

BETWEEN NATIONAL INTERESTS AND THE GREATER GOOD: STRUGGLING TOWARDS A COMMON EUROPEAN UNION ENERGY POLICY IN THE CONTEXT OF CLIMATE CHANGE

by Hanno Focken

I. INTRODUCTION: TOWARDS A RENEWABLE EUROPEAN ENERGY SUPPLY

The strategy paper Renewable Energy: a major player in the European energy market of the European Commission describes a remarkably fast development of “green” energy sources in recent years. Yet, to continue this trend in the future, the underlying political framework has to be reliable. Creating a favorable environment through investment incentives and the integration of renewable sources of energy into a common European Union (EU) energy market is therefore key.¹

So far, the EU has, however, only set rough targets for the development of renewable energy sources. In 2007, the EU agreed to a twenty percent increase of the total share of renewable energy supply in Europe by 2020. However, member states were given the freedom to define their own national goals for 2020.² Hence, supervision of the overall implementation of renewable energy goals does not lie within EU jurisdiction, but instead remains within the control of national governments.

Existing instruments within the EU framework for promoting renewable energy exemplify a lack of political coordination. Up to this point, no coherent energy policy has been formulated or implemented. The formulation of binding goals within the 20-20-20 framework was not followed by further attempts for a common European energy strategy. When observing the energy policies of some of the larger member states this becomes particularly apparent: On one hand, Germany decided to single-handedly phase out nuclear power and focus on the use and expansion of renewable energy sources;³ on the other hand, France still draws the largest part of its national power generation from nuclear sources and will not deviate from this path in the foreseeable future.⁴ Poland, as another

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example, still counts on coal as its main power source while planning on giving nuclear energy a more central role in the future.⁵ Renewable energy sources have not yet been considered in a serious manner by Poland and have been regarded with skepticism by its government.⁶

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The “Europeanization” of the energy industry in recent years makes these differences in energy strategies seem somewhat paradoxical. Although member states still show a vast amount of autonomy in defining their individual energy policies, their national decisions are increasingly affecting neighboring countries. For instance, the electricity generated from wind power plants in Northern Germany is increasingly flowing through the power grids of the Czech Republic and Poland

to reach the southern parts of Germany, as their own grid is not capable of supporting these energy streams. This additional strain on Polish and Czech grids by the “loop flows” of German wind-generated energy could, under certain circumstances, threaten the national energy security of these countries.⁷ This example alone illustrates that a stronger coordination of energy policies among EU member states is needed, if only to stabilize the political climate within the EU and prevent future conflicts between neighboring countries from arising. Furthermore, if independent operation of the already interconnected systems of energy creation among EU member states continues, the EU will remain substantially inefficient and will miss out on possible synergy benefits.

Finally, effective policies to combat climate change will only be feasible in close cooperation among EU member states. This paper therefore provides insight into the state of play of cross-border energy collaboration among EU member states in the context of EU policy and legislation as well as geopolitics.

2. GEOPOLITICS, ECONOMICS AND COLLECTIVE ACTION – THE REASONS FOR A COMMON ENERGY POLICY

Today human society consumes manifold amounts of energy that hunter and gatherer societies used to consume.⁸ In this context, one of the key concerns for the 21st century, which will limit human energy consumption, is not the scarcity of resources such as fossil fuels but rather their abundance.⁹

So far, a clear vision and strategy on how to build a society that maintains the current standard of living using less energy, while discouraging individuals, organizations and economies from divesting from fossil fuels, is still missing.

The main victim of this development is the earth's environmental system, which acts as a repository for waste products of these resources, like carbon dioxide. As pricing and thus self-regulation by the market does not help to limit greenhouse gases from concentrating in the earth's atmosphere, imposing strict limits on carbon dioxide production seems like one of the most promising options.¹⁰ Furthermore, gains in technological efficiency will not be enough to limit pollution because income saved from these efficiency gains will increase consumption, which will in turn increase the need for energy. This is known as the rebound effect.¹¹

Furthermore, sources state that global energy demand has doubled between 1990 and 2011 and will grow another 81 percent before 2035.¹² Given this dynamic, Europe's energy demand is likely to plateau or even decrease.¹³ Even with only a few proper resources, the EU still consumes one fifth of the world's energy.¹⁴ By 2030, EU energy imports will likely increase to roughly seventy percent, resulting in a significant dependence on other countries for energy supply. Apart from this, the electricity blackout in November 2006 and the gas crisis in January 2009 brought to the table the issue of energy security, including related infrastructure needs.¹⁵ In 2011 this led to the adoption of a regulation of European energy infrastructure and the dedication of close to five billion Euros in the EU budget to subsidize the integration of European energy networks by investing in cross-border energy infrastructure under the "Connecting Europe Facility".¹⁶

In more recent discussions, the plan of establishing the "North-South Corridor" in Western Europe aims to strengthen a secure gas supply in Central and Eastern Europe (CEE) and create a single gas market for the total cost of roughly fifty billion Euros. This project features extensive infrastructure investments in Poland and will link it, as well as other CEE countries, to the global liquefied natural gas (LNG) markets.¹⁷ The Ukraine crisis has exposed the vulnerability of CEE countries to Russian supply of natural gas, the only supplier to which their pipelines have access. Political pricing and other possible manipulations in the gas market by Russia make the strategic importance of this project more important than ever.¹⁸

Diversifying energy supplies and their means of transport, ensuring affordable energy prices in order to avoid a lack of competitiveness on the global market, while at the same time protecting the environment through actions against climate change are thus considered key issues by the EU. From a geopolitical standpoint, member states cannot neglect the strategic importance of striking a balance between these three issues. However, collective action proves to be a problem.¹⁹

The primary argument that countries like Germany use in defense of their efforts to combat climate change is that they are acting as a role model.²⁰ By reducing their carbon extraction and limiting their own emissions they try to be a leading example and inspire followers. However, Germany achieves these results mainly by delocalizing parts of its production to countries that base their

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energy infrastructures on fossil fuels, such as states in Eastern Europe.²¹ Carbon emissions in this case have simply been outsourced instead of reduced. Moreover, although noble in its goals, Germany's implementation has proven to be complex and has caused a lot of complications.²² While not directly applicable to the European context, this example nevertheless shows that unilateral efforts will not achieve change on a larger scale.

Supranational cooperation is therefore required on an EU level, as well as globally, where even the EU uses an approach of moral judgment towards other actors, considering itself the environmental leader.²³ This kind of behavior will not contribute to solving collective action problems – within the EU and beyond.

In the EU context, other reasons prove that the answer has to come from a supranational entity. The differences in energy efficiency across various regions of the EU make unilateral actions undesirable for some, even when provided with shining examples from other countries.²⁴ Furthermore, the EU is estimated to have paid approximately one-hundred million USD more than necessary through inefficient deployment of renewable energy resources. For example, it seems obvious that Southern Europe experiences the lion's share of solar radiation, whereas Northern Europe is predominately windy. The EU's investments however do not reflect these conditions. Spain receives roughly 65 percent more solar radiation than Germany. Germany, however, installed approximately 600 percent more capacity for solar energy generation (33 GW compared to 5 GW in Spain). Contrasting this, Spain has installed 23 GW of capacity from wind power even though it has lower wind levels than the Northern European countries.²⁵

A World Economic Forum-Bain report estimates that savings of another forty billion USD would have been possible by cross-border deployment of renewable resources.²⁶ Part of this development stems from the unsystematic landscape of subsidies among member states. Currently, up to 3,000 different levels of subsidized prices for one and the same commodity exist on EU territory. This distorts

investment and partly explains the above-mentioned inefficiencies in deployment of renewable energy; solar farms and windmills are more likely to be built where subsidies are most attractive than where they would be most cost efficient.²⁷

These conditions present tangible gains for a common energy policy among member states enabled by supranational cooperation. In the next part we will concentrate thus on the legal context in which the EU operates in order to reach these gains through a common EU energy policy in the context of climate change.

3. LEGISLATION AND PAST COOPERATION AMONG MEMBER STATES IN THE ENERGY SECTOR

Energy issues are deeply embedded in the legal foundation of the EU. Member states cooperation in frameworks like the European Coal and Steel Community (ECSC) and Euratom have always been at the center of European ideals of partnership. The creation of the ECSC in 1952, in particular, was seen as a vital step toward developing an internal energy market for Europe and breaking up energy cartels. The initial idea was not to give a single nation the power to manipulate the entire energy system.²⁸ Consequently, European energy production has always been both an issue of conflict but also an opportunity for integration.

However, it took until 1993 for energy policy to be placed high enough on the agenda of policymakers to become a separate policy field within the EU through the Maastricht treaty, which discusses the internal energy market of the European Union.²⁹ The importance of energy issues has risen steadily in the eyes of European policymakers. The Lisbon Treaty underlines this by dedicating a full article to energy alone (Article 194), listing three objectives for energy policy: security, competitiveness and sustainability. Two important issues are not covered by the treaty and remain national prerogatives: taxation issues and the choice of the sources of energy. Thus, member states essentially still control their energy mix. Yet, they decided on sharing a part of it via the European directive on renewable energies.³⁰

Besides Article 194, Articles 191 and 192 present the legal basis for the competencies of the EU in environmental policy. At first, these articles, which cover deeply interlinked subjects, seem to present a contradiction. Article 192 grants the European Council the competence of adopting “measures significantly affecting a member state’s choice between different energy sources and the general structure of its energy supply” for the sake of the environment.³¹ Article 194, however, while outlying the competencies of the EU to ensure the establishment of an internal energy market, relativizes this by stating that “such measures

shall not affect a member state's right to determine the conditions for exploiting its energy resources, its choice between different energy sources and the general structure of its energy supply, without prejudice to Article 192(2)(c)".³² Therefore, even with the competence of setting binding environmental targets and standards for its member states, the EU cannot interfere with their respective energy mixes.³³ This highlights the complexity of attempts to achieve supranational cooperation among member states. Nevertheless, it is important to note that the

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two competencies are neither in competition with each other, nor do they lead to redundancy.

Renewable energy as a separate entity first became a topic in 2001 when the EU developed indicative targets for renewables in the electricity sector. Following this, the European Council under German presidency in 2007 agreed on the Climate and Energy Package. Adopted under French presidency

in 2008, this package of binding legislation aims to ensure ambitious targets by 2020 within the EU: the so-called "20-20-20" goals encompassing a twenty percent reduction in greenhouse gas emissions from the 1990s levels, an increase to twenty percent of the share of renewable energy sources in the EU final energy consumption, and an improvement of energy efficiency within the EU by twenty percent. The Energy and Climate Package composes the legal framework for the EU's energy policy until 2020, putting a focus on efficiency and sustainability.³⁴ Within it, the EU also further pushes the use of renewables via the directive on the promotion of the use of energy from renewable sources. This directive sets a biofuel target for the transportation sector (ten percent share of fuels from renewable energy) and considers the respective efforts and resources of each individual member state in the production of renewable energy.³⁵ However, as discussed above, there are no legal tools that allow the EU to enforce these targets. As a consequence, if a member state does not reach the targets, all EU policymakers can do is ask for an amendment of its plans. The same goes for the energy efficiency targets: it is essentially up to member states to develop their proper roadmaps for implementing and achieving the requirements.

Another contradiction can be found between the 20-20-20 targets and the principle of the internal market. The internal market principle assumes that electricity is in line with any other commodity can move freely within the EU.³⁶ Electricity is, however, not a regular good, given that its production does not necessarily lie within the territory of a member state and can have different

origins. This fragments the internal market as each member state tries to achieve its proper targets using its proper resources. The targets also do not account for cross border flows or electricity generated from renewable sources.³⁷ This means that the efforts of a member state cannot be counted for the energy goals in another member state.

For example, German wind energy used in Poland is not being taken into account. Another, more concrete example is provided by case C-26/11 on “Belgische Petroleum Unie” where Flemish suppliers purchased electricity generated from Norwegian renewable energy sources and asked for green certificates (support schemes) from the authorities of Flanders for supplying the region with green energy. The Flemish authorities however refused to hand out national support schemes stating that the energy supplied had not been produced on Belgian territory. The European Court of Justice clearly stipulated that refusing national support schemes in this case violated the free market principle, but until this date no judgment has been passed.³⁸ Cross-border support and cooperation, especially in financial support schemes, consequently only occur on a voluntary basis. In this context it is difficult to require member states to support green electricity, which does not count towards their own, nationally conceived targets. One of the main challenges for the EU in this context is thus reconciling efficient and sustainable energy policy with the internal market principle.

4. COOPERATION UNDER DIFFICULT CONDITIONS: ASSESSING THE STATE OF PLAY IN CROSS-BORDER ENERGY COLLABORATION AMONG EU MEMBER STATES

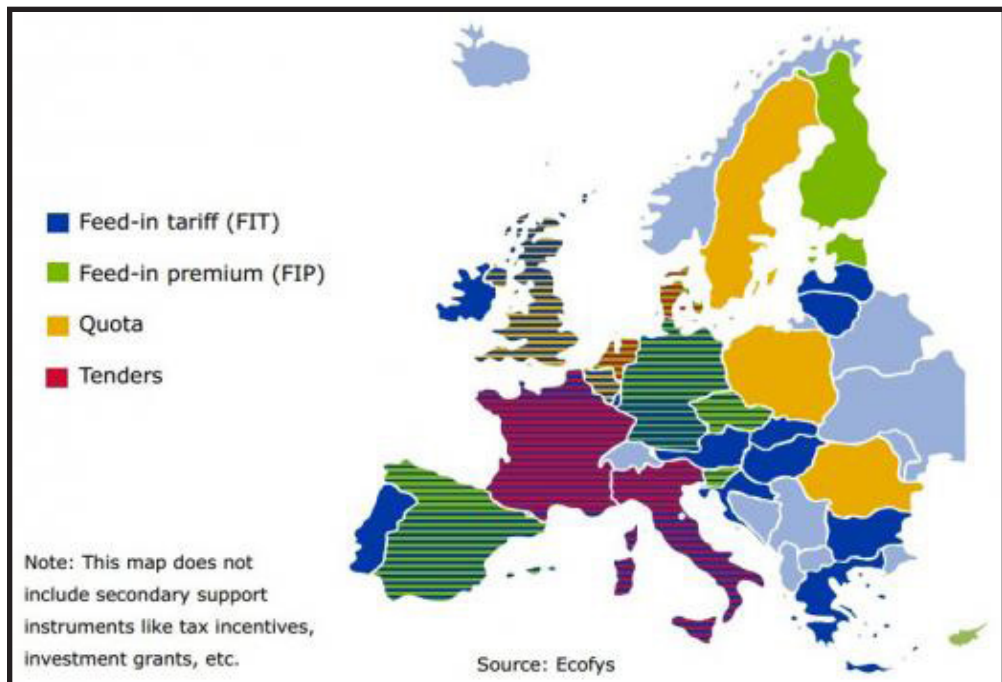
The question remains: how can the specific energy systems of the EU member states be integrated? Even though there has been significant progress in both market integration and climate protection since the 1990s and European member states are generally aware that coordinated and concerted efforts are needed to ensure a secure energy supply, speaking with one voice to energy partners has proven difficult for the EU. The vision of a common European energy policy is actively competing with 28 energy policies on the member state level. For historical, geographic and climatic reasons, the various energy mixes of member states differ profoundly.³⁹ The same can be said about the structure of national energy sectors within the EU. In Germany approximately 800 local companies, the “Stadtwerke”, take care of electricity supply and distribution.⁴⁰ In contrast, a single operator, “Électricité de France” (EDF), takes care of almost the entire distribution of electricity in France.⁴¹

Furthermore, member states continuously disagree over the use and possibilities of energy gained from nuclear sources. Shale gas offers one such example: France and Germany do not consider it an option, but Poland considers it a very

attractive alternative for energy production.⁴² The complexity of the process involves many other powerful players at the regional level (European Council, European Parliament, European Commission, NGOs, industry associations etc.), as well as at the national level (national parliaments, industries), all of which seek to influence decision-making.

Partly due to these reasons, member states have addressed energy issues in different ways leaving us with persisting differences and contradictions across the 28 different energy markets, even despite considerable progress. In order to find a long-term solution to this, it is crucial to reach a common position on critical issues where opinions contrast most. Implementation of renewables, in particular, requires strengthened cooperation between member states. Common rules on grid stability and costs, as well as feed-in prioritization are necessary to prevent conflicts, such as loop flow incidents.⁴³ The debate over these issues is mostly shaped by the three key pillars of Europe's energy triangle: reliability, sustainability and affordability. However, the different attitudes of EU member states in ecology and economy make it difficult to decide on the order of priority in which these goals should be addressed in future European energy production, as well as concrete opportunities for action.

Figure One: Principle RES-E Support Schemes in Europe



One starting point that has caused some of the problems with inefficient resource allocation is the enormous diversity in support schemes for renewable

energy in the 28 member states. Different member states run different types of schemes that range from feed-in tariffs to quota obligations for supporting renewable energy that run either alone, in parallel or in combination.⁴⁴ Figure 1 illustrates the extent of this phenomenon. Harmonizing these support schemes could limit competitive distortions between member states and increase cost effectiveness. The EU is taking initial steps in this direction at the moment through the gradual introduction of processes that promote competitive bidding and foresees gradually replacing feed-in tariffs with feed-in premiums.⁴⁵

Overcoming the stalemate in energy politics within the EU requires developing an energy market that is truly European. This would require further harmonization of the respective national rules regarding, for example, market integration of smart grids and renewable energy sources, more powerful energy infrastructure that reaches across borders, as well as joint efforts in developing future energy technologies.⁴⁷ The implementation of renewables in particular could profit from this, requiring strengthened cooperation between member states. A complete harmonization of the energy mixes of EU member states is, in this context, neither desired nor efficient due to differences in the respective comparative advantages and disadvantages of energy sources.⁴⁸ Instead, they could in theory be made complementary to each other. In this given context, the EU Commission can only provide the playing field for achieving the goal of a reliable, sustainable and affordable energy supply in a common energy market. It is then up to each member state to demonstrate the political will necessary to launch and implement common projects on a supranational level.

Examples for theoretically promising approaches of supranational cooperation consist of investing in basic research for reducing production costs of carbon-efficient technologies and actively diffusing the knowledge gained.⁴⁹ The value of this research is particularly relevant for future technologies, such as solar energy, which still constitutes the most expensive alternative to carbon-sourced energy.⁵⁰ Enacting financial transfers, subsidies and border-tax adjustment for promoting low-carbon technology development is another example.⁵¹ However, practical examples of implementation of these approaches leading up to a concerted strategy are still missing.


This is also largely due to “perceived” rather than “real” barriers. From a legal perspective, there are no unsolvable problems as long as there is clarity on the political level about goals and priorities. However, in the process of developing a new model for cooperation, decision-making will prove difficult as is always the case when leaving familiar ground. Public acceptance also plays a big role, especially when talking about decision-making on the regional level. Particularly since the beginning of the Euro crisis, the voters of the European Union have

become less and less approving of their respective country's EU membership. More support is being given to fringe parties as the feeling arises that there is no way to influence Brussels except via national governments that seem unwilling to listen. As proof, no less than nine of the Eurozone's national leaders were ejected from office since early 2010.⁵²

Adding fuel to this is insecurity about the distribution of future costs and benefits of energy reforms. As the country with the most ambitious approach to a transition towards renewable energy, Germany has begun to notice the difficulty of maintaining a balanced energy triangle. With energy prices now among the highest in all of Europe, maintaining affordability while improving sustainability and competitiveness is no small task. So far, the general public still seems supportive of the "Energiewende" but even the International Energy Agency has issued explicit warnings about the effects on public acceptance, should this trend continue.⁵³ On a member state level, fear persists that new forms of cooperation could undermine national support schemes.⁵⁴

These perceived barriers put an emphasis on the importance of intelligent communication and presentation of clear and tangible benefits from a common energy market and policy in the context of climate change. In this context, the latter desperately requires successful practical examples of regional cooperation for reference. Practical regional cooperation can help to provide concrete selling points for future cooperation on the European scale and help increase cost efficiency for the transformation of the European energy landscape. Furthermore it will facilitate the coexistence of different markets and support schemes and contribute to the reduction of limiting differences. Regional cooperation can make an important contribution to the development of the European energy market and help achieve the EU's climate and energy goals.

5. CONCLUSION: THE ROAD AHEAD

Integrating renewable energy sources into a common EU energy market presents a key challenge for the EU in the 21st century. With member states anchored to their individual national energy policies and with many obstacles for cooperation on an intergovernmental level, this goal can be achieved only through advanced supranational cooperation. In order to get all 28 member states, as well as all other relevant stakeholders, on-board, tangible gains need to be actively pursued and displayed on a regional scale. By acting as practical examples and references for further harmonization of national energy policies, these projects will actively contribute to integrating the European energy market and the policies linked to it. 

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