

CONCURRENT SESSION VI

ENERGY SECURITY: CHALLENGES AND POLICY OPTIONS FOR THE ASIA PACIFIC REGION

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Introduction

According to BP Statistical Review of World Energy June 2008, the challenges that the world community faces will be maintaining secure energy supplies, due to the continued weakness in oil supply and increasing demand from the rapidly growing non-OECD economies such as China and India, rather than the sufficiency of the world's fossil fuel resources.² While the world primary energy consumption decreased by 0.3% in 2007 and consumption in such region as North America, slightly increased by 1.6%, or even declined by 2.2% as in the case of EU, energy consumption growth in the Asia-Pacific was still above-average 5% and accounted for two-thirds of global energy consumption.³ China and India continue to be the two largest consumers in East Asia with consumption growth of 7.7% and 6.8%, respectively.

If the increasing demand and uncertainty in energy supplies are the greatest challenges as BP pointed out, Asia-Pacific would be a potential source of political tensions and conflicts which is triggered by the competition for energy resources among regional countries. The potential tensions and conflicts in the region may become more intense given the interlocking relationships between energy security, economic growth and climate change⁴ and other issues. The aims of the author in this paper are, therefore, to identify some of the potential conflicts triggered by energy insecurity through examining three major trends in the regional efforts to meet its surge demand for energy, namely: (i) internationalization of oil supplies; (ii) the continued exploration and exploitation of domestic primary energy resources for economic development; and (iii) development of alternative energy such as nuclear power.

¹ Diplomatic Academy of Vietnam.

² BP Statistical Review of World Energy June 2008.

Ibid.,

⁴ See Simon SC Tay, "Energy, Climate Change and Security: Prospects for Competition and Cooperation in Asia and ASEAN" in *Panorama: Insights into Southeast Asian and European Affairs* (Konrad Adenauer Stiftung, 2007).

The paper argues that the competition for energy resources has served as a driving force in the shaping of state-to-state relations in the new context that many countries' foreign policy is energy-driven. Furthermore, energy insecurity nowadays cannot be examined separately from other types of insecurities. In other words, there is close nexus between energy security and military security, energy security and sustainable development, for example. In this sense, energy insecurity will have implications for security in other areas. Finally, it argues that the race among a number of regional countries to develop of alternative energy such as nuclear can raise various concerns but it also offers prospects for regional cooperation.

Diversification of energy supplies: Impacts on inter-state relations and regional peace and security

The pressure from high oil prices in 2007-2008 have made the assurance of sufficient oil supplies and other primary sources of energy for domestic consumption and economic development a pressing issue on the agenda of regional countries in Asia-Pacific. Moreover, as all major economies East Asia have been dependent on oil imports from the Middle East, and even the once resource-rich countries in Southeast Asia like Indonesia,⁵ Malaysia and Vietnam to a less extent, are also facing serious shortages of energy, insecurities are therefore strongly felt in the region. This has led to a common trend among regional countries in their development of a national energy strategy that makes the diversification of the sources of oil & gas and other primary energy a priority so as to meet the goal of establishing strategic reserves⁶ and attaches great importance to the continued exploration of domestic primary energy sources as in the case of emerging economies such as China and Vietnam.⁷

The trend of internationalization oil supplies has been clearly shown by China's efforts, for example, to establish a new form of "allies" with all resource-rich nations in Latin America (Venezuela, Brazil, and Zimbabwe), Africa (Nigeria, Angola, Chad and Sudan) and Central Asia (Russia, Uzbekistan) and with the so-called "states of concerns" in the eyes of the United States such as Myanmar in Southeast Asia, Iran in the Middle East or Venezuela in Latin America. China's diplomatic activities in recent years have

⁵ Indonesia announced it was no longer an OPEC member in 2008.

⁶ China is to establish strategic reserves for 30 days.

⁷ The Vietnamese Government has approved the three major strategies, including the *Development Strategy for Power Sector in the period 2004-2010 and Orientation to 2020*, the *Development Strategy for Coal Sector in the period 2006-2010 and Orientation to 2025*, and the *Development Strategy for Oil&Gas Sector to 2015 and Orientation to 2025*. These strategies highlight the effective exploitation and efficient utilization of the country's primary energy resources. For example, the strategy for Coal sector sets out specific objective of reducing energy losses to 30% and 25% by 2015 and 2025 respectively, while Power industry targets to reduce electricity loss by 10% in 2010.

focused on establishing “strategic partnerships’ with other countries. China wants to establish “strategic partnerships’ in order to show that it has friends all over the world. Rarely has any country rejected a proposal of partnership made by China.⁸ China’s support and its close relationships with “states of concerns” to the United States do not necessarily lead to open conflicts between the two countries but it can make the issue discussed at the UNSC more complicated. As we often see at the UNSC discussions on Myanmar, Iran’s nuclear program or the situation in Dafur, Sudan, oil interests clearly played a role in Beijing's actions at the United Nations.

But from the non-traditional security perspective of energy security, the internationalization of energy supplies may be a source of tensions and conflicts among regional countries as they target the same oil export destinations. As China has led this effort by reaching out to other regions such as Africa and Latin America rather than relying only the supply from the Middle East, India and to a certain extent, Vietnam are doing the same by extending its cooperation with oil-rich countries in other parts of the world. PetroVietnam has made dozen of oil exploration and development contracts with partners from Algeria, Malaysia, Indonesia, Venezuela, Congo, Myanmar, Peru, and others. In 2008, PetroVietnam has signed 10 contracts in foreign countries.⁹

However, as many foreign corporations are targeting the same markets, the competition among them in the process of bidding for oil&gas contracts may become intense. Political “intervention” in some forms can be necessary so as to secure preferential contracts for foreign oil corporations of the investors, especially when the operation of state-controlled oil companies in third countries are strongly supported by their respective governments through establishing close political relationship with the governments of the host countries. Potential political tensions cannot, therefore, be down played.

In East Asia in particular, energy needs has contributed to the shaping of attitudes towards territorial sovereignty and maritime issues. The deterioration of Sino-Japanese relations in 2005 was clearly a case in point. The differences over energy reserve, especially when China completed one drilling platform in the East China Sea, worsen the already tense diplomatic relations between the two countries during Koizumi’s tenure. Although China and Japan have recently signed a joint development agreement, it does not mean that the dispute has been resolved and so setting a model for the claimant states to the dispute in the South China Sea to follow.

⁸ China Ministry of Foreign Affairs, available at <http://www.fmprc.gov.cn/eng/gjhdq/>

⁹ PetroVietnam, available at <http://www.pvn.vn/>

Increased oil exploration activities in disputed areas in the South China Sea can serve as flash point for conflict in the region. While there are six claimants to the dispute, Sino-Vietnamese relations have much more affected by the sovereignty dispute over the Spratly and Paracel Islands, which is fueled by ongoing oil exploration activities of the two sides. It is true that every oil exploration projects planned by one has met with strong opposition from other. Beijing has several times put pressure on foreign companies not to participate in offshore projects with Hanoi in waters claimed by China and increased naval patrols in the Paracels and Spratlys. BP and Exxon Mobil have, as a result, abandoned their oil exploration pacts with PetroVietnam.¹⁰ In response to Chinese moves, Hanoi strongly affirmed that the oil exploitation projects that PetroVietnam partnered with foreign companies were,¹¹ as provided in the Convention on the Law of the Sea in 1982, within the Vietnam's continental shelf.¹² More recently, in response to the announcement that the China National Offshore Oil Corporation (CNOOC) got approval of \$29 billion exploration project in the South China Sea, the Vietnamese Foreign Ministry's spokesman has strongly stated that "Any exploration activities carried out on the Vietnam's sea and within its continental shelf, without approval, would be considered violations of Vietnam's sovereignty and national interests and therefore of no validity."¹³ Vietnam also expressed its "deep concern" over the information that China encourages organizations and individuals to explore, use uninhabited islands in the South China Sea, with the view that the exploration of uninhabited island is beneficial to China's protection of its sovereignty.¹⁴

Competition for underwater energy resources in the South China Sea among regional countries has fueled the already tense territorial dispute. In return, the unresolved territorial dispute has contributed to the race of military modernization and the increased patrolling activities by all involved parties in the disputed area in their effort to protect sovereignty and territorial integrity and maritime resources. These moves by regional countries have triggered clashes first among their respective fishermen and lead to the discriminatory treatment of fishermen by local authorities. In most of the cases these

¹⁰ Peter Navarro, "China stirs over offshore oil pact" *Asia Times Online*

¹¹ China attempted to prevent foreign companies from investing in oil&gas exploration projects with Vietnamese partners. The most recent examples have been a BP-led gas exploration and development project off southern Vietnam, the project with India's state-owned ONGC off Vietnam's central coast and Exxon Mobil Corporation's deal with PetroVietnam to explore for oil in waters surrounding the disputed Spratly and Paracel island chains. China has, in all cases warned that these companies' future business interests on the mainland could be at risk if they continue to work with Vietnamese partner.

¹² "The area belongs to Vietnam's sovereignty" *Vietnamnet*, available at <http://vietnamnet.vn/chinhtri/2008/08/800731/>

¹³ "Vietnam reaffirms its sovereignty over the Spratly and Paracel Islands," *Vietnamnet*, available at <http://vietnamnet.vn/chinhtri/2008/11/815759/>

¹⁴ Press Briefing by MOFA's Spokesman on January 8, 2009, available at http://www.mofa.gov.vn/en/tt_baochi/pbnfn/ns090110083915

clashes have been intentionally kept low profile so as not to affect the “big situation” of their relationships as argued by some claimants. As a result, fishing and other activities in the sea are put under strict control by some regional countries. Tensions related to the territorial dispute in the South China Sea has also made the ensuring of safe sea lanes of communication for oil shipment a priority in regional energy policy that is of equal importance to ensuring advantageous oil access. While Straits of Malacca remained a major chokepoint for transport of oil and gas resources into Northeast Asia, China is also diversifying the routes for its energy shipment.

The South China Sea dispute has revealed the nexus between traditional and non-traditional security issues. Energy insecurity and military security are in many ways inseparable. Competition for energy has intensified political tensions and possible military clashes. Political tensions and military clashes have been the biggest obstacles for the exploration and exploitation of oil and gas and other maritime resources of regional countries and above all impacts on the regional peace and security that the recent clash between US navy ships and Chinese vessels in the South China Sea is just one example.¹⁵

Energy security and sustainable development

One major characteristic in East Asia is the direct relationship between energy demand and economic growth, especially in the emerging economies in the region such as China and India and in developing countries like Vietnam. China’s rising energy consumption has been largely on account of sustained higher economic growth and a ‘rising industrial market economy’ due to the growth of heavy industries.¹⁶ The situation in Vietnam is similar to China when in recent years the country’s domestic consumption has steadily increased as a result of high economic growth. The country’s GDP has grown by an average of 7.3%, energy demand increases accordingly by 11% per annum, 1.5 times GDP growth rate. Industry is the largest energy consumer, with the increased proportion from 38% by 2001 to estimated 42% and 47% by 2010 and 2020 respectively, particularly electricity demand increases by 16%-18% annually.¹⁷ These figures clearly show that there would be a heavy burden for the energy sector if the country’s goal is to maintain high economic growth.¹⁸

¹⁵ “US and China confront in the South China Sea”, VietnamNet, available at <http://vietnamnet.vn/thegioi/event/11203/>

¹⁶ ADB Technical Assistance Report.N0. 41077, December 2007.

¹⁷ Ministry of Industry and Trade

¹⁸ “Supporting Implementation of the National Energy Efficiency Program Project”*ADB Technical Assistance Report*, N0. 41077, December 2007.

Together with the diversification of oil import supplies from different destinations, another major content in the national energy strategies of regional countries like China and Vietnam has been the continued exploitation of their domestic primary resources such as coal. However, coal industry in Vietnam is facing the challenge of output decrease due to the lack of advanced technologies for production, particularly for exploitation activities at the 150-300m depth. Vietnam National Coal - Mineral Industries Group has warned that with the lack of advanced technology for exploitation the country has to import coal by the year 2012. The excessive exploitation and utilization of primary energy sources like coal has posed serious challenges to sustainable development. Indeed, outdated production facilities in Vietnam and the weak management of the many but small, heavily-polluted and scattered coal mines in China, for example, have caused serious environmental degradation and posed dangers for work safety which has direct impacts on mine workers' health.¹⁹

Domestic mining projects in which the interlocking relationship between economic efficiency, environment protection and other issues rising from the operation are not seriously considered can also be a source of conflicts in the society. The current promotion of bauxite mining projects in the Central Highland of Vietnam is a case in point. The government argues that these projects will help develop the economy in the Central Highlands and confirms that the Chinese technology chosen for the products is well-proven and can be applied for projects in Vietnam. However, growing concerns raised by scientists and deputies of the National Assembly are over the projects' economic efficiency, environment impacts, national security and defense and other issues such as how to manage Chinese workers on the site and their future relationship with local people.²⁰

Contrary to the government's expectation, scientists argue that these projects will not be profitable as the current aluminum prices in the international market are very low, standing at US\$ \$1426 per tone, around 70% below 2006-2007 level. The price for alumina is correspondingly reduced. How the environmental impacts will be controlled or how the waste will be treated are also issues of concerns. It is warned that red mud reservoirs in the rainy season from the Central Highlands can flow to the Mekong River Delta, even Ho Chi Minh City, causing devastating environmental impacts.²¹ Even more important is the issue of Chinese workers when they are the main workforce at the mining

¹⁹ Fifth Session of the National Assembly.

²⁰ A series of article related to bauxite mining projects can be found at Vietnam Week, available at <http://www.tuanvietnam.net/>

²¹ "Deputies call for debate on Government's bauxite report", available at <http://english.vietnamnet.vn/reports/2009/05/849576/>

sites rather than the local people. Conflicts between these workers and local people may escalate as the current number of Chinese workers is around 3,000 rather than 600 as the Government announced. The geopolitical sensitivity of the Central Highlands has to a large extent made these issues more alarming and the Government report on these projects has not satisfied scientists and members of the National Assembly.

The bauxite mining policy in the Central Highland of Vietnam is not the only case that reveals close nexus between energy needs for economic growth in particular and sustainable development in general and national security as well. China has made great strides in seeking for energy investment projects wherever possible around the world and sending large numbers of their nationals to work at these projects. Sudan is the best example where China has the largest overseas oil project and the Chinese laborers working there have been protected under the vigilant gaze of Sudanese government troops armed largely with Chinese-made weapons.²² However, anti-Chinese sentiments have arisen and Chinese workers, even under the protection of the Sudan Government, could not avoid being at risk in the country's political turmoil. In 2008, a number of Chinese oil workers were kidnapped in Sudan by tribe members seeking greater oil wealth, in Kordofan state.²³ The case of Chinese workers in Sudan shows that maintaining strong political relationship with the host government may not be sufficient to ensure that tensions and conflicts involving foreign energy investment projects can be avoided. Clashes between foreign workers and local people can lead to heightened tensions and conflicts in countries that are already in political turmoil.

Nuclear energy: Promises and Threats

East Asian countries are at different stages of economic development and so are they for energy diversification. In Northeast Asia, nuclear energy has been introduced and constituted a considerable component in Japan and Korea's domestic consumption mix. Other countries in Southeast Asia have recently followed this strategy, seeking to promote and increase the share of nuclear energy in their energy mix but they are still at the first stage. They all share the same rationale for developing nuclear power: Being so concerned about the growing domestic consumption, especially in the context of the spike in energy prices in 2007-2008. It also seemed that regional countries could no longer afford the

²² "China Invests Heavily in Sudan's Oil Industry" *The Washington Post*, available at <http://www.washingtonpost.com/wp-dyn/articles/A21143-2004Dec22.html>

²³ "Chinese workers abducted in Sudan", available at <http://english.aljazeera.net/news/africa/2008/10/20081019152420790816.html>

heavy financial burden of providing fuel subsidies for their citizens through compensation for energy vendors. The Vietnamese Government, for example, has spent some VND10,000 billion in 2007 to compensate petroleum vendors for their losses.²⁴ This has therefore added to sense of urgency to diversify energy sources for domestic consumption in Southeast Asian countries and nuclear energy is the top priority in their respective national energy policies.

Indonesia, Thailand and Vietnam have attached great importance to bringing into use nuclear energy so as to increase its share in each country's energy mix. The building of nuclear power plants is one of the major components of each country's strategy for power development. Indonesia and Thailand have proposed four nuclear power plants while Vietnam planned to build two.²⁵ All the three countries has set the same deadline for the operation of their first nuclear power plants in the period 2016 - 2020 with the power capacity of 2,000 megawatt each.

There is no doubt that nuclear energy has got its lion share in energy mix of such countries like Japan and South Korea. In Japan, for example, with more than 50 nuclear power plants are in operation, nuclear energy accounts for nearly 40% of the country's total power production.²⁶ In the case of Southeast Asian countries, the share of nuclear energy in power production would not increase much if regional countries have planned to build quite few number of nuclear power plants.²⁷ However, human and financial resource, technical requirements are the main obstacles that do not allow developing countries like Vietnam to build four nuclear power plants at the same time.

The threats of nuclear are many folds. From the political and security perspective, there are possible threats of "breakout" - developing nuclear weapons capability from an existing nuclear program and the leakage of materials and technology to terrorists groups.²⁸ From the technical and management aspects, the vulnerability of nuclear facilities due to seismic activities such as earthquakes and volcanic eruptions (more likely in the case of Indonesia) and the treatment of nuclear waste and its possible impacts on those living in the neighborhood are the major concerns. For Vietnam, the biggest issue as warned by energy experts has been how to ensure the safety of nuclear power plants once

²⁴ "Government continues to compensate for petroleum vendors," *The Saigon Times*, available at <http://www.thesaigontimes.vn/>

²⁵ World Nuclear Association, available at <http://www.world-nuclear.org>

²⁶ NEAT Working Group on Energy Diversification, Singapore, 2007.

²⁷ With two planned nuclear power plants, it is expected to increase 2% in electricity production.

²⁸ Ta Minh Tuan, "Going Nuclear: A solution for Southeast Asia's Energy Crunch" in *CSCAP Regional Security Outlook*, 2008.

they are put into operation.²⁹ This becomes more urgent in the context that Vietnam lacks human resources for operation and management of nuclear power plants. The training of technicians for the plants operation may take several years as advised by foreign experts, but for training experts it must take longer, not to mention the generation gap in Vietnam when most of nuclear experts trained in the Soviet Union several decades ago are now retired and nuclear energy is not the attractive subject at the domestic universities.³⁰ Concerns at regional level are also on the safety of operation. Unfortunately, there is no available cooperation mechanism in the region regarding the development of nuclear power.

Policy Options

Asia-Pacific countries have been pursuing their individual strategies of ensuring energy security that based on their respective conditions and stage of economic development. But to a large extent, they share the same approaches of diversifying energy resource supplies and at the same time diversifying the energy sources in each country's energy mix. While diversifying energy supplies may create competition when regional countries target the same energy export destinations, diversifying energy mix offers the room for cooperation at regional level and such cooperation will serve a number of purposes. It can help complement national policies and actions and address issues of common interests or concern such as the safe use of nuclear energy and safe disposal of nuclear waste. Such cooperation can be promoted in the framework of APT process whereby developed economies such as Japan and Korea can share their experiences and provide technical support for those in Southeast Asia who have been heavily dependent on fossil fuel in such areas as energy savings and conservation and energy diversification by bringing into use alternative energy. In the framework of ASEAN cooperation, the ASEAN power grid (APG) and the Trans-ASEAN Pipeline can be best example of sub-regional cooperation in energy security.

Conclusion

Energy security is an issue of growing weight in the shaping of relationship between the emerging economies that are thirst for energy and the rich-resource countries around the global and also in key relationships in the Asia-Pacific such as US-China, China-India and China-Russia. On one hand, energy insecurity has posed serious threats to regional peace and security and led to heightened tensions, especially in the South China

²⁹ Interview with Professor Pham Duy Hien, former Director General of the Vietnam Atomic Agency.

³⁰ Feasibility Study of Building the first Nuclear Power plant in Vietnam.

Sea, where rising “energy nationalism” and claims for sovereignty over disputed islands and surrounding water become intertwined. On the other hand, the surge in energy demand for economic development has had implications for sustainable development when the exploitation of domestic primary energy resources for economic growth continued to be a priority in national energy strategy of a number of governments. Environmental degradation, possible social clashes among local people and migrant workers, for example, and other national security issues may be the consequences of the energy investment projects that do not seriously take into consideration the nexus between energy security and sustainable development.

Although countries in the Asia-Pacific have developed their own energy strategies for the 21st century, there are still room for regional cooperation, particularly in the shared goal of diversifying energy resources through bringing into use alternative energy such as nuclear and sharing experiences in energy savings and conservation. Given the low level of cooperation in wider-region of the Asia-Pacific, cooperation should begin at the sub-regional level like in ASEAN or APT framework. /.