

**Minutes of SPEC 2003: Presentations and Panel Discussion “Regional Economic Cooperation and Energy Security in Asia”**

**Chairman’s Address**

At present the Asian region faces two crises. One is the Iraqi problem and the other is the North Korean problem. The former is directly related to energy security, while the latter, though not directly related to energy, is a real security issue of North East Asia. I believe regional cooperation is imperative for dealing with this sort of crisis. Since 1997, the East Asian region has built up cooperative relations through summit meetings of the ASEAN+3 (Japan, China and Korea). The 2001 November Summit, the first meeting held after the September 11 terrorists’ attacks, agreed on strengthening of cooperative relations in energy security field. Today, we have five panelists from not only Asia but also Russia and Europe, who are asked to deliver presentations and have a panel discussion on energy security in their homelands and a desirable way of energy security cooperation in North East Asia, among others.

**Presentations by Guest Panelists**

**“Regional Economic Cooperation and Energy Security in Asia – Energy Cooperation among Japan, China, Korea and ASEAN,” presented by Mr. Naoaki Kurumada, Director for Asian Energy Cooperation, International Affairs Division, Agency for Natural resources and Energy, Ministry of Economy, Trade and Industry, Japan**

Like water and foods, energy is a necessity of the modern economic society. In order to stabilize and develop our living, we need to curb the risks of shrinking energy supplies and energy price hikes. The IEA projection puts Asia’s energy demand to increase from 2,600 million tons oil equivalent (MTOE) in 2000 to 5,200MTOE by 2030. On the other hand, oil production within Asia is expected to remain almost flat, which means most of Asia’s incremental demand has to depend on supplies from outside the region. Then, the strong likelihood is that the major supply source to Asia will be the oil-rich Middle East, where is politically unstable due to the Iraqi problem and the Palestine conflicts, among others. Unexpected incidents, if any, can cause an oil disruption from the Middle East. Worse, even with commercial stocks included, Asia’s oil stockpiles are as little as barely meeting an about 30-days local demand, which means Asia is poorly prepared the risk of disruption. In a region where the economies are highly interdependent through trade and investment, if an energy crisis hit a single country, confusion of the crisis-hit country’s economy should have eventually spread to the rest of the region and made the neighboring economies stagnated too. Sharing the recognition that we are all “on the same boat,” Japan, China, Korea and the ASEAN must tackle energy security issues through the ASEAN+3 forum.

At the ASEAN+3 Energy Ministers meeting held September 2002 in Osaka, Minister Hiranuma for Economy, Trade and Industry called for ASEAN+3 energy cooperation, which consisted of five initiatives, about which the Ministers agreed. (1) **Creation of an emergency network:** During the past two oil crises, fears for oil disruption have arisen despite ample supplies actually available. Then, the disruption fears helped create speculative demand in consuming countries stricken by panic and thus precipitated price hikes. In emergency, regional market stabilization must be tried by calling for calm attitude among the public by making the people informed swiftly and accurately through well-organized information gathering and analysis. (2) **Development of oil stockpiles:** Oil stockpiling has a few functions. They include: i) availability of stockpiles itself provides a sense of security and prevent panic-prone behaviors in emergency; ii) drawdown of stockpiles is effective in easing supply and demand and curbing price spikes in emergency; and iii) the drawdown secures physical supplies in the event of disruption, if any. While calling for the necessity for stockpiling, Japan is ready to furnish individual countries in this region with know-how that help them build up oil stockpiles at the earliest possible opportunity and thus improve emergency preparedness regionwide in the medium run. (3) **Joint studies on the Asian oil market:** We have to make best efforts to stabilize the oil market further through i) researches/studies that contribute to solving the issue of the Asian Premium and ii) improvement of accuracy of oil data based on which emergencies must be judged. (4) **Improvement of natural gas development:** The greater natural gas use leads to the lower oil dependence and the lower energy dependence on the Middle East. This is also helpful in mitigating global warming. (5) **Promotion of energy conservation and renewable energies:** The economy's lower dependence on energy and greater supply of alternative energies can improve energy security in the long run. These provide effective measures to arrest global warming as well.

From now on, energy cooperation among ASEAN+3 will be put to specific studies and implemented by the senior official members under the Energy Ministers. We expect cooperation among ASEAN+3 will be under way steadily through public and private concerted efforts to seek best ideas while sharing the sentiment that we are all "on the same boat."

#### **Questions & Answers/Comments**

Q: I heard China, in its effort for oil stockpiling, has a plan to create an oil sharing system in East Asia modeled after the IEA one. Is this true?

A: I've never heard of it. The IEA certainly has a mechanism of emergency sharing. But, in recent years, little chance has been noted of as serious disruption as provoking the sharing mechanism. So, it sounds unrealistic China has such a plan. At any rate, I highly appreciate China's oil stockpiling because it contributes much to stabilizing the East Asian market in emergency.

Q: You said Asia's energy demand would grow sharply. But, with post-industrialization in progress, Japan's energy demand will be downward, won't it?

A: Japan's energy demand is expected to be flat or down. Yet, given that Japan is a member of Asia, energy security and market stabilization within the region are matters of vital importance for Japan's energy security too.

Q: Is the Russian pipeline scheduled to reach Japan via China? What impacts will the pipeline have on China's crude oil imports?

A: The significance of the pipeline from the Russian perspectives is diversification of its crude oil outlets, while it is diversification of supply sources from the consuming-countries' perspective. Because this is a private project, what it will be depends on how the private organizers think of it. On the other hand, as for the Pacific Pipeline, it became definite that its details, including economics, would be discussed at a Japan-Russia summit meeting. We positively evaluate it as a plan leading to diversification of Japan's crude oil supply sources.

Q: What should happen in the event of terrorism in the Strait of Malacca?

A: First of all, it is clear that it won't cause any serious consequences. It is because Japan and Korea are the IEA members and have over 90-day stockpiles.

**“Energy Security: Risk and Opportunity,” presented by Dr. Hoesung Lee, President, Council on Energy and Environment Korea, Korea**

Despite strong market forces sweeping the global economy, energy security problems require more proactive government initiative than ever. When we consider security issues, we have to consider not only risk but also opportunity. Vulnerability to energy security gives a good chance to promote energy conservation and new energies. It also gives a chance to modernize the energy system. But, to what extent energy security will advance depends on to what extent consumers are willing to pay the required cost for it. Energy security has three dimensions. They are (1) vulnerability to an energy disruption that disintegrates the link between producing and consuming countries, (2) vulnerability to macroeconomic losses due to energy price volatility and precarious supply, and (3) economic and technical uncertainties over sustainable supply in the long run.

Today energy security risks are increasing. Because no serious crisis has occurred since 1985, oil dependence has been rising inch by inch, together with increasing dependence on fewer number of supply sources. Also, the oil market has become less flexible due to mounting oil demand in the

transport sector. In addition, regional imbalance has worsened and Asia/Pacific dependence on energy imports is record-high. Two decades later energy demand of North East Asia is projected to reach a level comparable to the U.S. Because oil dependence won't fall much and because oil import dependence will rise, greater risks will be inevitable. In the face of energy security vulnerability in these points, what's the government role is clear. That is, the government should be a guarantor of energy security. To build an efficient energy market from both national and regional perspectives requires positive government involvement. Government-led multilateral cooperation and positive R&D investments are important as well.

External shocks lead to modernization of energy system. Taking Korea as an example, the oil crisis in 1973 helped advance nuclear and coal-fired power introduction, which lowered dependence on oil-fired power, responsible for 80% of Korea's generated output at that time. Today nuclear power accounts for 40% of generated output, and coal-fired power 30%. The second crisis in 1979 promoted natural gas infrastructure construction, which helped natural gas become the primary energy source of the household sector. Oil stockpiling was in advance as well. A third energy crisis, if any, should have energy conservation and new energy introduction advancing dramatically.

The lessons from the last three decades after the first oil crisis must be put to best use in preparing for the next 30 years. To design and implement energy security measures has been the key role played by the government. From now on, by advancing privatization and deregulation, the government is required to help enhance the role of the private sector in energy security. In addition, in order to enjoy scale economies of existing and new energy technologies, both public and private sectors are in need of multilateral cooperation. East Asia needs something like a multilateral coordinating agency dedicated to energy security improvement. Its missions would include six programs. They are i) information/database construction, ii) international gas pipeline, iii) foreign investment protection, iv) coordination of supply disruption, v) sea-lane security measures, and vi) policy reviews/advice given to member countries.

Actually, in order to increase energy security, we need "price reforms." In order to lower oil dependence of economic activity by private entities, the price must be increased. Energy diversification efforts without price rises on the market should involve some costs naturally. Are consumers willing to pay for the cost? Namely, if or not energy security is gained depends on to what extent consumers are willing to bear the cost.

#### **Questions & Answers/Comments**

Q: With what funds Korea finances oil stockpiling?

A: It is financed by various oil-related taxes.

Q: On top of security on supply side, energy security on demand side is important as well. In this sense, don't you think there are still many things to be done?

A: Ideally, clearing supply and demand must be left to the market.

Q: You mentioned security requires price reforms. Do you have any specific schemes for energy price reforms?

A: The economists are computing appropriate prices now. Given the trade-off with environmental problems, etc., theoretically estimated prices turned out to be too high to be actually accepted by consumers and such high-level energy prices will require act of political courage on the part of government. In the real world of democratic government, there are very few politicians who want to risk their own political life. So, we will have a dilemma.

**“Oil Security in China,” presented by Ms. Wang Yanjia, Professor, US/China Energy and Environment Technology Center, Tsinghua University, and Team Leader, APERC**

Along with economic development, living of the people is improving and the car ownership is projected to increase at a pace of 10% yearly, and China's oil demand is expected to grow fastest in Asia from now on. In response to growing energy demand, the Chinese government has six-point energy security measures. (1) **Domestic resources development:** The government's target is to attain self-sufficiency of 60% in 2010 and 50% by 2020. However, domestically produced crude oil is expected to reach a peak in 2010. (2) **Natural gas development and utilization:** With the West Gas to East Project as the centerpiece, development and utilization of domestic natural gas will be promoted and LNG import terminals and pipelines will be constructed. (3) **Overseas resource development** and (4) **strategic alliances:** Because oil development in China costs much higher than in the Middle East, to acquire interests outside China can contribute to China's supply security. Actually CNPC is producing 370,000 B/D overseas, which is expected to reach 50 million tons by 2020. (5) **Creation of oil stockpiles:** China's oil stockpiles are as limited as around 20-day commercial stocks at refineries. Also, because China imports about 2 million B/D, a rise in the crude oil price by about \$5/bbl boosts the country's import cost by about \$10 million every day. So, by investing \$100 billion over the next 20 years, China will construct oil storage facilities and plans to stock 35~60 million tons by 2020. (6) **Energy efficiency improvement and alternative energy introduction:** China's energy consumption per \$1,000 of GDP is 0.26 tons (oil equivalent), nearly double the Japanese and American levels. This means, however, China has a big potential of its energy efficiency improvement. Also, through energy conservation and oil substitution, China intends to reduce oil consumption by 16 million tons by 2005. Alternative liquid fuels to oil used in transportation will probably be covered with synthetic fuels, like methanol liquefied from natural

gas, in the short term, and with coal liquefaction and biomass in the long term.

#### **Questions & Answers/Comments**

Q: Are the 20-day oil inventories commercial stocks?

A: They are commercial stocks at refineries.

Q: China imports a lot of crude oil, but sometimes starts selling it before the cargoes reach. Can you explain why?

A: I don't think I can answer this question. Probably it is for political reasons or some trading-related reasons, not economic ones.

Q: Is the Russian pipeline scheduled to reach Japan via China? What impacts will it have on China's crude oil imports?

A: I just saw the news about it. But, I do not know about details of that.

A (Krumada): From the Russian perspectives, the pipeline leads to diversification of its crude oil outlets. For consuming countries, the merit of the pipeline is that it helps them diversify their supply sources. Because it is a private project, what the organizers think remains unclear. As for the Pacific Pipeline, implementation of F/S became definite.

Q: What will happen if terrorists attack a Japanese tanker in the Strait of Malacca?

A (Krumada): Because Japan and Korea are IEA members accessible to emergency sharing and also have 90-day stockpiles, I think the region is in a better position to respond to such destruction.

A (A (Gary ENG): At the APEC Energy Workshop in April 2002, we made an impact analysis on an assumed case that the Strait of Malacca would be closed due to terrorism. The conclusion we gained is that the price can increase a little but supply won't fall in the long run.

#### **“International Energy Cooperation in Asia-Pacific Region: Role of the Russia Federation in Stable Energy Development of the Region,” presented by Mr. Boris Vorontsov, Manager, International Relations and Strategic Liaison, International Fuel and Energy Development Academy, Russia**

The Russian Federation, geographically advantageous to both Asian and European markets, holds a unique position that enables us to be a regulator and a stabilization factor between the East and the West.

Today, many experts agree that energy demand will keep growing at an annual rate of 2% in the years up to 2020. Amid demand surges, the Asia/Pacific region is showing the highest growth. Given energy supply outlook ahead, Asia/Pacific has an extremely important role that it should fulfill in international energy cooperation. Above all we recognize Russia holds a very important position as a leading exporter.

In 2002 Russia became the world's largest producer, with its production reaching 7.60 million B/D, and the second largest exporter exporting 3.8 million B/D. According to the prospect of the International Institute for Fuel and Energy Complex, Russia's oil exports will increase to 5.80~6.00 million B/D by 2010 and, at the same time, production will also grow to 10.20~10.80 million B/D. Having such great energy potentials and recognizing the importance of energy cooperation in Asia/Pacific, the Russian Federation is engaged in proactive international energy cooperation with both leading energy producers and consumers.

In recent years a number of high-level meetings among Asia/Pacific policy-makers have taken place. On January 10, 2003, immediately before this symposium, Prime Minister Koizumi of Japan officially visited Moscow and, during his meeting with President Putin of Russia, the both parties expressed strong desire to encourage stabilization of energy supply in North East Asia and promote energy cooperation between Russia and Japan. Indeed, an action program was adopted as an outcome of the high-level meeting. Among key issues of the action program, cooperation in energy resource development in the Russian Far East and Siberia as well as cooperation in pipeline construction and capacity expansion are cited. Russia and Japan shared a view that the Russian Far East and Siberia alike could contribute to stabilization of the energy market at both global and regional levels.

Given these high-level meetings and the framework of regional cooperation, as well as potentials of the Asia/Pacific region, Russia's leading oil, gas and energy companies are now refocusing their strategy to tap new export channels. Already the leading energy companies such as Gazprom, Yukos, Tansneft and Unified Energy Systems all have initiated large projects oriented toward the Asia/Pacific region, thus unfolding their development efforts eastward. Sakhalin-2 Project already started pumping crude oil. Gas marketing activity to Japan is also under way. As for oil, a few plans have been unveiled. They include "Daqing Project" planned by an alliance of Russian and Chinese firms to construct a gas pipeline between Siberia and China, and "An Energy Bridge" that spans Russia, Japan and China. To realize these projects require in-depth analysis by experts. On top of verification of their feasibility, we have to learn possible impacts of these projects beforehand.

The International Institute for Fuel and Energy Complex of MGIMO-University has established close contacts with the Russian oil, gas and energy companies as well as production centers in Russia to make better research & analysis efforts. The supervising council on the

development of the Institute is headed by Minister Ivanov for Foreign Affairs, Russia, and comprises of leaders from more than 30 oil, gas and energy companies and about 10 governors of oil and gas producing regions. The council is expected to act as a coordinator among related companies. Our Institute, the first of its type in Russia, started education of the world-class specialists in international energy dialogues, in which we have to speak in the same language and understand each other in order to develop cooperation. The Center for Strategic Energy Research and Geopolitics, another unit of our Institute, is engaged in fundamental research and assessment of international activity of oil, gas and energy cooperation and multinational projects. We are also ready to offer our Japanese partners research and analysis works in the field of strategy development and perspectives of the oil & gas sector, among others. We are already working with foreign companies and developing cooperation with leading international organizations. They include the International Energy Agency (IEA), the International Atomic Energy Agency (IAEA), Secretariat of the Energy Charter and the Organization of Petroleum Exporting Countries (OPEC). We are also allied with universities. Together with leading European universities, we have established the Russian-French Research Institute of Energy Diplomacy and the Russian-Italy Institute of World Economy. We are also keeping good contacts with the Japanese companies, universities and government offices. Needless to say, the IIEEJ, the sponsor of this symposium, is a very important partner of us.

Lastly, I would like to underline that to develop bilateral and multilateral cooperation in the sphere of energy education and research can be a matter of serious importance. We believe such efforts allow us to facilitate cooperation in international energy dialogues, which, in turn, contributes to regional energy stability and security.

### **Questions & Answers**

Q: Where is Russia's stand in the consumer-producer dialogue, private or governmental?

A: Russia is in contact with both producers and consumers and the OPEC as well. As a result of liberalization of the oil market taking place in the 1990s, the both private and government entities have been participating in international dialogues. Specifically, the government-owned company is Rosneft.

Q: Natural gas and oil development is under way in Sakhalin and East Siberia too. The owner of Sibneft has reportedly launched into Chukot. What do you think of oil development potentials in and around Chukot (the areas spreading from Chukot to Magadan)?

A: East Siberia reportedly has a vast potential of oil & gas reserves. This region's production capacity in the future can be very promising. In East Siberia, the plural number of firms already initiated the development of oilfields and gasfields independently of each other. The Ministry of Energy on its part is developing routes to move energy from this region. Given good cost

efficiency and transportation efficiency, it appears possible to continue development in this region.

**“Energy Security in East Asia: From European Perspectives,” presented by Dr. Philip Andrews-Speed, Director, Centre for Energy, petroleum and Mineral Law and Policy, University of Dundee, UK**

Why is security on the agenda now? In Europe and America, it has been ignored over the past 10~20 years. Behind security issues there are such factors as increasing energy demand, rising dependence of oil on the Middle East and price volatility. Moreover, in East Asia, energy demand keeps mounting in reflection of the fast economic growth in China, among others, while the region is poorly prepared for emergency.

To begin with, what is energy security? The traditional concept of energy security focused on the need for a reliable supply at reasonable price. Among others, there are the issues of market security and “market failures.” Environmental problems must be reviewed from global and regional perspectives. Also we need acceptability of the society, namely, a social consensus on environment, safety (e.g. nuclear safety currently debated in Japan), taxes and acceptability of the people in producing areas, among others. So, the key to the government is to assess what cost they are prepared to pay, what risks do they face, what instruments are appropriate to address these risks.

To enhance energy security, we need a good combination of two measures. (1) The strategic approach requires the government to act directly on energy security and put the bill. The best example is oil stockpiling. (2) The market approach makes the market solve the issue by increasing efficiency of energy security. These are what the U.K. has pursued over the last two decades (though there is no Department of Energy in the U.K.) Yet, as known from the case in California, we cannot leave the matter fully to the market. In Europe, we have taken an approach to leave the matter to the market as much as possible, while the governments play a complementary role by taking actions that the market cannot.

However, a unilateral approach has limitation. To enhance energy security further naturally requires multilateral cooperation. The aim of multilateral cooperation is to remove obstacles to energy development investment and transportation across international boundaries and set up specific mechanisms to deal with supply crises as well as environmental and safety problems. Then, it is important to make such multilateral cooperation legally binding. Multilateral cooperation among the Western countries is legally binding, while legally binding cooperation is often resisted in Asia. “Regional security” develops into “economic cooperation,” which further leads to “political cooperation.” Then, “political cooperation” contributes to enhancing “regional security.” It is

essential to maintain this sort of virtuous cycle.

In Europe, the European Coal and Steel Community and the European Nuclear Community were established 50 years ago, which, via the EC, have grown into the today's European Union. Among others, multilateral cooperation exists in various areas and sectors across the region, which not only enhances coherence of the EU members but also strengthens cooperation with the states outside the EU (like Russia, Asian and North African countries).

While East Asia already started participating in international framework, like the IEA and the WTO, the real challenge of this region is to develop its own forum. To promote effective multilateral energy cooperation mechanism is important as well, which requires much political efforts. Multilateral cooperation must be designed not merely for the security of energy supply but also to pursue political security within the region.

#### **Questions & Answers/Comments**

Q: To what extent energy taxation contributes to dealing with environmental concerns in Europe?

A: Unfortunately, most governments in the world confuse all the different objectives of environmental taxation and taxation in general. Environmental tax is really a way to get tax revenues, which is almost certainly the case in the U.K. I guess situation in the rest of Europe isn't different much far. But, this is becoming a big challenge at the EU level.

Q: I'm a little puzzled with your reference that legal binding obligation is missing in Asia. But, Japan is an IEA member and ratified the Kyoto Protocol too, while the U.S. rejected the Kyoto Protocol, while many Asian countries accept their obligation.

A: Please note I didn't refer to Japan when I talked about it. I've spent long in China and the outlook there is what's important is "trust, not reliance on the law." I'm looking specifically at energy cooperation in East Asia, where I don't find any legally binding multilateral treaties. As for the U.S., that may reflects their legalistic approach. Namely, they won't sign anything if they do not believe they can follow it through.

#### **Panel Discussion**

Chairman: The American attack on Iraq can be cited as an imminent crisis. I would like to ask each of the panelists their comments on what impact a US-led attack on Iraq will have on short-term oil supply, as well as on medium and long-term security.

Mr. Kurumada (Japan): Not as an official view of the METI, but as my personal view, a disruption

won't occur. If any, it will be very limited in quantitative terms. Given that individual countries and individual organizations are ready to assume their responsibility for stable supply, a disruption will hardly occur. Yet, price hikes can be worried if the market reacts to disruption fears.

Individual governments to give the public accurate information swiftly to avoid such panic-led behaviors. Recalling the Gulf crisis, we have the experience that we overcame the situation without serious confusion. In any case in preparation for such a critical situation, the METI is gathering information and prudently preparing stable supply measures, including stockpiling.

Dr. Lee (Korea): I think the Iraqi invasion of Kuwait 11 years ago can be a model case that enables us to analyze how the U.S. is about to handle the matter. I think there is no big difference between the current conflict and 11 years ago. As for possible impacts on energy, it had been said 11 years ago the price should have stayed at high levels, but the volatility of oil prices proved short-lived. This time too, I think there would be little impact on the oil price, if the crisis were over in a short time. The Korean government has institutional measures like stockpiles and demand control system that could be mobilized if the crisis persisted.

Ms. Wang (China): The Chinese government and I personally hope this issue is solved in a peaceful way. China depends on imports around 25% of oil imported and 50% of imported oil comes from middle east. So, only 10% or so oil of consumption comes from Middle East.

In this sense, there will be little impact on China.

Chairman: Europe seems spilt over the attack on the Iraqis. Any comments?

Dr. Speed (UK): I want to avoid any comment on the attack on the Iraqis, but I can say, after the September 11 event, individual countries began considering security anew, which had a big impact.

Mr. Vorontsov (Russia): Iraq is a very important country for Russia. On a pattern that assumed the crisis would be over within a year and another pattern of prolonged military actions, we asked a group of experts to analyze the two cases. As a result, it was found that oil price spikes should have adverse effects over a prolonged period.

Chairman: In our efforts to realize energy security ahead, what's important is how to advance regional cooperation. Particularly it is a crucial subject for the Far Eastern region, where we are required to make specific commitments not merely in political and economic terms but also from the aspect of global warming abatement. I'd like to have the panelists' comments on the cooperative relation between Japan and Russia.

Mr. Vorontsov (Russia): The relation between Japan and Russia is very important in keeping supply stability and price superiority from the destination diversification aspect. We hope Sakhalin Project could be promoted further by increasing its economics.

Chairman: I'd like to have comments on resource development and environmental problems on the Far Eastern region.

Dr. Lee (Korea): The Far Eastern region seems vulnerable to energy supply and, therefore, this vulnerability should be lowered by regional cooperation. The promotion of natural gas development is expected to bridge fossil fuels of conventional type with the next-generation fuels. This not only enhances energy security but also works effectively on global warming abatement.

Chairman: There is a plan to pipeline gas to North Korea and build a gas-fired power plant. I'd like to have your comments on this.

Dr. Lee (Korea): The nuclear issue of North Korea is no longer an energy issue. Projections of energy consumption, etc., which were based on the statistics a decade ago, put that North Korea was in need of two reactors. But, it appears there was little need for nuclear power generation. When we consider the North Korean energy issues, it is important to select energy that can best fit the country, while considering its ability to pay and economic ability. Among fossil fuels, I think natural gas is the best. Meanwhile, North Korea is little equipped with infrastructure, which is conversely taken as lucky. Namely, it is because the country can introduce more efficient brand new infrastructure acceptable by the next generation. I'm optimistic about North Korea as if it were a lab.

Ms. Wang (China): When I participated in a working group on interconnection of power grids in North East Asia, I had an opportunity of listening to views on a project to get North Korea interconnected to power grids. The opinion I heard is that "the project is just political and can never be a business, because nobody knows who will invest in it and how returns on investment can be expected."

Chairman: We have discussed that regional security is important. Then, what points should we stress more?

Dr. Speed (UK): First, we need to have a well-established forum of dialogues. Energy issue is a longer-lasting issue than political life of a single politician. It also requires investments over a long

period. Considering how much North East Asia is in need of forums, I can cite many, such as an investment-type forum, which may be more relevant to the Korean Peninsula. Among others, a forum like a North East Asian version of Energy Charter Treaty is also needed.

Chairman: I'd like to have some comments on Russia.

Mr. Vorontosov (Russia): I think this is rather political question. One thing that I can say is that stabilization of this region in terms of both energy and general security can be obtained only when all countries participate in a dialogue.

Chairman: I'd like to have some questions from the floor.

Mr. Suetsugu: I believe we should have clear-cut roles of the governments and private firms when a new framework is constructed among Japan, China and Korea over Russian gas in North East Asia. In Europe, how the roles are shared between the government and private sectors?

Dr. Speed (UK): In Europe different countries have different views. Yet, simply speaking, the roles of the governments are to prepare a framework and remove various obstacles.

Chairman: In Japan role sharing between the government and private sectors is subject to debate over nuclear issues. I'd like to learn specific measures taken in individual countries in this point.

Dr. Lee (Korea): The government's job is to create the framework. I can say the government must have an ability to mediate in the event of conflict of interests.

Chairman: In concluding this panel discussion, I'm pleased to see that we could reach an agreement that the promotion of dialogue-type cooperation would contribute to improving energy security of this region amid rapidly changing political environment in the Asia/Pacific region. By taking this opportunity, we hope to further advance discussion and energy security cooperation.

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