

# ***IEEJ e-NEWSLETTER***

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## Summary

### **[Energy Market and Policy Trends]**

#### **1. Discussions on Energy Policies in the Basic Policy Subcommittee**

On August 27, the second meeting of the Basic Policy Subcommittee was held to discuss the Basic Energy Plan. The meeting discussed the recent status of 3E+S as the basic stance toward the energy policy.

#### **2. Nuclear Power: The International Research Institute for Nuclear Decommissioning, Water Contamination, and the Reviews for Restarting the Nuclear Power Plants**

The following topics are drawing keen attention: the establishment of the International Research Institute for Nuclear Decommissioning to tackle the decommissioning of the Fukushima Daiichi Nuclear Power Plant, the issue of contaminated water in Fukushima and the progress of the reviews by the NRA based on the new safety requirements.

#### **3. Direction of the Global Warming Prevention Policy after the General Election in Australia**

There may be a change of power in the Australian federal election which will be held on September 7. If so, it could have a considerable impact on the future course of the international coal market and the international negotiations on global warming.

#### **4. The Uncertain Effect of the Settlement between the EU and China over the Dumping of Solar Cells**

The EU and China have agreed to reconcile over the issue of dumping of solar panels, but the effect of the settlement remains uncertain. Japan, too, needs to face the expected influx of Chinese solar panels.

#### **5. Notable Trends in the Global Natural Gas and LNG Markets in the First Half of 2013**

Global LNG trades continued shifting to the east while decreasing the total traded volumes in the first half of 2013 following similar trends in 2012, with contrasting developments in the Pacific and Atlantic regions.

## 1. Discussions on Energy Policies in the Basic Policy Subcommittee

Akira Yanagisawa, Senior Economist  
Energy Data and Modeling Center

On August 27, the second meeting of the Basic Policy Subcommittee was held to discuss the Basic Energy Plan. The meeting discussed the recent status of 3E+S as the basic stance toward the energy policy. The secretariat summarized the current situation by reviewing the facts, and some members highly evaluated the wording and style of the summary as being helpful for promoting information sharing and understanding of the situation. However, some members objected to using the meeting material as the basis for future discussions, arguing that it is biased and does not sufficiently reflect the changes after the earthquake disaster. The Secretariat stated that more information on hydrogen and renewable energies and energy conservation would be added to the meeting material.

Many members pointed out the seriousness of the security problem and risk that Japan depends on imports for most of its energy supply, and that this dependence has increased since the earthquake. The members generally agreed on the need to use an appropriate balance of various energy sources, but their opinions differed regarding each individual energy source and the means to achieve it.

Regarding how the policy should be implemented, there were few comments as to which areas the market mechanism should be applied to, and when and how the government should intervene to resolve “market failure”. This issue, however, is one of the key factors for defining the framework of the Basic Energy Plan, and so must be established at an early stage as a basis for the discussions. Regarding the individual energy sources, as expected, there were many comments on renewable energies and nuclear power. However, the secretariat focused on explaining the current situation with facts at this meeting, thus discouraging the members from discussing individual energy sources in detail.

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

- I thank the secretariat for clearly stating that 3E+S is the criterion for discussing the energy policy. Neither nuclear power, nor fossil fuels, nor renewable energies is perfect by itself. It is important to use a proper balance.
- While the reviews being carried out by the independent Nuclear Regulation Authority are some of the strictest in the world, there is somewhat deviation from the “international standard” that the risk of nuclear or any other energy can never be zero. It is important for the public to accept the idea of reducing the risk to a tolerable level.
- The shutdown of nuclear power plants is generating huge costs and the outflow of national wealth. The economic impact of this outflow should be analyzed closely, as it could worsen if the yen depreciates further. Regarding the FIT system, the accumulated surcharge generated from the installed capacity as of the end of May and the licensed capacity of 20 GW is expected to reach 16.5 trillion yen, or an additional cost of 0.9 yen/kWh spread over a period of 20 years. This could accelerate the hollowing out of industry, as more companies could leave Japan if the cost of electricity rises any higher. With renewable energies, we must advance what has not been promoted sufficiently, but lower the price if renewables become excessively promoted.
- The situation in the Middle East, particularly Egypt and Syria, has changed drastically in the past month. Problems such as the unrest in the Middle East cannot be left to market mechanisms; energy security must be addressed by the state in a responsible manner.

## **2. Nuclear Power: The International Research Institute for Nuclear Decommissioning, Contaminated Water, and the Reviews for Restarting the Nuclear Power Plants**

**Tomoko Murakami**, Group Manager  
Nuclear Energy Group, Strategic Research Unit

On August 1, the International Research Institute for Nuclear Decommissioning was established for the 17 domestic nuclear organizations and power companies to jointly develop the technologies needed for decommissioning the Fukushima Daiichi Nuclear Power Station. The organization commenced work on August 8. Professor Hajimu Yamana of the Kyoto University Research Reactor Institute, who was appointed as board chairman, indicated that “the top priority is to remove the molten fuels”, and pledged to “work for completing the decommissioning as early as possible by gathering expertise from both Japan and abroad.” The decommissioning of Fukushima Daiichi is a challenge of unprecedented difficulty for the world; the organization is expected to promote research on nuclear safety, while developing internationally-oriented human resources through R&D on the decommissioning and contributing to the recovery and rehabilitation of the Fukushima area.

The most serious concern regarding Fukushima Daiichi is the contaminated water containing high-level radioactive substances which is leaking into the ground water and flowing into the sea. According to the weekly update by Tokyo Electric on the status of the contaminated water in the buildings and the progress of its treatment and storage, the cause of the leakage of an estimated 300 tonnes of contaminated water per day has not been identified yet. The expert group is now considering building a water-shielding wall with frozen soil to stop ground water seeping into the building so that the contamination can be kept under control. The parties concerned need to identify and implement reliable and realistic measures as soon as possible, though it is extremely difficult to completely stop the contaminated water leaking off-site at present.

Regarding the review of the nuclear power plants for compliance with the new regulatory requirements implemented on July 8, a total of fifteen review meetings had been held by the end of August, and the number of meetings including the hearings of power companies now exceeds one hundred. The Nuclear Regulation Authority (NRA) is dividing its reviews into two groups, namely “compatibility of the plant with the safety requirements” and “earthquake and tsunami countermeasures”. So far, the NRA has pointed out issues with all of the plants that it has reviewed, requiring the power companies to take action.

For example, in response to the explanation on the tsunami evaluation for Sendai Units 1 and 2 by Kyushu Electric at the 11<sup>th</sup> compliance review meeting held on August 21, the NRA suggested that the power company “should postulate a larger tsunami irrespective of the record of large tsunami in the past”. Further, regarding the review of the validity of the severe accident countermeasures, the NRA is highlighting the actual procedure for ending the accident together with its validity, and is closely checking the procedures based on the characteristics of each plant rather than the standard procedures. While the power companies in general are responding quickly, it takes a considerable time to answer up to a dozen or so questions each time, and so the compliance review is expected to take several more months.

Since compliance with the new requirements is a precondition for restarting, and the timing of restarting remains uncertain, the impact of the shutdown, including the outflow of national wealth, is continuing, aggravated by the increased use of fossil fuels and the weaker yen. Meanwhile, the safety decision by the NRA as an independent regulator has an enormous impact and is a major concern for energy policy-makers and industry officials both in Japan and abroad.

### **3. Direction of the Global Warming Prevention Policy after the General Election in Australia**

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

On August 9, Prime Minister Rudd decided to hold the federal parliamentary election on September 7, one week earlier than initially planned. The opinion polls reportedly indicate that the coalition of conservative opposition parties is ahead of the ruling Labor Party in the run-up to the voting day, so there may be a change of government. The election is also drawing attention because Australia's global warming prevention policy could change if the opposition wins, as the ruling Labor Party and the opposition have different policies.

Since returning to power in the 2007 general election, the Labor Party has been actively promoting a global warming prevention policy, including ratifying the Kyoto Protocol which the former administration chose not to do. In July 2012, it introduced the carbon tax as part of the Clean Energy Act, setting a policy direction of "migrating" to an emissions trading system from 2015. Internationally, in addition to joining the Kyoto Protocol, the party has sought to expand the international carbon trading market, including linking the emissions trading systems of Australia with the EUETS and furthering the ties with the trading system of the State of California. In contrast, the coalition of opposition conservative parties is clearly opposed to the global warming prevention policy of the administration and has officially pledged in its current election campaign to change the government's policy, including abolishing the carbon tax.

According to the opinion polls, less than 10% of the population sees global warming as a major campaign issue, and people are now becoming even less interested in it compared to other policy issues such as the economy. However, after returning to his former post, Prime Minister Rudd immediately announced that the "migration" to an emissions trading system would be brought forward by one year. This is a political decision to use the low-priced emissions credits to alleviate the current cost burden borne by industry as a coal tax. In any case, Prime Minister Rudd views global warming prevention as a major campaign issue.

Will the carbon tax be abolished if the opposition coalition wins? The matter is not so simple. Some believe that the carbon tax will not be discontinued even if the conservative coalition comes to power, as it will not be easy to find an alternative source of tax revenue to replace that earned by the carbon tax of the current government.

However, a change in government is very likely to change the efforts by the current administration to form an international emissions trading market through collaboration with other countries, as well as its stance toward the UN negotiations on the Kyoto Protocol which it has decided to join. Despite having lower GHG emissions among the countries, Australia has played a key role in the international negotiations in the United Nations Framework Convention on Climate Change. Thus, the result of the general election could have a considerable impact on the future course of the international coal market and the framework negotiations on global warming prevention, and must be monitored closely.

## 4. The Uncertain Effect of the Settlement between the EU and China over the Dumping of Solar Cells

**Hisashi Hoshi**, Board Member, Director

New and Renewable Energy & International Cooperation Unit

The trade row between Europe and China over the dumping of solar cells has been settled. According to the announcement by the European Commission at the end of July, the parties reached an agreement to set a minimum export price and an annual import cap. The minimum price will be applied only on the products below the annual import cap; an anti-dumping duty of 47.6% will be applied to any quantity exceeding this limit. Although actual figures have not been released, the media estimates the minimum price at €0.56/W, and the annual import cap at 7 GW or equivalent to the current share of Chinese panels in Europe.

Opinions on this agreement are split, and some doubt its effect. European Commissioner for Trade Karel De Gucht, who led the negotiations with China, praised the settlement that he achieved, saying that “the agreement will help stabilize the European solar panel market”, but many view the minimum price of €0.56/W as a mere endorsement of the status quo, which will not stop the influx of Chinese panels. This price is considered sufficient to keep the Chinese manufacturers, especially the major ones, competitive in the market.

In addition, the implications of this limit on imports will vary significantly depending on the future trend of the European market. The European Commission estimates that “the share of Chinese products will fall significantly from the current 80% (by setting the cap) as the European market will continue to grow (underlined by the author)”. The Commission further claims that the European market will continue to depend on imports as Europe has a demand for panels of 17 GW (as of 2012) and a production capacity of only 7 GW (estimated), and thus Chinese products within the import cap will not compete with European manufacturers. However, the growth of the European solar power market is slowing, with added capacity falling by 23% year-on-year in 2012. 2013 has seen significant cuts in the purchase price of renewable electricity and the revision of the system for promoting renewables. If the market shrinks any further, Chinese products will certainly compete with local products even within the import cap.

Behind this solution with its uncertain effect lies the fact that Europe’s policy to introduce solar power is not viable without Chinese panels. The production capacity of Europe is not sufficient, and the European Commission emphasizes in its announcement of the agreement with China that it will consider the stable supply of solar panels. It is not sufficient to consider only the solar power industry, as cheap panels help control the surcharge associated with the purchase of renewable electricity.

This situation is not irrelevant for Japan. Following the introduction of the system for purchasing renewable electricity, the margin of Japan’s solar panel production capacity has decreased sharply. The capacity of solar electricity licensed for purchase reached 20 GW by the end of March, and this demand cannot be met without the massive supply capacity of China. It is necessary to solve the difficult challenge of keeping Japanese panel manufacturers compatible with imports from China while maintaining a healthy market.

## 5. Notable Trends in the Global Natural Gas and LNG Markets in the First Half of 2013

**Hiroshi Hashimoto**, Senior Analyst  
Fossil Fuels & Electric Power Industry Unit

The global LNG trade is expected to shrink in 2013 for the second year in a row, as this newsletter previously discussed. Preliminary figures suggest that volumes of internationally traded LNG in the first half of 2013 were around 116 million tonnes, representing a 2% year-on-year decline. This article looks at some regional features observed behind this overall trend.

The Northeast Asian markets (Japan, Korea, China and Chinese Taipei) imported 80 million tonnes, nearly a 5% increase from the corresponding period in 2012. While Japan, the largest importer of LNG and natural gas in the world, observed its first year-on-year decline in six-month LNG imports since the nuclear crisis in 2011, increasing Korean and Chinese imports contributed to the increase in the regional total.

China in particular imported 8.34 million tonnes of LNG, a 25% year-on-year increase, and 9.43 million tonnes of pipeline gas, a 54% year-on-year increase, in the first six months of 2013. As China consumed 81.5 bcm (60 million tonnes of LNG equivalent) in the same period, a 13% increase compared with the corresponding period in 2012, the country also increased domestic gas production by 9% year-on-year. Although the growth in production has been significant in recent years, even faster expansions of LNG imports since 2006 and pipeline gas imports since 2009 have been registered, with a combined 30% share of imports in the total gas supply in the calendar year 2012 and the first half of 2013.

Although Japan's six-month LNG imports declined year-on-year in the first half of 2013 for the first time since the East Japan Great Earthquake, yet the corresponding payment in six months registered another record high of JPY 3.5 trillion, due to persistently high LNG prices, as well as the weaker Japanese currency. Another year-on-year increase of monthly LNG imports in July 2013 resulted in the highest ever monthly payment of JPY 621.3 billion for the commodity, exacerbating pains to the nation's economy caused by the excessive burden of LNG purchase, amplified by the recent depreciation of the local currency.

The European LNG markets were quiet again in the first half of 2013, apparently reducing imports by 25%, or 6 million tonnes compared to the corresponding period in 2012. With few factors to gear up gas demand on the continent except for unusually cold snaps in the first quarter, a 10% increase in pipeline gas imports from Russia effectively replaced the reduced LNG imports. While domestic gas production in the United States grew by only 0.4% year-on-year in the first half of 2013, gas consumption in the country also increased modestly by only 2% as gas consumption for power generation shrank year-on-year for seven straight months until June 2013. Therefore any significant increase of gas and LNG imports into the country is not expected.

The ratio of the East-of-Suez - Asia Pacific and the Middle East - LNG imports to the West-of-Suez ones grew from 6:4 until 2010 to 3:1 in the first half of 2013. This shift to the east is expected to continue for the time being, as more new LNG receiving terminals are expected to start operating in the next couple of years following ones in Singapore, Malaysia, and India in 2013 and dismal LNG activities are expected in Europe.

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