

Summary of Press Conference Comments Made by Makoto Yagi,
FEPC Chairman, on July 17, 2015

Thank you for taking the time to be here. Today, I would like to say a few words on the following two topics: the finalization of the energy mix and our views on improving the nuclear power business environment under increased competition.

Since the beginning of July, our customers have been asked to cut back on electricity for the summer. We apologize to everyone for the significant inconvenience and trouble this will cause, and ask again for their cooperation.

We expect that the supply and demand situation will remain extremely tough again this summer, and we will have to depend heavily on thermal power. However, we will continue to make utmost efforts to fulfill our mission, which is to provide a stable supply of electricity.

1. Finalization of the Energy Mix

First, I would like to say a few words on the finalization of the energy mix. Since the beginning of this year, the energy mix was widely discussed in the Subcommittee on Long-term Energy Supply-Demand Outlook, and was officially finalized yesterday following a public comment period. Please look at [Document 1](#) for the comment released yesterday.

Overall, the energy mix that has been finalized is a well-balanced generation mix that does not depend excessively on a particular electricity or fuel source. Further, for nuclear power, on which the Strategic Energy Policy had stated that its "necessary capacity must be determined", the new draft proposal indicates a clear numerical capacity to be secured. We consider that this is an important step forward. The key in moving forward is how to achieve this energy mix. We will make utmost efforts to achieve the S + 3E policies. Accordingly, we ask the government to consider the necessary policies and the environment to enable us to do so.

Establishment of the Action Plan for the Electricity Industry for Achieving a Low-Carbon Society

Now that the energy mix is established, the ten member companies of FEPC, together with J-Power, JAPC and twenty-three power producers and suppliers (PPSs), established a new voluntary framework for achieving a low-carbon society, formulated the Action Plan for the Electricity Industry for Achieving a Low-Carbon Society, and released it officially today. Please look at [Document 2](#).

The Plan sets a CO₂ reduction target for the entire electricity industry for FY 2030. The electricity

industry will now work collectively to achieve this target, monitor the progress of the actions each year, and reflect the result in the actions for the following year and beyond, to increase the likelihood of meeting the target.

2. Our Views on Improving the Nuclear Power Business Environment under Increased Competition

Next, I would like to say a few words on our views on improving the nuclear power business environment under increased competition. On June 17, the revisions to the Electricity Business Act for the third phase of the Reforms of the Electric Power System were legislated. As we have said before, the power companies will work actively to ensure that the reforms of the electric power system are truly beneficial to customers. Meanwhile, for the reforms to be effective, we think that three issues need to be addressed: "building a mechanism for maintaining supply stability", "improving the supply and demand of electricity", and "improving the business environment for nuclear power".

Regarding "the challenges for performing the nuclear fuel cycle business", which is one of the specific challenges in "improving the business environment for nuclear power" mentioned above, an expert working group to study ways to improve the nuclear business environment has been set up under the Nuclear Energy Subcommittee and has begun to hold discussions. The first meeting on July 14 featured a free discussion by the members on the current situation of the nuclear fuel cycle and its challenges under a competitive environment.

Due to its uncertainty, including the need for vast amounts of investment and extremely long time scale, the nuclear fuel cycle business has so far been sustained jointly by the ten electric utilities under the national nuclear policy. Due to such characteristics, for the private companies to be able to continue to do so even as the dependency on nuclear power declines and competition increases, a new mechanism is needed to reinforce the existing systems, such as the overall cost-based tariff system, which have allowed those in the business to take a long-term view.

We understand that the Working Group will consider specific issues, such as the financial contribution of each power company and the roles and functions of the business implementing entity, but we also ask the members to intensively discuss the mechanism for running the nuclear fuel cycle business safely and stably even amid fierce competition, and the reallocation of the roles of the public and private sectors to make this happen.

We believe that the nuclear fuel cycle business will remain important in the future, and hope to continue to undertake this task with a sense of mission, increasing our commitment to both the

technological and human resource aspects, with a long-term vision.

Developments in Restarting the Nuclear Power Plants

Lastly, I would like to report on the developments in restarting the nuclear power plants. Currently, Sendai Units 1 and 2 are undergoing a pre-service inspection. Unit 1 was recently loaded with nuclear fuel, and the plant is being prepared in stages for restarting. Further, we are also responding steadily to the NRA's safety assessments, and a reactor installation and modification permit was received for Ikata Nuclear Power Plant Unit 3 on July 15 following Takahama Units 3 and 4. We will continue to respond sincerely to the reviews and inspections, so that the nuclear power plants can be restarted as soon as possible.

This is all for today. Thank you for your kind attention.

Finalization of the Generation Mix (Energy Mix) for FY 2030

Thursday, July 16, 2015

Federation of Electric Power Companies

Makoto Yagi, Chairman

Today, the Energy Mix for FY 2030 was finalized at the government Subcommittee on Long-term Energy Supply-Demand Outlook.

Regarding the energy policy, we consider, from the S + 3E perspective, that it is essential to build a supply system that does not depend excessively on a particular electricity or fuel source. Overall, the energy mix that has been finalized is a well-balanced generation mix.

For nuclear power, on which the Strategic Energy Policy had stated that its "necessary capacity must be determined", the new draft proposal indicates a clear numerical capacity to be secured. We consider that this is an important step forward.

The key in moving forward is how to achieve this energy mix, and the measures to do so should be studied immediately.

We will work together to fulfill the S + 3E policy in accordance with the energy mix that has been finalized.

Establishment of an Action Plan for the Electricity Business for Achieving a Low-Carbon Society

July 17, 2015

Federation of Electric Power Companies
 J-Power
 The Japan Atomic Power Company (JAPC)
 Volunteering Power Producers and Suppliers

The ten member companies of FEPC, together with J-Power, JAPC and 23 power producers and suppliers (PPSs) (hereinafter referred to as "the participating companies") have established a new voluntary framework for achieving a low-carbon society (Attachment 1), and formulated the Action Plan for the Electricity Business for Achieving a Low-Carbon Society (Attachment 2).

The participating companies have all positioned global warming as an important business challenge, and have been working on both the supply and demand sides of electricity, based on their own action plans for achieving a Low-Carbon Society.

Meanwhile, for the electricity industry to orchestrate collective action for achieving a low-carbon society and jointly tackle the expected changes in environment, the participating companies set up a study group in March 2015, and have considered specific plans.

With the announcement of the government's energy supply-demand outlook for FY 2030 and the draft GHG reduction target, the participating companies together decided to set a new target based on their integrated action plans, as described below.

Action Plan for the Electricity Industry to Achieve a Low-Carbon Society

- Reduce the user-end emission intensity to approximately 0.37 kg-CO₂/kWh.
- Utilize the best available technology (BAT) affordable in new thermal power plants to secure a maximum reduction potential of approx. 11 million t-CO₂.

* An emission intensity of 0.37 kg-CO₂/kWh is the national emission intensity estimated based on the energy mix indicated by the government's Long-Term Energy Supply-Demand Outlook, and is estimated to be 35% lower than FY 2013 levels.

$$\left(\frac{\text{CO}_2 \text{ emissions in FY 2030 (360 million t-CO}_2\text{)}}{\text{Estimated electricity demand in FY 2030 (980.8 TWh)}} = \text{approx. } 0.37 \text{ kg-CO}_2\text{/kWh} \right)$$

* A maximum reduction potential of approx. 11 million t-CO₂ represents the effect of introducing BAT in major power source development since FY 2013.

Going forward, the participating companies will enhance their efforts to achieve a low-carbon society by steadily taking actions to achieve these targets, and following up on the progress each year.

July 17, 2015

Federation of Electric Power Companies

J-Power

The Japan Atomic Power Company (JAPC)

Volunteering Power Producers and Suppliers

The ten member companies of FEPC, J-Power, The Japan Atomic Power Company (JAPC) and 23 power producers and suppliers (PPSs) have set up a voluntary framework, as described below, to take substantial corporate action based on the philosophy of the Keidanren's "Action Plan for Achieving a Low-Carbon Society" and the actions for reducing GHG emissions.

- As of the time of this announcement, the framework consists of the ten FEPC member companies, J-Power, JAPC and the 23 PPSs that have volunteered (together accounting for over 99% of all electricity sales). The framework will be open to companies that wish to join in the future.
- The target is to achieve the level (the emission intensity for FY 2030) required to fulfill the long-term energy supply-demand outlook indicated by the government.
- Efforts such as the utilization of BAT in new thermal power stations will be assessed quantitatively.
- The electricity industry will work collectively to achieve the target. The progress will be monitored each year, and reflected in the efforts the following year and beyond (promotion of the PDCA cycle), to increase the likelihood of meeting the target.
- The participating companies will continue to hold discussions to improve the effectiveness of the mechanism for achieving the goal.

List of Participants, Action Plan for the Electricity Industry for Achieving a Low-Carbon Society

General electric utilities Wholesale electric utilities	Volunteering Power Producers and Suppliers (PPSs)	
Hokkaido Electric Power Co., Inc.	eREX Co., Ltd.	ITOCHU ENEX Co., Ltd.
Tohoku-Electric Power Co., Inc.	Idemitsu Green Power Co., Ltd.	F-Power Co., Ltd.
Tokyo Electric Power Company	eneserve Co., Ltd.	ENNET Corporation
Chubu Electric Power Co., Inc.	Osaka Gas Co., Ltd.	Orix Corporation
Hokuriku Electric Power Company	Kanden Energy Solution Co., Inc.	Summit Energy Corporation
Kansai Electric Power Company	JX Nippon Oil & Energy Corporation	Showa Shell Sekiyu K.K.
Chugoku Electric Power Co., Inc.	Nippon Steel & Sumikin Engineering Co., Ltd.	Diamond Power Corporation
Shikoku Electric Power Co., Inc.	Tess Engineering Co., Ltd.	Tepeco Customer Service Corporation Limited

Kyushu Electric Power Co., Inc.	Tokyo Gas Co., Ltd.	Nihon Techno Co., Ltd.
The Okinawa Electric Power Company	Japan Logitec	Premium Green Power
J-Power	Marubeni Corporation	Mitsui & Co., Ltd.
The Japan Atomic Power Company	Mitsuuroko Green Energy Co., Ltd.	

Action Plan for the Electricity Industry for Achieving a Low-Carbon Society

		Description
	Target Action Plan	<p>To achieve an optimum energy mix which is in line with the S + 3E principle that seeks to achieve Energy security, Economic efficiency and Environmental conservation premised on Safety, the participating companies will continue their efforts to achieve a low-carbon society by working on both the supply and demand sides of electricity.</p> <p>In accordance with the government's long-term energy supply-demand outlook for FY 2030, the target was set to achieve a nationwide user-end emission intensity of approx. 0.37 kg-CO₂/kWh in 2030.^{*1,*2}</p> <p>For newly constructed thermal power plants, the best available technology (BAT) affordable to match the scale of the plant will be used to secure a maximum reduction potential of approx. 11 million t-CO₂.^{*2,*3}</p> <p>*1 The Target and Action Plan are based on the generation mix and electricity demand indicated in the long-term energy supply-demand outlook of the government, and assume that the outlook will be achieved by 2030 through the joint efforts of the government, the power companies, and the public.</p> <p>*2 The Target and Action Plan will be revised as needed based on changes in the energy and environmental policies as well as technological development in Japan and other countries as the PDCA cycle advances.</p> <p>*3 The maximum reduction potential representing the effect of introducing BAT in major power source developments from FY 2013 onwards compared to conventional technologies.</p>
1. Target of Domestic Corporate Activities for 2030	Grounds for the Target	<p>The efforts of the participating companies that are based on their respective forms of business will be orchestrated to achieve a low-carbon society.</p> <ul style="list-style-type: none"> ○ Utilizing nuclear power premised on safety <ul style="list-style-type: none"> · Implementing thorough safety measures based on the lessons learned and knowledge obtained from the Fukushima Daiichi accident, while improving safety voluntarily and continuously beyond the requirements of the regulation standards · Providing detailed explanations to the hosting communities and the people of Japan to gain their understanding, and operating the plants safely and stably once their safety has been confirmed and they have been restarted ○ Utilizing renewable energies <ul style="list-style-type: none"> · Utilizing hydropower, geothermal power, solar PV, wind and biomass · Developing technologies for addressing output fluctuations of renewable energies <ul style="list-style-type: none"> - Studying measures to address output fluctuations of solar PV - Considering enhanced introduction of wind power using inter-area connection lines ○ Improving the efficiency of thermal power <ul style="list-style-type: none"> · In developing thermal power, using the best available technology (BAT) affordable based on the scale of the plants · Maintaining and managing the thermal efficiency of existing plants at an appropriate level ○ Providing energy-saving and CO₂-reducing services to customers to contribute to a low-carbon society <ul style="list-style-type: none"> · Providing energy-saving and CO₂-reducing services in the electricity retail area needed by customers in a low-carbon society
2. Enhancing Alliances between Entities (Efforts through the expanded use of low-carbon products and services and		<p>Believing that CO₂ reduction and improvement of emission intensity in the electricity department cannot be achieved without the government's involvement in the energy policies, including nuclear and renewable energy policies, as well as a joint effort involving the power generation, transmission & distribution and the retail departments and the customers who use electricity, the alliances between entities will be strengthened together with the efforts of</p>

<p>employee training, and the reduction potential in 2030)</p>	<p>the power companies themselves.</p> <ul style="list-style-type: none"> ○ Contributing to CO₂ reduction by customers by promoting high-efficiency electric appliances and energy-saving and CO₂-reduction activities, to enable customers to use electricity efficiently ○ Completing the introduction of smart meters as part of improving the environment for customers to use electricity more efficiently
<p>3. Promoting International Contribution</p> <p>(Efforts through the expansion of energy-saving technologies overseas for 2030, and the reduction potential overseas)</p>	<p>Contributing to CO₂ reduction in other countries by expanding overseas the technologies and know-how of the power companies developed in Japan</p> <ul style="list-style-type: none"> ○ Transferring and providing the electricity technologies of Japan to help decarbonize developing countries, through activities such as the diagnosis of coal thermal facilities and CO₂ emission reduction activities through the GSEP (Global Superior Energy Performance Partnership) activities ○ Advancing decarbonization on a global scale by developing and introducing advanced and feasible electricity technologies, taking into account the developments in international systems such as the Joint Crediting Mechanism (JCM) <p>(Reference) The CO₂ reduction potential for coal thermal in the OECD countries and developing countries of Asia achieved by introducing high-efficiency plants and improvements in O&M is a maximum of 900 million t-CO₂/year.</p>
<p>4. Development of Innovative Technologies</p> <p>(Medium- to long-term efforts)</p>	<p>Continuously developing technologies that contribute to preserving the environment for both the supply and demand of electricity</p> <ul style="list-style-type: none"> ○ Developing technologies for utilizing nuclear power ○ Thermal technologies such as A-USC, IGCC and CCS for reducing environmental burden ○ Responding to the introduction of large volumes of renewable energies (improving the load followability of thermal power plants, stabilizing the transmission and distribution systems, and introducing more biomass and geothermal power) ○ Developing technologies for the efficient use of energy