



## How Europeanised are European Renewable Policies?

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### Introduction

This paper explores the multilevel relationship between the EU and member states in the development and implementation of renewable policies. The paper seeks to establish the extent to which renewable policies in member states are “governed” by EU policies and the nature of that governance. While there is a tendency to focus on the role of EU legislation which has specified binding targets for member states to meet to increase the share of renewables in their energy balances, EU-level governance of renewable policy is both more and less than these formal commitments indicate: more in that it aims to set a framework for integrating renewables into the single energy market; less in that much of the impetus to increase the share of renewables comes from national policies grounded in national political conditions. The paper analyses the evolution of EU and national policies for renewables development and the interaction between them.

### The progress of renewable energy in the European Union

One of the objectives of European energy policy over many decades has been to increase the share of renewable energy in the overall energy balance. The EU has been successful in achieving that goal, particularly in the last 20 years during which it has presided over a remarkable

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increase in the absolute and relative contribution of renewables to the Union's energy needs. On the basis of data drawn from the BP Statistical Review of World Energy, Figure One (below) shows the overall trend over the last 50 years and Figure Two shows the relative shares of hydro- and non hydro-based renewables along with the overall share of renewables in primary energy supply (BP 2015). In the mid 1960s, all renewables accounted for about 5% of total primary energy supply within the countries that currently constitute the EU (a similar share for the original 6 member states). Moreover, almost all of the energy produced was from hydro (with some exceptions such as Italian geothermal and French tidal power). Thereafter, the relative share of renewables declines as conventional energy demand (and supply) outstrips the development of hydro and other sources.

It is only in the mid/late 1990s that the relative share of renewables returns to and exceeds those earlier levels, driven to an increasing extent by non-hydro sources: by 1997 the share of non-hydro renewables in total renewables had reached 10% thanks in large part to the development of wind power in Denmark, Germany, the Netherlands, Spain and UK. In the period from 1997 to 2014, the share of renewables in total energy supply more than doubled to 12.6% with almost all growth coming from non-hydro sources. The relative share also increased because overall energy supply has been relatively stagnant after peaking in 2006 at 1833 million tonnes of oil equivalent or mtoe (in 2014 demand was 1611 mtoe).

The increase is most dramatic for wind and solar power and impacts primarily on the fuel mix for electricity (other non-hydro renewables maintain significant but not as spectacular growth rates as well, however). The take-up reflects changing cost profiles of these technologies but clearly the most important driver is the policy framework in place. Europe has been (or is being) "renewabled" but have renewable policies been "Europeanised" (i.e. have they been shaped by legislation, funding or other mechanisms agreed at the EU level)? As a closer inspection of the numbers would reveal, while all countries have seen the share of renewables increase in their energy balances, there are major differences in the extent of the increase (again a function of policy but also other factors such as geographical conditions). What does this imply for the relative impacts of national or European policies?

### **The dynamic between EU and national renewable policies**

How have policies towards renewables evolved at the national and EU levels and how have they interacted? Clearly there are some important interconnections between the two levels – member states are central players in (co)deciding on the final shape of any EU policy and are also the principal implementers of any commitments stemming from those policies. But, as will be seen, national policies have generally gone ahead of and beyond what has been determined at the EU level. Moreover, both levels of policy have undergone major changes over time as technologies mature, wider policy agendas shift and political and economic conditions change.

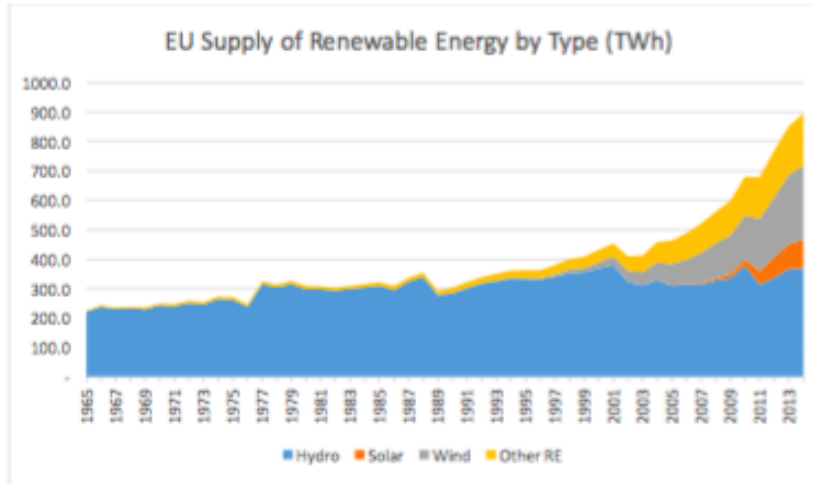


Figure One

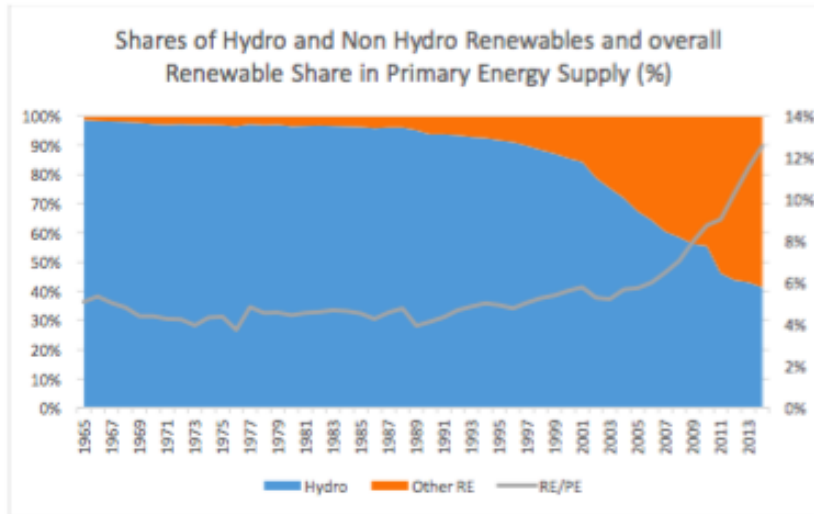


Figure Two

Source: BP Statistical Review of World Energy 2015

To get a sense of their evolution and interaction, therefore, the following analysis adapts Hildingsson et al. (2010)'s account of European renewable policies by breaking the development process into five stages:

- A prehistory (from the mid 1970s to the mid 1980s) of almost no European-level engagement apart from a few limited targets and fairly low levels of commitment in most member states (but more than in the EU setting).
- A second phase (from the mid 1980s to the end of the 1990s) when a more significant dimension to EU policy emerged, initially in terms of research support but potentially more significantly on the back of the prevailing priorities in EU energy policy at the time - tackling climate change and liberalizing energy markets. National policies, by contrast were taking off in a number of member states and often in ways that were at odds with what was proposed at the European level.

- A third phase covering the struggle over the shape of European policy around the time of the debate surrounding the 2001 legislation which set a non-binding target for renewable development and the evolution of policy thereafter (1999-2006). In this period, national policy commitments intensify and some of the most active member states effectively resist attempts by the European Commission to create a market solution to integrate the diversity of approaches pursued nationally.
- A fourth phase covering the debate leading to and from the legislation on binding targets (2006-2011). EU policy at this stage largely focuses on setting the level of commitment, leaving the detail to national policies. At the member state level, commitments and support for renewable development are at their peak, raising the question in what way agreements at the EU level affected national choices.
- The final phase covers events of the last three years where both EU and national policies have undergone a significant revision. At the EU level, the “revision” is effectively a return to its previous aspiration to integrate renewables into a more liberalized market framework. At the member state level, the change has been more profound, reversing pre-existing policies quite dramatically but leaving open the question whether these changes give more space to common framework across the EU.

### *1. “Prehistory” (1974-1986)*

In the 1970s, against the background of largely unsuccessful efforts to develop a common energy policy, the European Community agreed a set of indicative targets to reduce reliance on imports of hydrocarbons. In contrast to very explicit and ambitious goals to reduce dependence on energy imports and increase the role of domestically produced coal and nuclear power, renewables scarcely figured in these goals with the initial objectives, set in 1974, calling for an increase in hydro and geothermal power from 30 mtoe in 1973 to 40 mtoe in 1985 as well as a general goal of increasing R&D to foster the development of new sources of energy (European Commission 1974). The profile of renewables increased in the 1980s – with explicit but non-specific objectives to increase the share of renewables specified in the 1990 and 1995 targets – but policy commitments remained limited in the form of European research budget support.

National policies on renewables generally progressed ahead of EU level initiatives but the pace of development was very slow. Most of the effort was in research and development and while overall those budgets were at historically very high levels (in the aftermath of the energy crises and given commitments to nuclear power and alternative fossil fuels in particular), the share of renewables was very small in most countries (International Energy Agency 2015). In this period therefore not only was there little in the way of European level activity to provide the impetus for Europeanisation, there was not very much happening at the national level to be Europeanised. European governance of national policies was effectively non-existent while national governance had had only limited effects on the contribution of renewables to energy supply: by the late 1980s, non-hydro renewables accounted for 5% of all renewable energy supplied in the countries then in the EU.

## ***2. Policy consolidation at EU and national levels (1986-1999)***

Over the course of the 1990s, European level discussions on renewables intensified, setting more substantial policy goals and backing those up with financial support (from EU level regional development and research budgets) and legislative proposals. One part of the explanation for the rising European profile was the attempt to define a common approach to the issue of climate change: renewables were seen as a way of reducing dependence on fossil fuels. The ALTENER programme provided R&D funds and set the target of increasing the renewable share in energy supply from 4% in 1991 to 8% by 2005. When the Commission revisited the goal of developing a European energy policy, renewables also figured more significantly. The 1995 White paper on Energy Policy (European Commission 1995) reflected the growing attention paid to renewables and was itself followed up with Green (1996) and White (1997) Papers on renewables, the latter setting a target for renewable share of 12% by 2010 (European Commission 1997). However, beyond giving more attention to the ends of increasing renewables in the energy mix, the Commission was also active in proposing the means by which this would be done. Given that European energy policy debates had been dominated by the goal of a single energy market, it was not surprising that the Commission should propose the development of renewables in line with the principles of market liberalisation and competition (Jordan et al 2010).

By this time, however, a number of member state governments had accelerated their efforts to encourage the development of renewable energy: over the course of the 1990s almost all countries had defined their own targets for increasing renewable energy share and most had devised mechanisms to encourage that outcome (European Commission 1997). While these efforts were driven in part by national debates on how to tackle climate change and reduce carbon emissions, another important development encouraging policy changes in some countries was the rise of the Green Party and its inclusion in a number of governments (Germany and France being perhaps the most notable case) towards the end of the 1990s. Indeed, Green participation in governments also entailed commitments to phase out or limit the development of nuclear power, in effect raising the relative profile of renewables. Moreover, the effects of policy were beginning to be apparent as new policies led to increased investment in renewables and policy revisions rendered the schemes more attractive in some countries. By the end of 1999, non-hydro sources of renewables now accounted for nearly 17% of all renewables supplied for the EU 15.

In this period national policies were still generally ahead of EU actions with almost all governments setting up mechanisms to encourage the take-up of renewables (Feed-in Tariffs and Green Certificates being the most popular). Indeed, it could be argued that the growing significance of renewables in national strategies – and the presence of national advocates promoting their development in EU policy circles – contributed to the development of a more visible EU policy. However, those national policies were often at odds with the emerging policy framework which the European Commission was promoting, one which rejected Feed-in Tariffs in favour of certificate schemes. Overall, the Commission's attempts to govern national renewable policies in this period had a relatively limited impact (though Busch and Jorgens (2012: 75-78) note how the Commission's proposals were influential in shaping some countries' choices of support mechanism).

### 3. *National Diversity Prevails over European Harmonisation (1999-2006)*

Over this period, however, the Commission continued to push its preferences for market-compatible and harmonized mechanisms of support. In its initial discussions on a proposed directive on promoting renewable energy in the electricity sector, the Commission envisaged a harmonization of support schemes and the prohibition of feed-in-tariffs. However, this provision was dropped under pressure from the German government which was heavily committed to this means of supporting renewable deployment (Busch and Jorgens 2012: 79). Instead, the legislation required a review of support schemes, leaving it open to the Commission to propose a harmonized mechanism in the future. The proposal itself set a non-binding target to increase the share of renewables in electricity supply to 22.5% by 2010 (again the Commission had favoured a binding target but member states were opposed).

While the legislation established a system of Commission monitoring of national policies based on set reporting requirements, governments remained largely free to define their own approaches to supporting renewables with many choosing to use feed-in-tariffs. While this option was seen by the Commission as incompatible with the creation of a single market in electricity, the right of member states to use it was endorsed by the European Court in its *Preussenelektra* judgement of 2001.

Given the Court's qualified backing, and the continued diversity apparent in national policies, the Commission appeared to retreat from its efforts to harmonise. In its first review of the 2001 directive, the Commission concluded that competition between national schemes "could be seen as healthy at least over a transitional period" (European Commission 2005: 16) with important learning benefits from different approaches. Instead it recommended greater cooperation between national systems and optimization of national frameworks to encourage take-up. The Commission's shifting stance might also have reflected the apparent success of those schemes as non-hydro renewables accounted for over a third of renewable supply in 2006.

### 4. *"2020" Effects (2006-2011)*

Despite the rapid growth of renewables in the previous decade, advocates argued that the EU needed to do more if it was to tackle global warming. For those advocates, and for the Commission itself, a centerpiece of upgrading its commitments would be the setting of a binding target for increased renewable supply. In what were unusually propitious circumstances (a convergence of factors including the aftermath of the 2006 Russia-Ukraine gas dispute, the EU's efforts to maintain a leading role in international climate talks, perceptions that green technologies were an opportunity for the EU's economy and support from both leading member states and the European Parliament), the Commission's proposal for a binding target of a 20% share of renewables in energy supply was accepted. In other respects, however, the legislation observed the principle of diversity rather than harmonization. Although there was discussion of a more extensive system of trading at an early stage in the discussion of the proposal, in the end the scheme was substantially watered down in the face of opposition from Germany and Spain and divisions within the Commission itself. In the working document supporting the proposal, the Commission noted that the persistence of 27 different support schemes raised single market concerns and argued that harmonization of those schemes would "simplify the regulatory environment, allow industrial growth and boost economies of scale, and provide a clearer framework for the efficient exploitation

of renewable energy across the Union” (European Commission 2008a: 12). However, it also recognized that harmonization would be inappropriate given difficulties in identifying the best mechanism, the likely uncertainties and disruption in many markets, and the consequences for other policies linked to existing mechanisms (European Commission 2008a: 13-14). Moreover, in its analysis of existing mechanisms the Commission found that feed-in-tariffs were the most effective and efficient mechanism for renewable support (European Commission 2008a: 10).

Overall, the legislation limits harmonization to a requirement to improve national planning frameworks to facilitate renewable projects and mechanisms to encourage cooperation between national authorities, particularly in cases where some member states have overfulfilled their target and others are falling short. The targets themselves were designed to take account of national differences in terms of economic conditions and already-achieved renewable commitments.

The prospect of a binding target – and the relative ease with which the legislation was implemented by member states – reflected a generally positive national policy context across much of the EU. Even with the onset of the financial crisis in late 2008, the policy of encouraging renewable development was seen as one way of stimulating the European economy (at least in the early stages of the debate on managing the crisis). National policies in a number of member states were successful in attracting investment in renewables: between 2006 and 2011, “new” renewable supply doubled in the EU as a whole (accounting for all the growth in renewable production in that period) and by 2011 accounted for more than half of all renewable output. However, even as national policies appeared to be delivering increased renewable production, there were signs that those policies were unsustainable.

##### ***5. Retrenchment, Revision, Reversion (2011-2015)***

In this period, the initial momentum behind the climate-energy package has largely run its course and, with the financial crisis turning into a fiscal crisis, the context to policy at both the EU and member state levels has become much less supportive. The stagnation in energy demand may have made the 2020 target for renewables easier to attain but its effects on energy and carbon prices have rendered low carbon investments as a whole less attractive. Instead of rising carbon prices narrowing the difference between fossil fuels and renewables, prices collapsed, maintaining or increasing the gap which public support would need to fill. As a result, short term concerns with either competitiveness or affordability have taken precedence over concerns with longer term effects.

These changes have had a significant impact on national policies: while no country has abandoned its commitment to boosting renewable energy, the content of policies behind the commitment has shifted. Over the last few years almost every member state has reconfigured its policies for renewables in ways which have cut the amount of support available and changed the policy mechanisms which govern renewable development. In many ways the changes are in response to the success of past policies: in a number of countries using feed-in tariffs, the prices offered, combined with falling costs for the technologies, led to flurry of investments in many member states. Governments have responded by scaling down the purchase prices for power, introducing different mechanisms for future renewable development accompanied by lower levels of capacity required and in some cases introducing retroactive charges and taxes to claw back some of the funds flowing to renewable operators.

Changing domestic political settings for renewable energy have been reflected at the EU level to some extent. Some of the member states most engaged in scaling back renewable commitments have been active in reshaping EU policies. The clearest example of this is the coalition of the UK and Central and East European governments which successfully blocked the extension of binding national targets when the Commission put forward its proposals for a 2030 energy strategy (European Commission 2014). (By contrast Germany was lobbying for binding national targets at the same time as it was reversing its support policies at home, a reflection of its continued commitment to the goal of developing the resource while rethinking the mechanisms to deliver such development.)

The Commission's decision not to propose national targets (while maintaining a binding EU-wide target) also reflected a revision of its own position on renewable support. The previous Energy Commissioner Gunther Oettinger increasingly gave weight to concerns about the impact of the policy on the competitiveness of the EU's industrial base and was increasingly vocal in calling for a scaling back of national policies supporting renewable energy. This was reinforced in the Commission's 2030 proposals where it stressed that future policy should "reflect the consequences of the on-going economic crisis, the budgetary problems of Member States who have difficulty to mobilize funds to deliver the 2020 targets and the concerns of households and business about the affordability of energy" (European Commission 2013a: 2). Over the last few years, its proposals on the internal energy market and state aid to the energy sector have increasingly stressed the need to move away from public support for renewables and full integration of renewables into the electricity market (European Commission 2013a; 2013b; 2014b). While this is not at odds with the Commission's overall perspective on the centrality of the single energy market to European energy policy in general and renewable policy in particular, it marks a departure from the more permissive position it took in its proposals for the 2020 targets and its stance in the immediate aftermath of the legislation being agreed.

Whether this return to a market-led perspective will secure a 27% share for renewables remains to be seen, particularly as the regime to oversee future policy (so-called "governance mechanisms") is likely to be relatively weak. By all accounts these mechanisms will be akin to the "open method of coordination" promulgated by the Commission for those areas of policy too close to national sovereignty to be subject to enforceable legislation, and generally regarded as lacking effectiveness. The reinforcement of competitiveness and supply security objectives envisaged in the proposals for an "Energy Union" (European Commission 2015) may also limit the degree to which EU energy policies will focus upon renewables (at least if the future direction of this initiative follows the preferences of President Tusk rather than of President Juncker).

In the meantime, shifting national policies may cast doubt on the 2020 target itself. The Commission's most recent progress report shows that renewables were projected to comprise 15.3% of Gross Final Energy Consumption in 2014, indicating that the EU as a whole and most member states were on target (European Commission 2015a: 3). However, the Commission's report also found that maintaining the momentum would require increased efforts from some member states and greater reliance on cooperation mechanisms to support those countries lagging behind. While the overall target is unlikely to be missed (particularly if overall energy consumption remains stagnant), there remains a risk that the current retrenchment of policies could discourage investment over the next five years.



In the current period, it appears that there is a degree of convergence amongst national policies towards more restrictive conditions for the development of renewables. Potentially this tendency will make it easier for the Commission to reopen the question of market-led harmonization of support mechanisms.

## Conclusions

This paper has outlined the evolution of renewable policies in the EU, at both the EU and the national levels. Clearly these processes have been intertwined. In what senses can we say that interaction has been one of Europeanisation? Moreover, has that dynamic of Europeanisation been top down or bottom up?

As Hildingsson et al (2010: 103) have pointed out, attempts to develop an EU-level policy for renewables have been driven by two objectives: increasing the share of renewables in the EU's energy balances (with the objective of addressing supply security and environmental concerns) and harmonizing the goals and mechanisms of policy (with the objective of complying with the goal of an internal energy market). This paper's review of EU policy shows that the first objective has been secured more effectively than the second one but, even in that respect, it is not clear how the "success" of the former can be attributed to EU-level actions. On the contrary, attempts prior to the 2020 package to set binding targets were rebuffed by member states. However, it could be argued that with the 2020 package, a Europeanisation of sorts has been achieved with a top down objective being set and with member states moving towards compliance. As the Commission has argued in its most recent review of progress, the binding target may have incentivized those member states which might not have otherwise prioritized the development of renewables.

Beyond the ends, how far have the means of renewables policy been Europeanised? Overall, one would have to recognize that member states have largely continued to define their own policies to promote renewable development and have resisted attempts to harmonise policies across the Union. It might be argued that the Commission's harmonization efforts over the years had an indirect effect on some member states and the requirements in the current legislation to simplify planning procedures could also be seen as a modest step in the direction of harmonization but, so far, member states have preferred to set their own policies to support renewable development and, over the last ten years have achieved considerable success (if our measure of success is to increase the share of renewables in the overall energy mix). As part of that process, moreover, there may have been a degree of "bottom up" Europeanisation as the successful operation of a policy instrument in some settings has prompted others to adopt such instruments themselves.

More recently, however, the gears of policy transfer seem to have been put into reverse as countries have sought to rein in policies which appear to have become unsustainable in terms of levels of subsidy they require. Perhaps the rush by governments to reduce, reverse and replace those policies can be seen as a form of Europeanisation. To the extent that these moves signal a greater acceptance of harmonization and integration of European renewable policies and markets, the Commission's ambitions to Europeanise the EU's renewable regime may be achieved. Whether such a regime will deliver growth at the rate achieved over the last ten years remains to be seen.

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