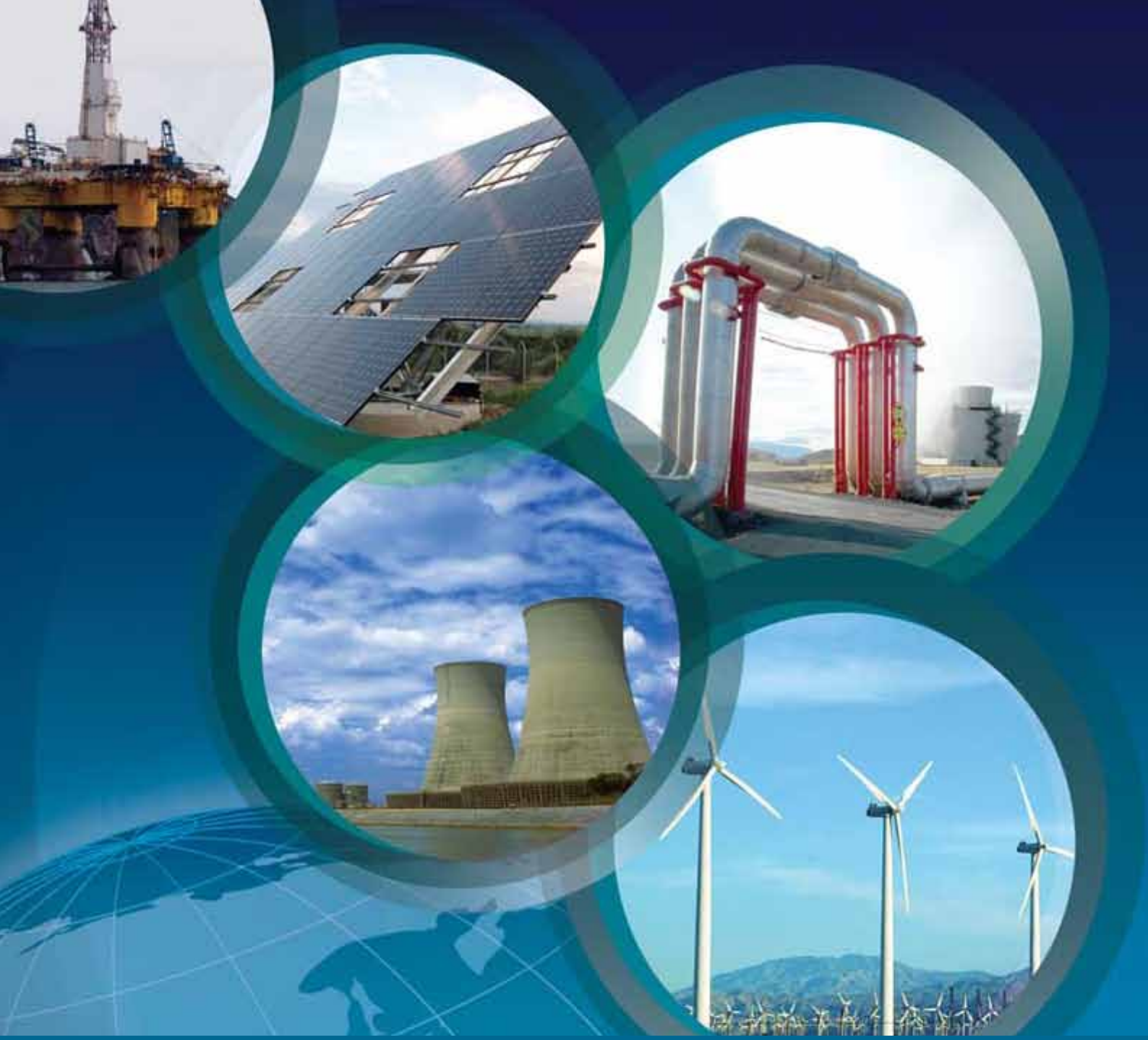

Regional Workshop on Dealing with Energy Vulnerabilities
9–10 December 2010

Organised by the RSIS Centre for Non-Traditional Security (NTS) Studies

Centre For Non-Traditional Security Studies

REGIONAL WORKSHOP ON DEALING WITH ENERGY VULNERABILITIES: CASE STUDIES OF COOPERATION AND COLLABORATION IN EAST ASIA

REPORT

ORGANISED BY
THE RSIS CENTRE FOR NON-TRADITIONAL SECURITY (NTS) STUDIES

9–10 DECEMBER 2010
SINGAPORE

S. RAJARATNAM SCHOOL OF INTERNATIONAL STUDIES (RSIS)
NANYANG TECHNOLOGICAL UNIVERSITY
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This report summarises the proceedings of the regional workshop as interpreted by the assigned rapporteurs and editors of the RSIS Centre for NTS Studies. Participants neither reviewed nor approved this report.

The workshop adheres to a variation of Chatham House Rules. Accordingly, beyond the speakers and paper presenters cited, no attributions have been made.

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Executive Summary

Much literature on energy security in East Asia has focused on the dynamics of competition over resources, and how conflicts could arise from this. While this analytical perspective identifies potential risks and is conducive to the proposing of pre-emptive solutions to likely problems, it also risks precluding necessary attention to the possibilities for cooperation between states in the region. While the themes of competition and conflict will continue to be relevant in discussions on East Asian states and societies, it ought to be a useful exercise to review case studies of how countries in East Asia have managed to overcome their respective vulnerabilities and thus meet their energy needs. Such knowledge can in turn contribute to the exploration of cooperation-based solutions for addressing energy security in the region.

The RSIS Centre for Non-Traditional Security (NTS) Studies organised a Regional Workshop on 9–10 December 2010 in Singapore to examine East Asian energy cooperation and collaboration against the backdrop of conventional research projects that highlight geopolitical uncertainties and tensions as a central focus of inquiry. The Regional Workshop marked the second phase of a project on the theme 'Dealing with Energy Vulnerabilities: Case Studies of Cooperation and Collaboration in East Asia'. This phase provided commissioned writers from an Energy Study Group Inception Meeting in June 2010 with the opportunity to present their research findings.

Papers presented during the Regional Workshop sought to fill the research and knowledge gaps attributed to the general tendency to relate energy security to power politics while undervaluing the extent of interdependence in the chain of energy and energy-product trade among nation-states in East Asia and the wider Asia-Pacific. It is hoped that the findings can stimulate debates on energy policymaking and institutionalisation in the region. A key assumption underpinning this project is that shortages in and uncertainties over energy supplies – that is, energy vulnerabilities – constitute a normative part for the countries under examination. Themes covered by the project include: (1) stock-taking of trade in fossil fuels among East Asian states; (2) the 'Asian premium' phenomenon; (3) developmental institutions and energy in East Asia; and (4) energy vulnerabilities unique to East Asian societies.

Comments and discussions from the Regional Workshop are to be taken into consideration by commissioned writers as they finalise their research papers for inclusion in an edited book volume by the third quarter of 2011.

Welcome Remarks

Associate Professor Mely Caballero-Anthony
Head, Centre for Non-Traditional Security (NTS) Studies
S. Rajaratnam School of International Studies (RSIS)
Nanyang Technological University
Singapore

Associate Professor Mely Caballero-Anthony welcomed participants to the Regional Workshop, which was a continuation of an Energy Study Group Inception Meeting held in June 2010, and part of a project on the theme 'Dealing with Energy Vulnerabilities: Case Studies of Cooperation and Collaboration in East Asia'. She expressed her gratitude to participants of the Inception Meeting for their efforts in seeing through the project with their contributions of papers.

Prof. Caballero-Anthony gave a brief overview of the work of the Centre for NTS Studies. The Centre, she noted, examines security challenges that affect the security and welfare of states and societies, doing this by teasing out some of the issues and approaches to problems from a rather non-conventional perspective.

Resource scarcity is something that is often seen as a possible precursor to interstate conflict. Thus, in an attempt to mitigate the likelihood of conflict, the current project examines energy governance in Asia, with an emphasis on cooperation and collaboration rather than competition. A crucial component in addressing this within the non-traditional security (NTS) framework would be to examine the roles that both states and societies can play in facilitating cooperative rather than competitive approaches to energy security.

Prof. Caballero-Anthony drew a parallel between the themes of this Regional Workshop and that of a recent workshop on the global enterprise of peace operations which took the position that the extent to which states understand vulnerabilities is key. It would seem ironic that while vulnerabilities have become more interlinked, there is still an absence of collaboration, a state of affairs which could potentially allow competition and conflict to escalate. As such, the debate on, and examination of, effective collaboration and cooperation on energy governance issues is critical to Asia.

Professor Zha Daojiong
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Advisor to the Energy and Human Security Programme
Centre for Non-Traditional Security (NTS) Studies
S. Rajaratnam School of International Studies (RSIS)
Nanyang Technological University
Singapore
and
Professor
School of International Studies
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China

Professor Zha Daojiong expressed his appreciation to contributors of papers for their hard work. He noted that the idea of examining energy security from an NTS perspective emerged during a discussion in 2009 when he was a visiting scholar at the Centre for NTS Studies. An Energy Study Group Inception Meeting was held in June 2010 and it was decided that some of the participants should draft papers for publication. This Regional Workshop was intended to give those participants a forum to present and discuss their papers, in order to refine their ideas, sharpen their perspectives and broaden their knowledge points.

Prof. Zha suggested that subscribing to a traditional, mainstream approach to addressing Asia's energy challenges would lead to the tendency to use top-down approaches rather than bottom-up ones. Such approaches are, however, no longer useful in exploring innovative solutions. Top-down, traditional approaches, he noted, reference standard textbook approaches that begin with theories of international politics, move on to illustrate that efforts to secure energy supply is part of a larger pattern of geo-strategic competition, and have the end purpose of identifying risks to the established system or hierarchy. Such approaches have the potential to make only minimal contributions to easing existing tensions surrounding energy trade across nation-state boundaries.

Prof. Zha noted that for much of the modern history of mainstream studies of international politics, East Asia's position in the international system/hierarchy has been an issue in intellectual debates and diplomatic tussles. Much of the research literature has tended to focus on signs of challenges, and sources of threats, to the established norms. Yet, it is important to examine, among other things, how countries and societies in East Asia have managed to pursue cooperation, against the predicted odds of competition.

In short, this project draws wisdom from the emerging traditions of NTS studies and applies it to the study of energy security in East Asia, thereby encouraging thinking out of the usual conceptual boxes, and avoiding the pitfalls found in traditional approaches to energy security studies.

At the closing of his remarks, Prof. Zha related his experiences in conducting a field study in Sudan in 2010, during which greater engagement with the people on the ground provided researchers and policymakers with a variety of insights that could facilitate innovative solutions to hard and complex issues such as energy.

Session 1: Energy Outlook of East Asia and Challenges for Sustainable Development

Chair

Professor Zha Daojiong
Visiting Senior Fellow and
Advisor to the Energy and Human Security Programme
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Paper Presenter

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Discussant

Dr Ji-Chul Ryu
Managing Director
Center for Energy Information and Statistics
Korea Energy Economics Institute (KEEI)
Korea

This session provided an overview of the energy landscape in East Asia and the challenges faced by the region in ensuring sustainable development in the face of energy vulnerabilities.

Twin threats to energy security and sustainable development

There are two major threats currently facing the world – one, threats to adequate and secure supplies of energy at affordable prices, and two, environmental harm caused by excessive energy consumption at the regional and global levels.

With increasing volatility in energy supply, energy prices have been changing dramatically, and this has had serious impact on the availability and affordability of energy. At the same time, world energy consumption is projected to rise rapidly. IEEJ has estimated that world energy consumption would increase 53 per cent from 2008 to 2035 in a business-as-usual scenario, if no additional policy actions are taken to address energy and environmental issues. East Asian countries would witness the most notable growth rate in energy demand, while the developed world would experience more limited increases. As a result of the surge in energy consumption, carbon dioxide (CO2) emissions would also increase rapidly. China, India and the ASEAN region are projected to emit much more CO2 than other countries and regions.

Many East Asian countries are highly dependent on energy imports. Japan and South Korea are heavily dependent on foreign sources for the three major types of energy – oil, natural gas and coal. Although China and India used to be major coal producers, their coal reserves have been sliding. China in fact began to import coal in 2009. In Southeast Asia, the situation is slightly different. Some Southeast Asian countries, for instance, Indonesia, Malaysia and Brunei, are net natural gas exporters. Indonesia and Vietnam export coal, with Indonesia being the world's largest stem coal exporter.

Countries are also increasingly vulnerable to volatility in terms of transportation of energy sources. As energy transportation routes often cross national boundaries, energy issues can become political in nature. In the 1970s and 1980s, for instance, energy transcended political systems in Europe. The Soviet Union gave permission for the construction of European pipelines within its territory. In Southeast Asia, Thailand and Malaysia, as well as Lao PDR and Thailand, have agreed on joint pipelines. Conversely, in the Korean peninsula, tensions stalled plans to extend the Chinese pipeline to South Korea via North Korea. Supplies from Russia were less preferred as Russia exercised strict controls over its energy resources. As a result, Northeast Asian countries had to depend on imports from outside the region, in particular the Middle East, which became their primary source as it was relatively more open to foreign investments.

Overcoming dependency on energy imports

In the case of Japan, diversification has been one of the measures adopted in response to the oil crisis in the 1970s. Japan has promoted natural gas and nuclear energy on the supply front, and encouraged energy efficiency and conservation on the consumption front. In addition, Japan has actively increased oil stockpiling and sourced oil from producers other than the Middle East. However, due to Japan's scarce energy reserves, it has not been easy for the country to diversify its energy resources. By 2009, oil from the Middle East accounted for 90 per cent of Japan's total oil consumption.

In the case of South Korea, it has largely been a net energy importer, as its economic growth relied heavily on high energy-consuming industries. Between 1970 and 2008, its energy consumption increased twelvefold. To some extent, South Korea's path of development replicated that of Japan. As the government realised the risks inherent in the country's energy consumption pattern, it also adopted a policy of diversification by practising energy diplomacy, encouraging conservation, implementing economic re-adjustment, increasing stockpiling and investing in overseas projects. South Korea invested more in hydropower, solar power and renewable energy, so as to reduce the reliance on fossil fuels. In particular, the government channelled its efforts towards advancing civil use of nuclear energy. The Lee Myung-bak administration adjusted the country's economic development strategy to pursue a green growth path, which emphasised high energy efficiency, low CO2 emissions and enhanced international cooperation in energy technology. In addition, President Lee also remarked that energy poverty should be of concern to governments in the region.

Given these trends, it is thus important to strengthen cooperation in developing advanced technology to enhance energy efficiency and conservation. Improvements in energy efficiency and conservation could also contribute to reduction in carbon emissions. Furthermore, governments should encourage energy-saving measures to achieve sustainable development. In terms of regional cooperation, Northeast Asia still has a long way to go as the arrangements in the region have mostly operated bilaterally.

Discussion

Much of the discussion centred on issues related to cooperation. It was noted that multilateral cooperation among China, Japan and South Korea has been minimal in the energy sector. There is to date no formal cooperative arrangement at the regional level. Nevertheless, these three countries can, in fact, complement one another. China has huge market potential, while Japan and South Korea are advanced in nuclear and renewable energy technologies. Therefore, cooperation rather than competition should be mainstreamed. However, due to historical mistrust, the potential for cooperation has yet to be fully explored. Increased cooperation in the energy sector would thus depend on openness in trade and investment, government commitment and the easing of historical distrust.

In addition to government efforts, the inclusion of other sectors, such as business corporations and civil society, is essential for a bottom-up process to be effective. In this regard, think tanks, such as the RSIS, could contribute to the conversations by identifying areas for cooperation as well as ways forward.

Cooperative arrangements would also depend on the specific issues raised in forthcoming multilateral forums. For example, there have been increased discussions on establishing institutions to promote energy transportation security. This would be a significant area of discussion for the Asia-Pacific Economic Cooperation (APEC) forum when Russia – an increasingly important energy supplier – plays host to the APEC meeting in 2012.

Session 2: The 'Asian Premium' Phenomenon

Chair
Mr Yang Razali Kassim
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The 'Asian Premium' in Crude Oil Markets: Fact or Fiction?

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Co-writer
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Price Volatility and the 'Asian Premium': Growing Russian Crude Oil Inflow May Ease the Issue?

Paper Presenter
Mr Kensuke Kanekiyo
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Discussant
Mr Richard Gorry
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Singapore

This session discussed perspectives on the Asian premium phenomenon, wherein Asian countries pay a premium for oil from the Middle East. Some observers have suggested that, as the Middle East crude oil supplied to Asia is priced substantially higher than oil bound for the US and Europe, the Asian premium could be perceived as a discriminatory practice.

Reasons for the Asian premium

There are several factors contributing to the existence of the Asian premium. These include Dubai's oil market illiquidity, unresponsive price adjustment factors, lack of competition and alternative sources of energy, and rigid supply rules. The Asian oil market relies on Middle East crude oil, and thus on Dubai price formation. However, the Dubai market is low in liquidity and transparency. The Middle East oil producers, which are Asia's major suppliers, are not responsive to market fluctuations, failing to adjust accordingly. They also restrict their sales to long-term customers, which means that Asian countries commit to the Asian premium on long-term contracts.

To tackle the phenomenon, think tanks in Northeast Asia have proposed some solutions, including the following: applying the Brent crude oil price as the reference price, using the average of US and European prices, adopting spot trading of Arabian Light crude, increasing crude oil storage facilities in Northeast Asia and promoting oil product trade in Asia. However, these solutions would be ineffective. The Brent, a reference for the European market, is not suitable for the Asian market. The average of US and European prices would not reflect the relative Middle East crude oil value in Asia. Also, Asian countries have yet to agree on how to deal with the phenomenon, and the findings of research institutes do not necessarily reflect the perceptions of private oil companies.

The Asian premium has also been explained as an outcome of history. The 1985 collapse of the old Organization of the Petroleum Exporting Countries (OPEC) pricing regime, which administered the price of oil by fixing a 'posted price', was due to two factors. First, non-OPEC oil-producing companies had increased their output. Second, there were instances of cheating within the OPEC system. As a result, a system of regional market-related formula prices was introduced to replace the fixed price system. According to the formula, the Middle East oil supply price is set at equal to the benchmark crude oil price plus an adjustment factor, which constitutes less than 5 per cent of the total price of a particular crude oil grade. The crude oil price benchmark would be set by the market and could thus vary from region to region. Due to geographical factors and the lack of oil reserves, countries in Northeast Asia have no alternatives to this pricing system. As such, the Middle East will remain the major source of supply for Northeast Asian countries under the most plausible scenarios.

Implications of the Asian premium

Higher oil prices reduce refining margins and increase the price of other energy commodities. The financial burden of extra costs could suppress economic and industrial activities and reduce the competitiveness of Asian economies. IEEJ estimated that the Asian premium imposes an additional annual burden of USD4–8 billion on the Asian market. Moreover, Asia's lack of proper market signals for crude oil pricing has placed the region in a fragile position.

There was also great uncertainty for the energy security of countries worldwide when oil prices fluctuated violently in 2008 and 2009. Unstable crude oil prices threatened sustainable development, by retarding economic growth, widening global wealth imbalances, fuelling resource nationalism, and thereby inflicting adverse impacts on both consuming and producing countries. While the 2008 financial crisis did help to reduce the Asian premium significantly, it was not eliminated, due to Northeast Asia's strong dependence on the Middle East for its oil supply. Hence, as long as Asian oil markets continue to grow substantially, their dependence on the Middle East would increase, thereby adding to the vulnerabilities of their oil industries.

Despite the higher premium, it is likely that oil companies in Northeast Asia are still able to make profits. As such, the premium has little to do with discrimination against East Asian countries but is merely the result of price-setting by existing market structures.

Alternatives to the Asian premium

An alternative to the Asian premium may be found with the emergence of Russian crude oil export and thus an opportunity to change the market system. Russia currently exports around 500,000 barrels of crude oil daily from its eastern ports. The increase of Russia's oil supply to Northeast Asian countries would add pressure to the Asian premium. Russian crude oil from its eastern ports has an advantage over Middle East oil: its proximity to Northeast Asia means lower transportation costs. Russian crude oil is also attractive as it is of high quality with low sulphur content.

There are however, some uncertainties. Given the fact that oil supply from eastern Russia would be able to reach its Northeast Asian neighbours within three to four days, there would be a need to ensure effective management of tankers to accommodate the higher frequency of tankers. Moreover, there is a need for a more reliable and transparent pricing system in order to plan future energy systems effectively. The current pricing system in the Asian market is opaque and fragile, and dependent on the Oman-Dubai pricing system. With the availability of Russian crude oil and its advantages, the Asian market might be able to establish a stable pricing system within the region.

Discussion

It was noted that the rich Russian oil reserves have important implications for addressing the Asian premium. However, more investment is needed to improve the infrastructure and facilities of the Russian oil fields if the expansion of their export to Asian countries were to be achieved. Moreover, it was observed that if Japan, South Korea and China all turn to Russia, oil prices would increase, and hence the oil would no longer be as cheap as anticipated. In addition, Northeast Asian countries are more accustomed to long-term oil trading. As a result, Northeast Asian refineries are less flexible in dealing with market fluctuations and may be unable to set their own benchmarks.

On the issue of alternative sources of supply, it was observed that although Asian countries have also sourced crude oil from Africa and Latin America, oil prices continue to increase. Hence, such alternative supplies have failed to address the problem of the Asian premium. Iraq's huge export potential was mentioned by one participant. If the potential production capacity of Iraq is fully explored, it could have significant implications for Asian countries as it could greatly relieve the pressures on the supply market.

The point was made that a regional framework on energy pricing might be needed, such as an energy charter treaty. However, countries in Asia do not seem to be actively engaged in establishing such a framework. There are several possible factors for this. First, there has been a lack of enthusiasm on the part of national governments, as the latter have played a supervisory role in the oil market only since 1945. As the market has been performing relatively well, there are few incentives for governments to push for a regional framework. Second, the Asian market is not homogeneous; the oil industries of the different Asian countries are at varying levels of development and have different focuses. Setting an oil pricing mechanism would therefore require a unified signal from the energy-consuming countries. Third, while it is up to the oil-supplying countries to set oil prices, there is also an issue of insufficient local oil production areas within the region. As a result, Asian countries end up paying higher prices for oil than the West.

On the issue of logistical challenges faced by Asian countries in importing oil from sources other than the Middle East, it was noted that since the 2008 financial crisis, the oil shipping industry has suffered great losses, with their capacities declining by 93 per cent. Many shipping companies have been experiencing over-capacity rather than under-capacity.

Session 3: Energy in a Seamless Asia

Chair
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Discussant
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This session began with the assertion that increased cooperation and collaboration through the formation of an integrated energy market in East Asia would reduce energy vulnerabilities. Based on the concept of energy security, energy integration would enhance the availability of energy resources for countries in the region and contribute to mitigating the negative impacts of energy use on the environment.

The misdirected use of abundant resources

It was noted that there continues to be a high demand for coal, oil and gas in Southeast Asia. The demand for these traditional sources of energy in Southeast Asia is estimated to grow at an average annual rate of 2.5 per cent, which is expected to push ASEAN's share of global demand from 4.3 per cent in 2007 to 5.4 per cent in 2030. However, while ASEAN countries do possess some of these resources – for example, Indonesia, Vietnam and Thailand have abundant coal reserves; and Brunei, Indonesia, Malaysia and Vietnam are rich in oil and natural gas – their fossil fuel reserves are relatively low and insufficient to meet the region's needs.

Southeast Asia possesses a relatively larger potential in renewable energy sources, such as hydropower, wind, biofuels and geothermal energy. However, the demand for these sources has increased at a relatively low pace compared to traditional energy sources. Indonesia and the Philippines have huge potential in geothermal energy, being the second and fourth geothermal power producers in the world, respectively. Brunei, Indonesia and Malaysia are crude oil and liquefied natural gas (LNG) exporters within ASEAN. In addition, most ASEAN countries have plentiful hydropower. However, much of this renewable energy potential remains under-utilised. Among the various reasons for the low utilisation level of renewable energy is the lack of demand, insufficient funds for developing such energy and inappropriate levels of the necessary technology to realise its potential. An integrated energy market would therefore have to effectively take these factors into account.

Regional infrastructure for the energy market

It was suggested that effective energy cooperation would require an integrated energy market which ensures cooperative competition among the various sectors within the energy market. Examples of cooperative competition include the ASEAN Power Grid, the Trans-ASEAN Gas Pipeline (TAGP) project, and energy development and cooperation in the Greater Mekong Subregion. The ASEAN Power Grid project is an indication of the technological and economic viability of a pan-ASEAN energy market. Moreover, given the fact that Asia has a host of net importers and exporters of energy, an integrated energy market and energy trade would be able to meet mutual needs and bring mutual benefits. Such regional cooperation will also facilitate ASEAN unity.

An integrated market would need to first ensure that national electricity grids have the capacity to accommodate grids for renewable energy sources and that these would be able to reach all consumers. These grids, together with roads, railways and pipelines are essential infrastructure for energy transportation, and electricity transmission and distribution. The additional benefit of such integration of renewable energy would be to make possible a gradual shift to a low-carbon economy. It is estimated that East Asia would gain USD2 billion by making clean energy available. Cross-border energy trade involving renewable energy resources would reduce power generation from fossil fuels such as coal or oil. This would improve the environment, as renewable energy emits smaller amounts of greenhouse gases (GHGs) and pollutants than fossil fuels.

To facilitate this, transnational physical connectivity is vital. Effective regional energy infrastructure is needed and would be best situated along cross-border economic corridors. Upgrading and extending Asia's infrastructure networks would generate significant benefits, through reduced costs, increased trade volume, more efficient energy production and utilisation, and investment in infrastructure which will bring about welfare gains.

Investments in energy infrastructure

Fossil-fuel and renewable-energy production require substantial amounts of investment, especially in energy supply infrastructure in Southeast Asia. It is projected that USD1.1 trillion would be needed over the period 2008–2030. Poorer countries in the region will face difficulties in meeting these costs. As infrastructure investment and economic development are strongly interconnected, it would be important for relevant institutions to be established to facilitate investment in the construction of needed infrastructure.

It was also accepted that realising a seamless Asia would be very costly, thus the suggestion that a Pan-Asian Infrastructure Forum (PAIF) and an Asian Infrastructure Fund (AIF) would be critical for the construction of energy infrastructure. In other words, supportive policy frameworks and relevant institution building would be necessary and important for energy market integration. Relevant fiscal incentives and policy frameworks should be established, to promote closer economic integration and thus facilitate free trade in energy. It was observed that best practices exist from European Union (EU) and Latin American regional models. Major Southeast Asian countries, such as Indonesia and Malaysia, could also take the lead and push for infrastructure integration as a foundation for market and economic integration.

Discussion

The discussion began on a conceptual footing, with the suggestion of using 'energy poverty' to underpin drives to diversify into renewable resources for energy supply and to establish an integrated energy market. Such an approach would also factor in the vulnerabilities faced by local communities. The collaborations between China and the Greater Mekong Subregion countries of Lao PDR, Vietnam and Myanmar would be a case in point. It was noted, though, that China-Lao PDR collaborative efforts in building hydroelectric dams had led to the forced displacement of communities as well as a host of other environmental issues that have affected the livelihood options of these communities. There is thus a need to further examine the level of social acceptability of these projects to avoid assets being expropriated by transnational or multinational companies, leaving locals with minimal stakes in the projects. Factors to examine include the progress of such collaborative efforts, its potential financial and engineering impediments as well as the agents involved in these projects. Moreover, it was suggested that in an era of urbanisation, renewable energy may not be attractive. As such, the focus should remain on fossil fuels but with resources allocated to developing clean-energy output mechanisms.

On the issue of regional collaboration, a thorough assessment of present efforts, as well as concerns, was proposed. It was suggested that bilateral engagements – for example, at the national level with private companies – are more pragmatic as larger projects involving multiple countries could be impaired by difficulties in mobilising political will. It was also suggested that the role of banks, such as the Asian Development Bank (ADB), was in most instances fundamental – due to the experience and the financial leverage they are able to offer.

On the issue of the need for a legal framework, it was observed that ensuring stable and consistent market conditions could encourage investment as well as reduce the risk of sabotage by local players. However, such frameworks might also facilitate protectionist measures. A legal framework would therefore need to be flexible enough to ensure equal distribution of risks between collaborators; it would need to be connected to an economic framework and take into account market complexities, by stipulating and supporting agreements on tariffs, the nature and operation of a system, and the infrastructure.

Session 4: Developmental Institutions and Energy in East Asia

Chair
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NEAT Working Group on Energy Security Cooperation

Paper Presenter
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Discussant
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This session focused on the Network of East Asian Think-Tanks Working Group (NEAT WG) on Energy Security Cooperation in East Asia, one of the working groups established by NEAT, a Track II body sanctioned by the ASEAN Plus Three leaders to enhance cooperation among the 13 countries. The NEAT WG on Energy Security Cooperation in East Asia had met over a three-year period from 2005 to 2007, to brainstorm and provide recommendations related to energy and energy-related issues for the consideration of senior government officials (at the ASEAN Plus Three level).

Network of East Asian Think-Tanks (NEAT)

The establishment of the NEAT was one of the measures suggested by the East Asian Studies Group for fostering East Asian cooperation. This measure was endorsed by the leaders of ASEAN, China, Japan and South Korea at the 6th ASEAN Plus Three Summit in Phnom Penh, Cambodia, in November 2002.

The objectives of establishing such a network for East Asia include: accelerating exchanges of views on issues important to the peace and security in the region; effectively analysing common problems faced by East Asian countries; drawing up harmonised solutions to the problems; exchanging best practices in addressing problems in policymaking and implementation; and jointly exploring long-term issues of strategic importance to the region.

Among Country Coordinators from the 13 countries, three broad groups of representation can be discerned: (1) autonomous think tanks or academic institutions (institutions under this group come from countries such as Indonesia, Japan, Korea, Malaysia, the Philippines, Singapore and Thailand); (2) institutions that have some form of affiliation to or come under the aegis of Track I (institutions from countries such as Brunei, China, Lao PDR, Myanmar and Vietnam are represented in this group); and to a lesser extent (3) Track I bodies (these are from countries such as Cambodia). Nevertheless, regardless of their representation, each Country Coordinator has its own internal channels of communication with their relevant Track I bodies.

The establishment of the NEAT was seen as an extension of the ASEAN Institute of Strategic and International Studies (ASEAN-ISIS), an association of non-governmental organisations (NGOs) registered with ASEAN. The NEAT WG on Energy Security Coooperation in East Asia thus encompasses this ASEAN network and the NEAT's network of institutions in Northeast Asia.

NEAT WG recommendations on energy security

The NEAT WG on Energy Security Cooperation in East Asia defined energy security as the process by which the ASEAN Plus Three countries, either nationally or in collaboration with each other, meet their energy needs at a reasonable cost in a sustainable manner. This definition encompasses much broader aspects such as pursuing energy conservation, energy efficiency as well as energy diversification.

Over the course of three years, from 2005 to 2007, the WG submitted annual reports (a total of three), with relevant recommendations, for the consideration of the NEAT Country Coordinators. In its first year, 2005, or Phase 1, the energy outlook for the region and East Asian cooperation in energy conservation was considered. The main recommendations included the following:

- A regional energy cooperation framework, based on respecting and complying with international law, should be institutionalised, with the aim of coordinating oil stockpiling in East Asian countries, promoting transnational energy projects, improving the quality of energy data and statistical information, and stepping up maritime security coordination efforts.
- The development of markets for conventional energy to ease speculation, and natural gas markets to reduce dependence on oil and oil-fired subsidiaries, should be encouraged. Energy conservation and alternatives should be promoted. Efforts in this direction should begin by improving existing energy resources and exploring alternatives including renewable sources.

In its second year, 2006, or Phase 2, demand-side issues were examined with particular focus on energy efficiency and conservation. The main recommendations included the following:

- Countries are to set national targets for energy efficiency, and expand energy conservation efforts through audits, inspections, minimum energy consumption efficiency standards, energy efficiency demonstrations and public education on energy efficiency.
- Energy-saving activities at the household level should be introduced.
- Energy conservation in the consumption of oil especially in the transport sector and the manufacturing industries should be encouraged.
- Public education and campaigns on energy conservation should be implemented.
- The maritime sector needs to be improved through material and technical assistance to less-developed littoral states. It was suggested that the Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP) is well-placed to expand its scope to cover environmental disasters, and that participation in, and cooperation with, ReCAAP should be encouraged. It was thought that such cooperation efforts would have confidence-building effects, boosting mutual trust among the various parties.

In its third year, 2007, or Phase 3, supply-side issues were considered, with the focus being energy diversification. The main recommendations included the following:

- Viable alternatives such as renewable sources of energy should be explored.
- Facilitating sharing of information, technology and know-how on the use of both fossil and non-fossil fuels should be encouraged.
- The development of the TAGP project as an alternative energy source should be hastened, in order to reduce the oil industry's heavy reliance on the transportation sector.
- The ASEAN Centre for Energy (ACE) should be expanded to cover all ASEAN Plus Three countries, with more attention and resources channelled towards energy conservation and diversification efforts.

The impact of the Track II recommendations

In three statements issued at different ASEAN Plus Three summits, the various recommendations of the NEAT WG on Energy Security Cooperation in East Asia were noted, indicating, to a certain extent, a recognition of the work of this WG. Furthermore, many of the recommendations were incorporated into the Second Joint Statement on East Asia Cooperation in November 2007, and particularly into its attached Work Plan.

As a caveat, it was recommended that it would be prudent to not over-estimate the role of the NEAT WG on Energy Security Cooperation in East Asia. This is primarily because the WG is a Track II body contending with a few other formal ASEAN Plus Three bodies which are also exploring ways and means to enhance energy cooperation. These other bodies provide a more direct input – at Track I – into the decision-making process on energy cooperation. Hence, while the WG did play a role in the entire process, it is difficult to discern its exact contribution.

A possible area of improvement in forming future NEAT WGs would be in the area of communication between Track I and Track II. It would, for instance, be extremely useful for Track I or its relevant sectoral bodies to either provide feedback to the NEAT or to its respective WGs on the outcomes of the recommendations made. The lack of such a mechanism has often left the WGs with some doubts as to how effective they have been in carrying out their work.

Discussion

Various misconceptions on the causes and consequences of diversifying into renewable sources of energy were discussed. These include issues related to land rights and noise pollution associated with windmills. It was argued that there should be initiatives to highlight positive outcomes. An example of such an initiative would be the public awareness efforts in connection with the adoption of wind energy in the Philippines, which resulted in negative perceptions being changed. The completion of the wind energy project brought about positive reactions and a sense of achievement, as the project contributed to boosting tourism.

It was noted that the role of Track II organisations is fundamental – they provide expert or specialist knowledge to Track I organisations. At the same time, the extent of influence non-Track I organisations possess on issues depends on the governance structures surrounding the issue. For instance, if the issue is governed by a Convention, or subject to parliamentary endorsement, that could restrict participation by the academic community. In other cases, decision-making institutions are driven by industries and so industrial actors play a greater role, such as in the EU. Nonetheless, it remains the case that government authorities wield greater influence over industries (than vice versa).

The need for feedback on the recommendations provided by the NEAT WG was explored further. The instituting of feedback mechanisms would be significant in furthering the development of loose consortiums that can explore cooperation in energy development, and conduct energy-related dialogues with extra-regional groupings for promoting understanding and building rapport. Through such review processes, Track II bodies can direct their efforts to the demands and requirements of Track I priorities. It was suggested that it may be useful to have review meetings back to back, as is being done by the Council for Security Cooperation in the Asia Pacific (CSCAP) and the ASEAN Regional Forum.

Session 5: Enhancing Regional Cooperation

Chair
Associate Professor Mely Caballero-Anthony
Head, Centre for Non-Traditional Security (NTS) Studies
S. Rajaratnam School of International Studies (RSIS)
Nanyang Technological University
Singapore

Enhancing Regional Cooperation in Fighting Piracy and Robbery against Ships in Asia

Paper Presenter
Ms Lee Yin Mui
Assistant Director (Research)
Information Sharing Centre (ISC)
Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP)

Discussant
Associate Professor Robert C. Beckman
Director, Centre for International Law (CIL) and
Associate Professor of Law
National University of Singapore
Singapore

This session discussed the importance of regional cooperation in addressing energy vulnerabilities, specifically with reference to the Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP).

ReCAAP's role in regional cooperation

The formation of ReCAAP came about due to concerns over piracy and armed robbery against ships in the 1990s. Piracy and armed robbery were seen as threats to maritime navigation, in particular the safety of seamen and the transport of cargo and energy supplies. Such incidents at sea would also result in higher operating costs due to the increased need for insurance following such attacks. As a result, ReCAAP was officially launched on 29 November 2006, and is regarded as the first inter-governmental anti-piracy effort in the Asian region.

An international organisation (IO) with local staff and overseas secondees from 17 member countries (including European countries with shipping interests such as Norway, the Netherlands and Denmark), ReCAAP is tasked with enhancing regional cooperation through information sharing, capacity building and cooperative arrangements in combating piracy and armed robbery against ships.

To fulfil its mandate, ReCAAP has established an Information Sharing Centre (ISC) in Singapore. It functions with the support of designated Focal Points from each of the ReCAAP signatories. Each Focal Point is tasked with four main roles: (1) to manage piracy and armed robbery incidents within its territorial waters or within its jurisdiction; (2) to act as a point of information exchange with the ISC; (3) to facilitate its country's law enforcement investigation; and (4) to coordinate surveillance and enforcement for piracy and armed robbery with neighbouring Focal Points. Through these roles, the Focal Points – which are either from the navy, coast guard, marine police or marine department of a country – are to serve as ReCAAP's eyes and ears for information related to piracy, thereby enhancing collaboration between law enforcement agencies and the maritime industry.

Such cooperation between law enforcement agencies and the maritime industry can ideally bring about several advantages, such as bridging gaps in operational activities by leveraging on each other's strengths, enhancing greater cooperative measures in areas of mutual interest through there being a conduit for communications, and shortening the learning curve through the sharing of best practices. ReCAAP has been able to demonstrate these capabilities in the case of several incidents of piracy in the Asian region.

Challenges

These regional cooperative efforts do nevertheless face several challenges. First, there is the issue of limited resources as funding is provided on a voluntary basis by contracted parties. The main contributors are the governments of Singapore, Japan, South Korea, China, India and Norway. In terms of ReCAAP operations, there is the issue of who pays for the costs of tracking perpetrators and responding to a situation. Often, it is left to an area's Focal Point to react and deal with the situation within their area and inevitably also bear the costs. In the case of Southeast Asia, many incidents occur within Indonesian and Malaysian waters, and these countries may not always be willing to pay.

This raises the second challenge: the lack of cooperation from various stakeholders. States such as Malaysia and Indonesia, which are critical to addressing piracy in Southeast Asia, have not yet ratified the regional agreement. The refusal of Indonesia and Malaysia to ratify the agreement is explained by the fact that the security of tankers is of concern to end users, that is, consumers of imported energy sources, but not these countries. Moreover, these two countries do not profit from supporting these tankers, which are essentially free users of the Strait of Malacca. Rather, these free users would only serve to cause these littoral states to incur greater costs through, for instance, environmental damage by oil tankers. As such, Indonesia and Malaysia would prefer not to internationalise the issue but rather keep it a local issue.

Third, there is the challenge of varying levels of capacity among the Focal Points. For instance, given the varying designated Focal Points in each country, there is a greater need to coordinate effectively across various sectors. Moreover, some Focal Points may have fewer resources available to them or face inter-agency coordination problems, and this may lead to delays in communication and information sharing among them.

The nature of the piracy crimes also makes it difficult for Focal Points with varying capacities. For instance, the difficulty in prosecuting perpetrators could be due to the fact that information does not come in real time. This only serves to highlight the importance of enhancing cooperation with local seafarers, who are one of the best sources of information at sea. It is also important for Focal Points to ensure that information from local seafarers, who may not have a high level of language fluency, is reported accurately.

In terms of legislative capacities, ReCAAP signatories differ widely. Within ASEAN alone, 6 out of 10 member countries do not have domestic piracy laws. This is particularly important as it is ultimately the police (on land) that would have the authority to apprehend perpetrators rather than those out at sea. In this regard, ReCAAP would need to do more to encourage the countries concerned to review their legislation so as to effectively prosecute perpetrators apprehended within their national boundaries. It may also be useful to examine the case of Djibouti, as its code of conduct includes a review of legislation.

Fourth is the issue of trust between governments and industry, the lack of which may impede the extent to which information is shared. For instance, some companies would want to provide reports anonymously in order to protect their businesses. Shipping companies would also not be willing to bear the costs of sending witnesses to trials.

Finally, given ReCAAP's relatively infant stage, there is the challenge of ensuring continued commitment by signatories to sustain ongoing efforts. Given the fact that ReCAAP looks specifically at piracy and armed robbery, it would be difficult to sustain the attention of critical signatories. Indonesia, for instance, is more interested in a broader range of transnational maritime crimes, including issues such as smuggling and terrorism. ReCAAP has sought to address this by organising one-to-one dialogues with individual states to discuss issues and share how to address the problems, and essentially seek to build rapport with individual countries to facilitate greater cooperation. In addition to this, there needs to be greater pressure from the foreign affairs ministries of the various countries to encourage greater cooperation and ratification of agreements. Track II institutions can also play an important role in promoting the value of engaging in regional cooperative arrangements.

Discussion

It was noted that in ensuring the security of energy sources at sea, there would also be a need to consider the role of offshore oil platforms. These platforms not only threaten the environment as a result of spills, but can also threaten the safety of navigation. It is said that there are about 100 oil platforms in Southeast Asia that are reaching the end of their shelf life. However, few plans have been formulated for the safe dismantling of these platforms. In terms of responding to oil spills, Singapore has the capabilities, but effective transnational cooperation would still be required to ensure effective response. There are already international conventions in existence that call for the development of oil spill responses, and it would be necessary for the Asian region to take this into consideration when formulating legislation related to energy security.

Session 6: The Benefits and Barriers to Regional Asian Energy Projects

Chair

Associate Professor Mely Caballero-Anthony
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Singapore

Is Bigger Always Better? The Challenges Facing Transnational Asian Energy Megaprojects

Paper Presenter

Dr Benjamin K. Sovacool
Assistant Professor
Lee Kuan Yew School of Public Policy
National University of Singapore
Singapore

Discussant

Dr Scott Valentine
Assistant Professor
Assistant Director, Master of Public Policy, International Program (MPP/IP)
Graduate School of Public Policy (GraSPP)
The University of Tokyo
Japan

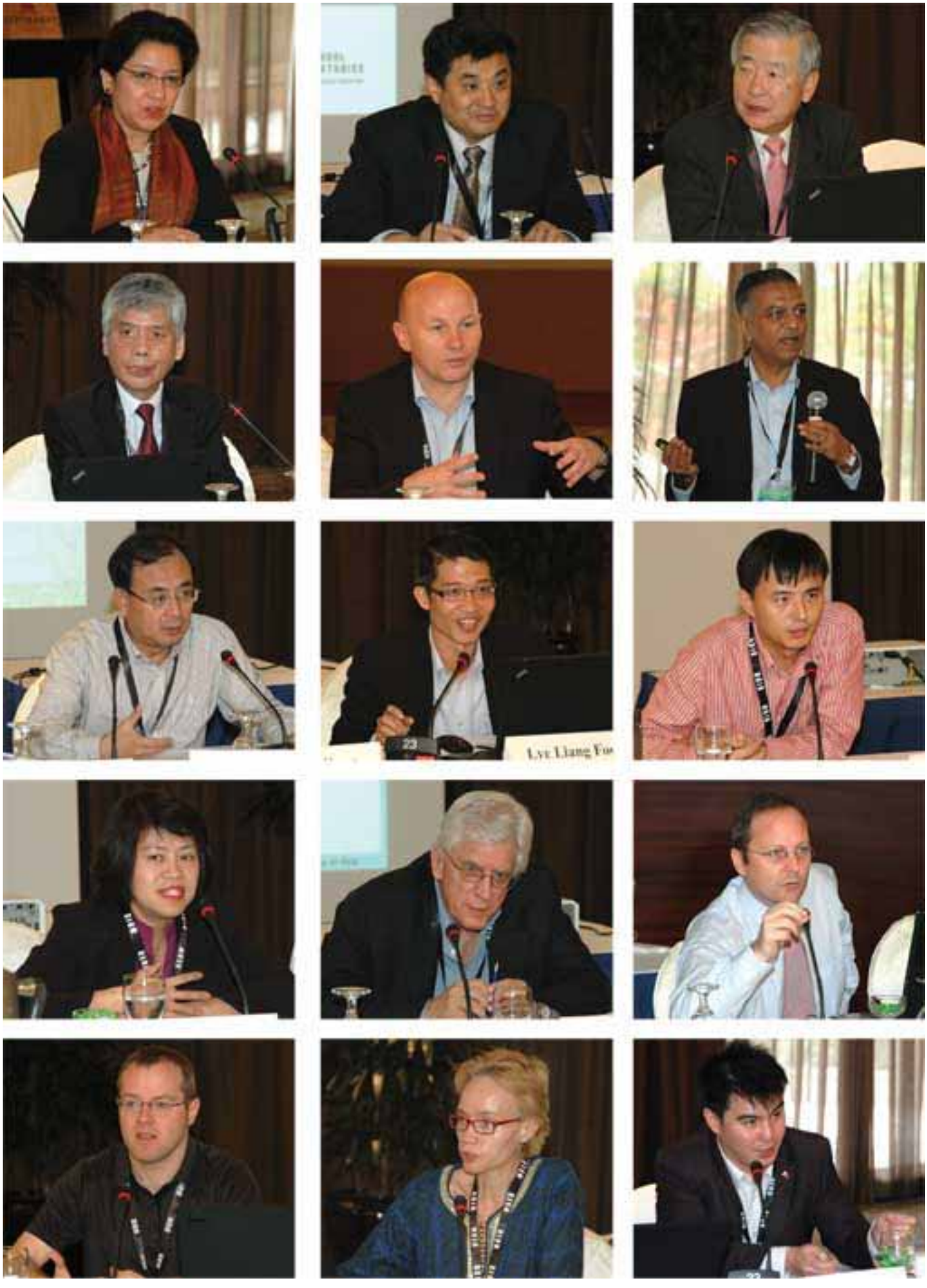
This session discussed the challenges facing large, capital intensive, multi-billion dollar regional megaprojects. It argues that, due to their scale, size and complexity, such projects face a unique range of challenges distinct from those confronting energy infrastructures at smaller scales and within national borders.

Significance of regional energy projects

This session defined regional energy projects based on two criteria. First, these projects are capital intensive – typically large, multi-billion-dollar energy infrastructure initiatives such as dams, pipelines and inter-state transmission networks. Second, a megaproject is of a large geographical scale, with at least two or more countries involved.

Aside from these criteria, regional energy projects are significant for several reasons including the potential economies of scale that could be achieved in areas such as manufacturing and labour costs, and the ability of countries to potentially stockpile resources, avoid duplication and improve market efficiencies. Moreover from a political perspective, regional projects could engender a shared sense of vulnerability to the risk of accidents and disruptions, and this could promote coordination and cooperation.

The study examined three megaprojects: (1) the Baku-Tbilisi-Ceyhan (BTC) oil pipeline exporting petroleum from the Caspian Sea near Azerbaijan and then traversing parts of Georgia and Turkey; (2) parts of the TAGP network connecting the gas reserves of Indonesia, Myanmar and Thailand with each other and Singapore; and (3) the Sarawak Corridor of Renewable Energy (SCORE) intended to connect East Malaysia's hydroelectric resources with electricity markets in Brunei and Indonesia.



Seated (from left to right): *Mr Yang Razali Kassim, Dr Tilak K. Doshi, Ms Lee Yin Mui, Prof. Zha Daojiong, Mr Kensuke Kanekiyo, Prof. Mely Caballero-Anthony, Dr Elspeth Thomson, Ms Yao Lixia*

Standing: *Ms Agnes Koh, Dr Scott Valentine, Mr Ashish Mehrotra, Mr Kevin D.G. Punzalan, Dr Chang Youngho, Dr Ji-Chul Ryu, Dr Jochen Prantl, Mr Lye Liang Fook, Mr William Kucera, Mr Nur Azha Putra, Ms Sofiah Jamil, Ms Irene A. Kuntjoro.*

Implications of regional energy projects

To examine the effectiveness of regional energy projects, a social science systems approach can be useful as it takes into account social considerations (such as economic, educational, legal and administrative factors) and thus defines technological systems differently. From the perspective of this approach, the choice of an energy system significantly impacts the socioeconomic systems of the people, that is, it will have an effect on employment opportunities, economic and social enhancement, the environment and health, technology diffusion and utilisation of resources. However, many megaprojects often face challenges in fulfilling these social needs.

Economic challenges

In terms of economic challenges, there have been instances of undervaluations of costs associated with the three projects under study. In the case of the BTC pipeline, project sponsors assured the governments of Azerbaijan, Georgia and Turkey that it would cost USD2.1 billion. However, costs ballooned to more than twice as much. Moreover, many of the contractors hired by the BTC Company did not understand the need for social and environmental impact assessments, leading to delays in assessing rights of way and construction.

In the case of the SCORE project, one interview respondent stated that some estimate the cost overruns associated with the Bakun dam to be a staggering 600 per cent. Originally, the dam was estimated to cost RM2.5 billion but the figure became much higher due to various delays, rising interest rates, strikes and excavation problems.

Such issues may cause stakeholders to withdraw from the projects, as in the case of the BTC project, which only served to further increase the costs involved. Three members of the consortium – Lukoil of Russia, and ExxonMobil and Pennzoil of the US – were so certain the BTC would not be profitable that they withdrew from the project.

Also, such cost overruns would often not be covered by the companies themselves, but passed on to consumers and ratepayers through higher prices. This was particularly evident in the case of the SCORE project where electrification was largely for the benefit of industries rather than locals and the rural poor in the area.

Another economic challenge for regional projects is their ability to ensure that they are attractive to investors relative to other sources of energy. The ASEAN TAGP, for instance, still needs to demonstrate that they can earn a greater return for investors compared to other possible investments. Also, while some have argued that natural gas pipelines and LNG infrastructure are complementary – they both create demand for natural gas – there is potential for competition between these two sources. In addition, gas pipeline projects would also need to weigh the costs of being perceived as too dirty by advocates of clean power, and not profitable enough by advocates of fossil fuels. There is also the question of them being attractive enough to investors outside of the energy sector.

Socio-political challenges

While regional energy projects can generate high economic returns, there is less certainty regarding whether such returns will be beneficial for local communities. This is reflected at the national level via the issue of transparency and accountability. In the cases of the BTC and SCORE projects, the lack of accountability is reflected in the high level of corruption within governmental bodies. This is further exacerbated by restrictions on freedom of information as well as low levels of policy literacy and representation among local communities. Communities lack an understanding of the issues and they are not vocal enough in articulating their views. With little awareness among local communities on accountability issues, ruling regimes are able to usurp the revenue from the energy projects for themselves. Revenue from Azerbaijan's oil exports, for instance, facilitated a concentration of political power in the office of the President which ultimately undermined the democratic role of the country's parliament.

In the case of the TAGP, the dearth of NGO presence in countries such as Myanmar makes it difficult for local communities to have an active and meaningful discussion with state-owned oil and gas companies on where natural gas pipelines go. Moreover, there is no clear complaint mechanism, nor a clear division of roles between companies and the state.

At the regional level, energy projects touch on the sensitive issue of sovereignty. For instance, countries such as Brunei, China, Indonesia, Malaysia, the Philippines, Taiwan, Thailand and Vietnam continue to contest each other's claims to the natural gas reserves found in East Natuna and the Spratly Islands despite the 'aura of close cooperation' among ASEAN member states and their neighbours.

The construction of energy projects also has adverse implications for local communities' livelihoods through displacement. This is compounded by the lack of accountability, which delays efforts to address the issue. A fieldwork study of the BTC project found that an estimated 7,500 internally displaced people continued to live in makeshift tents with little likelihood of relocation or compensation, while infrastructure such as the irrigation systems and roads in the Shamkir, Goranboy, Ujar and Kurdamir regions that had sustained significant damage were seldom repaired. Moreover, it was estimated that 90 per cent of the funds provided by the BTC Company and others for social relocation and community development went instead to foreign NGOs.

Environmental challenges

The adverse environmental implications of energy projects can also affect the livelihoods of local communities. In the case of the BTC project, abandoned oil sites have socio-environmental implications as little has been done to clean up the sites or safely dismantle the installations.

The natural gas processing facilities for the TAGP project could contaminate local groundwater sources and soil, and accidents could give rise to fatal jet fires, pool fires, fireballs and flash fires (depending on the quantity of gas involved).

Deforestation and flooding were continually referenced as significant environmental impacts from the development of the SCORE project. Dam building also has adverse implications on local communities – the resulting sedimentation affects waterways and thus local communities' mode of transportation and access to other areas such as hospitals.

Discussion

It was observed that the data collection methodology used in the case studies was very comprehensive. Research which employs qualitative methodology using a social science systems approach enables an enhanced understanding of the issues by highlighting greater details through case studies. Such a methodology also allows researchers to zone in on the views of targeted groups of individuals (such as decision-makers or implementers of policy) through purposive sampling.

It was noted, however, that the case of the SCORE project does not totally fit into the study as it is now more national, rather than transnational, in nature. Although the SCORE project was initially projected to be transnational in scale, the reluctance to sell energy to neighbouring Kalimantan and Sabah means that it is now more of a state-level project.

There was some debate over the competing emphases of economic and social concerns in megaprojects. For instance, there is a need to address the socio-environmental implications of energy projects and issues raised by civil society advocacy more squarely. In the case of the BTC project, the level of corruption in Azerbaijan is a concern, and there is a need to fully examine the extent to which corruption is a dominant factor. Also, there are structural impediments related to issues such as fund management and quality of workmanship, especially when project managers have opted to cut corners with little oversight and regard for safety measures during project development. In the case of the TAGP project, the slow progress has been attributed to a focus on concerns related to the buying and selling of energy resources rather than on the project as a means of regional cooperation. It was noted that while economists are aware of the adverse implications of megaprojects, some projects do need to be of a particular size to operate efficiently.

There were also suggestions for further improvements in the study through adding, first, an analysis of whether problems with megaprojects could be attenuated through improved planning and through addressing the various considerations using a social systems framework; and second, an analysis of whether smaller, decentralised energy projects can better serve developing countries in terms of meeting the considerations of a social systems framework. These considerations would include: delivering quality energy services, providing enhanced employment (quality and quantity), ensuring less environmental impacts, enhancing forward and backward linkages, delivering more equitable benefits, reducing corruption, promoting transparency, decreasing human rights abuses and minimising energy costs.

In relation to the projected population increase in developing countries, a question was raised as to balancing the interests of minorities (that is, respecting the interests of minority groups and their territorial rights) with the interests of the majority (that is, addressing their increasing energy needs). It was clear that balancing the needs of various groups would be difficult but nonetheless necessary.

Session 7: Energy Security in the Philippines: Opportunities and Challenges

Chair

Associate Professor Mely Caballero-Anthony
Head, Centre for Non-Traditional Security (NTS) Studies
S. Rajaratnam School of International Studies (RSIS)
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Renewable Energy in the Philippines: Challenges and Opportunities

Paper Presenter

Mr Kevin D.G. Punzalan
Instructor
International Studies Department
De La Salle University
Manila
Philippines

Discussant

Dr Elspeth Thomson
Senior Fellow
Energy Studies Institute
National University of Singapore
Singapore

This session examined the Philippines as a case study in addressing energy vulnerabilities. The Philippines is an interesting case as it is both a laggard and a leader in terms of energy policy. While it is a laggard in terms of its ability to guarantee stable supplies of electricity and the competitiveness of its energy prices, it is a leader in terms of exploring alternative energy options and in privatising its energy market. As such, the experience of the Philippines with privatisation and developing alternative energy sources provides lessons for addressing energy vulnerabilities, in terms of which policies work, and which do not.

History of the Philippine energy policy (1970–2010)

The Philippines was historically 95 per cent dependent on imported oil for energy. Such dependency made the country highly vulnerable to increases in oil price. As a result, the government of the Philippines launched a civil nuclear programme to shift energy generation away from expensive imported oil.

The construction of a nuclear power plant (NPP) in the Philippines took many years and was characterised by cost overruns. Moreover, the plant was completed in the midst of an anti-nuclear policy environment. Objections were particularly strong as the NPP was being constructed in a geographical location prone to volcanic eruptions and earthquakes. Upon completion of the NPP, the Philippines faced two main problems. First, there was a generation shortage that had to be addressed immediately. There was a shortage of 3,077 gigawatt hours (GWh) which resulted in the Philippines losing between USD600–800 million per year in foregone investments. Second, there was a funding shortage for the construction of new generation facilities. The Aquino government was short of capital as a result of the moratorium on foreign borrowing in the final years of the Marcos regime. Moreover, by continuing to honour the debt incurred in the construction of the NPP (which had ballooned to USD2.3 billion by the time the plant was finished), the state-owned generation monopoly, the National Power Corporation (NAPOCOR), became bankrupt in 2001. The Power Sector Assets and Liabilities Management Corporation was then set up as its successor, and sold generation assets to private investors. As of year 2010, over 70 per cent of the country's generation facilities are now in the hands of private investors.

Challenges and opportunities

Several challenges have arisen as a result of these changes in the energy policies of the Philippines. First, the privatisation of power generation led to the entry of different players, and such diversified ownership increases the risk of shortages, due to the lack of coordination of the maintenance programmes.

This leads to the second challenge of rising energy costs. In the period following 2001, Philippine consumers paid as much for the power purchase adjustment as they did for the actual cost of power, and many industries cited this as a disincentive. Thus, the immediate challenge is to find ways to reduce the cost of electricity and to lower power rates in order to retain existing industrial investments and to attract new investments. Such efforts must not involve passing on the costs to another body (as was done to NAPOCOR).

There is also the challenge of sourcing for new generation facilities. This is particularly critical for the island of Mindanao. While there is the temptation to establish diesel generators, the long-term costs involved do not commensurate with the short-term gains. Securing public support for new infrastructure is an area of concern. While nuclear energy is increasingly an option considered by many countries in the region, it is still widely opposed by civil society organisations. Specifically, in the Philippines, environmental NGOs, academia, the church and other interest groups have lobbied against nuclear power. They have even testified against NPPs in Congress using environmental and financial justifications.

Finally, there is the challenge of evaluating energy alternatives. While hydropower remains an important alternative energy source, better watershed management must be adopted to guarantee supply. This requires improvements in multi-sectoral cooperation as well as thorough environmental impact assessments.

Despite these challenges, there have been some successes in the attempt by the Philippines to harness alternative energy. First, it could be suggested that the Marcos Plan was partly successful as the attempt to move away from oil dependency and adopt alternative sources of energy proved to be a far-sighted policy. While the nuclear power component of the Marcos Plan was unsuccessful, both the hydropower and geothermal components saved billions of dollars in foreign exchange, and were also less polluting. Second, the efforts demonstrated the viability of geothermal power in the Philippines. Since 1973, the industry has grown steadily, with a 700-megawatt (MW) plant on the island of Leyte, among others. Also, maintenance and sustainability issues appear to have been addressed, with problems such as groundwater intrusion and acidic wells under control. Third, the efforts have also demonstrated suitable geographical conditions for renewable energy – particularly in the use of off-grids on the outer islands which are not connected to the national grid. As such, there is great potential for renewable energy resources such as wind, geothermal energy and solar power. Finally, there has been an increase in public support, which is seen in the lobbying for policy initiatives on renewable energy. NGOs in the Philippines have also been active in proposing and maintaining micro-renewable energy infrastructure.

Lessons learnt

In light of these challenges and opportunities, there are several lessons for policymakers to take away from the Philippines' experience with alternative energy. First, the knee-jerk development of nuclear power did more harm than good as the NPP that was built was more costly than projected and the geological risks in the Philippines were considerable.

Second, while privatisation was instrumental in ending the power crisis, the contracts signed were not sustainable in the long run. This was because take-or-pay contracts were expensive. As such, better coordination among independent power producers (IPPs) is necessary.

Third, the decision to diversify energy resources in the 1970s was far-sighted. The Philippines has to date the longest track record in renewable energy development in Southeast Asia. In particular, the development of geothermal resources proved vital.

Fourth, engaging with civil society can be productive as they can assist in evaluating the sustainability of alternative projects as well as provide advice on the formulation of legislation on alternative sources of energy.

There are also opportunities to strengthen regional cooperation. In terms of standardising regional incentives for renewable energy, other countries in the region could pattern their renewable energy policies after that of the Philippines as the latter has been a pioneer in creating a comprehensive renewable energy policy. There can also be more efforts in standardising incentives, especially as ASEAN market integration deepens. This can create a larger market as a whole for renewable energy and help bring down costs as more firms set up shop in the region. There are also incentives for renewable energy support services. The Philippine experience has demonstrated that the initial construction and operation of renewable energy projects are affordable. However, the problem lies in long-term operational costs. Replacement parts are costly because fabrication is still limited to countries outside the region. Costs are therefore quite high and sometimes unsustainable for communities which have installed renewable energy. As such, there is a need to provide incentives for manufacturing, and support for R&D at the regional level so that parts can be manufactured at more sustainable costs.

Discussion

On the issue of energy vulnerability, a comment was made that dependence on energy imports is not always a vulnerability. This would be the case when comparing Singapore, which is highly dependent on energy imports, and Nigeria, which has sufficient sources of energy but is still vulnerable with a relatively slow rate of development.

It was suggested that the proposed paper could be strengthened by including a breakdown of the Philippines' energy import dependence. For instance, gas and coal are more significant now than in the past. This is due to the fact that, in the 1980s, geothermal energy was cheaper than fossil fuels. Wind power has some potential though it is still relatively new in the Philippines – the first projects were established only in 2004. Wind power is said to cost 8 cents less per kilowatt hour (kWh) than power from the national grid generated through the use of fossil fuels.

An IEEJ report has noted that the government of the Philippines needs to take on more responsibility in ensuring energy security as it is very capital intensive. There is also a need to be wary of tariffs as privatisation can push prices up exponentially. Thus, greater in-depth thought would be required, such as in the calculation of initial investment costs. In terms of government prioritisation for funding, it was noted that the Department of Energy is the second smallest department in the government of the Philippines. It had been abolished during the Aquino administration and was only revived in the 1990s.

It was also noted that the Philippine national tariff rates body comprises representatives from the private sector as well as consumers. However, rates take a long time to be decided on, before being released, as they are discussed extensively by the various representatives. As such, off-grid energy solutions may be preferable.

On the issue of cooperation, it was noted that South Korea has assisted in constructing a coal power plant in the Philippines. A comment was made that regional organisations such as the ADB are not necessarily interested in financing micro-projects. It would thus be useful to have some sort of body to facilitate such financing and the sharing of best practices. Others commented that the reliance on international finance would only make debt more untenable for countries such as the Philippines.

Concluding Remarks

Associate Professor Mely Caballero-Anthony
Head, Centre for Non-Traditional Security (NTS) Studies
S. Rajaratnam School of International Studies (RSIS)
Nanyang Technological University
Singapore

Associate Professor Mely Caballero-Anthony noted that given the breadth of topics covered over the previous two days, the 'Dealing with Energy Vulnerabilities: Case Studies of Cooperation and Collaboration in East Asia' project is indeed an ambitious one.

Prof. Caballero-Anthony expressed the view that it was a pleasure to be able to collaborate with other institutes in Singapore such as the Energy Studies Institute, the Lee Kuan Yew School of Public Policy and the East Asian Institute. Such collaborations have been useful in understanding the topic from a variety of perspectives.

Prof. Caballero-Anthony also commended Dr Tilak K. Doshi's point that cooperation and collaboration represent a useful move away from zero-sum games. While the push for cooperation is there, there are nevertheless serious snags. She noted that the papers presented at the Regional Workshop have pointed to issues of governance. She reiterated the need to include the role of non-state actors in cooperative initiatives to ensure more effective collaboration in reducing energy vulnerabilities.

Professor Zha Daojiong
Visiting Senior Fellow and
Advisor to the Energy and Human Security Programme
Centre for Non-Traditional Security (NTS) Studies
S. Rajaratnam School of International Studies (RSIS)
Nanyang Technological University
Singapore
and
Professor
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China

Professor Zha Daojiong thanked the participants of the Regional Workshop for their fruitful contributions. He observed that the papers have discussed both endogenous and exogenous factors of energy security and the complexities surrounding them.

He noted the follow-up timeline for paper writers and ended by thanking all for their hard work in organising and participating in the Workshop.

Programme

9 December (Thursday)

Venue: Stamford Room
Level Four
Park Royal on Beach Road

08:30 – 09:00 **Registration**

09:00 – 09:20 **Welcome Remarks**
Associate Professor Mely Caballero-Anthony
Head, Centre for Non-Traditional Security (NTS) Studies
S. Rajaratnam School of International Studies (RSIS)
Nanyang Technological University
Singapore
and
Professor Zha Daojiong
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Peking University
China

09:20 – 10:50 **Session 1: Energy Outlook of East Asia and Challenges for Sustainable Development**

Chair:
Professor Zha Daojiong
Visiting Senior Fellow and
Advisor to the Energy and Human Security Programme
Centre for Non-Traditional Security (NTS) Studies
S. Rajaratnam School of International Studies (RSIS)
Nanyang Technological University
Singapore

Paper Presenter:
Mr Kensuke Kanekiyo
Former Managing Director and Research Advisor
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Japan

Discussant:
Dr Ji-Chul Ryu
Managing Director
Center for Energy Information and Statistics
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South Korea

Q & A

10:50 – 11:15 Group Photo Taking and Break

11:15 – 12:45 **Session 2: The 'Asian Premium' Phenomenon**

Chair:
Mr Yang Razali Kassim
Senior Fellow
Centre for Non-Traditional Security (NTS) Studies
S. Rajaratnam School of International Studies (RSIS)
Nanyang Technological University
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The 'Asia Premium' in Crude Oil Markets: Fact or Fiction?

Paper Presenter:
Dr Tilak K. Doshi
Principal Fellow
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Co-writer:
Mr Adi Imsirovic
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Price Volatility and the 'Asian Premium': Growing Russian Crude Oil Inflow May Ease the Issue?

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Discussant:
Mr Richard Gorry
Director
JBC Asia Pte Ltd
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Q & A

12:45 – 14:00 Lunch

14:00 – 15:30 **Session 3: Energy in a Seamless Asia**

Chair:
Dr Jochen Prantl
Visiting Senior Fellow
Centre for Non-Traditional Security (NTS) Studies
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Paper Presenters:
Dr Chang Youngho
Assistant Professor, Division of Economics
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and
Senior Fellow, Energy Studies Institute
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Singapore
and
Ms Yao Lixia
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Discussant
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and
Professor
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Q & A

15:30 – 15:45 Break

15:45 – 17:15 **Session 4: Developmental Institutions and Energy in East Asia**

Chair:
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NEAT Working Group on Energy Security Cooperation

Paper Presenter:
Mr Lye Liang Fook
Senior Research Officer
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National University of Singapore
Singapore

Discussant:
Dr Li Minjiang
Assistant Professor and Coordinator,
China Programme
S. Rajaratnam School of International Studies (RSIS)
Nanyang Technological University
Singapore

Q & A

Enhancing Regional Cooperation in Fighting Piracy and Robbery against Ships in Asia

Paper Presenter:
Ms Lee Yin Mui
Assistant Director (Research)
Information Sharing Centre (ISC)
Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP)

Discussant:
Associate Professor Robert C. Beckman
Director, Centre for International Law (CIL) and
Associate Professor of Law
National University of Singapore
Singapore

Q & A

End of Day 1

10 December (Friday)

Venue: Stamford Room
Level Four
Park Royal on Beach Road

09:00 – 10:30 **Session 5: Enhancing Regional Cooperation**

Chair:
Associate Professor Mely Caballero-Anthony
Head, Centre for Non-Traditional Security (NTS) Studies
S. Rajaratnam School of International Studies (RSIS)
Nanyang Technological University
Singapore

10:30 – 10:45 Break

10:45 – 12.15 **Session 6: The Benefits and Barriers to Regional Asian Energy Projects**

Chair:
Mr Kwa Chong Guan
Head
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Is Bigger Always Better? The Challenges Facing Transnational Asian Energy Megaprojects

Paper Presenter:
Dr Benjamin K. Sovacool
Assistant Professor
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Discussant:
Dr Scott Valentine
Assistant Professor
Assistant Director, Master of Public Policy, International Program (MPP/IP)
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Q & A

12:25 – 14:00 Lunch

14:00 – 15:30 **Session 7: Energy Security in the Philippines: Opportunities and Challenges**

Chair:
Associate Professor Mely Caballero-Anthony
Head, Centre for Non-Traditional Security (NTS) Studies
S. Rajaratnam School of International Studies (RSIS)
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Renewable Energy in the Philippines: Challenges and Opportunities

Paper Presenter:
Mr Kevin D.G. Punzalan
Instructor
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Discussant:
Dr Elspeth Thomson
Senior Fellow
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Q & A

15:30 – 15:45 **Closing Remarks**

Professor Zha Daojiong
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End of Workshop

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About the RSIS Centre for Non-Traditional Security (NTS) Studies

The **RSIS Centre for Non-Traditional Security (NTS) Studies** conducts research and produces policy-relevant analyses aimed at furthering awareness and building capacity to address NTS issues and challenges in the Asia-Pacific region and beyond.

To fulfil this mission, the Centre aims to:

- Advance the understanding of NTS issues and challenges in the Asia-Pacific by highlighting gaps in knowledge and policy, and identifying best practices among state and non-state actors in responding to these challenges.
- Provide a platform for scholars and policymakers within and outside Asia to discuss and analyse NTS issues in the region.
- Network with institutions and organisations worldwide to exchange information, insights and experiences in the area of NTS.
- Engage policymakers on the importance of NTS in guiding political responses to NTS emergencies and develop strategies to mitigate the risks to state and human security.
- Contribute to building the institutional capacity of governments, and regional and international organisations to respond to NTS challenges.

Our Research

The key programmes at the **RSIS Centre for NTS Studies** include:

1) Internal and Cross-Border Conflict
   - Dynamics of Internal Conflicts
   - Multi-level and Multilateral Approaches to Internal Conflict
   - Responsibility to Protect (RtoP) in Asia
   - Peacebuilding

2) Climate Change, Environmental Security and Natural Disasters
   - Mitigation and Adaptation Policy Studies
   - The Politics and Diplomacy of Climate Change

3) Energy and Human Security
   - Security and Safety of Energy Infrastructure
   - Stability of Energy Markets
   - Energy Sustainability
   - Nuclear Energy and Security

4) Food Security
   - Regional Cooperation
   - Food Security Indicators
   - Food Production and Human Security

5) Health and Human Security
   - Health and Human Security
   - Global Health Governance
   - Pandemic Preparedness and Global Response Networks

The first three programmes received a boost from the John D. and Catherine T. MacArthur Foundation when the RSIS Centre for NTS Studies was selected as one of three core institutions leading the MacArthur Asia Security Initiative in 2009.*

Our Output

Policy Relevant Publications

The **RSIS Centre for NTS Studies** produces a range of output such as research reports, books, monographs, policy briefs and conference proceedings.

Training

Based in RSIS, which has an excellent record of post-graduate teaching, an international faculty, and an extensive network of policy institutes worldwide, the Centre is well-placed to develop robust research capabilities, conduct training courses and facilitate advanced education on NTS. These are aimed at, but not limited to, academics, analysts, policymakers and non-governmental organisations (NGOs).

Networking and Outreach

The Centre serves as a networking hub for researchers, policy analysts, policymakers, NGOs and media from across Asia and farther afield interested in NTS issues and challenges.

The **RSIS Centre for NTS Studies** is also the Secretariat of the Consortium of Non-Traditional Security Studies in Asia (NTS-Asia), which brings together 20 research institutes and think tanks from across Asia, and strives to develop the process of networking, consolidate existing research on NTS-related issues, and mainstream NTS studies in Asia.

More information on our Centre is available at www.rsis.edu.sg/nts

** The Asia Security Initiative was launched by the John D. and Catherine T. MacArthur Foundation in January 2009, through which approximately US$68 million in grants will be made to policy research institutions over seven years to help raise the effectiveness of international cooperation in preventing conflict and promoting peace and security in Asia.*

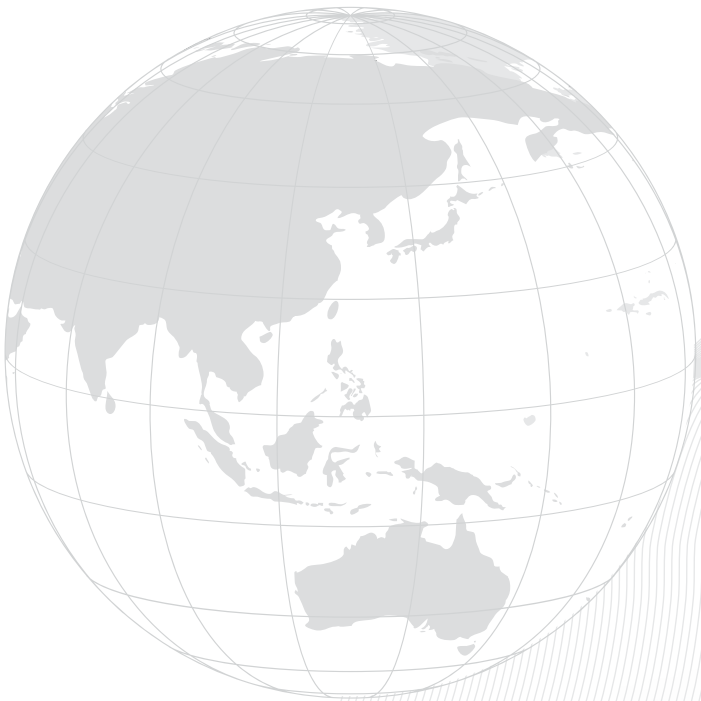
About the S. Rajaratnam School of International Studies (RSIS), Nanyang Technological University

The **S. Rajaratnam School of International Studies (RSIS)** was inaugurated on 1 January 2007 as an autonomous School within the Nanyang Technological University (NTU), upgraded from its previous incarnation as the Institute of Defence and Strategic Studies (IDSS), which was established in 1996.

The School exists to develop a community of scholars and policy analysts at the forefront of Asia-Pacific security studies and international affairs. Its three core functions are research, graduate teaching and networking activities in the Asia-Pacific region. It produces cutting-edge security related research in Asia-Pacific Security, Conflict and Non-Traditional Security, International Political Economy, and Country and Area Studies.

The School's activities are aimed at assisting policymakers to develop comprehensive approaches to strategic thinking on issues related to security and stability in the Asia-Pacific and their implications for Singapore.

For more information about **RSIS**, please visit www.rsis.edu.sg



CENTRE FOR
NON-TRADITIONAL
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