Project Representative and Contact for this Overview:

Name: Mitsuharu Sugano

Country: Japan

Phone: +81-3-4216-1111

Email: sugano.m@tepco.co.jp

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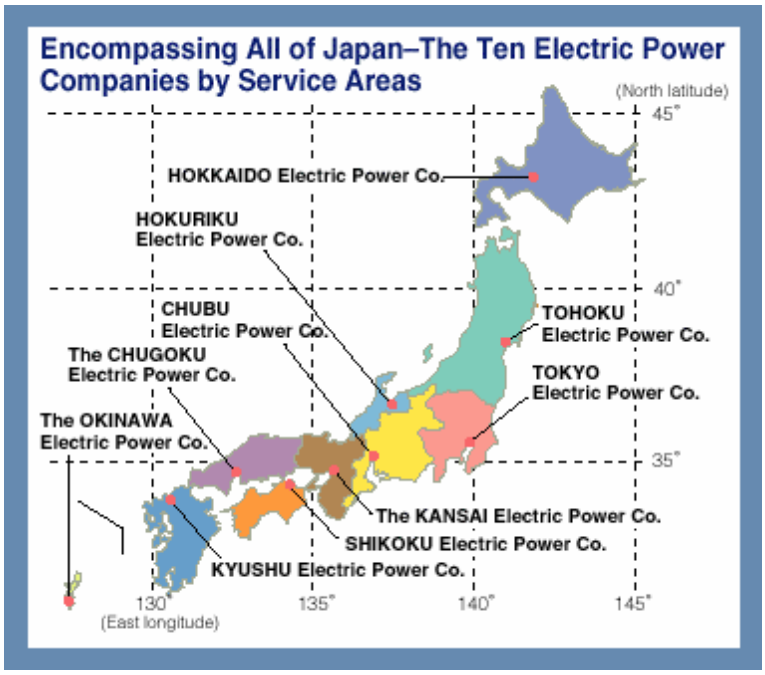
But please remember that the above-representative person will be reshuffled to the other organization after July 1st 2004.

Section I: Electric Industry

1. Does your country operate as one national electricity marketplace or do you have multiple regional electricity marketplaces?

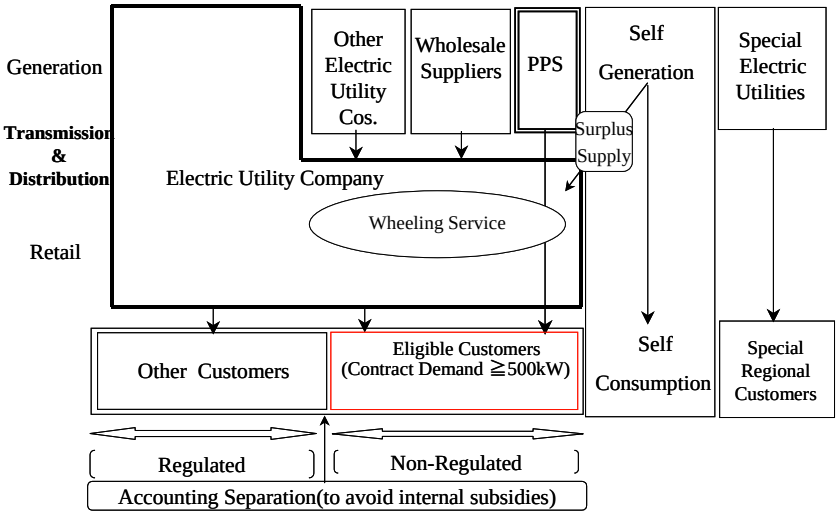
   The 10 privately-owned electric power companies(EPCos) in Japan are responsible for providing local operations as the traditional vertical integrated services, from power generation to distribution, and supplying their respective service areas with electricity.
   In addition to the EPCos, there are some wholesale electric utilities, such as the Electric Power Development Company(EPDC), and some other wholesale suppliers, so called the Independent Power Producers (IPPs).
   And since March 2000 when the partial deregulation of the retail power supply was implemented, 13* new comers, so called, the Power Producers & Suppliers(PPS), were registered as of March 2004.



（Source: the FEPC website）

※ The Federation of Electric Power Companies(FEPC): http://www.fepc.or.jp/english/index.html

※ Reference：Japanese market situation as of April 2004



2. If you have multiple regional marketplaces, how many exist in your country? Please explain.

   It is a little hard to say to give the number of the marketplace because the deregulation has already begun. But, dare I say, there are actually 10 regional market places at this moment so far.

3. What market actors perform the following functions in your marketplace:
   (Please list and briefly describe)

   a. Generation:

   b. Transmission:

   c. Distribution:

   d. Retail customer services:

   e. Reliability management:

   f. Other (please describe):

   As I mentioned before, the 10 regional EPCos operate as the traditional vertical integrated services, from power generation to distribution, and supplying their respective service areas with electricity.
   And since March 2000 when the partial deregulation of the retail power supply was mplemented, 13* new comers, so called, the Power Producers & Suppliers(PPS), were registered as of March 2004.

4. What market actors' work directly with the retail consumers (e.g. distribution company, competitive suppliers, energy service companies, etc)? Please provide brief description of their roles.

   As of now, the deregulated customers (contract: 500kW or above) can receive services among some different electric suppliers. The other customers who are not deregulated continue to receive electricity service from the EPCos in their respective service areas.

※ Reference: Deregulatory Timetable for the Japanese Electric Power Retail Market (as of FY.2001)

Deregulatory Timetable	Voltage	Contract Scale	Total Electricity Sales	Customers	
				Number	Main examples
2000.3～	Extra-high 22kV, 66kV or more	**2,000kW** or more	212.2 TWh (26%)	about 9,000	Large Buildings and factories
2004.4～	High 6kV	**500kW** to 2,000kW	115.5 TWh (14%)	about 40,000	Mid-sized or small buildings and factories
2005.4～	High 6kV	**50kW** to 500kW	186.2 TWh (23%)	about 700,000	Mid-sized or small buildings and factories
2007.4*～	Low 100/200V	**Less than 50kW**	296.5TWh (36%)	about 76million	Residential
(*beginning of consideration of full delagulation)					
	Total		810.4 TWh (100%)		

（Source: the FEPC website）

※ Reference: Agency for Natural Resources and Energy
http://www.enecho.meti.go.jp/english/index.htm

5. Please list key regulatory players and their roles.

Agency for Natural Resources and Energy : Responsible for the energy security.
In addition, the Agency plays a following role:

- Maintenance of the market from the viewpoint of fairness, impartiality and efficiency
- Design of deregulatory market
- Approval of the system of tariff
- Environmental protection, regarding energy etc.

6. Please list key industry stakeholder groups (e.g. large customer associations, reliability organizations, trade associations, etc.)

- Federation of Electric Power Companies(FEPC)
  ＊ FEPC：http://www.fepc.or.jp/english/erj/chap11.html
- Heat Pump & Thermal Storage Technology Center of Japan（HPTCJ）
  ＊ HPTCJ：http://www.hptcj.or.jp/about_e/index.html

etc.

7. How many commercial, industrial and residential customers exist in your marketplace (add additional customer classes, e.g. agricultural, as needed)?

(All Japan, FY2001)

Customer Class	Number of Customers	Summer Peak Demand (GW)	Winter Peak Demand (MW)	Annual TWHs
Commercial	About 450,000	175.0GW	138.0GW	159.2TWh
Industrial	About 300,000			354.7TWh
Residential	About 76 million			296.5TWh

※Reference: Japan Electric Power Information Center(JEPIC)
http://www.jepic.or.jp/english/jdata/index.html

8. How many distribution companies operate in your marketplace? Please list the top five largest distribution companies.

In Japan, there are not distribution companies. But there are 10 traditional vertical integrated electric power companies.

※Reference: FEPC website
http://www.fepc.or.jp/english/index.html

Company Data (Fiscal year ending March 31, 2003)

Company	Capitalization (Millions of yen)	Total Assets (Millions of yen)	Generating Capacity (MW)	Electric Energy Supplied (GWh)	Electric Energy Sales (GWh)	Revenues from Energy Sales (Millions of yen)	Number of Customers (Thousands)	Number of Employees
Hokkaido	114,291	1,360,920	6,604	33,075	29,247	506,202	3,834	6,187
Tohoku	251,441	3,897,981	16,048	82,444	74,255	1,470,708	7,606	12,964
Tokyo	676,434	13,812,538	60,377	307,348	281,902	4,801,365	27,252	39,488
Chubu	374,519	5,977,514	32,733	134,357	123,050	2,081,195	10,181	17,936
Hokuriku	117,641	1,527,483	6,759	28,113	25,587	470,169	1,987	5,148
Kansai	489,320	6,772,316	35,434	154,918	141,820	2,471,358	12,969	23,484
Chugoku	185,527	2,629,834	12,195	61,571	55,847	962,561	5,171	11,017
Shikoku	145,551	1,380,360	6,893	29,795	26,248	530,201	2,867	6,433
Kyushu	237,304	3,929,942	19,347	84,298	76,636	1,353,075	8,190	13,951
Okinawa	7,586	395,260	1,676	7,764	6,883	133,974	771	1,555
Total	**2,599,614**	**41,684,148**	**198,066**	**923,684**	**841,474**	**14,780,808**	**80,829**	**138,163**

Source: Handbook of Electric Power Industry

9. If you have retail competition, how many competitive suppliers exist in your marketplace?

As I mentioned before, since March 2000 when the partial deregulation of the retail power supply was implemented, 13* PPS were registered as of March 2004.

10. If you have retail competition, what percentage of the summer and winter peak demands do competitive suppliers supply?

The percentage of peak demands contribution competitive suppliers supply in the summer and winter is unknown.
But in terms of the electric sales (kWh), the percentage is about 2%.

11. What is the forecasted peak demand growth rate in your marketplace?

It is forecasted that the peak demand in the summer of 2012 will amount to191GW. The average annual growth rate between 2001 and 2012 is forecasted to be 0.9%.

12. What is the projected supply (capacity) growth rate in your marketplace?

The growth rate of the projected supply (capacity) is unknown. But the supply capacity in 2012 is projected to be about 216GW. As reference, the supply capacity in 2002 is 194GW.

Section II: Demand Response

13. Has demand response been attempted in your market? If so, please provide brief description of relevant successes and challenges.

※Reference: Heat Pump & Thermal Storage Technology Center of Japan
http://www.hptcj.or.jp/about_e/index.html

In Japan, there aren't any programs or activities, which are called 'demand response'. But we are actively promoting the DSM, such as load leveling. The DSM is helpful for securing the supply of the electricity reliably and as cheap as possible. And the DSM also contributes the energy conservation and the environmental protection. So the promoting DSM is considered a national issue. The government, electric power companies and manufactures cooperate to promote the DSM corporately.
As for the DSM programs of electric power companies, the program utilizing tariff system (seasonal and TOU) play a central role of DSM (load leveling).

Peak shift effect under load adjust contract of 10 EPCos in 1998 was about 9GW, which amounted to 5.4%, compared to the peak demand.

Other than the tariff related DSM activities, EPCos are actively promoting DSM equipments such as thermal storage systems. To promote these thermal storage systems, the subsidy system has been set by the government, and Heat Pump & Thermal Storage Technology Center of Japan(HPTCJ) is functioning as the organization of implementing the subsidy.

14. Which market actors might be most supportive of demand response in your marketplace? Please explain why.

As for the DSM, the government, it seems that electric power companies and manufactures are respectively playing a certain role.

The government implements the subsidy system to promote DSM equipments, such as thermal storage systems, then electric power companies set the tariff systems suitable for promoting the DSM, and manufactures develop and sell DSM equipments. So all players are essential.

15. Which market actors would be the most likely to offer demand response services to the consumer? Please explain why.

N.A.

16. Can demand response resources participate in electric market transactions today? If so, how?

No. The traditional EPCos can transact the electricity bilaterally, but in Japan, the power exchange doesn't exist at present.

17. What are the most important objectives for demand response? Please explain.

As for the DSM, the most important objectives are the security of supply of the electricity reliably and as cheap as possible.

18. Do energy consumers see different electricity prices at different times of the day? (Please explain in terms of how many and by class or size)

For example, as for Time-of –Use service contract provided by Tokyo Electric Power Company(TEPCO), the customers see 3 different rate(energy charge) changes of the day(e.g. Daytime rate, Morning and evening rate, Nighttime rate). This contract can be applied to not only residential but also commercial and industrial customers.

19. Have any energy efficiency and/or a demand response market potential studies been completed in your marketplace in the last ten years? YES / NO

    If yes, please provide a reference location or attach the report.

    NO.

Section III: Market Transactions

20. What type of electricity products traded in your marketplace (e.g. 5-minute spinning reserve, 30-minute non-spin, day ahead, capacity, hourly energy/spot, etc.)?

    As I mentioned before, the power exchange doesn't exist, so except for the bilateral transaction between EPCos, electric power hasn't been traded so far.

21. Do you have a central trading exchange in your marketplace?

    Again, the power exchange doesn't exist in Japan. But for the expansion of the deregulation, the establishment of the market of nationwide power exchange is now under the preparation.

22. How are reserve margin targets established in your marketplace? Please explain.

    Projected reserve margin in 2012 is11.1%. As reference, the reserve margin(record) in 2002 was 11.2%

23. What is the current reserve margin target in your marketplace?

    As I mentioned before, projected reserve margin in 2012 is11.1%. The reserve margin (record) in 2002 was 11.2%

24. Does your market currently exceed or fall short of the current reserve margin target? Please explain.

    N.A.
    But at least, we are not facing the urgent and severe situation.