

Japan's Energy Security Policy

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Improving Energy Efficiency

One of the highlights of the 2007 G8 Summit held in Heiligendamm, Germany was the discussion on climate change and energy efficiency. Both Prime Minister Abe and President Bush actively participated in the discussion, and Prime Minister Singh of India was also invited as a key partner country to the second day session along with the leaders of China, Brazil, Mexico and South Africa. In terms of Japan's energy security policy, the G8 Declaration was a positive development. It clearly reiterated Japan's primary policy objective to promote energy conservation utilizing both existing and new technologies. In addition, the leaders reaffirmed the importance of dialogue and joint actions with emerging economies such as India and China in improving energy efficiency.

One of the most important energy security policy objectives of Japan is improving energy efficiency of the world as a whole. On January 15, 2007, the second East Asian Summit was held in the Philippines. 16 leaders participated from Japan, India, China, Australia, New Zealand, South Korea, and ten ASEAN countries. Prime Minister Abe announced the Cooperation Initiative for Clean Energy and Sustainable Growth in East Asia. The initiative includes a provision for energy-related Official Developmental Assistance (ODA) of approximately two billion dollars over three years starting in 2007, and the promotion of energy conservation, energy efficiency, biomass energy, and clean coal technology.

Japan makes substantial bilateral efforts as well. On April 11, 2007, Premier Wen Jiabao of the People's Republic of China reaffirmed his promise to continue cooperation on energy efficiency improvements during his visit to Tokyo. On April 27, 2007 during a visit to Washington, Prime Minister Abe and President Bush agreed to "lead the promotion of improving energy efficiency in the Asia-Pacific region." Furthermore, Prime Minister Abe addressed energy issues during his visit to India in August 2007.

Security of energy supplies

Another important energy security concern for Japan is maintaining the supply of energy. This is the area where diplomats of major consuming countries are expected to try his or her best to complete their mission for their country.

For example, among the achievements of the former U.S. secretary of state, Dr. Henry Kissinger, most notable is his proposal to establish the International Energy Agency (IEA) and the successive installation of the joint strategic oil stockpile for use during emergencies. The Agency has functioned successfully.

Dialogue with major oil producer countries is also important. Middle Eastern countries will remain the most important partners. From April 29 to May 2, 2007, Prime Minister Abe visited Saudi Arabia, the United Arab Emirates, Kuwait, Qatar, and Egypt to further promote Japan's multi-faceted diplomacy.

Australia and Indonesia will remain crucial suppliers of natural gas and coal. Building on existing close relations, Japan strives to further strengthen strategic partnerships with these countries. Russia may perhaps become an even more important supplier with its improved investment climate.

Horizons keep expanding with oil sand development in Canada, new pipelines to the Indian Ocean from the Caspian Sea, new exploration in the deep seas of Africa, uranium from Kazakhstan, bio-fuels from Brazil, and so on.

Security of transportation routes

The third pillar of Japan's energy security policy is the securing of critical energy infrastructure, particularly the safety of navigation through the straits of Hormuz, Malacca and Singapore. As the Japanese ambassador to the United States, Ryozi Kato pointed out, this is a critical area where Japan, the United States and India share a common interest in protecting the sea lanes from the Middle East to East Asia. More than 90 percent of exported oil to Japan goes through the straits of Malacca and Singapore, and the total volume is expected to double by 2030. The Strait of Hormuz is a strategic exit for oil from the Middle East. Daily flow of oil through the strait amounts to about 17 million barrels per day, which is more than four times as large as the daily Japanese import of oil.

Another aspect of securing critical energy infrastructure for Japan is related to pipelines from Russia to the Asian market. As Russian and Caspian oil and gas pipelines extend east and south, there will be new opportunities and challenges. These pipelines will add Russia as a major exporter to Japan and thus diversify Japan's sources of energy. Caspian oil and gas will contribute to the diversification of transportation routes and the increase of supply, which will enhance global energy security.

What are the challenges associated with energy security?

Climate change and energy efficiency

Prior to the G8 summit in Heiligendamm, Prime Minister Abe announced his proposal “Cool Earth 50.” The proposal sets a long-term target for all major emitters to cut global emissions by 50 percent from the current level by 2050, and calls for the establishment of an effective international framework to address climate change beyond 2012. In response to this, the leaders agreed to seriously consider at least halving global emissions by 2050. Improving energy efficiency is an effective measure to tackle climate change. However, there are three major challenges:

- Cooperation with China and India - Japan has to work more with China and India in order to assist their efforts to improve energy efficiency. As IEA statistics indicate, in order to produce one unit of GDP, China needs 8.7 times and India needs 9.2 times as much energy input as Japan. Both India and China are working hard to improve this ‘energy intensity’ problem.
- The effect of energy intensity improvement on greenhouse gas (GHG) emissions - The second urgent task is to mature methodologies that quantify the effect of energy intensity improvements on the reduction of GHG emissions. For example, as a rule of thumb, we can say that if all countries improved their energy intensity to the same level as that of Japan, world CO₂ emissions would be reduced by more than 20 percent in 2030. However, we need more comprehensive studies on GHG reduction effects for specific energy efficiency related policies and measures. We can utilize the IEA for this purpose so that valid measures for energy conservation can be properly evaluated within the UN Framework Convention on Climate Change.

- Research and development for technologies - On June 26, 2007, a Japanese delegation exchanged views with American counterparts on an important joint project, Future Gen. The project was initiated by the United States and aims to achieve zero-emissions of CO₂ from coal by combining coal gasification and carbon capture sequestration (CCS) technologies. The ongoing Japanese experiment on coal gasification is called “EAGLE.” The United States and Japan should promote its Future Gen project together with India, China, and South Korea.

Stability and Transparency in Energy Producer Countries

Another major challenge is related to stability in energy producer countries. The increasing concentration of oil production in the Middle East adds one more justification to Japan’s continuous diplomatic efforts to seek peace and stability in the Middle East.

The resurgence of resource nationalism is also a destabilizing factor. Resource nationalism includes unilaterally imposed policy measures such as restrictions against equal access to energy resources, failure to comply with existing upstream contracts, artificial limits on the supply of oil and gas, and so on. These unilateral measures by producer countries can risk decreased investment in fundamental production sectors and could subsequently undermine the security of energy supply.

In 2006, Russian President Putin chose global energy security as the main topic on the agenda for the St. Petersburg G8 Summit, which culminated in the adoption of the Global Energy Security and the Plan of Action. The leaders’ agreement begins with an important statement as follows:

Energy is essential to improving the quality of life and opportunities in developed and developing nations. Therefore, ensuring sufficient, reliable and environmentally responsible supplies of energy at a price reflecting market fundamentals is a challenge for our countries and for mankind as a whole (emphasis added).

In short, a free and open market provides an effective solution to resource nationalism.

According to the IEA's estimate in 2006, the world needs about 20.2 trillion dollars investment in energy infrastructure by 2030 to obtain necessary energy. The international community should urgently improve investment conditions, particularly in the fundamental sectors. As the G8 leaders reaffirmed in Heiligendamm, the G8, including Russia, should continue to implement the agreements made in St. Petersburg steadfastly.

Straits of Malacca and Singapore, and Rules on Pipelines

Straits of Malacca and Singapore - Regarding the straits of Malacca and Singapore, new regional cooperation to address piracy has developed through the "Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia" (ReCAAP). The secretariat of the ReCAAP was established in Singapore last November, 2006 with a Japanese diplomat as its head. Information on piracy is quickly shared through focal points of the 14 participating countries. In a wider context, the littoral and main user countries of the straits have cooperated to maintain and manage the facilities to assist navigation. Japan has extended the Grant Aid for Cooperation on Counter-Terrorism and Security Enhancement, which covers provisions for maritime law enforcement vessels, the protection of harbors and airports, capacity building of law-enforcement agencies, and more.

Recently, a Malaysian enterprise, Trans-Peninsula Petroleum, announced that they will begin construction of an oil pipeline across the Malay Peninsula. Completion is expected for 2014. If completed as scheduled, it would provide a groundbreaking alternative route for oil from the Middle East to Asian countries, avoiding the straits of Malacca and Singapore.

Rules on Pipelines – Energy Charter Treaty - Another challenge for the security of energy transportation is how to adhere to a common international standard on utilizing pipelines. The Energy Charter Treaty has existed since 1994, which stipulates rules for economic activities such as free trade, investment, and transit. The treaty has agreed on rules such as non-discriminatory treatment regardless of origin, destination or ownership, and created dispute settlement procedures. The Energy Charter Treaty provides a good legal basis to maintain the security of pipelines, which transit through its member countries. Pakistan is now another Asian contracting party to this treaty, following Japan, Mongolia, and all the Central Asian countries. Afghanistan has become an observer and has been preparing to become a full member, and so is the Philippines. It is time for other Asian countries such as India, China, South Korea, and others to consider participating in the Energy Charter Treaty as well.

Iran and Global Energy Security

Diplomatic efforts

Japan regrets that, despite repeated calls from the international community, Iran has not complied with the requirements of UN Security Council resolutions. Japan strongly hopes for a negotiated, peaceful solution to this issue. To this end, Japan will continue to take every opportunity to urge Iran, based on the “suspension for suspension” proposal of the EU3+3, to

suspend its enrichment-related and reprocessing activities and then to return swiftly to the negotiation process.

Energy security implication

From an energy security perspective, Iran is the fourth largest oil producer in the world and one of the main exporters to Asian and European markets. If the export of Iranian oil halted for some reason, it would affect the supply and demand balance of the world oil market to a certain extent. However, there are some countermeasures to mitigate such an impact. First, the 26 member countries of the IEA would make a decision to release the strategic oil stockpile collectively, as they did in the summer 2005 when Hurricane Katrina and Rita devastated refinery capacity of the United States. The IEA secretariat estimated that a release could compensate for Iranian oil for at least about a year and a half. In March 2006, Japan's minister in charge of its emergency oil stockpile announced that Japan can offset Iranian oil for 1,027 days with its own oil stockpile in case of a supply disruption.

Second, OPEC maintains a certain amount of spare oil production capacity. As they did in 1991 during the Persian Gulf Crisis, they could expand their production to compensate a supply decrease brought about by Iran.

Most extreme case

For the sake of argument, suppose Iran closed the Strait of Hormuz and blocked all transportation of oil, which is about five to six times larger than Iranian oil exports – Japan would still survive.

For example, there is an alternative pipeline across Saudi Arabia from East to West, between Abu Qaik and Yanboo. Japan could combine such alternative transportation routes and emergency releases of the IEA oil stockpile. Such a response would cover the shortage of oil caused by the closure of the Strait of Hormuz for quite a long time.

Given the strategic importance of the Strait of Hormuz, there seems to be more room to enhance future international cooperation among the littoral states such as Oman and Iran as well as the user states. It would be worth considering multilateral rapid-response network to share relevant information among the littoral and user countries. There could also be a brainstorm to come up with some ideas of constructing new pipelines, railways, and other alternative transport routes, which bypass the Strait of Hormuz.

Conclusion

What would be a common long-term approach to address future opportunities and challenges for the United States, Japan, and India?

Common Understanding on Market Mechanism

First, the United States and India should continue Japan's conscious effort to attain a common understanding of the appropriate division of labor between state and market.

The G8 St. Petersburg Summit, the Five Countries Energy Ministers Meeting, and the IEA ministerial meeting have all been opportunities to draft international political declarations on global energy security. There have always been different expectations for market mechanisms from different parties.

For example, “security of demand” is vital for producer countries such as Russia and Saudi Arabia. In other words, those producer countries need a guarantee of sorts that consumer countries will continue to purchase an agreed amount of oil and gas for many years to come. In fast growing consumer countries such as China, there are views that oil prices should be controlled through governmental intervention.

Limitations of Existing International Rules

There are existing international rules which provide certain criteria for the appropriate division of roles between governments and markets. For example, the World Trade Organization (WTO) agreements provide trade rules. The Energy Charter Treaty supplements the WTO Agreements not only in terms of trade, but also in terms of investment and transit aspects. The IEA has some implementing agreements related to emergency response and improvement of energy efficiency. However, every existing international rule has shortcomings in terms of limited membership, insufficient enforcement, etc.

Making a Comprehensive Legal Framework

In the short- to medium-term, the realistic approach is to further enhance existing legal frameworks. In the long run, if there is a chance, a comprehensive treaty on global energy security should be pursued among all players including both developed and developing countries, and both producer and consumer countries.

In 2006, there was a glimpse of possibility for such a comprehensive treaty in the product of the Russian Presidency of the G8. The two agreed documents were titled “Global Energy Security” and “St. Petersburg Plan of Action Global Energy Security.” They summarized very important global energy security principles. If the G8 were able to continue to implement the St.

Petersburg Principles, it would pave the way not only for the G8 and its key partner countries such as India and China, but also for the international community as a whole, to achieve common international rules on global energy security.