Wood Biomass Power Generation Target for 2030: Impact on Biomass Fuel Supply in Japan

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Abstract

The “Long-Term Energy Supply and Demand Outlook” announced by the Ministry of Economy, Trade and Industry in 2015 presented the energy mix of Japan for 2030. According to this, 3.7 - 4.6% of the total assumed power generation in 2030 is designated to come from biomass power generation, most of which is expected to use “timber (wood)” as a fuel. This paper examines the feasibility of 2030 target of wood biomass power generation as seen from the viewpoint of the quantity of fuel supply, with a brief discussion on the political options available for Japan at the end.

The required volume of wood biomass fuel in 2030 in Japan is estimated as an equivalent to 256 - 355 PJ p.a. which is much higher than the domestic wood supplies in 2015 of 215 PJ even including wood not intended for fuel use, implying that Japan is highly likely to depend on wood fuel imports in a large scale. Although wood biomass traded in the global market is expected to grow from an equivalent to 521 PJ in 2015 to 1,216 PJ in 2030, Japan would still require a large proportion of the traded wood in the market. Therefore, it is necessary for Japan to take international actions to secure and increase the fuel supply sources.

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