Second Proposal on Energy Policy

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Keidanren

Energy, sometimes described as "the very blood of our economy," is an indispensable factor of national livelihood and corporate activities. Energy policy is the pillar of national strategy.

In July, when Japan was challenged with an impaired energy supply capacity in the aftermath of the Great East Japan Earthquake, Keidanren compiled the First Proposal on Energy Policy[1], which called for enhanced government efforts towards securing the power supply for the short-term, as well as presenting a vision for Japan's energy policy in the medium- to long-term.

The government then initiated in-depth discussions in the Energy and Environment Council towards the compilation of the Innovative Strategy for Energy and the Environment due next summer. At the same time, it established a Basic Issues Committee under the Advisory Committee on Natural Resources and Energy to begin reviewing the Basic Energy Plan. It has also just recently formulated the Action Plan to Stabilize Energy Supply-Demand to secure the immediate power supply.

The government is to continue discussions in the respective committees in order to present the "Basic Policy" of the Innovative Strategy for Energy and the Environment and the basic concept of the optimal energy mix to be stipulated in the Basic Energy Plan by yearend.

Keidanren has taken this opportunity to compile the following views from the industrial sector so that they will be adequately reflected in these ongoing discussions and eventually upon the government's energy policy.

1. The Immediate Energy Policy

(1) The resolution of the accident at Fukushima Daiichi Nuclear Power Plant must be prioritized above all other issues. There is still a strong need for concerned parties to make concerted efforts

[1] http://www.keidanren.or.jp/english/policy/2011/078outline.pdf

to steadily implement the roadmap for resolving the accident. Maximum support is also required for the reestablishment of lives and livelihoods and for local reconstruction, so that victims of the earthquake can resume their normal lives and livelihoods as soon as possible.

(2) This summer, the supply-demand power balance was tight nationwide, especially in the area serviced by the Tokyo Electric Power Company, Ltd. and Tohoku Electric Power Co., Ltd. where the government imposed a restriction of electricity use based on Article 27 of the Electricity Business Act. Dedicated efforts of companies to avert blackouts were consequently accompanied by extremely heavy corporate burdens: cost increases were inflicted by new installations of on-site power generation equipment or the utilization of existing systems and the introduction of energy-efficient equipment; and the lifestyles of many employees were largely affected by the shifting operation hours to weekends and early mornings or late evenings. There are continued concerns over power shortages for this winter and next summer, in the event of which national livelihood will be significantly impacted and the hollowing-out of domestic industry will be accelerated to a further extent.[2]

(3) Budgetary and deregulation measures should be firmly implemented for the measures stipulated in the government's Action Plan to Stabilize Energy Supply-Demand, including the visualization of power consumption, promotion of demand-side energy efficiency and conservation, and support for the

[2] According to a survey conducted by Keidanren, many manufacturers said that among the approaches they took in response to summer supply-demand measures, utilizing on-site power generation equipment and shifting business activities to weekends, early morning, or late evening hours were most effective. However, few answered that such efforts were sustainable, in consideration of increased costs and burden, including fuel expenses, and the impact on the employees' lifestyles. Also, 60 to 80 percent of all manufacturers responded that if the tight supply-demand situation of this summer were to continue for two or three years, the company would be adversely affected in terms of production, investment and revenue.
(http://www.keidanren.or.jp/japanese/policy/2011/101.pdf)
(Japanese version only)

enhancement of diverse supply capacity.

(4) Furthermore, as provided in the current Cabinet's administrative policy, it is very important that, setting trusted relationships with local governments as a prerequisite, nuclear power plants are reinstated after regular check-ups, upon confirming their safety. It is the government's responsibility to be committed to restoring the confidence of local governments under a consistent policy.

(5) At the same time, the efforts made this summer aroused both public and corporate awareness towards the importance of energy conservation and power-saving, and have formulated into various concrete activities. For the sustainment of such trends, the government should continue to enhance public campaigns on energy efficiency and conservation, as well as power-saving.

2. Medium- and Long-Term Energy Policy

(1) Critical issues to be resolved

1) The nuclear accident induced by the Great East Japan Earthquake has greatly impaired public trust in the safety of nuclear power. It simultaneously brought to light the vulnerability of Japan's energy supply system. Establishing a secure energy system that ensures safety and reliability to the public is a prerequisite of energy policy.

2) In order to address issues including sustaining and creating employment and achieving fiscal reconstruction, Japan must attain its "growth strategy" target, which is to mark a nominal GDP growth rate of 3 percent and a real GDP growth rate of 2 percent by 2020. This can only be achieved by securing economic rationality of energy costs, as well as a stable supply, which is a basic infrastructure of national livelihood and economic activity.

3) Compared internationally, Japan has achieved an extremely high level of technology in the energy field. Japan's role in the international community is to make further technological advancements and to disseminate them not only domestically but also overseas, thereby contributing to the resolution of various global issues, including preventing climate change, improving nuclear safety and saving fossil fuels.

From the abovementioned perspectives, Japan's energy policy should be developed with an aim to resolve three crucial issues: "ensuring public safety and reliance," "sustainable economic growth" and "contributing to the international community."

(2) Formulating a flexible and diverse energy utilization plan

1) Energy policies and plans must be formulated in view of the timeline. Rational judgment is required, in particular, on the extent to which state-of-the-art technology will be disseminated in 2020 and on which innovative technologies will be available in 2030.

   For example, if an electric power supply-demand plan is based on exaggerated forecasts of the development and dissemination levels of products and technology related to energy efficiency and conservation, storage, and renewable energy and consequently cannot be achieved, energy supply anxieties will be aroused as a result of supply-demand gaps. With regard to the long periods required to construct a major power plant, such outlooks should instead be more conservative.

2) The current Basic Energy Plan aims to reduce energy generation to 2007 levels in 2030 through the achievements of energy efficiency and conservation (efficiency improvements by approximately 30 percent). The plan envisages that nuclear energy will represent 53 percent of the power supply; renewable energy, 21 percent; and fossil fuels, the remaining share.

   a) Nuclear power: Firstly, public trust must be restored for nuclear power by thoroughly investigating the causes of the accident and by implementing all possible preventive measures. This calls for in-depth debate based on the report to be compiled by the Investigation Committee on the Accident at the Fukushima Nuclear Power Stations.

      The weight of nuclear energy in the medium- to long-term energy policy must be thoroughly discussed, along with issues including the government's role in nuclear projects, the processing of spent fuel and the nuclear fuel cycle, based on establishing reliable measures to prevent the reoccurrence of accidents and

reestablishing the regulation framework.

(b) Renewable energy: The current plan has laid out extremely ambitious targets for the introduction of renewable energy[3]. However, considering current circumstances - low economic efficiency, power instability and geographical constraints – concrete and realistic introduction targets based on geographic data including siting should be developed after conducting another nationwide study. The introduction target of energy efficiency and conservation, also, have to be concrete and realistic.

(c) Fossil fuels: Despite higher expectations towards non-conventional forms of fossil fuels, concerns over future price rises and supply shortages inflicted by the rapid growth of emerging economies present uncertain prospects.

3) With regard to the abovementioned points, new targets for the energy or power generation mix should be flexibly planned with a certain range. Then, ensuring safety and economic rationality as a prerequisite, the government should firmly promote energy efficiency and conservation and present a list of policy measures for each of a diversity of energy sources, including nuclear power, fossil fuels and renewable energy, to enable their efficient and effective use to the maximum extent possible.

It is important for Japan to maintain flexible and diverse energy options from the perspectives of risk dispersion, as well as sustaining and enhancing Japan's resource-related negotiation power against

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[3] According to the Institute of Energy Economics, Japan (IEEJ), the installed capacity of renewable energy can be estimated as follows, in comparison with the current Basic Energy Plan: 1) Photovoltaic power: Whereas 12 million households are to install photovoltaic power by 2030 under the plan, approximately 10 million households would be the realistic limit, considering quake-resistance standards. In order to install photovoltaic power in 12 million households by 2030, the annual installation rate must be 550,000 households, compared to only 150,000 in 2009. 2) Wind power: Although the plan envisages the installation of 10 million kW by 2030, onshore potential is no more than 6.4 million kW, therefore requiring the construction of large-scale wind farms in natural parks and offshore. (IEEJ "Energy Policy Agenda after the Great East Japan Earthquake" http://eneken.ieej.or.jp/data/3897.pdf)

In terms of energy conservation and efficiency, the current Basic Energy Plan estimates that electricity generation, which increased 1.65 times during the 20 years from 1987 to 2007, will return to 2007 levels in 2030.

resource-rich economics.

(3) Stabilizing power supply-demand

1) Securely recovering lost baseload power[4] will be one of the most critical issues upon reviewing energy policy. Nuclear power, in particular, has played a core role as baseload power in Japan's power generation mix. The government must make extensive efforts to restore public trust in nuclear power so that it may continually assume a given role.

2) The development and dissemination of renewable energy is essential from the viewpoint of coping with climate change and effectively utilizing natural resources. However, wind and photovoltaic power entail high costs and power instability, and therefore cannot be expected to serve the role of baseload power in the immediate- to medium-term.

In order for renewable energy to develop into a core energy source in the future, technological innovations for cost reduction, higher efficiency and grid stability, including improved storage, are indispensable. Furthermore, it is required that siting regulations related to geothermal and wind power generation be drastically relaxed, as currently discussed in the government.

3) Given the current circumstances encompassing nuclear energy and renewable energy, the immediate agenda is to secure a stable energy supply based on fossil-fuels, which have an advantage in supply elasticity. On the other hand, with forecasts of continued growth in global demand, fossil fuels entail risks of high cost trends. With its presence in resource procurement weakening as a result of increased demand in emerging economies, Japan is faced with the great challenge of adequately securing its procurement capability for

[4]The optimal generation mix, comprising various energy sources, each of which are designated as baseload power, middle load power and peak load power, according to their respective features in relation to cost, power stability and power controllability in response to demand fluctuations, etc. is an important essence of supplying power. Base load power bears the role of stably supplying a given amount of power; peak load power adjusts supply according to changes in demand; and middle load power possesses both the roles of peak and base load power.

resources (in terms of price, volume and quality).

It is therefore important for Japan to establish firm negotiation power against resource-rich economies by proactively encouraging public-private cooperation in resource diplomacy as well as maintaining diverse energy options. Considering the independent decision of each corporate management as a prerequisite, the joint procurement of resources by a group of different companies should also be discussed.

Furthermore, technology development for even more highly efficient use of fossil fuels must be promoted.

4) Upon reducing supply-demand tensions, maximum efforts must be made. These efforts include policy support for the dissemination of energy-saving products such as high-efficiency household appliances and LED, and for the development of energy-efficient technology and products. However, given the significant impact that the energy conservation measures of this summer had on corporate activities, energy efficiency and conservation policies disregarding economic rationality should not be implemented.

In the medium- to long-term, smart meter technologies will enable the efficient control of electricity demand based on meticulous supply data. The government should provide proactive support for demonstration projects for smart-community technologies, which are being conducted in many areas. Keidanren also intends to contribute to the domestic and overseas dissemination, as well as the development of state-of-the-art technologies, through Future City Model Projects and others.

5) The ongoing energy policy review proposes issues to address such as the functional enhancement of the power transmission and distribution system, further introduction of the principle of competition to the electricity market and power system reform, including unbundling power generation and transmission.

Enhancing power grid interconnections between regions and between eastern and western Japan should be given elaborate consideration in order to secure a strong and flexible power supply.

The separation of power generation and transmission will diversely

affect the stable supply and economic efficiency of electricity. Therefore, in light of achieving the policy aims of securing a stable power supply and preventing electric utility rate raises, an objective analysis of both the advantages and disadvantages should be conducted based a full observation of the experiences of other countries. Thorough discussion will be required to determine how effective the unbundling of power generation and transmission would be, especially under the circumstances of an impaired power supply, which Japan is currently faced with.

(4) Promoting technology-based international contribution

Technological improvements in the energy field and disseminating energy technologies overseas are extremely important in terms of both international contribution and maintaining and enhancing Japan's capacity to procure resources by means of reducing global demand for fossil fuels.

1) Japan possesses advanced technologies for the highly efficient use of fossil fuels in various fields. For example, Japan is expected to contribute to the global dissemination of its well-established super-critical and ultra super-critical technology through public-private cooperation. It is also important that Japan further promotes the development and practical use of IGCC (Integrated Gasification Combined Cycle), IGFC (Integrated Coal Gasification Fuel Cell Combined Cycle), and CCS (Carbon dioxide Capture and Storage), among other technologies.

2) With forecasts of increased nuclear power generation in emerging economies, the international expectation towards Japanese technology remains high under the circumstances. Japan must develop and improve its level of nuclear technology on findings and achievements of past research and development as well as lessons learned from the accident at Fukushima Daiichi nuclear power plant, thereby enhancing the safety level of its own nuclear power plants to the world's highest level, serving the interests of countries seeking nuclear utilization, and contributing to the safe use of nuclear power globally.

Therefore, efforts should be continued in conducting research and development and fostering and securing human resources to resolve the nuclear accident and to improve nuclear safety.

Furthermore, proactive contributions should be made to international rule-making for enhanced nuclear safety and to the establishment of an international cooperative framework for emergencies.

3) Details of the bilateral offset mechanism[5] must be shaped in order to boost the overseas dissemination of Japanese technology. It is important that bilateral discussion with concerned developing countries is accelerated and that energy efficiency and conservation / low carbon projects are designed with due consideration of developing country needs.

ODA (Official Development Assistance) and other public funds must also be strategically employed in order to promote the introduction of high-efficiency equipment employing Japanese technology in developing countries.

(5) Jointly promoting climate change and energy measures

1) Reviewing the mid-term emission reduction target

Carbon dioxide (CO2) accounts for approximately 90 percent of Japan's greenhouse gas (GHG) emissions. Therefore, climate change measures are closely linked with energy measures. The portion of the mid-term climate change target that is to be achieved by domestic emission reductions (or, real reductions) must be clearly underpinned by energy policy.

However, whereas the current Basic Energy Plan envisages Japan's energy supply and demand in 2030, the mid-term GHG emission reduction target is for 2020, and the relationship between the targets given in the two outlooks is uncertain. This is the largest reason that the public cannot understand the mid-term target with reality.

Therefore, in the current debate on middle- to long-term energy policy,

[5] A scheme based on bilateral agreement that allows the counting of emissions reductions achieved in foreign countries as a result of technology transfer as domestic reductions. A number of feasibility study projects are currently in progress.

energy and climate change policies should be discussed in an integrated manner and a zero-based review of the mid-term GHG emission reduction target should be conducted.

Furthermore, it is important that Japan immediately provide the world an explanation of the background of the current review of the target and sincerely endeavor to gain understanding from international community.

2) The importance of global climate change measures

Japan is committed to a global target to halve GHG emissions by 2050. Proactive technological contributions for Japan to achieve this goal are essential. Furthermore, as stipulated in the First Keidanren's Proposal, climate change policy should not be directed inwards but should be more focused on contributing to global GHG reductions.

Japan's industry should continue to take the initiative in developing and applying environmental and energy technologies of the highest global standard and in their dissemination both domestically and overseas. Government taxes and regulations should not hobble such activities.

The Tax for Measures against Global Warming, in particular, should not be introduced from the perspective that it would erode financial resources for technological development and undermine international competitiveness.

Furthermore, the feed-in-tariff scheme for renewable energy, the bill for which was adopted in the previous Diet session should be designed with regard for the long-lasting public and corporate burden of purchasing costs so as not to inflict excessive burden on national livelihood and corporate activities.

3. Conclusion

Given the initiation of discussions for the Innovative Strategy for Energy and the Environment, this proposal has compiled our views on the critical issues to be addressed major points of controversy in energy policy. Keidanren intends to continue to communicate industrial views in line with developments in government debate.

Energy policy is closely related to national livelihood and corporate

activities. Again, we would like to ask for transparent and open debate and the disclosure of various information, including the proceedings of the Energy and Environment Council meetings.