Getting to Grips Again with Dependency: Japan's Energy Strategy

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Summary

Japan has had to deal with a high level of dependency on energy imports for many decades. Today the country faces an increasingly competitive energy market that forces it to reinvent its traditional security of supply policies. Unfortunately for Japan, the rise of China and India is increasing the competition for scarce energy supplies among *consumer countries*, whereas in the past *supplier countries* competed for access to the attractive Japanese market. To confront the challenges of the new environment the Japanese government has drafted a *New National Energy Strategy*. This paper analyses the strength of the strategy's proposals and targets, in particular those aimed at improving security of oil and gas supply.

To assess the impact of the strategy we place it firmly against the background of Japan's history of energy security policy, as well as Japan's recent experiences with 'strategic resource projects'. This paper finds that Japan's policies in post-1973 history have been impeded by a complex set of factors. Traditionally this set has included Japan's troubled bilateral relations with Russia and China, and Japan's security dependence on the United States. Other factors are Japan's inability to synchronise national and corporate interests, and a lack of cooperation between domestic energy companies.

More recently, rising oil prices, growing resource competition with China and lacklustre domestic demand-growth for energy have increased anxiety about security of supply amongst policymakers in Tokyo. In three case studies the paper illustrates in detail how these factors – in combination or by themselves – have structurally compromised Japanese initiatives to improve security of supply. The case studies discuss the *Azadegan* oil development project in Iran, plans for a pan-Siberian oil pipeline, and the oil and gas projects on Russia's *Sakhalin* Island.

Our analysis of the *New National Energy Strategy* confirms that energy security is back on Japan's policy agenda. But the strategy does not offer groundbreaking policy changes and reaches back to policies that have shown an uneven track record. Japan appears unsure of how to win the favour of its Middle Eastern suppliers and fence off Chinese competition for energy supply. Energy relations with Russia and China should be improved, but the strategy looks unconvincing on this point also.

Many Japanese like to believe that he who perseveres, showing unflinching seriousness and pure intentions, will succeed in the end ─ as the Japanese proverb goes, "*Ishi no ue ni mo sannen*" (even if one must wait) three years on a rock.

In our view, with this *New National Energy Strategy* Japan has indeed placed itself 'on a rock', waiting for recycled policies to work their magic under increasingly difficult circumstances. Instead of leading to eventual, deserved success, the strategy's ambitions may well be compromised by the same impediments that have plagued Japanese security of supply policy in the past.

1

Introduction

On 31 May 2006, the Japanese Ministry of Economy, Trade and Industry (METI) released Japan's New National Energy strategy.[1] This event signalled the Japanese government's growing concern about Japan's position in the world's energy markets. Japan lacks abundant natural resources. For its supply of energy, the country is almost completely dependent on imports.

A combination of new developments convinced Japanese policymakers that energy security should be given a higher priority. The price of oil on New York's WTI rose from US$30 dollars per barrel in late 2003 to an historic high of $78 per barrel in July 2006.[2] Oil prices were driven by the prospect of an increasingly tight supply of oil, due in part to rapid demand growth from China and India. Japan started to fear more competition for resources with its neighbour China. Energy outlooks predicted that Asian economies would become increasingly dependent on the Middle East. This would put Japan in direct competition with China and other Asian neighbours that are all increasingly looking towards the Middle East for supply. The 9-11 attacks heightened concerns in Japan about the future stability of the Middle East and the country's suppliers. The nuclear aspirations of Iran resulted in rising tensions with the United States and other governments, leading to speculations of a looming war.[3] A trend of resource nationalism in which governments, including that of Russia, are seeking stronger command over oil and gas reserves, was posing new challenges for Japan's traditional policy to secure resources through direct investments in foreign reserve development projects.

It was against this background of a rapidly changing world energy environment that Japan's New National Energy Strategy was released. The New Strategy puts forth a set of concrete policies to enhance security of supply to Japan. In March 2007, METI proposed a new Basic Energy Law, which incorporates the new emphasis on energy security that was proposed by the New Strategy. One aim of this paper is to provide a detailed description of the new policies, concentrating on the supply of oil and natural gas. A second aim is to grasp the significance of the New Strategy and its proposals. In order to do so, we will first analyse Japan's past policy efforts. Our discussion of the New National Energy Strategy will thus be preceded by a historical analysis of Japan's security of supply policy. This historical background should give the reader evidence to help him/her look critically at the New Strategy and ask questions about the ability of the Japanese government to realise its policy aims.

In Chapter 2 we will first introduce Japan's energy security of supply situation and show how it is particularly vulnerable. Chapter 3 provides an historic overview of Japan's policies to secure its oil and gas supply. In Chapter 4 we briefly discuss the new role of China as a competitor to Japan for oil and gas procurement. We argue that China's new, assertive role on the world's energy scene is a main cause for growing concern in Japan about its energy security. Chapter 5 provides four recent case studies of Japanese involvement in strategic resource projects in Iran and Russia. These case studies show us some of the complexities and impediments that have obstructed the Japanese government's policy to improve the security of oil and gas supply to Japan. In Chapter 6 we look at the policy proposals in Japan's New National Energy Strategy and analyse them, based on the historical evidence from Chapters three and five.

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[1] Japan's Ministry of Economics, Trade and Industry (METI) gained worldwide name recognition under its former name, the Ministry of International Trade and Industry (MITI). Its name was changed from MITI to *METI* during a bureaucratic reshuffling in 2001.

[2] Ekonomisuto (5 September 2006), *gen'yu 100 doru jidai* (The age of $100 oil), p18

[3] See for example Seymour Hersh (2006), Annals of National Security: The Iran Plans, in: *The New Yorker*, 17 April 2006

2

Oil and gas in Japan: Multiple dependencies

In 2005 Japan was the world's fourth largest user of energy. Japan was responsible for 5% of the world's primary energy consumption. Only the United States, Russia and China consumed more energy on a yearly basis.[4] But Japan is a country that is lacking in domestic energy resources. By using a combination of hydropower and alternative energy sources (wind, geothermal) Japan is currently able to produce a mere 6% of its total energy supply domestically. This means that Japan is dependent on external sources for 94% of its energy supply. Comparatively, Germany (39%), France (50%), the United States (72%) and the United Kingdom (106%) can produce a significantly larger share of their energy needs domestically.[5]

2.1. Oil dependencies

Japan is an oil-dependent nation. Over fifty percent of Japan's daily energy consumption is accounted for by oil.[6] When compared to the other main industrial powers, Japan's reliance on oil stands out. The United States (40.3%), Germany (37.5%), France (35.5%) and the United Kingdom (40.9%) all have a lower overall dependency on oil.[7] Japan's oil dependence can be explained by high oil consumption in heavy industry, the electric power industry and households. Japanese industry relied on oil for 51.1% of its energy consumption in 2004, well above industry in the US (36.9%), Germany (34.9%), France (38.4%) and the UK (39.8%).[8] Similarly, Japan's electric power industry relied on oil for 10% of its power output in 2004, while electricity production in the US (3%), Germany (1%), France (1%) and the UK (2%) has moved away from oil to a greater extent.[9] Thirdly, Japanese households and offices use more oil than their counterparts in the Western industrialised nations, due to the widespread use of kerosene and liquid petroleum gas (LPG) for heating and cooking purposes in Japan. Energy consumption in Japan's residential/commercial sector was 46.1% oil in 2004, clearly exceeding the figure for the US (13.0%), Germany (27.7%), France (25.9%) and the UK (7.2%).[10]

Japan is almost completely dependent on foreign countries for its oil supply.[11] During 2005, Japan consumed an average of 5.36 million barrels of oil per day.[12] This makes Japan the world's second

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[4] Japan's total primary energy consumption in 2005 stood at 524.6 million tonnes of oil equivalent (BP, Statistical Review 2006); See also Petroleum Association of Japan (2006), p20. Of the total amount of Japan's oil demand in 2004 (278.9 million kilolitres) 19.4% was used as feedstock for the chemical industry, 14.2% was used in mining and manufacturing, 5.9% was used for electricity generation, and 16.2% was used by households and businesses. Oil use for transport purposes (automobile, aviation, transportation and marine, agriculture and fisheries) accounted for 43.5% of total oil demand (calculated from data published in Petroleum Association of Japan (2006), p9)

[5] METI (2006), nihon no enerugii 2006, p4, or on the Web: http://www.enecho.meti.go.jp/topics/energy-in-japan/energy2006html/supply.html

[6] BP Statistical Review Primary Energy Consumption data, http://www.bp.com/liveassets/bp_internet/globalbp/globalbp_uk_english/reports_and_publications/statistical_energy_review_2006/STAGING/local_assets/downloads/pdf/table_of_primary_energy_consumption_by_fuel_type_2004_and_2005.pdf

[7] Calculated from BP's Statistical Review, Table of Primary Energy Consumption by fuel source, http://www.bp.com/liveassets/bp_internet/globalbp/globalbp_uk_english/reports_and_publications/statistical_energy_review_2006/STAGING/local_assets/downloads/pdf/table_of_primary_energy_consumption_by_fuel_type_2004_and_2005.pdf

[8] IEA (2005), *Energy Policies of IEA Countries,* p534

[9] IEA (2005), *Energy Policies of IEA Countries*, p107

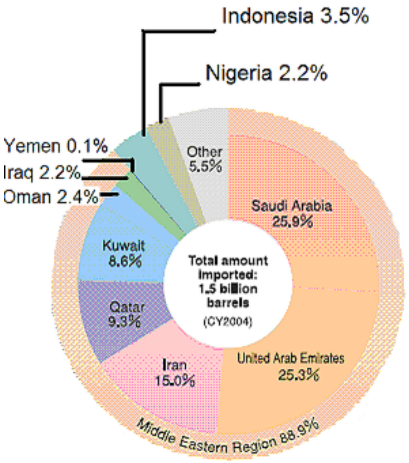
[10] IEA (2005), p534

[11] Japan is not unique in its dependency on imported oil. Some of Europe's largest economies – notably France, Germany and Italy – also depend on imported oil for close to 100%. However, due to the larger size of Japan's economy and Japan's relatively large dependency on oil as a fuel source, the volume of Japan's imports is significantly larger.

[12] BP Statistical Review 2006

largest oil-importing nation, with 12% of world oil imports, trailing only the United States.[13] Japan imports most of its oil from the Middle East. Japan's main oil suppliers are the United Arab Emirates, Saudi Arabia and Iran. These three countries supplied some 66% of Japan's oil needs in 2004. Additional supply from Qatar, Kuwait, Oman, Iraq and Yemen raised Japan's Middle East dependency to almost 90%.[14]

Figure 1: Japan's crude oil imports by supply country



Source: METI

Western industrialised nations are generally less dependent on oil from the Middle East. Twenty-four percent of the United States' oil consumption is imported from the region. Italy's dependence is relatively high at 36%, while France (25%), Germany (10%) and the United Kingdom (6%) sit considerably lower.

Japanese energy consumption can thus be characterised by three structural dependencies: oil dependency, import dependency, and Middle East dependency. In the years ahead Japan will increasingly face competition from China and India for Middle Eastern oil imports. Japan's ability to keep the oil flowing will come under pressure, and this will highlight the risks of Japan's dependencies. Four trends point in this direction: First, world oil demand, particularly Asian demand, is rising. The US government's Energy Information Agency (EIA) expects daily world oil consumption to rise from a level of 80 million barrels per day in 2003 to 118 million barrels per day by 2030. Non-OECD countries in Asia (mainly China and India) are expected to account for 40% of the increase in demand.[15] Second, most of the new demand for oil will have to be imported, because oil production in major consuming regions like the US, China and Western Europe will not keep up with rising domestic consumption. Third, oil imports will increasingly come from OPEC member states, and Middle Eastern OPEC member states in particular, because that is where the lion's share of oil reserves is located. Fourth, domestic Japanese demand for oil has flattened out and is expected to fall in the coming years, which will impede Japanese buying power.[16]

2.2. Gas dependencies

Starting in the early 1970s, a programme to promote the use of gas has helped to lower Japanese dependence on oil. Gas consumption in Japan continued to grow steadily to a volume of 81 billion cubic

[13] METI (2005), enerugii hakusho, http://www.enecho.meti.go.jp/topics/hakusho/2005/html/17013410.html; The US is the number one oil-importing nation.

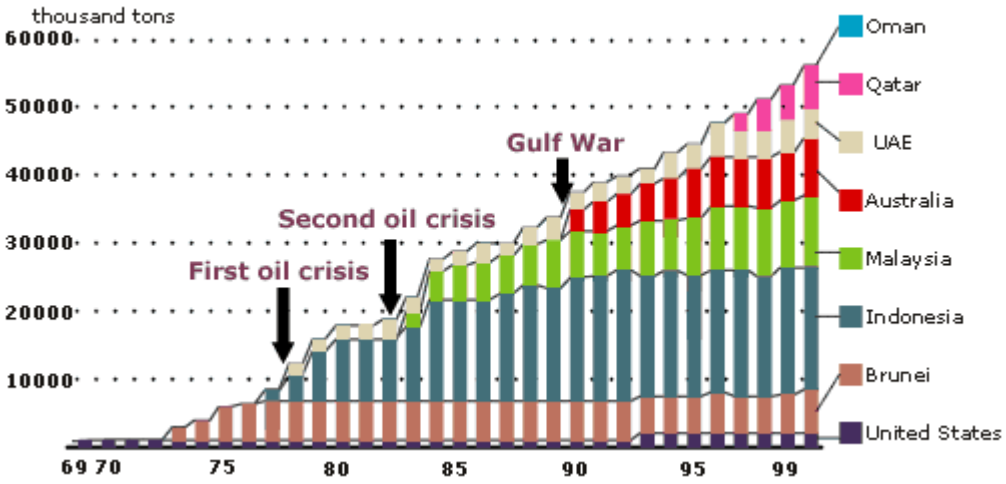
[14] METI (2006), nihon no enerugii 2006, p15

[15] Figures are based on the EIA reference case, EIA, "International Energy Outlook 2006", http://www.eia.doe.gov/oiaf/ieo/index.html

[16] According to METI's reference case scenario, oil consumption will fall from 274 million kl in 2000 to 254 million kl in 2010. See METI (2006), *nihon no enerugii 2006*, p25

meters per year in 2005.[17] Natural gas then accounted for 13.6% of Japan's total primary energy consumption.[18]

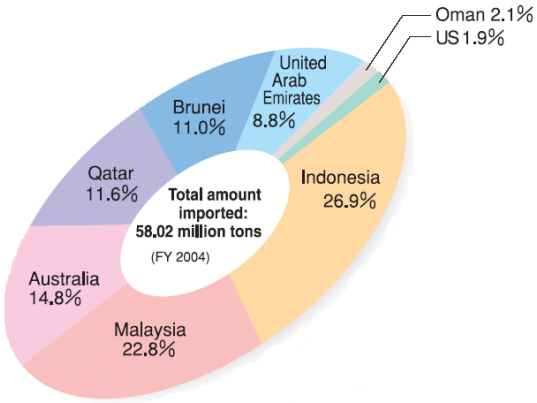
Figure 2: Growth of LNG imports to Japan



Source: METI/ANRE

But through the increased use of natural gas Japan created a new dependency: gas imports. The Japanese archipelago holds only minimal natural gas reserves which as a consequence ties Japan to foreign suppliers, just as in the case of oil. Japan relies heavily on Southeast Asia and Oceania for its supply of gas. In 2004, seventy-five percent was imported from just four countries: Indonesia, Malaysia, Australia and Brunei. Moreover, Japan is not directly connected to foreign gas fields by pipeline, and all of its gas imports are shipped in as Liquid Natural Gas (LNG).

Figure 3: Japan's natural gas imports by supply country (2004)



Source: METI

Japan's LNG imports will inevitably shift more towards the Middle East and Russia, countries that hold a large share of the world's proven reserves. Imports from Japan's long-time number one gas supplier, Indonesia, are set for a major downwards adjustment, due to rising domestic demand and unforeseen production shortages. Indonesia has had problems meeting supply contracts in recent years and is expected to miss its targets again in 2007.[19] Press reports signal a significant cut in Indonesian exports to

[17] BP Statistical Review 2006

[18] BP Statistical Review 2006

[19] World Gas Intelligence (16 May 2007), *Japan facing Big Indonesian LNG Loss*

Japan of 50% and possibly even 75% when long-term contracts with Japanese customers expire in 2010 and 2011. The latter would amount to some 20% of Japan's total LNG intake.[20] Japan began the import of natural gas from Qatar in 1996 and from Oman in 2000.[21] Japanese gas utilities and electric power corporations have also signed long-term gas delivery contracts for Russian natural gas from the offshore Sakhalin-2 project.[22] In order to keep its gas import portfolio diversified, Japanese buyers want to expand gas acquisitions from Australia, which they hope will prove a supremely stable supply source.

The IEA foresees increasing competition for LNG worldwide. The US, Chinese and European markets for LNG are all expected to grow considerably in the coming 20-25 years.[23] This perspective has Japan concerned about the stability of LNG supply and prices. Domestic demand is expected to grow at moderate rates at best. METI foresees growth of only one percent per year until 2030, which is merely half the expected world growth rate. For years, Japan dominated the world LNG market, while the US, China and Europe relied almost exclusively on piped gas. During that time, Japan's strong buyer position guaranteed security of supply and stable import prices. But now that growing demand for LNG pushes Japan's share of the world's LNG market downwards, stability of supply and price is no longer a given.

The absence of a pipeline connection to a major foreign gas field means that Japan can not easily diversify its gas intake away from LNG. Japan's reliance on LNG has also resulted in the situation that Japan today only has a limited domestic pipeline infrastructure for natural gas.[24] This is an impediment to the growth of overall gas consumption. The network was created to transport domestically produced gas from small fields in the Akita and Niigata prefectures to the main industrial areas around Osaka and Tokyo. Together with the imported quantity of LNG, natural gas is used mainly for power generation and industrial purposes. Individual households in Japan are, in general, not connected to a gas grid. In light of Japan's significant gas consumption, the expectation that supply from Southeast Asia will slow down in the future, and the presence of large, proven natural gas reserves in nearby Russia, a discussion has been going on in Japan for some time about the necessity of a pipeline connection to the Russian island of Sakhalin. We will refer back to that discussion in Chapters five and six. Judging from the discussion, it seems unlikely that a pipeline directly connecting Japan and Russia will be built. With Japan's position in the LNG market weakening, this may well prove to increasingly become a strategic vulnerability.

2.3. Energy security

Japan's supply of oil and gas is characterised by a series of dependencies. The dependencies make Japan relatively vulnerable to supply disruptions and thus negatively influence Japan's energy security.[25] The concept of energy security, or security of energy supply, is generally defined as "the availability of energy at all times, in various forms, in sufficient quantities, and at reasonable and/or affordable prices."[26] Governments try to boost energy security by minimising the risk of a supply shortage. In order to manage security of supply risks, governments have traditionally resorted to a mix of policy tools. Policies to prevent shortage of supply include: multilateral cooperation (i.e., through the International Energy Forum), international agreements (through the International Energy Agency), foreign policy, economic cooperation/ trade policy, horizontal and vertical integration, diversification of resources, reduction of import dependence, research and development. Additionally, governments may use policies to put pressure on supply nations, with the intent to persuade them to keep energy supplies

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[20] Rigzone (17 January 2007), *Indonesia to determine size of future exports to Japan*; Reuters (29 June 2006), *Indonesia LNG export shortfall seen deeper in 2007*; Shingetsu Newsletter No. 466, *Fallout from Japan-Indonesia EPA signing*; Shingetsu Newsletter 420, *Inpex drills for LNG in Indonesia's Timor Sea amidst energy concerns*

[21] ANRE (2004), enerugii 2004, p264

[22] Sakhalin Energy, corporate website, www.sakhalinenergy.com

[23] World Energy Outlook 2006

[24] Miyamoto (2002), p130-135

[25] "A security of supply risk refers to a shortage in energy supply, either a relative shortage, i.e., a mismatch in supply and demand inducing price increases, or a partial or complete disruption of energy supplies." (ECN, EU Standards for Energy Security of Supply, p13)

[26] Clingendael International Energy Programme, p37

stable. Such policies include: UN Security Council measures, unilateral political- and economic sanctions, security policy and strategic alliance.[27]

These policies are aimed at increasing the level of control that the state can exert over its supply of energy. Control, in turn, leads to a sense of security. The pursuit of energy security should be seen as a search to enhance control, direct or indirect, over the supply of energy resources from the source to the domestic market. When looking at Japan, we observe that Japan cannot use all of the policy tools that we have listed above. First, since Japan lacks domestic oil and gas resources, as well as uranium or significant coal resources, it does not have the option to reduce import dependence through the domestic development of resources. Second, Japan has no domestic integrated energy corporation that wields significant influence on the world's energy markets. Third, Japan has no serious deterrence capability which it can use in its dealings with oil suppliers. Japan is bound by a pacifist constitution which forbids it to wage war abroad and sell weapons to foreign countries. For its own military security Japan relies on its strategic security alliance with the United States. At the same time, Japan counts on the US to secure the oil flow from the Middle East through its military control of the Persian Gulf and the sea lanes in the Asian Pacific region. Also, because Japan is not a member of the UN Security Council it cannot influence energy markets through that forum. Japan has a burning desire to be admitted to the council, but its lobby has so far been unsuccessful.[28] Fourth, because of Japan's strategic dependence on the US and its military power, it is hard for Japan to wage independent foreign policy that goes against the interests of the United States. In the Middle East, this has complicated Japan's options for diplomacy with the Arab nations and Iran. The United States has always supported Israel. Japan could never be seen to openly go against US policy, even if it may have served its energy security interests.

In the next chapter we will discuss the policies that Japanese policymakers have used, given the nation's dependencies, and given Japan's limited policy options for managing security of supply risks that are the result of those dependencies.

[27] Linde, v/d C. (2005), p222-223; Clingendael International Energy Programme, Chapter 4

[28] See for a brief discussion of Japan's efforts to join the UN security council Togo (2005), p379-381

3

Japan's security of supply policy: A short history

3.1. The 1970s and 1980s

In the early 1960s, Japan's economy began a decade of double-digit economic growth that led to the massive growth of Japanese oil consumption. In a matter of just a few years Japan switched its energy base from coal to cheap oil. In 1960 the Japanese economy could do with 660,000 barrels of oil per day. By 1973, this volume had exploded by more than 700% to 4.95 million barrels per day.[29] All of this oil was imported, most of it from the Middle East.

In October of 1973, Japan roughly awoke to the reality of its own oil dependency. The outbreak of the Yom Kippur War and the resulting decision by Arab OPEC members to tighten oil supply led to a fourfold rise of the oil price.[30] Before this series of events, which are remembered as the 'first oil crisis', Japan had never faced the prospect of serious supply shortages, but now the sudden price increases sent a shock wave throughout the country. Some Japanese began hoarding commodity goods such as toilet paper.[31] The crisis proved that Japan's dependence on foreign oil could be a real liability to economic growth. The price of oil grew from 3.5 US Dollars per barrel in October 1973 to 10.5 US Dollars in March 1974. As a result, Japan's economic growth rate plunged from 5.1% in 1973 to -0.5% in 1974.[32] In 1979-1980, the world was hit by a second oil crisis, caused by the full disruption of oil supplies from Iran in the wake of the Iranian revolution. This time, the oil price increased 2.5 fold. Japan's economy was again negatively affected.[33] The 1973 and 1979-1980 crises gave Japanese policymakers the impetus to announce, implement and expand a mix of policies to secure the supply of oil.[34]

Crisis management

The government put in place a crisis management system that would give it the ability to react to future crises more efficiently. The cabinet of the Prime Minister was granted authority to dictate prices and the power to determine the dispersion of resources during a time of crisis.[35] The state built national oil storage facilities and expanded the mandatory level of oil stocks to be maintained by the private sector.[36] The volume of private reserves of crude oil and oil products expanded from a level equal to 56 days' worth of consumption in 1973 to 79 days in 2005. State-managed reserves today stand at 91 days.[37] Just prior to the first crisis, the Agency for Natural Resources and Energy (ANRE) was established within the Ministry of International Trade and Industry (METI). From now on ANRE would be the place where security of energy supply policies would be discussed, crafted and carried out.[38]

Autonomous development

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[29] Figures taken from the EIA website

[30] Petroleum Association of Japan (2006), p22

[31] Ishii Akira and Fuji Kazuhiko (2003), p166-171; Morse (1982), p259; For an overview of the days of the 1973 oil crisis, and its impact on everyday life in Japan, see for example Harada (1990), p162-173

[32] Fujita (2003), p233

[33] Fujita (2003), p233; The oil price increased from 13.7 US Dollars per barrel in September of 1979 to 34 US Dollars in August of 1980. Japan's economic growth rate of 5.1% in 1979 sunk to 2.6% in 1980.

[34] Caldwell (1981)

[35] IEA (2003), p70-71; See also Petroleum Association of Japan for an overview of the emergency policy system, p25

[36] Fujita (2003), p255

[37] Petroleum Association of Japan (2006), p24

[38] Fujita (2003), p233; Morse (1982), p258; IEA (2003), p70

At the time of the first oil crisis, in October 1973, Japanese oil companies and trading houses dived *en masse* onto the world's spot markets in search of short term oil contracts. At the time, the bulk of Japan's oil supply was controlled by a few major Western oil corporations, mainly Shell, Exxon and Mobil.[39] Japanese industry feared that the foreign majors would favour American and other Western customers over Japan for the duration of the crisis. The panicking of Japanese industries worsened the overall situation by driving oil prices up further.[40] In the years after the first oil crisis, Japan's reliance on the majors decreased significantly with oil supply nations nationalising production. By 1979, the majors supplied 45% of Japan's oil, while bilateral deals between Japan and foreign governments had risen from 5.4% in 1972 to 31.4% in 1978.[41] The level of autonomously developed oil as a share of Japan's total oil imports grew from 8.5% in 1973 to 11% in 1978.[42]

The experiences of the oil crisis convinced Japan's government and business leaders to intensify the search for oil concessions to foreign oil reserves. Both the government and private industry had entered the upstream oil development market in the 1960s. The Japanese called this policy *jishu kaihatsu*, or 'autonomous development'.[43] Japanese industrialists led Japan's first foreign acquisition of oil rights from the Middle East. Then, in 1967 the Japanese government established the Japan National Oil Corporation (JNOC), under the auspices of the Ministry of International Trade and Industry, as a government vehicle to acquire foreign oil reserves. The government set an ambitious target, stating that Japanese companies must become the source of 30% of oil imports to Japan.[44] In the late 1960s and early 1970s, the Japanese government and private industry created a wave of new foreign oil projects and oil exploration companies.[45] Japan's government made finances available for oil and gas exploration and development through a number of government institutions, in the expectation that private industry would join in with further investments.[46] Investments in oil and gas resource procurement received government insurance through Nippon Export and Investment Insurance (NEXI).[47] Soft financing came from Japan's Import Export bank and Japan Development Bank.[48] After the second oil shock the Japanese government reinforced its financial support.[49]

During this period Japan's upstream industry became an intricate arrangement of oil (project) companies in which the state and private industries held joint investments. A typical arrangement would be for JNOC (METI's investment company) to own 50% of the shares, with the other 50% held by Japan's trading houses, banks and other large corporations. Such companies included the INPEX Corporation which was based around large investments in Indonesia, and the Japan Oil Development Corporation (JODCO), which bought concessions to five oil fields in the United Arab Emirates. If

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[39] In 1975, the major Western oil companies were responsible for 70% of Japan's oil supply (Petroleum Association of Japan (2006), p12)

[40] Morse (1982), p261; Ishii and Fuji (2003), p168-170; According to Ishii et al, there were indeed incidents in which deliveries to Japan were cancelled, but by and large Japan faced no real shortages.

[41] Morse (1982), p261

[42] Fujita (2003), p246

[43] A more popular name is *hi no maru sekiyu*, or 'hi no maru' oil. The *hi no maru*, or '*circle of the sun'*, is how the Japanese refer to their national flag. According to Japan's Agency for Natural Resources and Energy, autonomous development projects contribute to: a) high stability in the supply of oil and gas to Japan, b) a swift understanding of changes in the supply-demand environment of oil and gas markets, and c) strengthening of mutual ties of dependency with supply nations. (ANRE Website, www.enecho.meti.go.jp/faq.oil/q09.htm)

[44] Fujita (2003), p227; This target was meant to be a timeless ambition that Japan should strive for. In reality, Japan never came close. The highest autonomous development rate that was reached stood at around 15%.

[45] Fujita (2003), 233-35

[46] Interviews with high ranking official of the Agency of Natural Resources and Energy, Tokyo, 20 November 2006 and 13 December 2006

[47] NEXI is 100% owned by METI, and most of its directors are former METI officials (NEXI Website)

[48] The Import Export Bank was controlled by the Ministry of Finance (MOF) and METI. It has since been renamed and is now know as the Japan Bank for International Corporation (JBIC). Its board is made up of officials with ties to METI and MOF. (JBIC Website). Currently there are ongoing discussions about splitting up JBIC again, in which part of its activities will be integrated into the Japan International Cooperation Agency (JICA); See Matsumura (2000) for a more detailed explanation of the activities of these institutions.

[49] Morse (1982), p261

private industries were to be reluctant to invest in a project that METI wanted to pursue, JNOC would provide 100% of the initial investment, selling off part of the shares once oil was discovered, but taking the fall when exploration turned out negative. By 2004 JNOC had invested in over 280 oil projects.[50] Japan's trading companies also formed their own oil exploration firms, some of them in cooperation with METI and JNOC.[51]

METI hoped to push the autonomous development policy one step further and foster a genuine Japanese major oil corporation which preferably would be strong enough to compete with Western oil firms. But METI's power to influence the decisions of Japanese companies was limited due to a number of reasons. First, METI had limited finances. The major Western oil firms held the most profitable reserves and Japan lacked this sort of income to finance its upstream investments. Second, METI could not fully control the management of the oil projects that it set up through JNOC because they were managed by autonomous companies with officially autonomous management and because METI had to be mindful of the wishes of other shareholders. Third, because of limited financial strength with METI and private industries, the upstream industry remained 'project-based'. For each new project, most of which were supported by JNOC, a different combination of investors pooled resources to invest. Fourth, METI had only limited control over private downstream industries in Japan including the oil wholesale and electricity industries. Fifth, Japanese upstream projects were by and large investments in existing projects. Development projects usually involved a major Western oil company that possessed the technology.[52] Because of this, Japanese upstream did not develop the technology level of the major oil companies.

Because of these limits to METI's influence, the energy industry remained divided in an upstream and a downstream segment. METI could never force private downstream companies (oil, gas and electricity) to merge their operations with Japanese upstream companies. Private downstream companies such as Idemitsu, Nippon Oil and Cosmo Oil chose to develop their own upstream divisions instead of combining forces with JNOC's operations. The upstream industry thus became divided into many smaller companies, which generally kept their independence. Despite large government investment, cross-shareholding and close management ties between METI and private investors, METI could not control Japan's upstream industry to such an extent that the sector could be managed as a unit. As a result, METI has found it difficult to coordinate Japanese resource policy.

In a telling example, METI received the fury of Iranian officials after it had promised Japanese participation in various oil projects, in the summer of 1972. While a consortium of Japanese companies had been established, thirteen Japanese companies then began competing for the concessions separately. Iran demanded that the Japanese government control its private companies, but METI could not fully comply, causing the projects to be delayed.[53] Twenty-five years later, when Japanese companies bid for Libyan oil contracts, a virtually similar pattern emerged, signalling that the structurally divided nature of the industry remains unchanged to this day.[54]

Diversification away from the Middle East

The first oil shock convinced Japan of the dangers of depending too much on one, unstable supply region, and Japan's desire to diversify away from the Middle East increased. The Japanese government had, however, limited means to directly control geographical diversification. Although the government

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[50] Fujita (2003), p245

[51] For example, Mitsui Oil Exploration is 20% owned by Japan's Ministry of Economics, Trade and Industry

[52] In a recent example, according to the magazine Sentaku, Japan National Oil Corporation, which held a concession for development of the Sakhalin-1 project, initiated American oil major Exxon's participation as the operator for the project (Sentaku (December 2005)).

[53] Caldwell (1981), p175

[54] "From the side of the Libyan government the Japanese industry received the request to participate (in the bidding) not 'scattered out', everyone for himself, but as as one entity", says the CEO of Nippon Oil Exploration. Zero out of five participating Japanese companies won exploration rights in a first bidding round for Libyan oil contracts in January 2005. They fared better in a second round, when they placed joint bids with domestic and foreign oil companies. (Nikkei Sangyou (17 October 2005); Nihon Keizai Shinbun (4 October 2005))

regulated the domestic oil market, its main players were autonomous private corporations,[55] which would not have their purchasing decisions dominated by government bureaucrats. Therefore, in order to induce private companies to help the government's aim of diversifying oil supply, METI offered financial support for Japanese private oil development projects in places such as China, Thailand, and Mexico. METI's diversification strategy had some effect. New imports from (mainly) these countries contributed to a shift away from Middle Eastern oil in the second half of the 1970s. The diversification trend gained momentum after the second oil crisis in 1979-80. Middle East dependency was at 78% in 1973. By 1979 it had been slightly reduced to 76%.[56] In the 1980-1987 period, Japan's dependence on Middle Eastern oil was further reduced to 68%.

Economic policy

Although Japan imported most of its oil from the Middle East, government ties to the Middle East were not very strong in the early 1970s. Western oil companies and Japanese trading houses had by and large already covered oil trade relations with the region without much involvement from the Japanese government. The oil shock convinced Japan's government that it had to improve ties to its suppliers. It thought that the best way to do this was to carefully express support for the Arab views in the Arab-Israeli conflict and distance itself from the pro-Israel position of the United States.[57] Through a series of high level visits to the region, Japan further hoped to gain the trust of its Arab oil suppliers.[58] But Japan needed to be careful not to damage its strategic ties to the US. The discussion on energy security interests versus Japan's interest in the US-Japan alliance led to disagreements within the government, especially between the Ministry of Foreign Affairs (MOFA) and the Ministry of International Trade and Industry. MITI's minister, Nakasone Yasuhiro, wanted official Japanese support for the Arab position in their dispute with Israel. MOFA opposed such a show of support and pushed for a neutral position.[59] Similar frictions have played in the background of Japan's longstanding relationship with Iran that was continued during and after the US and Iran had fallen out, following the overthrow of the Shah in 1979 and the occupation of the US embassy in Tehran in 1980. Generally speaking, Japan's diplomatic efforts towards the Middle East have not been as steadfast as the region's importance to Japan's economic security would warrant.

Economic aid and Japanese investments proved to be a method to strengthen ties with the Middle East that was slightly less politically sensitive. The economic growth of the 1960s and early 1970s had turned Japan into an economic powerhouse. It could now use its economic might as a foreign policy tool. Japanese heavy industries received soft Japanese government financing through the national 'development banks', given to start-up business arrangements in the Middle East. After the second oil shock, in a similar fashion, the way towards new oil and gas development projects throughout Asia was paved by Japanese Official Development Assistance (ODA).

Diversification away from oil and oil conservation

Another policy effort was aimed at not merely reducing Japan's dependency on the Middle East, but on oil as a source of energy.[60] The so-called *dasseki policy* (away from oil policy) included policies to conserve energy and to develop new energy sources. Japan had initiated a nuclear programme in the late 1960s to answer the rising demand for electricity. After the 1973 oil shock, the programme went into overdrive and became the core of the dasseki policy, together with the promotion of liquefied natural gas

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[55] Miyamoto (2002), p124-127; See Petroleum Association of Japan (2006), p58 for a list of Japanese downstream oil corporations and the recent trend of mergers in the sector.

[56] Fujita (2003), p255; Petroleum Association of Japan (2006), p13

[57] Morse (1982), p260; Japan's Chief Cabinet Secretary issued a statement, calling for Israel to fully withdraw from 'the occupied territories' that were gained during the 1967 six-day war, Togo (2005), p291-292

[58] Morse (1982), p260-262

[59] Caldwell (1981), p166-168

[60] Morse (1982), p263

(LNG).[61] The electric power and gas industries were induced to invest in LNG through free import duties, loans and investments for exploration projects and construction of liquefaction plants in supply nations, receiving terminals and ship construction.[62] Competitive pricing of natural gas stimulated LNG use by the electric power industry.[63] At first, Japan procured gas from Alaska and Brunei. Then followed government-aided investments in Abu Dhabi, Indonesia, Malaysia and Australia by Japanese trading houses and the major gas and electricity companies.[64] As a result of the introduction of gas and nuclear energy, Japan's energy system became more flexible. LNG consumption as a share of total energy supply increased from 2% in 1973 to 11% by 1990. The use of nuclear power soared as well, from 1% to 12.2%.[65] A programme of domestic conservation was put in place to reduce oil consumption in all industries. A general trend, away from oil-intensive heavy industry towards services and manufacturing, contributed to the stabilisation of oil use.[66] Overall oil consumption remained at around 4.9 million barrels per day throughout the 1970s. In the period between 1980 and 1985, oil consumption was reduced to an average of 4.44 million barrels per day.[67]

3.2. The 1990s and beyond

The sense of urgency disappears

By the mid 1980s, Japan's economy, which had grown moderately since the 1973 oil shock, took off again. Primary energy supply had remained flat for over a decade, but went up again, driven by rising electricity and oil consumption by households and the transport sector. Oil prices had dropped quickly in 1986, and Japanese oil importers looked towards the Middle East to procure the surging demand for crude.[68] Oil consumption rose by 1 million barrels per day over the course of just five years, from 4.5 million barrels in 1986 to 5.5 million barrels per day in 1991.[69] The Middle East dependency rate increased from 68% to 75% between1987 and 1992.[70]

The economic boom turned into an inflationary bubble, which slowly deflated, in the early 1990s, leaving the economy in a dormant state for nearly a decade. In spite of the slow economy, energy demand continued to rise, by 1.2% on average in the 1990-2002 period.[71] By 2001, Japan consumed 19% more energy than in 1990. Oil consumption, however, stabilised at around 5.4 million barrels per day, with a peak average level of 5.77 million barrels per day in 1996.[72] The end of Japan's bubble economy lowered incentives to invest in fuel efficiency measures. Many Japanese industries, including the financial sector, faced financial difficulties. Japanese industries were looking for cheap energy and were reluctant to invest in conservation efforts that would show results at a later time. Moreover, the decision by Saudi Arabia to start expansion of oil production from the autumn of 1985 had started a 'new age' of consistently low oil prices which spilled over into the 1990s.[73] With oil prices low and the

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[61] The Japanese government provided loans to Japanese LNG development projects in Brunei, Abu Dhabi and Indonesia through the Japan Import-Export bank, Japan Development Bank and Japan National Oil Corporation (Morse, 1982, p266)

[62] Morse (1982), p266

[63] Then, as today, the power industry was responsible for 75% of Japan's natural gas consumption. Morse (1982), p266; Miyamoto (2002), p111 and 113

[64] Miyamoto (2002), p120-127

[65] METI (2006), nihon no enerugii 2006; BP Statistical Review 2006

[66] The Energy Data and Modelling Center, p59

[67] Figures from the EIA website

[68] Petroleum Association of Japan (2006), p13; Oil prices dropped as a result of the Saudi Arabian government's decision to abandon its role as a swing producer for OPEC, and excess oil production coming online in the North-Sea and the Gulf of Mexico, Fujita (2003), p235

[69] Figures from the EIA website

[70] METI (2005), nihon no enerugii 2005, p21

[71] The Energy Data and Modelling Center, p60

[72] Figures from the EIA website

[73] Togo points out how the sharp fall of the oil price was directly linked to the derailing of the Japanese economy. The lower cost of oil imports for Japan left the domestic economy with "an unexpected windfall of 'oil yen'", which fuelled the creation of the economic bubble. (Togo (2005), p299)

economy in recession, politicians would not push for expensive measures to reduce oil consumption. By the mid 1990s, Japan was losing its sense of urgency regarding the risks it faced to the security of oil supply.[74]

The 'sense of urgency' that existed in the wake of the oil crises was further watered down by the unstable domestic politics that marked Japan's attempt to deal with the fall of the Soviet Union. The ruling Liberal Diplomatic Party (LDP), which had ruled Japan uninterruptedly since 1955, was suddenly ousted from government, after a large faction of party members defected from the party and sided with opposition parties. During the political infighting which resulted from the 1993 split of the LDP, politicians were largely pre-occupied with smaller, party-strategic issues, rather than with energy security.[75] Admittedly, there were plenty of analysts and policymakers who continued to argue for strategic measures to reduce Japan's energy supply risks. A survey study in 2000 for example showed that there was serious concern in these circles about the lack of strategic thinking on energy security issues in Japan, and the general direction of energy policy in Japan.[76] Japanese energy specialists pointed at the future outlook for oil and gas use and warned that Japan's dependencies would increase, if it did not get serious about diversification of its energy supply.[77] There were a number of pipeline-schemes proposed to connect Japan's economy directly to Russia's energy resources, involving support from high-ranking LDP politicians.[78] But in the end such proposals were deemed unattractive in the political climates of the 1990s and early 21st century.

Economic Aid Policy

The economic downturn of the 1990s resulted in a domestic push for tighter government spending on Economic Development Assistance (ODA).[79] The Ministry of Finance (MOF) led the calls for frugality, which had broad public support. Prime Minister Hashimoto announced budget cuts for three years from 1996 onwards. Although ODA spending rose sharply in 1998 and 1999 in support of the Asian countries that were hit by the economic "Asian" crisis, this proved incidental, and the ODA budget continued to fall from 2000.[80]

Diversification away from the Middle East

With oil prices low and excess supply in place in Saudi Arabia to stabilise the market, Japan now believed it was in its best interest to support the proper functioning of global energy markets. The Western belief that as long as enough oil flowed towards the market place, security of supply would be guaranteed, became established wisdom in Japan. Officially the desire to diversify oil away from the Middle East remained in place.[81]. But in practice the actual numbers showed that the policy was no longer very effective. The volume of oil exports from China and Indonesia to Japan decreased in the latter years of the 1980s and early 1990s due to increased domestic demand in those countries. The prospect of large oil reserves in Russia's East Siberia offered a possibility for Japan to diversify supply in the long term. But notably, aside from purchasing a stake in the Sakhalin-1 oil and gas project, the

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[74] Interview with high-ranking ANRE official, Tokyo, 20 November 2006 and 13 December 2006; Interview with Toichi Tsutomu, Institute for Energy Economics Japan, 27 November 2006

[75] Interview with high-ranking ANRE official, Tokyo, 20 November 2006 and 13 December 2006; For a detailed narration of Japanese party politics during the 1990s and the split-up of the LDP in the wake of the collapse of the Soviet Union, see Gerald L. Curtis, The Logic of Japanese Politics (2000)

[76] enerugii mondai tokubetsu iinkai (Now renamed: enerugii kankyou tokubetsu iinkai), enerugii sekiyuriti no kakuritsu to 21 seiki no enerugii seisaku no arikata – yuushokusha no enkeeto chouse ni motozuite (establishing energy security and the appropriate 21st century energy policy: Based on a survey of (energy) professionals), results published on 30 March 2000

[77] See for example Ishii and Fuji (2003), p170

[78] See for example the Asian Energy Community initiative (Ajia enerugii kyoudoutai (Asian Energy Community), kaikyou no seiki ga owaru hi (the day the century of The Straits ends)(1998))

[79] By 1989, Japan had become the largest ODA provider (volume wise, *not* per capita) in the world. (Togo (2005), p321)

[80] Togo (2005), p321-322; MOFA, *Japan's Official Development Assistance White Paper 2006*, http://www.mofa.go.jp/policy/oda/white/2006/index.htm

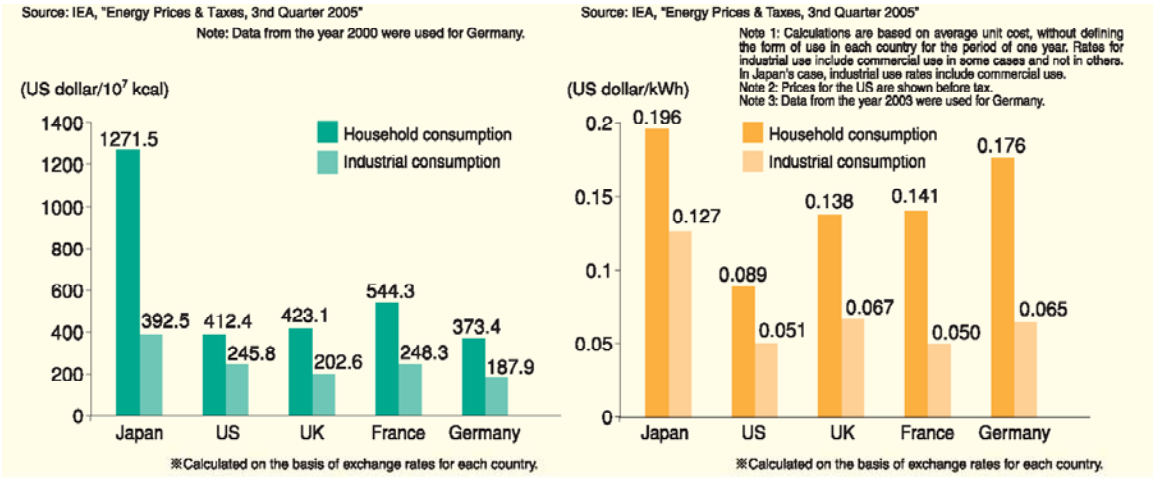
[81] The Ministry of Foreign Affairs even established its own "Strategy and approaches of Japan's energy diplomacy", which it still posts on its official website, http://www.mofa.go.jp/policy/energy/diplomacy.html

Japan National Oil Corporation (JNOC) did not make any other large-scale investments in the Russian oil industry in the decade after the fall of the Soviet regime.[82] Between 1992 and 2004 Japan's dependence on the Middle East for its oil supply steadily increased from 75.2% to 89.5%.[83]

Globalisation and Liberalisation

A trend that greatly influenced Japanese thinking on security of supply was the push, starting shortly after the collapse of the Berlin Wall, for free global markets, free trade and free financial flows. At a time when low oil prices reduced the concern for supply risks, world energy markets too needed to be free, mainstream economists and policymakers argued. Japan could not escape this trend, although many in Japan worried about possible adverse security implications.[84] While Japan's official energy policy aimed to balance the traditional triumvirate of energy policy (energy security, environment, economics), in reality policy seemed to move in a direction which put the need for lower energy costs first. METI introduced a policy to slowly liberalise the electricity and gas markets, which had always been characterised by strong regional monopolisation.[85] It was hoped that the introduction of competition in these markets would bring down gas and electricity prices, which were very high by international standards and about which Japanese industry had increasingly voiced their complaints.[86]

Figure 4: International comparison of Gas prices (left) and electricity prices (right) (2004)



Source: METI (based on IEA data)

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[82] This was probably a politically motivated decision, based on Japanese hope that by withholding such investments it could persuade Russia to return the Kuril Islands to Japan. Japan's diversification policy thus became a victim to the broader political goal of turning this long-standing Territorial dispute into Japanese favour.

[83] Petroleum Association of Japan (2006), p13

[84] Japanese energy industries, as well as the wider economy, has known a tradition of controlled competition in which competition between market participants was controlled by a bureaucracy which ruled through regulation, and industry groups in which market developments could be discussed between market participants. Naturally, the ideas of truly liberalised markets would shatter the traditional arrangements.

[85] Whilst METI went ahead with the introduction of liberalisation, there was reluctance, even within the ministry towards the idea of opening up the energy industry to competition. In spite of the lessened sense of urgency in an age of low oil prices, there was still general awareness of Japan's energy dependencies. METI had a tradition of (trying to) manage domestic markets. A combination of reasons may help to explain why the Japanese government, decided to introduce a policy of liberalisation to the domestic electricity and gas sector. First, there was pressure from the US government to open-up Japan's energy markets. Secondly, there was the argument that high domestic electricity prices, relative to other industrialised nations, were a burden for Japanese companies in 'the age of globalisation'. Thirdly, some METI bureaucrats may have lingered hopes that competitive markets would prove an incentive for Japanese electric power and other energy corporations to combine their operations to become a force on foreign energy markets. METI's managing role in the Japanese economy of the 1950s, 60s and 70s is documented in Chalmers Johnson's monumental work, METI and the Japanese Miracle (1982)

[86] Interview with ANRE official, Tokyo, 20 November 2006 and 13 December 2006; Interview with Toichi Tsutomu, Institute for Energy Economics Japan, 27 November 2006

The liberalisation policy resulted in a head-on collision between METI and Japan's electric power industry. The conflict centred on the question of who would take financial responsibility for the continuation of Japan's nuclear power policy. The power industry had planned for the future based on continued expansion of the nuclear power base. The government had always supported this and financially backed up investments in new capacity. But METI expected that in a liberalised market the electric utilities would share more of the financial risks in the nuclear programme. The utilities argued that this was impossible in the case of such a high risk technology as nuclear energy, and in light of the uncertain domestic demand outlook for electricity.[87]

While the discussion on nuclear policy in an age of liberalisation waged, this had consequences for the policy to promote natural gas use. This policy was no longer free of politics, because liberalisation had made the gas and electricity industries direct competitors. Electric power companies were still the dominant buyer of natural gas in Japan, with around 75% of the market, versus 25% for the gas retail companies. But they were not interested in the government telling them they should increase their procurements in favour of other fuel sources. In fact, the power companies were hoping to increase their use of coal. Liberalisation had worked as planned and electricity prices had gone down. With gas prices on the rise, the electric utilities looked towards coal as a cheaper input fuel through which to boost profits. When politicians or METI now called for promotion of gas use, the power companies took it as a threat. After all, the power industry did not intend to expand its use of natural gas, so any policy to 'promote gas use' had to mean 'promotion of the Gas industry', their direct competitors. The push for gas policy had, after the introduction of liberalisation, gained a formidable opponent.

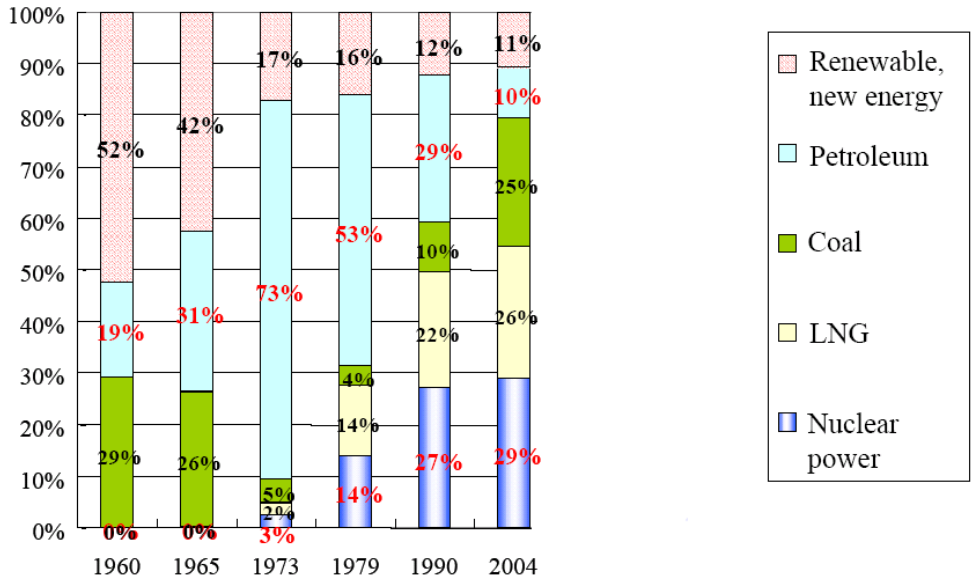
Diversification away from oil

Diversification of fuel sources in such a climate was a complicated matter for METI officials. Diversification policy during the 1990s was not so much driven by energy security considerations, as it was by environmental policy. Japan had signed the Kyoto protocol in which the world's leading industrial nations pledged to reduce CO2 emissions by 6% (of 1990 levels) in 2008-1012. Nuclear power was Japan's core policy to reach this target. Even before the nuclear expansion programme became disrupted by the argument over liberalisation, it had already lost momentum. A series of accidents and scandals involving nuclear safety provoked fierce public protests against plans for more nuclear plants halfway through the 1990s. In 2003, local governments forced Japan's largest electric utility Tokyo Electric to shut down all of its reactors for safety check-ups. In March 2007 Japanese media reported a history of near nuclear accidents at several plants throughout Japan. It is safe to conclude that expansion of Japan's nuclear production capacity will only proceed at slow pace in the coming years, if at all.

The figure below shows us how oil consumption in the electric power industry was reduced significantly between 1990 and 2004. Due to the issues that we described above, nuclear power and natural gas were however only partly responsible. Coal was the preferred replacement fuel for the power industry's officials, thanks to its price competitiveness, and played a large part in the reduction of oil consumption for electricity generation. Paradoxically, after petroleum had replaced coal use for electricity generation during the 1960-1980 period, coal made a comeback during the 1990s in an age of increased concern for the environment. The return of coal did not help Japan's chances of reaching the Kyoto targets for reduction of CO2 emissions, which today look slim at best. Coal did however contribute greatly to the reduction of oil consumption in the power industry and thus to diversify Japan's fuel mix.

[87] Interview with ANRE official, Tokyo, 20 November 2006 and 13 December 2006

Figure 5: Japan's electricity generation, per fuel source



Source: *METI, Japan's New Energy Strategy*

Autonomous development policy scrutinised

During the 1990s, Japan's autonomous development policy came under increasing scrutiny. Many felt that supporting domestic production of foreign oil had become too expensive. Low oil prices had made investment in oil reserves risky and unattractive for Japanese upstream corporations. Many resource projects in which the government-financed Japan National Oil Corporation (JNOC) had invested were facing insolvency. In the slipstream of the liberalisation policy, these investments in upstream oil development projects came under fire from politicians and business leaders alike. Even the private oil companies joined in on the 'bureaucrat-bashing'. Budgets for government support of resource projects were cut.[88] JNOC was accused of gross inefficiencies, bad risk management and other bad business practices. The critics derogatively called JNOC a 'retirement house' for METI (the former METI) bureaucrats.[89]

Prime Minister Koizumi put his weight behind a policy that called for market-based policies and the reduction of state-involvement in the economy through his approach toward 'semi-private' corporations. JNOC was one such semi-private corporation, and in December 2001 the cabinet decided that JNOC would have to be shut down.[90] The bargaining about the terms of JNOC's closure took more than three years.[91] In March 2005, JNOC, which was essentially a government investment vehicle and had large shareholdings in over 200 separate projects, was dissolved. Two of JNOC's largest project

[88] The Agency for Natural Resources and Energy's budget for resource development in 2003 was cut by 5.9% relative to the previous year. (ANRE Website (Japanese), www.enecho,meti.go.jp); Hosoe (2005)

[89] See, for examples of the criticism on JNOC and METI: Nihon Keizai Shinbun (morning edition, 18 Febuary 2004); Nikkei Sangyou Shinbun (11 July 2002).

[90] Nikkei Sangyou Shinbun (11 July 2002)

[91] Prime Minister Koizumi had presented METI with a *fait accomplit* with his demand for privatisation of JNOC. But METI tried to turn this unwanted development to its own advantage. METI pushed for the realisation of its perpetual wish to form a 'Japanese major oil company'. The ministry tried to persuade the project companies under JNOC's wing to merge into a single new entity that could then be listed on the stock market. However, the largest project companies (INPEX, JAPEX and Japan Oil Development Corporation) all objected to METI's proposal. METI was even faced with a lawsuit by private investors in JODCO against the plans. The eventual outcome was a compromise in which INPEX was granted its wish to become an independent operation. But METI forced it to incorporate JODCO. INPEX had wanted to incorporate JAPEX, but JAPEX managed to negotiate its own independence. METI could not shape the break up of JNOC according to its design, in spite of the fact that it held (close to) majority shareholdings in all of JNOC's project companies. The case shows us that METI's control over Japan's resource policy has clear limitations. (Nikkei Sangyou Shinbun (14 April 2003); Nikkei Sangyou Shinbun (23 January 2004); Japan INC (2003))

companies, JAPEX and INPEX, were floated on the Tokyo stock market. METI maintained large shareholdings in both. JNOC's function as a finance vehicle for upstream development was taken over by a new semi-private company called JOGMEC. The Koizumi government curtailed JOGMEC's ability to financially support the acquisition of foreign oil concessions. From now on, oil development had to be a private business-led enterprise and not a bureaucratically controlled enterprise. METI was forced to limit their involvement in private oil projects to below 50%. Although this left METI with plenty of input into Japan's upstream industry, it further reduced its powers to direct policies such as 'diversification' and 'autonomous development'. As we have pointed out, these powers had always been quite limited, but now the coordination problem in Japan's upstream industry had been worsened.[92]

3.3. Conclusion

Because Japan faced a number of important limitations in its 'policy space' to structurally improve its security of oil supply, it had to establish a mixed policy of resource diplomacy, financial support for domestic companies, and economic support to producer nations. Japan worked out of the belief that it should try to exert as much direct control as possible over energy supply, as it wanted to decrease its reliance on the market and its powerful foreign players. The policies to structurally reduce Japan's dependencies proved successful in the short term. Japan reduced its oil dependence by diversifying to other fuel sources for power generation, such as nuclear power and natural gas. Oil conservation policies helped to bring down industry's dependence on oil. Japan reduced its dependence on the Middle East in the early 1980s by diversifying to supply from China and Mexico, and at the same time made attempts to strengthen ties with Middle Eastern suppliers. The share of oil consumption to overall energy consumption has also been significantly reduced since 1973.

In the longer term, however, these policies proved insufficient for Japan to substantially undercut its multiple dependencies. Total oil consumption has risen, driven by rising demand from households and the transport sector. By 2007, Japan still used oil for 50% of its energy supply. Middle East dependency is thus back to where it was before 1973, at close to ninety percent of total oil imports. Japan's natural gas supply, originally part of efforts to diversify the fuel mix away from oil, today faces its own security of supply risks, as demand for gas is rising worldwide and Japan's main supplier, Indonesia, foresees export reductions. Japan's 'autonomous oil and gas development' drive never managed to secure more than 15% equity in oil imports to Japan. Worse, under the influence of liberalisation policies during the late 1990s, autonomous development policy lost political backing, which led to the forced bankruptcy of the Japan National Oil Corporation. Also, Japan's government never succeeded in its effort to create internationally competitive Japanese upstream oil corporations.

[92] Interview with ANRE official, Tokyo, 20 November 2006 and 13 December 2006; Interview with Toichi Tsutomu, Institute for Energy Economics Japan, 27 November 2006

4

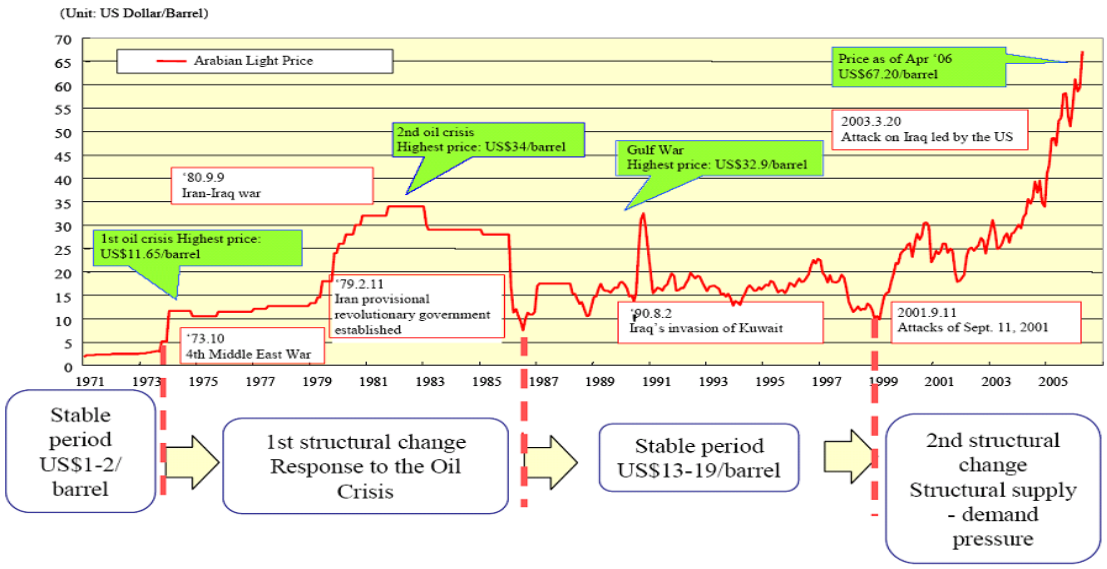
Rising China and Japanese resource concerns

Since 2002, Japan's Basic Energy Law has established Japan's energy policy as a policy that balances the "3E's": economic efficiency, environmental conservation and energy security.[93] In reality, Japanese energy policy of the late 1990s and early 21st century revolved around measures to liberalise domestic energy markets in an effort to push gas and electricity prices down (the economics part), and a policy to reduce the expulsion of greenhouse gases (the environment part). The energy security part of the overall energy policy now concentrated on nuclear energy: in particular, the question of how to liberalise the electricity market while keeping investment levels in (risky) nuclear energy up. Discussion on how to secure the stable supply of oil and gas to Japan was not on top of the energy agenda.[94] But events were unfolding that would slowly start to put pressure on the Japanese government's choice of priorities.

4.1. Oil prices and increasing Chinese oil imports

Oil prices had hovered between US$15-20 per barrel for over a decade[95] when they started to ascend in response to an OPEC-led reduction of oil production. Between 1999 and 2004, the price of oil became increasingly volatile. The terrorist attacks on New York, on 11 September of 2001, and the United States' *War on Terror* added to volatility by inserting a high level of uncertainty into the market. During 2004, the price of oil began to rise to levels that had not been seen since the second oil crisis of 1979-1980. In the 2004-2006 period oil prices quickly went up and reached record highs, with an average WTI price of US$70 per barrel during the summer of 2006. While many expected prices to come down again quickly throughout this period, they did so only partly, fuelling increasingly serious speculations about the cause of what many suspected was 'the end of cheap oil'.

Figure 6: Oil price trends (1971-2006)



Source: *METI*

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[93] METI/ANRE (2002) *Enerugii 2003*, p19-20; IEA (2003), p22

[94] This, among other things, was pointed out to me by a high ranking official of the Agency of Natural Resources and Energy, Tokyo, (Interviews held at METI, Tokyo, on 20 November 2006 and 13 December 2006)

[95] Excluding the short-lasting rise and descent following the 1991 US invasion of Iraq.

Analysts have pointed at a series of causes for the increased volatility, and eventual rise, of the oil price in these years. On the supply side, there were growing concerns about the stability of the Middle East, the US invasion of Iraq and the fall of Iraqi oil production, speculation on the oil futures market, OPEC's declining excess-production and refining capacity, disasters hitting production and refinery capacity in the southern United States, political upheaval hurting supply capacity in Nigeria, Venezuela, Bolivia and other regions, a trend of resource nationalism in which supply nations such as Russia, Venezuela and Bolivia had started to nationalise their resources, and other trends that increased uncertainty levels. On the demand side, the growth of the world's demand for oil and gas put the production capacity of supply nations under increasing strain.[96] It was under these circumstances of quickly rising oil prices that China's rising energy consumption and China's general rise as an active player on the world energy resource markets caught the full attention of the rest of the world, including Japan.

Growing Chinese demand for energy

China's oil consumption grew at an average rate of 7.1% per year between 1995 and 2004. In the 2000-2004 period, China was responsible for one third of the world's total demand growth for oil. China replaced Japan as the world's second largest oil-consuming nation in 2003. By 1993, China had become a net oil importer.[97] In 2006, China was dependent on foreign supply for 47% of its total oil consumption and was expected to grow still more dependent on imported oil.[98] To secure foreign oil supply, China adopted an active "going out" policy. [99]

China's high-speed economic growth demanded that China get its hands on all the oil it could.[100] Governments that were shunned by Western investors because of questionable human rights records gladly accepted Chinese (oil and gas) investments. The Chinese government has given its state-owned oil companies CNPC, Sinopec and CNOOC strong support to procure oil and gas equity rights abroad. By tying the promise of economic investments to resource deals, China managed to sign bilateral resource deals that secured exclusive deliveries of crude oil from Africa and Central and South America. China also expanded its energy infrastructure and supply lines to producing countries. An oil pipeline from Kazakhstan was built, while an oil pipeline to Russia is under construction.[101]

China's growing influence on global oil markets became even more visible in Japan and the West when CNOOC tried to take over American oil firm Unocal in 2005.[102] Unocal held rights to oil and gas reserves close to the Chinese market in Southeast Asia. If the bid would have succeeded, China would have taken a step toward creating a major integrated oil corporation with international clout, but the deal was blocked by the US congress.[103] Japanese policymakers, notably, never managed to succeed in creating a competitive 'major', in spite of their long-held belief that it would benefit their country's energy security. Japanese government officials sighed with relief when the Chinese withdrew their bid for Unocal, but their general anxiety about China's dash for energy resources had increased considerably.[104]

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[96] Koyama (2005)

[97] Takami (2005)

[98] BBC News Online (1 March 2007), *China Gets Foreign Oil Incentives*

[99] Takami (2005)

[100] This was pointed out to me by a Chinese Diplomat who specialises in China's African affairs.

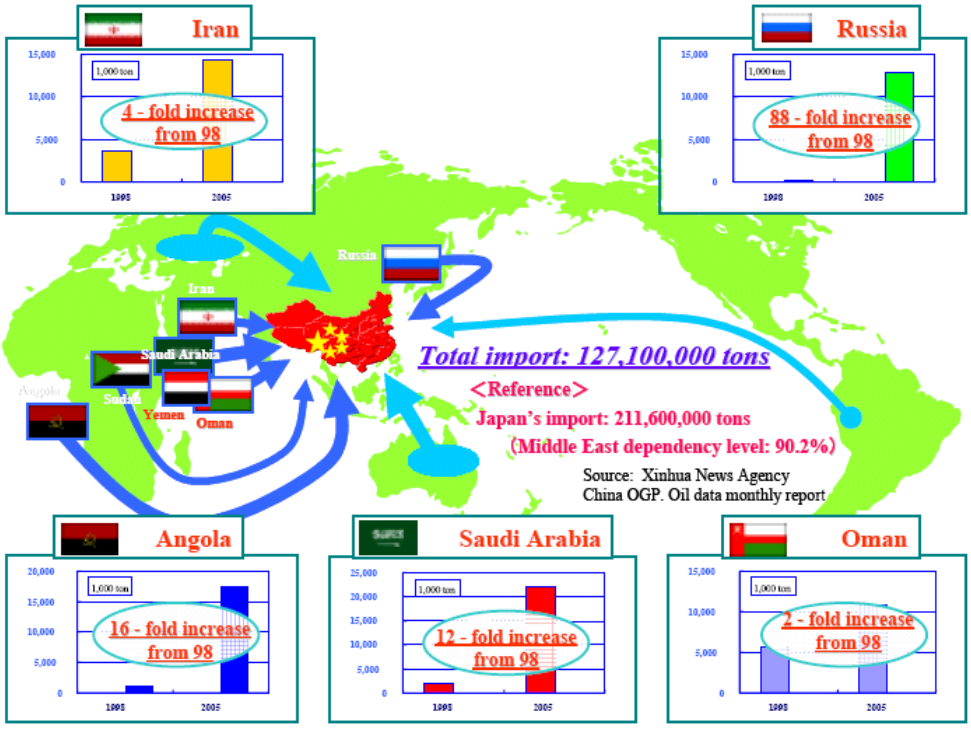
[101] See, for an in-depth analysis of China's energy strategy, including a history of the Chinese-Kazakh Oil Pipeline, Susann Handke (2006), *Securing and Fuelling China's Ascent to Power*

[102] China believed that acquisition of an established world player (and international brand name) such as Unocal, a company that held oil and gas concessions worldwide, would help China to better compete for additional resource procurement.

[103] The Guardian (24 June 2005), *$18 billion bid by Chinese for Unocal has US worried*; BBC News Online (2 August 2005), *Chinese firm abandons Unocal bid*

[104] Enerugii Fooramu reports relief amongst officials across ministerial boundaries at the department of Defense and the ministries of Economics and Foreign Affairs. A defense official remarked: "When I heard that the Chinese side abandoned I sighed with relief". Enerugii Fooramu (September 2005), p30-31; Of course, anxiety about China's rise in general had been rising steadily amongst many Japanese policymakers and analysts. To cite a telling example, the hawkish editorial board of Japan's energy journal Enerugii Fooramu published an opinion article in January 2005, in which it analyses Japan's new

Figure 7: China's growing oil imports



Source: METI (METI cites as its source: Xinhua News Agency China OGP Oil data monthly report)

Resource competition

What troubles Japan most was the fact that China is befriending Japan's traditional oil suppliers in the Middle East. For these countries, Japan has long been a strong client, giving Japan leverage in their relationship. But China, with its high oil-demand growth rates, looks set to become a serious rival to Japan's buying power in the region. China's oil imports from the Middle East have risen sharply in recent years and are expected to grow in the future. China is actively courting Saudi Arabia in order to gain and secure access to Saudi reserves. In 1992, Saudi Arabia was not among China's top-ten crude oil suppliers. Indonesia, Oman, Australia and Papua-New Guinea ranked first through fourth on China's list of main oil supply nations. By 2003, this picture had radically changed, clearly reflecting China's growing impact on the oil market. Saudi Arabia and Iran then topped the list, together delivering 30% of China's crude oil imports.[105] In 2006 China first welcomed the Saudi King Abdullah to Beijing to strengthen bilateral relations, followed by President Hu Jintao's return visit to Saudi Arabia.[106] China has established a strategic approach which aims to make Saudi Arabia economically more dependent on China, by pledging heavy investments in infrastructure and industrial projects, while at the same time allowing Saudi Arabia to invest in China's downstream oil market.[107] China-Iran relations are also intensifying, with China making large-scale investments in Iran's energy sector and the economy at large. Japanese officials worry about how Japan can continue to compete with China's booming demand

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Defense guidelines (which were released in December 2004). The magazine concludes that energy security considerations call for a resolute defense posture towards China. (Enerugii Fooramu (January 2005), p109)

[105] Takami (2005)

[106] IHT (23 January 2006), *Beijing and Riyadh sign oil and gas deal*; BBC News Online (22 April 2006), *Chinese President in Saudi visit*

[107] Note that Japan has tried to pursue a similar policy, pouring large-scale investments into industrial projects in the Middle East, which were then carried out by Japanese construction and engineering corporations. Japan was however always reluctant to allow producer nations access to its domestic energy market. Only recently has Saudi Aramco gained access to the Japanese downstream market, after it purchased some 20% equity share in the Showa-Shell corporation.

for oil when Japan's oil demand growth is almost flat.[108] Furthermore, Japanese analysts point out that Japan has one arm tied behind its back in its relations with Saudi Arabia and other Middle Eastern countries since Japan cannot offer strategic military sales or aid, limited by its pacifist constitution. China, on the other hand, can use its military export capabilities to strengthen ties with Saudi Arabia, which seeks diversification of its military dependency on the United States.[109] Japan has repeatedly received signals that it may lose its 'preferred customer' status to China. According to the Yomiuri Shinbun, the United Arab Emirates have let Japan know that oil purchases from the past are no guarantee for continued oil supplies in the future.[110] Iran has also attempted to play China and Japan against each other in their quest for long-term secure resource contracts, which was duly noted by Japanese officials and the Japanese mass media.

4.2. Gas conflict in the East China Sea

Japanese worries about China's aggressive plunge onto the world's energy scene have taken on a concrete shape through the continuing bilateral row over development of natural gas reserves in the East China Sea.[111] The reserves are located in an area of the East China Sea that is claimed by both Japan and China as their Exclusive Economic Zone (EEZ). China argues that its territorial border lies at the end of the continental shelf. Japan claims that its border stretches out 200 nautical miles west of the Senkaku islands, a group of islands which are administered by Japan, but also claimed by Taiwan and China. The Chinese-claimed and the Japanese-claimed borders overlap.

Map 1: Disputed area in the East China Sea

Source: BBC News Online, http://news.bbc.co.uk/2/hi/asia-Pacific/4784716.stm

The borders have been disputed for years, but at first no serious efforts were made to develop the underlying resources. The row intensified when China initiated development of the natural gas reserves, aiming to transport the gas to China by a submerged pipeline. China experienced serious electricity shortages in 2003, which may have helped convince China to step up development efforts. In August of 2003, China concluded development contracts with foreign oil companies, including Unocal and Shell. Japan raised strong protests and the companies retreated soon afterwards, but China went along with development on its own.[112] Japan claims that at least some of the East China Sea's fields are interconnected.[113] This could mean that even if China were to drill in an area that is undisputedly Chinese it may suck out resources that Japan claims to be part of its territory. Japan has therefore protested against the Chinese initiatives and claims that China is infringing on Japanese sovereignty.[114] China does not acknowledge Japan's claim and is continuing development regardless.

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[108] As an example of worries about China's ties to Saudi Arabia, see a conversation between Professor Masayuki Masauchi, Middle East specialist at Tokyo University, and Yoshihiro Sakamoto of the IEEJ, who discuss: "China is becoming a disturbance regarding Middle Eastern oil." (Sakamoto, 2002, p50-53)

[109] Interview with energy analyst at the Institute for Energy Economics Japan, Tokyo, 27 November 2006; See also Sakamoto (2002), p41. Defense hawks, such as former director of Japan's Self Defense Agency Shigeru Ishiba, have called for legislation allowing Japan to sell arms abroad, clearly with energy security concerns in mind.

[110] Daily Yomiuri (April 2005)

[111] See, for example: New York Times (14 April 2005), *For Japan and China, from a line in the sea*; BBC News Online (14 April 2005), *Asian giants keep up war of words*, http://news.bbc.co.uk/2/hi/asia-pacific/4443307.stm

[112] People's Daily Online (30 September 2004), *Oil giants pull out of East China Sea's gas fields project*; Asia Times Online (27 July 2004), *Gas and Oil Rivalry in the East China Sea*; Associated Press (8 October 2005), *Japan vows action against China if oil line in disputed zone confirmed*

[113] Enerugii Fooramu (September 2005), p31

[114] Enerugii Fooramu (January 2005), p52-55

More is at stake than just energy and resource development. In fact it is unlikely that the gas reserves will have a big impact on the Japanese market. The reserves are located much closer to China than to the Japanese mainland, and it would be more profitable to sell the gas in China in any case. Granting the area to China would mean lost income for Japan, not a lost opportunity to diversify physical gas supply. But Japan suspects that China is exploring the sea bed not just for resources, but for military purposes as well. Those suspicions were raised by a number of Chinese submarine sightings very near to Okinawa in Japanese territorial waters.[115] Fishing rights in the area provide a third factor underlying the dispute.

Both sides have at different times suggested joint development of reserves, but negotiations have so far led nowhere. Japan has insisted that China share its underwater survey data of the region, which Tokyo hopes will give an insight into the size of the reserves and the precise structure of the fields.[116] China has offered joint development in the disputed zone, but refuses to share the data.[117] The Japanese government sent out its own survey ships to explore the area in July 2004, to which China reacted by sending navy cruisers to meet the ships in attack formation.[118] In April of 2005, Japan officially announced that its surveys showed connectivity between the gas fields under development by China and reserves in Japan's (disputed) territory. Japan also said it would consider granting exploration rights to Japanese companies, which it did in July 2005. While Chinese companies continued development activities, the war of words between China and Japan continued throughout 2006.[119] Repeated attempts to negotiate for a solution failed. As of spring 2007, no drilling has commenced by Japanese companies.[120]

These events occurred against the background of already frigid China-Japan relations. Only very recently have the relations begun to show some signs of improvement, after Japan's PM Koizumi, who had angered China with his repeated visits to the controversial Yasukuni war shrine, stepped down in September 2006. Under new prime minister Shinzo Abe, the two countries have resumed normal diplomatic relations and have even started discussions about measures to improve energy security in the region. However, the unsolved East China Sea dispute still remains a powerful symbol of rising energy competition between the two countries and is a potential time bomb threatening Japan-China relations at large and energy cooperation in particular.

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[115] Enerugii Fooramu (December 2005), *2005 nen no enerugii gyoukai, 'ano wadai' wo furikaeru*, pp60-61; Asia Times Online (27 July 2004), *Gas and Oil Rivalry in the East China Sea*

[116] Enerugii Fooramu (January 2005), *higashi shina kai shigen kaihatsu ha nihon no shuken mondai* (Interview with METI minister Nakagawa Shoichi)

[117] In an interview with Enerugii Fooramu, METI minister Nakagawa tells about his negotiations with the Chinese delegation at the Asean Plus 3 meeting in Manila in June 2004: "(I told them) I am worried that your gas development will affect energy resources in Japan's EEZ. You must present me your information. It is possible that you will violate Japan's rights", (Enerugii Fooramu, January 2005, p1)

[118] Daily Yomiuri (July 2005)

[119] Enerugii Fooramu (January 2006), p72-73; Financial Times (7 August 2006), *Oil spat in East China Sea heightens Japan tensions*; Associated Press (8 November 2006), *Japan files protest over Chinese activity in disputed undersea gas field*

[120] The Japan Times (15 July 2005), *Teikoku Oil gets drilling rights in East China Sea*; China protested fiercely to Japan's decision (See People's Daily Online (15 July 2005), *China lodges solemn representations to Japan's approval of oil, gas drill*)

5

Diversification and autonomous development: Three case studies of strategic Japanese oil and gas development projects

The governments of China and India are today actively supporting their domestic oil companies in order to build up ownership of foreign reserves. They do so by guaranteeing investments, conducting high-level energy diplomacy, and promising direct strategic support to producer nations. Strategic support can come in many forms, including economic, infrastructural, and possibly also military aid. Interestingly, this strategy resembles the approach that Japan has traditionally employed in its attempt to secure oil and gas supply, as we have seen in Chapter three. The fact that a country like China is now aggressively pursuing a similar strategy reinforces the Japan's sense that they are increasingly in direct competition. Stepped-up competition for resources in Asia merits a number of questions. Has Japan succeeded over the past few years in diversifying supply by building new strategic supply lines? Has Japan managed to gain significant equity rights in major oil and gas fields? Have the Japanese government and the private sector successfully combined their efforts? How has increased competition from China influenced Japan's efforts?

In this chapter we will analyse three recent case studies of major upstream oil and gas projects (in Iran and Russia) in which Japanese companies and the Japanese government are involved. The success of these projects is considered to be of strategic importance because they hold the potential to significantly raise the level of oil autonomously developed by Japanese interests and because they would open up the possibility for Japan to diversify its oil supply away from the Middle East, towards Russia. Through these projects, Japan could diversify its gas supply geographically (away from Southeast Asia), and possibly shift Japan's energy supply somewhat away from oil and more towards natural gas. The opportunities for Japan seem clear enough. The obstacles are sometimes less well-known. They are, however, essential to Japan's future security of supply policies.

5.1. The Azadegan oil deal (Iran)

On 19 February 2004, Japan and Iran signed a deal for the development of Iran's Azadegan oil field. Azadegan promised to become the largest onshore project in post-revolutionary Iran.[121] The field had been discovered in 1999, adjacent to the Iran-Iraq border in the Khuzestan province. It is estimated to hold 26 billion barrels of oil reserves, of which around 5-6 billion barrels are believed to be recoverable.[122] The deal stated that Japan's INPEX Corporation would get 75% of the development rights and the National Iranian Oil Company would take 25%. Investment was estimated at $2 billion dollars. The two companies would jointly operate the project. Oil production was foreseen to reach 150,000 barrels per day by 2008 and 260,000 barrels per day by 2012.[123]

The Azadegan deal was considered of vital strategic importance by METI officials. It would further strengthen ties with Iran, Japan's third largest oil supplier, which boasts the world's second largest reserves of both oil and natural gas.[124] Iran is also strategically located, bordering the Strait of Hormuz,

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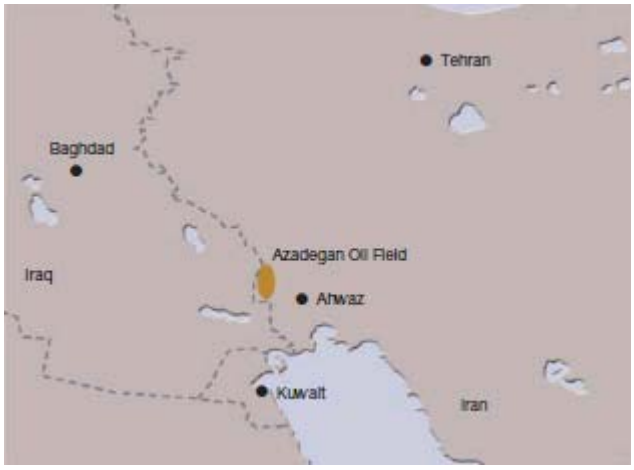
[121] Watkins (2004), *Japan secures financing to develop Iran's Azadegan oil field*

[122] Toda mentions the 5-6 billion figure (Toda (2004), p17). Salameh, however, states that the figure of economically recoverable reserves is actually only 2.6 billion barrels. (Salameh (2005)) The Iranian government is responsible for the 'estimated reserves' figure of 26 billion barrels.

[123] Toda (2004), p17; Hosoe (2005)

[124] See the *BP Statistical Review of World Energy 2006* for these figures. BP puts Iran's proven oil reserves at 137.5 billion barrels, second only to Saudi Arabia's 264.2 billion barrels. Canada's proved reserves figure of 16.5 billion barrels includes an official estimate of Canadian oil sands 'under active development' (BP world review). These numbers are. however. subject to doubt and discussion.

Map 2: Location of the Azadegan oil field, Iran



Source:
http://www.saigon-gpdaily.com.vn/International/2006/9/51213/

through which 90% of Japan's oil imports flow, a fact which is not lost on Japanese policymakers. Also, the development of Azadegan by a Japanese company would mean a significant boost to METI's autonomous development policy, aimed at increasing ownership rights on imported oil.[125]

Iranian oil and the Japan-US relationship

Ever since the Iranian revolution of 1979, Japan has had to manoeuvre carefully to balance its 'special relationship' with Iran, one of its principal suppliers of oil, with that of its closest ally, the United States. US-Iran relations have remained cold since the establishment of the Ayatollah Khomeini's religious government in 1980. The US banned Iranian oil imports from its domestic market. Japan, on the other hand, quickly resumed its oil trade with Iran.[126] The United States quietly allowed this trade to continue out of consideration for Japan's energy security. But Japanese efforts to further strengthen its energy ties to Iran by means of investments in Iran's industrial infrastructure invariably provoked strong US criticism. For example, the US put pressure on Japan during the Iranian hostage crisis to abandon the Mitsui-led Bandhar-Khomeini petrochemical project, at the time the largest Japanese foreign investment project ever. The project suffered delays and was eventually put on hold indefinitely after war broke out between Iran and Iraq and its facilities were critically damaged during bombardments by the Iraqi air force.[127] This and other projects left Japanese companies with unsettled Iranian debts, worth some $2.6 billion, but Japan decided not to rock the boat with Iran and allowed the debt issue to rest for the time being. Japan instead sought to increase its standing in Iran through quiet attempts to mediate in the Iran-Iraq conflict. In May 1993 Japan lifted its freeze on official yen loans to Iran, but heavy US criticism persuaded Japan to quickly backtrack on its promise.[128] Only in the late 1990s did Japan get back to the Iranians about the unpaid debts to Japanese industry. During hectic negotiations, the Japanese government eventually decided to let energy security considerations prevail over financial interests. The government agreed to pay off a large chunk of Iran's debts to Japanese private industries itself, in exchange for the promise of secure crude oil deliveries to Japan.[129]

Before the signing of the deal

The election of president Khatami in August 1997, who was regarded in Washington as a moderate reformer, had opened up prospects for closer Japan-Iran ties and lower risk of US reprimands.[130] Iran's foreign minister visited Tokyo in December 1998 and pledged to look for ways to improve economic ties between the two countries. Japan's foreign minister, Masahiko Komura, returned the favour in

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[125] In 2000, all Japanese upstream oil companies together produced only 8.3% of oil imports to Japan. (Petroleum Association of Japan (2006), p12)

[126] Nihon Keizai Shinbun (11 July 2003); METI/ANRE (2004), *enerugii 2004*, p259

[127] Caldwell (1981), *The Dilemmas of Japan's Oil Dependency*

[128] The new loan was intended to help finance a hydroelectric power project on the Karun River. After providing 38.6 billion yen as a first instalment, Japan held back on two further instalments, worth 80 billion yen, which it had promised to Iran. (The Japan Times, 26 May 1999)

[129] The Japan Times (26 January 1999), *Japan, Iran agree to debt-refinancing plan*

[130] CNN.com (3 August 1997), *Moderate Khatami confirmed as Iran's new president*, http://www.cnn.com/WORLD/9708/03/iran.prez/index.html

August 1999.[131] Unexpected events led to the swift intensification of Japan-Iran energy relations. In February 2000 Japan's semi-private oil corporation, Arabian Oil, failed to negotiate a renewal of oil exploration rights from the government of Saudi Arabia in the Khafji oil field.[132] The Japanese could no longer control the oil sales and were instead merely granted a service contract with the Saudi government for the field. Although there was no indication that Japan's oil supply would be disrupted, the loss of Japanese control came as a shock to officials in Tokyo, especially within METI. The development was a serious setback to METI's policy to foster 'autonomous development' of oil imports. METI quickly started to look for possible replacements, and turned to Iran.

The discovery of the large Azadegan oil field was announced in September 1999. METI officials saw that if Japan were to earn its development rights it would make a fine replacement for the Khafji field. In April of 2000, a mere two months after the loss of the Saudi rights, METI proposed a regular dialogue with Iran's oil ministry, and talks began in August of that year.[133] In November, President Khatami visited Tokyo and promised METI officials that Japan was first in line to negotiate for development and management rights to the Azadegan field.[134] At the time of this state-level agreement, METI brought state-owned Japan National Oil Corporation to the table as Japan's candidate to lead the project.[135] Khatami won a landslide electoral victory in June 2001 which strengthened perceptions in the West and Japan that Iran was ready for reform.[136] All looked well for Japan's involvement in the project and the two governments confirmed that negotiations would be concluded within a year.[137]

But the tide turned. George W. Bush was inaugurated as the new US president in January 2001, and his administration let it be known that it would maintain a firm stance against Iran.[138] In August Bush signed a five-year extension to the Iran/Libya sanction act, which bans most foreign investments in those countries, and their oil industry in particular. Then the attacks of September 11th, 2001 took place and the US president announced an American 'war on terrorism'. In his State of the Union Adress of January 2002, President Bush denounced Iran by calling the country part of an "axis of evil". The Japanese administration of Prime Minister Koizumi wanted to go along with the new US foreign policy, because it believed this would eventually lead to expansion of the US-Japan security alliance, which Koizumi deemed in Japan's broader national interest. But Japan now had to, as had been the case in the past, consider this aspect of Japan's national interest in the context of energy relations with Iran, as embodied by the negotiations on the Azadegan development project. As a short term solution to this dilemma, Japan decided to stay in line with US policy by carefully criticising Iranian policies, but without giving up on the Azadegan negotiations.[139]

Japan's position became even more complicated when it was revealed in August 2002 that Iran had been constructing underground facilities for the enrichment of uranium, leading to accusations by the United States that Iran was secretly seeking to build a nuclear weapon.[140] The nuclear issue placed Japan, with

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[131] The Japan Times (26 May 1999), *Komura hopes to strike oil during Mideast visit*; Ministry of Foreign Affairs website, http://www.mofa.go.jp/region/middle_e/iran/index.html

[132] The Khafji oil field is located in the so-called Neutral Zone between Kuwait and Saudi Arabia

[133] Penn (19 December 2006); Iran was interested in the Japanese initiative. Its oil industry had suffered from years of below par investments, due to low oil prices and US sanctions. Iran now wanted to start expanding production in existing and newly discovered fields, including Azadegan, and it needed Japanese funds to help do so. (Toda (2004), p12)

[134] The fact that the agreement was signed in METI's Tokyo head office (on 31 October 2000) underlines that on the Japanese side this agreement was brokered by METI, not by any other ministry or the cabinet office.

[135] Toda writes: "After Japan lost the rights to the Saudi Arabian Khafji field, Inpex and METI 'became one' and worked towards (realisation of) development in Iran." (Toda (2003), p6)

[136] CNN.com (9 June 2001), *Khatami re-elected, heading for landslide*
http://archives.cnn.com/2001/WORLD/meast/06/08/iran.votes.03/index.html

[137] Toda (2003), p5

[138] Toda (2004), p15

[139] Toda (2003), p2; Japanese Foreign Minister Kawaguchi Yoriko visited Tehran shortly after Bush's speech. She criticised suicide terrorism against innocent Israelis, but the Iranians warned that they would not bend to any US demands. (See website Ministry of Foreign affairs, http://www.mofa.go.jp/region/middle_e/fmv0204/iran.html)

[140] See, for 'Nuclear developments in 2002', the website of Globalsecurity.org:
http://www.globalsecurity.org/wmd/world/iran/nuke2002.htm; CNN.com (13 December 2002), *U.S.: Iran working on Nuclear*

its outspoken non-proliferation policy, in a particularly awkward position, because non-proliferation had been a core value in its overseas diplomacy.[141] Japan feared that Iranian nuclear technology might find its way to its non-friendly neighbour North Korea. Also, Japan had supported the US invasion of Iraq in March 2003 that was legitimised by the US, based on the assumption that Iraq possessed weapons of mass destruction. Japan could now hardly afford to neglect international criticism towards Iran's nuclear programme. Japan's Ministry of Foreign Affairs (MOFA) became convinced that the Azadegan negotiations were not in Japan's broader foreign policy interest. Business Daily *Nihon Keizai Shinbun* supported this view, and its editors urged the Japanese government to let anti-proliferation principles prevail over autonomous development policy.[142]

The Iranian government, irritated by the limited progress of negotiations on Azadegan, decided to put pressure on Japan and threatened to start parallel negotiations with China and India.[143] The China threat made a strong impact at METI headquarters.[144] Throughout the process so far, METI had been worried about competition from Europe and China.[145] The fear of losing the future oil supply from the Azadegan field to China was a driving argument for METI to continue support for the project.[146] The fear factor was furthered by negative developments for Japan in the negotiations with Kuwait and the United Arab Emirates for the extension of equity rights. In both cases Japanese companies had to settle for much weaker terms, much like in the earlier case of the Saudi negotiations.[147] METI now wanted more than ever to secure development rights for Azadegan and make it the new core oil field of its autonomous development policy. METI managed to push the deal through.[148] On February 18, 2004 the National Iranian Oil Corporation and Japan's INPEX Co finally signed an agreement to develop the Azadegan oil.[149]

After the signing of the deal

After METI had first agreed with the Iranian government to start negotiations about Azadegan, it had tried to set up a consortium of Japanese private companies around semi-national oil company INPEX to

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Weapons, http://archives.cnn.com/2002/WORLD/meast/12/13/iran.nuclear/; In February 2003, The International Atomic Energy Agency (IAEA) started inspections of Iran's nuclear programme and in June the IAEA pressed for stronger inspections, accusing Iran of failing its safeguard agreement regarding nuclear materials. Toda (2003), p5

[141] Japan regularly emphasises that it is the world's only nation to have suffered (two) nuclear attacks. Japan still upholds a policy based on what it calls the "three non-nuclear principles": not possessing, not producing and not permitting the introduction of nuclear weapons into Japan (by the US military), see website of Japan's Ministry of Foreign Affairs, http://www.mofa.go.jp/policy/un/disarmament/nnp/index.html

[142] Nihon Keizai Shinbun (11 July 2003), *Principles before Iranian oilfield*

[143] Nihon Keizai Shinbun (11 July 2003); METI officials stalled negotiations in an attempt to buy time to solve the Iran nuclear problem while maintaining the option to acquire the Azadegan rights. Japan let two official deadlines pass in the negotiations with Iran on Azadegan, in December 2002, and in June 2003 ─ both, reportedly, under strong pressure from the US government, which called it "not the right time under the circumstances" to invest in Iran. Japan was stuck between a rock and a hard place. It could not go against the policies of its vital ally, the United States, nor did it want to lose the rights to the Azadegan oil, which would boost its fragile energy security. (Toda (2003), p5; Nihon Keizai Shinbun (4 July 2003))

[144] METI minister Hiranuma acknowledged concern within the ministry about the possibility of China and other countries getting involved in Azadegan: "I have heard that other countries are trying to get their hands on the Azadegan oil field, but the situation is not such that we will stop negotiations". Nihon Keizai Shinbun (20 July 2003)

[145] Nihon Keizai Shinbun (7 July 2003); Toda (2004), p18

[146] Asahi Shinbun (23 January 2006); Interview with ANRE official, Tokyo, 20 November 2006 and 13 December 2006; Shaoul (2006) also establishes this point

[147] Toda (2003), p5-6

[148] Its officials had become convinced that staunch Japanese support for the US in its War on Terror had created goodwill with the US government and cleared the way for Japanese investments. METI officials had kept the US completely informed throughout the Azadegan negotiations and interpreted limited criticism in early 2004 as a green light. In Sekiyu Seisaku (Oil Policy) of 25 April 2004, Toda argues that the approaching Iranian elections of 20 February 2004 convinced METI that it was now or never. A new Iranian government might move Azadegan away from Japan and towards other interested parties, including the EU, or possibly China. The deal was signed 2 days before the Iranian elections. (Toda (2004), p17-18)

[149] Japan's Prime Minister Koizumi pledged his country's support for the agreement saying that Iran-Japan relations had been strengthening, giving Azadegan as an example. (Watkins (2004)) Media reports were more sceptical, with the Nihon Keizai Shinbun, Ekonomisuto and Sekiyu Seisaku all publishing critical articles on the deal, reflecting the scepticism of the Japanese private oil companies. (Nihon Keizai Shinbun (21 February 2004); Ekonomisuto (23 March 2004); Toda (25 April 2004))

take on the project. But once the deal was signed it became clear that the Japanese private sector had serious reservations due to the high risk level of the project. The private sector's greatest concern was that the terms of the deal, which was signed under a 'buyback agreement', were very unfavourable to the Japanese side. In this arrangement, Iran and the Japanese consortium would jointly develop the oil, but as Iran's constitution stated that all natural resources fell to the state, the Japanese partners would at no stage own any equity rights to the resources. The Japanese would be allowed to buy oil back, up to the value of their initial investment in the project. They would not share in any profits in the case that oil prices would rise. Instead, high oil prices would mean that only a limited amount of oil could be brought to Japan through the project, which would foil METI's original purpose of securing a significant, stable and long-term oil flow to Japan. Also, the buyback contract included a time limit within which the Japanese would have to buy the oil. Low oil prices would therefore mean that they would need to buy a lot of Azadegan oil quickly, which it might then not be able to sell at a profit. A second concern that was pointed out by the private companies was the considerable risk of US criticism and interference with the project or even the threat of sanctions. The only Japanese private company that initially showed serious interest to join INPEX was trading house Tomen. But soon after the deal with Iran was sealed, Tomen decided not to join the consortium after all, out of concern for damage to its US operations.[150] Third, the danger of earthquakes in the area and the large number of mines that remained after the Iran-Iraq war spelled the risk of considerable cost overruns. Fourth, they pointed out that the Azadegan field might be linked to Iraqi oil fields, which would make development a complex political issue with an uncertain outcome. Fifth, it was pointed out that while strengthening and increasing oil imports from Iran through the Azadegan field would benefit the 'autonomous development policy', it contradicted Japan's policy to diversify oil supply away from the Middle East. Finally, the private sector was convinced that no Japanese company, including INPEX, had the technology to pull this sort of operation off without the involvement of a foreign partner. METI and INPEX tried hard to get Royal Dutch Shell and Total involved as project operators, but they were reportedly turned off by the high risks and unfavourable terms of the deal.[151]

As a result of the unwillingness of the private sector, METI had to arrange the financing of the deal through government institutions. Before, METI had financed many upstream projects through state-controlled oil corporation JNOC. Yet right at the time of the Azadegan deal, METI was forced to close JNOC and split up the company due to pressure from private minority shareholders and debts of over US$7 billion. METI moved to finance the Azadegan deal through INPEX and JOGMEC, two institutions that were born out of the closure of JNOC. The INPEX Corporation, in which METI held 30% of the shares plus a golden share, would finance 49%. The state-owned and METI controlled Japan Oil, Gas and Metal Corporation (JOGMEC) would finance 51% of the deal.[152] The government-owned Japan Bank of International Cooperation (JBIC), together with Japan's four major private banking groups, promised to issue US$1.2 billion of syndicated loans to the National Iranian Oil Corporation for oil development purposes.[153] JBIC also said it would consider providing loans to INPEX in connection to the Azadegan deal.[154]

In the years 2004, 2005 and 2006, the project crawled underway. International developments made Japan's involvement increasingly precarious. The Iranian elections of February 2004, which immediately followed the signing of the deal, were won by the conservatives, weakening the image of Iran's government in the US and Europe. On 24 June 2005, Iranians elected a new conservative president, Mahmoud Ahmadinejad, who quickly re-established Iran's nuclear programme.[155] In August, Tehran announced a resumption of its uranium enrichment policy. The earlier row with the IAEA grew

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[150] Tomen was integrating its business with Toyota's trading company at the time. Toyota, of course, has major interests in the United States, which neither business wanted to risk by upsetting the US government through unpopular investments in Iran's petroleum industry. No other Japanese trading house or upstream producer stepped in to fill the gap.

[151] Toda (2004), p17; Watkins (2004)

[152] Toda (2004), p17

[153] Watkins (2004)

[154] Bloomberg (23 Feb 2004), *Japan plans second Iran loan to secure oil amidst U.S. protests*, http://www.iranexpert.com/2004/japan23february.htm

[155] BBC Newsonline (25 June 2005), *Iran hardliner hails poll victory*, http://news.bbc.co.uk/2/hi/middle_east/4622501.stm

in intensity. Ahmadinejad angered Western governments by denying the holocaust and making threatening remarks aimed at Israel and the US. In February 2006, Iran's Minister of Foreign Affairs, Mottaki, visited Tokyo in an unsuccessful apparent attempt to relieve Japanese concerns and insure continuation of the development schedule of the Azadegan project.

In Tokyo, the discussion between those who wanted the Azadegan deal to continue (METI) and those who called for its abandonment (MOFA) grew. A foreign ministry official stated: "We cannot ignore China, but we have to ask ourselves if we really need these projects, no matter what the cost."[156] For METI, the energy security argument for continuation of Azadegan was no longer as straightforward as initially thought. On the one hand, rising oil prices and China's aggressive dash for foreign resources increased fears about security of oil supply. But at the same time fear grew that an international backlash against Iran's nuclear ambitions might at some stage implicate Japan's own advanced nuclear programme, which forms the core of Japan's longer-term policy to reduce dependence on energy imports. Still, the *Asahi Shinbun* reported that by January 2006 the main current within METI wanted to continue the Azadegan project "silently" while the international community dealt with Iran through the United Nations.[157] By September 2006, however, METI's minister Toshihiro Nikai seemed to signal defeat: "It is inappropriate for Japan to stand outside of the cooperation in the international community."[158]

In the end, it was up to the politicians to decide. The Iranian government understood that the Koizumi cabinet, which was to leave office in September 2006, was not going to make the final decision. Iran therefore allowed the deadline to pass and waited for new Prime Minister Shinzo Abe to take office. Abe's priority was to foster a stronger international position for Japan, which he believed would have to start with a stronger Japanese military role in the United States-Japan security alliance. To clear the air with the United States about Iran, Abe decided to terminate the Azadegan deal by rebuking on promises of government financing for INPEX.[159] The Ministry of Foreign Affairs then went on to explain that the Japanese government actually had very little to do with the Azadegan project, calling it a 'private business' agreement between INPEX and Iran in which it could not control events.[160] Iran got the message and declared the contract void. It allowed INPEX to retain a symbolic 10% share in the project.[161] On 22 November 2006, Japan Bank of International Corporation froze all of its $10 billion loans to Iran "until Iran halts its nuclear programme".[162]

5.2. The Pacific oil pipeline (Russia)

In the aftermath of 9-11, Japanese policymakers, like their Western counterparts, were reminded of the looming threat of worsening political instability in the Middle East, specifically in Saudi Arabia, and its possible implications for Japan's security of energy supply. Fifteen of the nineteen alleged hijackers on board the airplanes that were used in the attacks of September 11, 2001 had been Saudi citizens. Saudi Arabia was Japan's number one oil supplier in 2000, when Japan imported 87.5% of its oil from the Middle East, of which 21.6% from Saudi Arabia.[163] Japan had to take the link between 9-11, Saudi Arabia and its own energy security seriously.

At the same time, Russia was becoming an increasingly important supplier to the world oil market. Russia had always been a potentially attractive source of energy for Japan. Russia holds 26.6% of the world's gas reserves and 4.6% of the world's oil reserves[164] and is geographically much closer to Japan.

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[156] Japan Times (18 august 2005)

[157] Asahi Shinbun (23 January 2006)

[158] Saigon Daily (14 September 2006), *Japan to keep talking to Iran on mega-oil deal*

[159] Asahi Shinbun Online (English Edition)(2 October 2006), *Tokyo ready for oil sanctions*

[160] See Ministry of Foreign Affairs website, http://www.mofa.go.jp/announce/press/2006/10/1003.html

[161] Japan Times Weekly Online (14 October 2006), *Japan can regain Azadegan oil stake in future; Iran*

[162] Bloomberg (22 November 2006), *Japan freezes $10 billion Iran loans on nuclear row*, http://www.iranfocus.com/modules/news/article.php?storyid=9283

[163] Japan imported 21.6% of its oil from Saudi Arabia in 2000 (Petroleum Association of Japan (2006), p12)

[164] BP Statistical Review 2006; Petroleum association of Japan (2006), p8

Oil and gas transports from Russia would not be threatened by conflict in the Middle East or by piracy in the dangerous sea-lanes around Indonesia. By 2002, Russian oil production had recovered from years of underperformance in the wake of the fall of the Soviet regime. Production rates were close to, or even higher than, that of Saudi Arabia.[165] Japan did not yet import oil and gas from Russia, but to Japanese policymakers, Russia now appeared more than ever to be a promising strategic alternative to Middle Eastern oil.

Territorial dispute Japan-Russia

There was, however, a serious impediment. An unresolved territorial dispute has prevented Japan and Russia for years from developing genuinely friendly relations. The dispute involves a group of four small islands that belong to the Kuril Islands group, located between Russia's Sakhalin province and Japan's northernmost island of Hokkaido. Soviet troops occupied the islands in the final days of the Second World War. Japan felt betrayed and deeply insulted by Russia, with which it had a non-aggression pact. Today, more than sixty years later, Japan maintains its claim to the islands and continues to seek Russia's return of them. The issue is a sensitive political issue in both nations and has to this day blocked the signing of a peace agreement between Japan and Russia.

Map 3: Kuril Islands (Northern Territories)

Source: BBC News Online, http://news.bbc.co.uk/2/hi/asia-pacific/4797701.stm

The territorial issue, as the dispute is known in Japan, has poisoned trust among Japanese policymakers towards Russia for decades. Many Japanese business officials and government bureaucrats hold deeply ingrained distrust of Russia, and have grave hesitations towards investing in the country.[166] After the fall of the Soviet Union, Japan made serious attempts to make Russia return the islands, but to no avail. During the 1990s, the Japanese government withheld investment in Russia's energy sector by the Japan National Oil Corporation (JNOC), one reason being that Japan considered Japanese investment strength to be a valuable bargaining chip in the islands negotiations with Russia. When this approach did not lead to results, Japan opted for a two-track diplomacy separating the mutually beneficial issue of economic and energy cooperation from the thorny territorial talks.

Proposing a Pacific pipeline

The Chinese government had talked with the Russian government about bringing oil from eastern Siberia to China for over a decade, when in May 2003 Putin and Chinese President Hu Jintao agreed in Moscow that a pipeline would be built, connecting China to Angarsk (Irkutsk Oblast). The pipeline would unlock oil reserves in eastern Siberia which are believed to amount to around 3 billion barrels, while potentially recoverable reserves are estimated to be 16.6 billion barrels.[167]

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[165] See Petroleum Association of Japan (p8) for oil production levels and the allocation of oil reserves worldwide; Nihon Keizai Shinbun (12 April 2002); IEEJ (April 2005)

[166] Interview with Dr Vladimir Ivanov, Director Research Division, Energy Research Institute for Northeast Asia (ERINA), Tokyo, 24 February 2006; Nippon Export and Investment Insurance (9 June 2006);

[167] Asia Times Online, *Japan Intensifies Lobbying for Russian Oil*, 3 July 2003; The Institute for Energy Economics Japan provides slightly different figures: 6.1 billion barrels of probable reserves, and 15.3 billion barrels of possible reserves, excluding Sakhalin, IEEJ (April 2005); Large uncertainty exists as to the accuracy of these figures. According to Ivanov (2005), only 10% of East Siberia has been geologically explored.

Map 4: Pacific oil pipeline

Source: BBC News Online, http://news.bbc.co.uk/2/hi/asia-pacific/4831624.stm

China was sure it had a deal. But China's actions had not prevented Japan from working on a counterproposal. Prime Minister Koizumi had initiated a Japanese offensive[168] in which the Ministry of Foreign Affairs and METI worked in smooth tandem to beat the China deal. METI minister Hiranuma personally proposed to the Russians to give priority to a Pacific route for oil.[169] Japan was encouraged by Russian president Putin who had, in spite of his reported agreement with President Hu Jintao, openly spoken about his preference for a pipeline that would connect eastern Siberian to the Pacific coast, giving Russia access to more potential customers.[170] In June 2003 Japan's Foreign Minister Kawaguchi Yoriko visited Vladivostok and offered the Russian government a Japanese counterproposal for an oil pipeline to the Japan Sea. The Pacific pipeline proposal envisaged a 4180 km-long pipeline connecting Angarsk (Irkutsk Oblast) to the Japan Sea coast at Perevoznaya Bay, including an oil terminal. Its capacity would be 1 million barrels per day. The route would lead around Lake Baikal and would stay north of the Chinese border until moving sharply south towards the Sea of Japan. The pipeline would connect the already producing fields in eastern Siberia to the Japanese market, as well as potentially the US and Southeast Asian markets. It would be a catalyst for the exploration and development of the untapped eastern Siberian fields. Japan offered to finance the plan with low interest loans of up to 900 billion yen, which included construction of the pipeline, the oil terminal and oil exploration in eastern Siberia. In return, Japan reportedly asked for exclusive oil deliveries from the pipeline to Japan until after repayment of the loans, as well as for favourable pricing of the delivered oil.[171] In October 2004, Putin visited China, but talks about a pipeline did not lead to a solid deal.[172]

On 31 December 2004, Russia officially stated that it had decided to build the Pacific pipeline towards the Sea of Japan coast, apparently following the Japanese proposal.[173] China was furious. Japanese media cried victory. But their enthusiasm was not shared wholeheartedly by Japan's business community. In fact, they felt all along that Prime Minster Koizumi should not have acted 'on his own' without consulting the business community, nor even make his proposal to finance the pipeline project

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[168] In 2002, Prime Minister Koizumi for the first time offered president Putin that Japan could finance a pipeline to Japan. (Enerugii Fooramu (June 2005), p50). This proposal was a personal initiative by Prime Minister Koizumi. When he presented his idea to the Russians, Koizumi immediately drew heavy (behind the scenes) criticism from the Japanese business community, the Japanese oil industry in particular. They felt (and in effect were) completely left out of the decision-making and demanded to know what 'Koizumi thought he was doing'. (Interview with Dr Vladimir Ivanov (ERINA), Tokyo, 24 February 2006)

[169] Nihon Keizai Shinbun (29 april 2003)

[170] Asia Times Online (3 July 2003)

[171] Asia Times Online (3 July 2003; 29 April 2005)

[172] Pacific Business News (Honolulu) Online (17 October 2004), *Russia, China fail to agree on pipeline*

[173] BBC News Online (31 December 2004), *Russia approves Pacific pipeline*

in the first place.[174] There were big risks involved in the pipeline project, and they did not want to become the victims of it.[175] The biggest risk was the uncertainty about the availability of recoverable reserves in the eastern Siberian fields. Would these reserves be large enough to fill a pipeline that can ask reasonable transport fees? Then there was the question of the cost of the exploration and development of those eastern Siberian fields that were not yet explored. The difficult terrain and climate would make development there very costly. A pipeline would be needed for investments to start flowing to eastern Siberia. But at the same time, without the guarantee that the eastern reserves would be enough to fill the pipeline, oil would have to be pumped in from Western Siberian fields. Clearly, this would not be the most cost-effective sales strategy for the western reserves. Furthermore, a pipeline would mean that Japanese oil importers would have to pay transfer fees to Russia.[176] All in all, the companies feared that Russian oil would be more expensive than Middle Eastern supply, and they stated that they would not want to pay extra for Russian oil if they could get it cheaper elsewhere. A further worry was the quality of the Russian oil that would flow from the future pipeline. The quality would most certainly differ from Middle Eastern crude, to which Japanese refineries are adapted. They would have to make costly changes to plants. Moreover, these private companies loathed what they saw as government (METI) efforts to infringe on their business autonomy by placing them in a position in which they could be forced to purchase Russian oil.[177] They argued that because Japan, unlike China, did not face any trouble with its oil supply, there was no direct need to add oil supply lines to Japan. Also, Japan's private oil importers were very reluctant to upset their relations with Middle Eastern suppliers, on which they had spent so much time and effort, by diversifying towards Russia.[178]

In April 2005, Russia changed strategy. It decided to split the pipeline proposal into two separate stages. Construction on the first stage would commence immediately, while the second stage would be postponed. Transneft officials leaked that the first oil shipments upon completion of stage one would go to China by rail.[179] This was then confirmed by President Putin.[180] Japan's government reacted with disappointment. METI's minister Nakagawa, who had previously said that Japan definitely wanted the pipeline project to succeed,[181] could not hide his frustration: "In such a situation, Japan will not provide financial cooperation".[182]

It is unclear what precisely caused Russia's changed position on the Pacific pipeline. Part of the reason may lie in irritations on the side of Russia involving the territorial dispute. Russia had, during the course of 2004, suggested talks to resolve the issue with Japan. President Putin reportedly even suggested that Russia return two of the four disputed islands to Japan. But Japanese Prime Minister Koizumi, who had earlier said that Japan could only accept a return of all four islands, rejected Putin's idea outright. He then went on a provocative, promotional boat trip to the disputed territories, the first Japanese Prime Minister to do so. President Putin then indefinitely postponed his intended state visit to Tokyo, which was scheduled for early 2005, finally arriving only in late November. On that occasion, Putin reconfirmed his intention to ultimately finish the pipeline to the Pacific coast, and stated that Russia considers the Taishet-Skovorodino segment merely the first phase of a two-phase project.[183] He reportedly labelled the Pacific pipeline a project of national significance[184] and told Japanese business leaders: "we are going to lead it to the Pacific coast to bring energy resources to the Asia Pacific region,

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[174] Interview with Dr Vladimir Ivanov, Tokyo

[175] The Nihon Keizai Shinbun urges the Japanese government to take the industry's concerns into consideration when pursuing further negotiation with Russia on the pipeline proposal. Nihon Keizai Shinbun (1 July 2003)

[176] Enerugii Fooramu (February 2005), p30

[177] Enerugii Fooramu, (March 2005), p42-44

[178] Enerugii Fooramu (February 2005), p30

[179] Asia Times Online (29 April 2005), *China beats Japan in Russian pipeline race*

[180] Japantoday.com (9 July 2005), *Russia prioritizes China over Japan on oil project*

[181] Enerugii Fooramu (April 2004), p37

[182] Asia Times Online (29 April 2005); *Enerugii Fooramu* draws the conclusion that the pipeline connection to Japan has now become a mere 'support route', while the connection to China has become the 'main route'. Enerugii Fooramu (June 2005), p50

[183] Watkins (28 November 2005), *Japan, Russia agree to two-stage pipeline to Pacific*

[184] Ivanov (13 October 2005), p4

including Japan."[185] Soon after his appearance in Tokyo, Putin hinted that Russia would build a pipeline branch towards China, connecting the Pacific pipeline at Skovorodino with China's oil production facilities in Daqing.[186] This would transform the initial Russian oil deliveries to China by rail into a permanent commitment by pipeline. The Russian president was now daftly playing Japan and China against each other. Putin stepped up the pressure on Japan when he revealed in July 2006 that he would not go along with a Japanese demand that a financial deal for the pipeline should be an intergovernmental accord. Instead, Putin said: "We consider this to be a commercial project. It is inappropriate to give state guarantees."[187] If this remains Russia's position, it will be very difficult for the Japanese government to go through with its proposal, which is based on the assumption that this project can only be carried out by governments because of the fundamental unwillingness of the Japanese private sector to face the risks.[188] If Russia is not willing to guarantee Japan a minimal amount of oil supply from the pipeline, the strategic argument for the Japanese government to invest in Russia will become hard to sell in Japan.

The questions remaining today are whether or not the second phase of the pipeline, the Skovorodino-Japan Sea connection, will be built, and if so, when it will be built and who will finance it. If built, it would be started no earlier then 2015. Phase 1 to Skovorodino is currently under construction and scheduled for completion by the end of 2008.[189] In spite of the many promises and intentions aired by both the Russian and Japanese governments, negotiations on the second phase of the pipeline are seemingly still in a premature stage. No Japanese investments have been made in new oil and gas exploration in eastern Siberia.[190]

5.3. The Sakhalin-1 & -2 projects (Russia)

Sakhalin Island is located in far eastern Russia. Its most southern tip lies a mere 40 kilometres north of the Japanese island of Hokkaido. Offshore from Sakhalin Island, in the Sea of Okhotsk lie the Sakhalin oil and gas reserves. The Sakhalin-1 and -2 projects are the first two blocks that were taken into production.

Sakhalin-1 dates back to 1972 when Russia approached Japan about jointly exploring the offshore deposits of Sakhalin. In 1975, the Japanese government-led joint stock company SODECO (Sakhalin Oil Development Corporation)[191] and Russia's Foreign Trade Ministry signed a cooperation agreement. The Chayvo and Odoptu fields were confirmed to hold recoverable reserves in 1978. Work on development plans, however, was obstructed by declining oil prices[192] and the Soviet invasion of Afghanistan. In 1991, the Japanese government consortium and Exxon, which each own 30% of Sakhalin-1, started working on new plans for development of the Sakhalin-1 block. They were soon joined by two affiliates of Russia's state-owned oil company Rosneft, who took 17% and 23% shares, respectively.[193] The Russian companies later each sold part of their share in the project to India's state-run oil company ONGC, which now holds 20%. The Sakhalin-1 project was initiated with the signing of a production-sharing agreement with the Russian government on 30 June 1995. According to

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[185] BBC News Online (21 November 2005), *Putin reassures Japan on pipeline*

[186] BBC News Online (22 March 2006), *Putin hints at China oil pipeline*

[187] AFP (15 July 2006), *State guarantees on pipeline to Japan 'inappropriate'*

[188] IEEJ (2005); Nippon Export and Investment Insurance may be willing to insure some investments, but confirms the fundamental hesitation of Japan's business community to invest in Russia, (NEXI presentation, East Asia: Country Risk and Business Model, Waseda University, 9 June 2006)

[189] Asahi Shinbun (21 February 2007), *Despite the boom times, is Russia really ready to go it alone?*

[190] Asahi Shinbun (20 January 2007), *Japan, Russia plan strategic dialogue*

[191] The SODECO consortium's current members are: JOGMEC, Inpex/ Teikoku, Japex, Itochu and Marubeni. JOGMEC is the successor to the Japan National Oil Corporation, the government-owned company through which METI initiated the project. Inpex/Teikoku and JAPEX are semi-independent oil developers in which the Japanese government holds significant stakes. Itochu and Marubeni are private General Trading companies.

[192] Sugimoto and Furuta (1999), p260

[193] The Rosneft affiliates are RN Astra and Sakhalinmorneftegas (Sakhalin-1 project corporate website, http://www.sakhalin1.com/whatsnew/projectnews/pnw_fact_sheet.asp)

the Sakhalin-1 project partners, its recoverable reserves are estimated at 2.3 billion barrels of oil and 17.1 trillion cubic feet of natural gas.

Map 5: Sakhalin oil and gas fields, pipelines

Source: Energy Information Agency, http://www.eia.doe.gov/emeu/cabs/Sakhalin/Background.html

The Sakhalin-2 block started with the exploration of the Lunskoe and Astokhskoye fields in 1984. In sharp contrast to the Japanese involvement in Sakhalin-1, the Sakhalin-2 project was driven by the initiative and efforts of private Japanese companies. They got involved in the Sakhalin project on their own terms and out of profit motives. Japan's largest trading house, Mitsui Trade Co, formed a consortium with US energy firm McDermott to pursue the project, but things went slowly until after the Soviet regime collapsed. The consortium acquired development rights to the Sakhalin-2 block in 1992. Mitsui brought in a Japanese rival, trading house Mitsubishi Holdings, which in turn brought along one of its business partners in the LNG field, Royal Dutch Shell.[194] In 1994, the companies involved in the project formed a project corporation, Sakhalin Energy Co, to carry out the development. Sakhalin Energy signed a production-sharing agreement (PSA) with the Russian government on 22 June 1994.[195] Shell has operated the project since then. Russia's state-led natural gas company Gazprom has recently taken the majority share in the project, owning 50% plus one share. Royal Dutch Shell retains 27.5%, while Japanese trading houses Mitsui Trade Co and Mitsubishi hold 12.5% and 10% respectively. Shell has stayed on as project operator in spite of no longer being its main shareholder. Reserves for the Sakhalin-2 project are estimated at around 1 billion barrels of oil (crude oil and condensate of gas production) and 18 trillion cubic feet of natural gas.[196]

Strategic importance for Japan

Japan has had its eye on Sakhalin's oil and gas reserves for a long time.[197] The Sakhalin reserves are vast and, due to their proximity to the Japanese market, promise lower transport costs than the Middle East and Southeast Asia.[198] This provides an incentive to Japanese private energy companies to switch to Sakhalin gas. A further benefit would be the relative safety of transports of LNG by ship from Sakhalin. The shipments from the Middle East and Southeast Asia to Japan must clear a number of chokepoints and risk being hindered by political unrest, piracy and possible terrorist attacks. As an additional argument for Japan's energy industry, there are some uncertainties surrounding the negotiation of contracts with current natural gas suppliers, particularly Indonesia. By diversifying their gas import portfolio to include natural gas from Sakhalin, the companies can spread their import supply risk. The possibilities of Sakhalin oil and gas for Japan's energy supply security induced the Nihon Keizai Shinbun editors to proclaim in June 2003: "The fact

[194] Interview with Mitsui Trade official, Tokyo, June 2006

[195] Sakhalin Energy corporate website, http://www.sakhalinenergy.com/en/default.asp

[196] Sakhalin Energy corporate website, http://www.sakhalinenergy.com/en/default.asp

[197] In fact, Japan was involved in oil development on Sakhalin as far back as the late 19th century. Also, during the Second World War, oil from Sakhalin fuelled the Japanese navy.

[198] Transport costs are particularly high in the case of LNG shipments. LNG from Sakhalin could prove very competitive in comparison with Japan's traditional suppliers in Southeast Asia and the Middle East.

that development on Sakhalin is becoming serious holds great importance for Japan's energy security".[199]

Problems

In spite of the huge strategic and economic potential (or maybe because of that potential) to both Russia and Japan, the Sakhalin-1 and -2 projects had run into trouble by the end of 2006. The natures of the problems, however, were markedly different. Whereas the Sakhalin-1 project had failed in its business plan to sell its natural gas to Japan by pipeline, the Sakhalin-2 partners were challenged by the Russian state to allow it greater influence over the project's future and a larger share of its profits.

Sakhalin-1 problems

Sakhalin-1 began oil production in 2005, initially producing 50,000 barrels per day. Production was expected to reach 250,000 barrels per day by late 2006 or early 2007.[200] Initially most of the oil was intended for Russian consumption.[201] By October 2006 exports started coming on line, with Japanese oil wholesalers, including Nippon Oil, being among the first buyers. Japanese oil importers remain wary about signing long-term oil contracts in Russia. These Sakhalin-1 imports were all procured on the spot market.[202] Natural gas is being produced and transported by pipeline for domestic consumption in the mainland province of Khabarovsk Krai. But there have been no gas exports yet.

From the start, the business plan for the Sakhalin-1 project was to sell all of the natural gas reserves of Sakhalin-1 to Japan by means of a pipeline that was to be constructed. The pipeline would run across Sakhalin, cross the strait between Sakhalin and Hokkaido, and would then either follow Japan's Pacific coastline to Tokyo or follow the Japan Sea coast towards Kyushu, Southern Japan.

Exxon, the project leader, wanted a pipeline connection because it had estimated that the total transport costs of piped gas would be cheaper than LNG, and thus more profitable. A lack of experience with large-scale LNG projects at the time may have been another reason for Exxon's pipeline choice.[203] A pipeline would have the further benefit of securing the sale of all the gas resources, because once the pipeline was in place, Japan would be wasting its investment if it did not buy the natural gas from Sakhalin. Exxon apparently believed that the fact that METI had pledged its allegiance to the project (as the leader of the Japanese consortium SODECO), meant that Japan would certainly build the pipeline. This proved a fatal miscalculation.

The proposed pipeline would be the first of its kind for Japan. Japan had no existing pipeline connections to Asia. Japan also did not have a full-grown domestic natural gas pipeline system. It merely had a few trunk and branch pipelines feeding the main industrial centres from Japan's few natural gas fields, and many LNG facilities dotting Japan's coastline. When Japan started to develop its gas imports in the 1970s, it had decided to rely on LNG that was brought in by ship from Asia and the Middle East. It had thus developed the world's largest LNG system, giving LNG a definite competitive edge over piped gas in the Japanese market.

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[199] Nihon Keizai Shinbun (1 June 2003)

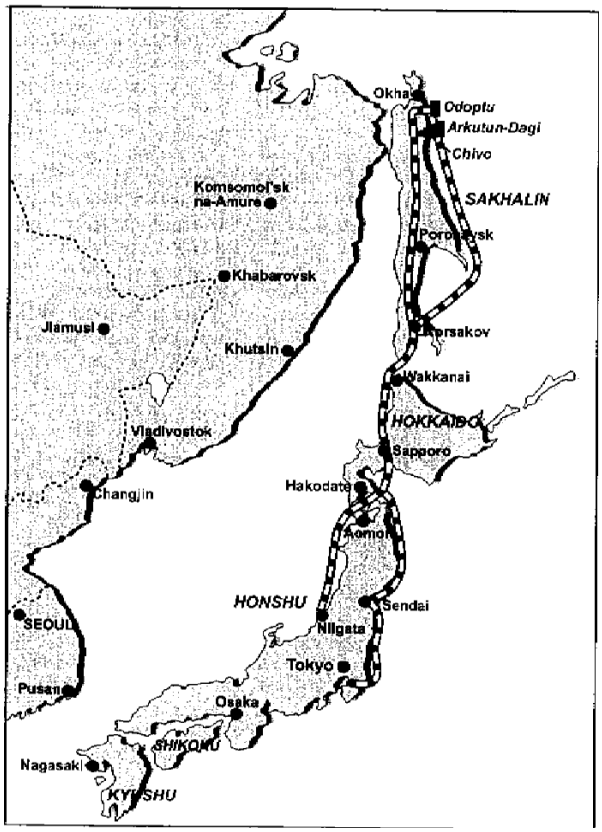
[200] See press release by Exxon-Mobil: *Exxon-Mobil announces start of Sakhalin-1 exports*, on the Exxon-Mobil corporate website, http://home.businesswire.com/portal/site/exxonmobil/index.jsp?ndmViewId=news_view&ndmConfigId=1001106&newsId=20060907005791&newsLang=en&vnsId=667

[201] See the Sakhalin-1 project corporate website, http://www.sakhalin1.com/project/prj_marketplace.asp

[202] Asia Times (21 February 2007), *Oil hungry Japan looks to other sources*, http://www.atimes.com/atimes/Japan/IB21Dh01.html

[203] Interview with Mitsui official, Tokyo, June 2006

Map 6: Sakhalin I-Japan pipeline options



Source: Miyamoto (2002), p147

Exxon nonetheless started promoting the pipeline in Japan. But it did so without first consulting with its intended customers, Japan's electric power corporations. These companies, who have long been among the most influential in Japan and Japanese politics, felt deeply insulted.[204] In addition to the insult, the Japanese electric power industry had a list of reasons to be very suspicious of the Exxon pipeline plan. The power industry foresaw that construction of the proposed trunk pipeline on Japanese territory would create legal problems about the disowning of farmland and the disturbing of fishing grounds. Given the complexities of Japanese law and the power of the agriculture lobby in domestic Japanese politics, they feared excessive costs and schedule overruns. And they suspected that they, the customers, would eventually have to pay for these risks through higher natural gas prices. In general, the power companies were not warming up to the idea to be locked into a Russian pipeline supply system, which would make them dependent on the project operators and ultimately, they suspected, the Russian government. Instead of procuring natural gas from a pipeline, the power corporations preferred the more flexible LNG, in which, as a matter of fact, they were heavily invested. Furthermore, the power industry knew that a trunk pipeline that would connect Japan to major foreign gas fields could easily work as an incentive to other Japanese industries to expand Japan's domestic natural gas pipeline network. Japan's gas and electricity markets had become increasingly liberalised and thus open to new entrants, and competition within the power industry, as well as between electricity and the gas companies, was on the rise. The electric power industry had no desire for any plan that could escalate competition and threaten its carefully cultivated regional monopolies.[205]

In spite of the power industry's protest, the Japanese government supported the project and financed a feasibility study for the two proposed pipeline routes, led by semi-state oil company JAPEX. The study concluded that the pipelines were economically and technically feasible.[206] The Hokkaido prefectural government also put its weight behind the pipeline.[207] Also, many Japanese energy analysts promoted the idea of a pipeline to Russia, arguing that it would improve supply security. But support for the pipeline seemed to strengthen the resolve of the power industry. They did not want the government to interfere in their autonomy by forcing them to procure natural gas through a pipeline from Russia.[208]

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[204] Samuels (1987) offers the best English language overview of the history of the Japanese electricity (and other energy) industries up to and throughout the 1980s. He shows how the fight between industry and bureaucracy over autonomy has determined relations within the industry in post-war Japan.

[205] Japan has ten major electric power companies. Each has enjoyed its own regional monopoly since the aftermath of the Second World War. The electricity market is today officially liberalised for large- and mid-volume customers, meaning that new companies are allowed to compete with the traditional incumbents. In practice, however, the electric power companies have maintained their regional monopolies.

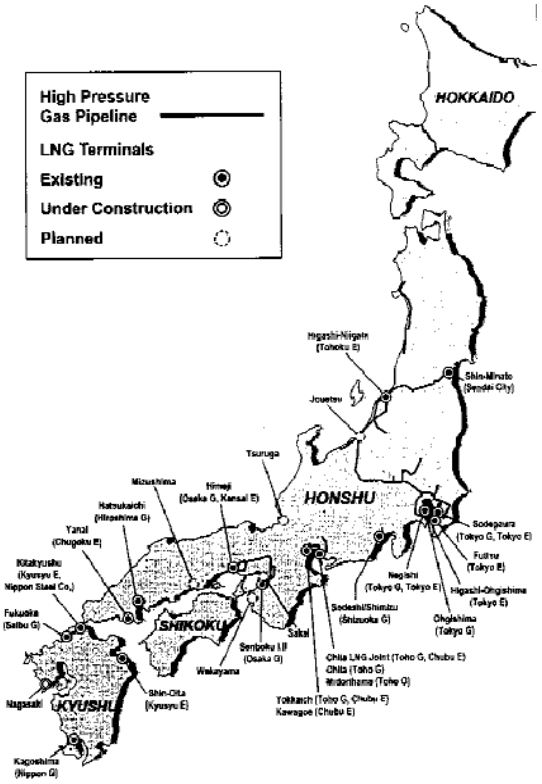
[206] See the JAPEX corporate Website, http://www.japex.co.jp/en/company/pipeline01.html

[207] Enerugii Fooramu (July 2006), p54

[208] The struggle between METI and the Japanese electric power industry has waged throughout the 20st century and has always centered on the issue of private business autonomy, which the companies fought hard to preserve, while at the same time trying

The power companies had been in continuous conflict with METI about the liberalisation of their market since the late 1990s and had no intention of bowing to Sakhalin and its METI-supported pipeline.

Map 7: Japan's domestic natural gas pipelines and LNG terminals



Source: Miyamoto (2002), p131

When the outlook for the pipeline did not improve, Exxon grew impatient and threatened to sell the gas to China if the pipeline plan was not realised. It initiated negotiations with China to construct a pipeline to the mainland.[209] The Japanese press reported that the Russian government would like to see the natural gas operations of Sakhalin-1 and -2 combined into one LNG operation.[210] The press also reported that Exxon would not have any of it. It is assumed that around this time METI quietly gave up on the pipeline plan.[211] METI had wanted the pipeline connection to Japan to guarantee a new energy supply line that could diversify Japan's import of natural gas. But as it turned out, METI was not able to gain the support of the private electric power companies. No pipeline was to be built to Japan.

In October 2006 Exxon-Mobil dropped the gauntlet by signing a preliminary agreement to sell all of the project's natural gas (8 billion cubic meters per year) to the Chinese National Petroleum Company (CNPC).[212] The threat of seeing the Sakhalin-1 gas reserves sold to China had always worried Japanese officials. They had hoped to lock in the Sakahlin-1 reserves by building a pipeline. But they had not managed to overcome private industry opposition. Now Exxon was openly flirting with China and the Japanese government was at risk of great embarrassment, namely of being actively involved in the development of an oil and gas project with great strategic potential for Japan, of which the production would be transported to China. Japan has now started to lobby with the Russian government in hopes of blocking the ongoing negotiations between Exxon and China and turning the Sakhalin-1 project into an LNG project.[213]

Sakhalin-2 problems

The Sakhalin-2 project sold its first oil to Korea through Mitsui in September 1999. Since then it has gone on to sell to customers in Japan, Taiwan, China, USA and others.[214] But the main part of the project consists of the development and export of natural gas. The decision to sell natural gas in LNG form was made early on by Mitsui, before Mitsubishi and Shell became involved in the project. Mitsui understood the Japanese gas and electricity markets and knew that their biggest customers, the power companies,

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to benefit from various state guarantees and state risk insurance. This history has been well documented, for example in Samuels (1987).

[209] Kommersant.com (3 November 2004), *China joins the battle for Sakhalin*

[210] Sankei Shinbun (17 February 2006); Nikkei Sangyou (23 February 2006)

[211] Discussion with energy analyst at IEEJ, Tokyo, February 2007

[212] Wall Street Journal (25 October 2006), *Japan hits big setback in push to expand its access to energy*

[213] See Downstreamtoday.com (26 February 2007), *Japan hopes to import LNG from Sakhalin-1*, http://www.downstreamtoday.com/(S(kd0urpiz0qhhwg55cpnd4e45))/News/Articles/200702/Japan_Hopes_to_Import_LNG_from_Sakhalin__1742.aspx

[214] Sakhalin-2 project corporate website

would prefer to buy LNG instead of piped gas.[215] In 2004, the Sakhalin energy partners decided to go through with the second phase of the project, which included the development of natural gas and the construction of an LNG plant.

It was Mitsui and Mitsubishi's responsibility to attract buyers for the project. While they pushed for 100% sales to their Japanese clients, Shell preferred a more diverse export-portfolio. The project eventually signed deals with Korea Gas and Shell's Eastern Trading Co for approximately 30% of the gas. The lion's share, over 60% of the gas, was contracted with Japanese gas and electric power companies.[216]

While the marketing of the gas was a success, not all went according to plan. Sakhalin-2 was criticised by international environmental groups for polluting the ocean, threatening the habitat of sea animals and damaging the Sakhalin environment. The project suffered setbacks and additional costs due to this targeting. Originally, the first shipment of natural gas was scheduled for 2007. This had to be pushed back one year. In July 2005, Shell announced a doubling of project costs from an estimated $10 billion to some $22 billion. The company blamed a boom in the demand for oil-related materials and manpower for its cost overruns. The Russian finance authorities held suspicions about the true nature of these cost overruns. They charged that the project companies tried to cheat the Russian government out of tax benefits that it should receive from the project. In fact, the Russian authorities had increasingly become annoyed with the terms of the contract, which was signed when Russia's economy was in dire straits and desperately needed foreign investment. Now that the economic situation was improving, largely because of the booming energy export sector, the Russian government felt that the terms were unduly benefiting Shell, Mitsui and Mitsubishi.[217] Around this time, Gazprom, Russia's state-owned gas company, said it wanted to be a part of the Sakhalin-2 project. Shell signalled it would agree to sell Gazprom a stake if the Russian company would grant Shell a stake in its Siberian Zapolyarnoye gas field.[218] Mitsui was not hostile to the idea of Gazprom joining the project. One official confided that Russian state involvement could actually stabilise the project.[219] But after Shell reported the cost overruns for Sakhalin-2, the negotiations for a swap between Gazprom and Shell reportedly broke down.

Russia increased the pressure. In July 2006, the Russian parliament granted Gazprom a legal monopoly in Russia's gas exports. That vote effectively put the continuation of the Sakhalin-2 project in doubt, since Gazprom was not a participant in the project.[220] In September 2006, Russian environmental authorities suspended the Sakhalin-2 project, citing environmental violations that included illegal deforestation along the pan-Sakhalin pipeline route.[221] Now the Japanese companies started to worry. Further delays threatened their return on investment and the promises that were made to its customer base in Japan. While Mitsui and Mitsubishi had neither asked nor received much diplomatic assistance from the government up to this point, the Japanese government now strongly urged Russia to stop its blockade.[222] Russia did not flinch.

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[215] Interview with Mitsui official, Tokyo, June 2006

[216] Interview with Shell official, Tokyo, October 2006; Sakhalin Energy Corporate Website; Nikkei Sangyou (21 February 2006); Japanese companies that signed LNG purchase agreements with the Sakhalin-2 project are Tokyo Electric Power, Tokyo Gas, Kyushu Electric power, Hiroshima Gas, Tohoku Electric power, Osaka Gas and Toho Gas.

[217] In a research paper, paid for by a group of non-profit organisations and published in November 2004, Rutledge argues that the terms of the Profit Sharing Agreement (PSA) that the Russian government and the Sakhalin-2 project consortium had signed were exceptionally unfavorable to Russia. The Rutledge paper can be accessed at: http://www.platformlondon.org/carbonweb/documents/SakhalinPSA.pdf

[218] International Herald Tribune (21 December 2006), *Shell cedes control of Sakhalin-2 to Gazprom*

[219] Stability was needed now that the cost overruns had saddled Sakhalin Energy shareholders Mitsui and Mitsubishi with a financial problem. Phase 2 needed $12 billion of additional investments, of which Mitsui would have to bear $3 billion and Mitsubishi $2.4 billion. Neither of these companies could command this level of resources with the relative ease that Shell was able to do. (Interview with Mitsui and Shell officials, Tokyo, June and October 2006)

[220] Moscow Times Online (6 July 2006), *Gazprom's export monopoly cemented*

[221] Asahi Shinbun (20 September 2006), *Japan protest's Russia's suspension of oil project*

[222] Then Chief Secretary to Prime Minister Koizumi's cabinet, Shinzo Abe, who succeeded Koizumi and became the next PM in September 2006, made clear that the Japanese government considered this a diplomatic affair with possible consequences for

The project remained in limbo until Shell, the project operator, agreed to sell Gazprom a controlling stake. Shell, Mitsui and Mitsubishi accepted the Russian offer to pay $7.5 billion for a 50% (plus one) share in the Sakhalin Energy company.[223] The three partner companies agreed to each sell half of their shareholdings, which would leave them with 27.5% (Shell), 12.5% (Mitsui) and 10% (Mitsubishi), respectively. The Profit Sharing Agreement remained in place, but through Gazprom the Russian government now held a controlling stake in the Sakhalin-2 project and thus controlled major LNG delivery contracts with Japan. Gazprom promised to honour existing contracts to customers of the Sakhalin-2 project. Mitsui and Mitsubishi were probably spared the dishonour of breaking promises to their clients. Nonetheless, the whole episode has undoubtedly reinforced negative sentiments within Japan towards Russia.

5.4. Conclusion

This chapter has illustrated how Japanese attempts to structurally improve its security of oil and gas supply through the development of strategic resource projects have been obstructed by a number of impediments. Some of the complications are recurring factors, as we have seen in Chapter three. Other complications are caused by new developments, such as China's surge for energy resources. What these case studies tell us is that Japanese government designs to improve Japan's security of oil and gas should always be analysed carefully and should not be taken at face value.

METI or other elements of the Japanese government may delve into strategic projects and declare state support because of vital national interests, but often they lack the ability to realise such projects. In this chapter we saw four recurring impediments: low levels of unity within Japan's government, with ministries unable to efficiently cooperate; the limited ability of the state to get support from the private sector for its strategic designs; Japan's troubled relations with its neighbours, specifically China and Russia; and Japan's limited diplomatic independence from the United States in international politics.

In the Azadegan case, competition with China for energy resources put pressure on Japanese policymakers. The ministries of economics (METI) and foreign affairs (MOFA) battled it out over the question as to where Japan's vital strategic interest lay, namely over whether to strengthen energy supply from Iran or to bow down to the United States, which had threatened Iran with sanctions due to its nuclear programme. Japan was further divided at home, because private industry refused to follow METI's example and invest in Azadegan. Furthermore, the Japan National Oil Corporation, METI's project leader, was forced into bankruptcy by the business community and politicians. In the end, after six years of efforts to secure Azadegan oil, Japan pulled out of the strategic project after all.

Regarding Japanese relations with Russia, the territorial issue about sovereignty over the Kuril Islands was always present in the background, complicating Japan-Russia relations in general. But that issue not withstanding, MOFA and METI worked together to launch a Japanese bid to finance a Pacific oil pipeline through Russia. But the Japanese government's eagerness to invest was met with scepticism in the private sector. Japan's oil companies were not ready to buy Siberian oil. Japanese companies in general were reluctant to invest in the Russian oil industry, weakening the Japanese government's promises of finance and investment. It seems that China will be connected by pipeline, while there are as yet no guarantees that the segment to the Sea of Japan will be built.

Mitsui and Mitsubishi's investment in the Sakhalin-2 project was exceptional, as it was the largest-ever Japanese private investment in Russia. This project looked set to become a strategic success for Japan, with Mitsui and Mitsubishi able to place over sixty percent of the project's natural gas output with Japanese buyers. But the Russian government manoeuvred to renegotiate the terms of the contract and installed Gazprom as the project's main shareholder. The move worsened Russia's image in the minds of Japanese businessmen and policymakers. This will further complicate Japanese energy ties with Russia in the future.

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bilateral relations: "I am concerned that major delays might have a negative influence on overall Japanese-Russian relations." (BBC News Online (19 September 2006), *Japan warns Russia over Sakhalin*)

[223] BBC News Online (21 December 2006), *Gazprom grabs Sakhalin gas stake*; NRC Handelsblad (22 December 2006)

Finally, the Sakhalin-1 project, in which the Japanese market was expected to buy the full natural gas output through Japan's first international pipeline connection, is currently courting Chinese buyers, after Japan's electricity corporations had flatly refused to buy piped gas. In spite of the strategic potential for Japan, no matter that the project was firmly backed by METI, which was the leading Japanese investor in Sakhalin-1, no unified position emerged in Japan in support of the project.

6

Japan's New National Energy Strategy

6.1. Introduction

As we discussed in Chapter three, Japan's energy policy lacked a sense of urgency when it came to security of supply during the 1990s and the early years of the 21st century.[224] Security of oil and gas supply only began to gain widespread media attention after oil prices had risen above US$40 per barrel in the course of 2004. One example is from *Ekonomisuto* (Economist), a leading business magazine, which ran a cover story on rising oil prices in September 2004: "Is it coming, the oil shock?!"[225] But the Japanese government was slow to perceive the possible dangers to security of supply. Japan's Ministry of Defence writes in its 2005 annual report: "Energy problems are not just an element that influences the national security environment in a negative way, but by promoting ties of cooperation between nations, they become elements that have a positive influence."[226] Prime Minister Koizumi's Cabinet Office stated that rising oil prices were not yet a cause for concern for security of supply, nor for serious adverse effects on trade, investment costs, inflation and domestic consumption.[227] METI's white paper on International Economy and Trade 2005 expresses some concern over rising oil prices, but it does not go beyond an analysis of its probable causes nor address the possibility of structural oil market changes or other long-term implications of current trends.[228]

As oil prices rose above US$60 per barrel at the end of 2005, energy security was finally placed squarely onto the political agenda. METI established two advisory committees on energy security policy. The first, the Energy Security Study Group, reported directly to the director of the Agency for Natural Resources and Energy (ANRE).[229] The second, ANRE's General Advisory Panel on Resources and Energy, fathered the document which we now know as Japan's New National Energy Strategy.[230] The document was presented on 31 May 2006, promising a national energy strategy "that places energy security at its core."[231] In the following months, Japan's mass media picked up on the energy security theme. Major daily newspapers Yomiuri Shinbun, Sankei Shinbun and Asahi Shinbun ran extensive

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[224] A review of the back catalogue of Japan's leading energy industry publication, Energy Forum (*enerugii fooramu*), confirms this point. An extensive review of this journal shows that during the 1990-2005 period, the energy discussion in Japan was dominated by issues of liberalisation, nuclear power and the environment, not by security of oil and gas supply. An exception should be made for the period running up to the US invasion of Iraq, when there seemed to be a periodic surge in interest for the politics of supply security. See, for example: Ekonomisuto, (15 October, 2002), *bei iraku kougeki ni kakusareta sekiyu no chiseigaku* ("The oil geopolitics that was behind the US attack on Iraq")

[225] Ekonomisuto (11 September 2004), *kuru ka! Oiru shokku*

[226] Defense Agency of Japan (2005), p18

[227] Cabinet Office (2005), p35-38

[228] METI (2005), *tsuushou hakusho 2005*, p36-39

[229] This committee held its first meeting on 22 December 2005. (METI, News Release: enerugii anzenhoshou kenkyuukai no kaisai ni tsuite (Regarding the start of the energy security study group), 22 December 2005); the notes of this study group are available on the METI website (in Japanese); In the notes of the first meeting we read that members stress that Japan's government must take a comprehensive approach towards energy security, which would have to include diplomacy, but also defence. The establishment of the group, but particularly its announcement that defence matters should be discussed in the context of Japan's energy security, signalled a rapid renewal of the sense of urgency in Japan's bureaucracy. Furthermore, members of the study group pointed out that Japan cannot offer its oil suppliers in the Middle East military support or sell them weaponry. Therefore, Japan must think about offering its high-end energy technologies instead.

[230] METI Website, sougou shigen ene chou sougou bukai (ANRE general advisory council), notes of meeting on energy security, 8 February 2006; Early discussions centred on the need for a comprehensive strategy, but members expressed concern that a 'sense of crisis' in Japan, as to the seriousness of the energy security issue, was lacking, making development of a true comprehensive strategy difficult.

[231] METI press release 31 May 2006, http://www.meti.go.jp/press/20060531004/senryaku-p.r.-set.pdf; The press release mentioned "the steep rise of oil prices and the severe energy situation" as a main *driving force* behind developing the strategy.

specials on Japan's energy security predicament.[232] The Ekonomisuto ran a cover article in September that headlined: "The age of 100 dollar oil."[233] In the autumn of 2006 METI officials drafted a new basic energy law, which they based on the energy strategy's proposals. This law was passed by Parliament in March 2007, in effect making the New National Energy Strategy the new guideline for Japan's energy policy.[234]

The strategy tells us that METI has now come to view as accepted wisdom that the structure of world energy markets is changing. METI points to the following underlying trends: Asia will be increasingly dependent on oil and gas from the Middle East; producer nations are moving to nationalise resources and limit access to reserves by foreign investors[235]; rising geopolitical uncertainties pose a threat to the stability of energy markets; there is a rising general consciousness about the long-term finite nature of oil[236]; Japan's demand for oil and gas is forecasted to grow incrementally over the next 20 years; Japan faces growing competition from China and India for increasingly scarce (and therefore costly) resources[237]; various other nations adopt energy security as a strategic issue that requires state involvement.[238] METI sees a continuation of high oil prices: "Based on the structurally tight situation of the international energy markets it is highly likely that the current high level of oil prices will persist in the long term."[239] The ministry fears for Japan's competitiveness in a high-priced, ultra competitive energy market: "We (Japan) are faced by the fear that our power to secure energy resources will weaken, related to (the fact that) our nation's buying power on international energy markets will relatively weaken in the future."[240]

6.2. Securing oil and gas supply for Japan

The strategy proposes the following policies that Japan should pursue to secure oil and gas supply in this situation of structural changes:

- Japan must strengthen its resource diplomacy and strengthen its overseas direct involvement and investment in oil and gas projects. A new target is set for Japanese upstream companies to be involved in 40% of the oil that flows into Japan by 2030, up from around 15% in 2005.[241] The 40% autonomous development target is meant to encourage Japan's energy industries to invest in upstream development, says ANRE's director general.[242]

- Japan must strengthen comprehensive relations with resource supply countries by using a combination of technological assistance, economic aid and soft power. First, Japan must promote the strategic development of various technologies in the field of energy, and use these and other high-end technologies that Japan possesses as a bargaining chip in negotiations with supply nations for mining and development rights.[243] Second, the strategy expresses the need

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[232] See, for example, Sankei Shinbun (4 and 5 June 2006), *The Challenges of a resources-poor country, part 4 and 5*; Daily Yomiuri Online (2005), *Planning national strategies (series)*; Asahi Shinbun, *Shin senryaku wo motomete* (Looking for a new strategy), http://www.asahi.com/strategy/

[233] Ekonomisuto (5 September 2006), *gen'yu 100 doru jidai* (The age of $100 oil). The previous month, August 2006, Ekonomisuto had already published a 100-plus page special edition on energy markets and geopolitics: Ekonomisuto, (14 August 2006), doru, gen'yu, sensou ("Three great uncertainties shaking the economy at its foundation: THE DOLLAR, OIL, WAR.")

[234] Interview with Dr Tsutomu Toichi, Institute for Energy Economics Japan, Tokyo, 27 November 2006

[235] See METI (2006), shin kokka enerugii senryaku, p5, for a long list of examples of "policy tightening by supplier nations".

[236] Ibid, p5-6; METI (2006), same page: "as represented by the Peak Oil theory".

[237] Ibid, p2-4

[238] Ibid, p13-14

[239] Ibid, p1

[240] Ibid, p9

[241] Ibid, p49

[242] Reuters (9 August 2006)

[243] METI (2006), shin kokka enerugii senryaku, p52: "By promoting the use of our country's high-level technological strength and (by promoting) technological development to strengthen our ability to acquire resources we will increase our country's appeal in the eyes of resource countries."; The New Strategy gives as examples of such energy technologies: "Gas to liquid

for Japan to advance the signing of Economic Partnership Agreements (EPA) which will make it easier to create stronger economic ties with its supplier nations. Also to this end, Japan must strategically employ Official Development Assistance (ODA) and help supplier nations to diversify and upgrade their economies. Third, Japan must work at the local level to create goodwill with the population of these nations by helping to build small and medium-sized corporations, by providing medical care and education, and by helping to improve the water supply.[244]

- The government must strengthen support for Japanese oil and gas development companies, both financially and by increasing diplomatic efforts. The government fears that the liberalisation of Japan's energy sector and the increasing competition on the world market may have reduced the chances for private Japanese investments in foreign resources.[245] Regarding diplomacy, the strategy states: "Internationally, there are many cases in which the securing of resources is basically a state-to-state affair, and therefore the state and the private sector must join policies and 'become one'."[246] Japan must support its core energy companies in the increasingly rough international energy markets through the government's support corporations such as Japan Oil, Gas and Metals National Corporation (JOGMEC), the Japan Bank of International Corporation (JBIC), Nippon Export Investment Insurance (NEXI), Japan International Cooperation Agency (JICA) and others: "We plan a drastic strengthening of the supply of 'risk money' by JOGMEC and other institutions."[247] Japanese private corporations and government institutions must create strategic ties to further the goal of security of resource supply. The government must strategically promote individual upstream projects of Japanese corporations. However, to maximise this approach, the government must make sure that the above mentioned government agencies work together, instead of separately.[248]

- The government must promote diversification of oil supply regions. The strategy states: "Our nation's 90% dependence for oil on the Middle East is extremely high and by planning to diversify supply regions we can bring down this dependency, and thus secure the stable supply of resources to Japan." Recent efforts to diversify oil supply include projects in Russia and the Caspian Sea region. From now on we will see more efforts in Libya, Nigeria and other parts of Africa, Central and South America, Canada, etcetera. The Pacific oil pipeline (linking Russia's eastern Siberian oil reserves to the Pacific coast) is referred to as "a project of strategic importance (for Japan)". Japan must work to realise this project, because it can help reduce oil dependency on the Middle East, unlock eastern Siberian resources and help to strengthen bilateral (energy) ties.[249]

- Japan must strengthen its supply strategy for natural gas. The strategy notes that the risks have risen not only for Japan's oil imports, but also for natural gas supply, due to rising domestic consumption in Southeast Asian producer nations (notably Indonesia); geopolitical risks in the Middle East; and rising demand for LNG from China, India, Europe and the US. It warns that Japan must from now on look carefully at the trends in the main natural gas producing nations, both in Southeast Asia and the Middle East.[250] In the face of these trends, the New Strategy says that Japanese buyers must maintain their leading position in the world's LNG market. The government must support strategic associations between Japanese companies to boost their

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technologies, methane-hydrate production technologies, enhanced oil recovery technologies, DME development technologies, technologies for refining and upgrading heavy oil, clean coal use technologies, and others."

[244] Ibid, p50

[245] METI (2006), shin kokka enerugii senryaku, p64

[246] Ibid, p22

[247] Ibid, p50

[248] Ibid, p50-51; "The institutions involved must join their policies and become one and develop a comprehensive approach." (METI, shin kokka enerugii senryaku (2006), p22)

[249] Ibid, p51

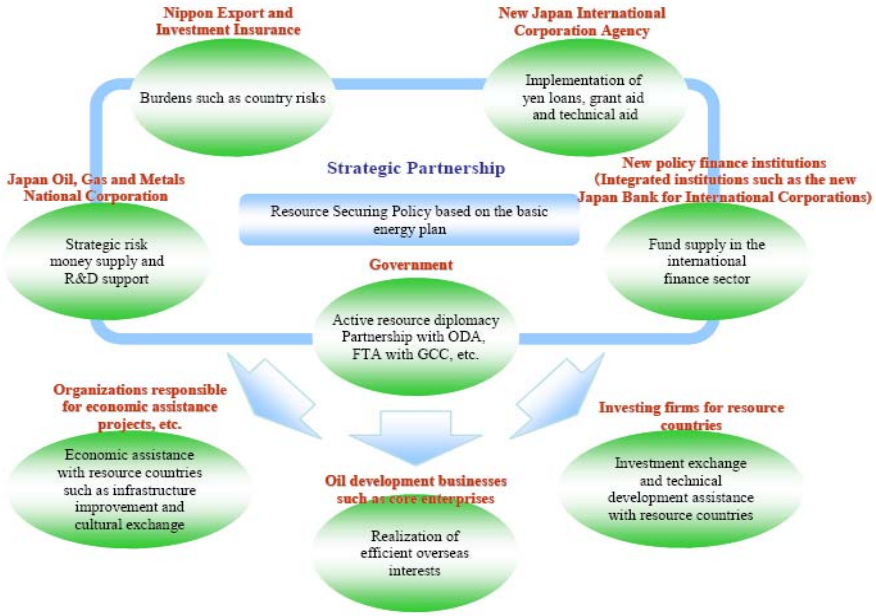
[250] Ibid, p11 and p16

market competitiveness. It must also support the strategic development of technologies that can be used as a means of exchange in negotiations with supply nations. The government will provide financial support to develop such technologies.[251]

- Japan must promote the transparency and stabilisation of energy markets by continuing to work in international energy forums, promoting the dialogue between producers and consumers, and the publication and sharing of energy data to make markets more transparent.[252]

- The strategy shows awareness that accommodating rapid demand growth for energy from Asia, primarily China and India, must from now on be an essential part of Japan's resource strategy. Japan must make efforts to lower the competition for oil and gas imports from these nations.[253] Therefore it must actively help Asian countries to diversify their energy sources. Japan must also help to make energy production in Asia cleaner and more efficient. And Japan must share its know-how to prevent panic in case of a sudden supply disruption to Asia. The strengthening of economic ties and increased technological transfers to Asian nations are proposed as the main tools to achieve better energy cooperation with Japan's neighbours.[254] METI writes that it has set numerical targets to keep all parties that are involved in Japan's energy policy focused on the mid to long term goals. But METI admits that focus alone will not do. Technology breakthroughs are necessary to reach most of the targets. Also, particularly relevant to the proposed resource diplomacy and autonomous development policies, there is need for better cooperation and coordination between the public and private sectors, as well as between different institutes within the government. This point is possibly the fundamental difficulty facing the strategy when it comes to realising its aims.[255]

Figure 8: Japan's strategy to secure overseas oil and gas resources



Source: Japan's New National Energy Strategy (METI)

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[251] Ibid, p52

[252] METI (2006), shin kokka enerugii senryaku, p51

[253] Ibid, p27: "Japan must contribute actively to the stabilisation of the world's demand and supply for energy, starting with Asia."

[254] Ibid, p54-59

[255] Ibid, p21-22

As far as diversification away from oil is concerned, the strategy sets a target to reduce oil dependency (as part of the energy source mix) from the current 50% to 40% by 2030. The reduction will have to come from a combination of factors, including conservation efforts in industry, expected slowing down of total household energy consumption growth that is caused by Japan's negative population growth, and a substitution for oil to be used as the main fuel source for transportation. To realise this last goal, the strategy has set a target to reduce the percentage of oil in transport fuels (now almost 100%) to 80% by 2030. This target must be reached by the large-scale introduction of bio-ethanol, accompanied by further promotion of electric vehicles. The strategy proposes that Japan should financially and diplomatically support the development and import of bio-ethanol.[256] Since the release of the New Strategy, the Japanese press has reported on a number of new initiatives on biomass production and consumption, including large-scale domestic production. Japanese politicians, starting with Prime Minister Abe, have shown enthusiasm towards these initiatives.[257]

6.3. Analysis

The New National Energy Strategy does not intend to give detailed policy descriptions. It sketches a new vision as to what the important policies are that Japan must follow from now on to secure energy supply. The strategy calls for stronger government involvement in resource procurement and, more broadly, security of oil and gas supply. This is a significant shift away from the market-competition approach of the past decade.[258]

A new consensus on energy security

Japan's main business lobby, Keidanren, has reacted approvingly to the New Strategy. It has backed the new-found emphasis on energy security and agrees that Japan should follow other leading nations by doing more to secure energy supplies. Keidanren's greatest enthusiasm goes to METI's pledge to invest in stronger resource diplomacy, especially diplomacy towards the Middle East. Resource diplomacy should be the top priority from now on, says the business community, which pushes for the signing of Free Trade Agreements or Economic Partnership Agreements with suppliers. The use of development assistance, any direct financial aid, to Japanese businesses is also appreciated. As are the proposals for government financial support for private resource projects and government financing of large-scale research into new energy technologies for the long term.[259] Active government policy to diversify supply sources for oil and gas is not supported. Such decisions should be left to private industry, argues the business lobby.

Keidanren believes that Japan should work towards an Asian Energy Partnership through which Japanese know-how on emergency storage and other technologies must be dispersed. In general, Keidanren is thus supportive of the strategy. But, it carefully notes that its support for the above proposals is based on the understanding that the government will assure the complete autonomy of the private sector in all its business decisions. Financial support must not hold any strings attached. Also, the business community is opposed to tax- or sanction-based systems to enforce improvement of energy efficiencies.[260] In a reaction, Mochizuki Harufumi, director of METI's Agency for Natural Resources and Energy tried to put to rest any concerns amongst private business about METI's intentions. Referring to private Japanese upstream investors, he remarked: "Basically, the government does not intend to influence their business decisions."[261] But Japanese industries clearly are already warning that they will not be forced into any strategic resource-related deals by the bureaucracy against their will.

The publication of three reports on energy security that were released around the time of the New Strategy's publication confirmed a growing consensus on the need for a stronger resource security

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[256] METI (2006), shin kokka enerugii senryaku, p51; METI (2006), Fiscal 2005 Annual Energy Report, p7

[257] Asahi Shinbun (13 November 2006), yunyuu gimu bei wo baio nenryou ni, nousuishou etanooruka suishin (Turn mandatory rice imports into bio-fuel: Ministry of Agriculture and Fisheries promotes shift to ethanol);

[258] Interview with three energy officials at the Institute for Energy Economics Japan, Tokyo, 22 November 2006

[259] Nippon Keidanren (2006)

[260] Nippon Keidanren (2006)

[261] Reuters (9 August 2006), *Japan to back energy projects abroad financially*

policy. First, the governing Liberal Democratic Party released its comprehensive energy strategy on 17 May 2006, stressing strong diplomacy towards the Middle East, expressing worry about the effect of liberalised markets on long-term security of supply, and urging government support to strengthen Japan's private energy companies.[262] Second, the independent Japan Forum on International Relations (JFIR) published a list of "Energy Security Policy Recommendations", which included the message that Japan should 'strengthen the strategic approach toward the oil-producing countries in the Middle East and Russia' and 'play a leading role in Regional energy cooperation in Asia'. Third, a private advisory group to the director of METI's Agency for Natural Resources and Energy (ANRE), the Energy Security Study Group, urged for 'strengthening pan-Asian cooperation', 'enhancing contributions to and cooperation with supply nations', 'strengthening relations with major producer nations', and 'secur(ing) resources abroad'.[263] All three reports stressed the need for a comprehensive energy security strategy in the face of increasing uncertainties in the world and the world's resource supply structure.

An end to the 'Shift to Gas' policy?

The strategy breaks away from earlier vocal support for the substitution of oil by increasing the use of natural gas, the so-called 'shift to gas' policy. The Japanese government supported the shift away from oil, as well as the increased usage of natural gas, since the 1970s and virtually until the release of the New Strategy. The argument behind the shift to gas was that gas is relatively clean, LNG prices are competitive, and by using gas, Japan could reduce its dependence on oil and the Middle East by shifting to LNG from Southeast Asian suppliers.[264] But the New Energy Strategy points out that Japan's position in the world LNG market is now weakening with growing demand expected in the US, EU and Asia, and that the stable supply of gas at stable prices may come to be increasingly under pressure. METI is thus signalling that it will no longer push gas expansion as a 'safe' alternative to oil. Likewise, the LDP also did not mention the 'shift to gas' in its energy security report. These omissions of the 'shift to gas' idea has been widely interpreted within Japan's energy industry as a political victory for the oil and electric power industries, who have opposed further expansion of natural gas for some time, vis-à-vis the gas industry.[265] The electric power industry is reluctant to expand the role of gas within its fuel mix much further, because of its relatively high price, as well as security of supply concerns. The industry prefers coal and nuclear energy.

A further indication of METI's changed view towards natural gas is that it no longer mentions the 'strategic project' to connect the Sakhalin-1 gas project by pipeline to the Japanese market. METI never officially dropped the pipeline plan, which could prove an incentive for the expansion of Japan's domestic gas market. But the omission of the plan from the strategy can be considered the final nail in the coffin of this pipeline scheme. Likewise, the strategy mentions that incentives should be given for investment by private parties in the establishment of a domestic gas pipeline network, but this implies that the government will not roll out such a network on its own initiative.[266]

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[262] Enerugii fooramu (July 2006), *Forum Interview: Omi Koji, head of the LDP's energy strategy council*.

[263] Energy Security Study group, *Interim Report*, June 2006

[264] In an example of recent Japanese government support for the shift to gas policy, the Basic Energy Policy that was established in June 2004 emphasised the need for increased use of natural gas and other oil alternatives. (Oil and Gas Journal (1 February 2005), *Japanese Energy Profile: The search for security*); The 2001 Energy Security Working Group, established within the Agency of Natural Resources and Energy's General Research Council (sougou shigen enerugii chousakai sougou bukai) recommended in its July 2007 report that Japan must shift its energy mix towards nuclear energy, coal *and* natural gas in the mid to long term. (METI/ANRE, *enerugii 2003*, p26-27)

[265] Interview with three energy officials at the Institute for Energy Economics Japan, Tokyo, 22 November 2006; While METI and the LDP are backing away from the 'shift to gas' policy, many energy analysts continue to emphasise the promotion of gas. The JFIR report on energy security, for example, urges Japan's government to realise direct links to Russian energy resources by way of oil and gas pipelines and to promote a pipeline system connecting the whole Northeast Asian region (JFIR, 2006).

[266] METI (2006), shin kokka enerugii senryaku, p52

Energy ties to Russia

A core message of the New Strategy is that Japan must strengthen its ties to oil- and gas-producing countries in order to improve its security of supply. But how does this statement include Russia? On the one hand, Japan is keenly aware that it could strengthen its security of supply by making Russia's resources an integral part of its mid-term supply portfolio. And of course Japan is particularly interested in the resources located in Sakhalin, due to its proximity to Japan.[267] On the other hand, Russia-Japan ties continue to be hampered by the row over the Kuril Islands. One might expect that strengthening strategic ties with Russia would be an integral part of the New Strategy. But in fact, Russia is mentioned only briefly and primarily in regard to its policy of increasing the state's grip on natural resources, which METI considers a negative development for Japan.[268]

One reason for the strategy's failure to propose a comprehensive view on Russia is, of course, that policy toward Russia in general, and the territorial issue in particular, falls under the responsibility of the Ministry of Foreign Affairs and the Cabinet of the Prime Minister; not the Ministry of Economics, Trade and Industry. MOFA's Russia policy has in recent years tried to separate the territorial issue from energy relations in Japan-Russia diplomacy.[269] One may question whether this indeed serves Japan's energy security interests, because as long as the issue is not solved, it remains as a root for mutual distrust and a brake on progress in the energy field.[270]

The New Strategy does not address the problem of Japanese industries' reluctance to invest in Russian oil and gas development in eastern Siberia. The failed proposal for a gas pipeline from Sakhalin to Japan, which was blocked by Japan's electric power industry, showed how the Japanese government is dependent on private sector support when trying to realise strategic energy projects. Now that the Sakhalin-2 episode, in which Mitsui and Mitsubishi were muscled out of half of their equity holdings, has further tarnished Russia's image in the eyes of the Japanese businesses community, the Japanese government faces an uphill struggle to secure cooperation from private investors. The New Strategy still refers to the eastern Siberian oil pipeline to the Pacific and hails it as a strategic project, but it puts forth no proposal as to how Japan will go forward to make it a reality. At this time, without the backing of Japan's oil industry, Japanese government investment in a Pacific pipeline is by no means a foregone conclusion. Government subsidies to the downstream industry may prove an incentive to get the private sector involved in eastern Siberia, but the New Strategy does not go into such detail.[271]

Equity oil

The New Strategy revives government support for autonomous oil and gas development, after a period in which it was deemed 'uneconomical' and too risky. METI's ability to coordinate Japanese upstream investments has, however, been weakened by the forced break up of JNOC. Even when JNOC was still functioning, METI's ability to guide private industry's decision making was limited. As a consequence, Japan's autonomous development policy, aimed at maximizing the amount of equity oil for Japan, was hardly a structured affair. We have given some examples of this in Chapters three and five. Thus, the strategy's aim to foster a stronger Japanese energy industry will prove easier said than done. The fact that METI could engineer the merger of upstream oil companies INPEX and Teikoku in late 2005 shows how the ministry still does have considerable sway over the part of the industry that was originally set up with government assistance.[272] Its influence over independent companies like Idemitsu and Nippon Oil

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[267] Interviews with high ranking official of the Agency of Natural Resources and Energy, Tokyo, 20 November 2006 and 13 December 2006

[268] The Report by the *Energy Security Study Group*, which reported directly to the director of ANRE, *does* specifically urge for efforts to strengthen relations with Russia

[269] See for example: Asahi Shinbun (20 January 2007), *Japan, Russia plan 'strategic dialogue'*

[270] Much as the history and territorial issues between Japan and China form obstacles on the road towards deeper energy cooperation.

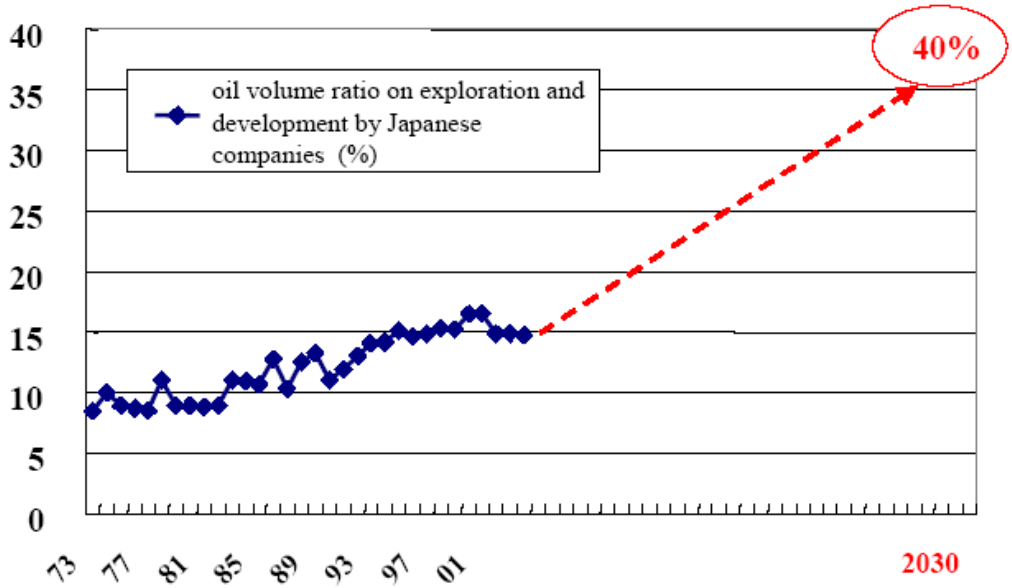
[271] Interview with oil official at Institute for Energy Economics Japan, Tokyo, 28 September 2006

[272] METI holds 29.3% of the shares in INPEX Holdings. METI holds a golden share in INPEX Holdings, which gives it the right to veto major policy decisions by the company. Furthermore, many of IIPEX Holding's top officials have their roots in the

is much more limited. Furthermore, METI has lost credibility in the upstream oil and gas market because of the problems at JNOC. This adversely affects METI's ability to cooperate on strategic energy policy with the private sector.[273]

It seems that METI hopes to solve this predicament by boosting state financial support for private energy corporations. METI is currently lobbying to get permission for a budget expansion and a higher government investment limit for upstream oil and gas projects. Because of JNOC's wastefulness the maximum was reduced to 50%, but METI is lobbying politicians to raise the level to 70% or 80%.[274] It looks like METI will get its way, after which its officials will try to grow JOGMEC into a reincarnation of JNOC. Private energy industries will follow METI's upstream investments closely and will be quick to criticise poor risk management behaviour. METI's increased budget space will not persuade Japan's energy industries to invest in upstream projects when they consider them too risky. State support will be accepted in cases that companies were already considering investing privately, or when the state agrees to cover virtually all risks. But frankly, resource nationalism and competition from China and India will make it increasingly difficult for Japanese corporations to land large oil concessions and development rights.

Figure 9: Oil exploration and development by Japanese companies as a share of oil imports



Source: *Japan's New National Energy Strategy (METI)*

Ministry of Economics, Trade and Industry, and are bound by ties of loyalty. METI's influence over the new INPEX is therefore likely to remain strong. But METI's power is not absolute. It is not the only large shareholder. Notably, Nippon Oil was Teikoku Oil's largest shareholder and was by no means amused about METI's behind the scenes role in driving this merger. Future decisions on large, strategic investments will be a process of negotiations within INPEX, and between METI and other large shareholders, the outcome of which may not be easy to predict. See, for more on the merger's details: Teikoku corporate website, https://www.teikokuoil.co.jp/eteiseki/press/

[273] Whenever the Japanese press or METI mention the need for an integrated 'Japanese major energy company' we should remember that METI does not have the power to push through decisive horizontal and vertical mergers between Japanese energy corporations that could result in an internationally competitive upstream player. The new Inpex Holdings will be a medium-sized player, measured against its oil sales. But its strength will be limited because it lacks its own downstream channel. A merger between Inpex and one of Japan's downstream industries (the wholesale oil industry and the electric utilities) could solve this weakness, but is not a serious possibility. The downstream industry would not opt for a merger with a company, Inpex Holdings, which is under such heavy influence of METI's bureaucrats.

[274] The Japanese government has already decided that JOGMEC's current investment limit of 50% will be raised, but the height of the new limit is still under discussion. METI is confident that they will get the support from the government for their request. (Interview with ANRE official, Tokyo, 20 November 2006 and 13 December 2006; Toichi (2007))

Given the above considerations, it will be an uphill struggle for METI to guide Japanese companies towards the New Strategy's stated goal of 40% equity oil as a share of total Japanese oil imports. The 40% figure included the supply forecasts from Iran's Azadegan oil field. We saw in Chapter five how Japan's security of supply policy in this case was torn apart by domestic strife and conflicting foreign policy interests. As a consequence it is fair to say that the target of 40% equity oil (autonomous development oil) should no longer be taken seriously.

Stronger resource Diplomacy

Efforts to strengthen ties with Middle Eastern suppliers will face increasing competition from India and China. Japan holds some significant disadvantages. Japan cannot take an independent pro-Palestine position, nor can it become too close to Iran, because Japan is dependent on the US for its domestic security. Japan cannot offer military cooperation, military technology or weaponry to aid its resource diplomacy, as its constitution forbids this, but India and China are free to do so. The stable level of high oil prices has flooded the Middle East with oil money, and this is weakening Japan's traditional strong point of economic and financial aid. Last but not least, Chinese and Indian demand growth make these countries increasingly attractive to producers, whereas Japan's market growth has stagnated.

On the upside, Japan stands in high regard within the region as a stable and reliable customer of Middle Eastern oil, which may provide it with some leverage with suppliers. The effective use of soft power diplomacy could further improve trust towards Japan. In one example, Qatar has indicated that it will continue to supply Japan with natural gas, because its private industries were the first to place their trust in Qatar's infant LNG industry, with Chubu Electric Corporation signing a long-term purchasing contract in 1992.[275]

Japan is actively pursuing a Free Trade Agreement with the Gulf Cooperation Council (GCC), which it hopes will be a force for stronger resource ties with Middle Eastern countries. Japan would like to include a paragraph in the FTA that says that GCC oil suppliers will preferably ship oil to Japan in case of emergencies.[276] Japan has suggested a similar paragraph in ongoing FTA negotiations with Indonesia.[277] China is leading Japan by almost two years in its talks with the GCC.[278]

Stronger energy cooperation between Japan and Asia, in particular between Japan and China, hinges on a successful approach towards the outstanding issues that continue to frustrate relations. These issues include the memory of the Second World War and the China-Japan resource dispute over gas fields in the East China Sea. If Japan and China make no progress in neutralising these disputes, it seems unlikely that both governments will be able to reach the necessary level of trust which is needed to come to strategic energy cooperation. The unmistakable fact that energy cooperation is in the clear interests of both nations in light of rising security of supply concerns is no guarantee that it will come about. Greater mutual trust is the essential ingredient. But the New Strategy gives no vision of how greater trust should be built.

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[275] The Shingetsu Newsletter quotes from an article in the *Gulf Times* of 11 February 2007, in which Qatargas chairman and CEO Faisal al-Suwaidi explains that Japan can count on Qatar's loyalty: "Qatar will always remember with gratitude Japanese customers led by Chubu Electric who had actually put the state's LNG industry on the global map…When Japan decided to buy LNG from us, many sceptics though the Japanese buyers were making a mistake. That was a period of regional skirmishes. But Japanese customers stood their ground and decided to lift some four million tons of LNG from Qatar. If they had not taken four million tons from us then, we may not have been talking about the 77 million tons now at all." (Shingetsu Newsletter No. 516 (12 February 2007), http://www.shingetsuinstitute.com/newsletter/february2007/february2007n516.htm); Hashimoto et al (2006)

[276] Japan will seek the inclusion in the proposed FTA of a GCC pledge to preferentially supply crude oil to Japan, even in emergencies, like war. (Masaki (12 March 2006), *China rivalry fuels FTA drive*); Kuwait News Agency (7 March 2006), *Japan gives priority to seal FTA with GCC*

[277] Regarding the negotiations with Indonesia on an Economic Partnership Agreement METI official Keita Nishiyama remarked: "We are concerned about LNG supplies. We want Japan to be prioritized over other countries that do not have similar agreements." (Shingetsu Newsletter No. 459 (7 December 2006), *Japan-Indonesia relations strengthened through economic initiative*)

[278] People's Daily Online reports the start of talks on a free trade agreement between China and the GCC in July 2004. People's Daily Online (7 July 2004), *China, GCC agree to start FTA talks*

The New Strategy proposes to promote the dispersion of Japanese energy technologies to help Asian countries to boost energy supply, and to use energy more cleanly and effectively. METI's strategy calls for technology transfer initiatives and pledges to support them through official development assistance. But this raises the question as to what kind of technologies the Japanese government can realistically offer to, for example, China, where energy demand is expected to rise most rapidly. China has signalled that it is interested,[279] but Japanese companies will not simply cooperate with their government's proposal. They will most likely refuse to share their core technologies out of fear that those will be copied. An ANRE official acknowledged that industry cooperation would prove hard to obtain on this policy initiative.[280] It shows again how security of supply policy is dependent on the cooperation of Japan's private industries.

The New Strategy calls for the strategic use of official development assistance (ODA) to secure resources abroad. Here, the New Energy Strategy connects to revisions that were made to Japan's ODA charter in 2003. The ODA charter to which Japan adhered throughout the 1990s emphasised softer values, such as "the humanitarian viewpoint, interdependence of the international community, environmental conservation and Japan's mission as a peace-loving nation." The new Charter emphasises that ODA must always be used to serve Japanese interests.[281] The revisions were specifically intended to promote the use of ODA as a strategic tool "to ensure Japan's security and prosperity". In this regard, energy security is highlighted: "Japan's initiative in making full use of ODA (…) will not only benefit Japan in a number of ways, (…), but also, it will lead to the stability and development of developing countries, which is vital for Japan as it is heavily dependent on overseas countries for resources and energy."[282] The awarding of ODA is a matter between the Ministry of Foreign Affairs (MOFA) and the Finance Ministry (MOF). When METI called for better cooperation between government institutions, so as to offer more effective support for private resource investments, this could be seen as a call towards MOFA and the MOF to steer ODA money towards resource projects. The New Strategy is a METI report and expresses METI's ideas on how to improve security of supply policies, but METI cannot force other bureaucracies to cooperate with its New Strategy.

As a final comment on the New Strategy's proposals for a stronger diplomacy to the Middle East, I would like to add that they are by and large recycled proposals. In 2001, METI's Agency for Natural Resources received very similar recommendations from its "Energy Security Working Group". The working group expected that stronger ties with the region could be built through (a) supporting economic reforms, (b) expanding direct investments by Japanese upstream companies, (c) building ties of trust, personal connections and diplomatic channels, and (d) pursuing cooperation in the fields of environmental protection, infrastructure, oil related technologies and human resources.[283] These proposals make very similar reading to the proposals for boosting Middle East ties in the New National Energy Strategy.

Diversification

The New Strategy suggests to the reader that METI has lost its zeal in trying to truly seek diversification of supply regions for oil and natural gas. All outlooks point to increasing reliance on the Middle East for the future. METI seems to reluctantly accept the inevitable and now calls for a doubling of efforts in strengthening ties with this region. Prime Minister Abe's energy mission to the Middle East in late April

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[279] FujiSankei Business I (11 April 2007), *Wen Jia Bao shusou kyou rianichi*; Asahi Shinbun Online (6 April 2007), *Japan to help China reach energy target*

[280] Interview with high-ranking ANRE official, Tokyo, 20 November 2006, 13 December 2006

[281] Togo explains that the 2003 revision of the ODA charter was originally initiated by the Ministry of Foreign Affairs to regain public trust in the ODA system after an embarrassing corruption scandal involving ODA funds. The ministry believed that a more realist ODA charter would boost the public image of Japan's ODA effort amongst the Japanese people. (Togo (2005), p342)

[282] MOFA (2004), *Diplomatic Bluebook*, p203-204

[283] METI/ANRE (2003), *enerugii 2003*, p26-27

2007 confirmed this picture.[284] This direction conflicts with Japan's Basic Energy Plan (introduced in June 2004) at the time of the New Strategy's publication. The law specifically called for diversification away from the Middle East, as well as diversification within the Middle East.[285] The New Strategy, however, neither provides a vision on diversification away from the Middle East, which would have to include a comprehensive proposal for better ties with Russia, nor does it call for active diversification between Middle Eastern supply nations.[286] But as we have stated before, even if METI would have called for efforts to diversify, it would have no solid tools to force Japan's private energy sector into going along with that intention. Japan's private oil importers make their own decisions.[287]

[284] Abe visited Saudi Arabia, Kuwait, the Emirates and Qatar. He asked the leaders of those countries to maintain stable supply of oil and gas in return for economic support. Tangible support was in store for The United Arab Emirates and Saudi Arabia. Abu Dhabi's national oil company landed a $1 billion dollar loan on soft terms in exchange for guarantees of future supply. (Financial Times (29 April 2007)) Saudi Arabia was offered strategic oil storage facilities on Okinawa, in return for preferred oil deliveries to Japan in case of supply disruptions. (Asahi Shinbun (30 April 2007))

[285] Hosoe (2005); METI's Energy Whitebook 2006 confirms that the basic energy law still considered diversification a main goal for Japan's energy security policy: "It is important for our nation to plan for secure and stable supply of oil by means of the development of a comprehensive resource strategy. As has been put forth in the Energy Basic Law of October 2003, we promote a comprehensive resource strategy through going forward with establishing *diversification of supply sources*, *diversification of supply from within the Middle Eastern region*, and *arrangements to deepen relations with the main oil producing nations, through broad cooperation, such as direct investment*". METI (2006), *enerugii hakusho 2006* (Energy Whitebook), http://www.enecho.meti.go.jp/topics/hakusho/2006EnergyHTML/html/i1250000.html

[286] Also, Japan's new Basic Energy Plan, which was adopted by the Japanese parliament in March 2007, and which incorporates the main guidelines of the New Strategy into the old basic plan, contains no firm call for diversification of supply regions.

[287] Interview with Dr Toichi Tsutomu (IEEJ), Tokyo, 27 November 2006

7

Conclusion

This paper was written to enhance understanding of Japan's New National Energy Strategy.

We have looked at Japan's oil and natural gas dependencies. We then covered the relevant history of Japan's security of supply policies. We looked at the rising competitive pressures on Japan from China's resource policy. We then went on to describe relevant case studies that showed how Japan has struggled to realise several strategic resource projects. With the lessons from these chapters we finally set out to read through the policy proposals of the Japanese government's *New National Energy Strategy*. We found that:

The strategy signals a new sense of urgency for enhancing energy security. It also shows awareness that a comprehensive approach towards energy security will be necessary. In that sense, the strategy has great significance. But the context of Japan's long history of trying to improve security of supply has shown us evidence that we should be careful in our expectations of the Japanese government's ability to turn its proposals into reality.

The New Strategy calls for more oil development by Japanese corporations, but this policy has been pursued for over 35 years, and never very successfully. As far back as the early 1970s, Japan's government set a target to increase so-called autonomous development oil to thirty percent of Japan's total imports, but this target has never been met. The New Strategy ambitiously increases the old target to forty percent, to be reached by 2030. This new target looks unrealistic, especially now that Japan has given up on developing the giant Azadegan oil field in Iran.

The New Strategy calls for better cooperation between the state and private industry to further Japan's strategic energy policy goals, but throughout history a lack of coordination and general trust between the government and private energy companies has prevented Japan from becoming a strong player on world energy markets. During the late 1990s and early 21st century, liberalisation and deregulation of Japan's energy industries has further increased distrust between the state and private industries and, as a result, further limited government influence over the sector. It has made it more difficult to gain the industries' cooperation in realising the state's strategic energy policy.

With Japan's new-found urgency for energy security, more government money will be made available for oil and natural gas related investment, but this policy has its downsides. If METI is allowed to increase spending on oil projects, it could lead to the de-facto rebirth of the state-led Japan National Oil Corporation (JNOC). JNOC was forced into bankruptcy with debts of over $7 billion dollars in 2004. There is a risk that bureaucratic upstream investment may again result in wasteful spending.

Better ties with the Middle East will remain constrained by Japan's close political alliance to the United States. In our case study we saw how this played out in the case of the Azadegan oil project, in which Japan chose to give up an opportunity to boost security of oil supply from Iran in order to stay in line with United States foreign policy. A further complication for warming up to the Middle East is that Japan today faces competition from China and other Asian nations who are also hoping to win the favour of Middle Eastern governments. China is not bound to loyalties to the US in its Middle Eastern policy.

Better ties to Russia and China are essential from an energy security perspective, but Japan's complicated relationship with those nations presents obstacles. The New Strategy admits that better relations are desired, but does not refer to any comprehensive proposals to improve relations.

Substitution of oil by shifting to natural gas was a long-term policy of Japan, but the New Strategy signals that the government's support for increased gas consumption is fading. The electric utilities have long preferred cheap coal over gas. The increasing global demand for natural gas also raises concerns about future supply security. The Japanese government had long promoted the construction of a natural gas pipeline to Russian Sakhalin, but this plan is now off the table, while it is clear that Japan's electric utilities are not interested.

Diversification of oil supply source is not emphasised in the strategy as a prime policy goal. Instead, Japan opts for strengthening relations with existing suppliers in the Middle East. Only one strategic project to diversify supply away from the Middle East is mentioned in the New Strategy: realising a Pacific oil pipeline to Russia. But discussions regarding this initiative are ongoing. The strategy merely states that the pipeline could improve ties with Russia.

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