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COMMISSION OF THE EUROPEAN COMMUNITIES

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Proposal for a

DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

on the promotion of the use of energy from renewable sources

version 15.4

Explanatory memorandum

1. CONTEXT OF THE PROPOSAL

- **Grounds for and objectives of the proposal**

The Community has long recognised the need to further promote renewable energy given that its exploitation contributes to climate change mitigation through the reduction of greenhouse gas emissions, sustainable development, security of supply and the development of a knowledge based industry creating jobs, economic growth, competitiveness and regional and rural development.

This Proposal for a Directive aims to establish an overall binding target of a 20% share of renewable energy sources in energy consumption and a 10% binding minimum target for biofuels in transport to be achieved by each Member State, as well as binding national targets by 2020 in line with the overall EU target of 20%.

Responding to the call made by the European Council of March 2006 (Council Document 7775/1/06 REV10) the Commission presented its Strategic European Energy Review on the 10 January 2007. As part of the Review, the Renewable Energy Road Map (COM(2006) 848 final) set out a long term vision for renewable energy sources in the EU. It proposed that the EU establish a binding target of 20% for renewable energy's share of energy consumption in the EU by 2020, and a binding 10% target for the share of renewable energy in transport petrol and diesel.

The European Parliament noted in its Resolution on climate change (14 February 2007) that energy policy is a crucial element of the EU global strategy on climate change, in which renewable energy sources and energy efficient technologies play an important role. The Parliament supported the proposal of a binding target to increase the level of renewable energy in the EU energy mix to 20% by 2020 as a good starting point, and considered that this target should be increased to 25% of the EU energy mix. Furthermore the European Parliament, in its Resolution on the Roadmap for Renewable Energy in Europe (25 September 2007), called on the Commission to present by the end of 2007 a proposal for a renewable energy legislative framework, referring to the importance of setting targets for the shares of renewable energy sources at EU and Member State level.

The Brussels European Council of March 2007 (Council Document 7224/07) reaffirmed the Community's long-term commitment to the EU-wide development of renewable energies beyond 2010 and invited the Commission to submit its proposal for a new comprehensive Directive on the use of renewable resources. This should include legally binding targets for the overall share of renewable energy and the share of biofuels for transport in each Member State.

- **General context**

The EU and the world are at a cross-road concerning the future of energy. The challenges of climate change caused by anthropogenic emissions of greenhouse gases, mainly from use of fossil energy, need to be tackled effectively and urgently. Recent studies have contributed to growing awareness and knowledge of the problem and its long-term consequences, and have stressed the need for decisive and immediate action. An integrated approach to climate and

energy policy is needed given that energy production and use are primary sources for greenhouse gas emissions. The European Union's increasing dependence on energy imports threatens its security of supply and implies higher prices. In contrast, boosting investment in energy efficiency, renewable energy and new technologies has wide-reaching benefits and contributes to the EU's strategy for growth and jobs.

The consequences of climate change, increasing dependence on fossil fuels, and rising energy prices make it even more pressing for the EU to put in place a comprehensive and ambitious policy on energy combining action at the European and Member States' level. In the framework of this energy policy, the renewable energy sector stands out for its ability to reduce greenhouse gas emissions and pollution, exploit local and decentralised energy sources, and stimulate world-class high-tech industries.

Renewable energy sources are largely indigenous, they do not rely on the future availability of conventional sources of energy, and their predominantly decentralised nature makes our economies less vulnerable to volatile energy supply. Consequently they constitute a key element of a sustainable energy future.

For renewables to become the "stepping stone" to reaching the dual objective of increased security of supply and reduced greenhouse gas emissions, a change in the way in which the EU promotes renewables is needed. Strengthening and expansion of the current EU regulatory framework is necessary. It is important to ensure that all Member States take the necessary measures to increase the share of renewables in their energy mix.

A new legislative framework for the promotion and the use of renewable energy in the European Union will provide the business community with the long term stability it needs to make rational investment decisions in the renewable energy sector so as to put the European Union on track towards a cleaner, more secure and more competitive energy future.

- **Existing provisions in the area of the proposal**

Directive 2001/77/EC (OJ L283, 27.10.2001) of the European Parliament and of the Council on the promotion of electricity produced from renewable energy sources in the internal market: the Directive sets a 21% indicative share of electricity produced from renewable energy sources in total Community electricity consumption by 2010. It defines national indicative targets for each Member State, encourages the use of national support schemes, the elimination of administrative barriers and grid system integration, and lays down the obligation to issue renewable energy producers with guarantees of origin if they request them. With current policies and efforts in place, it can be expected that a share of 19% by 2010 – rather than the 21% aimed at - will be reached.

Directive 2003/30/EC (OJ L123, 17.05.2003) of the European Parliament and of the Council on the promotion of the use of biofuels or other renewable fuels for transport: the Directive sets a target of 5.75% of biofuels of all petrol and diesel for transport placed on the market by 31 December 2010. Member States were required to set indicative targets for 2005, taking a reference value of 2% into account. This interim indicative target has not been achieved. Biofuels counted to 1% of transport fuel in 2005. The Commission's conclusion according to the assessment of the progress is that the target for 2010 is not likely to be achieved-expectations are for a share of about 4.2%.

Provisions of the former 2001/77/EC and 2003/30/EC Directives that overlap with the provisions of the new Directive will be deleted at the moment of transposition; those that deal with targets and reporting for 2010 will remain in force until 31 December 2011.

- **Consistency with the other policies and objectives of the Union**

The Proposal is consistent with the EU policies of combating climate change, reducing greenhouse gas emissions, achieving sustainable development, ensuring energy security and realising the Lisbon Strategy.

The proposal will, in particular, form part of a legislative package that will establish greenhouse gas and renewable energy commitments for all Member States. In addition to the present Directive establishing renewable energy targets for 2020, the package proposed by the Commission includes a Regulation updating national greenhouse gas emissions targets and a Directive to improve and expand the EU emissions trading system (EU ETS). The interlinkages between setting greenhouse gas reduction targets, the emissions trading scheme and renewable energy targets are clear. The Commission sees the various elements as complementary: EU ETS will facilitate growth in renewable energy; the renewable energy Directive will create conditions enabling renewable energy to play a key role in reaching the greenhouse gas reduction targets.

The Community's external energy policy should ensure the common voice of the EU in support of intensifying its relationship with its energy partners, with a view to further diversifying sources and routes, strengthening partnership and cooperation and focusing on the reduction of greenhouse gas emissions, renewables and increasing energy efficiency. Third countries should be able to benefit from the promotion of renewables in the EU through the supply of biofuels and other bioliquids which meet sustainability requirements, or the supply of renewable electricity from neighbouring countries. While in principle, no trade restrictions should apply to renewable energy imports or exports, the Community must ensure that a level playing field is afforded to all renewable energy producers, in and outside of the Community. As this proposal sets ambitious objectives for Member States and its industry to meet, the issue of legal framework of third countries must be addressed.

The development of a market for renewable energy sources and technologies also has a clear positive impact on security of energy supply, regional and local development opportunities, rural development, export prospects, social cohesion and employment opportunities, especially as concerns small and medium-sized undertakings as well as independent power producers.

The proposal is also consistent with the European Strategic Energy Technology Plan (COM (2007) 723), which emphasises the need to bring the next generation of renewable energy technologies to market competitiveness. In addition, information and communication technologies will further facilitate the integration of renewable energies into the European electricity supply and distribution system.

2. CONSULTATION OF INTERESTED PARTIES AND IMPACT ASSESSMENT

- **Consultation of interested parties**

Consultation methods, main sectors targeted and general profile of respondents

The main issues addressed in the renewable energy roadmap were debated in the public consultation on the Energy Green Paper and the Strategic European Energy Review between March and September 2006. Furthermore there have been consultations during 2007 including with Member States, citizens, stakeholder groups, civil society organisations, NGOs and consumer organisations.

The legislative proposal is based on a thorough impact assessment process with widespread consultation with stakeholders: numerous meetings with stakeholders on the key issues of the proposal, including barriers to the development of renewable energy uses, biofuels sustainability and flexibility measures in meeting the renewable national targets. Four public consultation exercises (Internet) have taken place, apart from the one on the Energy Green Paper (March - September 2006), on the revision of biofuels policy, on heating and cooling in renewable energy, on administrative barriers and on biofuels sustainability.

1. Public consultation on the biofuels Directive review (April-July 2006);
2. Public consultation on the promotion of heating and cooling from renewable energies (August-October 2006);
3. Public consultation on administrative barriers to the development of renewable resources in the electricity sector (March - April 2007);
4. Public consultation on biofuel issues in the new legislation on the promotion of renewable energy (April-June 2007).

Summary of responses and how they have been taken into account

There was wide support for a stronger policy on renewable energy sources and notably to a longer-term target for renewable energy, with suggestions ranging from 20% in 2020 to 50% and more by 2040/2050. The use of obligatory targets was widely supported, as was the internalisation of external costs.

The main positive effects of an EU initiative to increase heating and cooling from renewable energy sources, as suggested by a large number of respondents, are related to the promotion of local employment and opportunities for small and medium sized enterprises, regional and rural development, stimulating economic growth and increasing global European industry leadership. Tackling climate change and the security of the EU's energy supply were also seen as positive effects. The negative effects suggested by respondents mostly relate to the pressure on biomass resources, which are also used for non-energy industrial use and its further exploitation may lead to shortages or undesirable environmental impacts.

The biofuels issues in the Directive were the subject of the last related public consultation exercise. The proposal submitted to consultation proposed three sustainability criteria: a) land with high carbon stocks should not be converted for biofuel production; b) land with high biodiversity should not be converted for biofuel production; c) biofuels should achieve a minimum level of greenhouse gas savings (carbon stock losses from land use change would not be included in the calculation). In the responses, there is general support for such criteria from most respondents, with many proposing further reinforcements to the scheme.

• **Collection and use of expertise**

Scientific/expertise domains concerned

In order to answer the question whether the EU should adopt quantified targets for the share of renewable energy in 2020 and if so, for what amount and what form, several analyses and studies have been realised including the contribution of external experts.

Methodology used

For the modelling exercise various scenarios using the PRIMES and Green-X models have been carried out for the EU-27.

Main organisations/experts consulted

Several studies have been carried out and used in order to define the different elements of the proposal. These include the FORRES 2020 report: "Analysis of the EU renewable energy sources' evolution up to 2020, April 2005"; the OPTRES report: "Analysis of barriers for the development of electricity generation from renewable energy sources in the EU25", May 2006; the RE-GO project "Renewable Energy Guarantees of Origin: implementation, interaction and utilization", European Commission Contract No: 4.1030/C/02-025/2002; the E-TRACK project "A European Standard for the tracking of electricity", European Commission Contract No: EIE/04/141/S07.38594; the PROGRESS project "Promotion and growth of renewable energy sources and systems", European Commission Contract No: TREN/D1/42-2005/S07.56988; and the report by MVV Consulting, June 2007: "Heating and cooling from renewable energies: cost of national policies and administrative barriers". Regarding biofuels target impact on food prices, the study carried out by the Zentrum für Europäische Wirtschaftsforschung (ZEW) (2007): "Competitiveness effects of trading emissions and fostering technologies to meet the EU Kyoto targets", 2007.

Means used to make the expert advice publicly available

Most of the studies used have been published or are available on the Europa website, including the OPTRES project with contract No.: EIE/04/073/S07.38567 (www.optres.fhg.de) Progress report, 2007 "Identification of administrative and grid barriers to the promotion of electricity from Renewable Energy Sources" published at:

http://ec.europa.eu/energy/res/consultation/admin_barriers_en.htm.

The MVV Consulting report on "Heating and cooling from renewable energies: cost of national policies and administrative barriers" is available at:

http://ec.europa.eu/energy/res/sectors/heat_from_res_en.htm.

• **Impact assessment**

The impact assessment explores the associated options, described below:

- In what units should renewable energy targets be expressed? The impact assessment compares options for expressing the targets in terms of primary or final energy consumption and concludes in favour of the latter, as it does not discriminate between different types of renewable energy and accounting in primary energy gives greater weight to thermal and nuclear energy and therefore increases in these energy sources would make the achievement of any given renewable energy share harder to achieve.

- How should the 20% commitment be shared between Member States? Different methods are assessed, including modelled resource potential in each Member State, applying a flat-rate increase for all Member States, and modulating results by GDP to reflect fairness and cohesion. The conclusion is that a flat-rate approach modulated by GDP is the most appropriate as it provides a simple common, fair increase for all Member States. When weighted by GDP, the result reflects the wealth of the different Member States, and when modulated to take account of early progress in developing renewables, the result recognises the role "early starters" have played in leading the development of renewable energy in Europe and also reflects an overall cap on the targeted share of renewable energy in 2020 in individual Member States.
- How can cross border transfers in renewables be improved (through the use of guarantees of origin) to help Member States achieve their commitments – including the possibility of renewable energy consumed in one Member State counting towards the targets of another? Options of standardising the guarantees of origin already applied in the electricity sector are examined together with the possible expansion of scope beyond the electricity sector and various degrees of transferability of guarantees of origin. It is suggested that the guarantee of origin regime can be substantially improved and standardised and that its scope could be extended to large scale heating and cooling.
- What administrative and market barriers to the development of renewable energy can be removed? A range of planning rules, administrative procedures and market information failures are examined and requirements or recommendations to remove them are proposed (such as creating "one-stop-shops", ensuring charges are proportionate, granting mutual recognition of certification, setting planning deadlines, greater provision of information to public and professionals, and establishing minimum levels of renewable energy consumption in new buildings).
- What criteria and monitoring methods can be used to form a biofuels sustainability regime? A wide range of options are explored, and it is suggested that such a system should include minimum levels of greenhouse gas performance, criteria on biodiversity and rewards for the use of feedstock diversifying the raw material pool such as lignocellulosic material for the production of second generation biofuels. It is appropriate to leave verification to Member States (whilst encouraging multinational certification schemes); the penalty regime for failing to meet the criteria should be consistent across the single market and include exclusion from tax breaks, the barring of such biofuels from biofuel obligations and national targets. Finally, the actual "tracing" of the biofuels will require physical tracking, so that biofuels fulfilling the sustainability criteria can be identified and rewarded with a premium in the market.

3. LEGAL ELEMENTS OF THE PROPOSAL

- **Summary of the proposed action**

The proposed Directive lays down the principles according to which Member States need to ensure that the share of renewable energy in the EU final energy consumption reaches at least 20% by 2020, and establishes national overall targets for each Member State.

Three sectors are concerned in renewable energy: electricity, heating and cooling and transport. The overall approach is for Member States to retain discretion as to the mix of these sectors in reaching their national target. However, it is proposed that each Member State shall

achieve at least a 10% share of renewable energy (primarily biofuels) in the transport sector by 2020. This is done for the following reasons: (1) the transport sector is the sector presenting the most rapid increase in greenhouse gas emissions of all sectors of the economy; (2) biofuels tackle the oil dependence of the transport sector, which is one of the most serious problems of insecurity in energy supply that the EU faces; (3) biofuels are currently more expensive to produce than other forms of renewable energy, which might mean that they would hardly be developed without a specific requirement.

Specifically for biofuels and other bioliquids, the Directive sets up a system to guarantee the environmental sustainability of the policy, ensuring *inter alia* that the biofuels counting towards the targets achieve a minimum level of greenhouse gas savings.

- **Legal basis**

The Proposal will be made on the basis of Article 175(1) of the Treaty in combination with Article 95. While a single legal base is preferred, it is recognised that a dual legal base is appropriate where a measure contains provisions based on different parts of the Treaty. Both these legal bases imply the use of the co-decision procedure.

The majority of the Proposal falls under Article 175(1) (environment). This Article gives the Community power to act to preserve, protect and improve the quality of the environment, protect human health and make prudent and rational use of natural resources. These objectives are pursued by this Directive.

However, Articles 15, 16 and 17 of the Proposal impose binding obligations on Member States regarding the sustainability of biofuels and other bioliquids. While the sustainability criteria themselves obviously pursue an aim of environmental protection, the Directive also prevents Member States from adopting certain measures which would obstruct trade in biofuels or raw materials. The Directive thus aims for a complete harmonisation of biofuel sustainability criteria in order to ensure that no criteria adopted individually by Member States may constitute an obstacle to trade between Member States. For this element of the Directive, the internal market is therefore considered to be the primary objective. This assessment is not altered by the fact that environmental protection is also an important goal, since Article 95(3) EC expressly provides for a high level of protection of the environment to be aimed for in measures to complete the internal market. The Commission therefore considers that the provisions of harmonised standards for biofuel sustainability fall under Article 95 (internal market).

In general, renewable energy is a close substitute for conventional energy and is supplied through the same infrastructure and logistic systems. All Member States already use renewable energy and all have already decided to increase renewable energy's share. For these reasons, the proposal will not significantly affect Member States' choice between different energy sources or the general structure of their energy supply and does not fall under Article 175(2) of the Treaty.

- **Subsidiarity principle**

The subsidiarity principle applies insofar as the Proposal does not fall under the exclusive competence of the Community.

The objectives of the Proposal cannot be sufficiently achieved by the Member States for the following reasons:

It is clear from the experience with the promotion of renewable energy sources in the European Union that real progress only began to be made when the European Union adopted legislative instruments containing targets to be reached by a given deadline. This is true for Directive 2001/77/EC on the promotion of electricity from renewable energy sources and for Directive 2003/30/EC on the promotion of the use of biofuels. No such legal framework exists to promote the penetration of renewable energy sources in the heating and cooling sector. The development of renewable energy in this sector is nearly stagnant.

The European Council has concluded that the European Union needs to collectively achieve a 20% share of renewable energy sources in final energy consumption by 2020 for reasons of security of supply, of environmental protection and for reasons of competitiveness of the renewable sector, which is currently a world leader in many sectors.

Leaving action to the Member States would put the achievement of this share at risk and would not realise an equitable distribution of the efforts needed to arrive at the 20% overall share. In addition, leaving action completely to the Member States would also create investor uncertainty as to the objectives to be reached and the pathway toward these objectives.

In addition to the targets, the Directive addresses means to support the development of renewable energy, such as administrative procedures, planning, construction and information and training. For electricity from renewable energy sources it tackles grid system issues, such as access to the grid, and develops the role of the guarantees of origin. These measures build on existing provisions of Directive 2001/77/EC and of Directive 2002/91/EC on the energy performance of buildings, and provide for a common approach for the benefit of renewable energy producers and consumers across the Community. A Community approach to promoting renewables by these means is proportionate, because the level of ambition of the target requires coordinated action which addresses the sectors where most progress can be made.

Community action in the field of biofuel sustainability is justified, because it avoids the development of multiple national schemes which might impede trade to and within the Community.

In the Proposal, Member States retain wide discretion to favour the development of the renewable energy sector in the way that suits their national potential and circumstances best, including the option of achieving their targets by supporting the development of renewable energy in other Member States.

The Proposal therefore complies with the subsidiarity principle.

- **Proportionality principle and choice of instruments**

The Proposal complies with the proportionality principle for the following reasons:

An overall objective could not be reached without overall commitment, expressed in legally binding targets. As energy policy problems are threatening the Community as a whole, responses should be articulated at the same level.

The instrument chosen is a Directive that has to be implemented by the Member States. A Directive is the appropriate instrument for the promotion of renewable energy sources as it clearly defines the objectives to be reached, while leaving Member States sufficient flexibility to implement the Directive in the way that suits their particular national circumstances best. It

goes further than a framework Directive in that it is more precise on objectives and more detailed on measures to be taken.

The Directive sets an overall binding target for the European Union of 20% renewable energy by 2020. In addition, it sets a 10% binding minimum target for the market share of biofuels in 2020 to be observed by all Member States.

For the rest, the Member States are free to develop the renewable energy sector that corresponds best to their national situation and potential, provided they collectively reach the 20% target.

The level of constraint imposed is thus proportionate to the objective aimed at.

4. BUDGETARY IMPLICATION

The Proposal has no implication for the Community budget.

5. ADDITIONAL INFORMATION

- **Simplification**

The Proposal provides for simplification of legislation.

Currently there are two Directives in the field of renewable energy: for electricity and biofuels. The third sector, heating and cooling has not been legislated at European level so far. The 2020 target setting and revision of the renewable energy sector offers an opportunity to propose one comprehensive Directive legislating all the three sectors of renewable energies. This makes it possible to put in place indivisible measures in the different sectors, to address cross cutting issues (e.g. administrative barriers).

A single Directive and single national action plans will encourage Member States to think of energy policy in a more integrated way concentrating on the best allocation of efforts.

Reporting is currently required under both Directives; it will be replaced with a single report under the proposed new Directive.

- **Repeal of existing legislation**

The adoption of the Proposal will lead to the repeal of existing legislation.

- **Review/revision/sunset clause**

The Proposal includes several review clauses.

- **Recasting**

The Proposal does not involve recasting.

- **Correlation table**

The Member States are required to communicate to the Commission the text of national provisions transposing the Directive as well as a correlation table between those provisions and this Directive.

- **European Economic Area (EEA)**

The proposed act concerns an EEA matter and should therefore extend to the European Economic Area.

Proposal for a

DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

on the promotion of the use of energy from renewable sources

Text with EEA relevance

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 and Article 95 thereof

Having regard to the proposal from the Commission¹,

Having regard to the opinion of the European Economic and Social Committee²,

Having regard to the opinion of the Committee of the Regions³,

Acting in accordance with the procedure laid down in Article 251 of the Treaty⁴,

Whereas:

- (1) The increased use of energy from renewable sources constitutes an important part of the package of measures needed to reduce greenhouse gas emissions and comply with the Kyoto Protocol to the United Nations Framework Convention on Climate Change, and with further European and international greenhouse gas emission reduction commitments beyond 2012. It also has an important part to play in promoting security of energy supply, promoting technological development and providing opportunities for employment and regional development, especially in rural areas.
- (2) In particular, increased use of biofuels for transport is one of the most effective tools by which the Community can reduce its dependence on imported oil – where the security of supply problem is most acute - and influence the fuel market for transport.
- (3) 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 market⁵ and Directive 2003/30/EC of the European Parliament and of the Council of 8 May 2003 on the promotion of the use of biofuels or other renewable fuels for transport⁶ established definitions for different types of renewable

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