

The Policy on Electricity System Reform

April 2, 2013

Cabinet decision

Inexpensive and stable electricity supply is the basis for people's daily lives.

Since the Great East Japan Earthquake followed by the nuclear accident, the necessity has increased for raising electricity rates, supply and demand adjustment for circumstances where the supply and demand of electricity becomes tight, and utilization of various power sources, while many limits of the existing electricity system have been revealed.

In this situation, the Government of Japan (hereinafter referred to as "the Government") will revise the current energy policies by zero-based thinking while taking into account stable energy supply and reduction of energy costs. In addition, the Government promotes the introduction of renewable energy as a part of establishing an energy policy which is responsible for the current and future lives of Japanese citizens, as well as addressing the electricity system reform for the purposes described below by uniting full efforts of the Government of Japan. Accumulated resources such as the skills of the persons who are engaged in field operations of the electricity business, and technologies and human resources will be utilized in the process.

I. Purpose of the Electricity System Reform

1. Securing the stable supply of electricity

Following the Great East Japan Earthquake, with a greatly decreased reliance on nuclear power and with most power generation reliant on thermal power generation, the utilization of various types of power is inevitable, including distributed generation. The Government will establish a structure to secure stable supply even when introducing renewable energy that often involves output power fluctuation.

Preparedness for a tight supply and demand situation will be enhanced by introducing mechanisms such as those where demand can be controlled through decisions made by consumers and the electricity interchange between regions can be directed, instead of the current structure where any amount of power is supplied according to demand at the same rate.

2. Suppressing electricity rates to the maximum extent possible

Even with this increasing pressure on the electricity rates due to the decrease in the ratio of

nuclear power and the increase in fuel costs, electricity rates should be suppressed to the maximum extent possible by promoting competition, using generation in an ascending order of electricity rates (merit order) and optimizing investments on power generation facilities through consumers' demand response.

3. Expanding choices for consumers and business opportunities

The system where various options can respond to the various needs of consumers such as choosing electricity suppliers, rate plans, and power sources will be established. In addition, an electricity system which can induce innovation by promoting new entrants from other industries and regions into the electricity sector and utilizing measures such as power generation using new technologies and demand response will be realized.

II. Major Contents of the Reform

Under an electricity system reform composed of the three goals mentioned above, a bold reform will steadily be carried out in accordance with a realistic schedule, focusing on the following three pillars:

1. Enhancing nationwide system operation

In order to respond to a tight electricity supply and demand situation and expansion in introducing renewable energy that often involves output power fluctuation, the Organization for Cross-regional Coordination of Transmission Operators (tentative title) (hereinafter referred to as "OCCTO") will be established to centrally obtain information regarding users of electrical grids through collecting reports and assume the following operations under the supervision of the Government. The Government also significantly strengthens a stable supply system for both normal situations and emergencies, while strengthening a nationwide supply-demand balancing function beyond the conventional concept of control areas, for promoting the reduction of electricity costs.

- (1) To implement items such as formulating a supply-demand plan and an electrical grid plan, promoting the development of an infrastructure for transmissions such as frequency converters and interconnection lines between areas, and nationwide system operations beyond control areas.
- (2) Under normal situations, to address coordination from the viewpoint of wide-area operation regarding the supply-demand balancing and frequency adjustment by transmission/distribution companies in each area.
- (3) Under a tight supply-demand situation due to trouble such as disaster, to balance supply and demand by means of ordering reinforcement of thermal power sources and power interchange.
- (4) To neutrally carry out the reception of interconnection to new power sources and provide grid information.

(Enhancement of frequency converters and interconnection lines between areas)

The OCCTO will work to enhance the infrastructure for transmissions such as frequency converters and interconnection lines between areas in order to expand nationwide system operation.

Furthermore, in light of the current fact that development of interconnection lines between areas takes a long time, the Government will prepare a framework through designating important transmission facilities, providing opportunities for ministries concerned to hold meetings and communicate each other in order to facilitate proceedings of applicable laws and regulations.

2. Full retail choice and full liberalization of power generation

(Full retail choice)

The retail market will be fully liberalized to enable all consumers, including the household sector, to choose an electricity supplier. In this regard, free competition will be promoted through adequate provision of information and active publication by the Government and utilities so that consumers can choose a suitable electric company, rate plan, and option depending on power source, as well as through improving the environment for the introduction of smart meters.

(Ensuring appropriate rates)

Tariff regulation on General Electricity Utilities (hereinafter referred to as “GEU”), however, will be continued as a transitional measure after the full liberalization of entry into the electricity retail market until it is confirmed that competition is actually in progress. In addition, measures for protecting consumers will also be taken after the abolishment of tariff regulation (full liberalization of retail electricity rates), such as transmission/distribution grid operator/owner undertaking the last resort service of supply, and securing a stable supply in isolated islands at equivalent price that is comparable to that of the mainland.

(Full liberalization of power generation)

Moreover, along with full liberalization of the electricity retail market, full liberalization of power generation (abolishment of wholesale regulations) will be implemented as well as initiatives to raise trading volumes of electricity at wholesale power exchange markets. In addition, the Government will consider adding “electricity” to the coverage of the Commodity Futures Trading Act.

3. Further securing neutrality of the transmission/distribution sector through the legal unbundling

(Method of securing neutrality)

Further securing of neutrality of the power transmission/distribution sector will be carried forward so that electricity generation companies and retailers can use transmission/distribution systems fairly. Specifically, the reform will be carried forward on the premise of implementing a method in which transmission/distribution sectors must be unbundled and become separated companies from GEU, while not excluding having capital ties among companies, (hereinafter referred to as “the legal unbundling”).

The legal unbundling is superior compared to the functional unbundling in terms of stable supply and safety since it can ensure the integrity of development/maintenance and operation of transmission/distribution facilities, as well as in terms of flexibility in investments on transmission/distribution sectors and in management of electricity generation and retailing businesses. Although the independence is structurally clear, a code of conduct concerning personnel affairs and budget to secure greater neutrality will be also implemented.

In addition, a framework will be established along with the formulation of required rules in order to enable transmission/distribution companies, which conduct the load-dispatching instructions, to respond to disasters and adjust supply-demand and frequency of electricity in cooperation with electricity generation companies after the implementation of legal unbundling. It is possible to reconsider the functional unbundling that only transfer functions regarding planning and operation of the transmission/distribution system of GEU to the OCCTO, in cases where insurmountable problems emerge in the process of discussion on the implementation of the framework, making it extremely difficult to implement.

(Securing a stable supply)

Transmission/distribution businesses will continuously remain holding a regional monopoly and return of investments on electricity transmission/distribution grids will be institutionally guaranteed through tariff regulations including fully distributed cost methods. In addition, a high quality power supply acting as a foundation of economic activity, such as stable frequency and voltage, will be secured by continuously imposing the obligation to maintain a supply-demand balance of the whole electrical system.

Moreover, the Government will establish a framework for cases of emergency to take measures required for stable supply by clarifying the roles of the related organizations such as the Government, the OCCTO, and utilities.

In addition to the above, full preparation for stable supply will be undertaken before full liberalization by newly formulating necessary frameworks such as securing the supply capacity of electricity retailers and recruiting constructors of power plants, which will be prepared by the OCCTO for future electricity shortfalls.

III. Developing Related Frameworks

1. Revision of applicable laws and regulations

Business categories of GEU and Wholesale Electricity Utilities will be revised in line with the full retail choice. Accordingly, necessary measures for public services privileges and revision of related tax systems will be taken on the basis that each entities including electricity generation companies and retailers will be responsible for stable supply according to the new framework of the electricity system, in addition to transmission/distribution companies that have an obligation to maintain the supply-demand balance, while taking into account the intention of each law and the adequate implementation of electricity businesses.

2. Enhancing the market monitoring function of the government

The monitoring function of the government will be further enhanced to fully prepare for the monitoring of and formulating of rules for electricity trading in the liberalized market, strict implementation of tariff regulation and code of conduct regarding transmission/distribution businesses, and securing a stable supply under both emergencies and normal situations. To this goal, the administrative organization that conducts regulations regarding electricity business will be reexamined and transformed to a new regulatory authority with independence and high-level expertise within about two years.

IV. Matters which require attention in carrying the reform forward

1. The financing environment for GEU

The financing environment for GEU which is based on a vertically integrated structure and the tariff regulation adopting fully distributed cost methods will be significantly changed due to the electricity system reform. Thus, great attention must be paid to the impact on the financial market as a whole caused by the change in handling of the corporate bonds issued by GEU, taking into account the issued volume of these bonds as well as the characteristics of the electricity business requiring an immense amount of capital investment.

In the current situation, particularly, GEU's balance of payments and financing environment have worsened due to factors such as the suspension of operation of nuclear power stations. Taking into account the development of these situations surrounding GEU, measures will be taken to prevent difficulties in their funding required for stable power supply, with securing the healthy development of the electricity business by means such as preparing a fair competitive environment for companies.

Specifically, when implementing the further securing of neutrality of the transmission/distribution sector, necessary measures (e.g. transitional measures) will be taken

regarding the handling of financial liability including secured bonds in addition to a code of conduct after considering future circumstances of the financial market.

2. Relationship with other policies

To secure efficiency and stability of electricity supply under the structural changes that the electricity system is facing, some other policy measures will be possibly required in addition to the electricity system reform. In this context, from the viewpoint of promoting active competition in the electricity market after liberalization, necessary measures will be taken in cases where significant detriment emerges in competitive conditions due to any policy changes, including energy policies such as nuclear power policy, in order to mitigate this, after examining its necessity and content.

V. Reform Program

The electricity system reform is associated with a drastic change of business systems and it is necessary to promote the reform in a cautious manner based on full preparation including the amendment of applicable laws and regulations. Therefore, the reform will be divided into three stages and will be carried out while conducting full study to overcome challenges at each stage and implement necessary measures based on its results.

A system based on the specific regional features will be established for Okinawa region.

The ministries and agencies concerned will cooperate to promote drafting the details of the reform, and to develop institutional preparation including bills and other measures toward prompt implementation of the electricity system reform.

1. 1st stage: Establishment of the OCCTO

To the ordinary Diet session in 2013, a bill mainly regarding the establishment of the OCCTO will be submitted beforehand to contribute to the improvement of the recent situation where supply and demand balance of electricity is tight. The OCCTO will be established in about 2015.

In addition, the timing of submitting and enforcement of the bills required for establishing the framework concerning full liberalization of entry to electricity retail business, and the frameworks concerning further securing of neutrality of the transmission/distribution sector and full liberalization of retail electricity rates, which are mentioned in the following sections 2 and 3 respectively, will be included in the supplementary provisions of the bill.

2. 2nd stage: Full liberalization of entry to electricity retail business

A bill that is required for establishing a framework concerning full liberalization of entry to electricity retail business will be submitted to the ordinary Diet session in 2014, and is planned to

be enforced in about 2016.

3. 3rd stage: Further securing of neutrality of transmission/distribution sector and full liberalization of retail electricity rates

The frameworks concerning further securing of neutrality through the legal unbundling of the transmission/distribution sector and full liberalization of retail electricity rates shall be implemented by about 2018-2020. Necessary bills are planned to be submitted to the ordinary Diet session in 2015.

Under the assumption that the framework concerning full liberalization of retail electricity rates is to be implemented between 2018 and 2020, timing of the implementation of the system will be reexamined if the interest of electricity users is negatively affected due to factors such as failing to ensure fair competition among retailers.