EUROSOLAR Info

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The success of feed-in tariffs in Europe

In the European Union fixed feed-in tariffs take off as an instrument to promote the development of Renewable Energies.

Besides Germany, where a system for Renewable electricity feed-in, purchase and payment was already introduced in 1991, also Estonia (1998), Finland, France (2001), Greece, Latvia, Lithuania, Luxemburg, the Netherlands (2003), Austria (2003), Portugal (1988), Slovenia (2002), Spain (1994), the Czech Republic (2002), Hungary (2003) and Cyprus (2004) use feed-in tariffs to date.

Denmark equally applied feed-in tariffs until end of 2002, then switched to a quota model, but has postponed its transposition since. Normally, the remuneration levels depend on the technology used and on the plant size. In some countries the tariff rates are degressively structured to take account of technological advancements. Ireland used to have tendering procedures, but adopted a feed-in model in April 2005.

Feed-in tariffs with guaranteed prices or premiums for electricity produced from renewable sources,

Quota systems place an obligation on producers or consumers to cover a specific percentage of their electricity supply/consumption by renewable energies,

Fiscal incentives through exemption from energy or carbon taxes, and

Tendering procedures for the construction of electricity generation capacities from renewable sources.

Belgium, Denmark since 2003, Italy, Poland, Sweden and the United Kingdom use quota systems at present. Denmark, Finland and the United Kingdom combine different elements of the promotion schemes. In Finland for example, exemption from energy taxes is used alongside feed-in tariffs as the most important instrument for electricity from Renewable Energy Sources.

Targets for the European Union

The European Union set targets for the EU and its Member States by the directive 2001/77/EC to promote an increase in the contribution of Renewable Energy Sources to electricity production.

Percentage contributions of Renewable Energies in electricity consumption in 1997 and targets for 2010

	1997 contributions in %	Targets for 2010 in %
Austria	70	78
Belgium	1.1	6
Cyprus	0.05	6.0
Czech Rep.	3.8	8.0
Denmark	8.7	29
Estonia	0.2	5.1
EU 25	12.9	21.0
Finland	24.7	31,5
France	15	21
Germany	4.5	12,5
Greece	8.6	20.1
Hungary	0.7	3.6
Ireland	3.6	13,2
Italy	16	25
Latvia	42.4	49.3
Lithuania	3.3	7.0
Luxemburg	2.1	5.7
Malta	0.0	5.0
Netherlands	3.5	9
Poland	1.6	7.5
Portugal	38.5	39
Sweden	49.1	60
Slovenia	29.9	33.6
Slovakia	17.9	31.0
Spain	19.9	29.4
UK	1.7	10

In its May 2004 Communication on the state of development of Renewable Energy in the EU, the Commission concluded that the great majority of Member States will not achieve their national targets and that it seemed to be unlikely that the EU would meet the target of doubling the share of Renewable Energy in the overall energy consumption to 12% by 2010 without a fresh effort.

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Electricity produced from Renewable Energy Sources in EU Member States

The use of large-scale hydropower plants (capacities above 10 MW) is established in Europe for more than hundred years, and their potential has been largely exploited. Therefore, and also because energy generation from these hydropower sources is so frequent in some countries (Finland, Austria, Slovenia or Spain) that one dry year has considerable effects on the share of energy generated from Renewable Sources, the following table has an extra column to illustrate the development of Renewable Energy generation, excluding hydropower above 10 MW.

		Incl. hydropower above 10 MW		*Excl. hydropower above 10 MW*	
		1997	**2002**	**1997**	**2002**
Country	**Promotion scheme**	**[GWh]**	**[GWh]**	**[GWh]**	**[GWh]**
Austria	F, I	37,739	41,706	5,859	6,407
Belgium	Q, E	863	1,583	734	1,421
Cyprus	F	0	0	-	-
Czech Rep.	F, I	0	2,990	0	1,247
Denmark	Q (no transposition), E	3,214	7,137	3,214	7,137
Estonia	F	0	0	29	29
Finland	F, I	19,030	20,580	7,991	10,657
France	F	66,879	64,357	9,827	10,411
Germany	F	24,898	46,856	13,202	32,326
Greece	F	3,942	3,577	186	927
Hungary	F	85	253	85	87
Ireland	F	844	1,382	224	525
Italy	Q, F	46,457	47,961	12,982	16,489
Latvia	F	1	2,480	1	47
Lithuania	F	0	354	-	37
Luxemburg	F, I	138	200	138	200
Malta	F	0	0	-	-
Netherlands	F, I	3,478	5,120	3,387	5,012
Poland	Q	164	2,890	164	1,458
Portugal	F	14,177	9,898	1,710	3,015
Slovakia	I	0	5,423	0	184
Slovenia	F	0	3,505	0	519
Spain	F	37,653	36,275	6,804	16,367
Sweden	Q, I	72,029	71,092	7,469	7,834
UK	Q, I	7,042	11,329	3,402	6,748

F: Feed-in tariffs, Q: Quota systems, I: Fiscal incentives

At the forefront of increased Renewable Energy use thanks to feed-in tariffs

According to up-to-date studies, the costs for electricity generated from wind energy are lower in Germany than in the UK. This is most of all attributed to the ample security for investment as a result of the "EEG" (Renewable Energy Sources Act). In its May 2004 Report, the EU commission confirmed that only Germany, Spain, Denmark and Finland were likely to achieve the national targets the Directive 2001/77/EC holds for them. The first three owe their success to their national feed-in models, while in Finland, feed-in tariffs and a tax relief for Renewable electricity coexist. According to the EU commission, none of the countries applying quota systems will achieve their national indicative targets without clearly more efficient political commitment to the development of RE. Against this background, in June 2005, EU energy commissioner Piebalgs clearly rejected the request of the German electricity industry to introduce a European quota regime.

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