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Combating complexity: the integration of EU climate and energy policies*

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Abstract: In this article, we analyse EU energy policy from the perspective of the EU's long-term commitments to combat climate change. We focus on the policy integration of climate concerns – 'climate policy integration' (CPI). We seek to answer the question: what is the extent of CPI in energy policy, and what factors can explain this level of CPI? After outlining a conceptualisation of CPI that argues for applying a principled priority standard for the assessment of the level of integration of climate policy objectives in other policy sectors, we apply an analytical framework, with factors derived from general theories of European integration and literature on environmental policy integration, to explain the strength of CPI in two sub-energy sector case studies – renewable energy policies and internal energy market policies. CPI is found to be insufficient in both cases, and two factors are highlighted as particularly crucial for furthering CPI: political commitment to CPI, and the strong participation of climate advocates in the policy process. The article suggests that the expansion of EU competence in energy policy does not necessarily provide a guarantee for full and complete CPI.

Keywords: Competencies; governance; integration theory; energy policy; environmental policy; liberalisation; neo-functionalism; participation; policy coordination; regulation; regulatory policy; Single Market; political science

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Introduction

Since the 1990s, the EU has been actively promoting the integration of climate and energy policies to tackle environmental and energy security challenges. The political spillover of internal market legislation and environmental protection measures has led to the extension of Community competencies into the energy policy area (Andersen, 2000; see also Tosun & Solorio, and Schmitt & Schulze, in this issue). Developing EU climate and energy policies within a common framework aims to address complexity in governing these overlapping sectors. While the development of these policy areas has advanced at the EU-level, this paper counters assertions that the EU's climate and energy policy sectors are indeed integrated (see Adelle, Pallemaerts, & Chiavari, 2009; Hildingsson, Stripple, & Jordan, 2010; Howes, 2010). We argue that an evolving and developing EU-level regulatory governance in climate and, particularly, in energy policy has not yet resulted in policy output that is coherent with the climate policy objectives of the EU to 2050. Therefore, the research questions under investigation here are: to what extent are climate policy objectives integrated into EU energy policy? What factors can explain this level of climate policy integration (CPI)?

The integration of climate objectives into other policy sectors is referred to as CPI, which forms the central conceptual base of this paper. There is an intensifying discussion at national,

European and international levels on CPI, based on the rich and extensive body of literature on environmental policy integration (EPI) (Kulovesi, Morgera, & Muñoz, 2010; Mickwitz, et al., 2009). Little research has, however, focused on CPI specifically at the EU-level, although the integration of climate objectives into other policy sectors is a stated political aim of the European Council (European Council Conclusions, March 2007). Based on EPI literature, we conceptualise ideal-type CPI as a situation where "principled priority" is assigned to climate policy in both the policy-making process and output (section 2). Drawing on general theories of European integration, we next introduce our analytical framework, identifying four key factors for explaining the level of CPI (section 3). This analytical framework is applied to the study of CPI in two sub-sectors of EU energy policy – renewable energy (RE) and the internal energy market policies (section 4). While CPI in the RE case study can be assumed to be rather high, we would expect lower levels in internal energy market. This is despite the fact that the development of an integrated and competitive energy market is a key condition for integrating renewables into the electricity grid, thus promoting climate policy objectives.

The overall analysis reveals that even in the relatively successful RE case, CPI falls short of the ideal and of achieving long-term climate policy objectives.

1. Conceptualising CPI in the EU

The concept of regulatory governance is associated with the notion of the "EU as a regulatory state" (Majone, 1996), implying extensive delegation of powers to independent regulatory bodies and supranational institutions as a consequence of the development of a single market. It is a process that aims to promote effective policy outputs and to correct market failures (ibid.; Majone, 1999). As a result, regulatory governance has replaced some older forms of state intervention and certain redistributive policies characteristic of the welfare state (ibid.). The concept of regulatory governance also emerged from the "governance turn" in EU studies (Kohler-Koch & Rittberger, 2006), or the shift from "government" to "governance" (Benz & Papadopoulos, 2006). The continuing growth of Community legislation, the expansion of EU activities, and the increasing adoption of regulatory policies across a broad range of policy areas provide reasons for some EU-scholars to claim that the EU will remain an active regulator into the future (Pollack, 2000; Majone, 1999; Jachtenfuchs, 2001). The growth of supranational legislation and the expanding competencies in the energy sector, both internally and externally (including through the Energy Community, for example), can provide empirical evidence for the increasing regulatory powers of the EU (Renner, 2009).

In this context of expanding EU regulatory governance in the energy sector, policy integration as a concept goes beyond simply promoting better policy coherence and coordination. Whereas policy coherence relates primarily to policy output and outcome, and policy coordination focuses on the policy process, policy integration encompasses both these perspectives, thus providing a holistic view taking account of the policy output, outcome, and the policy process (Briassoulis, 2005b; Metcalfe, 1994; Underdal, 1980).

Environmental policy integration (EPI) goes farther, by applying a normative dimension in favour of the environment. Placing an adjective before the term "policy integration" implies assigning preference or priority to a specific policy sector's objectives over another (Briassoulis, 2005a, p. 23). While some scholars have advocated "principled priority" for environmental objectives in other policy sectors ("strong" or ideal EPI; Lafferty and Hovden, 2003), others have emphasised the importance of simply taking environmental considerations into account ("weak" EPI) (Jordan & Lenschow, 2008a; Persson, 2004).

We here outline an ideal-type concept of CPI in line with the "principled priority" standard outlined above. CPI is understood as assigning principled priority to climate policy objectives in all stages of the policy process and its output in non-environmental policy sectors (external EPI), and as maximising the synergy among environmental objectives where climate policy is being integrated with other environmental policies (internal EPI). Recent literature has distinguished between "external" EPI in non-environmental policy sectors and "internal" EPI among environmental sub-policies to avoid assigning priority to one environmental objective over another (Kulovesi, et al., 2010; Oberthür, 2009). Since the focus of this paper is on external CPI into the energy sector, the strong/ideal standard of "principled priority" is applied. Applying such a standard has several methodological advantages. It can facilitate comparison with other research results and enable criticism. The standard is comprehensive in two dimensions: it covers the policy process and output, and encompasses the full spectrum from strong to weak CPI (see Dupont & Oberthür, 2011; Lafferty & Hovden, 2003).

The question remains as to how to measure CPI. While the focus of the empirical research in this article is generally limited to the policy output, some initial proposals for indicators for an assessment of CPI in the policy process include the existence of procedures that ensure: (1) an assessment of the impact of the sector policy objectives on climate policy objectives; (2) that climate policy stakeholders (from outside the normal decision-making institutions in the EU) are consulted, take part, and are heard in the policy process; and (3) that climate policy advocates within the EU, such as DG Environment/DG Climate Action and the environment committee of the European Parliament, participate (as, e.g. (co-)drafters of the legislation in the Commission or as (co-)drafters of the opinion(s) in Parliament) in the determination of policy (Dupont & Oberthür, 2011; Jacob & Hertin, 2007; Schout & Jordan, 2008). The second and third indicators, especially, can also play an explanatory role in the assessment of the level of CPI (see section 3 below).

In the policy output, ideal CPI will be achieved if policies are fully in line with established (and scientifically grounded) climate policy objectives. This means measuring the policy output against the EU's long-term policy goal of achieving 80-95 per cent reductions in greenhouse gas emissions by 2050. Depending on the nature of the relationship between the objectives of the policy in question and climate policy objectives, the output may be more or less synergistic/conflictive with climate policy objectives even without any explicit consideration of these objectives during the policy process. We may be able to investigate the extent of the gap between the status quo and the ideal of CPI, where the policy under examination would be fully in line with long-term climate policy objectives (see table 1). On this basis, with an aggregate score on the policy output, and the initial analysis of the policy

process (where the presence of all three indicators mentioned above leads to a high level of CPI, of two to a medium level of CPI, and one to a low level of CPI); we strive to make an assessment of the level of CPI applying a five-fold scale ranging from very low over low, medium and high to very high/complete, where very low levels of CPI, for example, demonstrate little consideration of climate policy objectives in the policy process and in the policy output.

Table 1: Measuring CPI: Scale establishing gap in the policy status quo against the ideal of CPI

No CPI	Very Low	Low	Medium	High	Very High	Ideal/full CPI
0%	1-20%	21-40%	41-60%	61-80%	81-99%	100%

2. Analytical framework

In developing our analytical framework for CPI at the EU-level, we looked at research on EPI, and derived factors from both this literature, and from general theories of European integration. In EPI literature, different analyses have employed different analytical frameworks with partial explanatory power, usually due to the research focus. Examples include employing an institutional perspective (Jordan & Lenschow, 2008b); a "policy learning" perspective (Nilsson & Persson, 2003); a legal perspective (Nollkamper, 2002); or policy evaluation (EEA, 2005; Lafferty & Knudsen, 2007). Rather than applying one of these narrow analytical perspectives, we instead establish our framework in combination with general theories of European integration to ensure that the framework is as encompassing as feasible. Such a broader, more encompassing, framework can help us understand the level and variance of CPI (both in the process and the output dimensions) in and across policy fields.

As a result, we identify four core explanatory factors: (1) the level of political commitment to climate policy and to CPI; (2) the nature of the functional overlap between climate policy and the other policy field in question; (3) the level of engagement of climate policy advocates and the level of procedural safeguards for CPI in the policy process; and (4) the institutional and policy context (Herodes, Adelle, & Pallemaerts, 2007; Jordan & Lenschow, 2008a, 2010; Lafferty & Hovden, 2003; Nilsson & Eckerberg, 2007; Persson, 2004). These core factors together provide a differentiated but manageable framework for the exploration and explanation of CPI (for more detail, see Dupont & Oberthür, 2011).

First, *political commitment* is a core factor for explaining CPI, according to literature on EPI and, also, the liberal intergovernmentalist theoretical perspective on European integration that focuses on the state; on grand political decisions; on intergovernmental politics; and on member state preferences (Moravcsik, 1998; Moravcsik & Schimmelfennig, 2009). At the EU-level, it remains the member states that provide the political impetus and backing for

extending policy, and this is usually demonstrated in conclusions of the European Council (and the various formations of the Council of the European Union). Thus, member state preferences continue to play a significant role in the direction of EU policy and the level of commitment demonstrated to climate issues and to CPI. Political commitment plays a role as an explanatory factor, first, in terms of the EU's overarching commitment to combating climate change, and, second, in terms of commitment to promoting CPI. By examining statements of the European Council and the Council of the European Union for evidence of commitment to climate policy (by, e.g. expressing the wish to lead on climate policy internationally, or backing unilateral action within the EU) and to CPI (e.g. by examining the frequency of statements on the importance of ensuring integration of policies, and the weight given to climate objectives when several policy objectives are in question), we can trace the growth and/or level of political commitment. Political commitment is measured on a scale from low (no/little evidence of commitment found in statements) to medium (political commitment is evident, but not qualified) to high (political commitment is backed up by concrete targets and/or by assigning priority to climate objectives).

Second, the nature of the *functional overlap* between climate policy and the policy sector under investigation relates to neofunctionalist theory emphasising functional "spillover" as a driver of European integration (Niemann & Schmitter, 2009; Strøby-Jensen, 2007). While functional overlap between the objectives of climate policy and the other policy sector in focus (in our case, energy policy) shapes demand for CPI, the type of this functional demand (whether direct or indirect; synergetic or conflictual) may help us understand the level of CPI. The more direct (i.e. clear) and synergetic (i.e. policy objectives are in harmony) the functional overlap, the more likely that higher levels of CPI could be found in the policy output. In addition, where functional overlap is direct, it is more likely to be acknowledged in the policy discourse, which is an important element in explaining the eventual uptake of CPI in the policy process and output.

Third, the engagement and participation of *climate policy advocates in the policy process* will likely affect the level of CPI. This factor has roots in both institutionalist and neofunctionalist theory emphasising the role of multiple actors in the policy process (Haas, 1961; Niemann & Schmitter, 2009; Strøby-Jensen, 2007). EPI literature has regularly underlined the importance of openness and transparency in the policy process and the involvement of stakeholders (EEA, 2005). Ensuring CPI in another policy sector may require the active pursuit of climate objectives by stakeholders (both internally and externally to the EU institutions) to keep climate change part of the discussion. In both our empirical cases the involvement of policy advocates is measured by examining the proportion of environmental NGOs that participated in the public consultations launched by the Commission in the policy preparation process of the 2009 Renewable Energy Directive and the third liberalisation package on energy.

Fourth, a neo-institutionalist perspective leads us to pay attention to the *institutional and policy context* for CPI (Hall & Taylor, 1996; Pierson, 1998; Pollack, 2009). In focus here are the decision-making procedures and the path dependency that past policy and institutional decisions create regarding future policies (Jordan & Lenschow, 2010; Pierson, 1998). In general, it can be expected that CPI is more easily achieved in cases of qualified majority

voting; and where past policies have been deemed inadequate, this can open a window of opportunity for further policy development and potentially higher levels of CPI.

3. Assessing the level of CPI in the EU's energy policy

Our empirical research assesses CPI in two sub-energy policies, namely RE policy and internal energy market policy. We focus on the policy output level, with some reference to the policy process where possible, but an in-depth analysis of the policy process is beyond the scope of this paper. The ideal level of CPI in both cases is that policy output is fully in line with the achievement of EU climate policy goals – namely the reduction of GHG emissions by 80-95 per cent by 2050 (European Council Conclusions, October 2009, p. 3). The next section provides a brief introduction to EU energy policy generally, before moving to the case studies.

3.1. EU energy policy

Over time, competence in the internal dimension of energy policy has been shifting to the EU-level, although this competence remains relatively weak (Jordan, Huitema, Rayner, & van Asselt, 2010). While the Lisbon Treaty did introduce a new energy chapter into the treaty system, the Commission has long been active in promoting further coordination at EU level in energy policy. Arguably, regulatory spillover in energy policy, as a result of the expansion of environmental legislation (and especially climate legislation) and the development of the internal market, can be said to have aided the Commission in promoting more EU-level cooperation in energy policy. Article 194 (1) of the Treaty on the Functioning of the EU lists four areas where policy developments take place at the EU-level:

- the functioning of the energy market;
- the promotion of the security of energy supply;
- the promotion of energy efficiency and energy saving, and the development of renewable forms of energy; and,
- the promotion of new network interconnections.

This spillover was particularly clear with the adoption in 2009 of the climate and energy package and of the third internal energy market liberalisation package. As "energy related emissions account for almost 80 per cent of the EU's total greenhouse gas emissions" (European Commission, 2010, p. 2), action in the energy sector is essential to tackle climate change. Achieving the EU's long-term climate policy objectives requires an almost full-decarbonisation of the energy sector, since any remaining emissions will come from other sectors, such as agriculture (European Climate Foundation, 2010; European Commission, 2011a, p. 5). In addition, energy security challenges, such as the Russian-Ukrainian gas crises in 2006 and 2009, and the increasing dependence of the EU on a few external suppliers, have

led to calls for greater EU solidarity in energy policy, and a recognition that strengthening the internal dimension of EU energy policy could help tackle external challenges.

The next sections outline the extent of CPI in the 2009 RE directive, and the third liberalisation package on the internal energy market. These policies are important for the achievement of climate objectives – RE policy directly contributes to a move away from fossil fuel generation and therefore results in a reduction of GHG emissions; and the third liberalisation package is expected to promote further penetration of RE in the internal market. For these reasons, it could be assumed that relatively high levels of CPI can be expected in these cases. However, this study assesses CPI from the perspective of achieving long-term (to 2050) climate policy objectives.

3.2. EU renewable energy policy

EU RE policy is governed mainly by the 2009 RE directive (2009/28/EC), adopted as part of the climate and energy package, and which outlines the policy framework to achieve a 20 per cent share of RE in the EU's final energy consumption by 2020. This target was first suggested by the Commission in its Renewable Energy Roadmap (European Commission, 2006, p. 3), and later endorsed by the European Council in March 2007. Unlike previous EU legislation on RE, the 20 per cent target is legally binding. The rationale for developing policy on RE at EU-level includes: reducing GHG emissions; promoting security of energy supply; and, promoting diversification of energy supply (Hildingsson, et al., 2010; Howes, 2010).

Level of CPI: As outlined above, an ideal state of CPI in the policy output requires policy output to be fully in line with the achievement of climate objectives to 2050. For RE policy, this means that the policy output must achieve a very high proportion of RE in the overall share of energy in the EU by 2050. Some scenarios for 2050 advocate an almost 100 per cent share of RE in the power sector by 2050 (EREC & Greenpeace, 2010; Heaps, Erickson, Kartha, & Kemp-Benedict, 2009; WWF, 2011), while other analyses include a range of solutions, including carbon capture and storage (CCS) technologies, and nuclear energy in their assessments (see European Climate Foundation, 2010; European Commission, 2011b). Several issues remain with regard to integrating variable renewable electricity generation into the electricity grid, and ensuring the full upgrade of the grid, which renders uncertain the possibility for complete penetration of renewables (European Commission, 2011a). Nevertheless, with CCS technologies still commercially unviable, and nuclear energy facing a renewed degree of opposition in the wake of the Fukushima disaster in March 2011, we support arguments for a high proportion of RE in the energy mix by 2050. Taking the top ranges outlined in studies on decarbonisation to 2050, even with certain limitations, implies between 80 and 100 per cent of RE share by 2050.

In 2005, the share of RE in final energy consumption in the EU was 8.6 per cent (EEA, 2008, p. 44). On a linear trajectory from 2005 to 2050, achieving a 100 per cent share of renewables implies an increase by about 10.1 percentage points every five years. Such a trajectory

requires approximately a 39 per cent share of RE in the EU-27 by 2020: 19 percentage points higher than the current policy goal. However, taking the 80 per cent target as an ideal goal for 2050, assuming the use of CCS technology; a role for nuclear energy; and some continued fossil fuel use in, e.g., heating, implies a linear increase from 2005 by approximately 7.93 percentage points every five years. This means ensuring a 32.4 per cent share of RE in the EU by 2020 on a linear trajectory: 12.4 percentage points more than the current policy goals.

While the 20 per cent RE target for 2020 is thus considered insufficient (see also Adelle, et al., 2009), since it falls short of an ideal trajectory towards the long-term target by between 12.4 and 19 percentage points, it does set the EU on a pathway towards increasing the share of RE. It is clear that a simplistic linear trajectory cannot take into account current high costs for increasing the RE share – costs that are expected to decrease over time and therefore speed-up the deployment in future decades. However, it is also true that the level of GHG emissions must peak long before 2020, implying much investment in RE sources is required sooner rather than later (IPCC, 2007).

When it comes to examining the level of CPI in the policy process, an in-depth analysis is beyond the scope of this paper. However, evidence shows that procedures for impact assessments, consultation and coordination were in place during the elaboration and decision-making of the 2009 RE directive, and that many of the usual environmental and climate advocates were involved in the process. The directive was agreed under the co-decision procedure, with DG TREN (DG transport and energy; today, DG Energy) leading the proposal preparation. In addition to the usual co-decision procedures, other instances of coordination and consultation were evident. The Commission held inter-service and public consultations on the renewables roadmap published in 2007, and internal inter-service consultations discussing targets took place between April 2005 and November 2006. Public consultations took place on the Strategic Energy Review between March and September 2006, and further consultations dedicated to biofuels took place in early 2006 and 2007. Member states, the European Parliament, and the European Council, several citizens, industry groups and NGOs took part in the consultation process. In addition, the Commission submitted its impact assessment analysis with the directive proposal. In Parliament, the Industry, Research and Energy committee was responsible for reporting on the proposal, and it consulted several other committees for their opinion. Within the Council of Ministers, both the Environment and Energy Councils discussed the proposal for the RE directive on four occasions in 2008. Agreement was reached at the highest political level in the European Council in December 2008.

Overall, in the policy output a medium to high level of CPI is evident. The initial assessment of the level of CPI in the policy process also leads to indications of the presence of CPI. However, CPI in the RE case cannot be considered ideal. Instead a combined score of CPI being between 51.3 and 62 per cent in line with the ideal goal for policy output (medium to high score), and an initial estimate of between 81 and 99 per cent in line with the ideal goal for the policy process (very high score), results in an overall “high” level of CPI in the RE policy (see table 1).

3.3. Internal energy market

The third liberalisation package on energy was adopted in June 2009. It represents another milestone towards the completion of the internal energy market after the first gas and electricity directives in the 1990s and the second package of legislative measures adopted in June 2003. The third package provides further "unbundling" requirements to ensure the effective separation of production and transmission assets and increased regulatory powers at EU level. Under the legislation, there are three models of separation of supply and generation from transmission activities allowed: full ownership unbundling (requiring a full separation of supply and transmission activities); independent system operator (ISO) (allowing vertically integrated companies to retain ownership of their network assets, but requiring the transmission network to be managed by an independent system operator); and, independent transmission operator (ITO) (allowing vertically integrated companies to keep their ownership of the transmission system provided they are managed by an independent transmission operator and are subject to a number of safeguard provisions) (Directive 2009/72/EC; Directive 2009/73/EC).

Level of CPI: An ideal state of CPI in the policy output of the third liberalisation package would require preference to RE penetrating the grid, and therefore would allow for a non-discriminatory third party access to the market, provide incentives to invest in new infrastructure and to open up national energy markets to competition through effective unbundling, regulatory measures and improved transparency.

As the creation of a common market is a necessary condition for integrating renewables into the EU energy market, the third liberalisation package is an essential tool for achieving climate policy goals. Firstly, increasing competition in the energy sector challenges the dominant positions of energy monopolies on the European market and allows even the smallest independent producers of RE to have better access to and benefits from the market. Secondly, the effective application of economic instruments for sustainable development, including the emissions trading system, depends on the development of a competitive market (European Commission, 2007, p. 6). Thirdly, by enhancing consumer rights, the third liberalisation package promotes energy efficiency measures and awareness among consumers.

In terms of evaluating policy output, a sector inquiry, launched in 2005, and a set of country reviews conducted by the Commission in 2006 illustrated that the liberalisation measures included in the second energy package were insufficient. These measures did not successfully remove the conflicts of interests arising from vertical integration. Market distortions persisted despite the liberalisation process (European Commission, 2007a; European Commission, 2007b). These findings strengthened the recognition that ownership unbundling is the most efficient way to tackle these deficits, to ensure choice for energy users and to encourage investment (European Commission, 2007a, p. 14; European Commission, 2007, p. 7).

Although the Commission's original proposal included only full ownership unbundling and the ISO model as possible options, the ITO option was also included in the final legislative package due to political resistance from several member states led by France and Germany

(EurActiv 2008). The ITO option for unbundling is considered an improvement on the current situation, but the extent to which it will lead to effective separation and increasing competitiveness in the energy sector remains unclear. This option does not require structural unbundling, since the majority of the members of the supervisory body appointed by the vertically integrated undertaking are not subject to strict independence rules (Cabau 2010, p. 99). It is therefore questionable whether it can remove discrimination and ensure independence of transmission and distribution networks from supply interests.

Improving regulation to ensure effectiveness is another essential tool for increasing competition in the energy market, thus optimising the conditions for CPI. The third energy package aims to fill existing regulatory gaps by harmonising and strengthening the powers, duties and independence of national regulators and by improving regulatory cooperation through the creation of a new EU-Agency that will monitor the cooperation of national energy regulators and transmission system operators (TSOs) and manage the development of cross-border infrastructure. Supranational regulation in the energy sector is further enhanced by the new harmonising rules for cross-border exchanges in electricity and gas, and the establishment of a new framework for the cooperation of TSOs at EU-level, namely the European Networks of Transmission System Operators for Electricity (ENTSOE) and for Gas (ENTSOG).

Generally, CPI in the policy output of the third liberalisation package is insufficient for supporting substantially higher levels of RE penetration into the energy market. It is also therefore insufficient to achieve the long-term climate objectives of the EU, but some progress has been made over time, which has set the EU on a path towards improved RE penetration. On a scale of very low, over low, medium, high to very high, CPI in the policy output can be considered “medium” (see table 1).

Regarding the policy process, an initial assessment shows little evidence of CPI in the elaboration of the third liberalisation package, yet further in-depth assessment is required. The third legislative package was, however, adopted under the co-decision procedure. Procedures were therefore in place to ensure consultation opportunities among the EU institutions and stakeholders external to the decision-making process. The policy preparation included an extensive consultation process, starting with the Green Paper on Energy in 2006 and followed by two other targeted stakeholder consultations, in-depth country reviews, the (abovementioned) sector inquiry and an impact assessment. The process of inter-service consultation in the Commission was marked by close cooperation between DG TREN and DG Competition, the active role of DG Competition in co-drafting the legislative proposals, and the strong application of competition rules (Eikeland, 2008). In Parliament, each legislative act of the third package was reported on by a different rapporteur from the Committee on Industry, Research and Energy, which made policy coordination within the Parliament a complex task. In the Council, the Energy Council led the negotiations, and the Environment Council adopted the final text of the package in the second reading. Parliament accepted the package, including the third ITO option as a compromise solution, during the second reading. The third legislative package on energy was finally agreed in June 2009. However, there was a limited number of climate advocates involved. Very few Green MEPs,

environmental NGOs and RE producers, who explicitly advocate climate policy concerns, took part in the policy process leading to the adoption of the third liberalisation package, and it seems that climate considerations did not come to the fore in the negotiations.

In summary, the new unbundling rules, the promotion of energy efficiency, the transparency requirements, the strengthening of the regulatory framework and the provisions for harmonisation of energy legislation suggest an improvement in the situation for achieving climate objectives through liberalising the energy market, yet rather than resulting in high levels of CPI in the policy output, this rather increases the level of CPI from 'low' in previous policy output to 'medium' in the policy output of the third liberalisation package. This is relatively far from the ideal state of a fully liberalised and integrated energy market, with a legal framework requiring a full separation of supply and generation from transmission activities. In terms of policy process, our initial assessment suggests that the level of CPI is low, since the deliberations focused primarily on competition and regulation issues, leaving less room for climate concerns in the process.

4. Explaining CPI in the EU's energy sector

Political commitment: When it comes to overarching political commitment to combating climate change, we assess especially the conclusions of the European Council, following intergovernmentalist approaches laying emphasis on the role of member states in the EU. In March 2007, the European Council demonstrated commitment to combating climate change when it endorsed the 20 per cent targets to 2020 (European Council conclusions, March 2007). In addition, the EU has regularly voiced its commitment to combating climate change, both domestically and on the international stage (see generally conclusions from the European and Environment Councils, especially since 2005), and agreed its 2020 target unilaterally. On a simple scale of low (no consistent political commitment to climate objectives), medium (political statements outlining commitment, but no legislation to back this up) and high levels (both political overarching commitment in statements and legislation to meet these commitments) of political commitment, the EU therefore demonstrates high levels of commitment to combating climate change generally (Oberthür & Dupont, 2011). This aspect of commitment is a constant overarching the two cases.

Secondly, the question is whether there is political commitment to the *integration* of climate policy objectives into the RE and internal energy market policy sectors (i.e. commitment to CPI). The European Council clearly outlined that achieving climate policy objectives requires integration into energy policies. Acknowledging that "energy production and use are the main sources for greenhouse gases", the European Council called for "an integrated approach to climate and energy policy" (European Council conclusions, March 2007, p. 11). However, this does not necessarily imply an ideal level of political commitment to CPI as no principled priority is assigned to climate objectives. Rather, the Council clearly states that "integration should be achieved in a mutually supportive way", implying equal weight to the three objectives of increasing the security of supply; ensuring the competitiveness of energy prices;

and, promoting environmental sustainability and combating climate change (ibid.). Therefore, there is an evident political commitment to CPI in RE policy, but it is a rather neutral commitment, giving no priority to climate objectives in particular.

In the case of internal energy market policy, the level of political commitment to CPI is low. Except for outlining the general objectives of the third legislative package as achieving "a more secure, competitive and sustainable supply" (Council, 2008, p. 6; Council, 2008a, p. 17) and "promoting sustainability by stimulating energy efficiency and guaranteeing that small companies, too, in particular those investing in renewable energy, will have access to the energy market" (European Council, 2009, p. 19), no other reference to climate policy objectives could be traced. The importance of the third liberalisation package for guaranteeing access for RE and improving energy efficiency was highlighted by some MEPs. Therefore, some level of political commitment could be observed in Parliament. The debate on the liberalisation of the EU energy sector focused on the issue of ownership unbundling as well as regulatory aspects of the energy market, but no priority was given to climate policy goals.

Functional overlap: There is a clear and direct functional overlap between the objectives of RE policy and the objectives of climate policy since achieving a higher share of RE sources will positively contribute to achieving the goals of climate policy (reducing GHG emissions). Therefore, the two policy sectors overlap synergistically and co-benefits are large. This synergistic and direct functional overlap was acknowledged in the policy process, and is evident in the inclusion of the RE directive in the climate and energy package. Therefore, on a scale describing functional overlap from conflictual to neutral to synergistic, the direct links between climate and RE show the highly synergistic nature of these policies, thus promoting CPI.

In the case of the third liberalisation package, the mutually reinforcing objectives of internal energy market development and climate policy account for a clear (but indirect) functional overlap, as increasing the competitiveness of the energy market will improve the integration of renewables in the power grid. However, this functional overlap, although observed by the Commission in various communications (e.g. "an energy policy for Europe", among others), did not explicitly lead to the connections between the development of a competitive energy market and climate policy objectives being considered in the policy process or output.

Stakeholder involvement and procedures for CPI: While DG TREN led the policy preparation process on the RE directive, there was ample room in the policy process for NGOs, stakeholders and climate advocates in the Commission, Parliament and Council to voice their opinions on the proposal, largely due to the normal consultation and coordination procedures under the co-decision procedure. In addition, formal and informal consultations took place throughout the process. Further analysis of the proportion of, and actual attention paid to, these stakeholders in the policy process is required.

For the third liberalisation package, both DG TREN and DG Competition played active roles in the inter-service coordination and co-drafting of the legislative proposals. Inter-service consultations involved DGs Competition, Economic and Financial Affairs, Employment, Enterprise, Environment, Information Society and Media, Internal Market, and Health and

Consumer Protection, and their opinions were considered for the impact assessment (European Commission, 2007d). In terms of stakeholder involvement, a broad range of stakeholders was involved in the policy preparation process, although it is noteworthy that environmental NGOs were less present in the consultation than private industry actors.

Institutional and policy contex:. The Commission has long argued for further policy developments in energy policy at the EU level, by underlining the necessity for solidarity in the face of climate change and energy security challenges. This argumentation was finally enshrined in the TFEU (see above), although the practical meaning and implications of the solidarity clause are still unclear. In the RE sector, the failure of the EU to reach its previous RE targets (which were of a non-binding nature), along with the EU's leadership ambitions on climate change (Oberthür & Roche Kelly, 2008), opened a window of opportunity to move to binding targets. In this case, the institutional context helped create an enabling framework for RE policy development, and the past policy context of the failure to meet non-binding targets led to further RE policy that is favourable to CPI.

The institutional and policy context played an important role for the third liberalisation package. First, the political initiative to develop a coherent EU energy policy, based on a common legal framework, was launched in the context of rising oil and gas prices in Europe, the increasing dependence of the EU on a few external suppliers and global climate change challenges. Second, the development of the internal energy market is a path-dependent process that started in the 1990s with the first gas and electricity directives. Thus, the third liberalisation package was meant to fill regulatory gaps of the previous two packages. Finally, the internal energy market was one of the pilot cases for active application of competition policy – an objective that was given priority under the Barroso I Commission mandate (Eikeland, 2008, p. 19). Therefore, although the institutional context provided a favourable environment for further policy development, this did not necessarily lead to an emphasis on achieving climate policy objectives in the policy output.

Table 2: Summary of analysis

	Renewable Energy	Third liberalisation package
1. Political commitment	To combating climate change: High	
	To CPI: Neutral	To CPI: Low
2. Functional overlap	Direct & synergistic	Indirect & synergistic
3. Climate advocates' participation	High	Low
4. Institutional and policy context	Favourable	Favourable

In summary, both cases display insufficient but varying degrees of CPI. The overall target for RE policies for 2020 falls short of the ideal linear decarbonisation trajectory outlined above, although the level of CPI is still regarded as relatively high. Importantly, the current policy trajectory puts the development of RE on a pathway towards decarbonisation. The high, but insufficient, level of CPI in the EU's RE sector is affected by the score of neutral in terms of political commitment to CPI; the synergistic nature of the functional overlap between the sectors; the involvement of climate advocates in the policy process; and the favourable policy and institutional context for CPI in further policy development (see table 2).

The third liberalisation package is a step in the right direction with regard to reinforcing climate objectives, although the level of CPI remains insufficient. The analysis shows that CPI in the third legislative package is mostly driven by the clear, but indirect, functional overlap between both sectors and by a number of institutional and policy context factors that have led to indirect enshrinement of climate policy goals in the energy sector. Conversely, both political commitment to and stakeholder involvement supporting climate policy objectives remain relatively low.

The main findings will once again be discussed and assessed in a comparative perspective in the concluding section below.

Concluding remarks

This article examined the extent of CPI in two sub-sectors of EU energy policy, namely RE policy and internal energy market liberalisation policies. To assess the level of CPI in these sectors, we outlined a conceptual and explanatory framework. The explanatory factors under focus here included political commitment; functional overlap; stakeholder involvement; and the institutional and policy context. The empirical research showed that CPI remains insufficient for achieving long-term climate policy objectives to 2050, in both RE and internal energy market policies. This is despite the shifting regulatory governance context from member states guarding their sovereignty over energy issues to one where energy policy has gradually (and more explicitly) become an area of EU-level competence (Jordan, Huitema, Rayner, & van Asselt, 2010; Birchfield & Duffield, 2011).

The interplay of the main variables from the analytical framework also shows the benefit of deriving factors by employing a strategy of combining theories of European integration. A focus on one of these theoretical perspectives may have led to a lack of emphasis on certain factors. An application of intergovernmentalist approaches only, for example, may not have led to the acknowledgement of the importance of stakeholders; and an application of institutionalist perspectives only may have neglected the importance of political commitment for CPI, as outlined in our findings above. This conceptual framework would benefit from further testing and application, both to the policy output and process, in future research.

With regard to the explanatory factors, it is clear that the high and medium levels of CPI in RE and internal energy market policy, respectively, can be accounted for by the variability in

results on the factors outlined above. While political commitment to CPI is considered as high in the RE case, it is rather low in the third liberalisation package. Functional overlap in both cases is clear, but more indirect in the third liberalisation package case. This can account for the lower uptake of functional overlap as a justification for taking climate policy objectives into account in the policy-making process. In addition, while procedures for consultation were present in both cases, the dominance of competition policy objectives and the limited number of climate advocates in the policy process of the third liberalisation package contrasts with the generally higher level of climate input in the adoption of the RE directive. Finally, in both cases, past policy inadequacies allowed for further policy development and an extension of supranational governance in energy issues (and therefore a heightened opportunity for CPI, although this was taken up to a greater extent in the elaboration of the latest RE policy, than the in the third liberalisation package).

Although EU energy policy is evolving in line with climate policy development, its external dimension, and decisions on choice of energy mix and taxation on energy products remains a national competence. Energy policy has long been guarded by member state sovereignty, resulting in a challenging coordination task for the EU institutions to ensure a harmonised EU energy sector. It is clear that the EU's climate objectives to reduce GHG emissions by between 80 and 95 per cent by 2050 will not be met under current energy policies. Our analysis outlines the particular importance of political commitment to CPI; the recognition of functional overlap between policy sector objectives; and the strong involvement of climate advocates in the policy-making process for the advancement of CPI. While these factors remain unaddressed, even the expansion of supranational governance in energy policy will be inadequate to ensure the achievement of long-term climate policy objectives.

Research on CPI in the EU is still in its infancy. CPI can be regarded as a tool for increasing overall policy coherence in the EU, and as a perspective for policy development that can help diminish complexity in policy-making. Much potential lies in expanding this research domain and applying the analytical framework outlined above to the examination of CPI in other policy sectors, such as agriculture, trade or development policy. In addition, broader research into the impact of CPI on furthering the European integration project would provide an interesting avenue for future research and analysis.

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