



# CONFERENCE ON SPOTLIGHT ON ASIA'S ENERGY AND SECURITY CHALLENGES — A MULTILATERAL RESPONSE?

7-8 SEPTEMBER, 2007  
SINGAPORE



# CONFERENCE ON SPOTLIGHT ON ASIA'S ENERGY AND SECURITY CHALLENGES – A MULTILATERAL RESPONSE?

CONFERENCE ORGANISED BY  
THE INSTITUTE OF DEFENCE AND STRATEGIC STUDIES,  
S. RAJARATNAM SCHOOL OF INTERNATIONAL STUDIES,  
AND  
INSTITUTE FOR SECURITY AND DEVELOPMENT POLICY

7-8 SEPTEMBER, 2007  
SINGAPORE

## OPENING SESSION



*CE of Energy Market Authority, Khoo Chin Hean, delivering the guest speech*



*Exchange of ideas between RSIS and ISDP*

During the opening session of the conference, Mr Kwa Chong Guan, Head of External Programme at RSIS, highlighted the three aspects of energy security, namely Stability, Security and Sustainability.

The Sweden's Ambassador Pär Ahlberger spoke about the need to further integrate energy, environment and trade policies to produce sustainable and viable strategies.

Mr Khoo Chin Hean, the Chief Executive of Singapore Energy Market Authority (EMA) highlighted the importance of diversification, multilateral cooperation and affordability as the way forward, stressing that solutions should be based on market signals and economically reliable investments.

## SESSION 1

### Asia's Energy Profile: A Security Overview

#### Northeast Asian Energy, Diplomacy and Security



*Exchange of ideas between RSIS and ISDP*

Zha Daojiong began his presentation by highlighting that he will review how China, Japan and Southeast Asian countries have dealt with the South China Sea

as a regional security challenge since the end of the Cold War. He then proceeded to explain China's energy security framework.

He stated that China's GDP has grown by 11 per cent and energy consumption is growing by 16 per cent. He said that the current priority of China is energy conservation and it has had a good past record of energy security. He added that there is also a high reliance on domestic supply of energy. Another aspect of China's energy security framework is the belief that it needed to enhance international cooperation with other countries to ensure a constant supply of energy. Lastly, China acknowledges the need to protect the environment as it considers its energy need. This often means that China is actively investing in technology that will assist in energy conservation.

He predicted that coal would remain an important source of energy as the market prices continue to increase. He noted that the Chinese sale of coal is growing, boosted by increased domestic production. Yet he highlighted that there is a downside to the Chinese reliance on coal such as the high number of deaths related to coal mining. Other sources of energy may include natural gas, nuclear powers and using renewable energy. He predicted that the China-Japan energy relations are likely to shift in the future. China was providing Japan with energy in the form of oil, gas and coal. However, in recent time, the oil that China provides to Japan has decreased steadily. This, he argued could be explained by the fact that China needs the energy for its domestic use. He added that the amount of energy supply to Japan implied that there is a dwindling power of a business lobby in Japan. He said that pragmatism, not ideology, seems to be influencing the flow of energy supply from China to Japan.

Zha then further explored the politics behind the China, Japan and Russia energy relations. He stated that for these countries, their current policy is reflective of a normal development in strategizing energy development. For Russia, the exporter, it simply means that it is diversifying the consumer markets. For China and Japan, the importers, it means a diversification of import markets. Yet, despite the apparent and clear shared interest in developing a strong energy relationship, very little is done on the part of the three countries to seriously develop the proposed Siberia-Daqing-Dalian oil pipeline. He explained that the reason for this is the fact that there is a low level of interdependence between China and Japan in meeting their respective energy supplies. At the same time, access to Middle Eastern oil markets is not under serious risk.

Zha proceeded to explain that the geographical and geo-strategic positions the South China Sea occupies make it a constant security dilemma for all powers in the Asia-Pacific region. He proposed that an examination of the South China Sea as an issue in the international system suggests it can be treated as an indicator of the shifting balance of power between China and the United States, with U.S. allies playing a supportive role. First, the suggestions that the South China Sea may hold a reserve of oil, gas, and mineral

resources have been made since the late 1960s. Japan's reliance on offshore energy supplies, which dates back to the Second World War, and China's dependence on imported oil and gas supplies since the early 1990s have kept alive speculations about intra-regional rivalry for control of the South China Sea as a potential site of energy production. He gave the example of this intra-regional rivalry in the East China Sea gas exploration where both China and Japan are involved in efforts to explore gas.

He argued that related to the unsettled sovereignty disputes over the South China Sea, the Straits of Malacca and the South China Sea in general are becoming more critical for maritime commercial shipping between Northeast Asian and Middle Eastern and European markets. Since the end of the Cold War, the increase in the incidence and in the technological sophistication of attacks on cargo ships and oil tankers has led to maritime piracy again becoming a serious concern. He said that differences in legal rights and jurisdictional responsibilities for dealing with maritime piracy have prevented the emergence of a cooperative regime among the coastal East Asian states. For instance, China has been reluctant to support Japan's region-wide effort to combat maritime piracy, which is a reflection of the continuing weak link between Beijing and Tokyo in the area of military ties.

Zha mentioned that the regional dynamics of energy security leave room for China and Japan, the two big powers, to project their respective security interests towards Southeast Asian states in a more general sense. He noted that it is obvious that both countries have a high dependence on energy import and are exposed to systematic risks in global oil/gas trade. Both China and Japan will also resort to using political/diplomatic means for achieving diversification in energy supply and that there is a low level of mutual dependence in energy supply.

Zha concluded his presentation by stating the goals for regional cooperation in the areas of energy security. He said that there must be some sort of a regional crisis planning such as information sharing if there is a sudden price hike. He noted that there could be an increase in world supply through joint ventures in Third World countries to boost supply and lower costs. There could also be joint leadership between littoral states

in managing navigational safety of Malacca waterways and in dealing with piracy through effective law enforcement.

## The Geo-economics of Central Asia Energy

Robert Cutler began his presentation by defining what he meant by the “geo-economics” of Central Asian energy. He noted that this refers to the international economic and political factors influencing hydrocarbon resource development, and their consequences. Following the collapse of the Soviet Union, the countries around the region began to define themselves collectively as the Central Asia region. He pointed out that Central Asia’s oil and gas deposits have attracted the attention of many international powers. While Kazakhstan and Turkmenistan remain dependent upon Russia’s pipeline system, Uzbekistan exports less despite very high production levels because of the country’s high domestic consumption.

Moving on to the Caspian Sea, the regimes began to talk about developing Caspian offshore resources during the 1990s. However, the Caspian Sea’s resources remains under-exploited because of disagreements on how the Caspian Sea should be divided between Iran, Russia, Azerbaijan, Turkmenistan and Kazakhstan.

According to Cutler, the international implications of Central Asia’s oil and gas supplies emerge from nesting this region progressively within the “Greater Central Asia,” “Central Eurasia” and “Greater Central Eurasia” context. From a practical and logistical point of view, this is a landlocked region and in order to deliver its oil and gas resources to the consumer, the region needed to establish closer links with its neighbours. One example is the Caspian Pipeline Consortium that transport supplies into Russia.

## The Role of Energy in South Asian Security

Raja Mohan began his talk by highlighting five elements of regional security that is currently being shaped by the new geopolitics of energy.



*Raja Mohan on the rise of India*

He noted that as India responds to the imperatives of securing ever more energy supplies at reasonable prices, its traditional principles of foreign policy are yielding ground to new ones. India’s current adaptation encompasses its relationship with its neighbours and the great powers as well as a redefinition of its past attitudes towards multilateralism. He stated that there must be an acknowledgement that as India and China emerge to be major players in the global scene, there will be an increased demand for energy in both countries and distribution will begin to shift to China and India. Geography is going to change given the demands of India and China. He predicted that there would be a re-establishment of security relations between the two countries. He stated that he would limit his presentation to the security dynamics of this change. He expounded the view that there are security implications to the fact that India will import a lot more energy in the future. He noted that this is not an immediate problem but will become a long-term issue. He envisaged that there would be friendly competition between China and India as well as between India and Pakistan. At the same time, this development will change the economy of South Asia and improve relations between the major powers and South Asian countries. Raja Mohan argued that India’s foreign policy has changed in recent times. He noted that India has moved away from seeing itself as a weak Third World country. Its attitude is that of an emerging power. This is reflective in India’s military, which has seen a shift from traditional modernization to a more sophisticated development. India is also reluctant to limit itself in several areas. It is also not willing to take international criticism. In its foreign policy, India is far-headed and realistic. With the strengthening of India as an emerging power, India’s position must be increasingly accommodated.

Raja Mohan postulated the view that energy security considerations are reinforcing the urgency of accelerating regional economic integration. He said that India and its neighbours are coming to terms with the need for cooperation and are finding ways to overcome entrenched mutual distrust. He said that being the largest country in the region, India would push the regional order. In order for India to achieve energy security, it must take oil from outside either from Pakistan or Bangladesh. While he acknowledged the difficulties India would face in trying to overcome its problems with its neighbour, India must persuade its neighbours to open up the frontier. He added that Pakistan is aware of its location being in the middle of all oil-producing countries and a bridge state for oil pipelines. The future role of Pakistan will be a link state between South Asia, Central Asia and the Persian Gulf. He said that the onus is on India to reassure its neighbours, especially, Pakistan that it can be trusted and does not have any malicious intent.

Raja Mohan further espoused the view that energy concerns are ending the subcontinent's weak integration with its extended neighbourhood and restoring the region's historical links with the Persian Gulf, Central Asia and Southeast Asia. He said that the ideas in Washington, Beijing and New Delhi on shaping this restoration do not necessarily match and may lead to tensions. As such, one will see a new Great Power Game being played in the region. He admitted that this game has not changed much as both the Gulf and Central Asia have not changed much. However, while India and Pakistan used to be one country dealing with the game, it is now two sovereign countries. The question he posed is whether India-Pakistan relations will change with the Gulf. He believed that if India and Pakistan are to cooperate, the strategic unity of the subcontinent will be restored and the influence of both countries will increase.

He said that as India and China developed, the conditions for a maritime rivalry between India and China have begun to develop. This, he argued, could be attributed to Beijing's own energy security considerations that drive it towards modernizing the overland connectivity between West China and Southern Asia and establishing a maritime presence in the Indian Ocean littoral. He noted that India and China are not merely looking at access of energy but are also trying to build political and economic relations

with the oil producers. He said that how India and China would try to influence other countries could impact their relations and the region in general. Security of sea lanes has become very important, which is why China is now looking at shortcuts to South Asian ports by developing its Western regions. A basic reason for this is geography. Karachi is closer to Kashgar in West China than Shanghai. As such for easy transportation of oil to occur, it is more sensible for China to use Kashgar as a gateway to Central Asian and Middle Eastern oil.

Raja Mohan ended his presentation by posing the question of how the balance of power among India, China and Pakistan will change as India strengthens its ties with the United States. India's incipient accommodation into the global nuclear order, through the implementation of the Indo-US civil nuclear initiative of July 2005, has a potential of altering the balance of power in the region. This may lead to a more hostile reaction from Pakistan and China.

## Southeast Asia's Energy and Security Challenge

Elsbeth Thomson began her presentation by clearing a common misconception that the demand of oil in the Asian region will increase. She quoted Fereidun Fesharaki, Chairman and CEO of Facts Global Energy Inc, who stated that with the exception of China, demand for oil in the rest of the region is slowing because of higher prices. He was wrong when he felt that the proposed pipeline across Malaysia assumes that demand will explode.

Thomson explained that Asia had enough energy resources and have abundant supply of natural gas, coal and hydropower resources but it is oil that is the problem since there is a high reliance on Middle Eastern oil in the region. She added that nuclear energy is another source of energy that can assist in making up for shortages in energy supply in the region. She noted that Vietnam, Thailand and Indonesia have already announced construction intentions. She felt that there is a mixed feeling among analysts with regards to nuclear energy. While some analysts believe there is little alternative at this point in history to nuclear power, others are alarmed over the potential for corruption in construction and operation, lack of sufficient numbers of trained staff and earthquakes. There is also the

possibility of new oil reserves being discovered within the region. She mentioned that there are some potential deposits of oil in Myanmar and near Vietnam in the Beibu Gulf and in the East China Sea.

Thomson brought to attention the fact that the largest producers of crude oil are Indonesia, Malaysia, Vietnam, Thailand, Brunei, the Philippines and Myanmar. In all, about 40 per cent of the world's supply of liquefied natural gas (LNG) originates from this region. She stated that Indonesia and Malaysia together account for about 70 per cent of Asia's gas trade. Following Indonesia and Malaysia, the next largest producers are Thailand, Brunei, Myanmar, Vietnam and the Philippines. She added that Indonesia and Vietnam export large quantities of coal.

She also elucidated the view that Northeast Asia is pivotal in the security of oil routes. Oil shipments from the Middle East could be disrupted due to terrorism or war. Tankers that bring the crude oil to the region are vulnerable to attack. There is considerable concern that traffic through the Strait of Malacca could be hijacked, blown up or cut off by the sinking of tankers. She mentioned that every day, about 11 million barrels of oil, or 12 per cent of the world's daily output, pass through the Malacca Strait. By 2020, it could be 20 million barrels.

In 2004, the governments of Singapore, Indonesia, Malaysia and Thailand, took measures to step up sea and air surveillance, patrol and anti-piracy exercises as well as communication networks. The following year, Lloyd's shipping underwriters' Joint War Committee declared the Strait vulnerable to "war, strikes, terrorism and related perils". However, in August 2006, this assessment was lifted because the joint measures were deemed successful in deterring would-be attackers.

She noted that in recent times, ASEAN countries are increasingly looking at biofuels as a source of energy. Singapore is gearing up to become a biofuels "hub". However, she argued that there are many concerns about this possibility such as deforestation and consequent haze as well as heavy use of fertilizers. In addition, some plantations have been created by draining and burning peatland, causing the release of huge amounts of carbon emissions. She highlighted that some analysts believe that biofuels use more

energy than they produce, and possibly create more harmful emissions than fossil fuels. Lastly, she noted that if the price of petroleum falls below about US\$50, biofuels cannot compete.

Thomson believed that another issue that is affecting ASEAN countries is the issue of climate change. ASEAN would be very badly affected by rising sea levels, extreme wind storms that can result in potentially hundreds of thousands of homeless people, loss of prime agricultural land and increased incidence of tropical diseases. In addition, the air quality in the region's metropolises is among the poorest in the world. She also noted that energy consumption efficiency is very poor. Besides raising national energy security, improving energy consumption efficiency has many benefits such as decreased energy expenditure, increased economic competitiveness, greater sustainable development, higher incomes, improved trade balances, reduced need for new power plants and reduced environmental impact of energy use.

Thomson concluded that for ASEAN to overcome its energy security challenges, ASEAN must integrate further. Integration of NE Asian and ASEAN economies is good for ASEAN's energy security. She believed that China's relations with the United States and Japan potentially greatly affect ASEAN energy security.

## Discussion

A member of the audience queried on the relationship between China's energy security and foreign policies, and their subsequent impact on joint energy developments in the South China Sea. There was also a concern that China and India might extend their naval rivalries to the South China Sea region. In response, it was noted that South China Sea regional energy relations have been static so far. This is partly because there are still uncertainties over the South China seabed's exact energy resources. The South China Sea's underwater energy deposits level has yet to be ascertained by any politically independent geographical surveys. As such, data on the potential energy deposits of the South China Sea could be grossly overrated and it might not serve economic purposes to conduct joint explorations of the region.

It was also opined that it is highly unlikely that America would launch any naval offensives against China in

the South China Sea. It was reasoned that since oil is a commodity that is traded worldwide and shipped widely across the South China Sea region, any naval conflict in the area would drive oil prices to the roof. Furthermore, approximately 60 per cent of the world oil supply is imported by America. Therefore, naval clashes in the region would not be a viable option.

A panel speaker stressed that Chinese and Indian naval interactions are mainly competitive in nature and have not entered a rivalry stage. The challenge is to prevent such competition from becoming a rivalry. Nonetheless, the footprints of both navies have dramatically expanded. China's presence in the Indian Ocean, for example, has grown to include the building of maritime infrastructures in Pakistan, Bangladesh, Sri Lanka, The Maldives and Burma.

Likewise, India's naval footprints could be found in the South China Sea and Sea of Japan as well. For instance, in April 2007, India, the United States and Japan conducted the first trilateral naval exercises off Japanese coast. In 2005, the Indian aircraft carrier came to Malaysia, Singapore and Indonesia for the first time. The defence cooperation between India and Vietnam has also been growing. In retrospect, both China and India might interpret these developments as more than just efforts to establish energy security in the region. Therefore, the challenge is to seek ways to prevent a security dilemma from occurring between the two navies and move towards cooperative security developments.

There were questions on the strategic and economic value of running pipelines between Central Asia and China. These concerns generated varied responses from the panel speakers. For one, a speaker opined that the pipelines from Kazakhstan and Turkmenistan to China would probably serve limited economic purpose. Instead, Central Asia would most likely be concerned over the influx of Chinese pipeline workers into the region, especially if a fraction of the Chinese workforce chooses to stay on once the pipeline projects are completed. It was advised that firms should, before engaging in any of the pipeline projects, first study the economic and logistical value of the proposed pipeline.

A participant mentioned that the world demand for oil would most likely be higher than the oil supply and doubt the effectiveness of energy independence or self-sufficiency efforts in solving the dilemma. A panel presenter added that oil is a frangible and fluid commodity. The oil reserve is like a "swimming pool" where oil could be tapped by inserting pipelines at another end of the pool should one source be cut off. As such, oil could be shipped to any area that requires it.

The audience was also concerned over the rise in oil prices and how conservation policies could help to ease the demand for oil. It was speculated that energy demand in Asia would soar and this might drive oil prices up astronomically. To this regard, energy conservation would perhaps be a viable option to consider. It was argued that energy conservation efforts might contribute more energy into the system.

Geographically speaking, pipelines from Turkmenistan to South Asia would most likely pass through Afghanistan and a participant was interested to know how this would affect the way India and Pakistan interact with Afghanistan. In particular, there was concern if pipeline operations could be carried out safely in Afghanistan. The reply was basic security measures would most likely be in place. That said, however, there are a variety of ways in which energy could be delivered to South Asia (e.g. shipping) and alternative pipe routes could always be considered. It was also highlighted that politics, given its transient and dynamic nature, might not offer a good gauge of actual ground or operational level challenges.

A panellist stressed that based on geographical and analytical grounds, certain pipelines should not be considered at all. However, there was a counter argument that "analytical unsound" pipeline projects may not necessarily translate into meaningless political or economic decisions. It might set the pace for favourable economic developments and judgements.

All in all, it was agreed that cooperation at certain frontier over energy issues might not materialized. However, as ASEAN states begin to take off, there are avenues and prospect for greater cooperation among ASEAN, Northeast and Middle East states.



## SESSION 2

### Feeding Asia's Energy Demand

#### Russia's Energy Policy Towards Asia: Opportunities and Uncertainties



*Michael Lynch introducing the panel*

Shoichi Itoh explored the possibility of states using their energy endowment as a source of economic weapon. He also shared with the audience his projections on Russia's crude oil production level and the influence that Asian energy consuming countries have on Russia's energy prowess.

Itoh remarked it is commonly perceived that Russia, considering its energy resources, might attempt to assert its geopolitical influence in the global energy market. He argued that while in theory this seems like a possibility, in reality it is a questionable assumption. Where Asia is concerned, shaping or influencing Asian countries' energy consumption patterns might not be an easy feat. Moreover, over the 2003–2007 period, Russia has suspended several of its oil and natural gas supplies. Therefore, the notion of using energy as a source of economic weapon deserves re-consideration.

Itoh forecasted that oil and gas production in West Siberia would rise in the near future. He opined that the energy consumption patterns of Asia-Pacific countries, such as China and India, would either lead to an increase of Russian energy exports or influence the price of energy altogether. This might prompt Russia to expand its energy production eastward and tap into the energy resources in, for example, Eastern Siberia and the Sakha Republic, where the bulk of Russia's crude oil reserves are.

Moscow's hope to gain geopolitical influence in East Asia, through the energy market, is likely to be dashed. Itoh commented that Moscow's relation with China is probably only an energy partnership in disguise. Likewise, it is inaccurate to conclude that Japan, given the risk presented by the Middle East oil-producing countries, is in desperate need for Russian oil. Moreover, it is also not certain if the Eastern Siberia-Pacific Ocean pipeline would eventually materialized.

In general, the following are the three broad conclusions drawn by Itoh. Firstly, Russia cannot use energy as a diplomatic weapon against Asia in the foreseeable future. Next, Russia is more dependent on the Asian energy consumption market. Finally, energy consuming countries in Asia should consider multilateral policy coordination and cooperation as a mean to improve their energy security.

#### Perceptions and Strategies on Energy Security: The Case of China and Japan

Liao Xuanli explored both Japan's and China's perspectives on energy security. She noted that, in general, both countries have relatively similar views but also cautioned that they are unlikely to engage in strategic partnerships over energy supply issues. In fact, there might be a competition between them to attain security leadership role.

Liao defined energy security as "the availability of energy at all times in various forms, in sufficient quantities, at affordable cost and acceptable environmental impacts". The four basic attributes of energy security are: availability; affordability; reliability; and sustainability. The last factor, that is sustainability, would most likely post a greater challenge to states. Liao argued that energy sustainability requires states to cooperate with one another. Interstate cooperation might not be easily attainable, as it will depend on the availability of alternative energy resources, level of economic development and political stability in each country.

Japan's views on energy security vary in accordance to the fluctuations in the global supply of energy. During the 1960s–1970s, for example, oil supply was generally stable and Japan was mainly concerned with the securing of oil at the lowest possible cost. In contrast, the embargo on Arabic oil and the increase in oil prices within the 1973–1980 period triggered major oil supply disruptions fears.

Japan has, since the 1990s, grown to be less dependent on oil and have explored alternative energy resources. Presently, energy security issues are considered together with environmental protection protocols. This shift in perspective is partly shaped by the increasing need to develop safe nuclear energy resources, design energy efficient industrial structures and a growing sense of international responsibility.

According to Liao, as Japan has pursued energy efficient paths since the 1970s, its domestic oil reserves could be kept relatively low. In fact, she noted that, based on the current rate that Japan embraces energy conservation technologies and methods, the projection is that Japan's oil dependency ratio would fall from 50 per cent to 40 per cent by 2030. Nonetheless, despite the decline in oil consumption, Japan still imports most of its oil supplies from the Middle East, and oil still accounts for 50 percent of its energy mix.

Liao commented that energy security was not a serious issue to China until the mid 1990s when debates on attaining energy self-reliance status escalated. Prior to the mid 1990s, energy imports from the USSR were relatively minute. The energy security landscape in China changed when domestic consumption and environmental issues, for example, intertwined with energy diplomacy and environmental protection matters.

Currently, there is still no consensus on what constitutes energy security in China. Liao also noted that the emphasis is still very much on the availability of energy than its cost. Diplomacy would most likely be employed to enhance or resolve many of the energy reliability concerns. The Strategic Petroleum Reserve (SPR) was established to regulate the energy market. While environmental protection topics are gaining the interest and attention of the Chinese government, she warned that this does not suggest that China is ready to embrace and join the international environmental framework and community.

Liao informed that the Japanese Government provides both financial and non-financial support to Japanese oil companies as part of their overseas energy investment schemes. This includes providing aids to the JNOC (Japan National Oil Corporation) in 1967 and JOGMC (Japan Oil Gas and Metals National Corporation) in 2003. Similarly, the Chinese government offers bank loans at low interest rates and “beneficial policies” to state-owned oil companies.

With regards to oil diplomacy, Japan would most likely focus its oil-related foreign policies on interactions with countries in the Middle East, Southeast Asia and Latin America. As for China, the countries with which China would maintain oil-diplomatic relations would include Russia, Central Asia, the Middle Eastern States and North America. Liao also opined that at the home front, Japan would be focusing on the energy security, environment and efficiency aspect of energy development. In contrast, China might embark on oil-import curbing measures and move towards the use of energy saving resources (e.g. clean coal and renewable energy technologies).

Both Japan and China have implemented policies aimed at protecting the environment. However, in Liao's opinion, China might have to deal with several major obstacles before attaining its energy conservation goals. She commented that getting the six major industries in China to adopt energy conservation measures and cut down on pollution levels would probably be the biggest challenge ever.

Liao concluded that both Japan and China share similar views over the strategic value of oil. Both China and Japan are dependent on the stability of Middle Eastern states for the supply of oil. Japan's energy strategy seemed more robust in enduring oil shocks, while China's current oil reserves is approximately 30 days. While there is bilateral cooperation between the two countries on energy efficiency and environmental protection issues, strategic partnerships would probably not materialise anytime soon as there is still a significant level of political distrust between China and Japan. Liao noted that the two powers' dealings on energy security and political trust building efforts would have a significant impact on the peace and stability of the East Asian region.

## Australia's Role in Feeding Asia's Energy Demand

Richard Leaver discussed Australia's potential to be a major energy exporter and energy superpower in Asia. In essence, he opined that the regional energy market is a ground for both cooperative and competitive energy developments. He suggested that institutional reforms within and beyond Australia are probably needed to service the needs of greater regional cooperation over energy related issues.

Leaver informed that just a year ago, Prime Minister Howard has suggested that Australia might be considered an emerging energy superpower. This remark, in his opinion, is based on Prime Minister Howard's better understanding of what the global nuclear energy partnership entails and what he gathers from his personal meeting with President Bush and Prime Minister Stephen Harper. As a result, Howard commissioned a review on nuclear power, which recommended the building of 25 nuclear power plants in Australia over 25 years.

As for gas, there is a possibility that Australia might be a major gas exporter as well. The situation is, however, bleak for Australia's liquid fuel market. There is speculation by energy analysts that over the next 20 or so years, Australia would probably decline from being 70 per cent sufficient in liquid fuel to 25 per cent. Australia would then have to import liquid fuel like the rest of Asia. Nevertheless, Australia is still seen as a major net exporter of coal, uranium and gas.

Historically, Australia, given its sizeable coal, uranium and gas reserves, has been able to withstand the impacts of oil shocks in the region. In the late 1950s and 1960s, Australia was supplying a huge amount of high grade coking coal to Japan. Leaver stressed that Australia's energy provider roles in the region was made more evident when Japan switched to the usage of steaming coal, which Australia is well endowed with. This mix of energy demands and changes in oil prices turned Australia into a net energy exporter.

Leaver questioned if the energy demands of Asia, except Japan, would significantly drive up steaming coal production. It remains to be seen if uranium and gas would help to booster Australia's regional energy

provider prowess. In conclusion, Leaver quoted Peter Drysdale, "Cooperative resource management within a pluralistic international community, requires as an essential prerequisite the establishment of strong consultative processes and forums, so that, there may be an effective and acceptable resolution of these complexities of international choice in energy resources."

## Asia's Competition for Middle East Energy Supply: Feeding Asia's Paradox?



*Jaewoo Choo providing Asia's energy profile*

Jaewoo Choo examined in his presentation the possibility of interstate energy security cooperation in Asia. In fact, cooperation on energy security matters have not taken off as well as anticipated. He noted specifically that energy cooperation among China, South Korea and Japan would most likely be driven by economic factors. All in all, he opined that cooperation is perhaps the most economic approach to energy security and sought to trace the reasons why states are slow to adopt the option.

The answers to the question lie in the history and nature of relations between China and Japan, and the recent securitization of energy security interests. Choo added that the first oil crisis in 1973 has shown that energy related issues could no longer be viewed as pure economic problems. In his opinion, energy interests have been securitized.

In North and East Asia, there has not been a cooperative framework or venue where regional states could work on energy security together. Choo also stressed that, given the lack of cooperation over energy security issues by states in the region, the concept of security cooperation might not work as well as desired at this stage. He remarked that it is perhaps more constructive to not overly concentrate on the energy security

problems faced in the Northeast Asian region and avoid observations that closely mimic the official views of such regional groupings as APEC, ASEAN+3 and East Asia Summit.

According to Choo, the statements produced by regional groupings often lack substance. He noted, for instance, that while the Cebu Declaration on East Asian Energy Security might be meaningful in its own rights, it fails to address the lack of cooperation among energy producing regions and states. Contextually, it merely highlights the essentialness of a reliable, adequate and affordable energy supply for the sustenance of East Asia's economic growth.

According to Choo again, Eastern Asia's long term energy policy direction, specifically that of China, would be to prevent energy demand from placing unnecessary pressure on energy supply and limiting the growth of the energy industry. It also aims to avoid the building of coal processing centre structures that is detrimental to the environment, and also to move away from backward energy inefficient technologies. Finally, it hopes to discourage any major fluctuations in the international energy market that may have a drastic impact on domestic energy supply flow.

In a recent working report on energy security published in China, several strategies to overcome the problems of energy security were suggested. Russia and Central Asia must be considered in order for Asia to diversify its oil import sources. In addition, strategic reserves are required to prepare against unexpected interruptions of oil supplies. It is important to promote and strengthen bi-and-multi-lateral energy security cooperation with energy producing nations, and finally, to participate in the energy charter treaty.

Choo noted that the five points are similar to the views articulated in the energy security plan (2003) and policy (2004) of Japan. He added that while China and Japan might have both focused on improving energy-linked relations with energy producing nations and securing their accesses to natural energy resources with these countries, they are mainly pursued at the bilateral and not multilateral level. Therefore, the real challenge is to find ways to promote or develop a multilateral cooperative approach towards energy security.

In conclusion, Choo proposed the following policy recommendations for the audience's consideration. The concept of an energy free trade or common area of peace, similar to one proposed by the Euro-Mediterranean Energy Partnership for the Mediterranean region, could be applied by East Asia as well. He reasoned that this would help to ensure a stable flow of energy resources. In addition, a multilateral relational approach towards the Gulf Corporation Council (GCC) ought to be sought. Iran and Saudi Arabia have a larger role to play in supplying oil and gas to Asia. Choo mentioned that Asia is their preferred gulf-oil export destination ever since Europe and America sought to find energy alternatives and reduced their dependency on Middle-East oil imports. He also noted that in the foreseeable future, the Middle Eastern oil producing states would have a critical role to play in Asia's energy market and policy. Finally, inter-government collaborations should be promoted. The roles of governments in the stabilisation of the energy markets and ensuring energy security are still vital. That said, however, they should also aim to work hand-in-hand with the private sector. In Choo's opinion, close policy coordination and dialogues with the private sector are just as critical as government-to-government cooperation.

## Discussion

A participant pondered if a new or alternate definition of energy security is needed and could solve any ongoing energy-related dispute. The response was that changing the definition scope would not resolve the existing energy-security problems and would create new challenges. Moreover, there is still no one widely accepted definition of energy security. It would most probably be more constructive to concentrate on how energy security could be managed more substantively.

There were concerns over Russia's oil power potential and if Russia will use the commodity as an "economic weapon". The reply provided by a panellist was, at this stage, Russia is learning how to participate in the global energy market. The ability to use oil as a weapon would more likely depend on a variety of factors and that includes oil prices, the availability of alternative energy resources, Russia's economy and oil reserves size.

Taking China's current coal consumption level into consideration, questions were raised if China has enough coal to sustain its own demand and if energy self reliance could be achieved with environment protection in mind. A panellist answered, in general, China has sufficient coal supplies to meet its domestic demands. The real challenge lies in the transportation of the coal to areas that require it. Coal is found mainly in Northern China and is required to support the energy needs of areas in Southern China. The problem will be more pronounced in the next two decades when developmental programmes take off. The amount of LNG and oil storages would probably increase in Southern China to cope with future energy demand increases.

As for the development of clean energy resources, especially clean coal, a panellist opined that too much emphasis has been placed on China's energy consumption levels vis-à-vis its operational stance on environmental protection issues. Several developed nations are slow to share or impart clean coal technology, for instance, to China. The cost of clean energy technology to developing nations has often not been considered by critiques of China's environmental protection and energy policies. Instead, concerns have always been on intellectual property violations and have not taken into concern China's immediate developmental needs. The impression is that countries in the West are slow to share their knowledge on and provide aid for the development of clean energy technology. China is working with Japan, the United

States and South Africa on clean coal technology development but, due to the high cost, the progress has been slow.

A participant clarified that, as of March 2007, China has become a net importer of coal. This would probably reduce the burden of transporting coal from the North to the South of China. It is not unlikely that in the near future, energy security threats to China would be discussed in the context of coal supply. With regards to clean coal, China does have the technology to produce clean coal. This is made possible with energy collaborations between the Department of Energy of the United States and Japan. The reason why clean coal is not widely used is not because of technology but rather the cost of using it. For one, the availability of water and next, the cost of power generation has greatly hampered the mass consumption of clean energy producing resources. Furthermore, China's national power grid company holds monopoly power over trade negotiations with the energy supplies. It is going to take a long time before any changes could be seen in the energy landscape of China.

The IEA has not provided much help or assistance to China with regards to energy security. In fact, much of the energy related threats originated from the IEA and there has been no real cooperation between the IEA and Chinese government agencies since 1997. Much of the IEA's data on China's energy landscape, in the participant's opinion, is derived from guesswork.

## SESSION 3

# Nuclear Options and Environmental Concerns

### Energy and Climate Change: Towards Sustainable Development



*Simon Tay chairing the session on nuclear options*

Youngho Chang presented an interlinking framework between energy production, economic output, and the environment and its relationship to sustainable development. While energy production has a positive effect on economic output and GDP growth, it has a negative effect on the environment, which can affect prospects for sustainable development. Chang posed the question of how to develop a rule that leads us to sustainable development, given these interlinking dynamics? Chang stated that sustainable development ensures the well-being of a state for the present and future generation.

Sustainable development became part of the political agenda in 1987 after the influential Brundtland Report was published by the WCED in 1987. However, the Brundtland Report's definition of sustainable development is too vague for policy making. There are two main interpretations of sustainable development, the ecological perspective and the economic perspective. The ecological perspective is that the law of thermodynamics implies sustained economic growth is not possible and advocates that reduced usage of resources is necessary to achieve sustainable development. On the other hand, the economic perspective believes that sustainable development is possible if certain investment rules are followed.

Chang then presented two views of sustainability—weak sustainability and strong sustainability. Weak sustainability is another name for economic sustainability, with the key assumption being that natural capital can be substituted to some extent by man-made capital. The key assumption of strong sustainability is that natural capital is NOT substitutable by man-made capital. Due to their differing assumptions, weak sustainability and strong sustainability uses different models to achieve sustainable development.

Chang presented the Solow-Hartwick sustainability model, which demonstrates that a society should invest the benefits from non-renewable natural resources into man-made capitals in order to achieve sustainability. This will enable a society to enjoy a higher level of utility. Its strengths are that it provides an easily quantifiable rule for policy makers to follow while presenting a strong theoretical background since it is based on established economics framework. However, the weaknesses are that high substitution possibilities between natural and man-made capital are suspected, especially for ecological services such as biodiversity, purifying of air and water, which cannot be substituted. The other weakness is that this model will not work if appreciation of aesthetic natural sceneries is part of welfare indicator, as it cannot be substituted either.

Chang compared two strong sustainability models, giving examples of one put forward by Wackernagel known as the ecological footprint model, as well as the Safe Minimum Standards model. He weighed the pros and cons of the two models and outlined that UNEP'S Global Biodiversity Programme had officially embraced the Safe Minimum Standards model.

Chang then proceeded to elaborate on two indicators, the Genuine Savings (GS) indicator of the World Bank are based on weak sustainability models, and the Environmental Sustainability Index (ESI) based on the strong sustainability model. Dr Chang stated that one

gets many contrasting results using these two sets of indicators. For example, China is the 133rd on the ESI, but has a high GS of 25.5%. Singapore has a ESI score of 41.8 which translates to a 128th rank, but has highest GS of 35.2% in 2000 GS ranking. Chang then went on to say that this leads to the problem of which indicator do we take as a better measure. He said there is a trend showing that countries with a high level of FDI does well in GS because ESI does not reflect investment due to assumption of non-substitutability between man-made and natural capital. Countries with fast economic growth are most likely to do well in GS and poorly in ESI, so the question remains as to how we interpret this data.

Chang then gave a few examples of sustainable development. The first example was that of the Aral Sea. Located in Uzbekistan and Kazakhstan, the Aral Sea was the fourth largest lake in the world in 1960. However, it was gradually salinized, and depleted to the eighth largest in the world presently due to over-irrigation. The ecological damage to the Aral Sea led to the total collapse of the fishing industry and the disappearance of 20 out of 24 fish species. The second example given was the Pacific island of Nauru. The only source of income for the country is phosphate mining, a base material for fertilizer. The more phosphate is mined, the less habitable land they have. Nauru attempted to invest profits from phosphate mining in capital goods so as to have a source of income after phosphate reserves are depleted in 2006. However, the Nauru central bank is presently bankrupt due to poor returns from investments, corruption and the 1999 Asian financial crisis, which bankrupted their trust fund.

Chang reminded the audience that there are contrasting results seen with weak sustainability and strong sustainability indicators. If a country has been concentrating on capital investment and economic growth, then it will fare poorly in environmental aspects, at least in the view of strong sustainability. If the country were to follow strong sustainability strictly, buildings will have to be cleared to grow more forests; many of the population will have to relocate to other countries since they have already overshoot their natural carrying capacity.

Chang proposed a model entitled the Hybrid Sustainability Model (HSM), which suggests how much should be invested in man-made capital so as to keep consumption per capita constant. Based on his model, he concluded by recommending authorities to invest the capital derived from non-renewables into technologies that would protect the environment.

## The U.S.-India Nuclear Deal: Security Implications

Rajesh Basrur discussed the new U.S.-India nuclear deal and its possible security implications. The deal involves two things: the separation of India's military and civilian nuclear facilities, and the placing of the civilian facilities under the control of the International Atomic Energy Agency (IAEA). In addition, provided the deal goes through, the agreement will provide for the supply of nuclear fuel for India's civilian reactors. Basrur argued that the civilian side of the deal is not very important as current estimates see nuclear energy accounting for about 6.6 per cent of India's energy supply, at best. In fact, the real motivations behind this deal are of a political nature on either side. Both countries want to hedge politically against a rising China, and India wants to be recognized as an emerging power and, in due course, to get a "seat at the table" with other big powers.

The first important aspect of this deal is regarding how it will affect the NPT. One of the big debating points, especially in the United States, is that it would weaken the NPT regime by implicitly recognizing India's military nuclear capabilities. However, Basrur believed that a deal would not weaken the NPT regime because all the failures of the NPT regime hitherto have not come from outside proliferators but due to internal factors of particular countries. Basrur stated that he sees no linkage between the relative strength of the NPT regime and proliferation, stating that the decision of a state to develop or not develop nuclear weapons is primarily connected with their own security perceptions and have nothing to do with the state of the NPT regime.

The second question is whether this exception will become the rule. Basrur believed this is unlikely, with the only possible exception being Pakistan, who wants

a similar deal to that of India. However, no such deal will be made because Pakistan does not satisfy the conditions of being a responsible nuclear power. Basrur stated that if he were to take a radical position, he would argue that if Pakistan were to become a fully responsible nuclear power then there would be no reason against them negotiating a similar deal to that of India's. The basic argument of non-proliferation is concerned with real capability, not threat.

The third question is if the regime will be strengthened. Basrur argued it may strengthen the NPT regime to a certain degree in two ways: (i) under the deal, a majority of civilian facilities will come under IAEA control, which is not the case today, and (ii) more importantly, in the long run, increased Indo-U.S. cooperation in the area of nuclear security will actually increase the safety and the role of India in the NPT regime. It will additionally increase India's interest in cooperating in such initiatives as the Proliferation Security Initiative and the Container Security Initiative, which it so far has not done. Basrur noted there is no stronger approval of this idea than in the statement by the Head of the IAEA, El Baradei who said the U.S.-India agreement "would make India an important partner in the NPT regime".

Basrur stated that the second important aspect to examine the Indo-U.S. deal is in respect to India's rising status as an emerging Asian, and potentially world power. Basrur believed it would probably not make a great deal of difference because as things stand, the growth projections and trends are such that India is bound to emerge as a major player in Asian, and then world politics, within the next few decades. Basrur noted that in January 2007, Goldman-Sachs projected that India's economy will, in the aggregate, overtake Japan's by early 2030s, and overtake that of the United States by the 2040s. Even if this is an exaggerated expectation, it does nevertheless present some interesting trends in what is likely to happen in terms of global economic power, and is backed up by further studies such as the one published in May 2007 by the McKinsey Institute.

To the extent that the deal will allow India to access more high technology of the dual-use variety, it will certainly help pick up the pace of growth, but Basrur believed it would not make a big difference in the long run. What is more important, to him, is that a deal will make India a more "satisfied power". Basrur stated

that historically new powers that arise and are faced with obstacles in gaining acceptance into the community of major powers have always felt a sense of grievance; sometimes, this has led to tensions including major wars as a result. While Basrur does not anticipate war if India is not accepted into the global big power community, he does anticipate that the absence of India from a seat at the "high table" would make a difference in the optimal functioning of the big power community.

Basrur noted the third important aspect is regarding how this deal, if it goes through, will affect India's relation with Pakistan. One of the criticisms of this deal has been that it will lead to India producing more weapons, which will lead to an arms race with Pakistan, and potentially with China, thereby creating more tensions and unravelling international stability. But Basrur argued that the fact is that India already has the capacity to produce, by one estimate, perhaps 2,000 nuclear weapons. By all available estimates, India has produced less than 100 nuclear weapons. He thought that the mere availability of material is not the issue but the intent behind such weapons. He stated that current trends do not appear to show any signs of such intent. He went on to note that the main proponent of the arms race argument is the Pakistan government, with the issue being not one of an arms race but in actual fact simply politics. This argument comes from the Pakistan government fearing they will become increasingly politically isolated, and that with the United States moving closer to India it will close the doors to Pakistan's claims regarding the Kashmir territory.

Basrur stated that the fourth major issue regarding the Indo-U.S. nuclear deal is the relations between India and China. The fear is that such a deal will increase tensions between India and China. However, he sees this as a non-issue simply by looking at trade numbers. In 1995, trade between India and China was US\$1.1 billion, whereas in 2006 it was US\$24.9 billion, with the trend expected to continue. He believed that because of this, there is no basis for either country to pursue suspicions beyond a limited point. Finally, he noted that there is no strongly anti-Chinese constituency in domestic Indian politics.

The fifth issue is in terms of relations between the United States and India, with some questioning whether



this deal will result in the development of an alliance between the two countries, or whether it will turn into a subordinate relationship for India vis-à-vis the United States. Basrur noted that if one looks at India's overall trajectory since independence, one must recognize that India has historically been strongly inclined towards autonomy and independence. In previous times, autonomy meant keeping away from the global economy, which no longer applies. However, he said there is very little indication that India will listen to the United States beyond its own tactical needs, such as perhaps in using its IAEA vote against Iran. For the United States, the long-term results of this deal, and of India's possible rise into a global power, are of greater interest. For the United States, these interests include cooperation on counter-terrorism, safety in oceans and waterways, and responding to regional instabilities.

Basrur closed with a short discussion on the ramifications of the Indo-U.S. deal on Asian Politics. By mid twenty-first century one can expect to see a multitude of players in Asia: He noted that Asia has been the focus of much attention among international politicians and scholars alike; the reason for this is that there is a great deal of economic cooperation and opportunity in this region, but at the same time there is also a great deal of political uncertainty. Hence, Asia requires a certain degree of institutional stability. One possible solution for this is to develop regional institutions that will then link up and eventually develop into a larger overarching Asian institution. Basrur mentioned that current regional institutions are working very slowly in arriving at a consensus. He proposed that a concert of major players in Asia would be a more effective institution in avoiding conflict, maintaining general regional stability, and upholding common norms.

To close, Basrur said that even if the deal fails, he expects to see India evolve as he described, but at a much slower pace.

## Nuclear Renaissance: Its Expectations, Realities and Security Implications

Tatsujiro Suzuki discussed the issue of a possible "nuclear revival", examining what this means for Asia and the wide security implications. Citing IAEA reports,

he gave an overview of the current status of global nuclear energy. By the end of 2006, there were 435 nuclear power plants in operation with a total net installed capacity of 369.7 GW. However, around 80 per cent of its capacity is in OECD countries. There are 29 nuclear power plants under construction, with almost half of these units in Asia.

While total capacity grew very fast in the 1970s, it was flat by the 1990s and has not improved since. Yet there are now expectations for a nuclear revival, due to rising energy supply security concern as well as climate change concern. The three main reasons for this are the replacement of existing reactors in Europe, the United States and Japan; satisfying rapidly growing energy demand in developing economies; and growing climate change concerns worldwide.

There is a high growth estimate now for nuclear power protection. However, Suzuki noted that the reality may be far different, and the estimate may be far off the mark. The nuclear renaissance is not really about expanding the nuclear share, but is an exercise in maintaining the existing global nuclear power. This requires the ordering of a lot of nuclear reactors, which is very difficult. Within the next 20 years, around 200 reactors will need to be shut down and the only places where positive new growth will occur are in Asia. Japan, South Korea, China and India are all committed to expanding nuclear power. The growth here could be substantial, with these four countries expected to add 70GW by 2030. China and India are expected to increase their nuclear share by 6 to 9 per cent.

Given the need for replacing 200 reactors by 2025, OECD countries will need massive replacement orders just to maintain its share of nuclear power if they are going to be able to meet their objectives. Because of this, the OECD Nuclear share is expected to decline from 15 per cent to 10 per cent. Given this reality, Suzuki said that for North America and Europe, the term "nuclear renaissance" would be better termed "nuclear survival".

A number of other countries in the Asia Pacific are also considering introducing nuclear power by 2020, including Vietnam, Indonesia and Australia. A new report issued by Australia recommends 25 reactors to be built by 2050, although no official commitment has been made. Suzuki noted that to support the

introduction of nuclear power, these countries would need to build strong social and industrial infrastructures.

Beyond the OECD and Asia Pacific, a number of oil-rich countries in the Middle East and Africa are interested in adding nuclear power capacity. These include: Algeria, Egypt, Iran, Jordan, Libya, Morocco, Saudi Arabia, Tunisia, Turkey and Yemen. However, given their status as oil producers, they have little need for such nuclear power now and he said that while their nuclear programmes will be small, the international implications of these countries having nuclear power in such a politically sensitive area of the world could be high.

Suzuki stated there are four issues that must be overcome if a nuclear renaissance is to become a reality: Economics of Nuclear Power and Financial Risk; Safety and Public Confidence; Spent Fuel and Waste Management; Nuclear Non-proliferation.

Nuclear power is probably, on average, competitive with fossil fuels. However, this competitiveness is highly uncertain because of the high capital costs associated with nuclear power plants, and the regular variations in the price of fossil fuels. In addition, its competitiveness varies regionally depending on the economic policies of individual countries. For example, the United States introduced the Energy Policy Act of 2005 to aid the competitiveness of the nuclear power industry. In the United Kingdom, the DTI Energy Review of 2006 recommended a number of policies to reduce the uncertainty of the licensing process, such as standardized reactor design licensing and the pre-licensing approval of potential sites, and to enhance competitiveness through carbon credits.

Safety remains a concern in local communities in the acceptance of nuclear facilities, and Suzuki said that an improvement in the decision-making process of building new facilities is needed. In Japan, due to a recent heavy earthquake in Niigata, public confidence is again eroding in nuclear power. It was only when an IAEA safety review team published its “preliminary findings” assuring of “no serious damage”, was public concern reduced. However, it is not clear when all seven nuclear reactors will open again, and whether

seismic safety standard need to be revised again. Suzuki said that very little trust in government safety regulations remains in Japan.

Suzuki stated that the bigger safety problem is the issue of spent fuel and waste management. Enormous amounts of spent fuel are accumulating at reactor sites and if power plant operators cannot get rid of it, they have to shut down reactors. No country has successfully completed HLW repository facilities to deal with this problem. Suzuki noted that the United States’ Yucca Mountain facility is the closest to opening, but its prospects are uncertain, and pressure is increasing on governments and the nuclear power industry to reduce the “burden” of HLW waste programmes. While there are expectations that advanced fuel cycle technologies can reduce this burden, the benefits and potential risks associated with these new technologies are uncertain. Suzuki stated that the financial, political and social risks associated with the back end of fuel cycle are increasing, along with a growing need for securing spent fuel storage capacity to avoid unnecessary reprocessing. Some countries, like the United Kingdom, are simply refusing to do reprocessing given the costs.

Suzuki noted a need for tighter control of the enrichment process to ease proliferation concerns. He gave a few ways on how proliferation can be eased. This includes a policy of universal access to nuclear power; that is, discrimination between the “have” and the “have not” should be avoided. To ensure transparency, additional protocols or equivalent safeguards arrangements should be applied. Finally, all nuclear power projects must be economically viable. They should be consistent with global nuclear fuel market activities and the economic rationale should be clearly defined to support nuclear fuel cycle programmes.

Suzuki closed by saying a nuclear renaissance can be realized, but the global nuclear share may decline up to 2030. This is because of the high amount of replacement orders that must be made in order to maintain its current share in the United States and Europe. In Asia, nuclear power is expected to grow faster than any region. Japan, South Korea, India and China are all expanding nuclear power programmes

and while other countries may introduce nuclear power, they also need a large commitment to build infrastructure.

For Suzuki, the major barriers to realizing a nuclear renaissance are financial risks, public confidence, spent fuel and waste management, and non-proliferation concerns. In addition, a multilateral response may be needed to cope with the increased proliferation risks associated with expanding nuclear fuel cycle facilities. Finally, the three necessary conditions for success are universality, transparency and economic viability.

## Discussion

The first question raised touches on the issue of new nuclear power plants that are either being planned for construction or discussed in previously nuclear-free countries like Australia, Indonesia, or Vietnam. A panellist replied that in order for new countries like Australia, Indonesia, or Vietnam to build nuclear plants, they must have strong social-industrial and safety regulatory infrastructures built. Moreover, these are difficult to construct and the process itself usually takes a long time. As such, countries should be very careful with their planning and the details before committing themselves into any nuclear power project. Even if a country builds only one or two nuclear energy plants, strong regulations and the supporting infrastructures need to be in place. Similarly, if a country starts on a nuclear energy programme, it cannot stop at building just one or two reactors, as it is not economical.

A speaker noted that the Philippines started planning for the building of the first nuclear plant in Southeast Asia in the 1970s, but this plan was mothballed in the 1980s due to financial problems. The speaker noted that there seemed to be a sort of inertia in Southeast Asia since then over the building of nuclear power

plants. Queries were also raised on the factors that would account for Southeast Asian nations' lag or them being left out in this nuclear renaissance, and the prospects of Southeast Asian countries joining the nuclear energy club. A speaker replied that there have been ongoing discussions among Southeast Asian countries and Japan on these topics. The nuclear industry would love to introduce nuclear power into the region, but in many cases the expansion of nuclear power is extremely difficult—even in the case of developed nations. There is a natural worry among citizens about introducing nuclear power. In addition, the waste management and fuel processing cycle is a very complicated process, both politically and economically, even for just one reactor.

An attendee asked about the effects of the Indo-U.S. nuclear deal on Pakistan. The attendee felt the results would be an alienated Pakistan that would feel isolated and this would possibly move it closer to China. Moreover, this would strengthen the stance of those who are pushing in Pakistan for a belligerent attitude towards India. The response was that Pakistan is getting more and more isolated with or without an Indo-U.S. nuclear deal. But the respondent also felt that such isolation would not make Pakistan any more aggressive. In fact, they are becoming more cooperative, especially with India vis-à-vis the Kashmir issue.

Finally, a workshop participant queried if one could apply the logic presented in Basrur's presentation in regards to the Indo-U.S. nuclear deal and the NPT in relation to Iran. The reply was if Iran satisfied the conditions that permitted the acceptance of India under the Indo-U.S. deal—the country is democratic, a non-proliferator, and does not pose a threat to international stability—than Iran should be allowed a similar acceptance that India has received.

## SESSION 4

### External Perspectives

#### A U.S. Perspective on Asia's Energy Security Development



*Gaye Christoffersen on US perspectives*

In her presentation, Gaye Christoffersen began by outlining her argument for her paper. She postulated that the Cebu Declaration presented a challenge to the East Asian region as it incorporates both a Northeast Asian pattern of energy relations and a Southeast Asian pattern. She added that additional challenges to the declaration are determining how to institutionalize the ideas and goals of a declaration into an organizational form, a multilateral regime with norms, rules and principles. Lastly, she argued that the United States, if it were to have any role at all, has two potential divergent strategies in East Asian energy security, one that follows the Northeast Asian pattern and another that supports the Southeast Asian pattern.

She then proceeded to explain what the Cebu Declaration is all about. She noted that the Declaration primarily referred to the regional energy infrastructure that is in Southeast Asia, the ASEAN Power Grid and the Trans-ASEAN Gas Pipeline, projects that have been developed under the auspices of the ASEAN Plan of Action for Energy Cooperation (APAEC), but it did not mention the Northeast Asian regional energy infrastructure. The goals of the Cebu Declaration are very similar to other energy initiatives in the Asia Pacific, making it difficult to distinguish it from others. She noted that both ASEAN and APEC have taken a top-down approach to regional energy cooperation in steps—political consensus, institutional framework

created, cooperative entity established, joint feasibility studies, actual regional projects developed and implemented, eventual evolution to common regional energy market. This is a top-down approach because the regional political framework had existed for decades before a regional energy project was developed. She felt that in order for a proper regional energy cooperation to be established, there must be a bottom-up approach incorporated. The Northeast Asian energy cooperation institutional framework is still in the stage of forming rules and norms. Energy experts from China, Japan and South Korea meet periodically and continue to construct rules and principles for energy regime formation. The only country that seems to be interested to initiate discussion and persistently pursues an institutional framework for Northeast Asian energy cooperation is South Korea. South Korea seeks to do so under the ambit of the Intergovernmental Collaborative Mechanism on Energy Cooperation in Northeast Asia. Besides organizing symposiums and calling on international organizations such as UNESCAP and IEA to provide support for institutionalization, South Korea also rely on Track 2 meetings to discuss the issue. One of the Korean initiatives was in November 2005 in Ulaanbaator hosted by ESCAP, the first SOM that adopted the Intergovernmental Collaborative Mechanism on Energy Cooperation in Northeast Asia, and created a Working Group on Energy Planning and Cooperation to identify possible future cooperation activities.

The work plan would be coordinated by KEEI with partner research institutes in each country. Despite these incremental successes, the meeting reflected the major powers' lack of enthusiasm. For instance, China proposed very limited functions for the organization and suggested countries should simply strengthen bilateral energy cooperation. Due to competition among major powers for resources, governments are reluctant to commit to a cooperative multilateral approach. For example, the Chinese government preferred bilateral arrangements. Japan promoted regional cooperation except when it came

to Russian resources while Russia assumed Asian competition was more beneficial than Asian cooperation for Russian interests, preferring geopolitical manoeuvring to cooperation. The United States does not support a Northeast Asian cooperative framework because it fears this would decrease U.S. influence in the region. She then brought up the discussions in Track 2 level framework for energy security discussions.

This has been largely been carried out by the WG on Energy Security Cooperation in the Network of East Asian Think-tanks (NEAT), a Track 2 network for supporting ASEAN+3 led by Beijing. This working group's goals were to promote energy efficiency, conservation and energy security, including the maritime dimension, and protection of the SLOCs that bring oil from the Middle East.

In her assessment of the U.S. government's involvement in energy cooperation in Asia, Christoffersen argued that it has always been on the basis of bilateral energy cooperation initiatives with most of Asian countries. An example of this is the U.S.-China Energy Policy Dialogue, established in May 2004 between the U.S. Department of Energy and the Chinese National Development and Reform Commission (NDRC), which facilitates policy exchanges on energy security and energy technology choices. This Dialogue was preceded by the U.S.-China Oil and Gas Industry Forum, created in 1998 by the U.S. Departments of Energy and Commerce and the NDRC. A 2004 report of the nature of U.S. involvement in the area was critical of traditional U.S. government approach, which it described as lacking centralized control and inadequate. The report proposed an inter-agency working group for coherent energy cooperation given that U.S. government agencies are properly coordinated; greater funding for international cooperation on energy-technology innovation; and more civil-society energy collaboration projects. Another important report is the Center for Naval Analysis (CNA) report, which highlighted that global climate change presented a serious national security threat to the United States because it would foster instability in vulnerable areas of the world through natural and humanitarian disasters that exceeded the capacity of states in those regions to respond to and ultimately would lead to failed states. The report recommended the U.S. government commit to a stronger international role, and commit to global

partnerships with developing countries to help them build capacity to manage climate impacts. These reports were critical in fostering a paradigm shift in the position of the United States from having bilateral arrangements with individual countries to a multilateral arrangement. She highlighted that the U.S. Assistant Secretary stated five principles the U.S. government observes in 2007 with regards to energy security, namely, that the world's current level of energy insecurity poses an unacceptable risk; fossil energy poses an urgent environmental challenge; energy security is increased by free, open and competitive markets for energy trade and investment; scientific innovation is essential to resolving energy challenges; and that the problem is international in nature and thus requires a coordinated response.

Christoffersen then introduced the Asia-Pacific Partnership on Clean Development and Climate (APP) initiative. She explained that the APP was launched in January 2006 and is a voluntary, non-legally binding framework for international cooperation. Officially, APP is meant to complement rather than displace the Kyoto Protocol. APP consists of eight public-private task forces chaired by member countries and partner countries including Japan, Australia, India, China and South Korea. To ensure progress, APP has a Policy and Implementation Committee, consisting of representatives from all member countries, and an Administrative Support Group. The United States is the chair of the Policy and Implementation Committee and the Administrative Support Group, and in fact, the Administrative Support Group is the U.S. government. Due to the strong involvement of the United States, the APP might be able to bring together all the different initiatives in the region into a coherent architecture.

In conclusion, Christoffersen stated that while the United States could play a major role in East Asian energy cooperation as a source of energy conservation technology, it has yet to define a role for itself with ASEAN+3 or East Asian Summit (EAS). The United States could be expected to be more supportive of APEC than the EAS or ASEAN+3. She believed that the United States could and should be supportive of the EAS's energy conservation goals to the extent that these goals coordinate and nest within the overall purposes of the numerous Asia-Pacific energy initiatives the United States does participate in.

She also argued that the Track 2 organizations are better positioned than Track 1 to overcome challenges related to energy security.

## A Multilateral Approach to Energy Security: The Energy Charter Treaty

Pascal Laffont began by stating that the aim of his paper is to assess the relevance of the Energy Charter Treaty (ECT) in addressing energy security challenges in the ASEAN region. He began by highlighting all the forums and organizations related to energy security that are in existence today. This includes the Energy Charter Treaty (Brussels), International Energy Forum (Riyadh), OPEC (Vienna) and the International Energy Agency (Paris). The key aim of the ECT is to give access to reliable energy supplies for all countries. It also sees itself as a framework that encourages state-to-state relations and confidence building. As the demand for energy begins to increase, there will be more cross border trades and projects taking place and this will result in the vulnerability of supply. Among the factors he highlighted that could lead to problems between countries are the losses of national sovereignty, political barriers, concerns over security of supplies, varying levels of national energy regulation and the lack of governance of the global energy economy due to the lack of a multilateral framework.

He then proceeded to explain why there is a need for a multi-country transit in energy supply. He asserted the fact that demand for energy is rising. There is also a diversification of supply sources and such an approach is more economical leading to a cheaper price for the end-user. Nevertheless, he observed that there are some common challenges to the multi-country transit approach. These include the fact that the legal structure of the project, as well as the regional volatility, is caused by political vicissitudes among the countries. He took the example of the Iran-India-Pakistan pipeline where each of the participating countries had their own concerns with regards to the pipeline. For India, the concerns for the project include interruption of transit and supply, over-dependence on Pakistan, project financing and the protection of Indian investment in Pakistan and Iran. For Pakistan, its concerns are interruption of supply, promoting foreign investment, securing recovery of transit fee, protection of the Pakistan investment in Iran and the creation of economic imbalance in the region. For Iran, its concerns

are depletion of indigenous resources, project financing, protection of the Iranian investment in Pakistan and securing the best possible price.

Laffont noted that a multilateral framework affirms sovereignty while reducing political risks; gives minimum enforceable legal guarantees thus encouraging multi-country cross border projects and investments at a lower cost; leaves the parties free to work out their detailed contractual arrangements; encourages amicable settlement and provides a composite and constant dialogue thus minimizing “tit-for-tat” responses as well as share best practices and knowledge. He argued that the ECT is the only multilateral legal framework for global energy trade. The legal provisions of ECT are part of the “Global Energy Security Principles” which were reaffirmed by the G8 members during their 2007 meeting in Germany as increasing transparency, predictability and stability of global energy markets, improving investment climate in the energy sector, enhancing energy efficiency and improving international energy cooperation. This was also recognized by the Heads of States of the ASEM Group in their Sixth Meeting in Helsinki on 11 September 2006. The need for a multilateral approach means that ECT relatively young constituency is widening to include more countries.

He purported that energy is a key issue to facilitate economic cooperation and development within the region. ASEAN had initiated cooperation in energy sector with the signing of the Agreement on ASEAN Energy Cooperation in 1986. The agreement emphasized cooperation among the member countries in developing energy resources to strengthen the economic resilience of the individual Member Countries as well as the economic resilience and solidarity of ASEAN. Adopted at the 22nd ASEAN Ministers on Energy Meeting in 2004, the ASEAN Plan of Action for Energy Cooperation (APAEC) 2004–2009 is the foremost implementation programme to realize this goal of energy cooperation and security in Southeast Asia. He observed that there are two key projects of APAEC—the Trans ASEAN Gas Pipeline and ASEAN Power Grid. These projects are expected to facilitate integration of ASEAN energy market and infrastructure and fully utilize its resources, thus promoting prosperity and security in the region. He predicted that it will be difficult for ASEAN to harmonize policy, regulation and standards. He suggested that a solution to this could

be through bilateral agreements between ASEAN countries. However, this might cost considerable time and effort and might not provide the appropriate platform to build a common legal framework required by cross-border projects that span more than two countries. A regional/multilateral approach would provide the required harmonized legal standards necessary to attract the considerable level of investments and technological/human resources needed to build the infrastructure. This approach should leave each government in complete control of their national energy policy. He felt that the ECT can provide ASEAN with the necessary legal tools while, through common membership with producer countries in Central Asia, helping to diversify supplies.

## Energy and Security: A Market-based Approach

Michael Lynch began the presentation highlighting that governments have generally misread the signs with regards to the price of oil. He noted that governments had attempted to maintain oil supply by sending national oil companies to develop resources overseas, improving relations with oil exporting nations, reducing the import of foreign oil and stockpiling emergency oil supplies. He noted besides stockpiling oil supplies, the rest of the solutions are not useful.

He argued that in the current circumstances, governments are becoming worried that oil supply is under threat as many of the oil-producing countries are undergoing political and economic problems. There is also a soaring demand for energy by China and India. This had led to the power of OPEC rising. These developments have led to panic among governments. However, he noted that very few countries are energy independent and the current shortage of oil is not yet in the severe range. He added that the global market would be dependent on Middle Eastern oil, which will mean that oil prices will never be stable due to political turmoil in the region.

He said that fear of embargo, competition for scarce resources, and political vulnerability to the control of oil exports—either by oil exporting countries or the producing companies, which are not always identical—form the basis of government fears. Thus, most governments are concerned about the amount of their imports, the source of those imports, and the nationality

of the companies producing the oil and exporting to them. However, these are not the primary indicators of vulnerability, because the modern market is so efficient that, in an oil supply disruption, those factors are largely irrelevant. Instead, singular events that disrupt supplies to the market generally should be the focus of governments' energy security policies. Part of the government's problem is the fact that they distrust that markets will stabilize after a certain period. The tendency for governments to pursue a protectionist policy does not help in trying to stabilize the price of oil. There is also a poor understanding of economics and distrust for markets on the part of the governments.

He mentioned that, in general, the governments always impose sanctions against rogue nations to get them to cooperate with the international community. Such an approach was successful in the past as the United States and the United Kingdom had a monopoly over oil companies. As such, the oil embargo against Japan was successful as both the United Kingdom and the United States control the international oil market. However, since then, the situation has changed to the point where political interventions in the world oil trade—sanctions and embargos—are ineffective. There are simply too many exporters and traders to prevent oil from flowing to a given destination, short of a massive UN embargo with military force behind it. The primary threat is the disruption of oil supply due to political events—war, revolution, civic unrest, and/or labour actions—rather than a targeted manipulation of supply. As such, he noted that national control of internationally traded oil is not very valuable.

He advocated the view that disruption of supply at the source means that the nature of the producing company does not matter, and in the case of political attacks on supply, those creating the disruption will, in all likelihood, be opposed to those producing the oil. Having good relations with an oil exporting government will not help to develop good relations with a new, revolutionary government. This was clearly shown in the example of Iran where the United States had strong links to the Iranian regime under the Shah of Iran but when Islamic revolutionaries overthrew the Shah, the United States lost an ally whose oil supply was important. He also believed that it is important that governments do not manipulate prices as this will have an adverse effect on the economy in the long run.

He believed that the spot oil market has grown so large that it is very easy for a government (or company) to locate replacement supplies on the free market, without providing financial aid or political concessions to oil exporters. Instead, the primary threat is that the loss of supply will tighten markets for all consumers, raising prices and inflicting economic damage. This means that instead of relying on the military security approach of using worst-case analysis, economic security should be subject to cost-benefit analysis. In all but the most extreme cases, volumes are less important than the cost of the oil.

He noted that the best approach for a government in dealing with increasing oil prices is to do as little as possible. This means that governments should allow the market to operate and correct itself. Governments should however deter embargoes and hoarding of oil supply. They should also have strategic reserves in the case of disruption in oil supplies. He ended by saying that the test for governments is an economic test and they should approach this issue utilizing the Cost-Benefit Analysis taught in the economic discipline.

## Discussion



*Pascal Laffont from the Energy Charter*

One of the participants made a comment that the governments in Southeast Asia know what they need to do with regards to energy security, which is basically to leapfrog by using modern technology. Cities in the United States and North America are built on oil. Yet if Southeast Asia is going to adopt the same method, this may be impossible simply because fossil fuel is funning out. As such, this will prove impossible since Southeast Asian countries will not have enough money to buy these fossil fuels.

A speaker replied that it is impossible for one to know exactly how much oil the Southeast Asian countries are buying since they will not want to share such information. Thus it may be impossible for observers to gauge whether these countries can afford their oil. It was also said that the United States is fortunate that it has an underground storage. He said that the United States is a hegemon and it might take a greater role in maintaining stability especially in conservation and stability. Climate change is a collective good. If there is a crisis, oil prices need to go up as governments cannot protect their citizens against everything.

Another participant questioned if the Energy Charter Treaty is binding. The participant said that when one speaks of a treaty being binding, it means that there must be measures that can be imposed if a member state transgresses the treaty.

It was explained that the way a problem is to be solved is in the hands of its member states. If a member state feels aggrieved by another member state, the country could do something about it. An example is what occurred between Russia and Japan. When Russia decided to forfeit its agreement with Mitsui and Shell operating some of its oil fields, Japan had the option of taking Russia to task. However, Japan decided not to do so as it did not believe in using international platforms to promote the cause of a private Japanese company.

One of the participants suggested that a key issue that the United States must do is to provide countries in Asia with the technology to safe energy. However, this is not occurring. It was proposed that this issue is similar to the imposition of Free Trade Agreements (FTAs) where Asian countries were not allowed to sell cheaper made Asian products to the United States. One of the important things for the United States is to get access for Asia to U.S. technology. Somehow it reminds one of the FTA that the United States imposes on Asian countries. It is easy to promote free trade when you are in the stronger position.

A speaker agreed with the participant's assessment and pointed out that there are more than 24 laboratories in the United States that are churning out energy saving technology. Since the United States has securitized climate change, it should make an effort to share this technology with poorer countries.



## SESSION 5

### Regional Cooperation and Future Trends

#### Assessing the Cebu Declaration on East Asian Energy Security: Issues and Challenges in Regional Energy Cooperation

In his address, Renato Cruz De Castro stated that the aim of his presentation is to examine the feasibility of the stated goals of the Cebu Declaration on East Asian Energy Security. He then proceeded to define energy security. He defined energy security as the focus on maintaining energy supplies—particularly associated with oil such as fossil fuel. It is assumed that a state enjoys energy security if there is enough supply for the survival of the nation, protection of national welfare, and minimization of risk associated with supply and use of fuel and energy services. In policy terms, however, there is still an ongoing debate on how national policy should be formulated and implemented to achieve the objectives of energy security. The first perspective argues that energy security means ensuring unhampered access to the world's limited oil supply and reserves. It assumes that oil will remain abundant and cheap for the foreseeable future, and security concerns should be directed to the geo-strategic reality that these oil supply and reserves are largely controlled by a few major oil-producing states. The second view, on the contrary, argues that there is already fossil fuel scarcity at the macro-level and that there will be major security problems from the tightening supply of oil. The key challenge when it comes to energy security is to create the socio-technological basis for a global economy that operates not on fossil fuels but on alternative and renewable energy sources.

He observed that the declaration has two primary objectives: the promotion of the use of alternative energy sources through the production of biofuels; and the formulation of policies that could lead to a more efficient utilization of energy in East Asia. He stated that he would be using three variables: the nature of the exigency; the presence and participation of a hegemonic power and the balance between absolute and relative gains to analyse the political viability of the declaration's objectives. One of the key

documents signed by the member-states of ASEAN and the regional organization's six dialogue partners during the Second East Asian Summit is the declaration that calls for an international collaboration to reduce dependence on conventional fuels through intensified energy efficiency and conservation programmes, and to increase the development and wide and extensive use of renewable sources of energy. He felt that the document underscores the fact that the search for alternative fuel sources has been prompted by an awareness of the diminishing supply of fossil fuels, the unstable global prices of oil, and the worsening problems of the environment. The document urges member-states to boost freer trade on biofuels and encourage investments in energy infrastructure to lessen dependence on conventional fuels. The declaration, he noted also expressed the East Asian Summit long-term goal of reducing energy consumption in the region by promoting the use of renewable energy sources and energy-saving technologies.

Criticism of the declaration is mainly due to the wordings on the mechanics of energy cooperation, which is considered vague. For instance, while the declaration alludes that the countries will ensure availability of stable energy supply through investments in regional energy infrastructure and will explore possible modes of strategic fuel stockpiling, it does not explicitly state the declaration must be implemented immediately. Furthermore, he argued while the declaration has drawn attention to biofuels as a viable alternative to fossil fuels, signing states did not consider the shift to this alternative energy source of utmost urgency because they still have to grapple with its social acceptability.

De Castro went on to examine the agenda of the Philippines in pushing for the declaration to be adopted. He propounded the view that the Philippines played a vital role in its formulation, drafting, and eventual signing during the summit. This he argued is logical given that the country considers itself as the leading Southeast Asian country bent on advancing the large-scale use of their alternative. In addition, the Philippine

is also highly dependent on external supply of energy and thus looks optimistically into developing bio-diesel from jathropa oil that could be used on a commercial scale throughout Southeast Asia.

He explained that the Philippines have an abundant supply of jathropa plants that could be used. For the Philippines, the use of jathropa is sensible since the supposed declining supply of energy supplies means that the need for an alternative fuel that does not contribute to adverse climate change and is a renewable source. It is primarily banking on jathropa to achieve 60 per cent self-sufficiency in energy for the country by 2010.

He noted that in order for the Cebu Declaration to succeed, there is a need for a cooperative hegemon to succeed. He suggested that in the past, Japan was the perennial cooperative hegemon fostering regional economic cooperation in East Asia. He felt that this time Japan is playing the role of supportive player in the drafting of the Cebu declaration. This was exemplified by the US\$2 billion package to assist East Asian states in the development of energy-saving technologies to help reduce their dependency on fossil fuels that the Japanese Prime Minister promised. As a leader in the research and use of bio-diesel, the Philippines is banking on the Abe aid-package to finance its efforts to produce an alternative fuel.

De Castro highlighted that another important consideration affecting the feasibility of the Cebu declaration's goals is how member-states will strike a healthy balance between their absolute gains against relative gains in this cooperative venture in energy security. He believe that a dramatic shift from oil to an alternative energy source will have a major consequence on regional trade, production, economic growth, and overall wealth generation and distribution. Developing countries in the tropics with huge tracts of arable lands may benefit from the cultivation and production of bio-diesel. Developed countries like Singapore, Japan, South Korea and even Australia may not have the arable land for the cultivation of bio-diesel feeder plants. Thus, they might end up depending on the tropical countries for a significant part of their energy needs. A crucial issue confronting these states is whether the production of bio-diesel will cause some participating states to be more concerned with the relative gains producing states might generate if the

commercial production of bio-diesel will take off. If the developed countries will see the gains of the developing countries as their loss, then the prospect of cooperation in energy security may be bleak.

He cautioned however that the Cebu Declaration clearly acknowledges that fossil fuels still underpin the regional economy, and will be an enduring reality in the near future. The production of alternative energy source will only lead to an increased supply of energy, not a qualitative change in the generation of energy source. As such, the production of bio-diesel is not meant to effect a rapid and overnight replacement of fossil fuels but rather to provide temporary relief until a more complete transition from oil to alternatives can be effected.

He concluded that based on the analysis of the three factors that he began with, the necessary political prerequisites for the realization of the Cebu Declaration on East Asian Energy Security are present.

## What is the Relevance for Europe of Asia's Experience in the Field of Energy Security?

Ingolf Kiesow began by stating that his presentation will deal with energy as a security policy problem. He observed that there is now greater competition for energy due to increasing political instability in producer countries, increasing world demand and the peak production theory, which advocates the view that energy production has hit its peak. The result of this competition is a tendency for national egoism and zero sum thinking. He then highlighted some facts about the consumption of energy in the world. He noted that the United States consumes the largest amount of energy in the world and Asia's share of world import of energy has increased from 26 per cent in 1980 to 36 per cent in 2006 while European consumption has decreased from 37 per cent in 1980 to 27 per cent 2006.

Kiesow explained that the EU Energy Charter holds to the basic philosophy that as much energy as possible should be made available for the market. It also serves as a guideline for international cooperation in the realm of energy security between the countries of the world. It also aims at rule of law and a level field of rules for all governments. However, such an attempt faces

several challenges. Many of the major world powers have refused to sign the agreement. While Russia accepted the Charter, it has still not signed. China and the United States are observers at the forum while India is not even an observer.

Kiesow then proceeded to discuss some tendencies that he observed in energy security. Firstly, China and India are seeking to own oil as long as they have the financial means to do so. This is despite the fact that the United States is critical of this. Secondly, countries tend to avoid transport risks. Plans to build pipelines through land routes in Pakistan and the Malay Peninsula are reflective of this trend. Countries such as China and India are buffing up their navies to protect routes where energy are transported. Thirdly, he propounded the view that countries tend to manipulate their partners for their own purposes. The case of India is most apt at exemplifying this. India has been courted by China and Russia to participate in the Shanghai Cooperation Organization (SCO) while at the same time being courted by the Americans to counter the influence of China. This could result in less security for Asia. Fourthly, there is also a tendency for countries to mend their ties to secure energy. He gave the example of China and Japan where leaders of both countries are actively building confidence building measures. Fifthly, countries could come together to impede the advancement of a growing power such as in the case of China. He noted that four of this five tendencies are not in line with the ECT. He added that while the United States has been more liberal in terms of promoting free flow of energy supply, it has also imposed certain restrictive measures to manage energy supply. In addition, the ECT may prohibit non-EU countries (Russia) to buy EU infrastructure companies and while Japan is working for free flow of energy, it is facing hard competition from China.

Kiesow concluded by predicting that there may two power blocs emerging in Asia, one led by China and the other by the United States. Such a development will result in mercantilism, a zero sum gaming and for power politics to appear in the field of energy.

## Is there a Solution? Obstacles and Prospects for Multilateral Cooperation in Asia

Shoichi Itoh began his presentation by defining what he meant by energy security. He noted that traditionally, energy security has always been equated to oil security. It was also seen to be a means of political (diplomatic) justification, bringing the nation to rally under the flag. He then highlighted the multifarious interpretation of energy security that defines energy security as aiming to satisfy national energy demand now and in the future, to raise the level of energy self-sufficiency; to secure access to resources abroad, if necessary; to maintain sufficient stockpiles of key energy products; to diversify energy sources with an aim of avoiding excessive reliance on a limited number of energy alternatives; to reduce energy consumption by promoting efficient use of energy; and to procure energy at reasonable prices for the maintenance of a sustainable economy.

Itoh then proceeded to explain the Japanese model of energy security. He made the case that Japan has improved its energy conservation efficiency by over 30 per cent since the 1970s. It has also successfully established an oil stockpiling system that is equivalent to about half-a-year of its oil need. Japan has also reduced reliance on oil as a primary energy source. Oil accounted for 77 per cent of the Japanese energy need in 1973. By 2003, the percentage had gone down to 50 per cent. The economic system has reduced its vulnerability to the fluctuation of oil prices.

He noted that there are several challenges to energy security. Firstly, countries often have a certain perception or misperception of the intentions of other countries. In addition, energy security has increasingly become politicized. Also, energy security is often linked to financial games. Lastly, countries often question who benefits from “Resource Diplomacy”. He argued that only a convergence of national interests would lead to countries working together to resolve the problem. He gave the example of China and Japan where opportunities for cooperation could only occur

through business principles and market activities. This often leads to the de-politicization of energy security.

He explained that a multi-layered framework for energy cooperation involves both bilateral and multilateral cooperation. It is also important that the United States is engaged in any such process. The U.S. plays a role as a shock absorber for sub-regional rivalries. He also advocated the view that Russia acts as a catalyst for collaboration among consuming countries. As Russia began to look to the East, this provides a great potential for Asian countries. He believed that the geopolitization of energy security could be countervailed by policy coordination among consuming countries. This would involve countries coming together and coordinating policy among consuming countries as well as with Russia at a second stage.

He concluded by proposing a three-tier level of building an energy community. At the first tier, the precipitating conditions entail changes in technology, demography, economics, and the environment; the development of new interpretations of social reality; and external threats. At the second tier, the factors conducive are mutual trust and collective identity, with power and knowledge as structure, and transactions, organizations and social learning as process whereas at the third tier, the necessary conditions for dependable expectations of peaceful change must be built by mutual trust and collective identity.

## Discussion



*Niklas Swanstrom, Director ISDP, giving his closing remarks*

One of the participants suggested that one must take into consideration the regulations of companies. There is nothing that prevents a country from interfering in the affairs of oil companies from the country. It will be natural for countries to also support their own

national companies. For instance, Malaysia will definitely try to advance the interest of Petronas.

A panellist said that countries should convey the need for talking about the kind of compromises that can take place in the behaviour of states in the future. Countries should also clarify their attitudes. For instance, it is difficult for developing countries to subscribe to free trade principles. In addition, some countries deviate for different reasons. There is a tendency to misinterpret intentions and imagine power game. The EU and China cannot take individual initiatives. They should try to push for their agendas to a higher level maybe at the UN.

One of the participants asked whether small powers should take their own initiative in energy cooperation or should they rely on big powers. It was answered that while all countries in Asia would like to have U.S. involvement in the region, there must be fair treatment of such involvement in the region. China is afraid of the United States as a threat but one can expect that some things are unlikely to be solved. He also stated that the big powers have more responsibility. At the same time, it is also not optimum for only one single power to be dominant in a region. However, one has to accept that big powers are reality of international system.

Another speaker also said that it is difficult to assess to what extent the United States is trying to engage China. However, the United States cannot control the perception China may have of it. Even if the United States wants to contain China, is it possible or economically viable to do so? The United States has been anxious to engage China as the Asian market is globally connected. It is impossible for the United States not to engage China and India if a proper energy policy is to be developed. All the different countries appreciate the need for different alliances in this area.

Another participant questioned about the Japanese aspirations to decrease energy consumption by another 30 per cent, asking how Japan intends to do that. It was answered that Japan is in the midst of developing various technology to enable energy saving and this is likely to assist the country in cutting energy consumption.

Rapporteurs:  
Ng Sue Chia  
Mohamed Nawab Mohamed Osman

# PROGRAMME

## PROGRAMME / AGENDA

Thursday, 6 September 2007

- 1500 Arrival of commentators and speakers for Registration
- 1800 End of Registration
- 1900 Cocktail Reception and Welcome Dinner for commentators and speakers  
Café Biz, Traders Hotel, Singapore

Friday, 7 September 2007

- 0800 Conference Registration
- 0900 Welcome Remarks:  
Kwa Chong Guan, *Head of External Programmes, S. Rajaratnam School of International Studies, Nanyang Technological University, Singapore*
- 0915 Opening Remarks:  
Pär Ahlberger, *Ambassador of Sweden to Singapore*
- 0930 Guest Speech:  
Khoo Chin Hean, *Chief Executive, Energy Market Authority (EMA), Singapore*
- 1000 Break
- 1020 Session I: Asia's Energy Profile – A Security Overview
- Chairperson:  
Karlis Neretnieks, *Major-General (Ret) & Senior Researcher Institute for Security and Development Policy, Sweden*
- Northeast Asian Energy, Diplomacy and Security  
Zha Daojiong, *Professor, School of International Studies, Peking University, China*
- The Geo-economics of Central Asia Energy  
Robert Cutler, *Senior Research Fellow, Institute of European, Russian and Eurasian Studies, Carleton University, Canada*

The Role of Energy in South Asian Security  
C Raja Mohan, *Professor, S. Rajaratnam School of International Studies, Nanyang Technological University, Singapore*

Southeast Asia's Energy and Security Challenge  
Elspeth Thomson, *Visiting Research Fellow, East Asian Institute, National University of Singapore, Singapore*

Q&A

1220 Lunch

1330 Session II: Feeding Asia's Energy Demand

Chairperson:  
Michael C. Lynch, *President, Strategic Energy and Economic Research, Inc., United States of America*

Russia's Energy Policy towards Asia: Opportunities and Uncertainties  
Shoichi Itoh, *Senior Research Associate, Economic Research Institute for Northeast Asia, Japan*

Perceptions and Strategies on Energy Security: The Case of China and Japan  
Janet Xuanli Liao, *Lecturer in International Relations and Energy Security, Centre for Energy, Petroleum and Mineral Law and Policy, University of Dundee, United Kingdom*

Australia's Role in Feeding Asia's Energy Demand  
Richard Leaver, *Reader in International Relations, School of Political and International Studies, Flinders University, Australia*

Asia's Competition for Middle East Energy Supply: Feeding Asia's Paradox?  
Jaewoo Choo, *Associate Professor, Chinese Politics and Foreign Policy Department of Chinese Studies, Kyung Hee University, South Korea*

Q&A

1530 Break

# PROGRAMME

1550	<p>Session III: Nuclear Options and Environmental Concerns</p> <p>Chairperson: Simon Tay, <i>Chairman, Singapore Institute of International Affairs; Chairman, National Environment Agency, Singapore</i></p> <p>Energy and Climate Change – Towards Sustainable Development Youngho Chang, <i>Research Fellow, S. Rajaratnam School of International Studies, Nanyang Technological University, Singapore</i></p> <p>The US-India Nuclear Deal – Security Implications Rajesh M. Basrur, <i>Visiting Research Fellow, S. Rajaratnam School of International Studies, Nanyang Technological University, Singapore</i></p> <p>Nuclear Renaissance: Its Expectations, Realities and Security Implications Tatsujiro Suzuki, <i>Visiting Professor, The University of Tokyo, Japan</i></p> <p>Q&amp;A</p>	<p>A Market-based Approach Michael C. Lynch, <i>President, Strategic Energy and Economic Research, Inc., United States of America</i></p> <p>Q&amp;A</p>
	1030	Break
	1050	<p>Session V – Regional Cooperation and Future Trends</p> <p>Chairperson: Niklas Swanström, <i>Director, Institute for Security and Development Policy, Sweden</i></p> <p>Assessing the Cebu Declaration on East Asian Energy Security : Issues and Challenges in Regional Energy Cooperation Renato Cruz De Castro, <i>Associate Professor, International Studies Department, De La Salle University, Philippines</i></p> <p>What is the Relevance for Europe of Asia's Experience in the Field of Energy Security? Ingolf Kiesow, <i>Ambassador and Senior Research Fellow, Institute for Security and Development Policy, Sweden</i></p>
1720	Conference Adjourns	
1830	Conference Dinner	
Saturday, 8 September 2007		
0900	<p>Session IV – External Perspectives</p> <p>Chairperson: Mark Hong, <i>Visiting Research Fellow, Institute of Southeast Asian Studies, Singapore</i></p> <p>A US Perspective on Asia's Energy Security Development Gaye Christoffersen, <i>Associate Professor of Political Science, Soka University of America, United States of America</i></p> <p>A Multilateral Approach to Energy Security – The Energy Charter Treaty Pascal Laffont, <i>Head of Non-Members Unit, Cabinet of the Secretary-General, The Energy Charter Secretariat, Belgium</i></p> <p>Energy and Security –</p>	<p>Is there a Solution? -- Obstacles and Prospects for Multilateral Cooperation in Asia Shoichi Itoh, <i>Associate Senior Researcher, Economic Research Institute for Northeast Asia, Japan</i></p> <p>Q&amp;A</p>
	1220	<p>Closing Remarks: Niklas Swanström, <i>Director, Institute for Security and Development Policy, Sweden</i></p>
	1245	Lunch
	1400	Conference Ends

# LIST OF CHAIRPERSONS & PAPER PRESENTERS

1. H.E. Pär Ahlberger  
Ambassador  
Embassy of Sweden
2. Dr. Rajesh M. Basrur  
Visiting Research Fellow  
S.Rajaratnam School of International Studies  
Nanyang Technological University
3. Dr. Chang Youngho  
Research Fellow  
S.Rajaratnam School of International Studies  
Nanyang Technological University
4. Dr. Choo Jae Woo  
Associate Professor  
Chinese Politics and Foreign Policy Department of  
Chinese Studies Kyung Hee University
5. Dr. Gaye Christoffersen  
Associate Professor of Political Science  
Soka University of America
6. Dr. Robert M. Cutler  
Senior Research Fellow  
Institute of European, Russian and Eurasian Studies  
Carleton University
7. Dr. Renato Cruz De Castro  
Associate Professor  
International Studies Department  
De La Salle University
8. Mr Mark Hong  
Visiting Research Fellow  
Institute of South East Asian Studies
9. Mr Shoichi Itoh  
Associate Senior Researcher  
Economic Research Institute  
for Northeast Asia (ERINA)
10. Mr Khoo Chin Hean  
Chief Executive  
Energy Market Authority
11. H.E. Ingolf Kiesow  
Senior Research Fellow  
Institute for Security and Development Policy
12. Mr Kwa Chong Guan  
Head of External Programmes  
S.Rajaratnam School of International Studies
13. Mr Pascal Laffont  
Head of Non-Members Unit  
Cabinet of the Secretary-General  
The Energy Charter Secretariat
14. Mr Richard Leaver  
Reader in International Relations  
School of Political and International Studies  
Flinders University
15. Dr. Liao Xuanli Janet  
Lecturer  
Centre for Energy, Petroleum and  
Mineral Law and Policy  
University of Dundee
16. Mr Michael C. Lynch  
President  
Strategic Energy and Economic Research, Inc.
17. Professor C Raja Mohan  
Professor S.Rajaratnam School  
of International Studies  
Nanyang Technological University
18. Major-General (Ret) Karlis Neretnieks  
Senior Research Fellow  
Institute for Security and Development Policy
19. Dr. Tatsujiro Suzuki  
Visiting Professor  
The University of Tokyo
20. Dr. Niklas Swanström  
Director  
Institute for Security and Development Policy
21. Mr Simon Tay  
Chairman  
Singapore Institute of International Affairs
22. Dr. Elspeth Thomson  
Visiting Research Fellow  
East Asian Institute  
National University of Singapore
23. Professor Zha Daojiong  
Professor  
School of International Studies  
Peking University



# LIST OF PARTICIPANTS

1. H.E. Kamrul Ahsan  
High Commissioner  
High Commission of Bangladesh
2. Mr Srunya Ampartrakarn  
Second Secretary  
Royal Thai Embassy
3. Ms Chris Anderson  
Deputy High Commissioner  
High Commission of New Zealand
4. Mr Sajjad Ashraf  
High Commissioner  
High Commission of Pakistan
5. Mr Aung Kyaw Oo  
Minister Counsellor  
Embassy of the Union of Myanmar
6. Ms Bao Zhong  
Attache, Political and Press  
Embassy of the People's Republic of China
7. Dr. Peter Burns  
Research Coordinator  
Flinders International Asia Pacific Institute  
Flinders University
8. Mr Chan Siew Kuan  
Warrant Officer  
Singapore Armed Forces Warrant Officer School  
(SAFWOS)
9. Mr Chen ShaoFeng  
Student  
Department of Political Science  
National University of Singapore
10. Mr Chen Wei Nan  
Third Secretary  
Embassy of the People's Republic of China
11. Dr. Alvin Chew  
Research Fellow  
S.Rajaratnam School of International Studies  
Nanyang Technological University
12. Mr Chia Kay Poh John  
Warrant Officer  
Singapore Armed Forces Warrant Officer School  
(SAFWOS)
13. Dr. Charles Chow  
Managing Director  
East-West Gateway Private Limited
14. Mr Chua Hearn Yuit  
HSC Specialist  
National Security Coordination Centre  
Prime Minister's Office
15. Mr Chung Jeffrey  
Warrant Officer  
Singapore Armed Forces Warrant Officer School  
(SAFWOS)
16. Mr Aaron Corbett
17. Mr Alexey Dakhnovskiy  
Senior Counsellor  
Embassy of the Russian Federation
18. Dr. Arthur S. Ding  
Visiting Senior Research Fellow  
S.Rajaratnam School of International Studies  
Nanyang Technological University
19. Mr Hossam El Shenawy  
Second Secretary  
Embassy of the Arab Republic of Egypt
20. Ms Lefianna Hartati Ferdinandus  
First Secretary  
Embassy of the Republic of Indonesia
21. Mr Bertrand Fort  
Deputy Executive Director  
Asia Europe Foundation
22. Ms Susanne Gentz  
Policy Project Officer  
Centre for Humanitarian Dialogue
23. Mr Avinash Gill  
First Secretary  
High Commission of India
24. Mr Gnanasegaran  
Warrant Officer  
Singapore Armed Forces Warrant Officer School  
(SAFWOS)
25. Ms Guo Bin  
Third Secretary  
Embassy of the People's Republic of China
26. Ms Christiana Harkert  
Counsellor / Deputy Head of Mission  
Embassy of the Federal Republic of Germany
27. Captain Karl Henriksson  
Defence Attaché  
Embassy of Sweden
28. Ms Annamaj Hultgard  
Minister / Deputy Head of Mission  
Embassy of Sweden
29. Mr Michal Kolodziejski  
Head of Economic Section  
Embassy of the Republic of Poland

# LIST OF PARTICIPANTS

30. Mr Kwan Wai Wing  
Warrant Officer  
Singapore Armed Forces Warrant Officer School  
(SAFWOS)
31. Mr Christopher Len  
Energy and Cooperation Project Coordinator  
Institute for Security and Development Policy
32. Mr Mohammad Sarwar Mahmood  
Counsellor  
High Commission for the People's Republic of  
Bangladesh
33. H.E. Ahmet Bulent Meric  
Ambassador  
Embassy of the Republic of Turkey
34. Mr Mohamed Nawab Bin Mohamed Osman  
Associate Research Fellow  
S.Rajaratnam School of International Studies  
Nanyang Technological University
35. Ms Ng Sue Chia  
Associate Research Fellow  
S.Rajaratnam School of International Studies  
Nanyang Technological University
36. Mr Alvin Oo  
Manager, International Relations Office  
Defence Science and Technology Agency
37. Mr Mike Pathi  
Warrant Officer  
Singapore Armed Forces Warrant Officer School  
(SAFWOS)
38. Mr Eric Ricafort  
Assistant, Consular / Political  
Embassy of the Republic of the Philippines
39. Mr Rajesh Kumar Sachdeva  
Deputy High Commissioner  
High Commission of India
40. Mr John Selvamani  
Warrant Officer  
Singapore Armed Forces Warrant Officer School  
(SAFWOS)
41. Mr Sieng Bun Vuth  
Minister Counsellor  
Royal Embassy of Cambodia
42. Mr Sundaraj  
Warrant Officer  
Singapore Armed Forces Warrant Officer School  
(SAFWOS)
43. Major Azhar Tahir  
Assistant Defence Adviser  
High Commission of Malaysia  
301 Jervois Road, Singapore 249077  
Email: adammama@singnet.com.sg
44. Ms Tan Edna  
HSC Specialist  
National Security Coordination Centre  
Prime Minister's Office
45. Mr Joshua Thomas  
Manager, International Relations Office  
Defence Science and Technology Agency
46. Mr Tong Ting Yap  
Senior Officer  
Ministry of Defence
47. Mr Jan Van Overdam  
First Secretary  
Embassy of the Kingdom of the Netherlands

# ABOUT RSIS

The S. Rajaratnam School of International Studies (RSIS) was established in January 2007 as an autonomous School within the Nanyang Technological University. RSIS's mission is to be a leading research and graduate teaching institution in strategic and international affairs in the Asia Pacific. To accomplish this mission, it will:

- Provide a rigorous professional graduate education in international affairs with a strong practical and area emphasis
- Conduct policy-relevant research in national security, defence and strategic studies, diplomacy and international relations
- Collaborate with like-minded schools of international affairs to form a global network of excellence

## Graduate Training in International Affairs

RSIS offers an exacting graduate education in international affairs, taught by an international faculty of leading thinkers and practitioners. The teaching programme consists of the Master of Science (MSc) degrees in Strategic Studies, International Relations, International Political Economy, and Asian Studies as well as an MBA in International Studies taught jointly with the Nanyang Business School. The graduate teaching is distinguished by their focus on the Asia Pacific, the professional practice of international affairs, and the cultivation of academic depth. Over 150 students, the majority from abroad, are enrolled with the School. A small and select Ph.D. programme caters to advanced students whose interests match those of specific faculty members.

## Research

RSIS research is conducted by five constituent Institutes and Centres: the Institute of Defence and Strategic Studies (IDSS, founded 1996), the International Centre for Political Violence and Terrorism Research (ICPVTR, 2002), the Centre of Excellence for National Security (CENS, 2006), the Centre for the Advanced Study of Regionalism and Multilateralism (CASRM, 2007); and the Consortium of Non-Traditional Security Studies in ASIA (NTS-Asia, 2007). The focus of research is on issues relating to the security and stability of the Asia-Pacific region and their implications for Singapore and other countries in the region. The S. Rajaratnam Professorship in Strategic Studies brings distinguished scholars and practitioners to participate in the work of the Institute. Previous holders of the Chair include Professors Stephen Walt, Jack Snyder, Wang Jisi, Alastair Iain Johnston, John Mearsheimer, Raja Mohan, and Rosemary Foot.

## International Collaboration

Collaboration with other professional Schools of international affairs to form a global network of excellence is a RSIS priority. RSIS will initiate links with other like-minded schools so as to enrich its research and teaching activities as well as adopt the best practices of successful schools.



## **S. RAJARATNAM SCHOOL OF INTERNATIONAL STUDIES**

A Graduate School of Nanyang Technological University