

COMPANIES CALL FOR INVESTMENT SECURITY

Feed-In Tariffs Guarantee Successful Expansion of Renewable Energy

Experience has shown that quota systems promoting renewable energy are inferior to feed-in tariffs like under the German Renewable Energy Sources Act (EEG). The latter have proven to be more efficient and more effective. Companies call for a continuation of the EEG.

Expansion of the renewable energy sector is a key element of both German and European climate and energy policy. At the EU level, the legal framework is provided by Directive 2009/28/EC, which specifies binding national expansion targets for the member states. In Germany's case, this translates into an increase of renewable sources in final energy consumption (electricity, heat and fuels) to 18 per cent by 2020. To achieve this target, the use of renewables in the electricity sector must rise from its current 20 per cent of electricity consumption to a minimum of 35 per cent. The German Renewable Energy Sources Act (EEG) has proven to be a central and highly successful policy instrument in progressing towards this target. Although this instrument has proven to be effective and cost-efficient in international comparison, it is regularly put into question. Its critics call for the introduction of binding quotas for renewable energy sources in connection with certificate trading, believing that this combination will make the achievement of expansion targets more efficient and cost-effective.

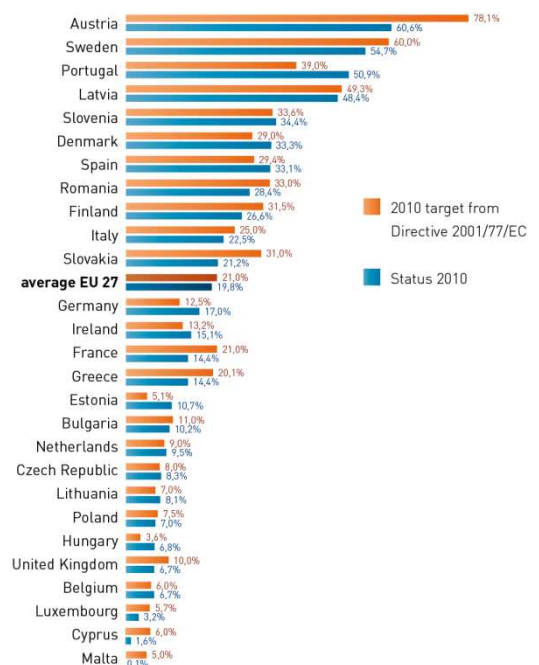
However, this assumption is inconsistent with both the experience made in other countries and the assessment of companies in the German renewable energy sector. In Germany, feed-in priority for renewable energy sources as set out in the EEG, technology-specific, guaranteed tariffs and grid access as well as grid expansion obligations are the central factors that have led to the successful expansion of renewable energy sources we have seen so far. The EEG progress report published by the German federal government confirms this assessment. Turning away from these core elements would reduce investment security and slow down the further expansion of renewable energy sources.

In the following, the differences between the competing systems will be presented together with their respective effects on renewables expansion.

1 Power generation from renewable sources in Europe – status quo

Up until now, the expansion of renewables in power generation has been rather heterogeneous throughout the EU. Most member states failed to reach the indicative, non-binding targets for 2010. The EU average was also below target as shown by the following graph.

Share of renewable energies in gross electricity consumption of EU countries in 2010



Source: EurObserv'ER; Status: 2/2012

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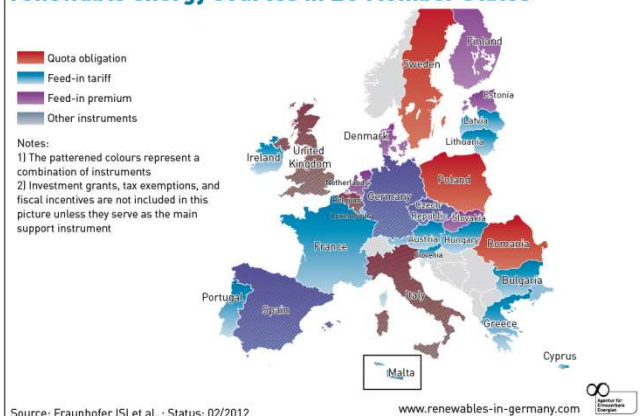
Recent developments have been more dynamic. In its Communication of June 2012, the EU Commission concludes that the EU now looks set to achieve the expansion target of 20 per cent renewables in final energy consumption (electricity, heat and fuels) by 2020. According to the Commission, the key drivers are the binding targets for 2020 under Directive 2009/28/EC.

2 Support schemes in the European electricity sector

The choice of support instrument is a key element in the expansion of renewable energy sources. In the field of power generation, feed-in tariffs modelled on the German Renewable Energy Sources Act (EEG) have proven to be particularly successful. Thanks to the introduction of feed-in tariffs, Portugal, Spain, Estonia and Denmark have, like Germany, substantially exceeded their expansion targets. Countries that have opted for quota systems to promote renewables expansion, for example the UK, Sweden, Romania and Italy, are significantly below targets.

20 out of the 27 EU countries have therefore introduced feed-in systems (feed-in tariffs or premiums). Some countries have opted for a combination of feed-in tariffs and quota systems. In Italy and the UK, for example, quota commitments predominantly apply while small systems and PV systems are subject to feed-in tariffs. With the UK being perceived as one of the most ardent advocates of the quota system, the new support policy introduced in 2009 marked a breakthrough for advocates of the feed-in tariff system. The following graph presents an overview of the support instruments employed in different EU member states.

Overview of support instruments for electricity from renewable energy sources in EU Member States



Worldwide, a minimum of 65 countries were operating feed-in tariff systems at the beginning of 2012, while quota systems applied in no more than 18 countries.

Aside from the successful design of support instruments, the further expansion of renewable energy sources also depends on the removal of non-economic barriers. These barriers include, for example, limited grid capacities, long lead times for grid expansion, complex approval procedures for renewable energy systems and lack of skilled labour.

3 Efficiency gains via quota systems?

Reliable political framework conditions and investment security are crucial elements in the further expansion of renewable energy sources beyond the year 2020 as set out in the federal government's energy concept and the EU Roadmap 2050. The required investment security depends on support policies offsetting the remaining competitive disadvantages of renewable energy sources compared to fossil energy sources.

Wind energy is a good example to show that feed-in tariffs have so far proven to be the more effective and efficient of the two support instruments: The EU 'RE-Shaping' research project has identified the countries with the most effective development of onshore wind energy compared to their potential in this field. All of them operate feed-in tariff systems. It is also noticeable that support costs for wind energy in countries with quota systems and tradable certificates (Belgium, Italy, Poland, Romania and UK) substantially exceed the average power generation costs in these countries.

While one kilowatt hour of electricity generated by onshore wind turbines costs 8.9 Cent in Germany, consumers in Belgium or Italy pay more than 14 Cent. In the UK, the kilowatt hour costs nearly 11 Cent. Since quota systems tend to lead to uniform pricing, windfall gains often arise for cost-effective technologies in favourable locations.

Country	Installed capacity, wind (onshore), end of 2011 (MW)	Price in ct/kWh.	Support instrument
Germany	29,060	8.9	Feed-in tariffs
Spain	21,674	7.8	Feed-in tariffs
France	6,800	8.2	Feed-in tariffs
Italy	6,747	14.9	Quota obligation
UK	6,540	10.8	Quota obligation
Portugal	4,083	7.4	Feed-in tariffs
Denmark	3,871	7.1	Feed-in tariffs
Ireland	1,631	6.8	Feed-in tariffs
Poland	1,616	11.4	Quota obligation
Belgium	1,078	14.2	Quota obligation

Sources: EWEA 2012 / EREF 2009

Despite these findings, there are recurrent calls for Europe-wide harmonisation based on a quota system with certificate trading. A study published by the Institute of Energy Economics (EWI) at the University of Cologne, for example, advocates a uniform, Europe-wide quota system. The EWI expects such a change in renewable energy policy, combined with the concentration of renewables expansion in the most favourable locations ("best sites"), to result in large cost savings compared to predominantly national support schemes.

However, scientists working for the EU's RE-Shaping project disagree with fundamental assumptions and methodologies employed by the EWI. According to the RE-Shaping scientists, the EWI study overestimates the

potential of the best sites in Europe and fails to adequately consider non-economic barriers, especially those associated with grid expansion. Furthermore, with technological progress being achieved independent of the technologies' use, the EWI study fails to properly address the necessary financing of technological learning curves in the field of renewable energy. The scientists also criticise the fact that the study deals exclusively with investment and power generation costs and ignores crucial costs incurred by the consumers in connection with the windfall gains arising in the quota system. Advocates of the quota system also disregard the question of social acceptance if the added value associated with the renewables expansion is not generated domestically.

Experience has shown that support policies that are consistent with national circumstances are the most promising. The degree of expansion of renewable energy sources and the situation on the electricity market must be taken into account. Technology-specific support schemes are generally a central characteristic of successful renewable energy policy. They facilitate the development of more cost-intensive new technologies that advance the learning curve and promote the expansion of cost-effective technologies at a suitable pace.

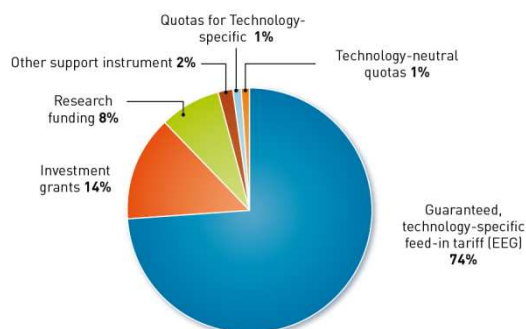
In this context, regular adjustment of payment rates to current developments and levels of experience (degression) can guarantee cost efficiency. A rejection of fundamentally successful instruments such as the German EEG would throw a wrench in the further expansion of renewable energy in Europe.

4 Companies clearly support feed-in tariffs

The renewable energy sector supports this opinion: A survey carried out by EuPD Research on behalf of the German Renewable Energy Federation (BEE) and the German Renewable Energies Agency in spring 2012 confirms the advantages associated with feed-in tariffs. While 74 per cent of the companies surveyed in Germany consider tariffs to be the best instrument to ensure climate protection, market launch and technological development in the field of power generation from renewable energy sources, quota systems are preferred by no more than two per cent of the respondents.

Companies prefer feed-in tariffs as support schemes for electricity generation from renewable energy sources

A survey among 226 companies in the renewable energy sector, which was carried out in March 2012 on the subject of the most expedient support schemes, had the following result:



Source: EuPD Research
Status: 4/2012

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Sources and further information:

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German Renewable Energies Agency

Reinhardtstrasse 18, D-10117 Berlin

Tel.: +49 (0) 30.200 535.3

E-mail: kontakt@unendlich-viel-energie.de

Editorial office: Claudia Kunz

Editor as per German press law: Philipp Vohrer