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Expansion of Renewable Energy and Burden on Household Finances

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Summary

- In the draft of the Sixth Basic Energy Plan, a target for mass introduction of renewable energy was presented. The burden on households in fiscal 2030 was estimated based on the target power generation mix.
- First, electric power consumed in fiscal 2030 was estimated to be about 880 billion kWh (-5.1% in comparison to FY2019). Based on this, we estimated that the renewable energy surcharge per household will increase by 41% between FY2019 and FY2030, and that the overall electricity tariff will increase by 5%.
- While the national burden will maintain its increasing trend, the pace of growth is expected to slow, since the cost of power generation of renewable energy is declining.
- Assuming a large amount of renewable energy is introduced by the year 2030, it is most realistic to focus on solar power generation, which has a short lead time to introduction.
- On the other hand, the issue is that the number of suitable locations for introducing solar power generation is decreasing. According to an estimate provided by the Ministry of the Environment, there is room for the introduction of solar power generation on roofs and in farmland.
- In order for roof-mounted solar energy to spread, it is necessary to increase the installation of photovoltaic power generation in new housing, promote farm-based solar power generation on farmland, and introduce solar power generation on abandoned farmland.
- In addition, one promising potential for solar power that is not shown in the Ministry of the Environment's estimates is the expansion of solar power through PPAs (power purchase agreements).

Attention

This report is a summary translation. The official document is only in Japanese, included in the DIR Research Quarterly Review (Vol.44).