Energy Cooperation in Northeast Asia: An Insight into Frameworks and Dimensions

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Abstract

Throughout the latter half of the past century, almost every academic and policy paper addressing cooperation in Northeast Asia (NEA) has been developed upon the principle of the regional economies' complementarity. This very feature was anticipated to generate a robust stimulus for strengthening cooperation among the NEA countries (NEAs).

Indeed, intra-regional cooperation has been expanding, but the interchange was mainly occurring in segments driven by market forces. On the flip side, in such spheres as finance, transport, and energy that require inter-governmental dialogue and official arrangements, joint initiatives were unfolding at a modest rate. Nowadays, given that the energy demand of the NEA economies is soaring despite the tightening of the world energy market, it seems rather unsound to continue neglecting the region's resource generation potential. Furthermore, the improving politico-diplomatic relations among the NEA states have created a favorable environment for regional energy partnership.

The current paper is focused on the organizational aspect of energy cooperation in NEA. The study examines the barriers and prerequisites for energy cooperation among the NEA states, overviews principal schemes for regional energy partnership, and speculates about prospective patterns of energy cooperation frameworks for NEA.

Introduction

In about 1999, the year oil price embarked on an upward trend, and energy studies are topping the lists of research subjects. Indeed, regardless of the dimension considered -- global, regional, or national -- the realm of energy affairs remains ample with multifaceted issues, which hold continuous interest and encourage a stream of inquiries.

In the global context, soaring energy resource prices, steeply increasing energy demand,

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tightening competition for energy supply, the complex nature of energy security issues, etc. compose challenges for the entire world economic and political system.

Looking from a regional dimension, Asia's demand has been growing tremendously, outstripping that of any other region. Whereas the overall world primary energy consumption in 2005 rose two-fold compared to figures for 1971, Korea's energy consumption during the corresponding period has increased eleven-fold, China's by over four times and Japan's consumption doubled, respectively.[1] Thanks to China, energy demand in NEA is projected to expand substantially in the years to come.

An upward trend in NEA's energy demand stands at odds with an extreme scarcity of energy resources in most NEA states. These two aspects drastically increase the value of cooperative initiatives and make regional modes for partnership in energy sector especially timely.

The current paper aims to provide an insight into structural and institutional aspects of energy cooperation in the region of NEA. To this end, the study is organized as follows. The opening part analyses the overall environment for cooperation between the NEA states. The following section examines a network of existing and in-the-making cooperative patterns and frameworks for energy cooperation. The concluding part contains the author's considerations on possible patterns for energy cooperation in NEA.

Wherever it seems relevant, the topic is approached in a broader geographical context, embracing all of East Asia.

1. Overall Atmosphere for Energy Cooperation

Approaching the theme of energy collaboration in NEA systematically, two conceptions - of general energy cooperation (GEC) and energy security cooperation (ESC) – could be useful. The latter serves to secure supply at reasonable cost in a sustainable manner, while the GEC provides a means for development of energy infrastructure and capacity building, establishment of financial mechanisms, formation of regulatory frameworks, implementation of research and educational projects, and information dissemination, etc.[2]

The idea result can be achieved if the ESC and GEC are implemented simultaneously. However, more often, ESC is seen as a substitute for GEC, as witnessed by typical energy policies within NEA. It is doubtful that such an approach constitutes an appropriate environment for handling the contemporary energy policy agenda comprehensively.

With a certain extent of generalization allowed, the overall climate for international cooperation in NEA can be examined from political and economic ambits. Along this broad classification, principal obstacles that hamper the process of regional cooperation can be exposed as follows.

Politico-diplomatic tensions between the countries of NEA, rooted in history of the nations' relations, have retained their destructive influence on all aspects of the intra-regional cooperation. That is to say, some of the territorial disputes inherited from the past century have transformed into lingering standoffs over offshore territories. This particularly complicates energy affairs of NEA as the nations inevitably

enter the realm of geopolitics while pursuing energy policies' goals. A telling example is Japan-China intercourse over the East China Sea. The dispute is not solely over the Senkaku (Diaoyu Tai) islands, but heavily about the surrounding exclusive economic zone (EEZ).[3] According to official surveys, the East China Sea may have as much as 200 bln cm of natural gas and 25 bln tons of crude oil, the energy-thirsty economies' aspirations to obtain jurisdiction over the islands are understandable.[4] A very similar setting can be observed in case of the Liancourt Rocks (Takeshima/Dokdo islets) which both Japan and Korea claim sovereignty over. The dispute is periodically stirred up by Korea's activity in the area around the islets where large hydrocarbon deposits were discovered. In 2004, a 10-year, $225-million gas exploration project was started southwest of Dokdo by KoGas, a state company. In the summer of 2005, Korea National Oil and Woodside Petroleum of Australia started oil and gas exploration north of Dokdo. [5]

Another issue stemming from the realm of politics that largely defines a pattern for intra-regional energy initiatives is the inter-Korean question. Speaking strictly on the point of energy cooperation, the current setting halts construction of energy infrastructure, such as pipelines and electric grids, which would bind not-so-highly-efficient national energy markets into an inter-connected system that would enable better allocation of resources/production factors.

Unsettled politico-diplomatic issues has contributed to the persistent isolation of national energy systems and limited the exploitation of the region's resource potential. Furthermore, as a result of enduring discordance, despite the NEA governments' official emphasis on cooperation as a viable means to improve national energy security, the measures needed to achieve this end are not laid down in joint documents. The present environment discourages multilateral collaboration and enables NEA nations to cope with challenges from an individualistic perspective, practicing self-centred unilateral dialogues.[6] Such a pattern eventually intensifies competition for energy supplies and inevitably leads to losses. To give but one example, regional economies are pretty much drained by the infamous Asian premium of $1/b extra, which annually cost them up to $8 bln.[7]

On the economic front, the region of NEA remains highly heterogeneous. Disparities between market, transition and planned economies, and asymmetric economic development predetermine nations' divergent inclinations for regional cooperation. The existing lack of regional financial mechanisms to back up joint initiatives is obviously not because of a shortage of accumulated capital that could be funnelled into regional projects. On the contrary, NEA is a home to the world's three largest foreign exchange reserve holders (China, Japan, and Russia). Mutual trust and reciprocal confidence--these elements, crucially needed for energy cooperation, are missing.

Moreover, the vast disparity between national regulatory mechanisms creates obstacles of a legislative and administrative character. This further retards the processes of forming organizational frameworks and harnessing the development of a joint strategy for energy cooperation.

Undeveloped cross-border energy infrastructure is another factor that puts up a stumbling block for intra-regional initiatives.

Sometimes, regional energy cooperation is governed by the considerations of high-level politics. The trans-Korean case is an example of this dynamic. Meanwhile, China represents another situation. Cross-border infrastructure basically means facilities originating in Russia. However, China's North and East did not require energy resources in quantity due to their longstanding underdevelopment. Furthermore, domestic fossil fuels were ample, and world energy market conditions did not put an extra burden when some portion of energy imports became needed to satisfy growing demand from the littoral provinces. Nowadays, China is seriously concerned about the security of the nation's petroleum imports originating from the Persian Gulf area that "… lies at the end of very long sea lanes… that are dominated by the navy of a potential enemy" (the Strait of Hormuz and the Straits of Malacca). That is why China came to realise that " … it is very important … to establish an onshore oil import channel" [8]. Japan and Korea present a somewhat unique situation. These highly developed economies historically have no domestic pipeline networks, and this complicates the prospects for cross-boundary energy infrastructure. Russia and Mongolia have contributed to the problem of poorly developed infrastructure as well. Extremely scattered population and limited industrial development in Mongolia and Russia's Eastern territories determined their energy systems of specific types. For example, Far Eastern electric grids were not connected to the United Energy System of Russia (UES), and gas pipelines constructed for the local markets were not extensive.

Given the scale of technical, financial, managerial, regulative, etc. resources required for construction of cross-boundary energy infrastructure, it is a tightly binding enterprise. Naturally, before bringing about such initiative, the countries involved must have absolutely no doubt about the prospects of joint projects.

The long-dormant energy cooperation situation in NEA is set to change. A number of challenges, in particular from the realm of energy security, are increasingly forcing NEA states to embark on a more coordinated path. A rapid growth of energy demand seems to be one of the impetuses for cooperation. The dramatic increase is readily observed in China, and this upsurge is indeed critical for the world market, not to speak about the scope of its effect on NEA. China belongs to the fortunate club of "carbons-haves", but its energy needs have already overwhelmed domestic capacity. In 1993, China became net-importer of oil, and in 2007 the country joined the group of net-importers of coal.

High dependence on oil coupled with large volume of consumption is another dimension of common concern for the countries of NEA. As of July 2007, according to the CIA, China stood 2nd, Japan – 3rd, Russia – 5th, and Korea occupied the 8th position in the ranking of the world's top oil consumers. In 2003, China outstripped Japan, turning into the world's second largest oil consumer after the US, and drastically heightened the energy security burden for Japan.

Steadily increasing energy imports coupled with low geographical diversification appear somewhat of a deadlock, and there seems to be little leeway left. Despite the nations' continuous endeavours to overcome their dependence on the Middle Eastern supply, it remains high, 76% on average.

Diversification utilizing Asian resources, a

heavily hoped-for remedy, is becoming questionable. For example, Indonesia, a major energy exporter among Asian countries, like other developing economies, has encountered a rise in domestic energy demand and turned into a net oil-importer. For that reason, the nation's LNG export policy has undergone revision. It has been already announced that Indonesian LNG exports to Japan is to be halved starting the year of 2010 after the current contracts end. This gravely challenges Japan, to which Indonesia is the largest LNG exporter (about 1/5, as of 2006). A similar predicament faces Korea, to whom Indonesia is the second top LNG supplier after Malaysia. The probability of other ASEAN energy exporting countries following Indonesia's lead and reconsidering their energy export contracts with NEA looms high.[9]

Nowadays, energy issues are inevitably burdened with environmental topics. Prevalence of such conventional energy sources as coal in the energy-mix of China (70%) and Mongolia (78%), and oil of Japan (47%) and Korea (46%), further exacerbates environmental conditions. Increasingly, concerns over environmental vulnerability urge joint multilateral efforts of the NEAs.

This overall setting encourages NEA states to embark on intra-regional cooperation in exploitation, development and utilization of energy resources. This would not only ease tensions caused by energy supply-demand imbalance, improve efficiency of regional energy market, but would work towards achievement of regional security. The prospects for intra-regional cooperation have additionally been brightened by rapprochements yielded in official bilateral Japan-China,[10] Korea-DPRK,[11] and Japan-Korea[12] relations, as well as by progress achieved under the Six Party Talks format. [13]

Thus far, an inter-governmental level has been examined. Speaking from a more practical standpoint, some pundits in the field of NEA energy affairs note that actual cooperation is not progressing, as the key stakeholders from each country are not truly involved in discussion. Tadashi Sugimoto, who has ample experience of service in Japanese-Russian relations, including energy, addresses two pivotal issues: who is to make the process work and by means of what procedure.[14] With regard to the state of energy cooperation in NEA, this expert argues that the modest scope of companies' engagement in extremely costly and risky energy projects and the overall lukewarm cooperative spirit can primarily be explained by the weaknesses of schemes underpinning initiatives in the sector. Nevertheless, in Sugimoto's eyes, there is no need for additional institutions to be established; the expert suggests breathing a new life into existing frameworks and accelerating a cooperation agenda on these grounds.

2. Architecture of Energy Cooperation: Spatial Aspect

Nowadays, the rationality of international energy cooperation that helps jointly find solutions to acute energy supply shortage, its unbearably high cost, or environmental deterioration is not questioned. The real question is how to design the process of cooperation on a win-win basis. At the outset, though, a principal point is to outline a spatial model of directly involved stakeholders.[15] Contemporary views on the possible approaches have become combinatorial, suggesting varied options.

NEA nations are involved in energy coop-

eration through a multidimensional structure comprised of bilateral and multilateral patterns[16] and supplemented by multilayered frameworks with external rooting,[17] like those of ASEAN + 3, EAS, etc.

Until recent, energy ties among the NEAs were almost exclusively pursued on a bilateral basis of a "consumer-supplier" mode. That is to say, NEAs relations with Russia routinely embraced investment in fossil fuel exploration and development (Japan: Sakhalin-I and Sakhalin-II projects) and trade (Japan, China, Korea, Mongolia, the DPRK). Yet, the performance was of a rather modest scale due to a number of factors. To be objective, the Russian government's tightening policy on the PSA schemes and FDI in the oil and gas sector also played a detrimental role.

The scope of the current study does not allow dwelling on detailed analysis of Russia's energy policy; however, the following note clarifies an area for further examination: Contemporary energy policy of Russia has become more predictable. This was achieved through a number of amendments in the federal legislation, revisions of the governmental system of natural resource management, adjustments of agreements with principal consumers, suppliers (Central Asian economies), and transit countries, etc.

Furthermore, the formulation in Russia's Energy Strategy goal of strengthening the 'Asian vector' - meaning development of energy cooperation with the NEA, in particular - has gradually started to gain a more visible shape (a telling example is the unfolding of the grandiose ESPO project). The prospects for further progress also look quite promising as a number of new projects, such as colossal gas and oil fields in East Siberia, offshore deposits of West Kamchatka, and new blocks on Sakhalin seabed (III – VI projects), are open for joint implementation. Moreover, NEAs apparently became more motivated to enhance ties with Russia. While initially only Japanese companies stepped into energy initiatives (jointly with Russian, American, British, and Indian in Sakhalin – I and II), recently, Korean and Chinese energy companies are energetically bidding for deals in the unfolding projects in the Russian Far East and East Siberia.

Characterising "consumer-consumer" exchange, a number of bilateral meetings, such as Korea-China Energy Dialogue and China-Japan high-level economic dialogue,[18] were held in 2007. China-Japan dialogue was held for the first time and was hoped to do much to step up the cooperation on energy-saving and environmental protection. A joint statement by the Japanese METI and China's NDRC on enhancement of cooperation between the countries in the energy field was signed on the 12th of April, 2007. This reveals a promising move towards tackling the NEA energy agenda on a more comprehensive cooperative basis.

With regard to multilateral cooperation, its geographical contour is not clear; there is an array of cooperative schemes that are overlapping at times.

The ***Six Party Talks*** format, which succeeded the KEDO as a result of structural and conceptual transformations in 2003, is the most representative regional mechanism. It unites almost all NEA's states - with one exception being Mongolia - in their continued efforts to settle a number of serious issues relating to the DPRK, such as nuclear weapons development program, withdrawal from the NPT, missile tests over Japanese territories, nuclear weapons tests, etc.

Since established, the Six Party Talks has been facing periods of total failures alternating with relative successes. The February 2007 round has been reported to have achieved a significant progress. The DPRK agreed to shut down its nuclear facility at Yŏngbyŏn in exchange for 50,000 tons of heavy fuel oil, and the release of $25 mln of the DPRK's funds frozen in a Macao bank. Furthermore, the DPRK agreed to provide an accurate declaration and disable all of its nuclear facilities against an additional supply of 950,000 tons of heavy fuel oil. The DPRK's commitments were met with a great enthusiasm. Although, the arrangement came into question from almost the very outset due to the DPRK's reluctance to observe its engagements,[19] it progressed later in the year. In a round of the Six-party talks on September 27-30, the DPRK not only agreed to disable all its existing nuclear facilities and to make a complete and correct declaration of all nuclear programs by the end of 2007, but also reaffirmed its commitment not to transfer nuclear materials, technology or know-how. Apparently, the future of the NEA's cross-boundary initiatives a great deal depends on the progress achieved with the DPRK issue.

Another scheme, perhaps the most scrutinized, is ***NEA-3***. The three-party format is actively elaborated with regard to the FTAs; nevertheless, in the context of energy affairs, it appears a sort of structurally flawed conception as it is formed by major energy importers -- China, Japan, and Korea -- but does not embrace a provider to make this scheme somewhat complete. Yet, it can be argued that the array of fields for cooperation is broad, and that energy saving, energy efficiency, alternative energy, etc. are the topics of crucial significance. Without playing down the value of international collaboration on these aspects, we nonetheless believe that NEA countries could benefit much more from launching a format that involves energy suppliers.

The ***NEA-3 + Russia*** arrangement is one of the reasonable solutions. It constitutes rational grounds for spurring multidimensional energy cooperation among the NEA's major consumers and potentially significant supplier – Russia. The problem here is that it remains the least organisationally developed framework. If previously this could be attributed to the regional energy-importers' disinterest, the current lack of development in this direction is due to a widespread sense that Russia's energy policy is turning increasingly assertive.

A ***hub-and-spokes*** format envisages establishment of a mode where, placed in the centre of cooperative system, Russia is connected with each of the NEA nations on a bilateral basis. This model is already partially at work through the NEA countries' investments in Russian energy projects, Russia's involvement in implementation of joint projects in Mongolia and China, and Russia-NEA energy trade, etc.

The ***ASEAN+3*** scheme reflects recent attempts to incorporate NEA's cooperative modes with those of the larger context. Recently, the ASEAN+3 energy cooperation agenda is being actively debated along with the ongoing FTA/EPA negotiations. Naturally, under these projections Russia's role is almost vanished away. It is true that majority of the ASEAN member states have energy resources, some portion of which are export-oriented. But, as discussed above, growing domestic energy consumption propelled by economic development cast doubt

on ASEAN's capacity to sustain their energy exports.[20] Therefore lurching for expanding cooperative incentives with ASEAN in attempt to enlarge fossils imports appears to be of a dubious pragmatic value.

For the time being, the only conception that considers NEA as a single locale for multilateral cooperation is developed by the NIRA's Working Group on a Grand Design for Northeast Asia. ***"A Grand Design for Northeast Asia as a Comprehensive Vision for Trans-border Development"*** constitutes grounds for energy cooperation between resource-abundant Russia and dependent-on-import NEA states. This approach has justly gained plenty of room for attention from academia, officials and practitioners at its conception; however, since then it was has not yet been scrutinised in depth. By all accounts, it can be taken as a roadmap for enhancement of regional cooperation.

This overview of spatial designs for energy cooperation reveals that NEA is not yet sensed as a single geographical unit. Needless to say, this not merely a matter of semantics; rather, it is a crucial point of the process of conceptualizing cooperation schemes. Strictly speaking, examinations relating to NEA often derive from erroneous geographical perception of the region with Russia put out of its contour, or included with only its eastern territories. This also explains somewhat popularity of the suggestions to mould energy cooperation in NEA in a manner similar to the EU-Russia energy dialogue.[21] Obviously, with Russia precluded from participation in cooperative formats, solid energy cooperation in NEA would be absolutely impossible. This, in turn, would further discourage development of authentic regionalism.

Furthermore, Russia cannot be involved in the NEA's energy partnership only partially via the Far East and East Siberia. Naturally, for practical purposes, the latter are the very regions most likely to become energy suppliers to the NEAs, but international energy affairs require that inter-governmental frameworks be established first, with "region-to-region", "business-to-business" or other supplementary formats emerging at a later stage.

3. Cooperative Frameworks and Arrangements

Generally speaking, cooperative frameworks can be divided into several categories: depending on the scope, they may be international, multilateral, regional, bilateral, and national. From the perspective of the type of connections between the stakeholders involved, they may be official/ governmental and non-official/ non-governmental.

Among numerous international frameworks on energy cooperation, the Energy Charter Treaty (ECT) occupies a special place. It constitutes a body of common rules and provides comprehensive framework for: protection of foreign investments (extension of national regime or MFN, protection against key non-commercial risks, etc.); non-discriminatory conditions for trade in energy materials, products and energy-related equipment based on WTO rules; regulation of cross-border energy transit flows through pipelines, grids and other means of transportation; resolution of disputes between participating states and between investors and host states, and promotion of energy efficiency, environment protection, etc.

Following adoption of the ECT, an array

of various regional cooperative initiatives has emerged. Conception of the Northeast Asian Energy Community (NEAEC) and NEA Energy Charter Treaty (NEA ECT) has been also proposed since that time.

Similarly to the ECT that proceeds from the European Energy Charter, a proposed NEA Charter is also envisioned to develop a legally binding foundation for regional energy cooperation with the aim to create the NEA ECT. The NEA ECT is envisaged to promote long-term cooperation, including exploration, production, transit and trade, investment guarantees, profit transfer, and dispute resolution procedures.

It might be reasonably asked then, why the ECT is not sufficient and whether there is an actual need for the NEA ECT. The issue is that among the countries of NEA, only Japan and Mongolia have already joined the ECT, while China and South Korea have taken seats as observers. Russia signed the ECT, but has yet to ratify it, pending negotiations over the Transit Protocol. As a history of energy cooperation between the NEA countries is young and free from a bitter legacy, creation of the NEA ECT appears an achievable enterprise. Also, as the NEA ECT is to be started from scratch, it would likely be laid down upon a parity principle that should increase the nations' enthusiasm about participation.

The following table represents the arrangements to which NEA nations are party.

Table. Frameworks for energy cooperation

Organization/ Treaty	Year of conclusion	Issues covered	Members/ Signatories	Participants from NEA
Nuclear Energy Agency (NEA) (affiliated with the OECD)	December 1957	specialized agency to assist its member countries in maintaining and developing international co-operation on scientific, technological and legal aspects of safe, environmentally friendly and economical use of nuclear energy for peaceful purposes	28 countries	Japan, Korea
International Energy Agency (IEA) (affiliated with the OECD)	1974	intergovernmental organization dedicated to preventing disruptions in the supply of oil, acting as an information source on statistics about the international oil market and other energy sectors; promoting and developing alternative energy sources, rational energy policies, and multinational energy technology co-operation	26 parties	Japan, Korea
Energy Working Group (EWG) (under APEC umbrella)	1990	voluntary regional-based forum helping facilitation of energy trade and investment; contribution of energy to economic, social and environmental enhancement	21 members	excluding the DPRK and Mongolia
The Northeast Asia Economic Forum (NEAEF)	1991	regional nongovernmental organization sponsoring and facilitating research activity, networks, and dialogues on economic and social development of NEA	China, Japan, Korea, Russia, Mongolia, US and EU	except for the DPRK
The Energy Charter Declaration (European Energy Charter)	1991	declares the principles underpinning international energy cooperation, reflects shared interest in secure energy supply and sustainable economic development	56 states/ 19 observers/ 10 international organizations (as of January 2007)	Japan, Mongolia, Russia (pending ratification), observers: China, Korea
Northeast Asia Cooperation Dialogue (NEACD)	October 1993	track two forum on various issues of regional security, including energy security	USA (founded by the Institute on Global Conflict and Cooperation, University of California), Russia, Japan, China, Korea and DPRK	excluding Mongolia
The Energy Charter Treaty (ECT)	December 1994, entered into force in April 1998	covering such key areas as protection of investment, encouragement of transparent and competitive markets, and promotion of energy efficiency	51 state and European Communities/ 14 observers/ 10 international organizations (as of January 2007)	signatories: Japan, Mongolia, Russia (pending ratification), observers: China, Korea

The Energy Charter Protocol on Energy Efficiency and Related Environmental Aspects (PEEREA)	December 1994, entered into force in April 1998	requires formulation of policy for improving energy efficiency and reducing negative environmental impact; emphases such aspects of national energy efficiency strategy as taxation, pricing policy in energy sector, environmentally-related subsidies, etc.	51 state and European Communities/ 14 observers/ 10 international organizations (as of January 2007)	signatories: Japan, Mongolia, Russia (pending ratification), observers: China and Korea
The Energy Charter Conference	established by the 1994 Energy Charter Treaty	inter-governmental forum, governing and decision-making body for the Energy Charter process; discusses issues of energy cooperation, reviews implementation of provisions of the ECT and PEEREA, considers possible new instruments and joint activities within the ECT framework.	51 state and European Communities/ 14 observers/ 10 international organizations (as of January 2007)	signatories: Japan, Mongolia, Russia (pending ratification), observers: China and Korea
Korean Peninsula Energy Development Organization (KEDO)	March 1995	organization founded to implement the 1994 U.S.-North Korea Agreed Framework	USA, Korea, Japan, EU, Australia, Canada, New Zealand, Argentina, Chile, Indonesia, Uzbekistan	Korea, Japan,
Association of NEA regional governments (ANEARG)	1996	promotion of mutual interexchange and cooperation in various fields	local governments of Japan, China, Korea, Russia, Mongolia, the DPRK	all six
The Kyoto Protocol	December 1997, entered into force in February 2005	agreement under the UN Framework Convention on Climate Change (UNFCCC), implies reduction of carbon dioxide, five other GHG, provides mechanism of emissions trading between the parties failed to meet reductions	174 countries signed and ratified (as of November 2007)	all six
Northeast Asian Natural Gas & Pipeline Forum (NAGPF)	1997	annual international conferences leads cooperative activities with the member organizations toward the construction of the International Pipeline Network in NEA	Asia Gas & Pipeline Cooperation Research Centre of China, Korea Pan-Asian Natural Gas & Pipeline Association, Asian Pipeline Research Society of Japan, Asian Pipeline Research Society of the Russian Federation, and Mineral Resources and Petroleum Authority of Mongolia	excluding the DPRK
G8 Energy Ministerial Meetings	April 1998	changing agenda with the focus remaining on issues of global energy security, energy efficiency, sustainable development, etc.	8 countries and the EU	Japan, Russia
The Shanghai Cooperation Organization (SCO) (1996, Shanghai Five mechanism)	June 2001	permanent intergovernmental international organization to promote economic, cultural and security cooperation	Kazakhstan, China, Kyrgyzstan, Russia, Tajikistan, Uzbekistan; observers: Iran, Mongolia, Afghanistan, India, Pakistan	excluding Korea, Japan, the DPRK
Six-party talks	2003	peaceful resolution to the security concerns caused by the DPRK nuclear program	USA, Japan, Korea, China, Russia, DPRK	excluding Mongolia
East Asia Summit (EAS)	December 2005	aimed at promoting peace, stability and economic prosperity in East Asia	ASEAN countries, Australia, China, India, Japan, Korea, and New Zealand	excluding Russia, Mongolia, the DPRK
The Asia Pacific Partnership on Clean Development and Climate (APP)	January 2006	over 100 long-term projects aimed at clean energy capacity building and market formation; to deploy clean energy and environment technologies and services; allows members to set goals for reducing GHG emissions individually, with no enforcement mechanism	Australia, China, India, Japan, Korea, and the US	China, Japan, Korea (Russia interested to join)
Five-Country Energy Ministers' Meeting	December 2006	boosting energy cooperation among the five in oil conservation, development of oil alternatives, research of key technologies and increasing of energy supply	China, India, Japan, Korea and the US	China, Japan, Korea
Global Roundtable on Climate Change	February 2007	launched "The Path to Climate Sustainability: A Joint Statement by the Global Roundtable on Climate Change"; outlines a post-Kyoto framework; policy and industry changes aimed at creation of sustainable energy systems for achieving economic growth	endorsed by over 100 participating corporations, research institutions, and governmental organizations	excluding the DPRK and Mongolia

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As can be concluded from the Table, the network of authentically regional institutions is weak. There is one NEA-rooted body, albeit of "region-to-region" format, while none of the inter-governmental arrangements unites all six NEA states.

The NEA-3's inclination to fitting into broader cooperative mechanisms[22] derives from several areas. As had been previously noted, the NEAs' inter-governmental discourse was severely damaged by historical legacy, and repeated attempts to establish confident relationships have also suffered failures. Naturally, such an environment precluded any possibility of tackling regional challenges from common grounds. The sphere of international energy cooperation was no exception.

The NEA countries' differing motivations for intra-regional cooperation also complicated establishment of common institutions. Nonetheless, such aspects as profound shifts in the global energy market and rapid changes in the NEAs' energy profiles are making the nations' energy policies increasingly cohesive.[23] Eventually, this will result in development of regional cooperative frameworks.

The reason for NEA-3's adherence to the external organizations can also be seen in unequal financial capacities of the regional powers to support intra-regional initiatives, and their asymmetric readiness to carry the costs associated with enlarging energy interdependence. Yet, taking into account an array of existing uncertainties in NEA which additionally heighten the ordinary risks associated with international economic cooperation, such an attitude appears to be realistic.

Thus the most active participation in multilateral frameworks occurs under the aegis of ASEAN and APEC. Throughout past decade, Korea was competing with Japan for taking a lead in the process of East Asia institutionalisation. In characterising a framework-building process, let us briefly describe the principal events in chronological order.

In 1998, Korean President Kim Dae Jung proposed the promotion of regional cooperation in East Asia through the institutes established under the ASEAN+3 framework. In line with this initiative, the East Asian Vision Group (EAVG), a nongovernmental consultative mechanism, and the East Asian Study Group (EASG), an issue-oriented body, were founded. Within their mandates, both of the Groups are currently handling energy issues of East Asia.

One of the early initiatives of the trilateral format between Japan, Korea, and China traces back in March 2002. At a meeting between the Directors General of Energy Ministries along with the Secretaries General of the IEA and Energy Charter Secretariat (ECS), the three countries explained their energy policies and exchanged views over energy issues in NEA. However, this trilateral meeting was not institutionalized on account of resurfacing tensions between Japan, China and Korea. This particular impasse was caused by the acute Japan-China controversy over the routing of the East Siberia - Pacific Ocean oil pipeline (ESPO), exacerbated territorial disputes over Senkaku Islands/ Diaoyu Tai in the East China Sea and Takeshima Islands/ Dokdo Islands in the Sea of Japan/ East Sea, etc. Given the above circumstances, NEA countries were prone to seek participation in the ASEAN's cooperative frameworks.

The next step was undertaken in September

2002, when the Japanese METI hosted an energy ministerial meeting of China, Japan, Korea, and ASEAN countries on the fringes of the 8th International Energy Forum. The Hiranuma Initiative proposed at that time called for strengthening of energy cooperation in East Asia by means of such measures as establishment of an emergency network, promotion of oil stockpiling, natural gas development, launching joint studies on the Asian oil market, improvement of energy conservation and renewable energy.

Responding to new challenges, a network of cooperative bodies, again in the context of a broad ASEAN coalition, is evolving. Recently, Centre for Energy (ACE), Council on Petroleum (ASCOPE), Forum on Coal, and Joint Oil Data Initiative (JODI) started activities in this direction. Some other structures, such as the Asia Energy Conservation Collaboration Centre (Japan) and Coal Liquefaction Assistance Centre (Indonesia), are to be launched shortly. [24]

As for the purview of ASEAN+3 energy cooperation, it includes: energy security, oil market, oil stockpiling, natural gas and renewable energy, energy efficiency and conservation.

Energy issues are also considered an important sphere for coordinated efforts within the East Asia Summit (EAS) founded in 2005. Multilateral policy is developed by the Energy Ministers Meeting (EMM) and executed through the Energy Cooperation Task Force (ECTF). The EMM supervises energy security in accordance with Cebu Declaration on East Asian Energy Security adopted at the 2nd EAS on 15 January 2007 in Cebu, Philippines. The ECTF coordinates the nations' activity in such specific streams as energy efficiency and conservation, energy market integration, and bio-fuels. With regard to the latter, joint efforts are to be coordinated via Asia Biomass Energy Research Core and Asia Biomass Energy Cooperation Promotion Office (Japan), both coming in place soon.[25]

The idea of intra-regional energy cooperation in NEA is promoted by the Korean Institute of Energy Economics (KIEE). A particularly active role is played by the Centre for Energy Research, Northeast Asia (CERNA), established in 2004 and affiliated with KIEE. KEEI with the support of UNESCAP is developing the Intergovernmental Collaborative Mechanism on Energy Cooperation in NEA. The latter is comprised of the Senior Officials Committee (SOC) and the Working Group for Energy Planning and Policy (WG-EPP). Each of the bodies had held three meetings as of December 2007.[26]

As a means to succeed in regional cooperation, CERNA envisages implementation of such instruments as a long-term development vision and action plan based on the Energy Outlook of NEA 2020, the Government-Business Dialogue, and the Trust Fund on Energy Cooperation in NEA.

Korean initiatives appear to be promoted systematically with due elaboration on such aspects of cooperation as forecasting, planning, financing, etc.

An initial proposal was launched in June 2001, during the International Symposium in Seoul. In October that year, the inter-governmental Northeast Asia Expert Group Meeting (under the aegis of UN ESCAP) of official representatives from all the six countries endorsed the Khabarovsk Communiqué.

The Khabarovsk Communiqué that opened a way for multilateral energy dialogue between the NEAs proclaimed the following objectives: to

increase energy supply from within the NEA; to optimize efficiency of supply and use of energy, and to minimize environmental impact.

In order to put the incentive to work, the following arrangements have been endorsed: the Energy Senior Officials Meeting (SOM), five Working Groups (on Energy Planning, Programming and Restructuring; Emerging Energy Technology and Scientific Cooperation and their Financial, Social and Environmental Impact; Electric Power Interconnection; Interstate Transit of Fossil Fuels; and Development of a Northeast Asian Energy Charter), with UN ESCAP as Interim Secretariat.

In April 2003, the Vladivostok Statement witnessed consensus about promoting regular SOM, agreed to rearrange three Working Groups, decided upon immediate establishment of TFE, and adopted a Consultative Mechanism.

The other cornerstone was the Consultative Meeting in September 2004 held in Bangkok. The benefits of energy cooperation were once again recognized and the Vladivostok Statement was recommended as the basic framework. Also, the meeting called for all six countries' participation and agreed to hold the 1st Task Force on Energy (TFE) Meeting in Russia.

The 1st TFE Meeting was convened in Khabarovsk in December 2004. The Meeting adopted "1st TFE Meeting Conclusions and Recommendations", in which it expressed consensus on long-term vision and objectives, identified five primary principles and six areas for energy cooperation and endorsed the SOC and Working Groups (WG) as focal arrangements.

The 2nd TFE Meeting gathered in April 2005 in Ulaanbaatar. One of the main achievements was a decision to set the priority among 6 Working Groups (energy policy, investment policy, power generation, development and grid, trade and transport of fossil fuel among countries, energy efficiency, and new and renewable energy) and make the WG for Energy Planning and Policy the focal point. Also, the agenda for the 1st SOC, including financing, was finalized.

In November 2005, the 1st SOC Meeting (Ulaanbaatar) established the Intergovernmental Collaborative Mechanism Meeting. From the beginning, Korea, the DPRK, Russia, and Mongolia joined the Energy Cooperation Mechanism, while Japan and China abstained. The Meeting endorsed directions of the Intergovernmental Collaborative Mechanism on Energy Cooperation, developed detailed action plan of WG-EPP, and set schedule of 1st WG-EPP and 2nd SOC Meeting.

The WG-EPP was assigned to examine conditions and prospects for energy cooperation in NEA. As starting point, in 2006, WG prepared each country's energy profile identifying potentials and challenges for cooperation. Throughout the year 2007, the WG continued analysis and completed energy outlook for all of NEA.

In summary, it is evident that frameworks for energy cooperation embrace a multilayered network of institutions and a multidimensional system of arrangements. At the moment, NEA countries are tending to stick to existing formats with external rooting; however, the need for intra-regional mechanism is realised and this task is being gradually approached.

Conclusion

The process of regional framework-building requires some time. A number of positive shifts in both politico-diplomatic and economic realms

significantly improve the overall prospects for spreading cooperative initiatives across NEA borders.

To be concrete, the certain progress of the Six Party Talks soothes tensions over the Korean Peninsula and enables further addressing of the issue multilaterally. With regard to the DPRK, a significant bilateral event – the Summit of Korea-DPRK leaders – was held in October 2007. Implementation of the declaration agreed upon at that time will enhance politico-diplomatic and economic ties between the two states, as well as enable cooperation across the region. Another promising shift is a reform, as yet very cautious, in the domestic market's selective segments that has improved prospects for the DPRK's involvement in cooperation with other countries of NEA.

Gradually, official relations between China, Korea and Japan that have been quite strained in the past are also 'thawing' . Solid inter-governmental dialogue among NEA-3 is an indispensable prerequisite to comprehensive cooperation in the entire region.

Coincidently, and fortunately for the matter of energy cooperation, national policies are becoming more cohesive. China, for instance, has developed a grand strategy to rejuvenate its industrial base in the Northeast over the next 10-15 years. The central government has earmarked huge funds for the region and introduced new measures on regional policy for industrial development and FDI promotion. In 2007, Russia revised its federal program on the socio-economic development of East Siberia, Far East and Trans-Baikal region. The federal government has committed massive funds and approved a range of policy measures to back up the infrastructure projects (particularly in transport and energy sector) and development of the natural resources in these remote areas.

The contemporary framework for energy cooperation in NEA is multilayered. It is formed by international, multi- and bilateral bodies, regional, and national institutions embracing both track I and track II mechanisms. Putting in place this multidimensional and multilayered system seems to be a way to realize the fruits of energy cooperation. Translating the idea into a structural image, the launching of cooperative frameworks in a hub-and-spoke manner with other arrangements supplementing it seems to be the near future scenario which accommodates the interests of the NEA nations. Taking into consideration the scope of the energy demands of China, Japan and Korea, it is safe to note that in order to establish a prudent cooperative framework, the trio's coordinated involvement is indispensable condition.

With regard to the cooperative schemes between NEA-3 and ASEAN/ EAS, they do not threaten Russia's position in NEA. On the contrary, having experienced hardships associated with energy transit through the East European and post-Soviet states, Russia came to clearly realize the benefits of direct access to diversified export markets. Based on this, Russia stepped up the Asian vector in its energy policy and has embarked on strengthening ties with the NEA nations.

What seems to be worth of noting on account of geographical and structural diversification, is that NEA countries, whose high dependence on the Middle East is infamous, have also started to seriously consider Russia's potential. In so doing, they aspire to go beyond a routine

form of energy import. There is a number of new oil and natural gas projects, in particular in East Siberia and the Far East, in which NEA's NOCs are partaking or planning to stake in. Touching upon structural diversification, it can be underlined that energy cooperation already stretches beyond crude oil. To provide but a few examples, it is reported, that the LNG from Russian Sakhalin II project is fully contracted to Japanese, Korean,[27] and American companies. Also, Russian-Mongolian and Russian-Chinese ongoing collaboration in hydropower and nuclear energy segments, respectively, complements the picture of regional energy collaboration.

Thus, energy interchange between the NEA countries is already started with these efforts to overcome barriers and use opportunities to increase openness. In principle, a structure for regional cooperation exists, containing institutions at global, international, regional, national, inter-regional, and inter-governmental levels and from the private sector. Naturally, as intra-regional cooperation is unfolding, some structural adjustments might be required. What is evident is that NEA's cooperative schemes will not be exclusively inward-oriented. Rather, they will be embracing various formats with external footing.

Acronyms

NEA – Northeast Asia
EEZ – exclusive economic zone
IEA - International Energy Agency
ASEAN+3 - ASEAN, Japan, Korea, China
NDRC - National Development and Reform Commission, China
EAS - East Asian Summit (ASEAN+3, India, Australia, New Zealand)
KEDO – Korean Peninsula Energy Development Organisation, 1995
EMM - Energy Ministers Meeting
ECTF - Energy Cooperation Task Force
KIEE - Korean Institute of Energy Economics
CERNA - Centre for Energy Research, Northeast Asia
UNESCAP - United Nations Economic and Social Commission for Asia and the Pacific
SOC - Senior Officials Committee
WG-EPP - Working Group for Energy Planning and Policy
SOM - Senior Officials Meeting
TFE - Task Force on Energy
NEA ECT - NEA Energy Charter Treaty
PSA – production sharing agreement
NIRA - National Institute for Research Advancement, Japan
NOC – national oil company
FTA – free trade agreement
EPA – economic partnership agreement
cm - cubic meter
bln – billion
mln – million

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