East Asian Energy Community Building: Modeled on the European Way?

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Abstract The consecutive and rapid economic growth needs a large amount of energy supply to fuel in the East Asia region. Although reaching some achievements, East Asia regional integration at a take-off phase changes little the situation of energy security in which there exists a more competitive than cooperative phenomenon in access to energy among major economies in the region. The current multilateral energy cooperation, in the framework of the Association of South East Asia Nations (ASEAN), cannot support sustainable growth in the region. So it is urgent for East Asian economies to set up an energy-specific community—the East Asian Energy Community (EAEC) to take uniform actions and effective cooperation on energy security. EAEC can be modeled respectively on European Union way especially in the East Asia Summit region, and on the Energy Charter Conference broadly in the Pan-Asia region including the Central Asia and the Middle East. It can be accomplished through such specific mechanism and institutional arrangements as follows: to sign a legally binding energy-specific treaty; to set up an Asian energy-specific fund to supply financial assistance for may-be losers in removing trade barriers and forming the energy market integration; to establish Asian Energy Cooperation Financing System based on the Asian Bond Markets Initiative approved by the ASEAN plus China, Japan and Korea; to encourage related research on development, deployment and dissemination of technologies, to enhance energy efficiency and conservation through multilateral cooperation; to establish Asian Energy Information and Data System for both supply side and demand side to facilitate policy making; to take collective actions to ensure energy transport and transit through both land routes and waterways, and so on. Despite many challenges and indigenous restraints on the East Asia regional integration, EAEC learning from European Coal and Steel Community, European Atomic Energy Community, and mechanism of the Energy Community Treaty, is completely possible and attainable.

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Introduction

Regional integration is parallel to globalization worldwide. Learning from the European Union (EU) and the North America Free Trade Agreement (NAFTA), economists and politicians in the East Asia (EA) have been pushing ahead with a scheme of the East Asia regional integration, and reaped early achievements with an ongoing process of institutionalization, such as coordinating model Association of the South East Asia Nations (ASEAN) plus China, Japan and Korea, and the East Asia Summit (EAS). On the other hand it is also a fact that the robust economic development does not beget naturally a mature and effective institutional arrangement for multilateral cooperation due to the diverse condition of economic, demographic, natural resources, and multiplicity of culture and altercation between different ideologies in the East Asian region. To some extent, the process of East Asia regional integration is in state of stagnancy. There is a long way for the so-called “East Asia Community” to go. So it is necessary and urgent for all the member-states of this region to take effective measures to deepen and institutionalize regional integration.

With rapid economic growth, the East Asia region has been a hot spot,¹ and a substantial amount of energy demand is essential to fuel it. Although a conversion of energy consumption from conventional energies to new and renewable ones is shared, and from a long run the global economy growth depends on fossil fuels heavily, and it will last in the foreseeable future. According to BP Statistical Review of World Energy, in the year of 2011 fossil fuels dominate the global energy consumption currently covering a market share of 87 %, while renewable energy continues to be paid much concerns accounting for only 2.1 % of energy consumptions globally.² Other forms of energy such as nuclear power, hydroelectricity, and biomass fuels, are about 10 %. Global energy consumption growth at rate of 2.5 % in 2011 moderated along with the world economy, meanwhile it showed an obvious asymmetry among different economies—once again all of the net growth in energy consumption took place in emerging economies, in which China alone accounted for 71 % of the global energy consumption growth, while Organization of Economic Cooperation and Development (OECD) countries’ energy consumption declined, led by a sharp decline in Japan.³ The data in 2011

¹ Although being implicated in Japan’s ongoing recession which was exacerbated by “3.11” earthquake and ensuing tsunami in 2011, East Asia region, as a whole, is still the highest growth blocs.

² Meanwhile the fossil fuel mix is changing as well. Oil, still the leading fuel with 33.1% of market share, has lost market share of for 12 consecutive years. While coal, accounting for 30.3% of global energy consumption which was the highest share since 1969, was once again the fastest growing fossil fuel with predictable consequences for carbon-dioxide emissions. See *BP Statistical Review of World Energy June 2012*, pp. 1–6. <http://www.bp.com/statisticalreview>.

³ See *BP Statistical Review of World Energy June 2012*, p. 2. <http://www.bp.com/statisticalreview>.

also confirm how a number of longer term trends remain in place. The center of gravity for world energy consumption continues to shift from the OECD to emerging economies, especially to the region of East Asia.

As far as the balance between energy supply and demand is concerned, the world is not structurally short of hydrocarbon resources. This viewpoint has been confirmed with related data on world-proved reserves. However long lead times and various forms of access constraints in some regions continue to create challenges for the ability of supply to meet the growth of demand at affordable and reasonable prices.⁴ As it is mentioned above, with reaching some remarkable achievements on the East Asia regional integration, energy cooperation among the East Asian economies is more popular in the framework of ASEAN Regional Forum and the EAS, annual summit meeting among China, Japan and South Korea, and other mechanism.⁵ But such cooperation, which is still relatively fragmental by and large, can not cover all the EAS membership countries.⁶

It is true that the main economies in the East Asia have been depending upon import of hydrocarbon resources, especially crude oil and refined products, to fuel their economic growth with exception of Russia, Australia, Indonesia and Vietnam. In addition there exists a more-competitive-than-cooperative phenomenon in access to energy in this region, an effective and institutionalized regional energy collaboration is necessary and inevitable to keep EAS region prosperity and stability. The study will review the current condition of energy cooperation and integration in the EAS region, the impetus and obstacles to energy-specific and effective community. It also tries to find answers to the questions—is it possible for the EAS countries to set up the common energy policies? And how does an energy community in this region construct its policy instruments?

Current Energy Security Structure in the EAS Region not Support Sustainable Growth

Over the last couple of decades the East Asia Summit region has attained the highest rate of economic growth in the world.⁷ As a consequence, the energy demands have also grown at the highest rate in the world. It is estimated by International Energy

⁴ Ibid., p. 1.

⁵ On behalf of ASEAN plus 3, the Network of East Asia Think Tank (NEAT) working Group presented a report on energy security cooperation in East Asia region at the third Annual NEAT meeting in Tokyo in August 2005. On the occasion of the second EAS on 15 January 2007 in Cebu, Philippines, Cebu declaration on East Asian Energy Security was published; and on the occasion of the Third EAS in Singapore on 21 November 2007, Singapore declaration on Climate Change, Energy and the Environment published.

⁶ In this thesis, the concept of “East Asia” goes beyond geographical sense, but is defined at geopolitics perspective. Here the range of “East Asia” extend much widely, covers all the membership of the EAS, i.e., comprising 18 countries: ten ASEAN countries—Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam—plus Australia, China, Japan, India, New Zealand, Republic of Korea, the United States and Russia.

⁷ Here EAS region does not comprise Russia and the United States who became the two latest membership in 2010.

Agency (IEA) that by the year of 2030 the cumulative energy demand of the whole EAS region will be around 7–8 billion tons of oil equivalent to maintain the same rate of the economic growth, accounts for roughly 2/3 of the global energy consumption.⁸ As a matter of fact, the demand of energy is hardly met for majority of the emerging and transitional economies because the energy resources are geographically widely spread out with varied potentials of extraction in this region, and the geographical variability is also large in the technical and financial capacities of the relevant governments to employ them.⁹

Concerning access to energy, except a few bilateral and multilateral initiatives, at present the EAS member countries are independently trying to secure their respective energy supply chains. With increasing threats to sufficient energy supply and sea lanes of communications (SLOC), and environmental constraints, in line with consecutive market structural changes, it has become risky, expensive, and unreliable to rely too heavily on one's own capacities. Consequently competition in access to energy based on zero-sum approach becomes even more acute. It has been nicely and sufficiently exemplified by the dilemma on the Russian Far Eastern Oil Pipeline Project among Russia, China and Japan. Both China and Japan addressed to reduce the deep dependency on oil from the Middle East region by diversifying their access to energy. As one of the most important supplier of petroleum and natural gas, Russia has been paid much more attention by China and Japan within the past two decades. Taking account of maximizing their energy security, China and Japan preferred respectively to Angarsk—Chita—Daqing pipeline system (ACD) and Angarsk—Chita—Nakhodka pipeline system (ACN). Owing to the lack of the regional and sub-regional cooperation institution and Russia's absolute predominance in the game, a cooperation solution was not attained finally. Russia rejected in 2003 both ACD and ACN with putting forward a substitute, i.e., the so-called "Tayshet—Ust'kut—Skovorodino—Nakhodka pipeline system" (TUSN).¹⁰ Meanwhile Russia committed to launch another pipeline program from Skovorodino to Daqing as a branch of TUSN system.¹¹ Against the global financial crisis, the so-called "Loan for Oil" China-Russia Agreement was signed in February 2009. According to the agreement China provides Russia long-term loan \$25 billion, while Russia promises to supply, as return and a prerequisite, crude oil 15 million tons per year to China from 2011 to 2030, totally 300 million tons.¹²

⁸ See International Energy Agency, *World Energy Outlook 2008*, Paris: Head of Communication and Information Office, p. 91.

⁹ Bhattacharya and Kojima (2011).

¹⁰ The dispute of oil pipeline can be traced back an initiative of building an oil pipeline from Russian Siberia to Northeast China put forward by Yukosneft in November 1994. Japan had a hand in this project in 2002 by raising Angarsk—Chita—Nakhodka pipeline building. In January 2003 Japan-Russia Energy Cooperation Scheme was signed with Japan's commitment of importing crude oil 1,000,000 barrels per day, \$5 billion loan aids for Russia Far East oil pipeline project. Within process of tripartite game, Japan increasingly rose up budget cost from \$10 billion to \$13 billion on the pipeline building.

¹¹ *Sino-Russian Agreement on Branch towards China of the Far East Oil Pipeline*. Visiting website <http://www.Chinanews.com/c/2008-10-29/>.

¹² The project has come into force since 1 January 2011.

As to multilateral energy cooperation mechanism, it is at a take-off phase of the regional integration with some indigenous weakness. As a nominal leader of the East Asia regional integration, ASEAN has been located a dominant position which is not paralleled by its comprehensive might and substantial influences. It is the disputes and lack of confidence among the regional big powers that cause less binding force and a deficiency of ASEAN-led mechanism.

Furthermore the energy security cooperation in the region is still confined to initiatives without a legally binding agreement towards its member states. Although the Energy Cooperation Task Force (ECTF), established with the EAS leaders agreement, is a mechanism through which government officials from the EAS member countries seek to forge a closer cooperation to address the common challenges on energy security, and shares on information, data and analysis on challenges and opportunities in some sectors, it is mainly an advisory body raising recommendations. Its work is reviewed annually by EAS Energy Ministers in charge of the report to EAS leaders.¹³

Some territorial disputes in the East Asia region are closely linked to the energy issue. With the rapid economic growth and deep dependence on the fossil fuels, interrelation between the access to energy and the maritime territorial disputes, has shaped a malignant spiral in that some rich oil–gas deposit has been ascertained near the disputed areas. The more related states show concerns for their energy supply, the more difficult a cooperative solution is attained on territorial disputes. In fact, India's involvement in the South China Sea, has escalated the tension over the past 2 years, and it will make the situation more difficult in the future.¹⁴

To be correspondent with an external dependence on oil from the Middle East, the major economies in the region have been deeply caught in anxiety of the Sea Lane of communication (SLOC), especially the Strait of Malacca Dilemma. Safeguarding the security of waterways has become some relevant powers' significant concern accordingly, but there is no uniform and effective cooperation on guaranteeing shipping routes. All the powerful economies independently escort their own merchant vessels regardless of the overall interests the region.

In addition to the frailty mentioned above, there are some other weaknesses as follows: the insufficient energy infrastructure, the weak strategic oil reserve except for Japan and Korea in the region, and the existence of a non-uniform energy trading market and non-uniform energy pricing mechanism.¹⁵ They are also big challenges for the majority of the EAS countries to realize regional sustainable economic growth, and to deal with unexpected crises. Therefore the energy security has attracted much attention of the East Asian economies, and will be an enduring crucial issue in the long run.

¹³ The establishment of East Asia Energy Cooperation Task Force (ECTF) was agreed to by EAS leaders at the second East Asia Summit on 1 March 2007 following the Cebu Declaration on East Asian Energy Security. It is authorized to focus initially on three areas for cooperation, (1) energy efficiency and conservation; (2) energy market integration; and (3) bio-fuels for transport and other purposes.

¹⁴ Buszynski (2012).

¹⁵ Anindya Bhattacharya and Satoshi Kojima, "Energy Market Integration in East Asia: What an Economic Analysis Tells Us?" *Policy Brief No. 15*, October 2011 Institute for Global Environmental Strategies (Hayama Japan), p. 3.

Process of the East Asia Energy Security Cooperation: Ways and Roles

The regional cooperation is a complicated and laborious process of evolution, in which a sequence of steps rather than one-off ventures forms a feature of pathway dependence. A set of norms, rules and regulations, and related administrative bodies is established in it. And it is gradually institutionalized to govern ensuing actions with legally-binding forces. The regional cooperation institutions based on the deep interdependence and common grounds are beneficial to all the members in the EAS region by sharing responsibilities, burdens and information, benefitting much from cooperative action.¹⁶ Considering the deep interdependence and common challenges, the East Asia energy security needs effective institutions and mechanism to guarantee multilateral cooperation in access to energy in the future.

As far as it is concerned that the main economies in the region geopolitically are net importers in energy consumption, and depend heavily on the fossil fuels, especially on crude oil and natural gas. Energy security, for the EAS economies, is facing challenges at different levels and from different sides, here the concept of “energy security” is defined as a process to secure energy supply at reasonable cost in a sustainable manner. The definition goes beyond simply “ensuring physical supply of oil”, as once envisaged after the “oil shocks” in the 1970s and 1980s. It stresses two elements ignored before: one is to meet one’s energy need in “a sustainable manner”; another emphases “reasonable cost” based on market function and sustainable economic-social-environmental development.¹⁷ It goes further into, to a large extent, ensuring supply and use of hydrocarbon resources and the long term supply–demand balance. It highlights sustainable and certain volumetric sources, and transit/transport routes safety on the one hand. It also addresses efficiency and conservation, and clean fossil energy on the other hand.

To achieve the target of energy security in the East Asia region, it also entails reviewing the current energy policies, trade and industrial practices, actively shaping market structure and monitoring main players, exploring cooperative measures among diverse participants, improving energy efficiency and quality, and investing in research and development of alternative energy sources.

It is assumed that the East Asia energy cooperation increases interests to both the suppliers and consumers in this region. Russia needs a robust market, and investment to build its energy infrastructure and develop abundant resources in the East Siberia and the Far East region. And China, Japan, and Korea need to import fossil fuels at reasonable cost to meet their increasing demands. The current situation is that multilateral cooperation in the East Asia lags far behind as in Europe.¹⁸

Energy cooperation and coordination among the East Asia countries are usually conducted through following three pathways: (1) bilateral dialogues and contracts on energy cooperation; (2) Asia–Pacific Economic Cooperation (APEC) Energy

¹⁶ Keohane and Nye (2000).

¹⁷ NEAT (Network of East Asian Think Tank), Working Report on Energy Security Cooperation in the East Asia, on May 2005, Singapore, p. 3.

¹⁸ Chun (2009).

Ministerial Conference; (3) EAS Energy Ministerial Meeting, especially ASEAN plus 3 Energy Cooperation Ministerial Meeting. Bilateral dialogue is the most popular and easiest form of energy cooperation in the East Asia region, while it also easily leads to vicious competition among the main economies in access to energy.

Multilateral cooperation pertaining to energy security commenced in the early 1990s. Japan and Korea raised respectively their own plan for energy cooperation mechanism, China has also paid more and more concerns to energy supply since it became a net oil importer in 1993. Taro Nakayama, Japan former foreign minister, proposed the establishment of Asian Energy Community for developing natural resources in the Siberia areas. Such related countries as China, Japan, South Korea, Russia and the United States can make a close cooperation to pave their way for an effective energy security mechanism in the East Asia Region finally. He went further that such a multilateral project should be developed similarly to how six European states agreed to jointly control their coal and steel in 1952 by the creation of the European Coal and Steel Community.¹⁹ China-Japan-ROK Joint Declaration for Improving Tripartite Cooperation, published in 2003, reiterated to strengthen reciprocal cooperation on the energy field, and explicitly ensured availability of stable energy supply through investments in energy infrastructure such as the ASEAN Power Grid and the Trans ASEAN gas pipeline, explored the possibility to build a regional energy transport/transit network.

There is an ad hoc Energy Working Group in the framework of APEC. The Energy Working Group, launched in 1990, seeks to maximize the energy sector's contribution to the region's economic and social well-being, while mitigating environmental effects of energy supply and use. It has four expert groups, each with their own program of activities to cover: new and renewable energy technology; clean fossil energy; energy efficiency and conservation; and energy data analysis. The group members meet twice a year, there exist up to 30 energy-related events each year under the umbrella of it. Considering that the main players in the East Asian region are also the member states of APEC, relevant achievements in framework of APEC can spill over the EAS regional energy cooperation. In framework of EAS, an energy-specific declaration—Cebu Declaration on East Asian Energy Security—was issued on 15 January 2007.²⁰

As an ad hoc body, the Energy Cooperation Task Force (ECTF) was established with agreement of EAS leaders to forge closer cooperation to address common energy security challenges in the East Asia region. The work of the ECTF is based on existing ASEAN sectoral mechanisms—institutionalized ASEAN plus 3 Energy

¹⁹ Taro Nakayama put forward his proposal at a Japan-EU Parliamentary Meeting on 25 November 2003 in Tokyo.

²⁰ According to the declaration, EAS countries address to work together towards the five goals: (1) improve the efficiency and environmental performance of fossil fuel use; (2) reduce dependence on conventional fuels through intensified energy efficiency and conservation programs, hydropower, expansion of renewable energy systems and biofuel production/utilization, and for interested parties, civil nuclear power; (3) encourage the open and competitive, regional and international markets geared towards providing affordable energy at all economic levels; (4) mitigate greenhouse gas emission through effective policies and measures, thus contributing to global climate change abatement; and (5) pursue and encourage investment on energy resources and infrastructure development through greater private sector involvement.

Ministerial Meeting where possible, and focuses on such three work streams as energy efficiency and conservation, energy market integration, and biofuels for transport and other purposes.²¹

The energy security in the East Asia equates with a cooperative game with more than two players, the credible commitment,²² which gives impetus to the evolution of cooperation, comes from legal-binding contracts on common knowledge, but not agents' verbal guarantee. Seeing that deep regional integration in the East Asia relies on an open and integrated energy market, the influential enterprises and multinational corporations are also the vital players besides member states of the EAS and important economies in the East Asia region. At government level, the major players comprises of ASEAN members, China, Japan, Russia, Australia, the United States, and India to a large extent.

East Asian Energy Community Building: Drawing on Experience of EU's and IAE's?

The studies above demonstrate early signs of progress in the East Asian energy collaboration. Whereas all the ways to energy security are stuck in a nascent phase, and need to be entered into force or transformed to go through the political, institutional, cultural and economic barriers due to both policy and market failures (i.g., fossil fuel subsidies). So a new effective cooperative regime and path dependency must be created with actors, institutions and sustainable accesses reinforcing each other.

To set off new pathways, new thinking about public policies, cooperative approaches, law of market is required immediately as well as mechanism for interactions between the state, the private sector and other actors in the East Asia region. It helps to pool and coordinate resources and skills. A good governance can be enacted not only through policies but also through institutional structures and process.²³

European Union, as the deepest regional integration organization, originated in the European Coal and Steel Community (ECSC) in 1951 when six European states decided to integrate two key sectors of their economies. The purpose was to replace conflict with cooperation, and antagonism with prosperity. The European Atomic Energy Community (Euratom), established on 25 March 1957, is an international organization to coordinate and foster cooperation in the nuclear field, then a very popular area. Although Euratom was merged into EU executive institutions later, the nuclear program has maintained a legally distinct nature from the European Union.

The energy issue has been at the heart of European integration from the very beginning, with ECSC and Euratom treaties. Both ECSC and Euratom tried to pursue a truly common energy-specific policy covering three objectives which are

²¹ Visit website, <http://www.dofa.gov.au>.

²² Thomas C. Schelling discussed efficacy and origin of commitment in the Chapter 2 of his work (Schelling 1980).

²³ Nilsson et al. (2012).

essential to energy today: affordable access to energy; sustainable development of energy production, transport and consumption; and security of supply.²⁴ As a matter of fact, “almost 60 years later, Energy is still at the top of the political and economic agenda. However, the rules that ensured equal access to common resources no longer exist”.²⁵ The difficulty of the task is compounded by the various crises that contemporary societies are facing. It is dangerous and illusory to assume that these challenges can be addressed at state, even sub-regional level, or that a loose cooperative structure has the ability to tackle the challenges. Therefore a new initiative so-called “energy community” was raised, with the Energy Community Treaty’s binding force,²⁶ to extend the EU internal energy market and policy to Southeast Europe and beyond. In accordance with the Energy Community Treaty signed in 2005, competitiveness is a key element besides another two interrelated elements—supply security and sustainability. Through integrating the energy markets of Southeast Europe to EU single market and interconnecting natural gas pipeline and electricity transmission lines, the single market could have more flexibility and competitiveness which provides the energy market with effective function, and hence a vibrant industry and economy.²⁷

“Energy Community”, in the word of the European Commission (COM 2011 105 final), “is about investments, economic development, security of energy supply and social stability; but—more than this—the Energy Community is also about solidarity, mutual trust and peace. The very existence of the Energy Community, only 10 years after the end of the Balkan conflict, is a success in itself, as it stands as the first common institutional project undertaken by the non-European Union countries of Southeast Europe.”²⁸

So the significance of the Energy Community moves far beyond economic realm, has a strategic implication on politics, society, and regional peace. An energy community in the East Asia has the same utility as it in the European Union, even in the whole Asia region because both Asia and Europe share the global environment, deeper interdependence, and have many such similarities as diversity of member states, cultural disparity, development gap, social transformation and territorial disputes.

Furthermore the Energy Charter Treaty (ECT) is beneficial to the East Asian Energy Community construction²⁹ as well, because a majority of Asian countries

²⁴ Andoura et al. (2010).

²⁵ Jacques Delor, “A Call for a European Energy Community.” Ibid., Preface.

²⁶ The Energy Community Treaty is a legally binding agreement. It was signed by EU and Southeast European countries comprising Albania, Bosnia and Herzegovina, Croatia, Republic of Macedonia, Montenegro, Serbia, Moldova, Ukraine, Kosovo (UNMIK) and observer Turkey in Athens, Greece, on 25 October 2005, and entered into force on 1 July 2006.

²⁷ Yörkan (2010).

²⁸ *Briefing of LEAP 2012*, Stockholm Environment Institute (SEI), <http://www.energy-community.org/portal/page/portal/ENC> home/Energy Community.

²⁹ The Energy Charter Treaty (ECT) is an international agreement which provides a multilateral framework for energy trade, transit and investments. Originally it aimed at integrating the energy sectors of the Soviet Union and Eastern Europe at the end of the cold war into the broader European and world markets. The legally binding treaty was signed in Lisbon in December 1994, together with a Protocol on Energy Efficiency and Related Environmental Aspects, and came into effect in April 1998.

are members or observers of the Energy Charter Conference and its subsidiary bodies in which the practice of energy cooperation and integration and mechanism in the European region do have positive impact on related Asian members or observers.

Although facing various challenges, it is possible to establish an energy community in the East Asia. Then what should and how can the related players, especially the major ones address to the East Asian Energy Community? Rhetoric and declarations with no follow-through will not suffice if the EAS countries or the whole Asian countries are to keep the rapid growth and, sustainable social development, and regional peace.

The East Asian Energy Community can be modeled respectively on ECSC and Euratom, specially in the EAS region, and on the Energy Charter Conference broadly in the pan-Asia region including the Central Asia and the Middle East. It can be accomplished through the following specific mechanism and institutional arrangements:

1. to negotiate urgently and sign a legally binding energy-specific treaty—the East Asian Energy Community Treaty based on the work of EAS Energy Cooperation Task Force as soon as possible, and start the East Asian Energy Conference (EAEC) mechanism with permanent institutions. The ASEAN-centered EAS countries will shape the core of the community, and absorb the central Asian countries as members or observers simultaneously;
2. to establish following four work streams in the framework of EAEC: Access to Fossil Fuel, Efficiency and Conservation; Energy Market Integration and Competitiveness; New Energy and Alternatives; Resolution if disputes between participating countries, and in the case of investments between investors and host countries;
3. to set up an Asian energy-specific fund through the Asian Development Bank or other financial institutions to supply financial assistance for may-be losers of GDP in removing trade barriers in terms of export and import tariffs and various subsidies, and forming the energy market integration;
4. to establish Asian Energy Cooperation Financing System (AECFS) based on the Asian Bond Markets Initiative which was approved by the ASEAN plus 3 Finance Ministers in 2003. AECFS aims at raising an efficient and liquid bond market in Asia, which enables better utilization of Asian savings for energy investments. Its activities focus on the following two areas: (1) facilitating access of social capitals to the market through a wider variety of issuers and types of bonds, and (2) enhancing market infrastructure to foster bond markets in Asia;
5. to give financial supports to such infrastructure projects as crude oil/natural gas pipelines, deepwater port building, and network of electricity grids construction;
6. to encourage related research and development of new energy, deployment and dissemination of technologies to enhance energy efficiency and conservation in the region through multiple means, such as investment, technical and financial assistance, and technology transfer;

7. to establish Asian Energy Information and Data System. It is open for both supply side and demand side to facilitate relevant policy making;
8. to establish regional strategic oil reserve modeled on IEA's framework of reserve to weather unexpected crisis, relatively stable oil price is beneficial to both the suppliers and consumers.
9. to take collective actions to ensure energy transport and transit through both land routes and waterways, especially keep the Strait of Malacca unimpeded any time.

Challenges on the Way to East Asian Energy Community

There are such many elements as history and current status, disparities about economy and politics, lack of strongly effective multilateral institutions, even territorial disputes, to compound the East Asia regional integration and common policies making. Once not dealt with properly, some differences and disputes may become main impediments to the East Asia regional integration and East Asian Energy Community as well as the globalization and interdependence among economies, motive forces. Therefore there are four crucial issues immediately to be tackled:

1. All the participants of the East Asian regional integration, especially the major powers, must transcend zero-sum thinking within interaction, show a real political will to motivate the East Asian Energy Community. Energy is tightly linked to politics. Just as what Daniel Yergin said, "pertaining to oil, 10 % is economy, while 90 % is political affair."³⁰ "Oil has such a tight link to geopolitics that any other kind of crude resources is far behind it. This has been testified in the Middle East, Russia, China, Latin America and even any spots in the world."³¹ To a large extent, this is the basic and the most vital element to the establishment of East Asian Energy Community.
2. Comparing with the Europe integration with political dynamics, the East Asia regional integration has no powerful political impetus. The East Asian Energy Community will face obstacles originating from the big gap in political area. Conversely the matter of political integration is not to be brought into integration agenda in a foreseeable future in the East Asia. On the other hand fostering political mutual confidence and economical interdependence among the EAS regional countries can mitigate the dilemma.
3. With the transfer of the global center of gravity to the East Asia region, the indigenous structural conflicts among great powers in this region have exacerbated consequently. This imposes negative impacts on the East Asian Energy Community.
4. Territorial disputes in the EAS region are also restraints on the East Asian Energy Community.

³⁰ Sebillé-Lopez (2006).

³¹ "A Conversation with Daniel Yergin", *International Politics*, No. 98, Winter 2002–2003, p. 331.

5. Considering relations between the EAS regional great powers, it displays more competitive than cooperative in access to energy except for energy supplier—Russia. It is, to a large extent, interrelated to “zero-sum” thinking, so the transfer of mind and thinking is more significant for East Asian Energy Community Building.

Conclusion

Despite many indigenous restraints on the East Asia regional integration caused, to some extent, stagnation of the East Asia Integration, globalization and interdependence, and even consecutive economic growth have also moved an impetus to the East Asia Integration. Given that the rapid and sustainable economic growth needs a stable and affordable energy supply, the EAS regional economies have paid more and more attention to access to energy. They share common ground on the energy supply security because all major economies but Russia are net oil importer. A wider and deeper cooperation in energy realm is an inevitable trend in the long run. The East Asian Energy Community, even a Pan-Asia Energy Community modeled on the European Coal and Steel Community and Euratom, and is completely possible and available.

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