakhstan – Strategic oil deal recently completed," *Jane's Intelligence Review*, Vol. 4, No. 12 (1 December 1997), p. 9, *Lexis-Nexis* (retrieved 19 December 2000; no longer available); and Francesco Lao Xi Sisci and agencies, "Giant oil deals move China onto world stage," *Asia Times*, 6 June 1997, p. 1, *DJF*.

93. Not-for-attribution report prepared by an international consultancy for the KazTrans Oil Company.

94. Quan Lan, "Transnational oil pipeline shelved," *China OGP*, Vol. 7, No. 16 (15 August 1999), pp. 2–3.

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featured prominently on the agendas of recent meetings between the leaders of China and states in the Middle East, Africa and Central Asia. Former Chinese ambassadors to oil-producing states and scholars at foreign policy research institutes and universities are the main proponents of oil diplomacy,[95] but the oil companies also endorse the development of friendly relations with oil-producing states as a way to secure investment opportunities.[96] More importantly, Beijing may hope that close ties to oil producers will ensure that these countries will continue to sell oil to China during an international crisis.

Chinese analysts at foreign policy research institutes and universities indicate that China can offer oil-producing states political and economic benefits in exchange for access to oil. Politically, China can utilize the opposition to American hegemony it shares with some of these states. In an article in the prestigious policy journal *Strategy & Management*, two Beijing University scholars argue that good relations with China can help regimes in the Middle East contain the United States to a certain extent, lessen domestic criticism that they are too pro-American, increase their diplomatic room to manoeuvre and realize diversified security guarantees. They also assert that China can use its rising power, increasingly active involvement in international affairs and permanent seat on the United Nations Security Council to further the interests of oil producing states.[97]

Economically, Chinese foreign policy analysts maintain that the creation of deeper economic relations between China and oil-rich states can help ensure China's access to oil. They advocate strengthening trade and investment between China and oil-producing states. The idea is that economic interdependence will make it more difficult for oil exporters to deny China oil.[98]

Recent history indicates that oil diplomacy may not enhance China's energy security, at least in terms of providing protection from oil price hikes. During the 1970s, some oil-importing countries learned that "special relationships" with oil producers are virtually useless during a crisis. Furthermore, bilateral approaches to energy security make import-

95. Interview, Beijing, March 2003; Xia Yishan, "China's energy strategy," p. 55; Yang Zhongqiang, "ZhongYa shiyou yu 21 shiji de Zhongguo shiyou anquan" ("Central Asian oil and China's oil security in the 21st century"), *Guoji luntan* (*International Forum*), Vol. 3, No. 1 (February 2002), pp. 34–39; and Wu Lei, "Zhongdong shiyou yu woguo weilai shiyou gongqiu pingheng" ("Middle Eastern oil and China's oil supply and demand equilibrium in the future"), *Shijie jingji yu zhengzhi* (*World Economics and Politics*), No. 3 (1997), pp. 30–33.

96. Lü Jianzhong, "Zhongguo shiyou shihua qiye jiakuai tisheng guoji jingzhengli zhanlüe fazhan" ("China's petroleum and petrochemical enterprises accelerate the development of a strategy to promote international competitiveness"), *Guoji shiyou jingji* (*International Petroleum Economics*), 20 September 2002, *CI*; and Wu Hui, Zhu Yu and Liu Junan, "Zhongguo shihua tuanti gongsi liyong guoji shiyou ziyuan de zhanlüe yu duice yanjiu" ("Study of Sinopec's strategy and countermeasures for using international oil resources"), *Dangdai shiyou shihua* (*Petroleum and Petrochemical Today*), Vol. 9, No. 1 (2001), p. 32, *CAJ*.

97. Wu Qiang and Qian Xuemei, "China's energy cooperation," pp. 50–51. See also, Yang Zhongqiang and Cai Juan, "China presses onward."

98. Yang Zhongqiang, "Central Asian oil," p. 38; and Wu Lei, "Middle Eastern oil."

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ing countries vulnerable to blackmail by exporting countries,[99] a possibility not noted by Chinese proponents of "oil diplomacy."

Pluralization and the Chinese Policy-making Process

The energy security debate is emblematic of the trend of "corporate pluralization" in the Chinese policy-making process.[100] The proliferation of actors involved in policy formulation is partly the result of China's increased involvement with the outside world. First, China's expanded participation in international organizations and institutions has generated a need for expertise in fields ranging from arms control to international trade. This demand for specialized knowledge has created more space for expert input into the policy-making process.[101] China's growing reliance on imported oil and plans to import natural gas mean that global energy markets are another specialized topic on which China's top decision makers benefit from expert advice. Secondly, as Thomas Moore and Dixia Yang note, one effect of China's deepening integration into the world economy is that no foreign policy issue falls easily into a discrete functional, institutional or regional category. Consequently, any given foreign policy issue is of interest to almost every actor in the Chinese system.[102] This is especially true for energy security. China's shift to a net oil importer has not only given additional actors, notably the foreign policy community, a stake in energy issues. It has also necessitated the interaction of actors from a variety of policy jurisdictions. Investment in overseas oil fields, for example, impinges on the interests of the Chinese oil companies, the MFA, the PLA and foreign area specialists at universities and research institutes.

The multiplicity of actors involved in the energy security debate has both positive and negative consequences for energy security decision-making. On the one hand, as several scholars of Chinese policy-making observe, corporate pluralization can result in more informed policy decisions.[103] The wide range of participants in the energy security debate enhances the likelihood that decision makers will be aware of the varied economic, political and military issues on which major energy security initiatives impinge. Indeed, the large number of voices suggests that high-level decision makers are uncertain about how to enhance energy security and are soliciting a variety of perspectives on this subject.[104] On

99. Amy Myers Jaffe and Steven W. Lewis, "Beijing's oil diplomacy," *Survival*, Vol. 44, No. 1 (Spring 2002), pp. 115–16.

100. For a discussion of corporate pluralization, see David M. Lampton, "China's foreign and national security policy-making process: is it changing and does it matter?" in David M. Lampton (ed.), *The Making of Chinese Foreign and Security Policy in the Era of Reform* (Stanford, CA: Stanford University Press, 2001), p. 12.

101. Glaser and Saunders, "Chinese civilian," pp. 597–98.

102. Thomas G. Moore and Dixia Yang, "Empowered and restrained: Chinese foreign policy in the age of economic interdependence," in Lampton, *The Making of Chinese Foreign and Security Policy*, pp. 213–14.

103. Lampton, "China's foreign and national security policy-making process," pp. 12–13; and Moore and Yang, "Empowered and restrained," p. 208.

104. I thank Gilbert Rozman for this point.

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the other hand, corporate pluralization can lead to "policy paralysis" as decision makers sort through larger numbers of positions on the issue under consideration.[105] The case of China's proposed SPR, for example, illustrates how a diversity of opinions can slow down the decision-making process. This delay is exacerbated by the tendency of participants in Chinese policy debates to refrain from directly challenging each other. Consequently, decision makers must take the time to determine the merits of and trade-offs between the "mini-campaigns" waged by the stakeholders.

Conclusion

The future direction of China's approach to energy security is, of course, difficult to predict. This is due not only to the opaque and fragmented nature of Chinese energy security decision-making, but also to the fact that energy security is a new topic for China's leaders and the individuals they rely on for advice to master that impinges on the interests of actors throughout the Chinese bureaucracy. The wide range of participants in the energy security debate indicates that more diversified views on energy security probably reach the top leadership. The impact of the multiplicity of opinions is two-fold. It can result in more informed decision-making, but it can also delay the process as decision makers must assess a larger number of competing and sometimes contradictory views.

China's approach to energy security will almost certainly fall between the two extreme scenarios defined by the external debate. To the extent that the Chinese leadership has staked its legitimacy on its ability to deliver continuous improvements in living standards, China has little choice but to become increasingly reliant on global energy markets because draconian measures to restrict imports would severely slow economic growth. However, concerns about dependence on oil transportation routes controlled by and oil producers perceived to be under the influence of the United States, a potential adversary, is likely to spur China to continue to pursue measures aimed at increasing its control over its oil supply, such as the acquisition of international upstream equity and oil diplomacy, although such measures may do little to enhance energy security.

How China's approach to energy security unfolds is subject to a number of factors. First is the extent to which decision makers recognize that global energy markets are a good source of reliable and low cost oil supplies. While this view is widely held in the West, the Chinese energy security debate indicates that many analysts are not fully convinced of the benefits of expanded reliance on world energy markets. The extent to which China embraces integration into global markets as a source of

105. This term is from Bates Gill, "Two steps forward, one step back: the dynamics of Chinese nonproliferation and arms control policy-making in an era of reform," in Lampton, *The Making of Chinese Foreign and Security Policy*, p. 258. See also, Lampton, "China's foreign and national security policy-making process," pp. 12–13; and Moore and Yang, "Empowered and restrained," p. 213.

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energy security is related to the level of knowledge about how energy markets operate. Indeed, it is those analysts who have the best understanding of global energy markets who are the strongest advocates of greater integration.[106] The second factor is China's perception of its relationship with the United States and its allies. John Mitchell has argued that the extent to which a state is willing to pursue expensive moves to reduce dependence on energy trade depends on the extent to which it expects to be permanently in conflict with the world's major powers.[107] The more China feels threatened by the United States, the more likely it is that China will seek to hedge against dependence on oil supplies vulnerable to American power. The third factor is the relationship between the Chinese leadership and the Chinese oil companies. It is possible to imagine situations in which the corporate interests of the companies in profit maximization would conflict with the national interest of the Chinese state in energy security. In such situations, will the corporate or the national interest prevail?

106. Xavier Chen Interview.

107. John V. Mitchell, "Energy and security," lecture at The Royal Swedish Academy of War Sciences, 16 March 2000, http://www.kkrva.se/sve/energi/mitchell.shtml.

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