

“The Middle East Situation and Post-Fukushima Energy Strategy: A Compound Crisis for Japan?”

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Today I would like to give some thought to the energy strategy that Japan should adopt following the Fukushima nuclear power plant accident, all the while keeping in mind a global perspective inclusive of the situation in the Middle East. The government has presented and discussed several options for the best energy mix going forward. While seeking lower dependence on nuclear power may be a matter of course, it would be exceedingly irresponsible and extremely harmful to Japan's national interests to argue for reducing nuclear power production to zero very early on. It is quite unfortunate that in-depth discussions are not being pursued from a global perspective, incorporating such issues as an understanding on the Iran crisis, natural gas procurement, renewable energy issues and energy security issues also tied up with territorial issues.

While energy demand in the OECD member states is not expected to grow that much, a significant rise in demand is anticipated from emerging countries such as China and India. With Asia becoming the prime focal point in energy security, changes in the world's energy market are therefore likely to depend considerably on whether the countries of Asia compete or cooperate. The development of shale oil and other sources has led some to say that North America could become energy self-sufficient by the 2030s. If this were to happen, the US presence in and around the Middle East, particularly in the Strait of Hormuz, could diminish, impacting Japan's security as well. The IEA does not foresee a substantial drop in future petroleum prices, so we must consider business models, energy policies and diplomatic strategies based on this outlook.

Given that 85% of the petroleum and about 20% of the LNG imported by Japan passes through the Strait of Hormuz, the consequences of a disruption in this flow would be severe. An Israeli attack on Iran's nuclear facilities is quite likely, with some observers suggesting that such an attack could take place next spring or summer. With that risk in mind, Japan must reformulate its energy policy before next spring. A closure of the Strait of Hormuz would drain the IEA's petroleum reserves in about three months. Petroleum prices would soar to double their present level, and Japan would suffer a current account deficit of 6 trillion yen – 12 trillion yen if its nuclear power plants are not on line. Should it come to this, trust in Japan's finances would be undermined, hypothetically pushing up interest rates on Japanese government bonds and bringing the yen crashing down. Unless preparations are made more with an economic crisis than an energy crisis in mind, the Japanese economy could be in for some serious trouble.

If nuclear energy is decreased in future, there will be no choice but to rely on thermal power generation using coal, petroleum and natural gas and on renewable energies. This will require tremendous resources, however, and impose huge cost increases on resource-importing countries. The environmental impact must also be taken into account. Japan is not contiguous with any of its neighbors, and so cannot purchase electric power from other countries. As long as eastern and western Japan operate their grids on different frequencies, there will be serious obstacles to the large-volume use of fluctuating renewable energies. Western Japan has the greater number of power generators, so efforts should be made, by steadily upgrading the oldest equipment first, to standardize power supply at western Japan's 60Hz.

Natural gas is likely to make up an increasing share as one of Japan's electric power sources, but it would be risky to attempt to replace nuclear power with gas alone. The shale gas revolution has indeed increased the supply of gas, but demand in emerging countries and elsewhere has also climbed, making it in no way certain that the price will drop. Japan must diversify both its sources of imported gas and its sources of electric power if it is to wield any bargaining power in the market. Japan also needs to liberalize its electric power market, encourage competition, and increase the incentives to purchase cheap gas. Russia has heretofore exported much of its natural gas to Europe but, with economic development in the EU economy by no means smooth, Russia is looking to increase its supply to Asia. Steady depletion of resources in the Urals and other areas of western Siberia is one factor accelerating development in the Russian Far East. If LNG terminals can be set up in the Russian Far East, then Russian gas could be exported to South Korea, the ASEAN countries and other Pacific nations in addition to Japan. If Japan can consolidate its import volume, it might consider constructing a pipeline. As part of its disaster preparations as well, Japan needs to work quickly toward establishing a domestic pipeline network and to study the idea of a future North East Asia Gas Infrastructure Plan that includes linkups with Russia and South Korea.

Japan must use renewable energies in future, but it faces certain disadvantages in comparison with Europe: the potential is low, the domestic grid is weak, and the country is not directly connected to its neighbors. Problems with Germany's mandatory power purchase system have been noted, and Japan should carefully examine the lessons of Germany's experience. It should be kept in mind that energy security entails seeking out as diverse a range of sources as possible and recognizing that the "best mix" varies by country. In Asia, too, electric power networks must be expanded and collective security considered, and Japan should pursue grid connections with Asia as a foundation of its energy policy. It is important to step up efforts to develop new energy technologies and to improve energy security by acquiring a variety of safer electric power sources, including nuclear energy, and by managing demand through smart grids.

Whenever a nuclear power accident occurs, responsibility for the accident must be clearly established. The statement by the Diet's Accident Investigation Commission declaring the latest accident man-made and preventable was an extremely important one. The absence of such a conclusion might have led to nuclear power plants being shut down as too dangerous to operate. Making it clear that this was a man-made disaster and identifying where the problem lay was essential. Although Fukushima I suffered an accident, damage was prevented at Fukushima II, Onagawa and Tokai II nuclear power plants, and it is necessary to determine what differences account for this. Japan has a responsibility to share the results of its investigations with energy officials in other countries, but no country has requested that Japan suspend its nuclear power generation. Japan has specialized in the peaceful use of nuclear power, and is the only non-nuclear-weapon state to be permitted to engage in reprocessing. It would be extremely short-sighted to simply relinquish such a privilege. While sharing the failures of Fukushima, we should rethink from a global perspective the energy strategy and nuclear power policy that Japan should adopt.