

# *Overview of the Second International Workshop for the Energy Security and Sustainable Development in Northeast Asia: Prospects for Cooperative Policies Project*

Vladimir I. Ivanov, Senior Researcher, Research Division ERINA

Dmitry L. Sergachev, Researcher, Research Division ERINA

Eleanor Oguma, Research Assistant, Research Division ERINA

On March 29-31, 2002, an international workshop co-organized by the Economic Research Institute for Northeast Asia (ERINA) with the Korean Energy Economics Institute (KEEI) was held at the Seoul Palace Hotel. Participants from China, Japan, the Republic of Korea, Russia, the United States and such international organizations as the International Energy Agency, APEC's Asia-Pacific Energy Research Center, the United Nations ESCAP and UNDP Tumen Secretariat, the World Bank,<sup>1</sup> and also the Northeast Asia Gas & Pipeline Forum took part in the meeting, along with members of ERINA and KEEI.

Among the distinguished speakers were Dr. Victor ISHAEV, Governor of Khabarovskiy Krai, Dr. John MERRILL, a leading expert on East Asia and the Korean Peninsula from the U.S. Department of State, Professor Shenming LI, Vice-President of the Chinese Academy of Social Sciences, and Ambassador Evgeniy AFANASIEV, former Ambassador to the Republic of Korea, now Director of the Continental East Asia Department of the Ministry of Foreign Affairs of Russia. A number of observers from the private sector, including such leading energy companies and business groups as the Korea National Oil Corporation, Mobil Oil Korea, Korea Gas Union, Korea Energy Forum and Korea Gas Corporation also attended the workshop.

The Seoul workshop was the second conference organized within the framework of the two-and-half year project initiated by ERINA, with the cooperation of the Northeast Asia Economic Forum (Honolulu, Hawaii) and the Monterey Institute of International Studies (Monterey, California). Funded by ERINA and the Japan Foundation Center for Global Partnership, the project aims to combine multilateral dialogue with collaborative research and network development, and involves experts from various fields, both researchers and practitioners.

The opening ceremony of the workshop took place in the evening of March 29 and featured brief introductory remarks from Professor Sang-Gon LEE, President of the KEEI, and Professor Hisao KANAMORI, Chairman of the ERINA Board of Trustees, followed by a special lecture by Governor ISHAEV. The guest speaker provided an overview of the recent changes in the world political situation, various impacts of the globalization process, and trends toward economic cooperation in Northeast Asia that could open new opportunities for energy exports from Eastern Russia to regional markets.

## **About the project**

This project, undertaken by ERINA in cooperation with experts from the United States and participants from Northeast Asia, aims to identify viable policies and highlight both the urgent need for and the benefits of cooperation in the energy-environment realm.

What is needed is a vision for a cooperative framework and policy coordination that encompasses the energy-development-environment triad. Participating institutions and experts will propose a shared vision for and approaches to reconciling energy use and environmental protection, where the economies of the subregion today operate independently. In addition to the matter of energy use, a further project objective is to assess the prospects for a cooperative approach to energy security, outlining an institutional framework that could reduce the vulnerability arising from the region's current dependence on energy imports.

The ultimate goal is to lift the "strategic sights" of governments and the public above the limits of national policies and prepare a path for them through the complexities of specific cross-border projects, which have a role to play as efficient tools of economic development, a means of providing a stable, cost-effective energy supply, and cohesive confidence-building devices.

The main conceptual pillar of the project is the expectation that the vital interests of the economies of the subregion overlap. All players are motivated by the desire for greater energy security, development and prosperity, political stability and environmental safety, and the belief that this could constitute a framework for both cooperative engagement and multilateral, cross-border solutions in the energy sector.

The technologies, engineering skills and managerial experience critical to the success of advanced energy ventures are also available, but have rarely been applied in this area in a bilateral or multilateral format. The exceptions are limited to the Sakhalin oil and gas projects and the Korean Peninsula Energy Development Organization (KEDO), which highlight the symbiosis of energy needs and security concerns.

This subregion is also unique to the world of energy because it has a low gas penetration rate, while transportation and distribution infrastructure is either limited or has yet to be assembled. It is assumed that imports via a pipeline would promote diversification in modes of transportation, allowing gas-to-gas competition

<sup>1</sup> See the list of workshop participants and their affiliation at the end of this overview.

and eventually an expansion in the use of gas. Various options for cross-border gas pipelines are under discussion. The problem is that the price tag of these projects is very high, improvements in the investment climate are still inadequate, and markets are neither easily accessible nor sufficiently secure to justify huge investments. Moreover, many of these cross-border projects require multilateral financing and concerted implementation efforts. The worst aspect, however, is the lack of long-term, comprehensive strategies that could enable partnership, both in negotiations and in the implementation of the projects.

All these factors make the economies of the Northeast Asian subregion a unique case study for observing both the domestic economic and political hurdles, and the external obstacles impeding cross-border cooperation in the energy sector.

The various obstacles and sources of uncertainty are wide-ranging and have yet to be fully accounted for and analyzed. Nevertheless, they amplify the necessity of working together to obtain the economic and political benefits of cooperation.

### Day One

The first workshop of the project, which focused on China, was held in June 2001, in Tainai, Niigata (*ERINA Report* no. 41, August 2001, pp. 44-51). It served as a follow-up to an earlier ERINA effort to study prospects for regional cooperation in the energy sector. At that workshop, held in December 1999 with the support of the Japan Foundation, the focus was on Japan-Russia relations, as well as energy-related interests and policies.<sup>2</sup>

At the meeting in Seoul, the project participants focused their attention on the Koreans, and policies and developments in their energy sectors, as well as other issues related to sustainable development and regional economic cooperation in Northeast Asia. Obviously, problems surrounding the Korean Peninsula impede energy cooperation throughout Northeast Asia. The complex nature of military-political relationships centered on the DPRK is a particular challenge.

Obviously, cooperation in the energy sector requires political trust and a favorable investment climate—the elements that are basically lacking in the inter-Korean relationship.<sup>3</sup> That is why the first session in the morning of March 30—*Northeast Asia in the 21st Century*—focused on both economic and political issues.

The presentations were made by Dr. MERRILL, Professor LI, and Ambassador AFANASIEV. Each speaker provided a useful overview of bilateral, regional and global trends affecting Northeast Asia and the Koreans. The first speaker mentioned that Northeast Asia's growing interest in a wider reliance on natural gas could have beneficial implications not only for economic development, energy

security and environmental protection, but also for geopolitical stability. With China becoming a large-scale importer of energy resources from Russia, cross-border pipelines will enhance regional economic interdependence. A trans-Korean pipeline would also greatly assist the economic recovery of North Korea. In this context, Dr. MERRILL mentioned the positive role of the 2000 inter-Korean summit and stated that cooperation in the energy sector could significantly contribute to improving the political situation. He emphasized that, when President Bush visited the Republic of Korea in February 2002, he reiterated the support of the United States for the Sunshine Policy of South Korea's current administration.

The second speaker, while underlining the value of discussions focused on energy cooperation and environmental protection, enumerated current geopolitical trends, economic problems and policy discourses that could negatively affect prospects for cooperation at the global, regional and subregional levels, including the situation in Northeast Asia. His main focus was on the United States and Japan, which could arguably influence, if not determine, developments in many fields, including energy sector cooperation in Northeast Asia. On the other hand, as this senior participant from China observed, the economies of Northeast Asia could develop economic links based on mutual benefits, using their economic complementarity. In particular, China, Japan and the Republic of Korea could rely on the energy resources of Eastern Russia, while the DPRK could emerge from its economic isolation by participating in regional economic cooperation and energy projects.

Ambassador AFANASIEV outlined prospects for bilateral cooperation with North Korea in the energy sector and infrastructure development. From the Russian perspective, the Korean Peninsula is central to Northeast Asia, and inter-Korean cooperation could herald a new era as far as cross-border energy projects are concerned. President Putin's visit to Pyongyang in June 2000 aided the restoration of bilateral political and economic contacts with the DPRK. During his visit to the Republic of Korea in February 2001, he reiterated Russia's support for inter-Korean dialogue and improvements in the relationship that would facilitate such large-scale infrastructure projects as railway interconnection. There are also prospects for trilateral cooperation in the energy sector, particularly in interconnecting power grids. In the long run, a trans-Korea gas pipeline project could be considered, as well as the renewal of cooperation with the DPRK in the nuclear power sector. These and other issues were discussed when the North Korean leader visited Moscow in the summer of 2001.

Mr. Susumu YOSHIDA delivered the luncheon address, on *"Energy Security in Northeast Asia and Prospects for Development and Economic Cooperation"*.

<sup>2</sup> Reports available online at <http://www.erina.or.jp/publication/Energy.htm>

<sup>3</sup> The policy of "comprehensive engagement" with the DPRK is now under review in the United States and it is not yet clear whether the concept of "improved implementation" of the Agreed Framework will be acceptable to Pyongyang. Moreover, Russia is the only G8 country that is not part of KEDO. The 1994 Agreed Framework is not a treaty or even an agreement. Given the uncertainty that this creates, the question looms large of how resilient (or vulnerable) KEDO could be and how its dynamics could influence prospects for energy cooperation between the Koreans. However, KEDO has the potential to generate a strong catalytic impact on other inter-Korean energy ventures.

This presentation further expanded the scope of discussion during the morning session, presenting the Japanese perspective. The speaker briefly touched upon general policy issues, concentrating on concrete economic links among the economies of the region and Japan. The prospects for multilateral cooperative projects were outlined, including KEDO and other projects that could involve North Korea, China, Japan and Russia. The presentation highlighted Japan's role in creating a cooperative framework for a stable energy supply in Northeast Asia, as well as providing an overview of the prospects for transportation corridors in the region.

The second session, on Regional Energy Cooperation, began with a keynote address by Professor LEE. He indicated at the outset of his speech that, as far as the Northeast Asian economies' energy problems are concerned, the 21<sup>st</sup> Century poses new challenges and offers new opportunities. Liberalization of the energy sector enhances competition and affects prices, requiring new approaches and flexibility on the part of governments and the private sector. Energy efficiency and emissions reduction appear to be priority issues and should form the foundation for subregional energy cooperation in Northeast Asia. Subregional cooperation in the energy sector could also become an effective tool in enhancing energy security, particularly in the context of the geographical proximity of energy importing countries and potential sources of exports in Eastern Russia. Sources of "cleaner" energy, including natural gas and hydropower, are important components that could allow Northeast Asia to become a center for negotiations on reducing GHG emissions. Specific projects that the Republic of Korea would support include the Kovykta natural gas field development, a regional oil stockpile mechanism, and the introduction of technologies that ensure higher energy efficiency and the competitiveness of "cleaner" energy sources. Cooperation among oil importers and Russian oil producers should also be promoted to reduce the dependence of Northeast Asia on the Middle East and enhance their capacity to influence world oil markets.

Dr. Boris SANEEV of the Energy Systems Institute in Irkutsk continued the discussion, referring to concrete issues concerning new energy resource development in Eastern Russia, including oil and gas projects offshore from Sakhalin, a natural gas project in Irkutskaya Oblast, and the prospects for a subregional natural gas pipeline network and electric power grid interconnection. In total, these projects are likely to require tens of billions of dollars of capital investment and it is vital to ensure their proper coordination, taking economic efficiency and environmental soundness into consideration.

The next speaker, Mr. Norio EHARA of the International Energy Agency, provided a comprehensive overview of energy sector liberalization in South Korea, which became a full member of the IEA on March 28, 2002. In reforming the energy sector, the government has adopted the so-called IEA shared goals, including greater reliance on the market in energy pricing and the promotion of regional energy cooperation. More specifically, according to this speaker, the Republic of Korea as the IEA member country and one of the leading economies in

Northeast Asia should play a more active role in promoting regional energy cooperation in Northeast Asia, including closer contacts with such key non-member countries as Russia, China and India. South Korea could act as a model for developing an emergency oil stockpiling system and should share its experience with China. Both Korea and Japan have a valuable pool of knowledge about energy sector reforms and promoting energy-saving technology. South Korea could also provide greater ODA-type assistance to other Northeast Asian economies, in order to facilitate improvements in the energy sector and protect the environment.

Representatives from ESCAP (Bangkok) and the UNDP Tumen Secretariat (Beijing) also took part in the workshop. The participants from ESCAP described their "concept report" on energy issues and policies in Northeast Asia, and requested the assistance of a number of government-level country representatives as co-authors, to enhance the value of the report for policy makers. The first section of their draft provided an overview of the status of the energy sector in each country, including China, the Koreas, Japan, Mongolia and Russia, with a brief overview of their policies; the latter part then presented a scenario for multilateral energy cooperation in Northeast Asia.

It is important to note in this context that the main goal of the workshops, as well as of the project as a whole, is exactly the same: to generate—through joint research and discussions—the capacity to propose a set of realistic recommendations not only relevant to policy making, but also firmly linked to the national interests of the actors involved. It is hoped that ERINA's project—supported by CGP—will eventually allow us to assemble just such a list of priority issues to enable the economies of Northeast Asia to promote advanced, cost-efficient energy technologies, pricing mechanisms and cross-border infrastructure projects that reconcile energy use and environmental protection through a multilateral cooperative framework.

After dinner, Mr. Bradley BABSON, Advisor on the DPRK to the World Bank, made a presentation on *"Searching for the Right Side of History in Northeast Asia: Potential Role of Energy Cooperation with North Korea"*. Although this paper is included in this issue of the *ERINA Report* (pp.20-23), it is worth mentioning that the author has offered a rather skeptical line of analysis concerning the future of the KEDO light water reactor project. In his opinion, a trans-Korean gas pipeline and power grid rehabilitation in North Korea could be an alternative to KEDO. The North-South gas pipeline project could better serve the energy and economic needs of North Korea, expanding the market for Russian natural gas, involving China and Russia in the inter-governmental setting of the project and contributing to political trust on the Korean Peninsula.

## Day Two

The theme of the two sessions in the morning of the second day of the workshop was cross-border Energy Delivery Infrastructure Projects and related issues. Dr. Alexander OGNEV, of Vostokenergo, UES Russia, gave an overview of possible economic scenarios for the Russian economy in 2002-2020, making projections with regard to

energy consumption patterns and electric power demand in the Far Eastern region. His main conclusion was that, under any circumstances, new power plants built in Chitinskaya and Amurskaya oblasts, as well as in Khabarovskiy and Primorskiy krajs, would be able to provide significant volumes of electric power for exports to China and the Korean Peninsula.

Dr. Pavel MINAKIR followed this up with an outline of the two Sakhalin projects currently underway, which could, in a few years, provide natural gas for LNG plants currently under construction, as well as for a cross-border pipeline to China and/or the Korean Peninsula and Japan. These projects are the largest investment undertakings anywhere in Russia; more large-scale oil and gas ventures are likely to be launched in Sakhalinskaya Oblast in 4-5 years time.

Dr. Hyun Jae KIM of the KEEI focused on the power sector of South Korea and prospects for the interconnection of power grids between the North and South. Such interconnection is particularly important in the context of the KEDO project, given that the power system of North Korea is small relative to the capacity of the two LWRs and currently very unstable. Three high-voltage inter-connectors between the ROK and the DPRK are needed to solve these problems, but prior to the feasibility study phase for such a project, the flow of information and technical exchanges must be promoted. As of today, such exchanges are limited; one of the options for expanding contacts is to rely on the services of a "third party", such as the United Nations. Noting also that China and Russia do not participate in KEDO, the Korean expert emphasized that they have an important role to play in power interconnection projects involving the two Koreas.

During the next session, on Cross-Border Projects and Plans, presentations were made by Dr. Kengo ASAKURA of the Northeast Asia Gas & Pipeline Forum, and Ms. Hisako TSUJI and Dr. Vladimir IVANOV, both representing ERINA.

The first speaker proposed a concept for a regional gas pipeline network—a mega-project that could potentially play a pivotal role in facilitating economic cooperation between the two Koreas. This regional gas pipeline network is based on a "ladder" concept, including two west-to-east transcontinental pipeline systems to be built in China and Eastern Russia, with north-to-south inter-connectors between them. The first west-to-east pipeline is now under construction in China, while the second one could be built in Russia along the Trans-Siberian railway, connecting gas fields in the Irkutsk and Yakutia areas with those in Krasnoyarskiy Krai and Western Siberia. The north-to-south inter-connectors would ensure wider market access for natural gas and more reliable operation of the entire system. In the eastern section, the two trans-continental pipelines are expected to be inter-connected in a more complex "circular" pattern, including a "western" circular line that covers the west coast of the Korean Peninsula and an "eastern" circular line, supplying gas to the east coast. The "western" circular line is seen as part of the gas pipeline network to be built in Northeastern China, while the "eastern" circular line would include Sakhalin, Khabarovskiy and Primorskiy krajs in Russia, and also

Japan. The main message of this paper, which also contains technical parameters for the future pipeline network, is that such a network will not only respond to growing energy needs and economic development plans, but also contribute to political stability and sustainable development in Northeast Asia, leading ultimately to the formation of a regional energy community.

The presentation made by the second speaker complemented the preceding paper, focusing on the prospects for railway inter-connection between the North and South, with access to the Trans-Siberian and Trans-China railways. ERINA is monitoring international cargo transportation via the Trans-Siberian railway, as well as the North-South dialogue on railway system interconnection. The latter project is relatively new and its implementation could serve as an indicator of the feasibility of the Trans-Korea gas pipeline project. Nevertheless, the sobering reality is that the cost of North Korean railway rehabilitation is estimated at between US\$1.3-1.8 billion. The cost of a trans-Korean gas pipeline is likely to be even higher.

The presentation by Dr. IVANOV was based on his paper previously published in *ERINA Report* No. 43. He advocated giving consideration to building a trans-Siberian pipeline along the Trans-Siberian Railway. It is important to acknowledge in this context that, similarly to China, the implementation of pipeline projects in Eastern Russia will benefit local economies and regional governments, particularly if the infrastructure is built in areas with a decent number of domestic consumers and industries.

What Russia needs is a long-term, comprehensive and consistent approach to developing, delivering and distributing Siberian and Far Eastern natural gas to domestic and external markets. This strategy must first of all be aimed at an integrated approach to commercializing natural gas reserves, including those in Krasnoyarskiy Krai, Irkutskaya Oblast, Yakutia and Sakhalin. Secondly, the number of potential exporters must be maximized, so ideally a pipeline, like a railway, should be kept "neutral" and open to all major exporters. Third, key transmission pipelines should be designed to collect and transport to northeastern China and the Koreas significantly more than the level of current and projected domestic demand. Finally, this integrated approach must include efforts to target LNG markets in Asia. This will allow the broader marketing of natural gas, involving LNG users in Japan, South Korea, China, Taiwan, India, and elsewhere.

In the discussion, Dr. Myung-Nam KIM, General Manager of the Korea Gas Corporation (KOGAS), mentioned that the Kovykta project is the most realistic and attractive source of natural gas for Korean users and that KOGAS is participating in a pipeline feasibility study with Russia and China. This pipeline, however, is currently envisioned as crossing Northeastern China and the Yellow (West) Sea, before reaching the Korean Peninsula.

Mr. EHARA delivered the luncheon address, on "*Prospects for Cross-border Energy Projects in Northeast Asia*" in the context of another conference on cross-border gas trade organized by the IEA in Paris, on March 26-27. As mentioned during the brief discussion following this informative presentation, Northeast Asia, quite regretfully,

was left out of the conference framework, with the attention of the participants focused on Europe, the Americas and Southeast Asia.

During the first afternoon session, on Energy and Environment, the list of speakers included Mr. Chan Woo LEE, Visiting Researcher at ERINA, Mr. Susumu ABE, Professor Fengqi ZHOU of the Energy Research Institute of the State Development Planning Commission of China, and Dr. Zin Oh KIM of the KEEI.

Among the issues discussed by the first speaker were prospects and options for providing energy sector assistance to the DPRK, as well as the need to promote South-North technical exchange. The options for energy assistance to North Korea include coal supplies, rehabilitation of the power grid and professional training. The prospects for the implementation of the KEDO project were also outlined, including both technical and political impediments. The main problem is that the ROK Government, according to this paper, is expected to serve as the principal source of funding for "energy aid" to the DPRK, but the estimated cost of the proposed cooperative projects amounts to hundreds of millions of dollars. It was therefore proposed that a possible multilateral option be sought, involving Russia, China and Japan as co-sponsors of the rehabilitation and energy aid efforts. In this context, a trans-Korean gas pipeline is seen as the most promising way of supplying energy to North Korea and assisting its economic recovery.

The Chinese speaker provided a detailed overview of energy sector development up to 2005 and projections up to 2010. China has demonstrated significant progress in improving energy efficiency and intensity levels, constructing large power plants, modernizing technologies and improving management systems. For example, since the early 1970s, energy use per unit of GDP has been reduced by 30%. At the same time, the share of high-quality fuels in the total primary energy supply remains low, while coal is the dominant fuel. Although its technical capacity in coal mining is more than sufficient, coal conditioning facilities, including coal washing, are scarce and underdeveloped.

In the oil industry, demand exceeds production, which in turn significantly exceeds the rate of reserve enlargement. China's dependence on imported oil is growing fast. In addition, power transmission lines are technologically obsolete, impeding inter-connection of regional power grids. Chaotic construction of small power plants decreases overall nationwide energy efficiency and exacerbates the problem of emissions. A further serious problem is that local power distribution grids in both urban and rural areas remain poor, limiting the potential for electricity production and transmission, and adversely affecting living standards and social conditions.

In the current decade, China will concentrate its resources on oil and gas sector development, energy sector reforms, energy efficiency and renewable energy. For the next 5-10 years, hydroelectric power capacity expansion and the west-to-east gas pipeline will be the priority directions in developing China's energy sector. The government will also take steps to create an emergency oil stockpile, promote clean coal technologies and improve

energy efficiency standards.

Mr. ABE discussed the 3Es— Energy Security, Environmental Protection and Economic Growth—and the relevance of this approach from the standpoint of subregional energy cooperation in Northeast Asia. Economic globalization presents new challenges that require innovative approaches to energy security issues, which must be derived from a wider perspective, taking all possible factors into consideration. Taking the view that energy serves as "the catalyst for human development, not an element restricting it", an energy system based upon sharing wisdom and prioritizing the available opportunities must be envisioned, which overcomes both technological and social limitations. The various problems we face today in the field of energy and the environment are not necessarily related to the impacts of past oil shocks. However, it seems that a crisis could be stealing up on Asia, of which it is as yet unaware. Compared to the previous century's paradigm of "development and growth", the 21st century is likely to be an era of development that aims for "continuity and harmony". Energy and environmental protection are issues of common concern to mankind and should be tackled accordingly. Concerted action must be taken in each region of the world to establish a mechanism that promotes a "think globally, act locally" approach. It is important, therefore, to begin with common recognition of the need to aim for the simultaneous achievement of 3E goals in Northeast Asia, positioning this as the long-term focus of energy policy.

Prospects for the utilization of renewable energy sources and their potential contribution to energy cooperation between North and South were outlined in the paper presented by Dr. Zin Oh KIM. He proposed the formation of a joint expert-level team to evaluate the potential for renewable energy, particularly in North Korea, which has already accumulated some experience in this field through cooperation with international NGOs. If this work took place on a large scale, the mountain terrain of North Korea could provide a unique opportunity for the utilization of small and very small hydropower generators. There is a significant potential for cooperation in using wind and solar energy. Given this broad spectrum of opportunities for cooperation in utilizing renewables, governments should work together to incorporate this into long-term and mutually beneficial economic cooperation.

In the last paper presented at the workshop, Dr. Chung-II NAHM (KEEI) evaluated the parameters of the KEDO project and the technical measures required to implement this project within the current schedule. As an electric power engineer, the speaker advised giving greater consideration to North-South power grid interconnection. Such a project would ensure that the necessary power transmission infrastructure is put in place before the first LWR is commissioned. This project would require cooperation in many other related fields, including the preparation of a feasibility study, which should be carried out at an early date to allow the construction of the five high-voltage transmission lines, commissioning the first one by 2006. This will, however, be both technologically complex and expensive.

In the discussion, Dr. Daojong ZHA of the

International University of Japan mentioned that the presentations made during this last session of the workshop shed light on a significant number of issues that need to be solved, as well as the complexities associated with the vision for structural energy cooperation in Northeast Asia. "Structural" in this context refers to government-level commitment in the form of a regional development body dedicated to promoting energy development in Northeast Asia.

An update provided by Mr. ABE about the latest changes in Japan's energy policies implied that Japan could choose to consume more energy resources from Northeast Asia. His observation that "policies aimed at enhancing energy security have usually been shaped by the international situations of the time and reflect the 'instincts of the past'" deserves careful consideration by practitioners. The overall economic benefits of North-South cooperation in the energy sector, as described by Mr. Chan-Woo LEE, also serve as a reminder of the value in continuing to aim for structural energy cooperation. Professor ZHOU's update regarding energy policy reforms in China informs us that decision-making is being delegated from the central government to local governments, providing more scope for market factors in shaping energy policies. Moreover, all speakers agreed on the geopolitical constraints that could complicate energy cooperation in the region.

### **Conclusions and topics for discussion and research**

As was noted during the concluding session, the participants received a positive impression of issues relating to the prospects for energy cooperation involving the Korean Peninsula, gaining a particular understanding of the extent of enthusiasm in the ROK for cooperation with the DPRK.

Cooperation may not be as easy to achieve in Northeast Asia as it was in Europe. There is a history of conflict and differing social systems. However, pipeline politics involving the Koreas could be an important diplomatic tool, given that West Germany's *Ostpolitik* eventually led to a considerable improvement of economic and policy links with the USSR. Similarly, a trans-Korean pipeline should be seen as a positive cooperative project. If required, the IEA should offer its expertise in developing a concept for a regional energy security system. Perhaps one of the more striking aspects of the conference was a feeling that it is now time to stop talking and start taking action, both for the sake of achieving political stability and economic growth in the region, and halting environmental degeneration.

Energy and environmental issues are seen as constraining economic growth. Renewable energy cooperation between the Koreas has potential because it will involve localities and communities. Renewable energy projects are small in scale, so can be started relatively quickly. Solar-powered water heaters could be developed quickly, while small-scale hydropower would be very easy to develop and use.

Cooperation in the field of energy and environmental protection in Northeast Asia is a battle against uncertainty. International partners have yet to start trying to build trust through multilateral efforts, because uncertainty tends to result in inaction and lack of motivation to make a decision. It was suggested by one of the speakers that efforts should

continue to be made to get the ministries of foreign affairs of the relevant countries to disseminate a positive message about cooperation in Northeast Asia.

Indeed, at the time of the workshop, uncertain geopolitical developments with potentially grave policy implications had been triggered by the Bush Administration's denunciation of North Korea as part of an 'axis of evil' (together with Iran and Iraq). It was proposed in the concluding sessions of the workshop, however, that the rhetoric be put in context, given that mid-term elections to the U.S. Congress will take place in 2002.

The Republican Party, which President Bush represents, has good reasons to cash in on the momentum of support for the President's anti-terrorist policies and stance. In other words, this rhetoric was intended for a domestic audience. Secondly, the three countries identified as the 'axis' cannot individually be much of a real threat to the United States. Their main defenders, namely China and Russia, compete with the United States over global geopolitical issues. Yet the help of both China and Russia can be enlisted in preventing those three regimes from becoming a bigger problem.

Indeed, as subsequent events demonstrated, President Bush did openly ask the Chinese leadership to assist the U.S. in re-opening a dialogue with North Korea. It is, therefore, possible that the rhetoric was also intended for a foreign audience. In the short term, we have good reason to believe that the 'axis of evil' animadversion may have more to do with finding a way to practice workable diplomacy than seriously preparing for a U.S.-led war on the three targeted countries, particularly North Korea.

It is also important to realize that uncertainties are part of the geopolitical practice of the major powers. A case in point is that, between countries in formal strategic alliances (for instance, the United States and Japan), there exist significant differences both in dealing with each other and in approaching third countries and global issues. Therefore, if one sees energy development projects as subject to shifts in geopolitical practice and foreign rhetoric, then the perceptions of progress in such projects will be affected negatively. In contrast, progressing with project designs based more on market rationale can foster greater confidence and a desire for interdependence. Thinking in terms of interdependence can, in turn, help contain drastic swings in geopolitical policies and pronouncements. It is therefore critically important to move forward on sound energy development projects, rather than waiting for the geopolitical situation to change, because favorable geopolitical moments come and go fairly frequently.

In addition, research efforts have thus far been devoted to researching the upstream reserves and downstream markets for oil and gas in Northeast Asia. This envisions the Russia's Far Eastern and Siberia regions as supply areas only, while South Korea, Japan, China and North Korea are seen as the demand areas. The problem with such an approach is that the country as a whole is usually treated as the unit in the analysis.

Indeed, structural cooperation does require policy commitment on the part of the national governments of the relevant countries. This conceptualization treats the three northeastern Chinese provinces and North Korea (and

Mongolia for that matter, as well as the provinces in Eastern Russia) as little more than areas providing a transit route for oil and natural gas to reach the consumers in South Korea, Japan and coastal regions of China. This type of thinking has its limitations. Instead, the transit areas ought to be treated as full-scale markets as well, if for no other reason than giving the governments and societies there a tangible stake in ensuring not only the physical security of the pipelines, but also an expectation of economic and social benefits.

Society and politics are becoming more populist, requiring a wider audience to be included in discussions, as it will be hard to obtain government support if there is no public backing for projects. People should not underestimate the potential for cooperation in this region, nor should they concentrate only on the economic aspects of projects. Economics is not the sole reason for undertaking projects in the region.

Different questions should be asked and answered in this regard. Do we need a Northeast Asian cross-border pipeline? We need to ask why there have been no practical developments to date, and why things are moving so slowly. Contemplating Eastern Russia and Northeastern China as a full part of the transit (mid-stream) market has particular significance because it will help to reduce the continuing reliance of these areas on abundant but polluting coal. There is also a limit to what international aid can do for North Korea in overcoming energy shortages. Research should consider how North Korea can find ways to pay for energy imported from Russia.

Taking the transit markets seriously also means that both the feasibility studies on small-scale projects and, better still, construction work on them can begin. Such projects can serve as important pilots for larger projects in the future. The report by the Director-General of ERINA on the Angarsk - Daqing oil pipeline serves as an excellent example. Indeed, we can envision a 'bottom-up' future, with short-distance links between localities in Russia and Northeast China extending southward to Korea and Japan.

Finally, our thinking about and research efforts into energy cooperation in Northeast Asian should take into consideration the human dimension. Urbanization in China's three northeastern provinces has a definite impact on energy consumption patterns, which in turn can help in evaluating the actual market value of cross-border pipeline projects. Cooperative energy developments, beginning with small-scale projects and linkages between provinces, can help to revitalize local economies. The participants agreed that the workshop was well-timed, as improved relations between the two Koreas require a comprehensive framework for economic cooperation and the exchange of information and ideas. On the other hand, sincere cooperation is required - pursuing cooperation with the aim of achieving the collapse of a political regime would not be constructive.

#### **Participants from the KEEI:**

Sang-Gon LEE, President of the KEEI, Bok-Jae LEE, Director (former), Department of Northeast Asia Cooperation, Woo-Jin CHUNG, Research Fellow, Department of Northeast Asia Cooperation, Chung Il

NAHM, Senior Research Fellow, Department of Northeast Asia Cooperation, Hyun Jae KIM, Research Fellow, Department of Northeast Asia Cooperation, Kyoung Sool KIM, Research Fellow, Department of Northeast Asia Cooperation, Eunmyung LEE, Research Fellow, Department of Northeast Asia Cooperation, Gyeong Lyeob CHO, Research Fellow, Department of Northeast Asia Cooperation, Sang-Yul SHIM, Director, Department of Northeast Asia Cooperation, Zin Oh KIM, Director, Department of Economic Analysis.

#### **Other Korean participants:**

Dong-Wook PARK, Vice-President, Korea Electro-Technology Research Institute, Jin-Seok KIM, General Manager, Korea National Oil Corporation, Myeong-Nam KIM, General Manager, Korea Gas Corporation, Kap-Koo YOON, President, ACE Engineering.

#### **International participants:**

Susumu ABE, Advisor, Toshiba Corporation, Evgeniy AFANASIEV, Director General, Asia Department I, Ministry of Foreign Affairs of the Russian Federation, Kengo ASAKURA, Deputy General Secretary, Northeast Asia Gas & Pipeline Forum, Bradley BABSON, Senior Advisor, East Asia & Pacific Region, World Bank, Norio EHARA, Head, Non-member Countries Division, Asian/Pacific & Latin America International Energy Agency, Victor ISHAEV, Governor, Khabarovskiy Krai, Yonghun JUNG, Vice-President, APEC's Asia Pacific Energy Research Center, Roy KIM, Senior Fellow, Foreign Policy Research Institute, Drexel University, Shenming LI, Vice-President, China Academy of Social Sciences, John MERRILL, East Asia Specialist, Department of State of the United States of America, Pavel MINAKIR, Economic Research Institute, Alexander OGNEV, Chief, Perspective Development Department, VostokEnergo, UES Rossiya, Boris SANEEV, Deputy Director, Energy Systems Institute, Ivan TSELITCHEV, Professor, Niigata University of Management, Xiaojie XU, Director, Overseas Department, Petroleum Economics & Information Center, China National Petroleum Corporation, Daojiong ZHA, Associated Dean & Assistant Professor, Graduate School of International Relations, International University of Japan, Fengqi ZHOU, Advisor, Energy Research Institute, SDPC.

#### **Participants and supporting staff from ERINA:**

Hisao KANAMORI, Chairman of the Board of Trustees, Susumu YOSHIDA, Director-General, Vladimir IVANOV, Senior Researcher, Hisako TSUJI, Senior Researcher, Chan Woo LEE, Researcher, Makiko KOBAYASHI, Research Assistant, Eleanor OGUMA, Research Assistant, Takako OGURA, Finance Officer, Dmitriy SERGACHEV, Researcher.

#### **Other participants and observers:**

Tuva KAHRIS, Programme Officer, UNDP Tumen Secretariat, Vladimir KUCHUK, Gennadiy KONDRATOV, Administration of Khabarovskiy Krai, Ralph WAHNSCHAFFT, Luong NGUYEN, ESCAP, John FETTER, President, FSI Energy (Foundations Systems Inc.), Toshihiko NIINUMA, Director, Environment and Energy Consultants.