

Snapshot: Japan's Post-Tsunami Energy Market

Law360, New York (September 05, 2012, 11:15 AM ET) -- It used to be that Japan's energy market was not much of a target for energy investors. Unlike most developed countries, the energy sector was not, until recently, deregulated to any degree. For decades, the 10 vertically integrated utilities in Japan have exercised monopoly control over the generation and distribution of electric power in their respective regions.

This arrangement has been overseen by the Ministry of Economy, Trade and Industry (METI), which championed nuclear power as part of the country's industrial policy, both for purposes of energy security — as Japan developed its nuclear enrichment, recycling and utilization capabilities and consequently reduced its need to import uranium — and for promotion of the domestic development, use and export of nuclear power technology, design and construction by Japanese industrials.

The catastrophic earthquake and tsunami of March 11, 2011, abruptly changed more than 40 years of government policy. In the aftermath of the disaster, the status quo of Japan's energy market and regulatory regime are being questioned domestically; the energy mix has changed dramatically; and, where there once was little opportunity for foreign players in Japan's energy sector, the market now seems ripe for international trade and investment.

Prior to the earthquake, nuclear power constituted approximately 27 percent of Japan's energy resources, with the balance being supplied by coal (27 percent), gas (27 percent), oil (9 percent), hydro (7 percent) and renewables (3 percent, most of which consisted of combustible waste). METI's 2010 electricity supply plan called for nuclear power to constitute 41 percent of all electricity supply by 2019, furthering national policies of reducing greenhouse gas emissions in accordance with the Kyoto Protocol, reducing dependence on fuel imports and increasing energy security.

However, the meltdown of the Fukushima Daiichi nuclear power plant shook public confidence in the safety of nuclear power to such a degree that all of Japan's 54 nuclear reactors were shut down, either by the earthquake or for scheduled maintenance, and it is unknown when, or how many, will come back online.

Some business leaders are calling for some of the reactors to be restarted to stabilize energy supply and avert further economic damage. One nuclear plant was restarted in June of this year by the order of Japan's Prime Minister, Yoshihiko Noda, who claimed to have ordered the plant back online to avoid blackouts and harm to industry. The move sparked the largest public protest rallies in Tokyo since the 1960s.

Prior to the recent public protests, in the face of less vehement public outcry over nuclear safety and criticism of the cozy ties between METI and the utilities it oversees following the Fukushima disaster, the government approved a white paper in October 2011, calling for a reduction in Japan's reliance on nuclear energy and expressing regret over its past energy policy. Japan now has a huge energy deficit, which begs the question: what energy sources will fill the void?

In the short term, the answer is natural gas. Currently, oil, coal and natural gas account for about 90 percent of Japan's energy resources, but the cost of the increased demand for oil and gas is estimated to be about \$100 million per day. Japan produces less than 4 percent of the gas it consumes, the balance of which it imports in the form of liquefied natural gas (LNG).

With record low prices for natural gas in North America, increased supply from shale gas sources in the United States and Canada and the combination of high demand and prices in Japan, the shutdown of nuclear facilities in Japan could be a boon for U.S. and Canadian exporters of LNG. North American suppliers have an advantage over some of Japan's existing suppliers, since those suppliers' LNG prices are often tied to the price of oil, and Japanese energy producers prefer natural gas over oil and coal for both environmental and cost reasons.

However, Japan is also looking after its own interests by taking equity stakes in natural gas projects overseas to gain control over the fuel source.

In both the short and long term, renewable energy will also help fill the hole left by the reduction of nuclear power in Japan. The Japanese government recently enacted an aggressive new law to encourage investment in renewable energy which, as of July 1, 2012, put into effect a feed-in tariff (FiT) that Japanese utilities will be required to pay for energy produced by qualifying renewable energy projects with what are believed to be some of the highest rates in the world by a substantial margin.

The government's stated goal of the FiT is to obtain 13 percent of its energy from renewable sources by March of 2013, with a possible long-term goal of obtaining 25 percent to 35 percent of its energy from renewable sources by 2030. Independent analysts anticipate that the FiT will spur at least \$9.6 billion in new solar installation in Japan.

Under the FiT, renewable generators that are approved by METI may enter into 20-year power purchase agreements with utilities at the 42 yen, or 53 cents, per kilowatt-hour price for solar and lower rates for wind and geothermal projects set by the FiT program. The government has suggested that power prices will be reviewed annually, but producer profits will be given special consideration during the first three years of the program, with rate decreases likely to follow in later years, giving a major incentive to early entrants in the program. The FiT program, and the domestic and foreign investment attracts, will have a dramatic and lasting effect on the energy industry in Japan.

One of the most significant possible outcomes of the FiT program is that it could be the first step in deregulation of Japan's energy market. Historically, the utilities and METI, their regulator, have had very close relations. The Nuclear and Industrial Safety Agency (NISA), Japan's nuclear watchdog under METI, has been criticized for its involvement with the utilities' attempt to influence public opinion on nuclear energy and for its slow response to the Fukushima disaster.

In late May of this year, the government began a debate on moving NISA to the Ministry of the Environment. Some observers think this structural change could signal a major overhaul of Japan's energy regulatory structure, and introducing independent power in the renewable sector could lead to independent power in other areas of Japan's energy market.

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