

Energy Security Revisited

By Kazumasa Kusaka

Before the Ukraine crisis, there had been much discussion of how the shale gas revolution would change the global landscape in terms of energy and the economy. In my class on energy at graduate school, I have a case study of the 2006 Ukraine gas pipeline crisis and teach how European dependence on Russian gas developed against US President Reagan's objections to "red gas". For young students, however, the event belongs to history and does not pose any "clear and present danger".

European leaders at that time had argued that since the era of Imperial Russia, the USSR/Russia had proved to be a reliable energy supplier. Afterward, for the first time, the European Union awoke to the concept of "energy security" – resulting in diversification of pipelines and a nuclear renaissance. Now, again, a crisis in Ukraine has triggered the interest of the world beyond energy experts.

Time runs at different speeds. The international situation surrounding energy supply could change overnight while time in energy supply runs slowly. In the case of a nuclear power plant, it could take more than 20 years to generate electricity through the lengthy process of acceptance by the local community, the regulatory authority's approval and actual construction.

The logistics of how to secure fuel, especially in the event of supply disruption, is the big challenge. In North America, there is a discussion about helping Ukraine by supplying shale gas as an alternative fuel. But it takes almost five years to build a supply chain for LNG. This is too late for next winter.

Since the oil crises of the 1970s, oil-consuming countries have taken measures to build up stockpiles, introduce alternative fuels and diversify sources geographically. Japan, with practically no indigenous energy resources and an 80% share for oil in its energy supply (of which 80% was from the Middle East), accelerated its oil stockpile and introduction of alternative sources such as nuclear, coal and LNG. Internationally, the International Energy Agency (IEA) had played the central role in these efforts, but the share of IEA members in energy consumption has dropped while non-member emerging economies such as China, India, and obviously Ukraine, have not prepared for such crises.

In response to the Ukraine crisis, there is currently much discussion about economic sanctions. In general, economic sanctions aim to bring about a change in the power balance within the targeted government by empowering favored groups within it, if there are any. But if the target is monolithic, causing pain and high costs will be less effective. In addition, if the sanctions are punishing our allies more than the target government, the

measures will not be sustainable. In the case of crude oil, refineries quite often process a certain kind of crude and finding alternative energy sources is difficult. Of course, bilateral pipelines connect specific producers and consumers. The EU's dependence on Russia for one-third of its gas certainly makes suspension of supply painful. The question is who suffers more.

In the case of sanctions on Iran, Japan's new Azadegan oil project was included while substantial additional investment in existing oil projects was excluded. Though Japan's withdrawal meant China's taking over the project, sending a unified message from like-minded countries had priority. In that process, the US suggested Japan could find alternative supply from Russia, but current developments teach us that there is a risk in relying on a single supplier or a single fuel excessively.

Your view depends on where you sit. For consuming countries, energy security spells supply risk. For Saudi Arabia, the concern around the year 2000 was demand risk. Even before resources become exhausted, oil could surrender its mantle as energy king, just as coal did, this time the heir-apparent being natural gas. The explosion of energy demand in emerging economies allayed this concern until the shale revolution started. Shale gas robbed the Middle East and Russia of the US LNG market. Is the US now sitting in an exporter's seat? If so, its view of the Middle East will certainly be affected, including from geopolitical and security aspects.

Energy is a comprehensive subject covering economics, politics, security and environment. Energy security is not just about volume but also about prices. Compared with shale gas prices in North America, LNG prices in Japan are three or four times higher, and those in Europe two or three times. This hits the competitiveness of energy-consuming industries and factories are now moving into North America, resulting in the loss of jobs in high-price areas.

But the positive aspect is that the US has returned as leader on global warming policy with the dividends of switching from coal to natural gas. For areas not fortunate enough to have shale gas/oil reserves, once again the potential role of nuclear power generation has to be examined.

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