

IEEJ e-NEWSLETTER

No. 45

(Based on Japanese No. 132)

Published: September 12, 2014

The Institute of Energy Economics, Japan

IEEJ e-Newsletter Editor: Yukari Yamashita, Director

IEEJ Newsletter Editor: Ken Koyama, Managing Director

Inui Bldg. Kachidoki, 13-1 Kachidoki 1-chome, Chuo-ku, Tokyo 104-0054

Tel: +81-3-5547-0211 Fax: +81-3-5547-0223

Contents

Summary

【Energy Market and Policy Trends】

1. Developments in Energy Policies

2. Developments in Nuclear Power

【Global Watch】

3. Middle East: Increasing Concern about the Islamic State

4. Russia Watching: Ukraine Crisis Spiraling out of Control

5. US Watching: EPA's Environmental Regulations and Private Businesses

Summary

【Energy Market and Policy Trends】

1. Developments in Energy Policies

On August 19, the 14th meeting of the Strategic Policy Committee was held, the first one since the revision of the Basic Energy Plan. The topics discussed included: (1) report on the status of each committee and subcommittee (Natural Resources and Fuel Committee, Energy Efficiency and Conservation Subcommittee, and Nuclear Energy Subcommittee), and (2) status of compilation of the technological roadmap.

2. Developments in Nuclear Power

The moves toward restarting the Sendai Nuclear Power Plant must be closely monitored. Regarding Japan's nuclear policy, the Nuclear Energy Subcommittee discussed securing skills and human resources, and the risks specific to the nuclear business.

【Global Watch】

3. Middle East: Increasing Concern about the Islamic State

Despite limited air strikes by the US, the Islamic State (IS) forces are steadily digging in and expanding. Prime Minister Maliki was forced to step down and a new prime minister was designated, but the situation in Iraq and surrounding countries remains uncertain.

4. Russia Watching: Ukraine Crisis Spiraling out of Control

The tit-for-tat economic sanctions between the West and Russia are intensifying. With no sign of a political solution, the Ukraine crisis is worsening and threatens to drag on.

5. US Watching: EPA's Environmental Regulations and Private Businesses

The impact of environmental regulations introduced by the Environmental Protection Agency (EPA) such as the Renewable Fuel Standard, ozone, and CO₂ is being discussed in various areas and is becoming an important issue under the Obama Administration.

1. Developments in Energy Policies

Akira Yanagisawa, Senior Economist, Manager
Energy Demand, Supply and Forecast Analysis Group
Energy Data and Modelling Center

On August 19, the 14th meeting of the Strategic Policy Committee was held, the first one since the revision of the Basic Energy Plan. Mr. Sakane, advisor for Komatsu, took over from Mr. Mimura as chairman, and Ms. Ito, representative director of Nihon Dento Kougyo Co., Ltd., newly joined the Committee. The topics discussed included: (1) report on the status of each committee and subcommittee (Natural Resources and Fuel Committee, Energy Efficiency and Conservation Subcommittee, and Nuclear Energy Subcommittee), (2) status of compilation of the technological roadmap, and (3) AOB.

Held for the first time in eight months after the “Opinions on the Basic Energy Plan” was finalized last December following heated debate and eventually approved by the Cabinet in April, the meeting focused on the reports of the discussions in each committee and subcommittee. Many members commented on the concerns regarding the rapid introduction of renewable electricity, particularly non-residential solar PV, propped up by the feed-in-tariff system, the worsening international relationship with Russia triggered by the Ukraine crisis, and clarification of the course up to the restart of the nuclear power plants.

In response to a question from Mr. Shiga on the estimated schedule for setting a quantitative energy mix, the then METI Minister Motegi said: “It is important to set the optimum mix of energy sources promptly. The power sources will be divided into baseload, middle load, and peak load power sources. Also, renewable energies will continue to be introduced actively beyond the three-year period of maximum introduction. The optimum mix of power sources will be set promptly and at the right timing, in time for the deadline for target setting in COP21 at the end of next year.” With these words, Mr. Motegi suggested that he will not necessarily stick to the decision at COP19 requiring all countries that can to submit the target beyond 2020 by the first quarter of 2015.

Meanwhile, IEEJ CEO and Chairman Masakazu Toyoda commented in the meeting as follows:

“In Europe, FIT is becoming widely recognized as the most effective but most expensive system. The already licensed capacity of 89 GW, if fully introduced, could cause a rise of 44 trillion yen or 2.5 yen/kWh in 20 years (10% for residential, 14% for industrial). The purchase price of mega solar power is too high; it must be adjusted as soon as possible, as vast capacity is being introduced in a short time. In Germany, there is a considerable difference in purchase price between residential solar PV and mega solar. Adjusting the purchase price once every year is not enough: Germany adjusts it every month. Japan does not set different surcharges for industrial and residential users, but in Germany, large companies are exempt from paying the surcharge. If the authorities think that the current system will affect Japan’s industrial competitiveness, they must reduce the burden on industry.

I have three points regarding nuclear power. The first is human resource development. Europe and the United States have both continued with nuclear power despite the Chernobyl and Three Mile Island accidents, and have had great difficulty securing human resources after the accidents. In the United States, the Department of Energy itself is funding scholarships, so perhaps the Agency of Natural Resources and Energy could set up a scholarship, too. The second point is the discussion on the confidence in municipalities. The authorities should study the situation in other countries, and invite guests from overseas to join the discussion.

The third is the technological roadmap. It is essential to use coal, but IGCC and A-USC (Advanced Ultra-Super Critical) will not be completed until 2030, which is too late. Our inability to use the coal that we already have will continue until then. Regarding the discussion on artificial photosynthesis, ideas such as converting coal into organic compounds could be taken further.

2. Developments in Nuclear Power

Tomoko Murakami, Manager
Nuclear Energy Group, Strategy Research Unit

On August 15, acceptance of scientific and technical opinions (public comment) on the draft review report on Units 1 and 2 of Sendai Nuclear Power Station of Kyushu Electric was stopped. According to the Nuclear Regulation Authority (NRA), approximately 17,000 opinions were received, showing the high level of public interest in this issue. On September 10, the NRA finalized the review report and Kyushu Electric will submit amendments for permits for revising construction plans and operational safety programs, for the NRA to complete the reviews and the procedure for restarting the plants to be completed.

Governor Yuichiro Ito of Kagoshima Prefecture stated that “the energy policy is the government’s responsibility, and to gain the consent of the hosting community, the government needs to clearly state in writing that it is essential to restart the nuclear power plants.” As the importance of nuclear power is clearly indicated in the Strategic Energy Plan approved by the Cabinet in April, the government needs to take a firm stance so that the nuclear power plants that have been proven to meet the new regulatory requirements and have completed the necessary procedures can be restarted without hindrance.

On August 7 and 21, the fourth and fifth meetings of the Nuclear Energy Subcommittee were held to discuss the desirable direction of nuclear power. The discussions focused on how to secure skills and human resources as the electricity market is liberalized, and the business risks specific to nuclear power, which private companies can only partially bear. One notable comment stated that the government should take overall responsibility for the direction of the back end and nuclear fuel cycle policies, and accordingly, should consider treating Japan Nuclear Fuel Ltd., which operates the reprocessing business, as a private, joint-stock company. It was also decided to set up a new WG, based on the opinions of many members that detailed discussions by experts are needed to determine how to mitigate the impact of unscheduled decommissioning on finance and accounting.

Maintaining human resources and passing on expertise have been an issue for the Japanese nuclear industry since before the Fukushima Daiichi accident. The industry matured a long time ago, and its future prospects are limited in scale. However, looking overseas, nuclear power is likely to continue to expand actively, particularly in emerging countries where energy demand is booming, such as in China whose 21st domestic nuclear plant has just begun to successfully transmit electricity on August 20 and which is close to joining the ranks of the world’s major nuclear countries, and Argentina whose Atocha Unit 2 reached initial criticality in June. Reminding the younger generation that the future market lies not only in Japan, and developing businesses overseas as well as in Japan, might be a way for Japan to maintain human resources and pass on expertise.

On August 7, the Japan Atomic Energy Agency and Mitsubishi Heavy Industries decided to take part in designing France’s next-generation reactor ASTRID and developing related technologies. With no effective measures in sight in Japan for developing and maintaining human resources, an effective approach would be to secure competent resources and advanced technologies through an international framework like this. As domestic industries will shrink in size in the years ahead, universities and research institutes must maintain their technological standard by actively providing the younger generation with occasions like these for learning advanced technologies.

3. Middle East: Increasing Concern about the Islamic State

Koichiro Tanaka, Managing Director &
President of JIME Center

This summer saw the Islamic extremist forces gain ground in Iraq, Syria and Libya, which are in a state of civil war. Despite mounting concerns, the international community lacks a comprehensive strategy for tackling the situation.

Though the speed of its aggression has slowed down, the Islamic State (IS) forces are steadily digging in and expanding in Iraq and Syria. Even the Peshmerga, the armed forces of the Kurdistan Regional Government (KRG) known for its robust defense, could not hold off the IS and had to retreat on the northern front. Consequently, the IS seized Mosul Dam in Ninawa Governate, a strategic location on the Tigris River, took the Sinjar village of the Yazidi ethnic minority, and have set their eyes on Erbil.

After the fall of strategic locations, a humanitarian crisis involving genocide of minorities, and the possibility of attacks on the capital of the KRG, the US launched air strikes on the IS forces in Iraq but their scale and effects have been very limited. With the locations of the IS military command and its leaders unknown, and suffering from sequestration, the US is unlikely to do much besides reacting to the situation, while the IS will continue expanding in neighboring Syria where it is gaining ground. The execution by the IS of two American nationals whom it had captured in Syria in retaliation for the air strikes is causing concern over the safety of a Japanese national, whose whereabouts can no longer be traced.

An international response is required concerning the source of funds of the IS, which is allegedly involved in the illegal sale of oil, in addition to the traditional sources of ransoms and “donations” from other countries. Furthermore, there is serious concern that the foreign militants, who have been recruited not only from the MENA countries and Asia but also from the US and Europe, may eventually pose threats in their native countries after being influenced by the radical beliefs of the IS through the civil wars. So far, the US and Europe have been reluctant to attack the Syrian contingent of the IS, which also opposes Assad, but as the situation worsens, the US government is showing signs of a change in policy. Taking military action within the border of Syria, however, could intensify the confrontation with the Assad administration, which is demanding that Syria’s sovereign rights be respected.

The efforts to end the political confusion in Iraq resulted in the designation of Mr. Haider al-Abadi as prime minister, with the support of Russia, Iran and Saudi Arabia in addition to the West. Former Prime Minister Maliki, who was refusing to leave, was eventually forced to accept the situation. However, this cannot completely end the sectarian conflict within the country, and as terrorist attacks on both Sunni and Shiite mosques continue nationwide, the negotiations on forming the new cabinet are stalling.

In Libya, the framework for power transition collapsed as the conservative Misrata militia known as the “Dawn of Libya” seized the airport in Tripoli, the capital, and declared the establishment of a new government. The Dawn of Libya is also fighting against the secular forces of General Khalifa Haftar who rules the eastern city of Benghazi, and has declared that it will retaliate against Egypt and UAE for conducting unilateral air strikes on its territory, thus adding to the tension. Regarding the conflict in Gaza that has claimed more than 2,100 lives, a ceasefire was agreed after several temporary attempts, although its effectiveness remains in doubt. In Turkey, Prime Minister Erdogan won the presidential election as expected, and Foreign Minister Davutoglu has been ordered to form the new cabinet.

4. Russia Watching: Ukraine Crisis Spiraling out of Control

Shoichi Itoh, Manager, Senior Analyst
Global Energy Group 2, Strategy Research Unit

The confrontation between Russia and the West over the “Ukraine crisis” is continuing to intensify, with no sign of a solution. In mid-July, the US announced additional economic sanctions restricting four major Russian energy companies, including Rosneft, and the Bank of Foreign Economic Activity from financing in the US. Subsequently, at the end of the month, the Council of the European Union launched stronger sanctions against Russia including prohibiting trading any bonds and stocks issued by state-owned Russian financial institutions with a maturity longer than 90 days within the financial markets of Europe, and exporting any facilities or technologies needed for developing oil fields.

On August 7, Russia announced in retaliation a one-year ban on importing food and agricultural products from the US, EU, Norway, Canada and Australia. Some estimate that the sanctions will cost the EU 12 billion euros. As the prolonged Ukraine crisis threatens to drag down the European economy, the real GDP growth rates for the second quarter of 2014 were reported to be 0% for the EU and minus 0.2% for Germany. Though Russia only accounts for 3% of Germany’s exports, the country’s investment in Russia amounts to 20 billion euros in total. Companies in Germany involved in exporting to Russia are hiring 400,000 people.

The energy firms and financial institutions of Russia are starting to feel the pain of the sanctions. In August, the Russian government, at the request of Rosneft, began considering purchasing 42 billion dollars of the company’s bonds in order to bail it out. The company has debts of 12 billion dollars and 17 billion dollars maturing at the end of 2014 and in 2015, respectively. The Russian Agricultural Bank and the Bank of Foreign Economic Activity have each requested the government for 2.8 billion dollars and 14-17 billion dollars of aid, respectively. The real GDP growth rate of Russia for the first quarter of 2014 remained low at 0.9% year-on-year, and some even speculate that the growth rate for the entire year could become negative. The amount of net capital outflow (capital flight) from Russia in the first half of 2014 was 2.2 times higher than that during the same period last year.

Since July in 2014, the offensive against the pro-Russian forces by the Ukrainian government forces has intensified in eastern Ukraine, and the pro-Russian militants are gradually being cornered. On August 12, President Putin decided to send a food and medical aid convoy to eastern Ukraine where the supply shortage is worsening. The West and the Ukrainian government are wary that such “humanitarian aid” might be used as a cover to strengthen the military aid to pro-Russian forces, including providing military supplies. Russian trucks are traveling back and forth across the border into the pro-Russian areas and back without proper inspection or permission by the Ukrainian government or the International Committee of the Red Cross (ICRC).

In Europe and the US, fresh concerns are being expressed on the possibility of Russia’s military intervention in Ukraine. The stakes in the “game of chicken” between Russia and the West over Ukraine are rising as neither party can find a solution while suffering economic damages.

5. US Watching: EPA's Environmental Regulations and Private Businesses

Ayako Sugino, Senior Researcher
Coal & Gas Subunit
Fossil Fuels & Electric Power Industry Unit

For the manufacturing industry including energy, environmental regulation is a key issue that determines the profitability of the business and opportunities. In particular, under the Obama administration, regulation by the Environmental Protection Agency (EPA) is becoming the main battlefield between the government and industry.

On August 22, the EPA submitted to the White House a proposal on the amount of biofuel that oil companies must mix with the gasoline and light oil that they sell in 2015 based on the Renewable Fuel Standard (RFS). The proposed regulation will be offered for public comment following a review by the White House. This will kick off this year's round of the battle between the oil companies, which is demanding a revision of the RFS due to the blend wall for ethanol and the decline in gasoline consumption associated with the improvement in gasoline mileage, as well as the delay in commercialization of next-generation biofuel that competes less with food, against the agriculture and biofuel industries which demand that the RFS be maintained.

On the same day, in Louisiana, federal Congressmen held an event to request the EPA not to tighten the standard for atmospheric ozone concentration. The current ozone standard was issued in March 2008 under the former Bush administration and judicial precedents have indicated that it is unreasonably lax. The EPA began reviewing the standard in 2009 and submitted draft revisions to the White House in July 2011, but the Obama administration ordered the suspension of the rulemaking, fearing their impact on the recovery of the US economy. This event in Louisiana aims to stop the Obama EPA from raising the ozone standard, which is nearing the timing for revision, as it could have a tremendous impact on manufacturing.

When proposing important rules such as the RFS, the ozone standard and the CO₂ emissions regulation on power plants, the EPA is required to analyze the social and economic impacts that such rules would have if enacted. As a requirement for the review by the White House, the EPA must estimate the cost and benefit of a rule in monetary terms, and also indicate that there is a net positive benefit.

Regarding the EPA's regulatory impact analysis, which, as described above, is an important decision factor, in July, the Government Accountability Office (GAO) released a report on the investigation of seven regulations implemented by the EPA between 2001 and 2011. The report pointed out that the EPA's regulatory impact analysis often does not provide enough explanation as to why the regulation is necessary (reasonable grounds to believe the existence of market failure, and that health, safety and the environment cannot be protected without government regulation). The report further indicated that the EPA's impact analysis did not sufficiently analyze the cost and benefit of the regulation and sometimes used obsolete data, did not provide clear grounds for the reference case estimations (the scenario without the regulation enacted), and that there are doubts regarding the consistency of the EPA's decision-making, because the method used to obtain the estimated "social cost of carbon" referred to in the impact analysis of the CO₂ regulation is different from regular cost-benefit analysis.

This GAO report consequently provided perfect ammunition for the industries and lawmakers which oppose the environmental regulation. However, the GAO recommendation is part of the multi-layered mechanism of US politics in which governmental agencies are required to mutually check the policy decisions of one another to achieve "a rational decision based on a scientific basis", so that government regulations will not cause excessive burden on private economic activities.

Past IEEJ Events

Energy Indicators of Japan

IEEJ Homepage Top

Back Numbers of *IEEJ e-Newsletter*