

Viewpoint

The European directive on renewable electricity: conflicts and compromises

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Abstract

As part of its efforts to increase the use of renewable energy in Europe, a Directive regarding renewable electricity was agreed by the European Union in 2001. The purpose of this article is to examine this Directive, examining how the discussions surrounding its content unfolded. The investigation focuses upon three contentious issues that were debated during the Directive's development: the definition of 'renewable', the national targets for renewable electricity (their levels, as well as whether they should be 'binding' or 'indicative') and the questions associated with harmonisation (whether one Union-wide 'support scheme' for renewable electricity should be in place, and, if so, what it should be). During the 5 years that the Directive was negotiated, many intra-Union conflicts were eventually resolved, at least temporarily, by compromises. Nevertheless, some difficult decisions regarding the promotion of renewable electricity in the European Union still have to be taken.

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1. Introduction

Many argue that industrialised societies' use of 'conventional' fuels in large, centralised facilities to generate electricity is unsustainable. The environmental and social consequences of fossil-fuel- and nuclear-power generating stations are, they continue, significant. Air quality issues (at various scales) and the problem of safely disposing of nuclear waste are but two of these challenges (see, generally, [Holdren and Smith, 2000](#)). 'Alternative' fuels to generate electricity should, the argument continues, be used instead. Wind turbines, solar panels, small-scale hydropower facilities and biomass generators are four of the most commonly cited examples of ways of using such alternative fuels (see, generally, [Boyle, 1996](#)).

For a variety of reasons—not only environmental concerns, but also economic aims and security goals (for example, [CEC, 2001b](#), Preamble; [Haas, 2001](#), p. 5)—citizens and officials around the world have voiced their interest in increased use of alternative fuels in their electricity supply systems. Europe is no different, for many have been calling for greater use of so-called

'renewable electricity'. The purpose of this article is to investigate the ways in which this pan-continental ambition was translated into a European Directive.

More specifically, the focus is upon the 2001 'Directive of the European Parliament and of the Council on the promotion of electricity produced from renewable energy sources in the internal electricity market' ([CEC, 2001b](#)). The aim of this article is to describe how the discussions surrounding its content unfolded. As will be revealed in this article, there was much more consensus surrounding the aforementioned 'general ambition' (that is, that alternatives should play a larger role in European electricity supply) than the means to achieve the same (that is, the strategies—be they policies, market mechanisms or something else). This article investigates the conflicts and compromises associated with the latter.

The article is divided into four main parts. After this brief introduction, the context is set in the second section: the author reviews the current structure of electricity supply in the European Union, and the author introduces the present European ambition for changing that supply structure—namely, the 2001 Renewables Directive. In the third section, the author examines, in greater detail, the three issues that generated the most attention, and the most debate,

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during the development of the Directive (Reiche (2002, p. 305) also identifies these three challenges). They are the definition of ‘renewable’, the national targets and harmonisation. The ways in which compromises to resolve these conflicts were reached are also described. Finally, in the fourth section, the author highlights the main conclusions, identifies outstanding policy challenges and notes paths for future research.

2. The context: electricity in the European Union and the 2001 directive

2.1. Electricity supply in the European Union

Table 1 presents information about the national electricity situation in the 15 member states of the European Union, as well as information for the Union as a whole. Information about what is sometimes—though not always—called ‘renewables’ can be found in the two right-hand columns. From this, it is evident that renewables—even when broadly defined—play a modest role in the electricity supply profile of most member states. Moreover, when large-scale hydro is removed from consideration of ‘renewable’, the total share of the Union’s electricity generation portfolio that is generated by ‘alternative’ renewable resources is only about 3%. Small-scale hydropower, biomass and wind are the largest contributors (Haas, 2001, p. 8).

2.2. The 2001 renewables directive

On 20 November 1996, the European Commission released a ‘Green Paper’ on renewable electricity in the Union, entitled ‘Energy for the future: renewable sources of energy’ (CEC, 1996a). Green papers generally ‘propose the first ideas for discussion in a specific field where a Community action might be envisaged, often presenting a range of alternative approaches’ (McGiffen, 2001, p. 29). After receiving comments from various institutions and parties, a White Paper of the same name was published by the Commission on 26 November 1997 (CEC, 1997). White papers ‘set out more detailed suggestions’ (McGiffen, 2001, p. 29). In that White Paper, it was proposed that a Directive would be first published in 1998, and that this would be the next step in European legislative development (CEC, 1997, p. 15, 34).

Given the nature of the issue, the renewable electricity proposal was subject to the European Union’s ‘co-decision procedure’ (as outlined in the Treaty of Amsterdam). In this, the Council and Parliament are joint legislators. The procedure can be generally described as follows.

Responding to a proposal from the European Commission, both the Council of Ministers and the

European Parliament have two opportunities to approve or amend the proposal. If, after this, the two co-legislators cannot agree, then a conciliation committee is convened. This body, composed of representatives from both the Council and the Parliament, aims to reach an agreement that will be acceptable to both institutions. If they are successful, their joint proposal must then be approved by the Council of Ministers (through Qualified Majority Voting—QMV) and the European Parliament (through a majority of votes cast). If the conciliation committee is unsuccessful, then the proposal is deemed to have been unacceptable, and the legislative process ends (for more information about the co-decision procedure, see Shackleton, 2002, pp. 104–107).

Returning to the specific case of renewable electricity, a proposed Directive was forthcoming from the Commission, but, because of controversies surrounding its content, it did not emerge until 2000. On 10 May 2000, the Commission published a draft Directive entitled ‘Directive of the European Parliament and of the Council on the promotion of electricity from renewable energy sources in the internal electricity market’ (CEC, 2000a).

Following the steps of the co-decision procedure, the draft Directive was subsequently considered by the European Parliament. On 16 November 2000, Parliament adopted, with a number of amendments, a report from the Committee on Industry, External Trade, Research and Energy (which, in turn, had received input from the Committee on the Environment, Public Health and Consumer Policy) (EP, 2000). This contained Parliament’s position with respect to how the Directive should proceed. In response, the Commission presented an amended proposal on 28 December 2000 (CEC, 2000b), which was transmitted to the Council and the Parliament.

Accepting some of the elements of the amended proposal, but rejecting others, the Council published its Common Position on 23 March 2001 (CEU, 2001). The Commission responded to this, in the form of another amended proposal, a week later (on 30 March 2001) (CEC, 2001a). This proposal then went back to the European Parliament for a second reading. In order to avoid the conciliation procedure (which would have been required, if agreement could not have been reached between the two co-legislators at this second stage), the rapporteur of the lead Parliamentary Committee negotiated an agreement with the Swedish Presidency, representing the Council. Their agreed text—incorporated into amendments—was approved by Parliament on 4 July 2001. This version was then subsequently approved by the Commission (on 24 July 2001) and the Council (on 27 September 2001) (CEC, 2001b). The Directive thus entered into force on 27 October 2001.

During the 5 years that the Renewables Directive was negotiated, it was subject to much debate among the

Table 1
Electricity generation profiles for the European Union's 15 member states, as well as for the EU as a whole (by resource), 1999

	Electricity generation (TWh)	Coal (per cent share)	Oil (per cent share)	Natural gas (per cent share)	Nuclear (per cent share)	Hydro (per cent share)	Others (per cent share)
Austria	59	9	5	15	0	68	3
Belgium	83	15	1	23	59	0	1
Denmark	39	52	13	24	0	0	12
Finland	69	14	1	14	33	18	20
France	520	6	2	1	76	14	1
Germany	551	52	1	10	31	4	3
Greece	49	66	17	8	0	9	1
Ireland	22	27	28	32	0	4	9
Italy	259	11	35	34	0	18	3
Luxembourg	0.4	0	0	57	0	24	19
Netherlands	87	26	8	57	4	0	6
Portugal	43	35	26	19	0	17	3
Spain	206	37	12	9	29	11	3
Sweden	155	2	2	0	47	46	2
United Kingdom	364	29	2	39	27	2	2
EU Total	2508	26	7	17	35	12	3

Source: IEA (2001).

three key institutions that developed it—that is, the European Commission, the Council of Ministers and the European Parliament. In the next section, the author identifies and investigates three of the most contentious issues. In particular, the author focuses upon the conflicts that arose and the compromises that were eventually agreed.

3. Key debates in the directive's development

3.1. Definition of renewable

Although some argue that the term 'renewable' has a more objective basis than other terms that are often used to describe similar kinds of electricity—in particular, 'green'—development of the Renewables Directive in Europe was not without its own set of discussions about how terms should be defined. Most of that debate—certainly the most heated parts—was with regard to the appropriate place for hydropower resources and biomass resources in the Directive. Each is considered here in turn.

Concerning hydropower, there was relatively little debate as to whether it is technically 'renewable' or not. That was widely accepted. Instead, the debate surrounded the issue as to whether hydropower—particularly, large-scale hydropower—should be supported by the Renewables Directive, and thus potentially receive as much advantage as solar or wind (the so-called 'greenest renewables') in national and European strategies.

On the one hand, many maintained that it should not be. Not only is large-scale hydropower already economically competitive in Europe's electricity marketplace, there are also numerous environmental and social consequences of its development (for example, WCD, 2000). Because of the former, it was argued that large-scale hydropower *does not require* support in any way; because of the latter, it was similarly argued that it *should not* be supported. Moreover, some feared that, with the significant share of large-scale hydropower already in place in the European Union (see Table 1), any obligation to give it the same kind of support as the 'new renewables' (like solar and wind) might lead to huge costs for governments.

On the other hand, supporters argued that large-scale hydropower should be covered by the Directive and that it should qualify for any associated support. In order to reduce greenhouse gas emissions and alleviate local and regional air pollution challenges, they maintained, support should be given to all kinds of no-emissions technologies—large-scale hydropower included.

As a result of trying to balance the apparently incompatible objectives of recognising that all hydropower is a renewable resource, while excluding large-scale hydropower from support in a Directive entitled (in part) 'the promotion of electricity from *renewable* energy sources' (emphasis added), the Commission chose to adopt some seemingly inconsistent wording in the first draft of the Directive. While renewable energy sources included, in the definition section of the Directive (Article 2), only those 'hydroelectricity installations with a capacity below 10 MW' (CEC, 2000a),

‘hydroelectric installations with a capacity above 10 MW (were) considered as a renewable resource’ (CEC, 2000a) for the purposes of meeting national targets (Article 3). Hence, it was proposed that large-scale hydropower was renewable for some purposes of the Directive, but not for others.

The Council, in the development of its Common Position, attempted to resolve this inconsistency. Hydropower, regardless of size, was defined as renewable throughout the Directive (CEU, 2001). The Council also added a section (recital 16) that effectively left the door open for subsequent reconsideration of whether any qualifications upon what kinds of hydropower are renewable should be introduced (CEU, 2001, p. 6). Thus, the debate was effectively deferred, at least at the European level, until future rounds of negotiations. Indeed, with Article 5 of the Directive requiring the ‘guarantee of origin’ (a certificate noting the source of the renewable electricity) for hydroelectric installations to indicate the capacity of the station that generated the renewable electricity (CEU, 2001, p. 13; CEC, 2001b), individual member states could continue to be able to distinguish ‘good’ from ‘bad’ hydroelectric power in whatever way they liked.¹ Hence, the broader challenge of a uniform Community definition for ‘preferred’ hydropower still needed to be tackled.

Biomass was another term that attracted much debate. In its first draft of the Directive, the Commission defined biomass as ‘products from agriculture and forestry, vegetable waste from agriculture, forestry and from the food production industry, untreated wood waste and cork waste’ (CEC, 2000a). In response, Parliament proposed to broaden, for the most part, the definition, adding landfill gas, biodegradable pulp and paper industry waste, the ‘digestion of the biodegradable fraction of separated municipal wastes’ (EP, 2000, p. 19) and annual peat growth. When given its opportunity, Council then expanded the definition of biomass in some ways even further (while also contracting it in one instance). Most controversially, Council not only endorsed the inclusion of municipal wastes as ‘renewable’ (something that the European Parliament had introduced), it extended it. In its Common Position, Council proposed to include ‘the biodegradable fraction of industrial and municipal waste’ as part of the definition of ‘renewable’ (CEU, 2001, p. 8). In this way, not only did Council propose that the waste could originate from either municipal or industrial activities (instead of just municipal activities, as proposed by Parliament), it also need not be ‘digested’ (again, as

proposed by Parliament) in order to qualify as renewable (energy recovery from waste could thus be in any conceivable form, including combustion). Council stopped short, however, of identifying all waste incineration as renewable. This proposal by Council, though lamented by many, including the Commission,² the Parliament and numerous environmental groups (for example, Volpi, 2000), found its way—word-for-word—into the final Directive (CEC, 2001b). Respect for the Community’s waste hierarchy also has to be present.

Other changes introduced by Council, and again incorporated into the final Directive in a verbatim manner, were a broadening of the industries covered by the definition of biomass and a rejection of peat as renewable (CEU, 2001, p. 8).

The breadth of the definition of renewables—that is, how many possible resources are included—has important ramifications for the prospects of individual renewable resources. If those that are deemed ‘light green’ are included (for example, all hydropower and all biomass), then—all else being equal—the ‘dark green’ resources (for example, solar and wind) will potentially capture less of the overall electricity market. This is because investors and consumers will have the option of pursuing less expensive renewable electricity alternatives in order to meet society’s goals. Similarly, if more resources are included in the definition of renewables, then—again, all else being equal—it will be easier for member states to meet their assigned targets. A larger portfolio of options will be available, and thus the chances of developing a cost-effective strategy will increase.

During the negotiations of the Renewables Directive, all member states, working through the Council, had at least some interest in ensuring that the term renewables included as many different kinds of resources as possible. This would maximise their flexibility in promoting renewables. It was, however, those countries that had significant existing electricity generating capacity in waste and/or plans (or potential) for more that worked the hardest to ensure that the broad definition of renewables was adopted in the final Directive. Italy, The Netherlands and United Kingdom, in particular, wanted waste to be included (EU Renewables Directive, 2001; ENDS, 2000a; Environline, 2001). These countries saw waste as being important—indeed, critical—if they had any chance at all of meeting their targets. In the end, their position prevailed.

¹ See the differences in perspective with regard to how hydropower is recognised in Midttun and Koefoed (2003, p. 684). In some countries (for example, Sweden), it is received more favourably than in others (for example, Germany). For differences in national approaches to renewables more broadly, see Haas et al. (2004).

² Of course, it is acknowledged that ‘the Commission’ is by no means a singular decision-making entity. While the Energy and Transport Directorate-General (DG) took the lead in developing the Renewables Directive, there was input from other DGs, including Competition and Environment.

3.2. Targets

While the ambition to increase the share of renewable resources in the Community's electricity supply has been publicly stated for at least 15 years (CEC, 1997, p. 6), the articulation of a specific target is more recent. On 4 July 1996, the European Parliament passed a resolution calling for the share of renewables in the European Union's primary energy mix to be increased to 15% by 2010 (CEC, 1996b). In its Green Paper, the Commission sought views on the setting of an indicative objective of 12% for the contribution by renewable sources of energy to the European Union's gross inland energy consumption by 2010 (CEC, 1996a). That figure represented an approximate doubling of the share that was in existence in the late 1990s. The 12% figure was repeated in the White Paper. Accompanying it at this time was a figure for renewable electricity: 'if appropriate measures are taken, electricity production from renewables could grow significantly by 2010, from the present 14.3% to 23.5%' (CEC, 1997, p. 43).

A target figure also appears in the first draft Directive, though it is lower than that proposed in the White Paper. The Commission argued that while the Directive still aimed for consumption of electricity from renewables to be at 675 TWh in 2010, because estimates of total electricity consumption in 2010 had risen, the share of that total that 675 TWh represented was correspondingly lower—namely, 22.1% instead of 23.5% (CEC, 2000a). Also introduced in the draft Directive were indicative targets for renewable electricity for each member state. The Commission argued that these were based 'on technological and economic potentials in each Member State' (CEC, 2000a, Annex, 25). Any targets that member states may have unilaterally announced were also used, for the Commission reported that the 'latest existing Member States targets and policies have been used as references...' (CEC, 2000a, Annex, 26). Targets for individual countries ranged from 5.7% for Luxembourg to 78.1% for Austria. Important to recognise, however, is the fact that member states were starting from different points. While United Kingdom's target of 10.0% might seem relatively modest in light of the Union-wide ambition of 22.1%, this still represented a six-fold increase in the *relative share* of renewables in overall electricity supply during a 13-year period.

Generally, the European Parliament pressed for higher targets for the European Union as a whole. In response to both the Green Paper and the White Paper, Parliament maintained its earlier position that the appropriate figure for overall energy consumption should be 15% (EP, 1997, p. 3; EP, 1998, p. 5). Other European institutions called for even more—Parliament's Environment Committee, for example, wanted a 20% target (EP, 1998, p. 30). For its part, Council was not as ambitious. Instead, it identified, in 1998, the

indicative target of 12% as providing 'useful guidance' (CEU, 1998).

Turning specifically to the figure for electricity, '22%' appears in the final version of the Directive, although it is noted that this is a 'rounded figure' (CEC, 2001b). After three countries reduced their targets from those that the Commission had introduced in its first draft of the Directive (Finland from 35.0% to 31.5%, The Netherlands from 12.0% to 9.0% and Portugal from 45.6% to 39.0%), the actual figure is estimated to be 21.7% (author's calculations following CEC, 2000a, Annex, 27 and CEC, 2001b).³ Full details of all countries' targets, as noted in the Directive, are presented in Table 2.

What was also important in the debate about targets was whether the targets would be binding or indicative. In its first draft of the Directive, the Commission considered this question, recognising that binding targets 'could facilitate the achievement of the 12% objective of the White Paper on renewables and would ensure that [renewable electricity] makes a significant contribution towards the attainment of the EU's commitments within the context of Kyoto' (CEC, 2000a, p. 3). But the Commission acknowledged that there were 'good arguments for maintaining a large degree of flexibility for Member States, enabling them, in the light of national circumstances, to identify the strategy best suited to achieve their climate change commitments and, if necessary, to adapt the strategy in the light of future developments' (CEC, 2000a, p. 4).

In that draft Directive, the Commission clearly tries to find a middle ground between these two poles.⁴ Although the targets are indicative, they are still intended to be stronger than simply 'suggestive'. Most importantly, a process of review is proposed, in which the Commission assesses the extent to which member states' national targets are compatible with meeting the objective of increasing the Community's share of electricity from renewable energy sources to 22.1% (as it was at that stage) by 2010. If the Commission finds that the national targets are likely to be inconsistent

³It is also important to recognise, in the final version of the Directive, the page of 'notes' associated with the targets. Six of the Union's 15 member states have qualified their target in some way. Many of these make the point that the percentage target is a function of overall electricity demand—should the estimate for overall demand be incorrect, then the target should no longer apply. Additionally, Austria and Sweden highlight the weather-dependent nature of hydropower (a significant contributor to their overall level of renewable electricity), and Luxembourg makes the point that all of the electricity produced by its municipal waste incinerator needs to be counted as renewable, if it hopes to reach its assigned target.

⁴The Commissioner responsible for the Directive—Loyola de Palacio—was reported as saying that she would have preferred to propose binding targets, but that she had been forced to abandon the plan in the face of stiff resistance from member states (Frost, 2001, p. 17).

Table 2
EU member states' renewable electricity production and target

	Renewable electricity (TWh), 1997	Renewable electricity as a percentage of total electricity, 1997	Renewable electricity target for 2010, as a percentage of total electricity
Austria	39.05	70.0	78.1
Belgium	0.86	1.1	6.0
Denmark	3.21	8.7	29.0
Finland	19.03	24.7	31.5
France	66.00	15.0	21.0
Germany	24.91	4.5	12.5
Greece	3.94	8.6	20.1
Ireland	0.84	3.6	13.2
Italy	46.46	16.0	25.0
Luxembourg	0.14	2.1	5.7
Netherlands	3.45	3.5	9.0
Portugal	14.30	38.5	39.0
Spain	37.15	19.9	29.4
Sweden	72.03	49.1	60.0
United Kingdom	7.04	1.7	10.0
Community total	338.41	13.9	22

Source: CEC (2001b).

with this target, then the Commission shall 'present proposals to the European Parliament and to the Council with respect to individual and mandatory national targets' (CEC, 2000a).

In spite of Parliament's desire to have something approaching binding targets (EP, 2000), the wording in the final version of the Directive is representative of indicative targets. More specifically, qualifications are introduced as to when the Commission can introduce proposals to the European Parliament and to the Council. If national targets do not appear to be fulfilling the Community's overall goal, then the Commission is not necessarily obliged to take action. If justified reasons exist (without the term 'justified' being further defined or explained) or if new scientific evidence has been brought forward, then the Commission does not have to introduce such proposals (CEC, 2001b).

The European Commission was extremely important as an agenda setter on the issue of targets (compare, generally, with Andersen and Eliassen, 2001, p. 39; and Young and Wallace, 2000, p. 18). The Commission initially advanced a target of 12% (for overall energy use) in its 1996 Green Paper (CEC, 1996a), from which it derived the figure of 22.1% for electricity. Although decried as weak by some, these targets are perceived by others to be quite ambitious. The original '12%' figure emerged from a study sponsored by the Commission on the European Union's energy futures entitled 'The European Renewable Energy Study (TERES II)' (ESD, 1996). A number of scenarios were developed in which 'the contribution of renewable energy sources to gross inland energy consumption (was) between 9.9% and 12.5% by 2010' (CEC, 1997, p. 7). By selecting a

target towards the top of this range, the Commission was selecting an 'ambitious overall objective' (CEC, 1997, p. 7). And although other figures were subsequently suggested by other interested players, in the end, it was a target of 22% that was written into the 2001 Directive. Given that this is generally consistent with the original '12%' figure (for energy as a whole), the Commission's position largely prevailed.

The 'national' approach selected by the Commission—that is, that the Community-wide target should be achieved on the basis of national-level targets being developed and met—also survived the long negotiations. Moreover, many of the figures calculated by the Commission, with respect to individual national targets, also endured. This was in spite of the fact that they were unilaterally developed by the Commission and that many of them (that is, for at least half of the countries) were stronger than that which had been declared by the individual member states themselves (ENDS, 2000b). Indeed, many observers remain curious as to how the Commission calculated the national targets, for no particular formulae, or rigorous presentation of decision-making processes, have yet to be revealed.

Given the perceived ambitiousness of the targets, virtually no country (with the exception of Denmark, and later on, Germany (Lauber, 2002b, p. 30)) wanted them to be binding. Therefore, the Commission was put under pressure by virtually all ministers in the Council to make the targets indicative. Even with the European Parliament supporting the Commission's call for binding targets, the Council's pressure eventually proved irresistible on this issue.

3.3. Harmonisation

Debates reviewed in this section revolve around two key issues—one, whether there should be any kind of ‘harmonisation’ of ‘support schemes’ for renewable electricity in the European Union; and two, if there should be, what form should that harmonisation take. Because the two are so closely related, the author considers them together in the subsequent investigation. Nevertheless, before pursuing this further, the author first reviews three of the dominant models in the European Union, with regard to support schemes for renewable electricity (for similar reviews, in more elaborated fashion, see Hvelplund, 2001; Krieglstein, 2001; Meyer, 2003).

First, a ‘feed-in tariff’ model consists of an obligation for utilities to purchase, at a set price, the electricity generated by any renewable energy resource. The price is often a function of the particular technology used to generate the electricity (with lower prices for cost-competitive resources). There is no limit as to the quantity of electricity that can qualify for such a payment.

Second, a ‘tendering system’ involves occasional competitions for set quantities of electricity to be provided by particular renewable energy technologies. Classified within identified ‘technology bands’, long-term contracts are then awarded to those renewable energy producers that offer the lowest bids.

Third, in a ‘tradeable certificates’ model, all utilities are under an obligation to ensure that a certain percentage of the electricity they generate is from renewable resources. They can either generate that electricity themselves or purchase ‘green certificates’ from those who have used renewables to generate electricity.

At the outset of this process, the Commission was clearly keen on harmonisation and equally enthusiastic that that harmonisation should be in the form of the tradeable certificates model. As Lauber (2002a, p. 299) describes: ‘(The 1996 Green Paper) argued that with increased competition on energy markets, regulatory policy measures such as feed-in tariffs had to be replaced by ‘more market oriented measures’ and then mentions specifically a system of ‘renewable energy credits’ (CEC, 1996a, p. 34). This would promote renewables at least cost and force utilities to ‘use their resources and creativity to lower the cost of renewables’. This position was repeated in the White Paper of the subsequent year (CEC, 1997, Annex II.3).’

In spite of opposition to this position (see below), the Commission, through 1998, remained strongly in favour of a Directive that contained explicit movement towards harmonisation. It wanted this for both ‘internal market reasons and to support the development of renewables’ (CEC, 1998, p. 1). Moreover, the preference

for the particular kind of approach continued to be tradeable certificates, for the Commission argued that this approach was ‘most likely to produce the most rapid reduction in the cost of renewables’ (CEC, 1998, p. 8).

A change in the public position of the Commission was becoming evident by 1999. In March of that year, the Commission produced a working paper in which it reviewed a number of support mechanisms and laid out a number of possibilities for potential inclusion in the Directive—possibilities, that is, in addition to its preferred tradeable certificates model. The Commission sought reactions in order to ‘reach conclusions on these issues’ (CEC, 1999, p. 34). It appears, however, that the Commission was unable to reach any such conclusions. In the first draft Directive, published the following year, the Commission noted that there was ‘insufficient evidence... to provide, at this stage, for the introduction of a harmonised Community-wide support scheme...’ (CEC, 2000a, p. 2). Instead, the draft Directive called for the Commission to ‘monitor the application of support schemes in Member States’, with the intention of, no later than 5 years after the Directive entered into force, presenting a ‘report on experience gained with the application and the co-existence of different support schemes in Member States’ (CEC, 2000a). Following that report, there is the prospect that the Commission would propose a Community-wide framework. Any such proposal would be evaluated primarily on economic criteria, though there would need to be ‘sufficient transitional regimes to maintain investors’ confidence’ (CEC, 2000a).

As noted above, many opposed the Commission’s original position. The European Parliament, for example, though perhaps sympathetic to a common pan-European approach (EP, 1998, p. 5), was not enamoured with the tradeable certificates system. Instead, it was a strong supporter of the feed-in tariff approach, noting that this system had been the most successful—in terms of adding renewable electricity capacity—of all those operating in Europe. Meyer (2003, p. 668), for example, reports that in ‘promoting wind power the (feed-in tariff model) has been used with some variations in Denmark, Germany and Spain and has proved superior to other methods that have been tried in the EU. By the end of 2001, the wind power capacities of these countries, comprise around 84% of the EU total.’ With an estimated 90% of the world’s wind turbine manufacturers based in Europe (Asmus, 2002), feed-in tariffs were also perceived by many as being key catalysts for industrial development.

The European Parliament also wanted to dilute the Commission’s emphasis on economic criteria, with respect to how any proposal would eventually be evaluated. It called for environmental criteria—namely, the extent to which different systems have served to add

renewable electricity capacity in the European Union—to be added to the list (EP, 2000).

The Council, reflecting differences of opinion amongst its members (see below), largely followed the Parliament's position. It did not endorse unequivocally any one particular method of harmonisation, but instead supported plans to investigate the different mechanisms at work in the various member states. The Council also backed a broadening of the criteria for assessment, to emphasis environmental considerations to a greater degree (CEU, 2001).

The final version of the Directive includes many of Parliament's amendments. There will be a report published by the Commission within 4 years of entry into force of the Directive (by, that is, 27 October 2005). In this report, moreover, any proposal will have elements that will not only have passed economic criteria, but will also have been considered in light of how they have served to promote the uptake of renewables. Additionally, the aforementioned transitional period—that is, the period during which existing member states' national schemes can continue to operate—is set at a minimum of 7 years. This means that, if the Commission's report is published close to its deadline date, then existing support schemes in member states, even if not of the kind selected for the Community as a whole, could remain in operation until at least 2012 (CEC, 2001b).

At the beginning of the negotiations, the Commission's enthusiasm for a system of tradeable certificates was virtually unfettered. Given that the Commission's main task is to facilitate the development of the internal market (Eising, 2000, p. 20), and the fact that a tradeable certificates system appears to fit well with the 'traditional' way of doing things in the Commission (compare with Nylander, 2001), the Commission's support for this kind of approach is understandable.⁵ Its unequivocal opposition to feed-in tariffs was also evident at this time. Perhaps most remarkably, when proposing—in 1999—what the future could hold, the Commission did not identify feed-in targets as one of three 'possible contents of a Community proposal' for means of harmonising standards across the European Union (CEC, 1999, p. 25).

While the Commission was supported by those member states that were pursuing a tradeable certificates system at the national level—in particular, Italy and United Kingdom (compare with ENDS, 2000a)—it was vehemently opposed by those that had a feed-in tariff system, nationally—in particular, Germany (Platts Global Energy, nd; Lauber, 2002b, p. 28)—and by many in the European Parliament. Indeed, the Parlia-

ment effectively took the lead in reigning in the Commission's eagerness for a Union-wide system of tradeable certificates. Backed by at least some parts of the Council, Parliament ensured that this question remained open, and that a number of 'national experiments' with different support schemes could continue to co-exist. Indeed, since each side in this conflict would be able to muster enough votes to block a decision taken by QMV in Council,⁶ there was acceptance that this issue would not be resolved at that time.

4. Conclusions

During the 5 years of negotiations on a Renewables Directive, there was much debate about the approach that should be taken and the elements that should be included. Each of the three key European institutions—that is, the European Commission, the Council of Ministers and the European Parliament—had differences of opinion on issues related to the definition of renewable, the national targets and harmonisation. Indeed, not only were there debates between these institutions, but there were also differences of opinion within each institution. These conflicts, however, were eventually resolved, at least to the extent that a Directive could be agreed. Thus, in the end, the 'Community method' of decision-making—that is, the interplay among these three autonomous institutions (Devusyt, 1999)—brought about agreement. The final document, many argue, represents a compromise on many of these issues. Indeed, the word 'compromise' was often used by the participants in the debate at the end of the process. For example, the European Commission, reflecting upon one aspect of the discussions, declared that '... the

⁵For more about the way in which different support systems 'fit' with ideas about competition, see Hvelplund (2001) and Menanteau et al. (2003, p. 809).

⁶Under QMV, 26 votes are needed to block a proposal. Countries that opposed the Commission's original proposal included Germany (10 votes), France (10 votes), Spain (8 votes) and Austria (4 votes). Countries that opposed any singular endorsement of a 'feed-in tariff' approach included the United Kingdom (10 votes), Italy (10 votes) and The Netherlands (5 votes). Though the latter falls one short of the requisite 26, three points are worth making here. First, there may have been others that would have supported their position. Lauber (2002b, p. 32), for example, identifies a number of countries that supported the guarantees of origin approach (which can be considered a 'related' issue): Denmark, The Netherlands, United Kingdom, Italy and the Flemish part of Belgium. And second, there is a general acceptance that if two of the big countries in the Union are against something, then it will not proceed (Peterson and Bomberg, 1999, p. 54). In this case, Italy and United Kingdom were against a singular endorsement of the feed-in tariffs approach. And third, Young and Wallace (2000, p. 16) note that: 'Last, but certainly not least, because decision-making in the EU is an iterated process, member governments are reluctant to ride rough shod over the interests of other governments, even when the decision rules would allow them to do so. This is because each government is aware that at some point in the future it might be in the minority with serious interests at risk.'

Commission can accept the Council's position as a compromise' (CEC, 2001a). The rapporteur for the pivotal Parliament committee stated that 'The European Parliament and the European Council at the end agreed on compromises...' (Rothe, 2001). Commentators said the same. A report from Platt's, for instance, maintained that the Directive was 'like much European legislation, a messy compromise' (Platts Global Energy, nd). In this way, it appears that the conflicts were resolved by compromises.

This, however, does not mean that the story of European decision-making with respect to renewable electricity is now over. Indeed, what is particularly striking is that many of the hardest choices have yet to be made. Many of the decisions that were reached after 5 years of negotiations simply reflect the 'lowest common denominator'. This is perhaps to be expected during the early days of legislative activity at the European level. In any case, it remains that the definition for renewables is considerably broad, that the targets are only indicative and that all support systems can continue to operate. Such approaches, however, may be unsustainable in the long term. Tough choices may eventually have to be made.

In any case, there is ample opportunity for further research and discussion about policy alternatives regarding renewable electricity in the European context. What, for example, are the 'best' elements to include in any subsequent European agreement? How should renewables be defined? What levels of target are appropriate? What are the relative strengths and weaknesses of indicative versus binding targets? Should harmonisation be pursued? If so, what system should be adopted? All of these questions invite informed analysis. With the right answers, the European Union has the chance to develop an effective international mechanism to promote renewable electricity as part of a sustainable future.

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