

Event Report on the 75th IEEJ Energy Seminar

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On 25 November 2014, a briefing session on the Medium-Term Renewable Energy Market Report 2014 was held at the Institute of Energy Economics, Japan (IEEJ). During the briefing session, the 50 or so participants who took part had the opportunity to hear an overview of the report, which is issued by the International Energy Agency (IEA) every year, in a speech by the head of the Renewable Energy Division of the IEA..

In the session, the IEA's Renewable Energy Division Head Paolo Frankl described the mid-term outlook for the renewable energy markets. The main points covered were as follows:

Amid a rapid increase in the capacity of renewable energy power generation facilities that have been introduced in the past few years, renewable power generation has been reaching grid parity in many countries and regions, even in the case of solar photovoltaic with its relatively high power generation costs. However, the uncertainties and lack of clarity evident in both government policies and markets will pose considerable risks to the continued introduction of renewable energy in the years ahead.

Biofuels and renewable thermal energy are (like renewable energy-based power generation) energy sources of the highest importance. However, as government policies for promoting biofuels and renewable thermal energy remain insufficient all over the world, such policies need to be further enhanced.

Turning to the questions of the state of progress of the introduction of renewable energy in Japan and implications for future policies, it was suggested that to date, renewable energy introduction has leaned heavily towards solar power generation, and that there is a need to consider optimized energy portfolios based on a wide variety of renewable energy-based power generation types, including wind power, geothermal power, small/medium-sized hydropower and biomass power generation. The cost of solar power generation in Japan is higher than in other countries due to the impact of higher personnel costs and other factors; however, the high level of feed-in tariff (FIT) is hindering reduction in system costs. It would also be advantageous to consider the development of government policies aiming at promoting greater percentage of self-consumption of power generated from

renewable energy to reduce negative impact on the grid. The overly heavy concentration of large numbers of solar power generation projects within Hokkaido and Kyushu is undesirable. Strengthening interregional transmission capacity is an essential policy, but merely building up such interconnecting systems is not in itself sufficient as a policy, bearing in mind that Ireland and the Iberian Peninsula have introduced much more variable renewables than Japan in spite of their grid isolation from the neighboring countries.

The flexibility of grids depends on the availability of the measures such as the grid network, backup power sources, power storage facilities and demand-side measures; Japan is exceptionally well equipped with gas-fired thermal power generation, and is one of the world's leading countries in terms of the pumped storage hydro power generation capacity. On the demand side, Japan's advanced energy management technology must be helpful for variable renewable to be integrated to the grid, while the improvement of grid networks through the building up of interregional transmission lines will make it easier to extend the integration of variable renewables.

Formulating optimal policies for promoting the introduction of renewable energy frequently poses the dilemma of how to promote long-term investment in renewable energy while also maintaining the balance of supply and demand in power markets in the short term. Given such conditions, possible policies which are being considered as options include combinations of tenders for long-term power and tenders for reserve power.

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