

Energy Sector Highlights (Dec 2013 – Feb 2014)

Policies and regulations

Second revision of Energy Basic Plan was announced on Feb 25, 2015. Although it has reflected more than 19000 comments from the public, no significant change was observed. Notably, it stipulates nuclear as an “important base load” for stable supply of electricity. On the other hand, positioning of renewable energy is vaguely defined as “prospective and diverse energy sources although it entails cost issues.”

In this situation, the reform of electricity market is moving forward. The second revision of the Electricity Business Act is expected to pass by the end of June toward the complete liberalization of electricity retail market in 2016. This implies the disruption in regional monopoly of incumbent electricity companies, and the market will be separated into three layers; 1) electricity generator, 2), electricity transmitter/distributor, 3) electricity retailer to promote competition.

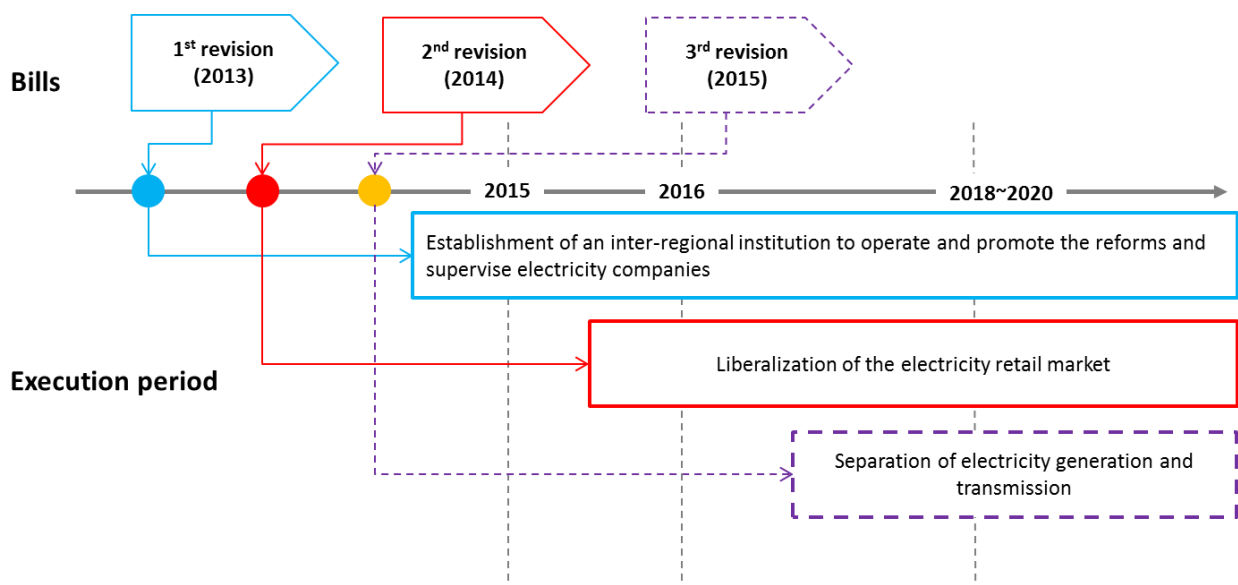


Figure 1: Timeline of electricity reforms in Japan (Original picture from Smart Japan)

Competitive landscape

This trend toward liberalization is attracting a number of new entrants. Power Producers and Suppliers (PPS) – businesses which sell electricity with more than 50kW for commercial scale utility customers are particularly increasing. As of March 2014, there are 153 PPS' in the market, aiming for the potential market. Although many of them are the energy specialists, non-energy giants have been actively pursuing in the market:

- **Trading:** major trading companies have established or invested in PPS. Itochu Enex in February announced to build two extra thermal power plants. Its rival Marubeni Corp announced to acquire a thermal plant from F-Power.
- **Telecom:** All three major telcos (NTT, KDDI, Softbank) are active in the market. NTT Facilities owns Enet, the largest PPS as a venture capital with Tokyo Gas and Osaka Gas. Softbank announced to jump in the electricity retail market for general households.
- **Restaurant:** Watami, a large scale restaurant and healthcare facilities group is currently building a mega solar plant (150kW output).
- **Housing:** Panasonic established a new PPS called Panasonic Epco Energy Service. Interestingly, the company aims to aggregate electricity generated from households rather than from robust power plants.

These companies have in common a nationwide promotion and distribution network as well as chunks of customers. In case of Watami, the company estimates JPY100 million (USD970K) reduction of annual electricity bill if 70% is self-supplied.

PPS	Parent company	Strength
Itochu Enex	Itochu Corporation	2200 Gas stations, 1 million LNG household customers
ENET	NTT Facilities	20 million fixed broadband, 62M mobile subscribers
SB Power	Softbank	3.2 million fixed broadband, 35M mobile subscribers
Panasonic Epco Energy Services	Panasonic	Direct access to Pana Home's customers
Watami Ecology	Watami	700 restaurants, 95 elderly care facilities

Figure 2: Lists of Prospective PPS

Renewable energy taking off

The potential electric-generating capacity of renewable energy has significantly increased to 27 million kW as of November 2013, 10% of total electricity sold by 10 regional electricity companies. Merely with the renewable power plants which started operation between April – November in 2013 was 4.7 M kW which can be converted to 8 billion kWh annual energy production = 1% of the domestic demand. Nikkei predicts the ratio of renewable energy will reach 28% by 2030 if it keeps increasing in the current pace.

Use of renewable energy is considered in the municipality level. As a part of zero emission transport system project, City of Kitakyushu will launch a city bus system which only makes use of solar power. The project will proceed in the following manner.

- March 2014: Introduce battery-driven busses in two lines of the city bus system. The bus at this moment is charged with the grid power.

- October 2014: Build and run mega solar with 7.7mW output and start powering busses
- April 2015: Prepare large storage battery to store mega solar generated electricity and charge buses in order to enable the system operation without the grid power.

The project will be co-operated with a few private corporations.

- HKK&TEK – joint venture of Hibikinada Development and Toray Engineering to architect the entire system
- Toray Group – design, development, operation of PV and electricity storage system
- Mitsubishi Heavy Industries – busses, lithium ion batteries

The total cost of the project is JPY2.7 billion (USD26 million), which makes sense considering the low running cost, the city official says.

Sources/References:

Policies and regulations

- [Basic Energy Plan](#)
- [Roadmap of Liberalization of Electricity Market](#)
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Competitive landscape

- [PPS List \(Agency for Natural Resources and Energy\)](#)

Renewable energy taking off

- [Smart Japan](#)
- [Smart Japan](#)
- [Tech-On](#)

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