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Five reasons for a feed-in model, five reasons against quota systems

In the European Union, two opposing concepts of legislative frameworks for Renewable Energies are in effect. While most of the Member States have followed and instituted the Germany's model of **fixed feed-in tariffs**, as laid down in its Renewable Energy Sources Act (Erneuerbare-Energien Gesetz) ("EEG"), some few apply **quota systems with tradable certificates**.

Fixed feed-in tariffs: essentials

The system of guaranteed premium prices as introduced by the German "Electricity Feed Act" (Stromeinspeisegesetz) of 1991 already, is quite simple: producers of electricity from Renewable Energies receive a fee per kilowatt-hour in accordance with fixed rates, so called feed-in tariffs.

The tariff rates may vary, depending on the plant size, source of energy and the site. They will decrease over time (e.g. annually by -4% on average under the EEG).

Grid system operators must not refuse plant operators feeding their electricity from Renewable Energies into the grid. The grid system operators remunerate the plant operators subsequently. The additional costs incurred are apportioned to all actors in the electricity market, i.e. the customers pay for electricity from Renewable Energies, when settling their electric bills.

Fixed feed-in tariffs: experiences gained

1. Decided security for investment in Renewables

- Plant operators and investors are offered security for long-range plans, since the tariff rates are guaranteed for a period of 15-20 years.
- A diversity of large manufacturing markets emerges and brings about intense competition among newly founded small and medium-sized enterprises.

2. Massive fall of costs in the field of Renewables

- Degressive tariff rates cause strong innovation pressure, i.e. manufacturers react by technological advancements and targeted exploitation of cost-cutting potentials to the annually decreasing tariff rates.

Quota system: essentials

Under the quota regime, Renewable Energy plant operators have to negotiate the purchase of their electricity with the grid system operators and with electricity traders or other large electricity suppliers on their own.

In return for their electricity, plant operators receive some proceeds, likely to depend on currently tradable wholesale prices in the electricity exchanges. In addition, they are granted certificates by an intermediary authority, one for each kilowatt-hour of electricity produced from Renewable Energies ("premium").

Plant operators may trade and sell the certificates subsequently. Their additional proceeds will rise in proportion to the demand for regenerative electricity certificates. Such demand is created artificially: state authorities determine a specific quota for electricity from Renewable Energies on the electricity markets or for individual electricity suppliers.

Quota systems: experiences gained

1. Lack of security for investment in Renewables

- Due to volatile market and trading prices for certificates, plant operators are affected by a lasting trend of little planning security
- Investors hesitate to support new suppliers; only financially strong and established market players can risk investment in Renewable Energy plants

2. Costs on the rise in the field of Renewables

- Since investors can not rely on stable prices for electricity and certificates, they put extra risk charges on the price per kilowatt-hour,
- Due to certification and intermediaries, the costs increase disproportionately in particular for small plants,

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- The fixed tariff rates depend on the actual efforts for generating one kilowatt-hour of electricity produced from the renewable source of energy, i.e. the prices are guaranteed and based on the pure generation costs without speculative, short-term fluctuations.

3. Most efficient promotion of Renewables

- Various Renewable Energies Sources can be adequately promoted by specific tariff rates, depending on their different stages of development and sites. Thus, the local and decentralized nature of renewable energy supply is optimally taken account of.

4. Enhanced and cost-effective development of Renewable Energies

- A broad basis of all energy suppliers and consumers shares and bears the development of Renewable Energies, as a result of a reasonable and annually decreased apportionment of costs (share of a four person private household in Germany: on average € 1-1.50/per month).
- Security for long-range plans and fixed tariff rates encourage new investment and provide for high expansion rates per capita of population.

5. Citizens become producers of electricity

- Security for long-range plans and adequate tariff rates make electricity generation worth for any citizen, e.g. by one's own roof photovoltaic installation, or by the purchase of 'public shares' offered to citizens for PV installation projects.
- Municipalities, schools and associations generate electricity from Renewable Energies; they offer independence of large electricity utility companies, promote regional creation of value added and create jobs in undertakings of the area.

- Among the few generators and suppliers of electricity from Renewable Energies, the competitive and innovation pressure is little, i.e. technology needs to be purchased at expensive rates from suppliers abroad.

3. The potential of Renewables underused

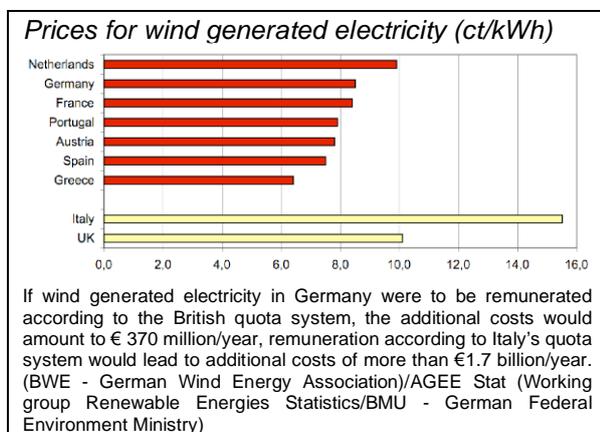
- Only the suppliers of the most cost-effective electricity generation (wind) enjoy the benefits and prevail the certificates market. Electricity generation, presently not yet as competitive (e.g. in geothermal energy plants, from photovoltaic installations), is no longer marketable on the other hand, and the potential of such technologies remains untapped.

4. Limitations to Renewables development

- Setting fixed quotas prevents the interest in a dynamic or self-sustaining development of capacities, since any investment above the quota targets would result in declining prices for certificates. Oftentimes quotas remain too moderate, and, in addition, do not offer any guarantee for the development of Renewable Energies (e.g. the UK with 1.8% in 2003, still clearly failed to achieve its quota target of only 3%).

5. Renewables are exposed to false competition

- Suppliers of electricity produced from Renewable Energies have to prove themselves in markets dominated by large electricity utility companies. They face depreciated old power plants with heavily subsidized fossil or nuclear fuels.
- Grid system operators and electricity groups can prevent feed-in and market access of Renewable Energies at their discretion, while the latter compete with each other for the fulfilment of a limited share in national quota obligations.



Conclusions

Fixed feed-in tariffs have enabled a massive development of Renewable Energy capacities in the EU during the past decade, without triggering price increases for electricity. The bureaucracy of quota regimes questions such stable growth and, above all, protects the dominant market positions of established electricity utility companies. They rather displace Renewable Energies from the electricity markets, than promote them. Feed-in tariffs therefore are the best-suited instrument to assure the variety of social and economic benefits of Renewable Energies.

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