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Announcement

Message from the CEO and Chairman of the IEEJ

I am very proud to report that our Institute was recently ranked First in Asia and Third among all the Energy and Resource Policy Think Tanks in the world. The survey results for the *Global Go To Think Tank Index*, developed by the University of Pennsylvania, were released at the end of January. The Index is designed to identify and recognize centers of excellence in areas of public policy research.

I am convinced that such achievement is primarily due to the unstinting support IEEJ receives from people like you. Without you, the Institute would not be what it is today.

The achievement is also attributable to the superb contributions and efforts from all our staff. We will certainly continue to provide "high quality studies in energy and environment areas not only for Japan and Asia, but also for the World."

Best regards,

Masakazu Toyoda
Chairman and CEO, IEEJ

＜ University of Pennsylvania (January 22, 2015), *2014 Global Go To Think Tank Index Report*, p.95＞

Top Energy and Resource Policy Think Tanks
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1.	Oxford Institute for Energy Studies (OIES) (United Kingdom)
2.	World Resource Institute (WRI) (United States)
3.	Institute of Energy Economics, Japan (IEEJ) (Japan)
4.	James A. Baker III Institute for Public Policy (United States)
5.	RAND Corporation (United States)
6.	Center for Science of Environment, Resources and Energy (Japan)
7.	Energy and Resources Institute (TERI) (India)
8.	Center for Energy and Environmental Policy Research (CEEPR) (United States)
9.	Resources for the Future (RFF) (United States)
10.	Energy Studies Institute (ESI) (Singapore)
11.	Center for Strategic and International Studies (CSIS) (United States)
12.	Korea Energy Economics Institute (KEEI) (Republic of Korea)
13.	Centre for Energy Policy and Economics (CEPE) (Switzerland)
14.	American Enterprise Institute for Public Policy Research (AEI) (United States)
15.	Center for Economic and Social Development (CESD) (Azerbaijan)
16.	Centre de Recherche en economie de l'Environnement, de l'Agroalimentaire, des Transports et de l'Energie (CREATE) (Canada)
17.	Centre for European Policy Studies (CEPS) (Belgium)
18.	European Centre for Energy and Resource Security (EUCERS) (United Kingdom)
19.	Center on Environment, Energy and Resource Policy (CEERP) (China)
20.	Centre for Energy Environment Resources Development (CEERD) (Thailand)
21.	Energy Policy Research Group (EPRG) (United Kingdom)
22.	UC Davis Energy Institute (United States)
23.	Emirates Center for Strategic Studies and Research (ECSSR) (United Arab Emirates)
24.	Centre for Population and Environmental Development (CPED) (Nigeria)
25.	Center on Global Energy Policy (CGEP) (United States)
26.	Institute for Sustainable Energy Policies (ISEP) (Japan)
27.	Center for International Energy Security Studies (China)
28.	Global Energy Studies (United Kingdom)
29.	Institute for the Analysis of Global Security (IAGS) (United States)
30.	Kazakhstan Institute for Strategic Studies (KazISS) (Kazakhstan)

http://repository.upenn.edu/cgi/viewcontent.cgi?article=1008&context=think_tanks

Summary

1. Discussions on the Energy Mix

Heading toward the start of discussions in the Advisory Committee for Natural Resources and Energy, the IEEJ quantitatively analyzed the strategic energy mix options available for Japan for 2030, and presented the desirable scenario.

2. Developments in Nuclear Power

Regarding restarting the nuclear power plants, the Nuclear Regulation Authority began to finalize the assessment report for Takahama Units 3 and 4. The reviews of Sendai Units 1 and 2 will still take time to complete; the reviews need to be made more efficient.

3. International Oil Market and Trends for Oil Prices

In forecasting the future oil prices, Saudi Arabia's actions under the new King must be monitored. While LNG prices should fall with oil prices, efforts for optimizing the LNG price formula must be continued.

4. Can President Obama Show Leadership in Climate Action?

In his State of the Union Address, President Obama once again emphasized the importance of climate actions by the US. Can the US take the lead? The response of the GOP must be carefully monitored.

5. Renewable Energy Price Committee Kicks Off Amidst Much Attention

The Renewable Energy Price Committee has got going. With the end of the "boosting period", the purchase price of solar electricity is expected to fall by around 20%. The premium on the internal rate of return (IRR) is likely to be maintained for other renewable sources of electricity.

1. Discussions on the Energy Mix

Akira Yanagisawa, Senior Economist
Energy Data and Modeling Center

The Basic Energy Plan was approved by the Cabinet in April 2014 without setting quantitative targets for the energy mix. The lack of such targets impedes proper investment in energy and hence sustainable economic growth and development of society. Thus, the recent establishment of a subcommittee on the outlook for the long-term supply and demand of energy, to discuss the future of the supply-demand structure of energy, is greatly welcomed.

On January 16, the IEEJ announced the result of a quantitative analysis of strategic energy mix options available for Japan for 2030, obtained using a measurement model and taking uncertainty into account. Four scenarios were built paying particular attention to the generation mix, which is affected significantly by the policies on renewable energies and nuclear usage, and Scenario 3 (25% renewables, 50% thermal, 25% nuclear) was selected as the desirable option (http://eneken.ieej.or.jp/press/).

Generation mix options have an enormous impact on all areas of the supply and demand for energy, the economy, and the environment. Scenarios with high dependency on high-cost electricity sources clearly showed adverse impacts on the economy. The increase in electricity tariffs and fossil fuel imports erode Japan's competitiveness and purchasing power, producing a difference of as much as 10 trillion yen in real GDP in 2030. In Scenario 1, which depends solely on thermal and renewable energies (35% renewable energies, 65% thermal, 0% nuclear), 5% of the growth achieved by Scenario 3 (25%) would be lost. Such impact would reach beyond the macro economy to households through employment and wages. Scenario 1 would shed 300,000 more jobs than Scenario 3, in addition to lowering the wages of workers who remain employed by 40,000 yen. Electricity tariffs would be forced to rise by ¥4.6/kWh even as incomes fell.

Carbon emissions would be minimized in scenarios that utilize renewable energies and nuclear power, which are zero-emission electricity sources. Being domestic or semi-domestic, they also ensure the highest levels of security. Thus, in terms of the environment and security, it is essential to use both resources in an appropriate manner, instead of choosing between them. Considering the overall quantitative effect of energies on the economy, the environment and security, it is desirable to use not only renewable energies, but also nuclear power and fossil fuels in a good balance.

The target energy mix to be presented by the government should be backed by well-grounded policy measures. Such measures must fully address the long lead time and life time that characterize energy- and environment-related technologies and facilities, the speed of technological innovation, and various restrictions at the time of introduction. Further, the progress of policy measures must be monitored regularly, and revised as needed based on the domestic and international situations concerning energy, the economy and the environment. 3E+S will continue to be the basic stance of the energy policy and the constant basis for evaluation. To continue strengthening Japan's energy security and climate actions, it is essential to cut back on fossil fuels and raise the ratio of domestic energies. To achieve these goals, appropriate policies must be introduced at suitable times and with the minimum burden on society.

2. Developments in Nuclear Power

Tomoko Murakami, Manager
Nuclear Energy Group, Strategy Research Unit

On January 16, public comment on the draft assesment report for the safety assessments of Takahama Units 3 and 4 was closed, after approximately 3,600 comments had been gathered. Accordingly, on February 12, the Nuclear Regulation Authority (NRA) finalized the assesment report and started the final phase of the assesment reviews. Meanwhile, Kansai Electric recently applied for a 10.23% raise of electricity tariffs for the regulated segment starting in April, assuming that Takahama Units 3 and 4 will be restarted in November 2015. The tariffs for the liberalized segment are due to rise by 13.93%. Whether this tentative decision will be reversed will depend on the reviews and the subsequent restarting process, and so progress must be closely monitored.

For Sendai Units 1 and 2 for which the assessment report was approved last September, the reviews of the construction plans and operational manuals are still under way. Power company hearings started early in the new year on January 5 and are being held every day, literally from morning to evening, already totaling nearly700 times. The focus of the reviews on the construction plans, apparently, is to clarify the basic facility design and quake resistance policy, and the simplicity of the assessment process; it is not clear when the reviews will actually end. The NRA stated at the press conference on January 14 that they "welcome" suggestions from the power companies for improving the regulatory system. Perhaps the power companies should propose revising the process of reviewing construction plans to make it more efficient.

On January 1, Stephen Burns took office as the 16th Chairman of the Nuclear Regulatory Commission (NRC), succeeding Allison Macfarlane. Mr. Burns named NRC's priorities to be continuing the post-Fukushima measures in the US nuclear power plants and discussing a new regulation to deal with the increasing number of applications for decommissioning. The NRC's discussions on the new regulation will serve as a useful reference for Japan, which is due to face a stream of applications for decommissioning and extended operation. Japan should review and adopt the points that are applicable to them, considering the difference in situations between Japan and the US.

Despite being an academic society, the Atomic Energy Society of Japan has been engaging increasingly in practical fault activities since the Fukushima Daiichi accident. For example, at the first meeting of the fault activity and risk assessment investigation expert committee held in December 2014, the Society investigated and discussed the possible impact on key facilities from an engineering perspective, whose output could affect the procedure for evaluating seismic ground motions and the seismic design guidelines. Further, the Society's special committee for safety improvement technologies is drawing up a medium- to long-term roadmap for maintaining and developing technologies and human resources for enhancing LWR safety, on which an interim report was presented on January 8 at METI's WG on Voluntary Improvement of Safety, Technology and Human Resources. This effort is in line with the long-term policy goal of "continued use of nuclear power as an important electricity source for achieving 3E+S". Broader acceptance of its achievements is keenly awaited.

3. International Oil Market and Trends for Oil Prices

Yoshikazu Kobayashi, Manager
Oil Group, Oil and Gas Unit

How far will oil prices drop? At the time of writing (late January), the Brent price is in the $40/bbl range, making the $30/bbl range, the level after Lehman Brothers collapsed, seem a possibility. In the US, the impact of low oil prices is starting to emerge in the form of oil companies cutting and postponing upstream investments, bankruptcies among medium- and small-sized oil companies, and fewer rigs in operation. However, as the consensus remains that US shale oil production will continue to grow, albeit more slowly, even though the global economy has not yet fully recovered and there are few prospects for growth in demand for oil, the international oil market does not see enough reason for the global over supply of 1 to 2 million B/D to be resolved.

The rapid drop in oil prices since last summer is similar to that in the mid-1980s (the so-called “reverse oil crisis”): (1) several years of high oil prices led to an increase in non-OPEC supplies, (2) OPEC is opting to maintain market share rather than prices, and (3) the easing demand was not caused by an economic shock. Some expect the supply-demand situation to tighten eventually under market forces, as supplies from high-cost oil fields such as shale oil and oil sands decrease on the supply side, while low oil prices stimulate new demand on the demand side. This alone, however, would take time to overcome the current glut in production. Instead, the most effective way to reverse the falling prices is for OPEC to cut production, as happened in the late 1980s. Thus, the actions of the Saudi-led OPEC are the key to forecasting future oil prices; the moves by Saudi Arabia under the new King Salman who succeeded the late King Abdullah must be closely followed.

While media reports suggest that oil-producing countries could suffer economic crisis as oil prices plunge, on the macro level, the price drop itself naturally benefits the Japanese economy. The average price of regular gasoline has dropped for 26 consecutive weeks to 139.6 yen as of January 19, raising hopes for higher consumer spending.

The falling oil prices are likely to cause the mostly oil-indexed LNG import price to fall too. The demand for LNG itself is also easing, with the spot price for North East Asia falling below $10/MMBtu. Consequently, the Asia Premium, or the difference in import price with Europe and the US, is expected to shrink significantly. However, while such a price drop would naturally be welcome for Asian importers, it does not solve the issue of the irrational, oil-indexed pricing mechanism. As more new contracts for Asia now adopt other pricing mechanisms such as the Henry Hub-indexed pricing used for US LNG, it is necessary to eventually establish a new price index that reflects the supply and demand of natural gas in Asia, by improving the reliability of spot LNG prices, abolishing the Destination Clause, and expanding spot transactions.

4. Can President Obama Show Leadership in Climate Action?

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

On January 20, President Obama delivered the 2015 State of the Union Address. Though seldom mentioned in the media, he talked at length about climate action. Citing the increase in average temperature measured in recent years, the President asked the nation to scientifically understand the signs of climate change and the future risks, and emphasized that, for the sake of future generations, the measures taken so far must not be reversed. He also stated that the US and China will lead the effort to reach an international agreement at COP21, pointing to his diplomatic achievements at the end of last year concerning the agreement between the US and China on climate change.

However, his address presented no new specific policy, and was instead a plea to the Republicans to assist the government's climate actions, as they now have a majority in both Houses following the mid-term elections. The President tried to win over the public on climate issues and to eventually win concessions from the Republicans, who are fighting the President over the EPA regulations on thermal power plants and the oil pipeline construction project. With China now ready to take action against global warming after the US-China agreement last year, the US now has a reason to move ahead with its domestic policies and lead the effort toward an international agreement. How will the GOP respond? Will Congress let US domestic policy move forward and accept the new international framework? The situation must be closely monitored from both these perspectives.

In Japan, the discussions on various efforts to determine the optimum mix of energy sources continue. Since the beginning of the year, quantitative analyses on building an optimum mix and discussions on actual GHG targets beyond 2020 based on the verifications so far have been gathering pace. On January 20, the 9th meeting of the Resource and Energy Agency's Energy Efficiency and Conservation Subcommittee clarified the points of the discussions so far, and discussed how to assess each specific policy measure and its effect in the future.

IEEJ Chairman and CEO and Subcommittee member Masakazu Toyoda proposed the following: (1) A short investment payback period is necessary to promote energy conservation and climate actions and to achieve their targets, and in many cases, financial assistance is essential, (2) a stable subsidy system and tax breaks should be provided from government budget, and (3) in doing so, for departments that span multiple ministries, adjustments must be made between the ministries to ensure cooperation in order for the measures to be implemented effectively. Further, regarding the residential and transportation departments, Mr. Toyoda pointed out the departments' high potential for energy conservation and the importance of the measures and policies taken by the presiding transportation ministry. In particular, he suggested that mandatory compliance of buildings with the energy conservation standards should be promoted, aiming for full implementation by 2020, in cooperation with other ministries where necessary.

5. Renewable Energy Price Committee Kicks Off Amidst Much Attention

Hisashi Hoshi, Board Member, Director
New and Renewable Energy & International Cooperation Unit

Where is the purchase price of solar electricity headed? The meetings of the Procurement Price Calculation Committee for the next fiscal year began on January 15. The Committee, which has been the center of attention since the launch of the FIT system, is receiving even more attention due to the withholding of licensed capacity connection last year caused by a plan which focused excessively on solar PV.

The calculation of the procurement price starts with a detailed review of the cost structure. First, the secretariat of Agency for Natural Resources and Energy proposed 290 thousand yen/kW as the system price which consists mainly of solar panels. This price is higher than the 275 thousand yen calculated based on the result of the previous fiscal year, due perhaps to the end of the down trend of the PV panel market. In contrast, operation and maintenance costs including those for repairwork decreased to 6000 yen/kW, down 2000 yen from the previous fiscal year. Most notable of all is the proposed capacity factor of 14%, up 1% from the previous year and rising for the second consecutive year. Meanwhile, prices for non-solar electricity sources are unlikely to change once again as there is little operating capacity.

Another highlight of the Committee meeting is the handling of the "boosting period" stipulated in the FIT law. The boosting period, a three-year period at the start of the FIT system during which "special consideration is given to profitability", ends in June this year. The 1–2% premium currently added to the internal rate of return (IRR) "in view of profitability" will be removed from the procurement price of solar power from July onwards; solar electricity will thus have two prices next fiscal year, one for April through June and another for the months beyond.

Based on the secretariat's proposal, the purchase price of solar electricity for the next fiscal year, especially for July onwards, is likely to be cut by 20% from current levels (estimated by the author). This will be yet another—and the greatest—downward revision of the purchase price, which has had two 10% cuts from the initial 40 yen to 36 yen, then to 32 yen. Nevertheless, the revision is in line with the conventional procedure and is in compliance with the FIT law. Amidst criticism of introduction of renewables unevenly concentrated on Solar PV, the authorities stuck to the rules and did not make flexible exceptions, and thus tried to maintain the system's credibility rather than act practically.

Meanwhile, for other electricity sources that are slow to pick up, the secretariat is suggesting maintaining the current IRR premium under a new concept of "premium based on introduction status". While wind and geothermal power are taking off only slowly due to the long development period, since ongoing projects will supply only 5–6 thousand MW of wind power and 0.4 MW of geothermal power, discussions on further measures for promoting these energies, including deregulation and the premium based on introduction status, are keenly awaited.

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