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► **B** **DIRECTIVE 2001/77/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL**
of 27 September 2001
on the promotion of electricity produced from renewable energy sources in the internal electricity
market
(OJ L 283, 27.10.2001, p. 33)

Amended by:

		Official Journal		
		No	page	date
► <u>M1</u>	Council Directive 2006/108/EC of 20 November 2006	L 363	414	20.12.2006
► <u>M2</u>	Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009	L 140	16	5.6.2009

Amended by:

► <u>A1</u>	Act concerning the conditions of accession of the Czech Republic, the Republic of Estonia, the Republic of Cyprus, the Republic of Latvia, the Republic of Lithuania, the Republic of Hungary, the Republic of Malta, the Republic of Poland, the Republic of Slovenia and the Slovak Republic and the adjustments to the Treaties on which the European Union is founded	L 236	33	23.9.2003
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**DIRECTIVE 2001/77/EC OF THE EUROPEAN PARLIAMENT
AND OF THE COUNCIL**

of 27 September 2001

**on the promotion of electricity produced from renewable energy
sources in the internal electricity market**

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE
EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and
in particular Article 175(1) thereof,

Having regard to the proposal from the Commission ⁽¹⁾,

Having regard to the opinion of the Economic and Social Committee ⁽²⁾,

Having regard to the opinion of the Committee of the Regions ⁽³⁾,

Acting in accordance with the procedure laid down in Article 251 of the
Treaty ⁽⁴⁾,

Whereas:

- (1) The potential for the exploitation of renewable energy sources is underused in the Community at present. The Community recognises the need to promote renewable energy sources as a priority measure given that their exploitation contributes to environmental protection and sustainable development. In addition this can also create local employment, have a positive impact on social cohesion, contribute to security of supply and make it possible to meet Kyoto targets more quickly. It is therefore necessary to ensure that this potential is better exploited within the framework of the internal electricity market.
- (2) The promotion of electricity produced from renewable energy sources is a high Community priority as outlined in the White Paper on Renewable Energy Sources (hereinafter referred to as 'the White Paper') for reasons of security and diversification of energy supply, of environmental protection and of social and economic cohesion. That was endorsed by the Council in its resolution of 8 June 1998 on renewable sources of energy ⁽⁵⁾, and by the European Parliament in its resolution on the White Paper. ⁽⁶⁾
- (3) The increased use of electricity produced from renewable energy sources constitutes an important part of the package of measures needed to comply with the Kyoto Protocol to the United Nations Framework Convention on Climate Change, and of any policy package to meet further commitments.
- (4) The Council in its conclusions of 11 May 1999 and the European Parliament in its resolution of 17 June 1998 on electricity from renewable energy sources ⁽⁷⁾ have invited the Commission to

⁽¹⁾ OJ C 311 E, 31.10.2000, p. 320 and OJ C 154 E, 29.5.2001, p. 89.

⁽²⁾ OJ C 367, 20.12.2000, p. 5.

⁽³⁾ OJ C 22, 24.1.2001, p. 27.

⁽⁴⁾ Opinion of the European Parliament of 16 November 2000 (OJ C 223, 8.8.2001, p. 294), Council Common Position of 23 March 2001 (OJ C 142, 15.5.2001, p. 5) and Decision of the European Parliament of 4 July 2001 (not yet published in the Official Journal). Council Decision of 7 September 2001.

⁽⁵⁾ OJ C 198, 24.6.1998, p. 1.

⁽⁶⁾ OJ C 210, 6.7.1998, p. 215.

⁽⁷⁾ OJ C 210, 6.7.1998, p. 143.

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submit a concrete proposal for a Community framework on access for electricity produced from renewable energy sources to the internal market. Furthermore, the European Parliament in its resolution of 30 March 2000 on electricity from renewable energy sources and the internal electricity market ⁽¹⁾ underlined that binding and ambitious renewable energy targets at the national level are essential for obtaining results and achieving the Community targets.

- (5) To ensure increased market penetration of electricity produced from renewable energy sources in the medium term, all Member States should be required to set national indicative targets for the consumption of electricity produced from renewable sources.
- (6) These national indicative targets should be consistent with any national commitment made as part of the climate change commitments accepted by the Community under the Kyoto Protocol.
- (7) The Commission should assess to what extent Member States have made progress towards achieving their national indicative targets, and to what extent the national indicative targets are consistent with the global indicative target of 12 % of gross domestic energy consumption by 2010, considering that the White Paper's indicative target of 12 % for the Community as a whole by 2010 provides useful guidance for increased efforts at Community level as well as in Member States, bearing in mind the need to reflect differing national circumstances. If necessary for the achievement of the targets, the Commission should submit proposals to the European Parliament and the Council which may include mandatory targets.
- (8) Where they use waste as an energy source, Member States must comply with current Community legislation on waste management. The application of this Directive is without prejudice to the definitions set out in Annex 2a and 2b to Council Directive 75/442/EEC of 15 July 1975 on waste ⁽²⁾. Support for renewable energy sources should be consistent with other Community objectives, in particular respect for the waste treatment hierarchy. Therefore, the incineration of non-separated municipal waste should not be promoted under a future support system for renewable energy sources, if such promotion were to undermine the hierarchy.
- (9) The definition of biomass used in this Directive does not prejudice the use of a different definition in national legislation, for purposes other than those set out in this Directive.
- (10) This Directive does not require Member States to recognise the purchase of a guarantee of origin from other Member States or the corresponding purchase of electricity as a contribution to the fulfilment of a national quota obligation. However, to facilitate trade in electricity produced from renewable energy sources and to increase transparency for the consumer's choice between electricity produced from non-renewable and electricity produced from renewable energy sources, the guarantee of origin of such electricity is necessary. Schemes for the guarantee of origin do not by themselves imply a right to benefit from national support mechanisms established in different Member States. It is important that all forms of electricity produced from renewable energy sources are covered by such guarantees of origin.
- (11) It is important to distinguish guarantees of origin clearly from exchangeable green certificates.

⁽¹⁾ OJ C 378, 29.12.2000, p. 89.

⁽²⁾ OJ L 194, 25.7.1975, p. 39. Directive as last amended by Commission Decision 96/350/EC (OJ L 135, 6.6.1996, p. 32).

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- (12) The need for public support in favour of renewable energy sources is recognised in the Community guidelines for State aid for environmental protection⁽¹⁾, which, amongst other options, take account of the need to internalise external costs of electricity generation. However, the rules of the Treaty, and in particular Articles 87 and 88 thereof, will continue to apply to such public support.
- (13) A legislative framework for the market in renewable energy sources needs to be established.
- (14) Member States operate different mechanisms of support for renewable energy sources at the national level, including green certificates, investment aid, tax exemptions or reductions, tax refunds and direct price support schemes. One important means to achieve the aim of this Directive is to guarantee the proper functioning of these mechanisms, until a Community framework is put into operation, in order to maintain investor confidence.
- (15) It is too early to decide on a Community-wide framework regarding support schemes, in view of the limited experience with national schemes and the current relatively low share of price supported electricity produced from renewable energy sources in the Community.
- (16) It is, however necessary to adapt, after a sufficient transitional period, support schemes to the developing internal electricity market. It is therefore appropriate that the Commission monitor the situation and present a report on experience gained with the application of national schemes. If necessary, the Commission should, in the light of the conclusions of this report, make a proposal for a Community framework with regard to support schemes for electricity produced from renewable energy sources. That proposal should contribute to the achievement of the national indicative targets, be compatible with the principles of the internal electricity market and take into account the characteristics of the different sources of renewable energy, together with the different technologies and geographical differences. It should also promote the use of renewable energy sources in an effective way, and be simple and at the same time as efficient as possible, particularly in terms of cost, and include sufficient transitional periods of at least seven years, maintain investors' confidence and avoid stranded costs. This framework would enable electricity from renewable energy sources to compete with electricity produced from non-renewable energy sources and limit the cost to the consumer, while, in the medium term, reduce the need for public support.
- (17) Increased market penetration of electricity produced from renewable energy sources will allow for economies of scale, thereby reducing costs.
- (18) It is important to utilise the strength of the market forces and the internal market and make electricity produced from renewable energy sources competitive and attractive to European citizens.
- (19) When favouring the development of a market for renewable energy sources, it is necessary to take into account the positive impact on regional and local development opportunities, export prospects, social cohesion and employment opportunities, especially as concerns small and medium-sized undertakings as well as independent power producers.
- (20) The specific structure of the renewable energy sources sector should be taken into account, especially when reviewing the administrative procedures for obtaining permission to construct plants producing electricity from renewable energy sources.

⁽¹⁾ OJ C 37, 3.2.2001, p. 3.

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- (21) In certain circumstances it is not possible to ensure fully transmission and distribution of electricity produced from renewable energy sources without affecting the reliability and safety of the grid system and guarantees in this context may therefore include financial compensation.
- (22) The costs of connecting new producers of electricity from renewable energy sources should be objective, transparent and non-discriminatory and due account should be taken of the benefit embedded generators bring to the grid.
- (23) Since the general objectives of the proposed action cannot be sufficiently achieved by the Member States and can therefore, by reason of the scale or effects of the action, be better achieved at Community level, the Community may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty. Their detailed implementation should, however, be left to the Member States, thus allowing each Member State to choose the regime which corresponds best to its particular situation. In accordance with the principle of proportionality, as set out in that Article, this Directive does not go beyond what is necessary in order to achieve those objectives,

HAVE ADOPTED THIS DIRECTIVE:

*Article 1***Purpose**

The purpose of this Directive is to promote an increase in the contribution of renewable energy sources to electricity production in the internal market for electricity and to create a basis for a future Community framework thereof.

▼M2**▼B***Article 3***National indicative targets**

1. Member States shall take appropriate steps to encourage greater consumption of electricity produced from renewable energy sources in conformity with the national indicative targets referred to in paragraph 2.
2. These steps must be in proportion to the objective to be attained.

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3. Member States shall publish, for the first time not later than 27 October 2003 and thereafter every two years, a report which includes an analysis of success in meeting the national indicative targets taking account, in particular, of climatic factors likely to affect the achievement of those targets and which indicates to what extent the measures taken are consistent with the national climate change commitment.

4. On the basis of the Member States' reports referred to in paragraphs 2 and 3, the Commission shall assess to what extent:

- Member States have made progress towards achieving their national indicative targets,
- the national indicative targets are consistent with the global indicative target of 12 % of gross national energy consumption by 2010 and in particular with the 22,1 % indicative share of electricity

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produced from renewable energy sources in total Community electricity consumption by 2010.

The Commission shall publish its conclusions in a report, for the first time not later than 27 October 2004 and thereafter every two years. This report shall be accompanied, as appropriate, by proposals to the European Parliament and to the Council.

If the report referred to in the second subparagraph concludes that the national indicative targets are likely to be inconsistent, for reasons that are unjustified and/or do not relate to new scientific evidence, with the global indicative target, these proposals shall address national targets, including possible mandatory targets, in the appropriate form.

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*Article 9***Transposition**

Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive not later than 27 October 2003. They shall forthwith inform the Commission thereof.

When Member States adopt these measures, they shall contain a reference to this Directive or shall be accompanied by such a reference on the occasion of their official publication. The methods of making such reference shall be laid down by the Member States.

*Article 10***Entry into force**

This Directive shall enter into force on the day of its publication in the *Official Journal of the European Communities*.

*Article 11***Addressees**

This Directive is addressed to the Member States.

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ANNEX

Reference values for Member States' national indicative targets for the contribution of electricity produced from renewable energy sources to gross electricity consumption by 201 (*)

This Annex gives reference values for the fixing of national indicative targets for electricity produced from renewable energy sources ('RES-E'), as referred to in Article 3(2):

	RES-E TWh 1997 (**)	RES-E % 1997 (***)	RES-E % 2010 (***)
Belgium	0,86	1,1	6,0
▼ M1			
Bulgaria	1,7	6	11 ⁽⁷⁾ ⁽⁸⁾
▼ B			
▶ A1 Czech Republic ◀	▶ A1 2,36 ◀	▶ A1 3,8 ◀	▶ A1 8 ◀ ⁽⁷⁾
Denmark	3,21	8,7	29,0
Germany	24,91	4,5	12,5
▶ A1 Estonia ◀	▶ A1 0,02 ◀	▶ A1 0,2 ◀	▶ A1 5,1 ◀
Greece	3,94	8,6	20,1
Spain	37,15	19,9	29,4
France	66,00	15,0	21,0
Ireland	0,84	3,6	13,2
Italy	46,46	16,0	25,0 ⁽¹⁾
▶ A1 Cyprus ◀	▶ A1 0,002 ◀	▶ A1 0,05 ◀	▶ A1 6 ◀
▶ A1 Latvia ◀	▶ A1 2,76 ◀	▶ A1 42,4 ◀	▶ A1 49,3 ◀
▶ A1 Lithuania ◀	▶ A1 0,33 ◀	▶ A1 3,3 ◀	▶ A1 7 ◀
Luxembourg	0,14	2,1	5,7 ⁽²⁾
▶ A1 Hungary ◀	▶ A1 0,22 ◀	▶ A1 0,7 ◀	▶ A1 3,6 ◀
▶ A1 Malta ◀	▶ A1 0 ◀	▶ A1 0 ◀	▶ A1 5 ◀
Netherlands	3,45	3,5	9,0
Austria	39,05	70,0	78,1 ⁽³⁾
▶ A1 Poland ◀	▶ A1 2,35 ◀	▶ A1 1,6 ◀	▶ A1 7,5 ◀
Portugal	14,30	38,5	39,0 ⁽⁴⁾
▼ M1			
Romania	14,9	28	33
▼ B			
▶ A1 Slovenia ◀	▶ A1 3,66 ◀	▶ A1 29,9 ◀	▶ A1 33,6 ◀
▶ A1 Slovakia ◀	▶ A1 5,09 ◀	▶ A1 17,9 ◀	▶ A1 31 ◀
Finland	19,03	24,7	31,5 ⁽⁵⁾
Sweden	72,03	49,1	60,0 ⁽⁶⁾
United Kingdom	7,04	1,7	10,0
▼ M1			
Community	372	13,2	21
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(*) In taking into account the reference values set out in this Annex, Member States make the necessary assumption that the State aid guidelines for environmental protection allow for the existence of national support schemes for the promotion of electricity produced from renewable energy sources.

▶ **M1** (**) Data refer to the national production of RES-E in 1997, except for the Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Slovenia and Slovakia where data refer to 1999, and for Bulgaria and Romania where data refers to 2001.

(***) The percentage contributions of RES-E in 1997 (in 1999-2000 for the Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Slovenia and Slovakia, in 2001 for Bulgaria and Romania) and 2010 are based on the national production of RES-E divided by the gross national electricity consumption. For the Czech Republic, Estonia, Cyprus, Latvia,

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Lithuania, Hungary, Malta, Poland, Slovenia and Slovakia, gross national electricity consumption is based on 2000 data. For Bulgaria and Romania gross national electricity consumption is based on 2001 data. In the case of internal trade of RES-E (with recognised certification or origin registered) the calculation of these percentages will influence 2010 figures by Member State but not the Community total. ◀

(****) Rounded figure resulting from the reference values above.

(¹) *Italy* states that 22 % would be a realistic figure, on the assumption that in 2010 gross national electricity consumption will be 340 TWh. When taking into account the reference values set out in this Annex, Italy has assumed that gross national electricity production from renewable energy sources will attain up to 76 TWh in 2010. This figure includes the contribution of the non-biodegradable fraction of municipal and industrial waste used in compliance with Community legislation on waste management. In this respect, the capability to reach the indicative target as referred to in this Annex, is contingent, *inter alia*, upon the effective level of the national demand for electric energy in 2010.

(²) Taking into account the indicative reference values set out in this Annex, *Luxembourg* takes the view that the objective set for 2010 can be achieved only if:

- total electricity consumption in 2010 does not exceed that of 1997,
- wind-generated electricity can be multiplied by a factor of 15,
- biogas-generated electricity can be multiplied by a factor of 208,
- electricity produced from the only municipal waste incinerator in Luxembourg, which in 1997 accounted for half the electricity produced from renewable energy sources, can be taken into account in its entirety,
- photovoltaically generated electricity can be raised to 80 GWh, and

in so far as the above points can be achieved from the technical standpoint in the time allowed.

In the absence of natural resources, an additional increase in electricity generated by hydroelectric power stations is ruled out.

(³) *Austria* states that 78,1 % would be a realistic figure, on the assumption that in 2010 gross national electricity consumption will be 56,1 TWh. Due to the fact that the production of electricity from renewable sources is highly dependent on hydropower and therefore on the annual rainfall, the figures for 1997 and 2010 should be calculated on a long-range model based on hydrologic and climatic conditions.

(⁴) *Portugal*, when taking into account the reference values, set out in this Annex, states that to maintain the 1997 share of electricity produced from renewable sources as an indicative target for 2010 it was assumed that:

- it will be possible to continue the national electricity plan building new hydro capacity higher than 10 MW,
- other renewable capacity, only possible with financial state aid, will increase at an annual rate eight times higher than has occurred recently.

These assumptions imply that new capacity for producing electricity from renewable sources, excluding large hydro, will increase at a rate twice as high as the rate of increase of gross national electricity consumption.

(⁵) In the *Finnish* action plan for renewable energy sources, objectives are set for the volume of renewable energy sources used in 2010. These objectives have been set on the basis of extensive background studies. The action plan was approved within the Government in October 1999.

According to the Finnish action plan, the share of electricity produced from renewable energy sources by 2010 would be 31 %. This indicative target is very ambitious and its realisation would require extensive promotion measures in Finland.

(⁶) When taking into account the reference values set out in this Annex, *Sweden* notes that the possibility of reaching the target is highly dependent upon climatic factors heavily affecting the level of hydropower production, in particular variations in pluviometry, timing of rainfall during the year and inflow. The electricity produced from hydropower can vary substantially. During extremely dry years production may amount to 51 TWh, whereas in wet years it could amount to 78 TWh. The figure for 1997 should thus be calculated with a long-range model based on scientific facts on hydrology and climatic change.

It is a generally applied method in countries with important shares of hydropower production to use water inflow statistics covering a time span of 30 to 60 years. Thus, according to the Swedish methodology and based on conditions during the period 1950-1999, correcting for differences in total hydropower production capacity and inflow over the years, average hydropower production amounts to 64 TWh which corresponds to a figure for 1997 of 46 %, and in this context Sweden considers 52 % to be a more realistic figure for 2010.

Furthermore, the ability of Sweden to achieve the target is limited by the fact that the remaining unexploited rivers are protected by law. Moreover, the ability of Sweden to reach the target is heavily contingent upon:

- the expansion of combined heat and power (CHP) depending on population density, demand for heat and technology development, in particular for black liquor gasification, and
- authorisation for wind power plants in accordance with national laws, public acceptance, technology development and expansion of grids.

► **AI** (⁷) When taking into account the indicative reference values set out in the Annex, the Czech Republic notes that the possibility of reaching this indicative target is highly dependent upon climatic factors heavily affecting the level of hydropower production and utilisation of solar and wind energy.

The National Programme for Economical Energy Management and Use of Renewable Energy Sources was approved by the Government in October 2001 and indicates a target of the electricity share from RES in gross electricity consumption of 3,0 % (excluding big water power stations above 10 MW) and 5,1 % (including big water power stations above 10 MW) by 2005.

In the absence of natural resources, the additional substantial output extension of large as well as small water power stations is ruled out. ◀

► **MI** (⁸) On the basis of the preliminary analysis and the updated information, the 11 % target is based on a positive development of renewable energies and on favourable climate conditions. The possibility of reaching this indicative target is highly dependent upon the total annual rainfall, timing of rainfall during the year and inflow as well as other climatic factors heavily affecting the level of hydropower production and utilization of solar and wind energy. Furthermore, the RES utilization is limited by the relevant environmental and related national legislation corresponding to the respective EU legislation. ◀