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Summary

1. Discussions at the Fundamental Issues Subcommittee of the Advisory Committee for Natural Resources and Energy

Energy mix options were discussed and it was decided to present four options to the Energy and Environment Council. These options include “promptly establish zero nuclear power,” “reduce nuclear dependency and re-examine after 2030,” “maintain some nuclear power plants,” and “make customers choose in the market (without setting a numerical goal for 2030). A reference scenario (setting nuclear dependency at 35%) will also be presented.

2. Reform of the electric power system

The Fifth Expert Committee on Electric Power System Reforms discussed complete liberalization and the options for introducing wide-area transmission and neutrality. It was agreed to promote complete liberalization after introducing certain transitional measures, for which the two options of functional separation (ISO) and legal separation were discussed.

3. Verification of supply and demand outlook for this summer

The Supply-Demand Verification Committee independently verified the supply/demand assessment made by electric utilities, and concluded that if no nuclear power plant restarts, Japan may face electricity shortages, especially in west Japan. It is necessary to encourage effective power saving based on the saving rates proposed by the Energy and Environment Council.

4. Discord between Japan and the U.S./Europe concerning the EV quick charger standard

Eight U.S. and European automobile manufacturers announced their own EV quick charger standard to restrain Japan’s lead in this field. Although there are growing concerns about Japan’s leadership in the international standard, a calm response is needed as the impact on the EV market seems to be limited.

5. Background and influence of EU ETS reform

EU ETS reform has been examined, including the introduction of regulations to reduce CO₂ emissions on aircraft arriving and departing in the EU area and a market intervention system to maintain the carbon price in light of the slumping market price. Although this is the EU’s own program, the carbon market players are closely watching its impact on the future international carbon market.

6. China watching: Policy trends in the automobile industry

The central government decided the “12th Five-Year Plan for the Scientific and Technological Development of Electrically-Driven Cars” and the “Energy-Saving and New-Energy Automobile Industry Development Plan (2012–2020)” in succession. Thus, China has clearly announced its strategy of accelerating technological and industrial development of electrically-driven cars, especially EVs, in a bid to evolve from a mere automotive giant to a world leader.

7. ME Watching: Busy political calendar in May 2012

The political calendar in the Middle East was packed in May 2012, including nuclear talks on Iran, the GCC consultation summit, the presidential election in Egypt, the establishment of a grand coalition in Israel, and an official tour of the Middle East by Japan’s Minister for Foreign Affairs Koichiro Gemba. June will remain busy, as none of these issues has been even remotely settled.

8. Russia Watching: Inauguration of the new Putin administration and spotlight on Far East development

Following the inauguration ceremony of President Putin, members of the new cabinet and the executive office of the President were announced. Mr. Victor Ishaev, former governor of the Khabarovsk region, who is familiar with the local economy of the Far East and who has close ties with northeast Asian countries, was appointed as Minister for Far East Development, a new post.

1. Discussions at the Fundamental Issues Subcommittee of the Advisory Committee for Natural Resources and Energy

Shigeru Suehiro, Manager, Senior Economist
Energy Demand Supply and Forecast Analysis Group
Energy Data and Modelling Center

The 20th meeting (April 26) to the 25th meeting (May 28) of the Fundamental Issues Subcommittee were held to discuss the revision of the Basic Energy Plan. The discussions focused on the energy mix options proposed at the 18th meeting, and the draft interim report on the options, which is to be proposed to the Energy and Environment Council, was approved at the 25th meeting.

The results of economic analyses carried out by five research institutes were presented at the 21st meeting, showing the estimated impacts of options with the nuclear share ranging from zero to 35% on GDP, electricity prices, etc. The estimates revealed that the zero nuclear option would cause GDP to shrink by 1.0–5.0% compared to the reference standard. However, there were comments that the basis of the estimation was not uniform and that the results seemed unreasonable, so it was decided to review and present the characteristics and assumptions of the model again.

Concerning discussions on the options, another option of maintaining the nuclear share at 15% in the case of decommissioning plants older than 40 years old was added to the options proposed at the 18th meeting. As the discussions proceeded, the number of options was reduced based on opinions such as “easy-to-understand explanations for citizens are necessary,” “a message that appeals to the public is essential” and “there are too many options”. Eventually, the option of 35% nuclear power was set aside as a reference based on the chairman’s decision due to conflicting opinions such as “(the option of 35% nuclear power) should be removed because it opposes the policy of abandoning nuclear power generation” and “(the option) should be maintained to help curb global warming and also for energy security, and it is necessary to inform the Japanese people on the economic impact assessment”.

The following draft options are to be proposed to the Energy and Environment Council:

Option 1: Abandon nuclear power completely as soon as possible (0% nuclear power, 35% renewable energy by 2030)

Option 2: Reduce the nuclear share and re-examine the period beyond 2030 (15% nuclear power, 30% renewable energy)

Option 3: Keep some nuclear power (20–25% nuclear power, 25–30% renewable energy)

Option 4: Let customers decide the optimal energy mix in the market (without citing numbers for 2030)

Reference: Maintain the nuclear power installed capacity at the current level (35% nuclear power, 25% renewable energy)

The views of Commissioner Masakazu Toyoda, Chairman and CEO of IEEJ, can be summarized as follows: There is no perfect energy. Not only nuclear power but also energy conservation, renewable energy and thermal power generation have both advantages and disadvantages. Also, in terms of methodology, it is not a question of deciding whether distributed or centralized power generation systems are better; rather, a well-balanced approach is required.

The subcommittee is scheduled to discuss the 2020 mid-term target for global warming prevention measures.

2. Reform of the electric power system

Junichi Ogasawara, Senior Economist, Manager
Electric Power Group, Electric Power & Coal Unit

At the Fourth Expert Committee on Electric Power System Reforms held on April 25, the promotion of competition and the introduction of a wider-area system were discussed. Major topics included 1) elimination of the barrier preventing power supply beyond supply territories and promotion of competition through the wholesale electricity market, 2) the mechanism to promote effective utilization of supply power over a wider area, and 3) the rules and mechanism to support neutrality in the transmission/distribution sector and fair competition among power sources. As the presentation by RTE, a French transmission company, and Q&A on the presentation took longer than expected, few opinions were expressed at the meeting. Some of the key points in the discussion are outlined below.

The imbalance charge, which was established in order to guarantee the balance between generation and consumption at all times and is to be paid when demand exceeds generation, is a barrier to new suppliers entering the industry. It was generally agreed that it is important to make the imbalance charge transparent by using the real-time market, which had been proposed by the power generation industry, but ideas for the mechanism of the real-time market differed among members. Nothing was decided on other topics due to lack of time for discussion.

Next, the Fifth Expert Committee on Electric Power System Reforms was held on May 18, at which complete liberalization and measures to protect customers, and options for introducing a wider area and neutrality in the transmission sector were discussed. As few members expressed opposition or concerns about complete liberalization regarding protection of customers, in principle it was agreed to introduce complete liberalization. It was decided to abolish the regulation on charges after providing a certain transition period, and to separately discuss protection measures such as a final guarantee of service. The writer, as a member of the committee, noted that a careful, detailed design is required because various challenges may arise during the transition to complete liberalization.

Two options were proposed by the secretariat on the introduction of a wider-area system and neutrality of the transmission sector. These options are: 1) to utilize ISOs, in which branch offices are established in each area by functionally separating the transmission sector assuming that a nationwide organization is set up, and 2) to establish a legally separated transmission/distribution organization by taking measures to assure independence of personnel affairs, budget, etc. Although these options were discussed without excluding the possibility of ownership separation, an agreement was not reached because opinions differed on which option is better. The writer suggested that it is necessary to further discuss and verify the feasibility and rationality of both options.

The real-time market system, which was proposed by the Federation of Electric Power Companies and in which a trade is made by 1 hour before the actual supply and demand, was also discussed. However, the discussion made little progress as the committee members had differing views on the specific mechanism of the real-time market.

3. Verification of supply and demand outlook for this summer

Junichi Ogasawara, Senior Economist, Manager
Electric Power Group, Electric Power & Coal Unit

The Supply-Demand Verification Committee established in the National Policy Unit held six meetings from April 23 to May 12, and objectively verified the validity of the supply/demand assessment for this summer presented by the electric utilities. Concerning the future electricity supply/demand assessment approach, the basic international standard is to compare the expected supply capacity with the assumed demand and to confirm that the reserve margin is sufficient. As this approach was also taken for the supply/demand assessment for this summer, the approach is comparable to the international standard.

The Supply-Demand Verification Committee identified the necessary reserve margin as 7% in advance. According to the Committee, 3% of the 7% is a reserve for the increase of demand associated with daily temperature variations, while 4% to 5% is required to respond to business fluctuations and unplanned outages. On the supply side, the possibility of additional supply capacity was examined, including power plants currently shut down, pumped-storage power generation, increase in thermal power generation, power decline under high temperature, and more active use of in-house power generation. It was concluded that the current assessment results are generally adequate.

On the demand side, the adequacy of assuming the case of excessive heat, the amount of energy conservation already established in society, and supply/demand adjustment contracts were verified. The assumption of the case of excessive heat was considered appropriate because the verification examines whether the supply/demand balance can be kept within the assumed risk. Concerning the amount of energy conservation already established in society, the calculation method was generally approved although opinions varied. The verification took into account power companies' efforts to avoid planned power outages by interchanging electricity; thus, it was concluded that if no nuclear power plants are restarted, there is a risk of electricity shortages, especially in west Japan.

The results of the recent examination are analyzed as follows. Firstly, concerning the reserve margin of 7% used as the assessment standard, the risk is underestimated due to: 1) many of the currently operating thermal power plants are old, and 2) the assessment is based on the average accident rate even though many thermal plants have been operating for a long time without sufficient maintenance. The amount of energy conservation already established in society was obtained by calculating the difference between the actual records of maximum electricity demand in 2011 and 2010 and subtracting the effects of business fluctuations and temperature variations, and multiplying by the rate of establishment judged from questionnaires, etc. The risk of higher demand may also be underestimated because the calculation method itself has not been thoroughly established, and thus there is a potential risk caused by the estimation of the amount of energy conservation.

In response to the conclusions of the Supply-Demand Verification Committee, the energy conservation target for this summer was set by the Energy and Environment Council on May 18. This target is based on the maximum electricity demand in 2010, which is different from the value calculated by the Committee, so in effect, a cap level for the demand in each area is set as the target. Whether or not effective power saving measures can be taken quickly before the summer starts will be the key.

4. Discord between Japan and the U.S./Europe concerning the EV quick charger standard

Hisashi Hoshi, Board Member, Director

New and Renewable Energy & International Cooperation Unit

Heated arguments are taking place over the quick charging method of EV (electric vehicles). The EV quick charger is an example of the international standardization of smart grid related technology that Japan has been working toward. In March 2010, the CHAdeMO Association was founded by the firms including Tokyo Electric Power Company and four Japanese automobile manufacturers, aiming to standardize the charging method and to increase the installation of quick chargers. CHAdeMO type quick chargers have been successfully introduced in line with the development of EVs by Nissan and Mitsubishi. A total of 1,150 units have been installed in Japan and 240 units overseas.

However, eight U.S. and European automobile manufacturers including GM of the U.S. and Volkswagen of Germany recently announced the “Combo” chargers of a different standard. These Combo chargers use the same connector for normal charging at houses and quick charging, as the name suggests, while the CHAdeMO chargers use different connectors. The reason why the U.S./European group is promoting the Combo system, which is still at the planning stage, is merely to hinder the leading Japanese group.

There is a concern over this move as another anti-Japan alliance, rather like the so-called “Galapagos Syndrome”. This may be a reasonable reaction considering Japan’s repeated difficult experiences with international standardization issues. Since those who control the standardization will win the market, it is natural to seek to expand alliances such as the CHAdeMO Association. However, it is important to ensure that excessive countermeasures do not obstruct successful development of EV charging technology and the market.

Differences in charging methods, while not trivial, are merely differences in some of the specifications of EV. According to some estimates, the EV market will expand from approximately 70,000 cars now to 14 million by 2030. With this size of market, two types of EV charging standard can coexist. Actually, Volkswagen of Germany, one of eight companies to announce the adoption of the “Combo type”, also declared that it will adopt the CHAdeMO type when entering the Japanese EV market, which is scheduled to be in mid 2013.

If automakers do not want to manufacture different types of EVs for different charging methods, another option is to provide both CHAdeMO and Combo type connectors on the quick chargers, just as gasoline stations sell diesel, regular and high-octane gasoline. Moreover, as battery efficiency and charging speed still need to be improved, a new generation of charging specifications beyond CHAdeMO and Combo may be required.

There is still time to seek the optimal method and to converge efforts by accepting the co-existence of both standards for the time being while various options remain. We should not commit the stupidity of hindering the spread of EVs by waging war over the standards of the charging infrastructure, as Mr. Carlos Ghosn, President and CEO of Nissan Motor Co., worries.

5. Background and influence of EUETS reform

Hiroki Kudo, Assistant to Managing Director
Global Environment and Sustainable Development Unit

Concerning the EU Emissions Trading System (EU ETS) launched in 2005, various reforms have been discussed and decided for the start of Phase III in 2013 and it is attracting growing international attention because of its impact.

For example, the regulation on emissions reduction was expanded in January of this year to cover all aircraft departing from and arriving at airports in the EU area. However, some national governments, including the U.S. and China, which have a strong stake in the departure and arrival of aircraft in the EU area, are considering imposing economic sanctions on the EU on the grounds of unilateral introduction of political measures. Furthermore, the EU decided to implement its own measures to restrict the usage of credits by limiting the emission reduction credits of greenhouse gases that can be used for accomplishing the EU ETS targets to those derived from projects carried out in Least Developed Countries (LDC) from 2013.

The key reform is the “Set-Aside” system. This system is a mechanism to allow EU ETS member countries to have authority to control the market trading price at a certain level by reserving a certain amount of EU Allowance (EUA) traded by the ETS and controlling the amount of supply. The inherent aim of the ETS is to achieve an absolute target reduction of greenhouse gases in the most economically efficient manner by trading. In contrast, the Set-Aside system is similar to the Feed-in Tariff (FIT) system of renewable energy in that it allows national governments to adjust market prices to maintain the target carbon price and thereby encourage business operators to make investments.

Such measures have been introduced as the carbon market has slumped along with the economy following the Lehman shock and the financial crisis in Europe, which have decreased the demand for EUA and emission reduction credits, and the market trading price remains low. There is also concern about the influence on future investment in global warming countermeasures. Therefore, political lobbying over the introduction of the Set-Aside system has continued in order to revitalize the market regardless of opposition based on the institutional problem of giving member countries the authority to interfere with the market and the fear of stricter emissions targets being introduced.

As the EU ETS accounts for more than 75% of the total international carbon trading market, its reform will affect the future coordination of the international market, the system design by countries which are considering introducing the emissions trading system, and consequently, the utilization of credits, etc. in the new framework of the United Nations beyond 2020. Therefore, the market players are watching the actions of EU ETS to predict the future direction of the international carbon market.

6. China Watching: Policy trends in the automobile industry

Li Zhidong, Visiting Researcher
Professor at Nagaoka University of Technology

China, which saw both its annual car sales and production exceed 18 million units and has grown to become the world's largest auto market, is now attracting worldwide attention. On March 27, the Ministry of Science and Technology announced the "12th Five-Year Plan for the Scientific and Technological Development of Electrically-Driven Cars", and the State Council executive meeting presided over by Premier Wen Jiabao approved on April 18 the "Development Plan for Energy Saving and New Energy Automobile Industry (2012–2020)" compiled by the Ministry of Industry and Information Technology. Thus, China has clearly revealed its strategy to evolve from a mere automotive giant to a world leader by accelerating technological and industrial development of electrically-driven cars, especially EVs.

The technological program defined the development of electrically-driven cars consisting of EVs and Fuel Cell Vehicles (FCVs) as key to improving the international competitiveness of China's automobile industry and securing a stable energy supply and reduction of carbon emissions. It was also announced that the industrialization of hybrid vehicles (HVs) is to be achieved by the end of 2015, and that a large-scale model project to commercialize electrically-driven cars, mainly small-size EVs, is to be carried out. In addition, large-scale industrialization of electrically-driven cars is to be promoted between 2016 and 2020, and commercialization of next-generation power batteries and fuel cells is to be started. Numerical targets were also set, including increasing the energy density of power batteries for purely EV passenger cars to at least 120 Wh/kg while reducing the cost to 1500 yuan/kWh or less. On the other hand, the industrial program considers the structural transition to electrically-driven cars as the major development strategy of the automobile industry, and intends to actively promote the popularization of HVs as well as the industrialization of EVs. The targets include cumulative sales and production of EVs of 500,000 units by 2015, rising to 5 million units or more by 2020, while EV production capacity is to be increased to 2 million units by 2020.

The national government launched an experimental project to promote the use of electrically-driven cars by providing subsidies to corporate organizations, in 13 cities including Beijing, starting from January 2009. The number of cities covered by this project was increased to 20 from May 2010, while the project started to include general users in five cities including Shenzhen. In spite of these efforts, cumulative sales, mainly of EVs, remained at just over 8,000 units by 2011. To accomplish the target for 2015, it will be necessary to manufacture and sell 123,000 units per year on average, and at least 490,000 units in 4 years from now, which will not be easy. The experimental project will continue with the introduction of subsidies as a support measure, and the Ministry of Finance has decided to waive taxes on electrically-driven cars on March 6. The prompt introduction of a carbon tax may also be effective.

The technological project has also set the targets of constructing 2,000 charging stations and providing 400,000 quick chargers mainly in the experimental area by 2015. To achieve these, it is necessary to unify the charging method to attract investment from electricity network operators and the oil industry. Although organizations such as the Standardization Administration of China decided four aspects of the national standards for the EV charging system at the end of 2011 and technical conditions for EV passenger cars in this May, a standard for the charging method has yet to be established. A standard needs to be set soon to improve the charging infrastructure and to achieve international standardization based on experience. In terms of strategic mutual benefits, cooperation between Japan and China should be actively promoted.

7. ME Watching: Busy political calendar in May 2012

Koichiro Tanaka, Board Member
Director of JIME Center

Even though the nuclear talks held in Baghdad concerning Iran lasted far longer than scheduled, substantial agreement was not reached, and it was merely agreed to hold the next meeting in Moscow. There is a great gap between the position of P5+1 which considers Iran's compliance with the UN Security Council resolutions as the starting point, and Iran which insists on its right to enrich uranium and considers that the resolutions are illegal. Criticism of Iran's enrichment activities following the detection of uranium enriched up to 27% in the Fordow facility has not helped bridge the difference either. About a month before the West's sanctions against Iran take full effect, there is a common interest in continuing discussions between Iran which wants to avoid such restrictions and the EU which would like to delay imposing sanctions due to concern about the impact on the Euro zone. However, the present situation dominated by principles is unlikely to change any time soon.

Although the GCC Arabian Union, under which the substantial merger proposed by Saudi Arabia to Bahrain would be expanded to all of the GCC area, was discussed at the GCC advisory summit, it was decided to continue thorough discussions. The approach seems to help Bahrain and Oman, which inevitably must seek economic assistance from the wealthy oil-producing countries such as Saudi Arabia since the Arab Spring. However, more reasonable purpose may be to counter the threat of Iran considering the position of Bahrain which is struggling to deal with the uprising by Shiite residents, and that of the UAE which is facing off against Iran over the territorial issue of three islands including Abu Musa Island.

In Egypt, the long-awaited presidential election was held on May 23 and 24, 1 year and 4 months after the "revolution" last year. However, votes were split among the candidates, and so those who survived to the final vote were neither the former Foreign Minister Mr. Moussa nor any liberal democratic candidate, but Dr. Morsi, the leader of the Freedom and Justice Party, supported by the Muslim Brotherhood and Mr. Shafiq, the last prime minister of the Mubarak administration. Copts and seculars are wary of Dr. Morsi due to his emphasis on Islam, while the younger generation dislikes Mr. Shafiq who has a military background and is tainted by association with the former administration. Thus, the run-off election on June 16 and 17 will not strengthen unity among the Egyptian people but actually deepen the rift.

Meanwhile, Israel looks prepared to deal with major issues, including the peace process, based on a grand coalition that was created by including the largest opposition party, Kadima. The tug of war between those led by defense personnel and intelligence community who are both objecting to attack Iran and Prime Minister Netanyahu who has been advocating war is attracting worldwide attention. Japanese Foreign Minister Mr. Gamba's recent visit to Israel carried two equally important messages: the effect of economic sanctions against Iran which is pressing ahead with its nuclear development, and a caution to Israel against its hasty military intent.

8. Russia Watching: Inauguration of the new Putin administration and spotlight on Far East development

Shoichi Itoh, Senior Researcher

International Strategy Analysis Group, Strategy Research Unit

The presidential inauguration ceremony of Vladimir Putin was held on May 7. The new president, with a six-year term of office, approved the list of new cabinet members proposed by the new prime minister Dmitrii Medvedev on May 21, and signed the Presidential Decree appointing members of the Executive Office of the President on May 22. Seven out of 18 members of the Executive Office of the President were moved sideways from the cabinet led by the former Prime Minister Putin. In the new cabinet, First Deputy Prime Minister Igor Shuvalov and four out of six deputy prime ministers among the new appointees and six ministers including the foreign minister and the finance minister remain in office from the former cabinet, reflecting Putin's strong influence.

The new cabinet post attracting much attention is the Minister for Far East Development, which is concurrently held by Mr. Victor Ishaev, the Plenipotentiary Representative of President in the Far Eastern Federal District. This post was created independently from the Ministry of Regional Development, which is in charge of social and economic affairs in other regions. Minister Ishaev served as Governor of the Khabarovsk region from 1991, when the former USSR collapsed, to April 2009 when he was appointed as the Plenipotentiary Representative of the district. Mr. Ishaev is known to be critical of the central government for its inadequate measures for the Far East.

President Putin ordered the new cabinet to draw up a draft proposal to accelerate development of the Far East by July 1, before the opening of the APEC conference in Vladivostok in September of this year in the "Presidential Decree on the Long-Term State Economic Policy" which he signed on the day of his inauguration ceremony. Although the history of comprehensive social and economic development programs in the Far East dates back to the era of the Soviet Union, which ran a planned economy, the program itself has been revised three times already in the 21st century. However, the process of revising half-hearted implementation in every next long-term plan has continued.

In Russia, there are two opposing views over how best to develop the Far Eastern economy. One group insists that an active national industrial policy is essential while the other focuses more on market economy principles. President Putin and Minister Ishaev belong to the former, and so intervention by the federal government in the economic development of the Far East district is likely to increase.

Although the Far Eastern district accounts for 36% of the total area of Russia, it has just 4% of the population. Both the gross regional product and the foreign capital participation ratio account for no more than 5% of the whole of Russia. Active efforts to attract foreign capital and large-scale eastward movement of domestic capital are essential for full-scale economic development. Minister Ishaev, who has long had strong ties with Japan, China and Korea, is surely well aware of the reasons why foreign capital from surrounding countries has not increased as expected, but can he come up with a new policy to improve the investment environment? We should closely follow his actions along with the outcome of the draft proposal to establish a "State Corporation for East Siberia and Far East Development" (tentative title) directly under the Executive Office of the President and the draft "Bill for East Siberia and Far East Development".

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