Asia Energy Forum, 2005: International Energy Security and Regional Cooperation in Asia

Panel Discussion: The Establishment of an Energy Security System in East Asia

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Energy security is once again a top policy priority in energy consuming economies. This development has been driven by changes in the underlying structure of energy markets that have been taking place in the last half a decade or so. Energy security policies in the 1980s and 1990s were benign, if not sanguine. That has all changed dramatically with growing concern about instability in the Middle East and terrorism generally and its impact on reliability of energy supplies. These developments on the supply side have been exacerbated by the unanticipated pressure on international markets because of the remarkable growth of China and, in more recent times, India.

Priority for Asian Energy Security

What has driven the change in energy policy climate is the relatively sudden shift from a buyer's to a seller's market. Real energy prices have still not reached the peak attained in during the energy crisis of the 1970s. But the threefold rise in energy prices since March 2002 and their doubling since March 2004 has galvanised market players and governments to focus on securing reliable long-term supplies of energy. Major reports and white papers in Europe, North America and Asia have highlighted the need to reconsider energy procurement and substitution strategies. Anxieties about access to energy supplies have been aggravated by the environmental impact of energy consumption including climate change.

Uncertainty about access to supplies is not primarily a product of re-assessment of physical reserves. Rather it has resulted from the interaction between political developments in the Middle East and the war on terror and the spurt of growth in energy demand in East Asia.

The surge of energy demand in East Asia is at the heart of the energy security issue in this region. Rapidly increasing demand has raised the stakes in securing long-term energy supplies for East Asian economies and made keener the diplomatic play on energy and other issues between principal energy consumers in the region, importantly China and Japan.

There is a fundamental sense in which the energy market is perfectly capable of sorting out these problems in securing long-term energy supply both within East Asia and globally. Yet, it is the character of the energy security issue, as it appears today,

that it may encourage a retreat from reliance on market-based solutions in calling forth new supplies and substituting less reliable supplies for more reliable supplies in the international market place. This is understandable. The increased risks attached to international energy supply derive in significant part from political factors and international diplomacy is a crucial element in ameliorating political risk. Moreover, the sharp adjustment in the energy terms of trade in favour of sellers, if it persists, will require structural, not just marginal, shifts in energy markets with new suppliers and new energy sources playing a larger role. An implication is that there is a role for governments acting independently and in concert to address the political issues and undertake whatever the public investment needed to resolve energy problems.

The core message in my presentation is to stress that the role of governments and cooperation between governments in energy markets is to enhance the capacity for market-based solutions and the integration of energy markets, including those in East Asia. In the longer-term only market-based solutions are able to deliver reliable, adequate and appropriate energy supplies efficiently and at the lowest cost to consumers that is possible consistently with encouraging those supplies onto the market through investment at reasonable returns on investment.

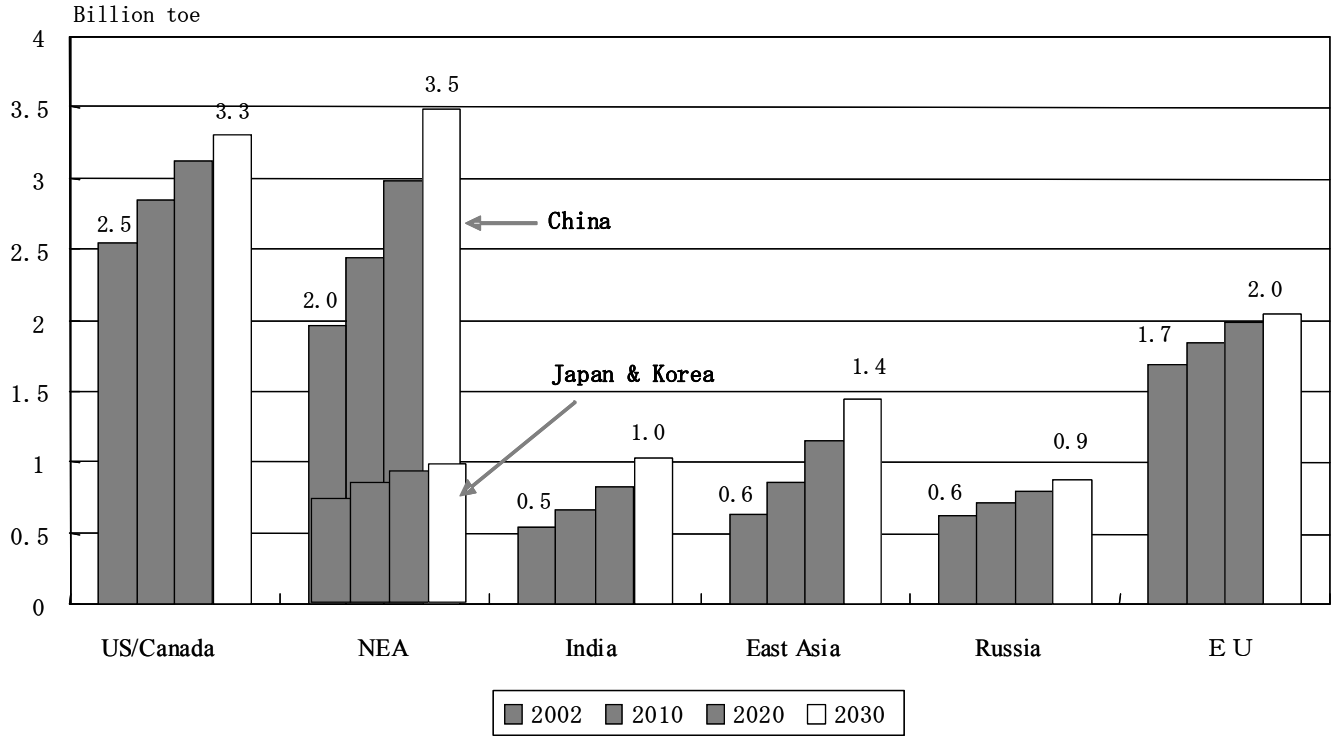
But this is a time for cooperative responses to alleviating the market pressures that are a product of what has been called the new energy paradigm. These responses require government initiative and inter-governmental action.

East Asia and the World Energy Outlook

Figure 1 sets out the IEA Energy Outlook for 2004 through to 2030.

The striking feature of these IEA projections is the growth of energy consumption in North East Asia. By 2030, energy consumption in North East Asia is expected to amount to 3.5 billion tons of oil equivalent, a rise of around 1.5 billion tons over the next 25 years. China accounts for the lion's share on the projected increase in energy consumption. India and the rest of East Asia will add another 1.3 billion tons to world consumption over the same period. By 2030, India is expected to consume as much energy as Japan and Korea combined.

Figure 1: East Asia and the World Energy Outlook, 2002 to 2030



Source: IEA, World Energy Outlook, 2004

If anything, these projections are conservative when lined up against projected growth of industrial output and trends in the intensity of energy use. Already Chinese consumption has exceeded the trend growth assumed in the IEA forecasts. While a dramatic rise in energy efficiency and fall in energy intensity is possible, especially in China and India over the next two and a half decades, this would not change significantly the main features of the picture of the geographic shift in energy consumption depicted in these projections.

What does this picture tell us about the future in international energy diplomacy?

It tells us three important things. First, it tells us that there will be increased competition for energy supplies. This is already reflected in the way in which energy diplomacy has become an aspect of international diplomacy not only among energy consumers in North East Asia but also in relations between energy consumers and

major energy suppliers. Second, it tells us that, nonetheless, the big energy consumers in Asia – China, Japan, Korea and, coming up from behind, India – have powerful common interests in securing energy supplies in a market in which relatively high prices are likely to persist. Sustained higher prices will induce changes in the structure of energy markets to satisfy increased demand and substitute new fuels and sources of energy supply for old. But the adjustments involved over the next decade or two are large, requiring huge investments in energy and infrastructure projects. Third, it tells us that the regional concentration of the growth in energy consumption suggests a useful regional dimension to cooperation between energy users and suppliers ordered around their mutual economic and political interests.

Rationale for Energy Cooperation in Asia

There are two important dimensions of regional energy security.

First and foremost is securing reliable supply at reasonable prices. There are two elements in this. One involves addressing political risk and building cooperative diplomatic relations with energy suppliers and other energy consumers to insure against disruption to energy procurement. This might, for example, include international cooperation in the provision of delivery infrastructure. Another involves attention to the contractual and the market infrastructure needed to provide a confident base for energy project and delivery infrastructure development.

Second, an increasingly important aspect of energy security is obtaining adequate energy supply while achieving environmental sustainability. The environmental effects of energy consumption are, of course, both global and local. There are also two elements in this. One involves the substitution of clean energy fuels such as gas for other energy fuels. Another involves improvement in the efficiency with which energy is used. Achieving improvements in energy efficiency is not simply a narrow technological problem. It also encompasses social choices about modes of living reflected, for example, in rapidly industrialising economies in the way in which rapid urbanisation is managed.

There is clearly a role for governments in both these dimensions of energy security through the provision of national and international public goods. And there is clearly a powerful incentive to cooperation on energy security issues in East Asia where much of the increased demand for energy over the coming decades will be located.

Elements of Cooperation on Energy Security

There are several forms of international cooperation that may assist in enhancing energy security both in the short-term, through protecting against short-term market disturbances, and in the longer-term.

Two initiatives that address the potential for short-term market disruption are the Joint Oil Data Initiative (JODI) covering 94 countries, being promoted by collaboration of six international institutions, namely, APEC, EUROSTAT, OECD/IEA, OLADE, OPEC and UNSD and the Real-Time Emergency Information Sharing System (RTEISS) among APEC countries. This is a real time communication system among government officials sharing information and exchanging intentions. There is scope for further cooperation in dealing with short-term supply disruptions through arrangements to share national stockpiles in times of natural emergency.

Collaborative research and the exchange of information on developments affecting energy markets is important to energy security. Timely response by market participants and energy authorities to market developments is a key to secure energy markets in the long-term. Market developments can in large measure be anticipated through careful analysis open to scrutiny by all sides of the market. Thus, research and information exchange based on research can help to ameliorate disruptive adjustments to supply and unnecessary price volatility.

There is a great deal of research on energy market developments and information exchange undertaken by industry and commercial participants as well as international agencies and institutions. But there remain significant gaps in knowledge and understanding especially about the forces shaping outcomes in new and rapidly growing markets and about the nature of the supply response to these changing market circumstances.

There are important benefits from participation in international research collaboration and information and exchange. It has positive effects both on the understanding of industry players of the origins of market developments and through encouraging common policy priorities and consensus on policy interests among energy policy authorities in energy consumer and supplier countries alike.

When delivery infrastructure requiring substantial long-term and risky investment has to be put in place to bring on stream new energy supplies, international governmental cooperation in securing finance, arranging transit rights, securing markets and providing protection is a commonplace and necessary requirement. The surge of energy demand in East Asia and the imperative of opening up new sources of supply to alleviate growing pressure in energy markets accord new priority to this form of international energy cooperation.

Of their nature, energy markets involve large-scale, lumpy investments. International cooperation directed towards improving energy market information flows, building understanding and policy consensus on developments in energy markets, putting in place delivery and related infrastructure all help to integrate energy markets and provide greater energy security. These measures improve the operation of energy markets. Creating an integrated energy market based on burgeoning demand in East Asia is a top priority in regional economic and political cooperation. Another vital area of international cooperation is in building a market-based regime that facilitates the transfer of technology and experience in improving energy efficiency and reducing environmental costs of energy consumption.

Cooperation in these ways depends on diplomatic initiative and appropriate international and regional frameworks through which to deliver it.

Vehicles for Energy Cooperation in Asia and the Pacific

East Asia will soon the largest regional energy market in the world. But there is still no institutional framework for multilateral energy cooperation that encompasses North East Asian energy market interests. There is not even an informal vehicle for consultation on energy issues, such as used to be provided by the Pacific Energy

Forum that grew out Pacific Economic Cooperation Council process after the oil shock of the 1970s. Energy diplomacy in East Asia and the Pacific is conducted almost entirely on a bilateral basis. Regional energy cooperation now deserves priority in the new energy market circumstances that have emerged in the last half decade

What vehicles might be helpful in fostering regional energy cooperation in the pursuit of common objectives in energy policy? Common energy policy objectives include enhancing research and information exchange, the joint development of supply sources, the integration of energy infrastructure, energy conservation, improving energy efficiency and reducing the risks associated with large-scale energy investment as well as dealing with short-term disruption in energy markets.

The Asia Pacific Energy Research Centre (APERC) located at IEEJ here in Tokyo provides one base for enhancing regional research and information exchange. The recently launched East Asia Energy Research Program (EAERP) links researchers in Australia, China, Japan and Korea and also has potential to strengthen the regional energy research network through its regular research meetings and its complementary training and exchange programs. Both can help to provide a foundation for development of inter-governmental cooperation on energy security in East Asia.

Founded in a period of quiescent energy markets, APEC did not traditionally have a strong energy cooperation focus, but that is now changing rapidly. APEC has joined a number of energy cooperation initiatives aimed at minimising disruptions to energy markets. The APEC Energy Security Initiative has on its agenda both short and long term measures to address energy supply disruptions, energy investment, energy efficiency, diversification of energy sources, and improvement of energy technologies. APEC is an ideal vehicle for the promotion of dialogue on longer-tern energy security issues such the meeting it recently convened on natural gas in Perth.

The recently convened Asia Pacific Partnership on Clean Development and Climate (including Australia, China, India, Japan, Korea, and the United States) is set to meet at ministerial level for the first time next January. It has the potential to contribute to the diffusion of technologies to improve energy technologies and build capacities and

ultimately regimes for managing environmental issues and an agenda that is open for definition.

The East Asia Summit, to be held in Kuala Lumpur next month, is another important platform for dialogue on cooperation on energy issues as they emerge as a constraint on East Asian growth ambitions. India and Australia with be partners in this dialogue with East Asia.

Keeping regional energy dialogues open to participation by key players, including energy suppliers, from outside the region will be important to successful cooperation among East Asian consumers.

Agenda for Action

Already North East Asia is the second largest energy market in the world. It includes Japan and Korea, two of the world's most sophisticated and efficient consumers of energy and China, the world's most rapidly growing energy market. While Chinese energy efficiency has risen markedly over the last 25 years, Japan is nine times more efficient in its energy use and the United States three times more efficient. And while total energy consumption in North East Asia is larger than energy consumption in Europe, there are no institutional arrangements in North or East Asia that foster regular consultation or cooperation on energy issues.

In short, there is a large agenda for action on energy cooperation in East Asia. There is the issue of assessing the impact of the growth of the East Asian market on world energy supply. There are opportunities for catching up with best practice technologies across the market. There are benefits from sharing experience in the regulation and development of energy markets within the region. There are shared interests in large-scale energy and infrastructure project development. And there are shared interests in insuring against short-term energy disruption are issues that beg cooperation.

Participation in the global measures that are already being put in place to strengthen energy security reinforcing preparedness against emergency is one thing. But East Asia has its own specific problems and projects that require distinctly regional initiatives. Items on the regional agenda include:

- developing joint responses to short-term supply disruption
- work on the regime for Asian energy and environmental cooperation
- sharing ideas on strengthening the integration of regional energy markets through
  - eliminating distortions affecting delivery, supply and substitution
  - using market incentives to increase energy efficiency and protect the environment
- augmenting supply and delivery infrastructure in North East Asia
- incorporating the discipline of alternative suppliers in cooperation strategies
- and the particular problem of planning the energy aspects of settlement on the Korean peninsula

Sensibly there will be more than one vehicle for regional energy cooperation to address these issues. The APEC Energy Security Initiative can deal with more global issues, for example, but energy cooperation related to resolving the North Korea crisis requires a narrower group. In East Asia cooperation that involves both energy users and energy suppliers is likely to be of greater value over the long term.

East Asia is distant from traditional sources of energy supply so new sources of energy supply in Australia, South East Asia, Africa, Russia and Central Asia are increasingly important in East Asian energy strategies. Developing energy resources in Russia to supply East Asian consumers requires huge project and infrastructure investment, an appropriate regulatory framework for international participation and the discipline of competitive alternative suppliers.

Energy cooperation in East Asia ultimately requires government initiative and blessing. But, given the political and economic circumstance in the region, East Asian energy cooperation might first be built most effectively on more collaborative private and research-based activities. This kind of cooperation can be promoted actively among national research institutes and centres. These activities will help to lay the foundations of inter-governmental cooperation and define an institutional way forward. Joint study of regional issues involving private, research and official participation has been an effective mode for developing economic cooperation in East

Asia and the Pacific in the past. And it is also likely to be effective in the area of regional energy cooperation.

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