

中共全球尋找石油及 強權間的潛在衝突【上】

China's Global Hunt for Oil and Potential Conflicts among the Powers

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提 要

- 一、中共自70年代末期改革開放以來，特別依賴石油，當前，石油佔中共總能源消耗超過20%以上。因此對維持經濟發展而言，石油的需求已儼然成爲一個重要的問題。
- 二、藉由檢視中共自開放政策以來的五年計畫，可以顯現出經濟發展及石油需求兩者間密不可分的關係，隨著中共經濟的持續成長，其對於石油的依賴將有增無減。
- 三、爲了滿足經濟成長的需求，中共正尋找內陸、近海油田的開發，並確保來自世界各國的石油供給，其除了增加國內油田的開發及輸送系統的建設外。中共也試圖以油管建設穩定外國油源的供給，並且強化與石油供應國的關係，以及透過軍事介入建立與非洲產油國的關係。
- 四、中共不斷表示它的「和平崛起」與「和平發展」並有意圖成爲霸權或者造成國際平衡混亂，不過，這並不保證緩和亞洲國家的全部疑慮，加上亞洲主要的強權都是重要的能源消費者，區內主要國家對能源的競爭似無法避免。
- 五、亞洲幾個主要能源消耗大國如中共、印度與日本試圖以雙邊協定獲得新能源，且每一個也都試圖支配越來越有限的資源。因此，在區域強權間的衝突也越有可能，除非某種協商國際治理的形式可以建立，有效仲裁油源紛爭事宜。

關鍵詞：「五年計畫」、「石油輸出國家組織」、「區域強權」、「南亞區域合作聯盟」、「大國外交」

壹、前 言

自工業革命以來，能源即扮演經濟發展的重要角色，而且一直是全球的議題，與全球經濟息息相關。^{註一}沒有足夠的能源供給，一個國家很難在經濟方面有持續性的成

長。中共自70年代末期改革開放以來，漸漸地以全球最大開發中經濟體的姿態嶄露頭角，其特別依賴石油，因爲工業及運輸的能源需求不能由煤、天然氣、核能、水力發電替代。當前，石油佔中共總能源消耗超過20%以上。因此對維持經濟發展而言，石油

註一 Xinhua News Agency, "Hu: China to Contribute to World Energy Security", 18 November, 2005.

的需求已儼然成爲一個重要的問題。

1.Introduction

Energy has played a significant role in economic development since the Industrial Revolution and it is always a global issue, indispensably linked with the world economy. Without a sufficient supply of energy, a country has difficulty continuing its economic growth. Since the inception of its open policy, in the late 1970s, China has gradually emerged as the world's largest developing economy. It is particularly dependent on oil, as its industry and transportation sector energy requirements cannot be served by coal, natural gas, nuclear power, or hydroelectricity. Currently, oil accounts for more than 20% of China's total energy consumption. The demand of oil, therefore, has become a crucial issue for the continuity of its economic development.

自1950年代初期，中共已非常關切對外國石油高度依賴的現象。因此，其嘗試開發境內所有油田資源，不僅爲了增加石油產量，同時也爲了達到自給自足之目的。^{註二}石油是中共第二大自產能源，2001年其國內產量超已過23億5千3百萬桶精煉石油。^{註三}

China has been very concerned about its high dependence on foreign oil since the early years of the 1950s. Therefore, it has tried to exploit all oilfield resources within its own territory, not only to increase the production of oil but also

achieve the goal of self-sufficiency. Oil is the second largest energy source produced in China, with a domestic output of over 2,353 million barrels of refined oil product in 2001.

然而，中共快速經濟成長所需要的能源已遠超過國內供給的來源，從1993年成爲石油淨輸入國。1997年石油進口達3千4百萬噸，相較於1993年度僅進口1千萬噸之下，已達其20世紀石油進口量的高峰。^{註四}2002年，中共石油進口達5千萬噸，在2003年，其變成世界第二大石油消耗國及第三大進口國。2005年，中共進口1億3千萬噸，超過其本身石油消耗的40%。^{註五}依照中共商業部的資料，2006年中共對於石油的依賴度已達47%，由於經濟的強勁成長，2007年對石油進口的依賴仍將維持在高檔。^{註六}

However, China's rapid economic growth has fueled a demand for energy that has surpassed domestic sources of supply. China became a net oil importer in 1993. Oil imports reached 34 million tons in 1997, the peak of China's oil importing in the 20th century, compared to only 10 million tons in 1993. In 2002, China's oil imports reached 50 million tons, and in 2003, China became the world's second largest consumer and third largest importer of oil. In 2005, China oil imports reached 130 million tons, over 40% of its oil consumption. China's oil import dependency level was at 47% in 2006, according to data from the Ministry of Commerce. Due to the coun-

註二 林典龍，「中國能源安全戰略分析」（高雄：中山大學碩士論文，2002年），頁1。

註三 Bernard D. Cole, *Oil for The Lamps of China: Beijing's 21st Century Search for Energy*, 2nd ed. (Hawaii: University Press of the Pacific, 2003), p.15.

註四 閻林，「資源全球配置與保障能源供應的關係」，中國能源，2001年第2期，頁26-37；轉引自林典龍，「中國能源安全戰略分析」，頁38。

註五 Department of Defense, *2005 Annual Report to Congress-Military Power of People's Republic of China* (Washington: USA Department of Defense, 2005), p.10.

註六 Alexander's Gas & Oil Connections, *China's 2006 Oil Import Dependency Stands at 47%*, March 14, 2007, <http://www.gasandoil.com/goc/news/nts71135.htm>

try's robust economic growth, China's oil import dependency will remain high in 2007.

在車輛數量、消費者及工業成長持續上升的趨勢下，未來對進口能源的依賴越來越大及進口總量成長的趨勢，是可以預見的。

^{註七}2020年之前，中共石油需求也許會倍增至7億3千4百萬桶，屆時進口量將佔其總石油消耗的50%。中共地質科學學院(Chinese Academy of Geological Science, CAGS)估計2020年時，中共石油消耗將達7億噸，而屆時其將只能生產2億噸。因此，超過70%石油將仰賴進口。^{註八}在2025年之前，中共石油進口也許將高達本身需求的80%，即每天約950萬到1,500萬桶。^{註九}

The trend of increasing reliance on energy imports and the growing import volumes is projected to continue for the foreseeable future, driven by rising numbers of cars on the road, greater energy consumption by consumers and industrial growth. The country's dependence on energy imports is expected to increase significantly over the next two decades, probably doubling to more than 735 million barrels by 2020, when imports will form at least 50% of China's total oil consumption. It has been estimated by the Chinese Academy of Geological Science (CAGS) that by 2020, China's oil consumption will reach 700 million tons, while China will only produce 200 million tons. Therefore, more than 70% of its oil will have to be imported. By 2025, China's

oil imports may rise as high as 80% of its demand, or about 9.5-15 million barrels per day.

基本上，中共的能源策略有三個主要目標：穩定供應、能源種類多樣化及能源來源多元化。^{註十}首先，爲了穩定供給，中共嘗試自行探勘與開採，以增加石油儲備及維持穩定石油供給，以達自給自足，此乃其能源策略的基本原則。

Basically, China's energy strategy has three major goals: stabilization of supply, diversification of types of energy, and diversification of energy sources. First, in order to stabilize supply, China is trying to increase its survey and exploitation, so as to increase its oil reserves and maintain stable the oil it needs for self-sufficiency. This is the foundation of China's energy policy.

第二，爲使能源種類多元化，中共正發展以天然氣爲主要的能源，用來當作煤或其主要能源（石油）的替代品。現今，天然氣已佔世界能源消耗總量的23.8%，且根據估計，天然氣可能在2010年超越煤、石油的消耗量，成爲世界主要能源。天然氣在中國大陸的消耗量僅234億立方公尺，佔中國大陸能源總消耗量2.1%，遠低於世界天然氣能源消耗的百分比，甚至落後於亞洲8.8%的平均值。^{註十一}

Second, in order to diversify types of energy, China is developing natural gas as an alternative to coal and oil, its main energy sources. Currently, natural gas accounts for 23.8% of the world's energy consumption, and according to

^{註七} Drew Thompson, "China's Global Strategy for Energy, Security, and Diplomacy," James Foundation, 29 March, 2005, <<http://www.uofaweb.ualberta.ca/chinainstitute/>>.

^{註八} 黃坤堆，「冷戰後中國海權發展對地緣政治的影響」（台中：東海大學碩士論文，2004年），頁162。

^{註九} Department of Defense, 2005 Annual Report to Congress-Military Power of People's Republic of China (Washington: USA Department of Defense, 2005), p.10.

^{註十} 閻林，「資源全球配置與保障能源供應的關係」，中國能源，2001年第2期，頁26-37；轉引自林典龍，「中國能源安全戰略分析」，頁38。

^{註十一} 林典龍，「中國能源安全戰略分析」，頁39-40。

estimates, it might surpass coal and oil and become the major world energy source after 2010. In China, the consumption of natural gas only reaches 23.4 billion cubic meters, accounting for merely 2.1% of China's energy consumption, which is far lower than the percent of world energy consumption devoted to natural gas, and even lags far behind the average Asian level of 8.8%.

第三，為使供應來源多元化，中共海外石油來源，特別是以俄羅斯之資源及中亞的輸油管為主。^{註三}加州大學洛杉磯分校教授理查鮑姆(Richard Baum)，認為中共將持續大量依賴石油以驅動其經濟，且能源資源的競爭將會成為國際政治的一部分。^{註三}鮑姆認為儘管中共政府倡議減少石油的使用，石油消耗將在驅動中共經濟成長中扮演重要的角色，且至少持續到本世紀中期。^{註四}因此，經濟成長造成驟增的石油需求及供需不平衡，大大型塑中共國際經濟戰略與政策。

Third, in order to diversify sources of supply, China is utilizing foreign oil resources, particularly Russian resources and Central Asia's pipelines. Richard Baum, a professor at University of California, Los Angeles, has argued that China will continue to rely heavily on fossil fuel to power its economy, and its competition for energy resources will be an aspect of international politics. Baum argues that oil consumption will play a major role in driving China's economic growth to at least the middle of this century, in spite of Chinese government's solemn vows to reduce its use of oil. Thus the rapidly

growing demand for oil for economic growth and the disequilibrium of supply and demand is significantly shaping China's international economic strategies and political policies.

本篇論文將置重點於在「中國崛起」的趨勢及石油消耗所造成的石油能源需求。此外，本論文也將探究中共為穩定石油供給策略，包含中國內陸、近海油田的開採，穩定國外油源供給，加強與石油生產國的關係及在軍事援助介入非洲的內部事務。本論文並將進一步檢視中共「能源困境」，區域強權的利益關係——美國、日本、印度如何看待中共全球尋找石油能源。

This paper will focus on China's demand for oil within the trend of its growth and oil consumption. In addition, the paper will explore Chinese strategies to secure the supply of oil, including exploitation of China's inland and offshore oilfields, stabilization of its foreign oil supply, strengthening of relationships with oil producing countries and military involvement in Africa. The paper will further examine the "energy dilemma," the concerns of the regional powers--the U.S., Japan and India--regarding China's global hunt for oil.

未來在世界各強權間可能會發生什麼衝擊？中共在全球能源產業變化無常當中，是一個新加入者，該產業數十年來，都面臨華盛頓透過全世界跨國的行動，來掌控全球戰略資源的事實(reality)。^{註五}當中共努力想去處理其令人注目的成長及不斷上升的能源需求，也同時面臨美國外交政策干預的意涵。

^{註三} 張帆、梁志鵬合著，「我國天然利用的主要途徑」，中國能源2001年第5期，頁40；轉引自林典龍，「中國能源安全戰略分析」，頁39。

^{註四} Goh Sui Noi, "China's Oil Diplomacy," Strait Times, 1 July 2005.

^{註五} Xinhua News Agency, "China's Oil Import Growth Slow Down in 2005," 28 January, 2006.

^{註六} Zhang Weiping, "China's Overseas Energy Strategy," China Daily, 7 November, 2005, <<http://www.gasandoil.com/goc/news/nts54706.htm>>.

註共 中共龐大的石油需求，已造成日本更加顧忌中共成為國際石油市場及全球油田的巨大競爭者，因為日本本身資源的匱乏。兩國間顯見的競爭目標是石油供給及來自西伯利亞的輸油管建設。印度也是一個迅速發展的國家，且意識到本身對穩定多元化能源資源的需求。註吉就「巴基斯坦與中共」盟友的歷史來看，中印的能源關係很自然是一個複雜的事務。中共與印度在能源上相互競爭，同時亦保持合作的協議。對能源資源的尋找已將亞洲長久歷史上的競爭者置於一全新道路上——此一道路很明顯的會影響全球能源系統及全球政治情勢。註大的確，石油供需已成為國際政治的主要議題。

What impact might occur among the world's most powerful countries in the future? China is a latecomer to the vagaries of the global energy business, which for decades has faced the reality of Washington's control over global strategic resources via the worldwide activities of giant multinationals. While China is grappling with how to manage dramatic growth and soaring demand for energy, it may also confront the implications of an interventionist U.S. foreign policy. China's tremendous oil demand has made Japan much more concerned with this giant opponent in the international oil market and in oilfields around the world, because of Japan's lack of resources. The obvious target of competition between the two countries is the oil supply and

pipeline construction from Siberia. India is also a rapidly developing nation and acutely aware of its need for secure, diverse energy resources. Given India's history with China's ally, Pakistan, the Sino-Indian energy relationship is naturally a complicated affair. China's energy "goal" vis-à-vis India involves competing for energy while remaining open to cooperative arrangements. The search for energy resources has put Asia's historic rivals on a whole new path—one that will certainly affect the system of global energy and geopolitical scene. Oil demand and supply, indeed, has become an essential issue in the international politics.

貳、中共經濟成長及石油消耗

藉由檢視中共自開放政策以來的五年計畫，可以顯現出經濟發展及石油需求兩者間密不可分的關係。表一顯示自1980年以來，每個五年計畫的最後一年之GDP（國內生產毛額）成長與石油消耗之間的關係。1980年代，中共是東亞最大的石油輸出國，然在2004年時其是世界第二大石油進口國，佔全球石油需求成長的31%。註九

2.China's Economic Growth and Oil Consumption

The inseparable relations between China's economic development and its demand for oil can be demonstrated by examining China's Five-

註共 Peter S. Goodman, "Big Shift in China's Oil Policy: With Iraq Deal Dissolved by War, Beijing Looks Elsewhere," in Washington Post, 13 July 2005, <<http://www.uofaweb.ualberta.ca/chinainstitute/>>.

註吉 Edward Lanfranco, "China's Developing World Energy Strategy," Terra Daily, Energy News, 13 January 2006, <http://www.terradaily.com/news/China_Developing_World_Energy_Strategy.html>.

註大 Ziad Haider, "Oil Fuels Beijing's New Power Game," Yale Global Online, 11 March 2005, <<http://yaleglobal.yale.edu/display.article?id=5411>>.

註九 David Zweig and Bi Jianhai, "China's Global Hunt for Energy," Foreign Affairs, September/October 2005, <<http://www.foreignaffairs.org/20050901faessay84503/david-zweig-bi-jianhai/china-s-global-hunt>>.

Year Plans over the past two decades, since the beginning of its open policy. This section will present figures on the growth of gross domestic product (GDP) and oil consumption from the last year of each Five-Year Plan (see Table 1). In the 1980s, China was East Asia's largest oil exporter. Now it is the world's second-largest importer; in 2004, it alone accounted for 31% of global growth in oil demand.

在「五五計畫」中(1976-1980)，中共經歷鄧小平上台及四人幫下台的政治變動，這樣的變動造成了一些計畫上的調整。基本上，這些計畫致力於農業及輕工業的發展，以便開放多種管道來分配農村人力。1980年代，中共國家經濟大幅成長，生產與建設亦向前邁進。在這一個階段，年平均成長率為7.8%。^{註一}1980年，也就是五年計畫的最後一年，國內生產毛額達到4,518億人民幣，較1975年成長50.75%。^{註二}

During the Fifth Five-Year Plan (1976-1980), China underwent the political upheavals of the purge of Deng Xiaoping and the arrest of the Gang of Four, and thus several adjustments were made over the course of the plan. The plan was basically devoted to developing agriculture and light industry so as to open multiple channels for allocating rural manpower. By 1980, not only the national economy was much improved

表一 中共國內生產毛額與石油消耗對照表
Table 1 Comparisons of the Growth of China's GDP and Oil Consumption

年度	GDP的成長比例 (%)		石油消耗的成長比例 (%)	
1980	4,518億人民幣	50.75	88(百萬)噸	
1985	8,964億人民幣	110.2	88(百萬)噸	0
1990	18,548億人民幣	107	109(百萬)噸	23.4
1995	58,478億人民幣	215.3	158(百萬)噸	45
2000	89,000億人民幣	52.2	238.66(百萬)噸	51
2005	182,321億人民幣	104.9	318(百萬)噸	33

資料來源：1. Lee Bing-xiang and Dileep Metha, "Restructuring of Chinese Banking Industry," Special Report, World Economy & China, 3 November, 2001.
2. 于民，「對解決我國石油供需問題的幾點思考」，石油化工技術與經濟，2000年第1卷第4期，頁14；轉引自林典龍，「中國能源安全戰略分析」，頁27。
3. National Bureau of Statistics of China, the Equilibrium of Oil, 2004.
4. Embassy of the PRC to the U.S.' "China's Oil Consumption, Imports Decrease in 2005," February 3 2006, <<http://www.china-embassy.org/eng/gyzg/t223673>>.

but also production and construction had moved forward. During this period, the average economic growth rate was 7.8% annually. In 1980, the last year of the plan, the GDP reached 451.8 billion yuan, which had increased 50.75% compared to 1975.

為了獲得外匯，中共自1980年起和國外的石油公司合作開發內陸及沿海油田。^{註三}中共雖於1980年仍出口石油，然其產量尚能維持自給自足，此時期產量約1億6百萬噸，而出口為1千4百萬噸。^{註三}中共石油產量主要來自最大產量的大慶油田及第二大產量的勝利油田，這兩大油田在當時足以供應中共石油的內需。

In order to acquire foreign reserves, China

^{註一} 中國網，「五五計畫」，十一五計畫報告，2005年9月28日，<<http://www.china.com.cn/ch-15/15/f.htm>>。

^{註二} Lee Bing-xiang and Dileep Metha, "Restructuring of Chinese Banking Industry," Special Report, World Economy & China, 3 November 2001, <<http://unpan1.un.org/intradoc/groups/public/documents/APCITH/UNPAN002823.pdf>>.

^{註三} 林典龍，「中國能源安全戰略分析」，頁17。

^{註三} 于民，「對解決我國石油供需問題的幾點思考」，石油化工技術與經濟，2000年第1卷第4期，頁14；轉引自林典龍，「中國能源安全戰略分析」，頁27。根據上述的資料作者重新計算上述1980年的資料。

has cooperated with a foreign petroleum company since 1980 to develop its inland and offshore oilfields. Although China exported oil in 1980, its oil production remained self-sufficient, at 106 million tons of oil produced and 18 million tons exported. China's oil production was mainly supplied by the largest oilfield, Daqing, and the second largest oilfield, Shengli; these two oilfields provided sufficient oil for China's domestic demand.

在「六五計畫」(1981-1985)期間，重點在解決經濟發展所遺留的問題，以及改善政府金融，並為「七五計畫」奠基。在這段期間GDP年度平均成長率為11%。1985年，GDP成長達到8,964億人民幣，超出1980年「五五計畫」最後一年的1倍之多(110.2%)，達到平衡政府財政、消除收支赤字及提升人民生活水準的目標。^{註四}

The Sixth Five-Year Plan (1981-1985) stressed the solution of remaining problems of economic development and the improvement of governmental finance, in order to pave the way for the Seventh Five-Year Plan. The average annual growth of GDP in this period increased 11%. In 1985, the GDP reached the level of 896.4 billion yuan, more than double the GDP of the last year of the Fifth Five-Year Plan in 1980. Equilibrium in government finance was attained, the deficit was eliminated, and the living standard of the people was elevated.

中共隨著經濟成長，在1985年其石油產量增加到1億2,500萬噸，較1980年的石油產量多了將近18%。由於大慶油田大量開採，中共在1985年出口3,700萬噸。和1980年相比，雖然國內消耗持平（均為8,800萬噸），但是出口量多了一倍以上，^{註五}石油出口在此時期佔總外匯存底的四分之一。^{註六}

With the growth of its economy, China increased its oil production to the level of 125 million tons in 1985, almost 18% more than the oil production of 1980. Due to mass production at Daqing oilfield, China exported 37 million tons in 1985, over 100% more than the amount in 1980 although domestic consumption remained the same as in 1980. Oil exports earned a quarter of China's total foreign reserve during this period.

「七五計畫」(1986-1990)隨著開放政策方針，建立「具中國特色的社會主義」。在這個階段，經濟建設克服了許多障礙，也達到新的成果，強化了經濟，提供足夠的國內需求物資，活絡了國外貿易及增加政府收入。使人民生活水準向上提升，且在科技、教育、文化、運動各方面都達到新的水準。在這階段，GDP提升7.8%及年度個人所得增加7.5%，這些成就超過了原計畫目標。^{註七}「七五計畫」是遵循中共社會主義的計畫經濟的第一個社會與經濟計畫，^{註八}中共的GDP於1990年已達1兆8,548億人民幣，1990年的GDP較1985年的GDP成長107%。^{註九}

註四 中國網，「五五計畫」，十一五計畫報告，2005年9月28日，<<http://www.china.com.cn/ch-15/15/g.htm>>。

註五 于民，「對解決我國石油供需問題的幾點思考」，頁14。

註六 林典龍，「中國能源安全戰略分析」，頁17。

註七 National Bureau of Statistics of China, "The Seventh Five-Year Plan," 13 March 1991, <http://www.stats.gov.cn/tjgb/ndtjgh/qgndtjgb/t20020331_15385.htm>。

註八 甘肅網，「十五計畫回顧和十一五計畫的展望」，七五計畫，2005年11月21日，<<http://www.gscn.com.cn/get/bjzl-11-12/204058573.html>>。

註九 Lee Bing-xiang and Dileep Metha, "Restructuring of Chinese Banking Industry," Special Report, World Economy & China, 3 November, 2001.

The Seventh Five-Year Plan (1986-1990) followed the guidance of the open policy, to establish "socialism with Chinese characteristics." In this period, economic construction overcame obstacles and achieved new gains, strengthening the economy, providing sufficient material for domestic needs, energizing foreign trade, and increasing governmental income. The living standard of the people further improved and science, education, culture, sanitation, and athletics achieved new levels. During this period, the GDP increased by 7.8% and individual income increased by 7.5% annually. These achievements exceeded the goals of the Plan. The Seventh Five-Year Plan was first a social and an economic plan, following the goals of Chinese socialism's planned economy. China's GDP in 1990 reached 1,854.8 billion yuan, which had increased 107% compared to 1985.

1990年，中共石油產量較1985年成長超過10%，達1億3,800萬噸。由於經濟成長的需求，石油出口稍微減少到2,900萬噸，而1985年的出口量為3,700萬。^{註二}然而，1990年後，中共逐漸減少石油出口並同時增加石油進口，此時期石油消耗較1985年成長23.4%。

In 1990, oil production had increased 10% over that of 1985, to 138 million tons. Due to the needs of economic growth, oil exports had decreased slightly to 29 million tons, compared with 37 million tons in 1985. However, after 1990, China gradually reduced its oil exports while

increasing its oil imports. The oil consumption during this period had increased 23.4% compared to 1985.

「八五計畫」(1991-1995)堅持鄧小平1992年的指導及中國共產黨第十四屆中央黨委會議結論，成為中央經濟改革及現代建設的新紀元。中共經濟持續成長並預定在2000年，達到1980年GDP四倍之策略目標，為外界所注目的是中共已於1990年達成此一目標，此為中共經濟成長的里程碑。根據中國國家統計局的資料，在這個階段，GDP年度平均成長率為11%，高於「七五計畫」的4%。「八五計畫」是成長最為快速且物價波動最小的時期。^{註三}中共1995年GDP達5兆8,478億人民幣，其成長高出1990年GDP之215.3%。^{註三}

The Eighth Five-Year Plan (1991-1995) adhered to Deng Xiaoping's instruction of 1992 and the fourteenth Central Committee of the Communist Party of China. It was a new era of Chinese economic reforms and modern construction. The economy had grown continuously and had completed the strategic goal of quadrupling the 1980 GDP by 2000 ahead of schedule. China reached this goal in 1995, an achievement noted by the outside world. This was a milestone of Chinese economic development. According to the National Bureau of Statistics of China, during this period, the average annual growth of the GDP was 11%, higher than 4% under the Seventh Five-Year Plan. The Eighth Five-Year Plan was the period of the most rapid economic growth

^{註二} 于明，「解決中國數個石油供需問題的考量因素」，頁14。轉引自林典龍，「中國能源安全戰略分析」，頁27。

^{註三} 甘肅網，「十五計畫回顧和十一五計畫的展望」，八五計畫，2005年11月21日，<<http://www.gscn.com.cn/getbjzl-11-12/204058573.html>>。

^{註三} Lee Bing-xiang and Dileep Metha, "Restructuring of Chinese Banking Industry," Special Report, World Economy & China, 3 November 2001, <<http://unpan1.un.org/intradoc/groups/public/documents/APCITH/UNPAN002823.pdf>>.

and the smallest price fluctuation. China's GDP in 1995 reached 5,847.8 billion yuan, increasing more than 3,991 billion yuan over the GDP of 1990. The growth of GDP in this period had increased 215.3% compared to 1990.

更高的經濟成長意味著更高的能源消耗，而且由於國內石油產量無法滿足因經濟成長所產生的需求，中共從1993年變成石油淨進口國。中共在1995年石油進口達900萬噸，雖然中共石油產量持續增加並達1億4,900萬噸。其石油消耗從1990年的1億900萬噸到1995年的1億5,800萬噸，成長率達45%，表一數字顯示其石油強勁需求是為中共快速經濟成長所驅動。獲得必需的石油進口量及中共境內最大極限的資源開發，已成為中共當務之急，其目的是為了確保足夠的石油供給。中共因此開始與中亞國家及俄羅斯強化合作，並加速內陸、近海油田的開採，以及開始跨國輸油管路的建設。^{註三}

Higher economic growth means higher energy consumption, and as domestic oil production could not meet the demand that resulted from economic growth, China became a net oil importer beginning in 1993. China's oil imports reached 9 million tons in 1995, although its oil production, which had constantly increased, reached 149 million tons. Its oil consumption

increased from 109 million tons in 1990 to 158 million tons in 1995, increasing almost 45%. The figure reveals the powerful need for oil that was being driven by China's rapid economic development. Acquiring requisite oil imports and maximizing resources on China's territory became urgent priority in order to secure a sufficient oil supply. China, therefore, began to strengthen cooperation with Central Asian countries and Russia, and also to speed up exploitation and development of inland and offshore oilfields as well as begin construction of transnational pipelines.

經過「九五計畫」(1996-2000)，中共隨著持續經濟成長及綜合國力的增加，在2000年外匯存底為1,656億美元，較1999年增加了109億美元。^{註四}根據中共國家統計局的統計資料，中共在國家經濟及社會發展上有了新的成長，改革與發展的目標也得以實現。2000年的GDP達8兆9,000億人民幣^{註五}，幾乎達到1980年（4,518億人民幣）GDP的20倍^{註六}，也高出1995年GDP的52.2%。^{註七}中共引人注目的經濟成就，基本上消除了農村地區的貧窮，也使全國各地達到了更高的生活水準。中共建立了一個現代化企業的系統及一個社會主義之市場經濟。^{註八}

Through the Ninth Five-Year Plan (1996-

註三 林典龍，「中國能源安全戰略分析」，頁17-18。

註四 National Bureau of Statistics of China, "2000: Report of National Economy and Social Department," 28 February 2001, <http://www.stats.gov.cn/tjgb/ndtjgb/t20020331_15395.htm>.

註五 Lee Bing-xiang and Dileep Metha, "Restructuring of Chinese Banking Industry," Special Report, World Economy & China, 3 November 2001, <<http://unpan1.un.org/intradoc/groups/public/documents/APCITH/UNPAN002823.pdf>>.

註六 National Bureau of Statistics of China, "2000: Report of National Economy and Social Department," 28 February 2001, <http://www.stats.gov.cn/tjgb/ndtjgb/t20020331_15395.htm>.

註七 Lee Bing-xiang and Dileep Metha, "Restructuring of Chinese Banking Industry," Special Report, World Economy & China, 3 November 2001, <<http://unpan1.un.org/intradoc/groups/public/documents/APCITH/UNPAN002823.pdf>>.

註八 甘肅網，「十五計畫回顧和十一五計畫的展望」，九五計畫，2005年11月21日，<<http://www.gscn.com.cn/get/bjzl-11-12/204406712.html>>。

2000), with its continuous economic growth, China's comprehensive national power (CNP) increased. In 2000, the foreign reserve was \$165.6 billion, an increase of \$10.9 billion over 1999. According to the National Bureau of Statistics, China achieved new gains in its national economy and social development. It also implemented goals of reform and development. The GDP in 2000 reached 8,900 billion yuan, almost 20 times the GDP of 1980 (451.8 billion yuan), and 52.2% more than the GDP of 1995. China's dramatic economic achievements basically eliminated poverty in the rural areas and achieved a higher nationwide standard of living. China established a system of modernized enterprise and set up a market economy within socialism.

隨著經濟的持續成長，在這時期石油消耗也是格外引人注目。2000年，中共年度石油消耗成長至2億3,868萬噸，較1995年多出了8,000萬噸，成長率為51%。^{註元}相信在接下来的20年裏，中共石油需求將持續成長以滿足經濟所需。因此，國內石油產量的持續增加及石油多元化進口，仍舊是穩固其石油供給的必要手段。

With the continuous economic growth, oil consumption also dramatically increased during this period. In 2000, China's annual oil consumption increased to 238.66 million tons, more than 80 million tons in 1995, a 51% growth in oil consumption. It is believed China's oil demand will continue to increase in order to meet the needs

of economic growth in the next two decades. Hence, increasing domestic output and diversification of oil imports will continue to be necessary to secure the oil supply.

「十五計畫」(2001-2005)置重點於產業結構升級及強化國際競爭力。隨著經濟的強勁成長，2005年GDP達18兆2,311億人民幣，^{註甲}比2000年GDP高出104.9%。2005年，國家經濟及資訊產業顯著成長，基礎建設也更上一層樓，區域間貧富差距也有效控制，同時農村地區的生活水準也得到提升。^{註四}

The Tenth Five-Year Plan (2001-2005) focused on the promotion of productive structure and strengthening international competitive capability. With strong economic growth, the GDP in 2005 reached 18,231.1 billion yuan more 104.9% than the GDP in 2000. In 2005, the national economy and the information industry apparently grew; the infrastructure was further improved. The gaps in wealth between regions were efficiently controlled and the living standard of rural areas was improved.

2005年石油消耗達到3億1,800萬噸，較2000年高出33%，而2006年中共國內石油產量達1億8,400萬噸，另石油消耗達3億2,900萬噸，換句話說，中共44%的石油需求來自進口。^{註四}因此，未來中共將持續增加石油產量及穩定其外國石油供給，俾滿足其經濟發展需求。「中國石油化學工業協會」副會長潘德潤曾說，事實上中共將試著倍增其石油供給，以滿足到2020年時4倍的經濟成長。^{註五}

^{註元} National Bureau of Statistics of China, the Equilibrium of Oil, 2004.

^{註甲} Xinhua News, 26 January 2006.

^{註四} 甘肅網，「十五計畫回顧和十一五計畫的展望」，九五計畫，2005年11月21日，<<http://www.gscn.com.cn/get/bjzl-11-21/204406712.html>>。

^{註五} Embassy of the PRC in the U.S., "China's Oil Consumption, Imports Decrease in 2005," 3 February 2006, <<http://www.china-embassy.org/eng/gyzg/t233673.htm>>.

^{註四} Ibid.

Oil consumption was about 318 million tons in 2005, which has increased 33% consumption compare to 2000. China's domestic oil output reached 184 million tons while China's oil consumption reached around 329 million tons in 2006, which meant that 44% of China's oil demand would come from importation. Therefore, China would need to continue to increase its oil output and stabilize its foreign oil supply in order to meet the needs of its economic development. Pan Derun, deputy president of China Oil and Chemical Industry Association, has said in fact that China will try to double its oil supply in order to meet its quadrupling economic growth by 2020.

中共盛產煤礦，其佔能源總消耗的67.2%，相對於石油21.4%，天然氣3.4%，及水力發電8%，^{註四}因此，中共的能源消耗大量依賴煤礦。然而，從1993年起，中共因國內產量無法滿足全國石油需求，因而亦造成對外國石油的高度依賴。從表一我們看到中共石油消耗1990年比1985年成長了23.4%。在1995年，中共石油消耗急遽上升到1億5,800萬噸，較1990年增加了45%。在2000年，石油消耗飆升至2億3,866萬噸，較1995年增加了51%。在2005年，石油消耗達3億1,800萬噸，雖然較2004年微幅下降，但中共在2005年石油消耗仍較2000年成長了33%。

China abounds in coal, which accounts for 67.2% of its energy consumption, in contrast, to oil, 21.4%, natural gas, 3.4%, and hydroelectric power, 8%. China's energy consumption, therefore, has largely relied on coal. However, since 1993, China's inability to meet its domes-

tic oil demand from its own production has resulted in high dependence on foreign oil sources. In Table 1, we see that China's oil consumption dramatically increased in 1990, rising by 23.4% of the figure for 1985. In 1995, China's oil consumption rose sharply to 158 million tons, increasing by 45% of the figure for 1990. In 2000, oil consumption skyrocketed to 238.66 million tons, increasing by more than 51% of the figure for 1995. In 2005, oil consumption reached 318 million tons, although it dropped slightly compared to the previous year. But China's oil consumption in 2005 still grew by 33% of the figure for 2000.

經濟合作暨發展組織(OECD)估計在1995至2020年中共平均年經濟成長率(含香港)為5.6%，而1971年至1995年的成長率是8.5%。因此中共仍將在接下來數十年內，同時面臨高經濟成長及國內石油產能不足的窘境。中共土地暨天然資源部部長於2002年4月曾指出「中國石油及天然氣儲備處於嚴重短缺」及「中國東部油田無法再增加產量」。^{註五}因為經濟持續成長，能源消耗在「十一五計畫」(2006-2010)將大於「十五計畫」。如果國內產能不足，將無法滿足經濟成長需求，中共對國外原油依賴將持續成長。舉例來說，中共每人能源消耗是遠低於美國；到了2015年，中共總能源產量預期將超過7千兆夸特(70 quads)，其中近乎四分之三來自煤。^{註六}中共該時期能源產量將逼近於美國在1990年的70.9千兆夸特(70.9 quads)的水準。然而，在過去中共主要依賴煤，在未來對石油的需求會因工業及交通需求而大增，且還有個人使用也都將大幅增加。

^{註四} 林典龍，「中國能源安全戰略分析」，頁21。

^{註五} Bernard D. Cole, "Oil for The Lamps of China: Beijing's 21st Century Search for Energy," p.70.

^{註六} 同註五，頁69。

The Organization for Economic Cooperation and Development (OECD) estimates that the average annual economic growth rate for China, including Hong Kong, will be 5.6% for the period 1995 to 2020, compared to 8.5% for the period 1971 to 1995. Thus China continues to face high economic growth while it lacks sufficient domestic oil production for the coming decades. The Minister of Land and Natural Resources stated in April, 2002 that the country's "oil and gas reserves are in great shortage" and "the oilfields in eastern China are unable to increase their yields any more". Since the economy continues growing, energy consumption in the Eleventh Five-Year Plan (2006-2010) will be larger than in the Tenth Five-Year Plan. If the domestic output cannot meet the needs of economic growth, China's dependence on foreign crude oil supplies will keep growing. For example, energy consumption per person in China is much lower than in the U.S. By 2015, China's overall energy production is expected to exceed 70 quads, of which approximately three-fourths will come from coal. China's energy production in this period will be close to the U.S. level of 70.9 quads in 1990. However, while China has relied mainly on coal in the past, its need for oil will be much larger in the future because the demand in industry and the transportation sector and for personal use will be significantly increasing.

由於汽車的大量增加，預期在交通上的石油消耗將增加，然交通部分的消耗量僅佔

現今中共能源消耗量的7%。^{註25}既然交通及工業對石油產品的需求無法由煤、天然氣、水力發電及核能來取代，中共對石油的持續成長是無可避免的。古德曼(Goodman)認為當中共人民開始擁有汽車與工廠，公寓大廈及辦公大樓不斷增加的時候，中共石油需求量將暴增。連續3年夏天，中共持續實施限電，也限制住了工業區的產量。^{註26}對中共而言，毋庸置疑的是原油的需求非常重要，減少石油消耗及提升能源存量，對發展中之中共是不可能的。^{註27}

It is estimated that the amount of oil consumption in the transportation sector will increase because of the increase in numbers of automobiles. The transportation sector, currently, accounts for only 7% of China's energy consumption. Since transportation and industry's demands for petroleum products cannot be replaced by coal, gas, hydroelectricity, and nuclear power, China's increasing demand for oil is inevitable. Goodman argues the oil demand is exploding in China as people embrace automobiles and factories, and as apartment towers and office buildings proliferate. For the third summer in a row, China is rationing energy, limiting production in industrial areas. The need for crude oil is critical, and needless to say, reducing oil consumption and promoting energy conservation in the developing China is impossible.

此外，在經濟成長率遠高於西方國家的趨勢下，到了2050年，以人均購買力平價(PPP)來看，中共將成為世界最大經濟體，將有僅次於30個經濟合作發展組織會員國

^{註25} 同註25，頁70。

^{註26} Peter S. Goodman, "Big Shift in China's Oil Policy: With Iraq Deal Dissolved by War, Beijing Looks Elsewhere," Washington Post, 13 July 2005, <<http://www.uofaweb.ualberta.ca/chinainstitute/>>.

^{註27} Chien Chung, "China's Energy Strategy in the 21st Century," 20 December, 2000, <http://www.peaceforum.org.tw>.

(OCED)總和一半的GDP。^{註平}由表一的分析，長期來看，即使石油佔中共總能源消耗的百分比或許會下降到某種程度，中共石油消耗總量仍將會增加。在「十一五計畫」中，中共已研究出中、長程計畫，除強調調整能源結構、加速核能發展、研發可再生能源之外，並積極發展水力，^{註五}以應對經濟成長所帶來石油消耗的壓力。

In addition, following the trend of an economic growth rate that has been much higher than that of the West, China would be the largest economy in the world by 2050 in terms of purchasing power parity (PPP), with a GDP slightly less than half of that of the 30 Economic Cooperation and Development (OECD) member-nations combined. Based on the analysis of Table 1, in the long term, China's oil consumption will increase, though the percentage of oil in China's total energy consumption might reduce to some degree. In the Eleventh Five-Year Plan, China has studied out a medium and long-term plan which stresses adjusting its energy structure, accelerating the development of nuclear power, exploring renewable energies, and vigorously developing hydropower in order to relieve the pressure of oil consumption which results from the economic growth.

參、中共全球尋找石油

爲了滿足經濟成長的需求，中共正尋找內陸、近海油田的開發，並確保來自世界各國的石油供給。的確，在接下來的25年，預

料中共將佔世界能源需求成長的五分之一。^{註五}人民大學教授金坎榮(Jin Canrong)，認爲如果能源短缺無法解決，長期來看也許會造成中共經濟成長的瓶頸。中共未來經濟也許會非常不穩定。^{註五}所以，中共將持續尋求國內、國外的石油供給。在內部方面，中共將加速位於新疆的塔里木(Tarim)、準噶爾(Junggar)、吐魯番(Turpan-Hami)盆地的石油建設，此地區總共提供209億噸石油，佔中共內陸石油的25.5%。到2010年，新疆地區石油輸出將達3,000萬噸。結合來自哈薩克輸油管的2,000萬噸原油，屆時新疆將成爲國家最大石油供給基地。^{註五}

3.China's Global Hunt for Oil

In order to meet the needs created by its economic growth, China is seeking to develop its inland and offshore oilfields and to secure foreign oil supplies worldwide. Indeed, in the next quarter century, China is expected to account for one-fifth of the growth in world energy demand. Jin Canrong, a professor at Renmin University, argues that energy shortage may cause a bottleneck in China's economic development and in the long term, if it is not resolved, China's economic future may be very unstable. China will continue to seek an oil supply internally and externally. On the internal front, China will speed up the oil construction in Xinjiang's Tarim, Junggar, and Turpan-Hami Basins, homes to 20.9 billion tons of oil which account for 25.5% of Chi-

^{註平} Bernard D. Cole, "Oil for The Lamps of China: Beijing's 21st Century Search for Energy," p.vii.

^{註五} Zhang Guobao, "How Can Energy Shortage be Blamed on China," *People's Daily Overseas Edition*, 21 September 2005, <<http://www.uofaweb.ualberta.ca/chinainstitute/>>.

^{註五} Zhang Guobao, "How Can Energy Shortage be Blamed on China," *People's Daily Overseas Edition*, 21 September 2005, <<http://www.uofaweb.ualberta.ca/chinainstitute/>>.

^{註五} Goh Sui Noi, "China's Oil Diplomacy," *Straits Times*, 1 July 2005.

^{註五} *Asia Times*, "Oil Focus Shifting to Xinjiang," 10 September 2005, <<http://www.uofaweb.ualberta.ca/chinainstitute/>>.

na's inland oil resources. The regional oil output will hit 30 million tons by 2010. Combined with the 20 million tons of crude oil imported from Kazakhstan via pipelines, Xinjiang will become the country's largest oil supply base by then.

在國外部分，北京當局的目的是避免不穩定的國際能源市場；其對外策略還是圍繞在穩定各式各樣的供給者上面。^{註五}自從1990年代初期以來，中共的石油公司持續投資世界油源的上游活動，這些活動包含在許多國家境內的探勘、油管與煉油設施的架設。最近，北京當局已經確立與非洲、中東、東南亞及美洲國家的長期合約。^{註六}此外，中共的領導人訪問許多國家，中共與這些國家的外交關係著重在能源考量。舉例來說，自從胡錦濤於2003年3月接任中共國家主席以來，他已走訪許多國家，根據陸以正的說法，中共正實行「大國外交」(big country diplomacy)。^{註七}Goh Sui Noi 同樣認為：中共已發展出對石油盛產國的石油戰略。透過胡的訪問，中共與這些國家已簽訂許多協定，以建立戰略夥伴及在許多領域的合作，其中包括經濟、能源、石油、天然氣、高科技、通信及教育。顯然的，能源合作永遠是在議程

中，且與石油生產國的協議中，石油是重要的主題。在石油生產國中，埃及、加彭、阿爾及利亞、羅馬尼亞、烏茲別克、阿根廷、巴西、印尼、汶萊、俄羅斯、哈薩克、墨西哥、沙烏地阿拉伯及奈及利亞都在中共未來能源合作的名單上。這些國家幾乎遍布全球，從中東、東南亞、俄羅斯、中亞到非洲，且這些國家可再進一步分成兩類，一為石油輸出國組織(OPEC)的成員；另一為石油盛產國，詳如表二。(下期待續)

表二 中國國家主席胡錦濤國外訪問統計表(2003-2006)
Table 2 President Hu's Visits to Foreign Countries (2003-2006)

日期 (年月)	國家	成果
2003年3、7月	蒙古、 [△] 俄羅斯、 [△] 哈薩克	奠定上海合作組織(SCO)之建立，鞏固多領域合作，以及發展策略性夥伴關係。
2003年10月	泰國、 [△] 澳洲、 [△] 紐西蘭	維持能源、礦產、林業、農業及畜牧業長期穩定的合作關係。
2004年1月	法國、 [△] 埃及、 [△] 加彭、*阿爾及利亞	簽訂經濟、能源、石油、科技及教育合作協定。
2004年6月	波蘭、漢堡、 [△] 羅馬尼亞、 [△] 烏茲別克	增進與四國的經濟及國際事務的合作。
2004年11月	[△] 阿根廷、 [△] 巴西、智利、古巴	促進雙邊策略性夥伴關係及合作。
2005年4月	菲律賓、*印尼、 [△] 汶萊	簽訂策略性夥伴關係宣言及增進能源合作。
2005年7月	[△] 俄羅斯、 [△] 哈薩克	提升策略性夥伴關係及增進經濟、貿易、石油及能源的合作。
2005年9月	[△] 美國、 [△] 加拿大、 [△] 墨西哥	促進雙邊夥伴關係及能源領域的合作。
2005年10月	北韓、越南	增進策略性夥伴關係及增進合作。
2005年11月	[△] 英國、德國、西班牙、南韓	促進中英廣泛戰略關係，促進中德雙邊關係，促進中西友好合作關係，鞏固中韓全方面合作關係並擴展雙邊合作。
2006年4月	[△] 美國、*沙烏地阿拉伯、摩納哥、*奈及利亞、肯亞	促進雙邊友誼、策略性夥伴及在經濟、能源與油田上的合作。
2006年7月	俄羅斯 (八國峰會)	積極推動中俄經貿領域特別是能源、機電之合作，並對朝鮮問題交換意見。
2006年11月	越南、印度、巴基斯坦	除赴越南參與亞太經合外，並分別訪問印度就能源、科研、旅遊、文化交流達成合作協議；另訪問巴國也分別就能源、農業、交通、金融、資訊達成合作協議。

資料來源：1.陸以正，「中國大國外交」，中國時報專欄，2006年5月1日。
2.China View (28 October, 2003; 10 January, 8 June, 13, 16 & 18 November, 2004; 21 April, 3 July, 10 & 12 September, 25 October, 4, 9 & 11 November, 2005; 27 March, 28 April, 2006).
3.Xinhuanet, "China's President's Euro-Asia Tour Fruitful," 6 Jun, 2003.
4.CIA Factbook, 2006, ° <http://www.cia.gov/cia/publications/factbook/index.html>.
5.2007中共年報，「年來中共與南亞外交關係」，中共研究雜誌社(台北)。中共年報——外交，pp.6-36~38。

附註：*代表石油輸出國組織成員，[△]代表石油生產及可能出口國家。

^{註五} Ziad Haider, "Oil Fuels Beijing's New Power Game," YaleGlobalOnline, 11 March, 2005, <<http://yaleglobal.yale.edu/display.article?id=5411>>.

^{註六} Drew Thompson, "China's Global Strategy for Energy, Security, and Diplomacy," James Foundation, 29 March 2005, <<http://www.uofaweb.ualberta.ca/chinainstitute/>>.

^{註七} 陸以正，「中國大國外交」，中國時報專欄，2006年5月1日。

Externally, Beijing's goal is to avoid the ever-volatile international energy markets; its strategy abroad revolves around securing diverse suppliers. Since the early 1990s, China's oil companies have invested steadily in upstream oil activities around the world, including exploration, pipelines, and refinery facilities in a number of countries. More recently, Beijing secured long-term purchasing agreements in Africa, the Middle East, South East Asia, and the Americas. In addition, China's leaders have visited countries that have diplomatic relations with China that are focused on energy concerns to some degree. For example, since Hu Jintao took over the Presidency of the PRC in March 2003, he has traveled to many countries, practicing "big country diplomacy," according to Lu Yizheng. Goh Sui Noi has made the same argument: that China is conducting "oil diplomacy" with oil rich countries. Through his visits, China has signed agreements to establish strategic partnerships and to strengthen cooperation in many fields, including the economy, energy, oil, natural gas, high tech, communication, and education. Certainly, energy cooperation is always on the agenda and oil is the essential topic in agreements with oil-producing countries. Among them, Egypt, Gabon, Algeria, Romania, Uzbekistan, Argentina, Brazil, Indonesia, Brunei, Russia, Kazakhstan, Mexico, Saudi Arabia, and Nigeria are on China's list of future energy sources. These countries are located almost all over the world, in the Middle East, Southeast Asia, Russia, Central Asia, and Africa, and they can be further divided into members of the Organization of the Petroleum Exporting Countries (OPEC) and other countries with abundant oil production and

reserves (see Table 2).

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