

“Design of the Japanese feed-in-tariff scheme”

~ for the achievement of low carbon society as well as new economic growth~

Background

- Renewable energy is important from the following viewpoints: “Global warming countermeasures”, “Energy security improvement” and “Fostering environment-related industries”.
- Feed-in-Tariff is the system which obligates electricity companies to purchase the electricity from renewable energy at certain price for certain period under certain conditions.
- In November last year, a “Project Team on the Scheme for Japan’s FIT” was launched at METI, and the team has investigated on Japan’s FIT system.
- Excess Electricity Purchasing Scheme for roof-top PV has already started last November.

Basic Idea

- In terms of designing the system, it is important to strike a balance between three factors: “expanded introduction of renewable energy,” “burden on the population” and “system stabilization measures”. Therefore, the basic policy is to maximize the introduction effect while reducing the burden on the electricity cost as much as possible.
- Soon after the announcement of the framework of the system, METI will consider the detail of the system while keeping an eye on the tax for Global warming countermeasure and the domestic emission trading system.

Estimated Effects

- It is estimated that the increase in the amount of electricity through the introduction will be 32 to 35 million kW by the introduction of the system. Furthermore, by promoting technological development and the use of heat from renewable energy as well as reviewing relevant regulations, METI aims to make the ratio of renewable energy in primary energy supply 10% by 2020.
- It is estimated that the CO2 emissions will be reduced by 24 to 29 million tons, which is approximately 1.8 to 2.2% of the total domestic emissions.
- Aim at expanding the renewable energy-related market to ¥10 trillion by 2020 through expansion of the introduction of renewable energy, etc. for example by implementing the feed-in tariff scheme for renewable energy. (The renewable energy-related industry has features including a broad base, and is therefore expected to produce high economic effect and employment effect.)
- The purchase cost to be borne at an average household is estimated to be approximately ¥150 to ¥200 per month 10 years after the start of the system.
- The extra cost for “power system stabilization measures” is estimated to be approximately ¥0.2 to ¥1 trillion due to the balance between the circumstance of R&D, restraining power output and battery application.

() In case of consuming 300 kWh per month

Volume to be introduced (10,000kW)	CO2 volume reduced (10,000t)	Annual purchase cost (0.1 billion /yen)	CO2 reduction cost (yen/t)	Purchase cost at average household () (yen/month)
Apx.3,200 ~3,500	Apx.2,400 ~2,900	Apx.4,600 ~6,300	Apx.19,000 ~22,000	Apx.150 ~200

(The estimation 10 years after the start of the system)

[Growth of the domestic market]



The framework of the system (Under consideration)

Type of Electricity to be Purchased

- In principle, those that have currently been put to practical use as renewable energy power sources should all be covered.
- Photovoltaic systems (including those for power business), wind power generation systems (including small types), small to medium hydroelectric systems (30,000 kW or less), geothermal power generation systems, biomass power generation systems (those not significantly affecting businesses that use bio masses for paper pulp etc.
- For small-scale photovoltaic systems at residences or the like, the surplus purchase system should be applied on an exceptional basis in principle from some viewpoints such as Incentives for daytime energy conservation at residences.
- From the viewpoint of promoting expanded introduction of renewable energy, newly installed systems will be covered by the purchase system in principle.
- some form of action should be taken for existing systems, such as providing a difference in purchase price.

Purchase Price and Period

- Purchase Price and Period should be at ¥15 to ¥20 /kWh for 15 to 20 years for any renewable energy except for photovoltaic systems or the like in principle from the following viewpoints:
- The purchase price should be set at a level that enables competitively-priced renewable energy sources to be economically operable and is internationally comparable.
- The purchase period should be set at 15 to 20 years in principle while referring to amortization period of facilities, etc.
- The power generation cost should be reduced through promoting competition among energy sources.
- The purchase price for photovoltaic systems or the like, whose prices are expected to be reduced, should initially be set at a high level in order to achieve price reduction early, then reduced in stages.

Bearing the Cost

- From the viewpoint of progressing the improvement of self-sufficiency of energy supply system, and stably implementing a system for recovering the purchase cost, a method of topping up the electricity rate should be adopted while referring to examples in foreign countries in principle.
- To ensure fairness of cost bearing among regions when expanding the purchase coverage in a situation where conditions for introducing renewable energy sources vary with regions, inter-regional adjustments should be made in principle.
- From the viewpoint that all power consumers should fairly bear the cost, a method of allocating the cost according to the electricity usage should be adopted in principle.

Measures to Stabilize the Power System

- As a measure to stabilize the power system, an optimal method that enables maximized introduction of renewable energy while minimizing the burden on electricity cost through efforts such as installing batteries, and suppression of the output of photovoltaic systems, in preparation for days where power demand is especially weak, should be studied in the future.
- In addition, review the system when necessary while seeing the technological development trend concerning system stabilization in the future, and the actual impact on the system.

Others

- Concerning the installation of renewable energy systems, it is also important to improve the environment for its introduction such as appropriately reviewing the regulations, and ensuring fair and transparent power systems.
- While keeping an eye on the amount of renewable energy introduced, expeditiously review the system as necessary, approximately 3 to 5 years later.