Introduction to European Law on Renewable Energy Sources

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ABSTRACT

This article gives an overview of the European legal framework on renewable energy sources, that is, those European legal provisions whose objective is to increase the exploitation of renewable energy sources in the production of electricity, heating and cooling, as well as fuel for transport. Although renewable energy sources are not an explicit matter for primary European law, it is clear, particularly given climate change and increasing dependency on energy imports, that they are gaining increasing importance in secondary European law and at the Member State level.

INTRODUCTION

According to the European Commission, renewable energies not only serve to tackle climate change, they will also contribute to the security of energy supplies. The Commission thereby pointed to two of the most important reasons why renewables have become a matter of great importance in political debates and legal developments over the past few years.

Renewable energy sources are defined as those sources of energy which, in contrast to conventional sources such as oil, natural gas, coal, and uranium, are available in limitless supply because natural forces constantly replenish them. The following are classed as renewable energy sources: the “solar” energies wind\(^2\), water\(^3\), biomass\(^4\) and the sun, which can be directly or indirectly traced back to solar irradiation, as well as the “non-solar” energy sources, i.e. the tides and geothermal power\(^5\). Like conventional energy sources, they can be transformed into electricity, heating and cooling, or fuel for transport.

Renewable energy sources are widely available in large quantities across Europe – from the sunny south to the water-rich north, to the east, with its extensive forests,
and the windy coastlines of western Europe. That is the decisive difference compared with conventional energy sources, which for the most part have to be imported from politically insecure regions. As the Commission emphasises, today renewable energy sources are already making a contribution to the security of energy supplies and have the potential to reduce our dependency on energy imports, which will otherwise only continue to grow in the years to come.

However, renewable energies cannot only be sourced everywhere. In addition – and in contrast to fossil energy sources, whose exploitation generates climate-damaging carbon monoxide – they can be transformed into electricity, heating/cooling and fuel without any detrimental effects on the environment. That is the essential, second advantage of renewable energy sources which the Commission emphasises.

Given current market conditions, renewable energy sources are nevertheless in many cases still more expensive than conventional sources. The long-term costs of conventional means of generating energy, in particular in terms of the exploitation of resources and climate change, have only just begun to impact prices. Renewable energies therefore have need of legal “guideposts” in order to be able to balance out the economic disadvantage, so they can assert themselves on the market and gradually replace conventional energy sources. The existing guideposts in the European legal system will be outlined in the following overview.

A. RENEWABLE ENERGY SOURCES AND EUROPEAN ENERGY LAW: THE PRIMARY LEGAL FRAMEWORK

The European Union has a separate treaty on nuclear energy, the Euratom Treaty. Until 2002, there was also a separate treaty for the primary energy source coal. However, there is still no comparable legal basis for renewable energy sources. Rather, they are covered by the general provisions set out in the treaty establishing the European Economic Community (hereinafter: the EC Treaty).

Nevertheless, the EC Treaty itself contains no explicit provisions governing renewable energy sources. Article 3 u) was added to the EC Treaty by way of the Maastricht Treaty of 1993 and assigns the Community only a general task to take measures in the energy sector. But the EC Treaty does not contain any provision on competence for energy policy measures (apart from a few closely delimited exceptions), as, under Article 5 (1) of the EC Treaty, the Community may only act within the limits of the powers bestowed on it (the proportionality principle) and, it cannot, in principle, introduce any general instruments on energy policy.

The reason why the EC Treaty lacks any such competence is the Member States’ desire to retain sovereignty over their energy policies. The supply of energy is too important to the Member States’ national economies. This becomes especially clear in the first sentence of Article 175 (2) c) of the EC Treaty, according to which environmental policy measures “significantly affecting a Member State’s choice between different energy sources and the general structure of its energy supply” can only be decided upon by unanimous vote. With the Treaty of Lisboa in effect, the legal basis for Community action in the field of Renewable Energy Systems will not change considerably.
As mentioned above, the fact that the Community can initiate no general energy policy measures only applies in principle, since the EC Treaty does not contain any exceptions which would exempt renewable energy sources from the purview of its general provisions. The general provisions of the EC Treaty can, moreover, in principle be applied to renewable energy sources if the relevant conditions have been met.

The Community can, therefore, also use, for example, its general competence regarding legal harmonisation or environmental protection to enact provisions governing energy policy. However, it has only availed itself of this option twice in the past, making reference to its competence regarding environmental protection (Art. 175 EC Treaty), namely in 2001 to enact the Directive on the promotion of electricity produced from renewable energy sources (2001/77/EC) and in 2003 for the Directive on the promotion of the use of biofuels or other renewable fuels for transport (2003/30/EC).

In January 2008, the Commission proposed a new “Directive on the promotion of the use of energy from renewable sources” on the basis of the named Art. 175 in combination with Art. 95, the competence for the internal market. 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 overall national targets for each Member State.

B. RENEWABLE ENERGY SOURCES IN THE MEMBER STATES IN LIGHT OF PRIMARY LEGISLATION

Some of the Member States have themselves closed the gap that Community law has left open until now in the area of renewable energy sources: Denmark, for example, enacted laws on renewable energy sources in the electricity sector early on; local governments in Spain adopted regulations governing the use of solar power plants in heating water; other countries such as Germany introduced tax relief for biofuels. It is in the electricity sector, especially, that the majority of Member States have for more than a decade had more or less sophisticated and effective support schemes for renewable energy sources.

Although primary Community law does not confer separate competences for renewable energies, the Member States’ law in this sector must comply with the EC Treaty, since it does not grant any exceptions to the precedence of Community law in specific policy areas. Relevant provisions in the EC Treaty are, in particular, the provisions on aid granted by states (Articles 87 et seq. of the EC Treaty) and the provisions on the free movement of goods (Article 28 et seq. of the EC Treaty).

I. Renewable energy sources and provisions on state aid

Community law on state aid is of particular relevance as regards Member States’ support schemes for the promotion of renewable energy sources. The European Commission’s Competition Directorate-General generally endeavours to subject all types of promotion by Member States to the Community’s regime on state aid. The
same can also be said of those support schemes used by the Member States to promote renewable energy sources in which the state does not grant aid to private industry in the classic sense, but rather where the Member States’ legislator imposes an “environmental” condition on energy supply undertakings requiring them to buy electricity from renewable energies at legally binding prices. However, in the *PreussenElektra* case\(^21\) (the subject matter of which was the former German law on electricity produced from renewable energy sources\(^22\)), the European Court of Justice found that the obligation to purchase electricity produced from renewable energy sources at minimum prices created an economic advantage for producers,\(^23\) but emphasised that only advantages granted directly or indirectly through state resources are considered as state aid within the meaning of the EC Treaty.\(^24\) However, obligating private electricity supply undertakings to purchase electricity produced from renewable energy sources at fixed minimum prices did not constitute the granting of direct or indirect state aid.\(^25\)

### II. Renewable energy sources and the free movement of goods

In addition to the provisions on the grant of state aid, the free movement of goods is especially important with regard to the Member States’ support schemes for promoting renewable energy sources. Article 28 of the EC Treaty, the key provision regarding the free movement of goods within the European Union, prohibits, in principle any quantitative restrictions on imports and all measures having similar effect. It was a matter of some debate in the specialist literature whether Member States’ support schemes for electricity produced from renewable energy sources constitute such a prohibited measure – irrespective of whether they are so-called quotas (so-called renewable obligations) or regulations governing minimum prices – and to what extent an exception to this basic prohibition would be of any use. The discussion was based on the fact that the amount of the respective quota or obligation to purchase electricity produced from renewable energy sources theoretically restricts the electricity dealer in importing electricity from other Member States.\(^26\) The European Court of Justice also referred to this aspect in the *PreussenElektra* case\(^27\) and ruled that Member States’ schemes for the promotion of renewable energies did not violate Article 28 of the EC Treaty.

The ECJ held that the obligation to purchase electricity produced domestically from renewable sources could at least potentially provide a hindrance to intra-Community trade within the meaning of the so-called *Dassonville* formula\(^28\), and thus, that a measure of comparable effect did represent a quantitative restriction on imports within the meaning of Article 28 of the EC Treaty.\(^29\) However, given the current status of Community law, the ECJ judged that the potential hindrance to intra-Community trade was reconcilable with Article 28 of the EC Treaty. This judgment was based on the fact that the use of renewable energy sources serves to protect the environment as well as to protect the health and life of humans, animals, and plants. The ECJ added that the fact that obstacles to trade in electricity between the Member States were still in place also needed to be taken into consideration.\(^30\)

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\(^22\) On the genesis of the legal dispute see e.g. Opinion of Advocate General Jacobs of 26 October 2000 in Case C-379/98 – *PreussenElektra* [2001] ECR I-2099, paragraphs 16 et seq.

\(^23\) ECJ, cited above, note 17, para. 54.

\(^24\) ECJ, cited above, note 17, para. 58.

\(^25\) ECJ, cited above, note 17, para. 59.

\(^26\) See e.g. Altrock/Oschmann/Theobald, cited above, note 17, pp. 52-55.69

\(^27\) ECJ, cited above, note 17.


\(^29\) Ibid., para. 71

\(^30\) ECJ, cited above, note 17, paras. 72 et seq.
Some of those writing in the specialist literature subsequently raised the question of whether this legal assessment may have changed, since in the meantime what has become known as the Second Electricity Directive has come into effect and therefore progress has been made in deregulating the electricity market.

Firstly, even the initial hypothesis is doubtful, namely, that progress has been made on deregulation since it is still the case that a few big energy supply undertakings dominate the electricity market and there is still only limited capacity for transporting electricity between the Member States. That is why, even though the Second Electricity Directive has now come into effect, one can hardly claim that there has been any real liberalised electricity market.

Even if one were to agree with the deregulation hypothesis, it would alter nothing about the fact that the Member States’ support schemes for electricity produced from renewable energies do not in principle conflict with the free of movement of goods.

Firstly, there is more to Community law than the Electricity Directive. Community law currently also comprises provisions on the promotion of renewable energies, in particular in Directive 2001/77/EC. This Directive explicitly assumes that Member States will continue to implement different support measures for the promotion of electricity produced from renewable energy sources “which could have the effect of restricting trade, on the basis that these contribute to the objectives set out in Articles 6 and 174 of the EC Treaty” (Article 4.1 Directive 2001/77/EC).

Secondly, since Directive 2001/77/EC came into effect, Article 28 of the EC Treaty is no longer applicable to Member States’ policies for promoting electricity produced from renewable energy sources. According to the case law of the European Court of Justice, national measures can no longer be assessed as regards their compliance with Article 28 et seq. of the EC Treaty if an EU Directive has created a harmonised provision. Although Directive 2001/77/EC primarily serves environmental and climate protection, it also harmonises the Member States’ various provisions on the promotion of renewable energies. That is why Member States’ provisions on the promotion of electricity produced from renewable energy sources can no longer be assessed in the light of Articles 28 et seq. of the EC Treaty, but only in the light of Directive 2001/77/EC itself.

C. RENEWABLE ENERGY SOURCES IN SECONDARY LEGISLATION

The lack of competence for Community action gives Member States wide-ranging scope to shape their policies in the renewables sector. It is also reflected in the Community’s secondary legislation, since there are only very few legally relevant acts dedicated specifically to renewable energies. Up until a few years ago the Community promoted renewable energy sources only by supporting research and by means of co-operation agreements and general recommendations.

It was not until the late 1990s, after Article 3 (u) had been inserted in the EC Treaty in 1993 (task for measures in the sphere of energy) and beginning with the Green Paper “Energy for the Future” of 1997, that the EU began to attach greater importance to renewable energies. The only visible results of this in the Community’s energy
policy so far have been Directive 2001/77/EC on the promotion of electricity produced from renewable energy sources (I.) and Directive 2003/30/EC on the promotion of the use of biofuels or other renewable fuels for transport (II.). Given its lack of competence as regards energy policy, the EU based both Directives on its competence for environmental policy (Article 175 para. 1 of the EC Treaty). In January 2008, the Commission proposed a new Directive on the promotion of the use of energy from renewable sources (III.).

I. The Directive on the promotion of electricity produced from renewable energy sources


1. Content of the Directive

The Directive places Member States under the obligation to set themselves indicative targets for expanding renewable energy sources in the electricity sector which must be consistent with the European targets defined therein. The Directive does not stipulate in any way how the Member States are to achieve these targets. However, based on Article 3 (4) of the Directive the Commission will assess the extent to which Member States’ national indicative targets are consistent with the European indicative targets and to what extent Member States are making progress in achieving their national indicative targets. To that end the Member States must submit annual reports to the Commission.

2. Implementation in the Member States

The overwhelming majority of Member States uses regulation of prices with fixed feed-in tariffs to launch renewable energy sources in the electricity sector. They permit producers to feed electricity into the electricity grid at fixed tariffs. These tariffs are based on marginal production costs and are fixed at state level. As an alternative to feed-in tariffs, some Member States apply state quotas (so-called renewables obligations) to the share of renewable energy sources used in electricity production, which are usually combined with a trade mechanism for green certificates. The amount of support available thereby corresponds to the price of the certificate on the certificate market.

In December 2005 and again in January 2008 the European Commission analysed and compared the Member States’ support schemes for electricity produced from renewable energy sources. It came to the conclusion that “feed-in tariffs . . . (are)
currently cheaper and more effective than so-called quota systems.” At present it appears that the Member States’ support mechanisms are gradually coming into line. In the UK, for example, subquotas for individual renewable energy sources are being discussed, whilst, for instance in Spain, regulation of prices is combined with incentives for the producers to market the electricity themselves.

3. First steps towards harmonisation

The Community has been discussing the harmonisation of the Member States’ different support mechanisms for electricity produced from renewable energy sources since the mid-1990s. The European Parliament has advocated a European feed-in regulation since the mid-1990s, although up until early 2000 the Commission, by contrast, preferred a harmonised quota model. In its proposal for Directive 2001/77/EC, which the Council and the Parliament adopted after making only a few changes, it then decided, in line with the principle of subsidiarity, to give Member States the freedom to choose which mechanisms they were to use.

In the report on the experience of Directive 2001/77/EC of December 2005, the Commission for the first time indicated that it clearly favoured a European feed-in regulation, given the better experience reported of regulation of prices. According to the Commission, however, it was currently too early for a Europe-wide harmonised system. It believed it was more appropriate to adopt a co-ordinated approach based on co-operation between Member States and on optimising national systems.

With the proposal for the new Directive on the promotion of the use from renewable sources the European Commission returned to its prior position and submitted a system of tradeable certificates.

a. European trade certificate system

Proposals for a harmonised system based on tradeable certificates for energy from renewable sources were already put forward in the late 1990s. In the same manner as the above mentioned national quota models, it would define a binding “target quota” for energy produced from renewable sources for all energy producers in the European Union. Each year, producers would have to submit certificates to prove that they had fulfilled their quota obligations. They would get the certificates by producing electricity from renewable energy sources or by buying in certificates from other producers.

The certificate system approach appears relatively simple at first glance. However, experience with emissions trading, which is comparable in terms of economic theory, leads one to suspect that “the devil is in the details” and that practical implementation would also be a complex affair.

b. European regulation of prices

A proposal for harmonised price mechanisms has also only very recently been put forward. It follows the Spanish law on the promotion of electricity
produced from renewable energies. In particular, it proposes a methodology for harmonisation based on a feed-in law with a modular and transparent premium for renewable electricity producers. This premium takes account of technology costs, some grid services, political incentives, and national priorities.

The proposed approach includes flexibility mechanisms to update and revise premiums, to avoid windfall profits for producers, and to share technology innovation benefits with electricity consumers while maintaining incentives for innovation. The final result is simple and straightforward for policymakers, developers, and system operators: a guaranteed premium for 20 years, with low transaction costs and easy enforcement, which developers can use to finance their projects.

c. Approaches to harmonisation against the backdrop of the principle of proportionality and the principle of subsidiarity.

As part of the so-called OPTRES project, the European Commission commissioned a model-based prospective analysis on what benefits in terms of efficiency would be gained by harmonising Member States’ support schemes for electricity produced from renewable energy sources. The analysis shows that significant efficiency gains could be made by optimising the Member States’ support mechanisms. A simple, Europe-wide tradeable green certificate scheme would, by contrast, lead to fewer benefits in terms of efficiency. Only a subtly differentiated, harmonised regulation of prices that is technology-specific would be marginally more beneficial than optimising Member States’ support instruments.

Since both previous experience of Member States’ support schemes and the model-based prospective analysis show that the Member States can achieve the objectives set out in the Directive on promoting electricity production from renewable energy sources, it is the principle of subsidiarity which limits the Community’s scope for action. The Community is essentially restricted to prescribing binding targets, to monitoring the achievement of these targets and to imposing sanctions upon failure to do so. Since according to practical experience and the aforementioned analysis, regulation of prices leads to lower transfer costs for consumers than quotas, at the present time the only form of Community regulation that would be conceivable from the point of view of the principle of proportionality would be a European regulation on prices.

Anyhow, the above mentioned proposal of the European Commission on the promotion of the use of energy from renewable sources contains provisions on electricity of renewable energy sources that are supposed to replace the existing Directive 2001/77/EC on electricity from renewable energy sources.
II. The Biofuels Directive


1. Content of the Directive

In a very similar way to the Directive on the promotion of electricity produced from renewable energy sources, Article 3 of the Biofuels Directive stipulates that Member States must ensure that a minimum share of biofuels and other renewable fuels is placed on their energy markets and that they must set national indicative targets to that effect. The Directive quotes a reference value for these national indicative targets, namely a share of 5.75% for biofuels (energy) by 2010.

The Directive defines biofuels as those fuels that are produced from biomass (Article 2 para. 1), i.e. biodiesel, bioethanol as well as bio-ETBE, biogas, biomethanol and synthetic biofuels produced from biomass (Article 2 para. 2).

The Member States are left to decide themselves how these national indicative targets are to be achieved – again by analogy to the Directive on the promotion of renewable energy sources.

In accordance with Article 4 of Directive 2003/30/EC, each year Member States must report to the Commission on what measures have been taken to promote biofuels. However, there is an “upper limit,” in that Article 16 (3) requires that only the additional costs of biofuels be compensated for. Overcompensation is therefore not permitted.

Directive 2003/96/EC harmonises the structure of taxation on electricity and energy products. Such standardisation had previously only been introduced in the mineral oil sector. The Directive now sets out a minimum tax rate, which also applies to biofuels. However, it also opens up the possibility of promoting biofuels by means of tax breaks.

The proposal of the European Commission on the promotion of the use of energy from renewable sources as of January 2008 contains provisions on electricity of renewable energy sources that are also supposed to replace the existing Directive 2003/30/EC on biofuels.

III. The new comprehensive directive on renewable energy sources

The mentioned proposal of the European Commission 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%. This target, which was adopted by the European Council in March 2007, is very ambitious. The current share of renewable energy
sources in the EU is 8.5%. In order to reach this target, all Member States will have to undertake huge efforts at the national level.

In addition to the specification of national targets, the Commission proposal contains an abundance of provisions to be implemented by the Member States. These include the introduction of national action plans, the launch of a two-tier trade system at the Member State and enterprise level, provisions on access to the electricity grid regarding building and building planning legislation, and, for the first time at the EU level, sustainability requirements for the energy uses of biomass.

When presenting its draft, the European Commission made clear that the decision on whether to participate in trade lies with the Member States and that the national support systems will not be impaired. The proposed trade at the enterprise level raises a number of questions. They primarily concern the trade’s impact on national support systems, the Member States’ responsibility for compliance with national targets, and the avoidance of excess support resulting in additional energy price burdens.

The trade model is evidently based on operators of RE installations not exchanging the certificates they receive for energy production against support under their national system, and instead using them in the framework of another national support system or offering them for sale on the market for guarantees of origin (GoO).

The obvious consequence is that operators of wind farms and solar power plants will look for the most favourable European support system for them – a national certificate trade system in the case of comparatively low feed-in fees or a feed-in system in cases where higher feed-in fees are paid.

One of the biggest problems is likely to be the incompatibility of free tradability at the enterprise level and the unconditional responsibility of the Member States regarding target compliance. Every certificate issued for domestically-produced renewable energy can only be counted towards compliance with the national target if the operator chooses to use the national support system. If the operator accepts the more attractive GoO sale offer by another Member State or trades on the exchange, the certificates do not count towards compliance with the national target. Pressure would grow on the first Member State to offer even more attractive conditions in order to secure the volume of certificates needed for target compliance. The result would be a subsidy race.

To resolve this, the Commission proposes the option of restricting trade, right through to a complete exclusion from trade. Whether the undermining of national systems differentiating according to technology by a European certificate model with a standard certificate price would suffice as a reason for restrictions on the free movement of goods is the crucial question, which ultimately would have to be decided by the ECJ. (unclear sentence)

If the consequence were a non-restrictable trade model at the enterprise level, this would lead to considerable so-called windfall profits in the support systems. While in the feed-in systems today the support element (feed-in tariff minus value of electricity fed into the grid) is 2-4 Eurocent/kWh for the “volume energies”
hydropower and wind energy (onshore), the British price for renewable obligation certificates (ROC), for example, is around 8 Eurocent (£0.08/MWh).

In green certificate systems, the standard certificate price is usually prescribed by the specific renewables’ additional costs of the marginal enterprise. In view of the very ambitious EU target, expensive new volume energies such as offshore wind energy, geothermal energy and biogas electricity generation would be required for target compliance and would lead to GoO prices of 12 Eurocent or more. The considerably more economically viable technologies of onshore wind energy and hydropower would also benefit from this, but the expansion potential in these sectors is limited and can contribute little to price reduction.

The conclusion is that in the case of GoO trade, considerable price increases for electricity consumers must be reckoned with, primarily as a result of higher specific support costs. This is why there is scepticism from an economic perspective regarding this trade model. Different national governments within the EU therefore urge, first of all, the advancement of flexibility between Member States through the transfer of excess volumes. The enterprise level can also be involved in such an alternative trade model. Therefore, it is unlikely that the European Commission will prevail with its proposal. It is more likely that the European Parliament together with the Council are going to find a more balanced solution.

D. OUTLOOK

The Commission’s proposal for a new Directive on the promotion of the use of energy from renewable sources of January 2008 – fully in line with the European Council and the European Parliament – sets the ambitious overall target of a 20% share of renewable energy sources in energy consumption by 2020, which will form the basis for a new European energy policy. Renewable energy sources have an important role to play both in terms of the security of supply and for climate protection.

In the light of the goals the European institutions are attempting to achieve, we can expect the importance of renewable energy sources in Community energy policy and in Community secondary legislation to significantly increase over the next few years. The EU should thus set the Member States ambitious, binding targets, but still leave them flexibility to choose the means of achieving those targets in line with the principles of subsidiarity and proportionality.