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Japan's move to open its electric energy sector to new entrants presents a ripe business opportunity for U.S. consultancies and other firms and organizations wanting to help it make the transition.

Japan's move to open its electric energy sector to new entrants presents a ripe business opportunity for U.S. consultancies and other firms and organizations wanting to help it make the transition.

Once it's complete, Japan's will be the largest retail electricity market open to competition in the world.

The switch is scheduled to take place on April 1 for electric retail markets and two years later for the wholesale and gas markets.

As part of the transformation, power companies will spin off their power transmission and distribution operations into separate units. At the moment, 10 regional utilities handle all aspects of electricity operations within specified regions, from generation to transmission and distribution.

The Japanese government began pushing for the overhaul after the 2011 nuclear crisis at the Fukushima No. 1 plant exposed vulnerabilities in the grid, with shortages and higher electricity prices.

Ross Malme, a partner at Skipping Stone, an energy consultancy with offices in Atlanta and elsewhere in the U.S., said the opportunity presented by the makeover has grabbed a lot of people's attention.

Still, that's 800 companies that have signaled their intent to enter the market. There are no more than a couple hundred companies vying for customers in the few U.S. markets where electric power competition exists.

Put another way, there are 30 million electricity meters in the U.S. open for retail competition; the Japanese market is going to be three times larger.

Skipping Stone is one of a number U.S.-based companies that are involved in helping Japan make the transition. Here's its story, followed by that of two others.

## **Skipping Stone**

There's nothing marginal about the role it's playing in Japan.

Skipping Stone is helping Tokyo Electric Power Co., Japan's largest electric utility, to manage what's called the Open Innovation Program, a clearinghouse for receiving applications to enter Japan's electric energy markets.

Skipping Stone's relationship with TEPCO began when a representative of TEPCO downloaded a white paper from Skipping Stone's Demand Response Library, a free depository of articles, white papers and other energy-related reports. Malme called the company to follow up. That's when TEPCO began talking about its role in the transformation with Malme.

"I was humbled they'd consider us," he said. "(But) we know something about customer choice. We're very good at understanding markets."

Skipping Stone did an analysis of the Japanese energy market and determined that the Ministry of Economy, Trade, and Industry (METI) - the equivalent to a conglomeration of FERC, DOE, NERC and state PUCs in the U.S. - was ill-equipped to regulate innovation.

"We needed to bring an innovative model to Japan," he said. "That's where the OIP started."

Malme and his staff also realized international players would be important in addressing Japan's energy concerns, so they put together some profiles of companies they thought could help and contacted them. As a result, several U.S. companies are planning to enter the Japanese market, while some of the Japanese companies involved are taking a reciprocal interest in U.S. markets.

"The competition has already begun for larger customers," Malme said.

## **Green Charge Networks**

Itochu Corp. is hoping for some of that business.

Hiroaki Murase is the manager of the lithium ion battery business unit at Itochu., an international diversified business network based in Japan. Three years ago, while attending an industry conference, he met the owner of Green Charge Networks, a California-based company that specializes in energy storage systems.

"We thought we could help supply the competitive hardware in Asia," Murase said. So Itochu acquired a minority stake in Green Charge Networks and took on the role of marketing the company's products to Asian markets.

Naturally, Murase believes the Green Charge Networks solution has a lot of potential.

"The system decides the best way to charge and discharge electricity based on local information," he said. That includes weather forecasts as well as information related to individual energy usage. "The software itself has a strong point-on-point local use as well as aggregated use, and they've proved it works perfectly in U.S. markets."

The Japanese electric system includes some smart grid technology, but it's still primarily traditional. As the government works to upgrade everything, Murase said, smart-home energy management systems designed to optimize electricity usage will become more commonplace.

Battery storage, in other words, will have a big role to play in the new Japanese electricity market.

## **OpenADR Alliance**

When you enjoy the position of being the only global standard, it seems only natural that you'll be called upon to consult with new markets. That's how the OpenADR Alliance, based in California, got involved in Japan's move to a competitive market.

ADR is an acronym that stands for Automated Demand Response. The mission of the alliance is to foster the development and adoption of demand response standards worldwide.

Barry Haaser, managing director of OpenADR Alliance, said that, after testing OpenADR for several months, "the Japanese government decided it would be wise to adopt it as a national standard and use it as a part of their grid framework."

The work has kept things busy at the alliance.

"We provide as much support as possible to facilitate the process," Haaser said. "We've expanded our capabilities to add a lab for testing and certifying products in order to expedite the process. We also help facilitate meetings and discussions in various technical issues that come up from time to time."

About one-third of OpenADR Alliance's membership is in Japan and most of those companies exclusively serve the Japanese market, Haaser said.

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