The dawn of Japan’s energy future
Japan is one of the world’s last industrialized nations to fully deregulate its electricity sector. The country’s 127 million people are currently served by 10 vertically integrated utilities, including Tokyo Electric Power Company and Kansai Electric Power Company, that each manage specific regional territories and, to add to the complexity, deliver power in two frequencies: 50Hz in the east and 60Hz in the west. While it is true that Japan’s power sector has experienced some previous attempts at deregulation, Japan’s 10 utilities still supply more than 90% of the country’s electricity.

This latest round of reforms was triggered by what is referred to in Japan as the Great East Japan Earthquake of 2011. The earthquake — the most powerful ever to hit the country — highlighted the inflexibility of Japan’s regional electricity systems. No capacity to interconnect the region’s power supply meant some areas experienced an electricity surplus while others directly affected by the earthquake faced shortages.

The new reforms, driven by Prime Minister Shinzo Abe’s Government, will establish a national electricity grid to allow for a better balance of Japan’s power demand and supply and ensure energy security. The process will also expand the wholesale electricity trading market and introduce real-time pricing, which should also help balance supply and demand.

First changes set for 2015
In October 2013, legislation passed to set in place a three-stage reform process. The first crucial step establishes an independent system operator in 2015 that will control the electricity flow in a national grid. The second phase will remove the regional monopoly control of existing utilities, allowing for new market entrants and allowing consumers to choose their own providers. Finally, the third phase will abolish pricing regulations and compel utilities to unbundle their generation and transmission operations. The process is expected to be complete by 2020.

Understand implications of reform
It is difficult to overstate the sheer size and complexity of the challenges facing Japan’s utilities, which, in a relatively small amount of time, will need to develop and implement many new business processes and large-scale operational changes to fit the requirements of a deregulated industry.

For now, the priority is to thoroughly understand the reform process and what it will mean for each part of the business: generation, trading, transmission and distribution, metering, and retail. For the generation side, much will depend on the structure of Japan’s new wholesale energy trading market. Soon to be established by the Ministry of Energy, this market will have a huge impact on how power generation plants will operate in the future.

On the network side, preparing for deregulation will require utilities to focus on understanding how they will use an increasing flow of data to balance supply and demand and improve the stability and reliability of energy transmission and distribution.

The consumer is at the center of the changes occurring on the retail side. Utilities must focus their energies on understanding their customers better and putting customer-focused processes in place. Issues such as handling customer complaints, explaining contracts and
ensuring processes are in place to manage customer switching all need to be mastered.

Bridge the capability gap

The experience of other countries proves that deregulation of the electricity sector is both a highly complex and time-consuming process. The task that Japan faces is exacerbated by the enormous size of its electricity system, its division in use of frequencies and large population. We are currently in talks with Japan’s leading utilities to help them meet these challenges, by first assessing their current capabilities, understanding those that will be required in the future – and deciding how best to bridge the gap.

Critically, adapting to an unbundled market will also require a fundamental cultural shift for Japanese utilities. Adopting a competitive mindset will ensure the best chance of success against new, nontraditional players attracted to the many opportunities of a liberalized Japanese energy sector.

Our teams can offer on-the-ground insights and local knowledge concerning Japan’s energy reforms as well as broad international experience gathered from the unbundling of other electricity markets. For a discussion about how we can help navigate the challenges and opportunities of Japan’s electricity sector, please contact us at sudoh-shg@shinnihon.or.jp

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