

# Fixing the EU Emissions Trading System? Understanding the Post-2012 Changes

---

*Jon Birger Skjærseth and Jørgen Wettestad*

## Introduction

In December 2008, the heads of state of the European Union and the European Parliament together adopted a new climate and energy policy for Europe. The policy consisted of a package of binding measures to deliver on the EU's unilateral target adopted in 2007 to reduce greenhouse gas emissions by 20 percent by 2020 (or 30 percent in case of adequate international agreement). The aim is to put the EU on track toward a low carbon energy economy based on cap-and-trade, renewable energy sources, energy efficiency and technological innovation. The new targets and the EU Emissions Trading System (EU ETS) also formed the basis for the EU's negotiation strategy toward a revised global climate change agreement at the 15th meeting of the United Nations Framework Convention on Climate Change (UNFCCC) in Copenhagen in December 2009 (COP 15). In light of President Obama's intention to establish a US cap-and-trade system, the EU aims to facilitate an OECD-wide carbon market by 2015. A well-functioning EU ETS will be important for the establishment of this market.

The declared cornerstone of the new package and key to the EU's international climate change position is a reformed EU ETS. The ETS is the first large-scale international cap and trade system in the field of the environment, covering over 10,000 industrial installations and representing close to half of the CO<sub>2</sub> emissions in the EU. The first Emissions Trading (ET) Directive was adopted in mid-2003 followed by a 2004 "Linking Directive" that connected the EU ETS to the Kyoto Protocol flexibility mechanisms. These directives established a three-year pilot phase (2005–2007) to precede the main commitment period of the Kyoto Protocol (2008–2012).

The EU initially established the ETS as a "decentralized" system.<sup>1</sup> Key decisions about the amount and allocation of allowances were in the hands of the member states, drawing up National Allocation Plans (NAPs). The overall cap on emissions then became the aggregate of national caps. Most allowances were

1. Skjærseth and Wettestad 2008a.

handed out free of charge and the scope of the system was rather narrow with respect to coverage of sectors (power producers and some large energy-intensive industries) and greenhouse gases (CO<sub>2</sub> emissions mainly). The system also allowed the import of credits from third countries, primarily via the Clean Development Mechanism (CDM). The pilot phase proved that emissions trading between 27 countries can work, in the sense that a price was placed on carbon. However, the initial ETS did not work well, with the carbon price fluctuating significantly between 2005 and 2008.

In January 2008, the European Commission (hereafter, the Commission) put forward a proposal for a revised ETS post-2012 as part of the climate and energy package.<sup>2</sup> This was a proposal signalling a significant change<sup>3</sup>—a much more centralized ETS, doing away with NAPs completely, auctioning allowances as the general principle, and establishing more restrictive rules on import of credits from third countries. A modified version of the Commission's proposal for a revised ET Directive was finally adopted by the European Council and the Parliament in December 2008, together with the rest of the EU climate and energy package. The revised Directive was then formally published as Directive 2009/29/EC in January 2009.

This article takes a first step toward assessing and explaining the changes in the EU ETS from various theoretical perspectives, placing different emphasis on the role and importance of the member states, nonstate actors, the EU institutions as actors and arenas, and the international climate regime. The second part outlines the analytical framework. There is a large body of social science literature on the EU ETS.<sup>4</sup> However, this literature tends to highlight one major level of explanation or one major explanatory factor. In contrast, our framework aims at including the multiple levels involved in EU policy-making. In the third part, we present a snapshot of the main changes in the EU ETS. The fourth and fifth parts examine changes in the positions of member states and nonstate actors to explain the changes in the system. Parts six and seven seek to explain the changes from the perspective of the EU institutions and the international climate regime. The concluding part summarizes the main argument.

## Analytical Framework

The focus of explanation is the *changes* in the EU ETS from the 2003 ET Directive and the 2004 supplementary Linking Directive. We have chosen to focus on the following key design elements:<sup>5</sup>

2. European Commission 2008a.
3. For instance, the think-tank *Carbon Trust* called the Commission's 2008 proposal a "revolution." See Carbon Trust 2008.
4. For reviews of this literature, see Skjærseth and Wettestad 2009, 102; Asselt 2009; and Convery 2009.
5. Other important design elements include the coverage of the system (the number of greenhouse gases, installations, sectors and states covered by the system) as well as monitoring and enforcement mechanisms.

- Cap setting: the process of determining the EU targets for total emission allowances (in tons of CO<sub>2</sub>);
- Allocation of allowances: the process of distributing and differentiating allowances to installations/companies (for free, for payment, or a combination) and industrial sectors;
- Links to the Kyoto Protocol's flexibility mechanisms—Joint Implementation (JI) and the CDM.

These design elements are crucial in providing incentives to European industry to reduce emissions (see below).

The 2003 ET Directive and the 2004 Linking Directive represent what was politically feasible in EU policy-making at the time, given the constellation of actor interests and preferences, the EU institutions in place, and the international climate regime.<sup>6</sup> The analysis uses three approaches to explain changes in EU policy-making in the period 2003–2009: liberal intergovernmentalism, multi-level governance, and the international regime approach. The two former approaches are well established in the EU literature and point to explanatory factors internal to the EU. The international regime approach points to explanatory factors external to the EU and is gaining attention in studies of EU decision-making.<sup>7</sup> The approaches differ concerning the identification of the most important actors, institutions, levels of decision-making, and mechanisms for explaining policy outcomes. We will, however, treat these as complementary rather than rival explanations.

The liberal intergovernmentalist approach regards EU policy-making and integration mainly as a result of interstate bargaining, making the interests and preferences of EU member states the key to understanding the ETS reform. Relevant assumptions are first, that bargaining outcomes are shaped by the interests and preferences of EU member states, leaving scant room for autonomous supra-national institutions to significantly influence policy-making.<sup>8</sup> Second, the location of authority and policy-making influence at the state level implies that nonstate pressure groups such as industry and green organizations form part of domestic societal interests that shape negotiating positions. According to Hooghe and Marks: "the core claim of the state-centric model is that policy-making in the EU is determined primarily by national governments constrained by political interests nested within autonomous national areas."<sup>9</sup> Hence, a reasonable liberal intergovernmentalist proposition for explaining the changes of the EU ETS is simply that the member states changed their positions.<sup>10</sup> The main

6. Skjærseth and Wettestad 2008a

7. Skjærseth and Wettestad 2002; and Fairbrass and Jordan 2004.

8. Moravcsik 1998, 1999.

9. Hooghe and Marks 2001, 3.

10. The propositions derived from the various approaches are falsifiable to the extent that changes in actor positions and institutions do not occur. A change in position does not necessarily correspond with a change in influence. However, the main EU channels of influence have re-

reasons for such changes can be knowledge gained from experience with the system prior to the reform, new material interests, or new ideas and norms concerning emissions trading as a policy instrument. The two latter points are particularly relevant in the case of the Central and East European Countries (CEECs) which entered the EU after adoption of the 2003/2004 directives.

Multi-level governance has been depicted as an alternative to the state-centered intergovernmentalist approaches of European policy-making.<sup>11</sup> There are many variants of multi-level governance approaches, but all share the assumption that European integration has weakened the state. This approach would explain the EU ETS by pointing to the complexity of actors and institutions involved at different levels of decision-making. Governance by supranational institutions and influence by nonstate actors at the EU-level constitute central aspects. Key assumptions are first that supranational actors, such as the European Commission and Parliament, have acquired an independent influence on policy-making beyond that of their role as agents for national governments.<sup>12</sup> Organizations can be considered as actors to the extent that they provide independent inputs to the problem-solving process.<sup>13</sup> Moreover, institutions as arenas determine who deals with what, how, when, and where.<sup>14</sup> We thus refer to the term *institution* in a broad sense, covering institutions as arenas as well as (supranational) organizations as actors.<sup>15</sup> Second, nonstate actors influence policy-making, not only through the formation of national preferences but also directly through EU-level institutions as an important part of the integration process. The separation of domestic and international politics is thus blurred within the multi-level governance approach. The changes in the EU ETS are in line with multi-level governance to the extent that the supranational EU institutions as actors changed their positions or the EU institutions as arenas changed and affected the ETS changes. Furthermore, a related analytical possibility is that industry and environmental organizations changed their positions.

Common to both liberal intergovernmentalism and multi-level governance is their emphasis on internal EU factors and processes for explaining EU policy-making. However, factors external to the EU can also affect EU policies.<sup>16</sup> Our point of departure is the impact of international regimes, defined as “sets of implicit or explicit principles, norms, rules and decision-making procedures around which actors’ expectations converge in a given area of international rela-

---

mained roughly the same throughout the time period analysed. Nevertheless, this case study cannot ‘test’ grand theories in any strict way and the theoretical approaches are mainly used as heuristic devices emphasizing changes in different actors and institutions at different levels.

11. Marks, Hooghe, and Blank 1996; and Fairbrass and Jordan 2004.

12. Hooghe and Marks 2001, 3.

13. Underdal 2002, 27.

14. Institutions as arenas are compatible with liberal intergovernmentalist approaches to the extent they serve as an arena for cooperation between states. In this paper, we use the term more broadly in a multi-level governance context to depict relationships between states, nonstate and organizational actors at different levels and sectors of society.

15. Underdal 2002, 24.

16. Weale et al. 2000.

tions.”<sup>17</sup> The principles, norms and rules in this specific context are those laid down in the 1992 UN Framework Convention on Climate Change (UNFCCC), its 1997 Kyoto Protocol, and the negotiation on a possible new and revised UN-based climate treaty. The changes in the EU ETS are more in line with an international regime approach to the extent that EU institutions and actors reformed the EU ETS in response to changes in the international climate regime. Given the link established between the EU ETS and the Kyoto Protocol’s flexibility mechanisms CDM and JI, we would particularly expect that the developments within the climate regime affected this link.

### Main Changes in the EU ETS

The first EU ETS decision-making process started in October 2001 and led to the 2003 Emissions Trading Directive, covering the first (2005–2007) and second (2008–2012) trading periods and phases. In these phases, the amount of allowances was determined by each state, and the total EU cap represented the aggregate of each state’s National Allocation Plan. The member states allocated close to or above projected needs, contributing to 4 percent more allowances than actual emissions in 2005. When this perceived “over-allocation” became known, the allowance price dropped considerably in the spring of 2006 and further down to almost zero in 2007.<sup>18</sup> Allowances were mainly allocated free of charge, providing revenues to the companies and windfall profits for energy producers who could then pass on the estimated costs of allowances to consumers, even though they had received them for free.<sup>19</sup> This system was also administratively complex and cumbersome for the member states. Finally, the EU ETS was linked to the Kyoto Protocol mechanisms and credits could be purchased through the CDM and JI. This led to fears that imports of generally lower-priced credits from third countries would bring abatement costs in Europe down at the expense of incentives for European companies to reduce emissions.

The second main ETS decision-making process ran from January 2008 to December 2008 and shaped the rules for the third trading period 2013–2020. A review undertaken in 2007 identified various problems and concluded that a more harmonised emissions trading system was imperative.<sup>20</sup> In January 2008, the Commission proposed the ETS reform. On December 11–12, 2008, EU leaders gathered in the European Council and agreed upon a revision of the ETS to take effect in 2013. The European Parliament endorsed the deal on December 17.

The changes adopted in December 2008 were significant. First, the revised ETS introduced a single EU-wide cap, and allowances were to be allocated on the basis of fully harmonized rules for the period 2013–2020. NAPs would

17. Krasner 1983, 2.

18. Skjærseth and Wettestad 2008b; and Ellerman and Buchner 2007 and 2008.

19. E.g. Sijm et al. 2006.

20. OJEU 2009.

therefore no longer be needed. Trading periods were increased from five to eight years. The quantity of allowances was reduced in a linear manner, ensuring gradual and predictable reductions in emissions. The annual decrease of allowances was set at 1.74 percent per year of the allowances issued by member states, arriving at a reduction of ETS emissions of 21 per cent below 2005 emissions by 2020 (and 10 percent for the sectors not covered by the ETS).<sup>21</sup> These changes will promote a scarcity of allowances and higher allowance prices.

Second, auctioning was introduced as the main allocation method, based on a differentiated system between the power-producing and the power-consuming sectors, i.e. various energy-intensive industries. As a general principle, the power sector needs to buy all of its allowances from 2013. Other industries need to buy a minimum of 20 percent of their allowances in 2013, increasing to a minimum of 70 percent by 2020 (with a view to reaching 100 percent in 2027). But there is also a differentiation within the power sector. Installations poorly integrated into the European electricity grid that are operational or under construction no later than the end of 2008, or which individually provide more than 30 percent of national electricity in countries with relatively low GDP (such as Poland and other Central and Eastern European countries), can get up to 70 percent of all allowances free of charge in 2013, declining gradually to zero by 2020. Within the group of energy-intensive industries, industrial sectors or sub-sectors particularly exposed to global competition and hence in danger of “carbon leakage” will be guaranteed free allowances from 2013 to 2020. A list of 164 industrial sectors and sub-sectors deemed to be exposed to “carbon leakage” has been approved. These sectors are estimated to account for about a quarter of total emissions covered by the ETS and nearly 80 percent of the total emissions from manufacturing industry in the ETS.<sup>22</sup> Transitional free allocation to installations will be based on harmonized benchmark rules taking the most energy-efficient techniques, substitutes, and alternative production processes into account.<sup>23</sup>

The important change in method of allocation involves an increase in revenues from auctions, with a relevant question being how these revenues will be spent. Eighty percent of the revenues will be distributed among the member states according to their ETS emissions in 2005 (or average 2005–7). Ten percent of these revenues are to be redistributed from member states with high per capita income to those with low per capita income to strengthen the capacity of the latter to invest in climate-friendly technologies. An additional 2 percent is to be distributed to countries whose greenhouse gas emissions in 2005 were at least 20 percent below their Kyoto base-year emissions. Another mandatory element is the use of 300 million allowances from the New Entrants’ Reserve to support up to 12 carbon capture and storage (CCS) demonstration projects and

21. This path has been calculated by starting at the mid-point of the 2008–2012 period average annual total quantity of issued allowances. OJEU 2009.

22. OJEU 2010.

23. OJEU 2009.

projects demonstrating renewable energy technologies. In addition, non-binding guidance recommends that member states use 50 percent of the revenues on measures to fight and adapt to climate change, mainly within the EU but also in developing countries.

Third, with regard to import of external credits, an ad hoc cap was introduced through the NAPs for the second trading period. In total, the EU ETS installations are allowed to use 1400 Mt of CDM/JI credits for compliance in the 2008–2012 period. This equals approximately 10 percent of the total allocation for the period. Data from 2008 show that companies did not make full use of the CDM/JI option.<sup>24</sup>

For the ETS post-2012, the rules on the use of CDM and JI credits are now included in the revised directive itself (Article 11).<sup>25</sup> As banking of CDM and JI credits from the second to the third trading period is permitted, and there are several complex details, the main thing to note is that companies will have a roughly similar principal access to such credits in the third trading period as in the second period. Compared to the total for the 2008–2012 period, some additional credits have been added but the increase is not marked.<sup>26</sup> There are no binding quality criteria for projects in third countries, but buyers must report on their quality. Only credits that are accepted for compliance in the second trading period will be accepted in the third period. Additional qualitative criteria may be implemented subsequently. If a satisfactory new international climate agreement is adopted and the EU's overall reduction target is increased by up to 30 percent, then half of the extra effort required by ETS installations *may* be covered by such external credits. Generally, it can be assumed that the possibility of using CDM credits will become much more practically important in the years ahead, as banking of allowances is now allowed and EU allowance prices are expected to increase considerably in the third trading period.

The main conclusion is that the ETS has changed significantly, particularly with regard to the cap and allocation method. These changes mean a new ETS that is significantly more harmonized across the 27 member states, which is likely to increase incentives to reduce emissions in the EU compared to the old system. We now turn to the explanatory perspectives, beginning with an inter-governmentalist approach.

## Requested Reform? Changes in the Positions of Member States

We focus on three important design issues: cap setting, allocation method, and links to the global flexibility mechanisms. Establishing a rough comparative baseline, the 2003 ET Directive and the 2004 Linking Directive were adopted accord-

24. In 2008, ETS installations used around six per cent of the 1.4 billion credits available for the 2008–12 trading period. See European Commission 2008b.

25. Thanks to Stig Schjølset for assistance in the clarification of the CDM/JI rules in the revised ETS.

26. The increase is from 1400 Mt to between 1700 and 1900 Mt of credits. The final number has not yet been decided.

ing to the qualified majority procedure in Council of Ministers and co-decision with the European Parliament. A majority of the EU-15 preferred a decentralized system with regard to the cap. As many of the EU member states had little knowledge about emissions trading and were sceptical to cap and trade, a decentralized system would calm the member states by giving them more leeway. Second, a majority of the member states preferred free allocation of “grandfathered” allowances based on historic emissions. Third, the link to the Kyoto Protocol’s flexibility mechanisms was clarified in the Linking Directive. That decision-making process showed that member states generally rejected a quantitative cap on the use of such external credits and preferred a rapid and liberal external link.<sup>27</sup> Based on a liberal intergovernmentalist approach, we would expect member states to change their positions on these three design elements.

### *Consultations on ETS Reform*

ETS reform officially began with the Commission’s November 2006 Communication on “Building a global carbon market.”<sup>28</sup> However, member states had expressed opinions on the development of the ETS prior to this. For instance, in the autumn of 2005, the Commission conducted an ETS web survey among main stakeholder groups, including member states.<sup>29</sup> This survey was far from representative of the positions of member states but it indicated that significant changes in positions were underway. Governments, along with market intermediaries, wanted more auctioning, and 47 percent of the government bodies favored imposing limits on the use of CDM/JI credits.<sup>30</sup> At this time, climate change also had started to climb the political agenda of member states and EU institutions. In 2003, 39 percent of respondents to a Eurobarometer survey listed climate change as their main concern, a number that had increased to 45 percent by 2005 and to 57 percent by 2007.<sup>31</sup>

The first step toward harmonizing the cap-setting process was taken by the Climate Change Committee in late 2006, on the NAPs for the 2008–2012 period.<sup>32</sup> The emerging changes in positions were also observed in the consultation process within the European Climate Change Programme (ECCP) framework in 2007. There was now a call for more harmonization and several member states advocated an EU-wide cap.<sup>33</sup> The Eastern EU newcomers also emphasized the need for continued flexibility to accommodate differences in economic development and possible impact on economic growth. The more

27. Skjærseth and Wettstad 2008a; and Hægstad Flåm 2009.

28. European Commission 2006a.

29. European Commission 2006b.

30. One explanation for this could be that it was mainly environment ministries and agencies that responded to this survey and these actors tend to be more restrictive in their views on the use of external credits.

31. European Commission 2008b.

32. Wettstad 2009, 319.

33. European Commission 2007a, 3.

positive view on auctioning signalled in the 2005 survey was now further confirmed. The report from the ECCP meeting noted that: “a number of Member States clearly spoke out in favor of auctioning.”<sup>34</sup> With regard to auctioning revenues, the dominant mood among member states emphasized national control but remaining open to the idea of earmarking some revenues for environmental purposes.<sup>35</sup>

A key background factor in the turn to harmonization and more auctioning was the bad experiences from the pilot phase,<sup>36</sup> including cumbersome and frustrating NAP processes, suspicions about free-riders in other countries, and windfall profits stemming from the free allowances. As to external links, the ECCP discussions indicate that positions were mixed—some did not favor a limit on quantity while others did. For example, one UK representative argued in favor of restricting the inflow of CDM/JI credits.<sup>37</sup>

### *Deciding ETS Reform: Fine-tuned Positions and Ultimate Victories*

The ECCP consultations in 2007 had outlined a change in the main member states’ positions on at least two of our three focused design elements. Did the decision-making process in 2008 show significant further changes in these positions? One interesting aspect of the decision-making process is how little attention affected actors gave to the proposed turn toward a cap-setting process at EU level. Brussels insiders refer to the cap as the regulatory cornerstone and “firewall” in the ETS.<sup>38</sup> As elaborated below, key ETS countries such as Germany and Poland emphasized instead the treatment of industrial power consumers and producers, respectively. Member states’ lack of attention to the cap-setting issue reflects broad-based agreement on the need for greater harmonization to achieve an overall 20 percent target. If member states really had questioned this part of the reform, they would easily have been met with demands to reduce non-ETS emissions further.

The member states did fight other battles, however. One such battle was the use of auction revenues. Quite soon after the Commission launched its proposal, member states’ economics and finance ministers came out strongly against the Commission’s earmarking proposal.<sup>39</sup> This position was basically retained throughout the decision-making process and the final outcome provided only non-binding recommendations on the use of revenues. This was a clear victory for the member states’ collective opposition to earmarking.

34. European Commission 2007a, 19.

35. European Commission 2007a, 20.

36. Interviews with key Brussels insiders confirm that member states’ unsatisfactory experiences with the pilot phase represent a central factor in understanding the changes in the system. Author interviews in Brussels, May 2009.

37. European Commission 2007b, 9.

38. Author interviews in Brussels, May 2009.

39. This meeting in the Ecofin Council (i.e. EU economics and finance ministers) took place on 12 February 2008. See European Council 2008.

As to the more general question of auctioning, an East-West split grew stronger during the negotiations, fuelled by the global economic crisis unfolding in the autumn of 2008. In 2005, the Polish government and industry had fiercely opposed a demand from the European Commission to cut the proposed Polish cap in the NAP. Poland feared that a stringent climate policy in the form of tight emission allowances could hinder the growth of their economy.<sup>40</sup> Poland as well as other Eastern newcomers emphasized the need to protect their coal-fired power stations from 100 percent auctioning commencing in 2013. They largely succeeded in this, with exemptions all the way to 2020.<sup>41</sup> They also succeeded in their request for more “solidarity” in the distribution of auctioning revenues, as noted above.

The liveliest sub-issue concerned the treatment of energy-intensive industries and the identification of those sectors most vulnerable to global competition. Member states were more impatient than the Commission and managed to hasten the identification of these sectors from mid-2010 to late 2009. Germany, in particular, was a staunch defender of energy-intensive industries, proposing to make all allowances free to industries exposed to carbon leakage until an international climate agreement imposed comparable costs on industries outside the EU. The German environment minister characterized the Commission’s proposal as “completely unacceptable.”<sup>42</sup> Germany argued successfully for free allowances for most energy intensive industries, including steel, glass, cement, pulp and paper, ceramics, chemicals, coke, and refining.<sup>43</sup>

Also concerning access to external credits, most member states opposed the Commission’s and the Parliament’s suggested tightening of import of external credits, albeit less intense than on auction revenues. The final outcome must be counted as a partial success for countries such as Spain and the Netherlands, with quite extensive CDM portfolios, preferring more liberal rules than proposed by the Commission.

The positions of the member states changed and contributed significantly to the outcome of the ETS reform process—in line with “intergovernmentalist” predictions. Experiences with the pilot phase are central to understanding changes in the system. However, the final decision was made by the European Council using unanimity rules,<sup>44</sup> and the emerging global financial crisis made the member states more aware of the costs of reform. This means that movement of most member states toward the outcomes observed does not constitute a sufficient explanation. The outcomes appear more far-reaching and ambitious than the positions of the least enthusiastic states and coalitions. For example, the Central and East European countries did not particularly favor a stringent EU-wide cap and auctioning as the main principle.

40. Skjærseth and Wettestad 2008b, 284.

41. However, as noted earlier, the room for these exemptions decrease over time, down to zero in 2020.

42. *ENDS Daily* 2008c.

43. *ENDS Daily* 2008d.

44. e.g. Nugent 1999, 202.

## Positions of Industry and Environmental Organizations: Greens Embracing Trading

Industry and environmental non-governmental organizations (ENGOs) can significantly affect EU climate policy even in the absence of formal decision-making power.<sup>45</sup> Such nonstate actors have participated in formal and informal EU channels since the inception of the system. The ENGOs initially opposed emission trading for both substantive and normative reasons, arguing that trading pollution was both ineffective and morally questionable. This resistance was gradually overcome by the belief that a cap-and-trade system in Europe could guarantee a positive environmental outcome, if appropriately designed. By 2000, most opponents had become supporters of the idea of emissions trading in Europe.<sup>46</sup> The ENGOs preferred a system based on cap-setting at the EU level, auctioning of allowances, and strict restrictions on the quantity and quality of credits imported from third countries, as this was seen as the best guarantee for environmental effectiveness.

The power-producing industry, represented at EU level by Eurelectric, is responsible for more than half of the CO<sub>2</sub> emissions covered by the ETS. As the “elephant in the corridor,” Eurelectric began preparing for emissions trading in Europe in the late 1990s by organizing several simulation exercises (Greenhouse Gas & Energy Trading Simulations, or GETS, 1, 2 and 3). These exercises indicated that the power industry had no reasons for concern. Anticipated costs from emissions trading could be passed on to consumers by increasing electricity prices. Eurelectric supported a cap and trade system in Europe and preferred allocation at the member state level in the short term and at the EU level in the long term.<sup>47</sup> Eurelectric could accept a combination of auctioning and allocation without charge, but warned against an auction system applicable to a large portion of the permits. They preferred that the import of credits be unrestricted and flexible.

The energy-intensive power-consuming industry was represented by a number of European federations including refineries, steel, cement, and pulp and paper. Energy-intensive industries supported emissions trading in principle, but most of these industries preferred relative targets in the form of a baseline credit system rather than cap and trade. These industries were not well organized in spite of their common interests and positions on the major design elements. Energy-intensive industries preferred an allocation of allowances at the member state level, free allocation, and full access to CDM/JI credits.

The basic interests and positions of these key interest groups changed somewhat during the negotiations of the revised ETS. The original ENGO positions were in line with the Commission’s proposal for stricter import of credits, more auctioning, and a cap at the EU level. In a common position paper on the EU ETS review process in 2007, Climate Action Network, WWE, Friends of the

45. Skjærseth and Wettestad 2008a.

46. Zapfel and Vainio 2002.

47. Eurelectric 2000.

Earth, and Greenpeace demonstrated their enthusiastic support for the ETS: “the existence of the EU emissions trading scheme (ETS) is a tremendously important achievement for European Climate Change policy.”<sup>48</sup> This position was further confirmed in interviews with key ENGO representatives in 2008 and 2009.<sup>49</sup> One important reason is that the system developed in line with their stated preferences.

Eurelectric has remained supportive of cap and trade. This is not surprising, as the electric industry had gained windfall profits as a result of the system. The organization favored an EU-wide, top-down approach toward setting the overall EU ETS cap. This position was in line with earlier long-term positions and based on the argument that cap-setting should ensure a level playing field for all European companies.<sup>50</sup> On allocation, harmonized rules were considered more important than the method of allocation, and there were different views within the electricity industry on this issue.

The energy-intensive industries had become more organized and issued a common position paper as well as individual position papers.<sup>51</sup> The basic positions were unaltered; most argued for relative targets, free allocation, and an unrestricted import of credits. However, given a continuation of the cap and trade system, there had been a change in the positions on cap-setting. The energy-intensive industries did not oppose cap-setting at the EU level, and some of the organizations argued in favor of more harmonization in setting the cap.<sup>52</sup> The main argument was that experience with the NAPs had shown a need for a further harmonization of the system to create a level playing field.

The main conclusion is that the positions of industry and ENGOs changed somewhat after 2000. The most important change on specific design elements was the increased support given to cap-setting at the EU level by industry. This change helps explain the Commission’s proposal and its ultimate adoption. In addition, the fact that the direction of reform process was in line with the original positions of ENGOs strengthened the legitimacy of the reform.<sup>53</sup>

## **EU Institutions as Actors and Arenas: Continuity and Change**

### *Institutions as Actors: The European Commission and Parliament*

The European Commission played an entrepreneurial role in initiating the first phase of the EU ETS by taking the initiative to establish the system, developing knowledge around the system, and crafting support among stakeholders.<sup>54</sup>

48. CAN/WWF/FoE/Greenpeace 2007, 5.

49. Author interviews in Brussels, May 2009.

50. Eurelectric 2007.

51. Key Stakeholder Alliance for ETS Review 2007.

52. e.g. OGP 2007; and Cefic 2007.

53. Skjærseth 2010.

54. Skjærseth and Wøttestad 2008a, 86

Drawing, among other things, on a string of external consultants' reports about design options,<sup>55</sup> the Commission's entrepreneurs came to favor an ETS marked by high harmonization and auctioning allowances as the main allocation method.<sup>56</sup> In the Linking Directive process, the Commission favored a restrictive position, suggesting a quantitative limit on the volume of import of CDM and JI credits.<sup>57</sup>

The European Parliament has become increasingly important in EU decision-making and a co-legislator with the Council within the dominant procedure of co-decision. The Parliament's main initial ETS design positions were outlined in the First Reading in the autumn of 2002. The Parliament preferred an ETS with a significant element of mandatory auctioning and more centralization (i.e. a central ETS cap). In the Linking Directive process, the Parliament supported the Commission's restrictive position on a quantitative limit on the import of CDM and JI credits.

#### *The Reform Process: Back to Basics*

Article 30 of the 2003 ET Directive stated that, on the basis of experiences and progress achieved, the Commission was to draw up a review report by 30 June 2006, "accompanied by proposals as appropriate." The regulatory challenge was less formidable in 2006 than it had been when the system was established. As noted, the publication of the first round of ETS emissions data in the spring of 2006 confirmed suspicions of a surplus of allowances contributing to an immediate price crash. This solidified the Commission's fundamental belief in the superiority of an ETS based on centralization and high harmonization, with allocation by auction. The Commission's January 2008 proposal for a revised ETS was largely the position taken back in the Green Paper on the EU ETS of March 2000.<sup>58</sup>

Turning to the Parliament, there is no evidence to indicate that EU enlargement changed this institution's basic input to the ETS reform process. The Parliament initially welcomed most proposed changes, which were in line with the Parliament's original positions. Not surprisingly, when Parliamentary processes began moving during and after the summer of 2008, some disagreement with the Commission's proposal was signalled: more earmarking of auctioning revenues to climate measures, earmarked money from the New Entrants' Reserve to fund carbon capture and storage pilot projects, and a quicker final agreement on measures to counter "carbon leakage" (i.e. by the end of 2010).

When the Environment Committee of the Parliament met in October, the main outcome was support for the basic reformed ETS architecture proposed by

55. See for example CCAP 2000; and FIELD 2000.

56. See Skjærseth and Wettestad 2008a, 74.

57. Skjærseth and Wettestad 2008a.

58. This impression was further confirmed in the author's interviews with key Commission officials in May 2009.

the Commission, both on centralization, greater auctioning, and the rather restrictive line on use of external credits.<sup>59</sup> Nevertheless, the amendments regarding the earmarking of revenues and CCS were upheld. The Committee suggested setting aside up to 500 million allowances from the New Entrants' Reserve as a funding mechanism for CCS projects.<sup>60</sup> In the end, the proposals were carried by 44 to 20 votes in the Committee (with one abstention).<sup>61</sup>

Regarding the final outcome, the main elements of the Commission's proposal survived in the decision-making process. This was first and foremost related to the adoption of a centralized and harmonized cap-setting and allocation model. As to the Parliament, no radical changes were demanded and, in the end, the changes obtained were mainly cosmetic, with the most important being related to CCS funding. The revised ETS was largely in line with the original positions of these organizational actors. These positions did not change in the reform process, but could be put forward more convincingly in light of practical experience with the system.

### *Institutions as Arenas: The Package Approach*

The year 2007 marked a turning point for EU climate policy. In March, the European Council adopted the main target for climate policy: ". . . until a global and comprehensive post-2012 agreement is concluded, . . . the EU makes a firm independent commitment to achieve at least a 20 percent reduction of greenhouse gas emissions by 2020 compared to 1990."<sup>62</sup> The Council identified the ETS as the main mechanism for realizing this target and formally invited the Commission to: "review the EU Emissions Trading Scheme in good time with a view to increase transparency and strengthening and broadening the scope of the scheme."<sup>63</sup>

This means that strengthening of the EU ETS was supported at the highest level in all EU countries well before the Commission's proposal in January 2008. In addition, the Council adopted new targets on energy efficiency, renewable energies, and energy technologies.<sup>64</sup> The European Council stressed the need to increase energy efficiency by 20 percent compared to projections for 2020 and adopted a binding target of a 20 percent share of renewable energies in overall EU energy consumption by 2020, including a 10 percent binding min-

59. Still, this latter point is complicated as the Committee put forward a different formula and procedure to that of the Commission. Analysts in *Point Carbon* indicated afterwards that the Parliamentary Committee in fact opened up for a little *more* use of CDM in the ETS than proposed by the Commission (Point Carbon 2008). The Committee also suggested that only "high-quality" CDM credits should be allowed into the ETS, without defining this element.

60. *ENDS Daily* 2008a, b; *Point Carbon* 2008; *Euractiv*, 8 October 2008; and European Parliament 2008.

61. *Euractiv*, 8 October 2008.

62. European Council 2007, 12.

63. European Council 2007, 12.

imum target of biofuels in overall EU transport petrol and diesel consumption by 2020. On technology, the Council welcomed the construction and operation by 2015 of up to 12 demonstration plants for CCS.

The EU sought to integrate climate policy targets and measures into security of supply and competitiveness policies. Existing measures in areas such as renewable energy and energy efficiency lacked the coherence to realize such goals.<sup>65</sup> The strategic energy plan viewed the goals of mitigating climate change, security of supply, and provision of competitive energy as mutually reinforcing objectives. Action on climate change was placed at the center of the new European energy policy. The revision of the ETS was seen as “critical to creating the incentives to stimulate changes in how Europe generates and uses its energy.”<sup>66</sup>

ETS reform was placed in the center of a package of climate and energy policy in the same way that climate change policy was placed in the center of a new European energy policy. This enabled linkage among various elements and increased the scope for integrative solutions by distributing costs in a way that facilitated agreement. Moreover, the proposal for a revised ET Directive was accompanied by a thorough impact assessment, unlike the 2003 Directive for which no such analysis was produced.

The package presented by the Commission in January 2008 comprised four legislative proposals to realize the 20+20+20 targets:<sup>67</sup> 1) a revision of the EU ETS covering large industrial energy-producing and consuming sources; 2) a decision on effort-sharing between member states in the form of differentiated targets for sectors not covered by the EU ETS such as transport and agriculture; 3) promotion of renewable energy sources; and 4) carbon capture and storage. New legislation was also underway for CO<sub>2</sub> emissions from cars and for fuel quality. An important benefit of the package approach was that it allowed more burden-sharing between rich and poor member states, compared to negotiating emissions trading in isolation from other policies. The overall cost to the European economy was estimated at just under 0.5 percent of GDP by 2020.<sup>68</sup> A guiding principle was that no member state should make investments that diverge too far from the 0.5 percent average. The Commission saw reform of the ETS and the links to other parts of the package as ensuring this in three ways: by setting different national targets in the non-ETS sectors based on GDP per capita, by setting different national targets for the share of EU energy consumption to be achieved by renewable energy, and by using auction revenues to compensate lower-income member states.

64. European Council 2007.

65. European Commission 2007c, 6.

66. European Commission 2007c, 11. Preliminary plans for revising the EU ETS were presented by the Commission simultaneously to the energy plan in the communication *Limiting Global Climate Change to 2 degrees Celsius* as a follow-up to the 2005 Communication on Climate Change (European Commission 2007b).

67. European Commission 2008a, 1.

*Negotiating the Package*

The Commission's January 2008 proposal was, as already noted, well received by the European Parliament and the Council of Ministers. This can largely be understood in light of the integrative nature of the package, promoting fairness in burden sharing and linking climate and energy goals. In addition, the 20+20+20 targets adopted by the European Council in 2007 required an ambitious package of measures to transform words into action.

The four pieces of legislation were negotiated in parallel in the Commission, the Council, and the European Parliament throughout 2008. Direct links were established between the process of negotiating a Directive on CCS and the use of ETS allowances from the New Entrants' Reserve to fund CCS demonstration projects.<sup>69</sup> The fact that the Parliament acquired a larger share of allowances to finance CCS projects than proposed by the Commission made it easier for the Parliament to accept the increase of free allowances for energy-intensive industries, which was a main feature of the European Council outcome. The new legislation on cars and fuel quality, which was initially excluded from the package, also became part of the negotiations in autumn 2008. Italy received more lenient emissions rules for small cars in exchange for supporting the package, and Germany got its way on free allocation for energy-intensive industry in exchange for accepting more stringent rules on car emissions than originally preferred.

The revision of the ETS Directive was proposed by the Commission under the co-decision procedure, with the expectation that it would be adopted by the Council of Ministers and Parliament under the rule of qualified majority voting. The French Presidency's push to resolve everything by unanimity at the December 2008 European Council was an important (and for many, surprising) move. It meant that the legislative proposal did not go through the full co-decision procedure, including a common position in the Council, two rounds ("Readings") in the Parliament, and even a final round in a conciliation committee which was sometimes required. Instead, trilogue talks between the Commission, the Parliament, and the Council were to sort out the main disagreements in a more rapid, *single* round. The most unusual element was the involvement of the European Council in hammering out a final deal in December 2008. As the action-packed European Council meeting took place *prior* to the first reading in the Parliament, the Parliament was faced with the decision either to accept or reject. It accepted. Still, the Parliament did not demand radical changes, so the alleged "sidelining of the Parliament" was perhaps mainly a matter of injured pride.<sup>70</sup> The European Parliament endorsed the deal on 17 December 2008.

The foregoing demonstrates that links between the ETS reform and new targets, energy policy, and other climate policy instruments promoted ETS

68. European Commission 2008a, 11.

69. This section has benefited greatly from the authors' interviews with key Brussels insiders in May 2009.

changes and distributed costs in ways that facilitated political agreement. The new targets and the very development of the climate and energy package reflected the increasing weight given to addressing climate change by the European public and politicians. These elements help explain the EU ETS changes.

## The Climate Regime: From Source to Target

In the 1997 Kyoto Protocol, the EU committed to reducing emissions by 8 percent from 1990 levels by the period 2008–2012. The Protocol established three flexibility mechanisms: emissions trading, the CDM, and JI. These components made the Protocol an important “source institution” for the development of the EU ETS.<sup>71</sup> The reduction commitment spurred the search for new policy instruments in an EU that lacked many or effective common policies. The withdrawal of the US from the Kyoto Protocol in 2001 was a catalytic event in convincing trading skeptics in the EU that quick development of an EU ETS could be an important contribution to an effective EU climate policy and to the EU “saving the Protocol.”<sup>72</sup>

The entry into force of the Kyoto Protocol in February 2005 made it more meaningful for all actors to take the ETS seriously. Although the Linking Directive had established the formal right to use CDM credits for compliance purposes, this had no practical importance until ETS reform in 2006 due to an abundance of pilot phase ETS allowances for many actors, no possibility for transferring external credits to the next trading period (banking), and the slow development of projects and credits.

The EU and other states met to discuss a successor to the Kyoto Protocol at the end of 2007, resulting in the adoption of the Bali Action Plan to develop a post-2012 global agreement at COP 15 in Copenhagen in 2009. When the Commission proposed ETS reform in January 2008, the reform was placed within a global context in several ways. First, echoing earlier ambitions for the EU to exert global leadership,<sup>73</sup> the package was cast as a means to achieve an ambitious and comprehensive agreement in Copenhagen. Hence, the global regime had become a target institution for the EU. The 20 percent commitment was intended to show that the EU was serious, and the possibility of increasing the ambition to 30 percent if the world followed suit was intended as a sweetener to the global deal.

Second, with regard to the CDM/JI link, the Commission sought to balance several concerns. On the one hand, due to the uncertainty about the real inflow of external credits from the CDM in the 2008–12 phase, the related fears of downward pressure on carbon prices and reduced EU internal abatement, and the unclear effects of banking, the Commission put forward an overall re-

70. Author interviews in Brussels, May 2009.

71. Oberthür and Gehring 2006; and Skjærseth and Wettestad 2008a.

72. Wettestad 2005.

strictive proposal for CDM/JI inflow post-2012. Except for projects in the least developed countries, no new credits would be allowed to be used in the reformed ETS, only credits produced and unused in the 2008–2012 period and, hence, banked. However, the global economic crisis contributed to the defeat of this proposed, more restrictive position on the use of CDM/JI. On the other hand, as a further global sweetener and a comforting nod to the CDM institution, if a “satisfactory” global deal *was* reached and the EU moved to the overall 30 percent ambition, half of the extra reduction efforts then required of ETS participants could be covered by external credits.

Third, as the discussion of possible global carbon leakage had increasingly dominated the 2007 discussions regarding the treatment of energy-intensive industries, the Commission’s proposal on this treatment was deliberately ambiguous and open. Again, seen against the backdrop of considerable uncertainty of what would come out of Copenhagen, the Commission suggested carrying out a clarification of the most vulnerable sectors after Copenhagen, putting forward this assessment by mid-2010, followed by an assessment of any international or sectoral climate agreements then in place by mid-2011.

In January 2009, the EU’s negotiating strategy for Copenhagen was made explicit in a Communication from the Commission.<sup>74</sup> An important part of this strategy was to facilitate an OECD-wide carbon market by 2015 based on the EU ETS. Based on President Obama’s intention to create a US cap and trade system, the EU suggested creating an EU-US working group on the design of carbon markets. Coordination with the US and other cap-and-trade countries was also seen as a condition for improving the CDM market to credit only projects which deliver real additional reductions. The negotiations in Copenhagen produced meagre results. However, item 7 in the Copenhagen Accord, the main outcome of the COP 15 negotiations, refers to “opportunities to use markets, to enhance cost-effectiveness and to promote mitigation actions.”<sup>75</sup> This part of the outcome could be an important building block in the further development of a global carbon market.

## Conclusions

The EU ETS has been significantly reformed for the trading period 2013–2020. In this article, we have focused particularly on the changes toward a more stringent and centralized cap at the EU level, significantly more auctioning of emission allowances, and somewhat more restrictive rules regarding the import of credits from third countries compared to the 2003/2004 directives. We outlined three compatible explanatory perspectives for explaining these changes focusing on the role of member states, nonstate actors, the EU institutions as arenas and

73. On EU climate leadership, see for example Gupta and Grubb 2000; and Oberthür and Kelly 2008.

actors, and the international climate regime. The explanatory perspectives were linked to specific propositions focusing on change in the EU ETS.

First, the proposition that member states changed their positions and requested the reform is strongly supported by our observations. This is in line with a liberal intergovernmentalist perspective. We have pointed to the unsatisfactory experience with the existing system, particularly the National Allocation Plans and free allowances to the power sector, as a key explanatory factor for changes in position. However, changes in the positions of member states are insufficient when explaining the scope and magnitude of the reform. The ETS reform was adopted unanimously, but is more far-reaching and ambitious than the positions of the new Central and East European countries that did not favor a stringent EU-wide cap and auctioning as the main principle.

Second, a multi-level governance perspective further aids our understanding of the significant reform of the ETS. The very idea of a centralized and harmonized ETS based on auctioning allowances was launched by the Commission and the Parliament. However, the lack of political support put these ideas on hold, only to reappear and largely win during the ETS reform process. Adopting a narrower and solely intergovernmentalist approach to understanding this process would easily lead us to ignore this important piece of the puzzle. In addition, as arenas for initiating and negotiating the reform, the EU institutions changed significantly and affected the outcomes. The reform of the EU ETS was linked to new mandatory targets, EU energy policy and a package of binding climate instruments in a way that would reduce costs, ensure a more fair distribution of costs, and facilitate agreement on the reform. Finally, industry became more supportive of EU-level cap-setting as a means of creating a more level playing field, and ENGOs also became more supportive of a reformed EU ETS.

Third, the proposition derived from the international regime approach gained relatively little support. The reform was not a response to changes in the international climate regime, but was partly an effort to affect the international climate negotiations. In a way, the reform was to some extent a response to a *lack* of international change. The international regime context is thus relevant to understand the outcomes, but our proposition needs to be modified.

This article has shown that accurately understanding past and future EU climate and energy policy requires drawing on various theoretical approaches, emphasizing explanatory factors at various levels, both internal and external to the EU. Moreover, understanding these policies requires understanding linkages between energy and climate policies and the political and function interactions among different climate policy measures. Linking may open up the possibility for more ambitious integrative outcomes than would be possible if policies are developed in isolation. But increasing linkages also means that the success of policies such as the ETS depends on the progress of various other policies, such as energy efficiency and renewables. This means that the venture of predicting future ETS success becomes increasingly challenging.

A sophisticated analytical approach will be needed for further analysis, since the system is not static. The economic recession and slow progress on a new international climate agreement have led actors both within the Commission and the Parliament to argue for a unilateral 30 percent emission target independent of international developments. The reason is that the crisis has led to a significant drop in EU ETS emissions and significant reduction of costs for meeting the current 20 percent target. Continued volatile and moderate carbon prices may severely affect investment in low-carbon technologies. Stepping up the level of ambition will obviously have repercussions for the EU ETS and the climate and energy package compromise and for those goals and measures which member states and companies will eventually have to implement.

### Authors' interviews in Brussels, 27–29 May 2009:

Climate Action Network: Tomas Wyns  
 European Commission: Yvon Slingenberg  
 European Commission: Peter Vis  
 European Parliament: Kavita Aluwahlia  
 Eurometaux (metals): Robert Jeekel  
 CEPI (paper): Marco Mensink

### References

- Asselt, Harro Van. 2009. Study on the Effectiveness of the EU ETS: The EU ETS in the European Climate Policy Mix: Past Present and Future. IVM, Amsterdam, Report for the ADAM project, 8 July 2009.
- CAN/WWF/FoE/Greenpeace (CAN-Europe, Friends of the Earth Europe, Greenpeace and WWF). 2007. *ECCP EU ETS Review Process: Written Comments*. Brussels: CAN/WWF/FoE/Greenpeace.
- Carbon Trust. 2008. *Cutting Carbon in Europe—The 2020 Plans and the Future of the EU ETS*. London: Carbon Trust Publication CTC734. June 2008.
- CCAP. 2000. *Design of a Practical Approach to Greenhouse Gas Emissions Trading Combined with Policies and Measures in the EC*. February 2000. Washington, DC: Center for Clean Air Policy. February 2000.
- Cefic. 2007. *3rd ETS Review Group Meeting on 21/22 May 2007: Cefic Contribution*. Brussels: European Chemical Industry Council.
- Convery, Frank. 2009. Reflections—The Emerging Literature on Emissions Trading in Europe. *Review of Environmental Economics and Policy* 3 (1): 121–137.
- Ellerman, A. Denny, and Barbara K. Buchner. 2007. The European Union Emissions Trading Scheme: Origins, Allocation, and Early Results. *Review of Environmental Economics* 1 (1): 66–87.
- . 2008. Over-Allocation or Abatement? A Preliminary Analysis of the EU ETS Based on the 2005–06 Emissions Data. *Environmental Resource Economics* 41 (2): 267–287.

- ENDS Daily. 2008a. MEPs Reveal Stance on Carbon Reduction Targets. Issue 2630. 7 October.
- . 2008b. Environment Committee ETS Vote in Detail. Issue 2630. 7 October.
- . 2008c. Still no Consensus in Sight on EU Climate Plans. Issue 2639. 20 October.
- . 2008d. German Cabinet Agrees Carbon Leakage Threshold. Issue 2662. 20 November.
- Euractiv. 2008. EU Climate Plans Get the Nod from MEP. 8 October.
- Eurelectric—Union of the Electricity Industry. 2000. *EURELECTRIC Position Paper on the Commission's Green Paper on Greenhouse Gas Emissions Trading within the EU (COM 87/2000)*. Brussels: Union of the Electricity Industry.
- . 2007. *Position Paper: Review of the EU Emissions Trading Directive (2003/87/EC) and the Linking Directive (2004/101/EC)*. Brussels: Union of the Electricity Industry.
- European Commission. 2006a. *Building a Global Carbon Market—Report Pursuant to Article 30 of Directive 2003/87/EC*. Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions, COM(2006)676 final. Brussels: European Commission. 13 November.
- . 2006b. *EU ETS Review—Report on International Competitiveness*. Report by McKinsey and Ecofys for the European Commission. December.
- . 2007a. *Final Report of the 3rd Meeting of the ECCP Working Group on Emissions Trading on the Review of the EU ETS on Further Harmonisation and Increased Predictability*. 070521-22 Final Report M3. Brussels: European Commission. 21 and 22 May.
- . 2007b. *Final Report of the 4th Meeting of the ECCP Working Group on Emissions Trading on the Review of the EU ETS on Linking with Emissions Trading Schemes of Third Countries*. Brussels: European Commission. 14 and 15 June.
- . 2007c. *An Energy Policy for Europe*. SEC(2007) 12.
- . 2008a. Proposal for a Directive of the European Parliament and of the Council Amending Directive 2003/87/EC So as to Improve and Extend the Greenhouse Gas Emission Allowance Trading System of the Community. Brussels: COM (2008) 16 provisional, 23 January.
- . 2008b. *Attitudes of European Citizens Towards the Environment. Special Eurobarometer Report*. Brussels: European Commission.
- . 2009. *Towards a Comprehensive Climate Change Agreement in Copenhagen*. Brussels: European Commission, COM(2009) 39 final.
- European Council. 2007. *Presidency Conclusions 8/9 March 2007*. 7224/07-Brussels: European Council. 2 May.
- . 2008. Council conclusions on efficiency of economic instruments to reach energy and climate change targets. Resolution of Economic and Financial Affairs Council meeting, 12 February 2008. Available at [www.eu2008.si/en/News\\_and\\_Documents/Council.../0212\\_ECOFIN.pdf](http://www.eu2008.si/en/News_and_Documents/Council.../0212_ECOFIN.pdf), accessed 27 July 2010.
- European Parliament. 2008. *Compromise Amendments 1–25 on the Proposal for a Directive of the European Parliament and the Council Amending Directive 2003/87/EC*. Draft Report Avril Doyle, 2008/0013(COD). Brussels. 5 October.
- Fairbrass, Jenny and Andrew Jordan. 2004. Multi-level Governance and Environmental Policy. In *Multi-level Governance*, edited by Ian Bache and Matthew Flinders, 147–164. Oxford: Oxford University Press.
- FIELD. 2000. *Designing Options for Implementing an Emissions Trading Regime for Green-*

- house Gases in the EC, Final Report to the European Commission DG Environment*. London: FIELD. 22 February.
- Gupta, Joyeeta, and Michael Grubb, eds. 2000. *Climate Change and European Leadership*. Dordrecht: Kluwer Academic Publishers.
- Hægstad Flåm, Karoline 2009. Restricting the Import of 'Emission Credits' in the EU: A Power Struggle between States and Institutions. *International Environmental Agreements* 9 (1): 23–38.
- Hooghe, Liesbet, and Gary Marks. 2001. *Multi-Level Governance and European Integration*. Oxford: Rowman & Littlefield.
- Key Stakeholder Alliance for ETS Review. 2007. Lowering Production is No Benefit for the Environment, Says European Industry. CEFIC, CEMBUREAU, CEPI, CERAME-UNIE, VPIC, EUILA, EUROCHLOR, EUROFER, EUROMENTAUX, IEFIC. Brussels. 21 May.
- Krasner, Stephen D. 1983. Structural Causes and Regime Consequences: Regimes as Intervening Variables. In *International Regimes*, edited by Stephen D. Krasner, 1–22. Ithaca, NY: Cornell University Press.
- Marks, Gary, Liesbet Hooghe and Kermit Blank. 1996. European Integration from the 1980s: State Centric vs Multi-level Governance. *Journal of Common Market Studies* 34 (3): 341–378.
- Moravcsik, Andrew. 1998. *The Choice for Europe. Social Purpose and State Power from Messina to Maastricht*. London: Routledge.
- . 1999. A New Statecraft? Supranational Entrepreneurs and International Cooperation. *International Organization* 53 (2): 267–396.
- Nugent, Neill 1999. *The Government and Politics of the European Union*. London: Macmillan.
- Oberthür, Sebastian, and Claire R. Kelly. 2008. EU Leadership in International Climate Policy: Achievements and Challenges. *The International Spectator* 43 (3): 35–50.
- Oberthür, Sebastian, and Thomas Gehring, eds. 2006. *Institutional Interaction in Global Environmental Governance—Synergy and Conflict Among International and EU Policies*. Cambridge, MA: MIT Press.
- OGP. 2007. *Position Paper on the Review of the EU ETS Directive*. Brussels: International Association of Oil & Gas Producers.
- OJEU. 2009. Directive 2009/29/EC of the European Parliament and the Council of April 2009 amending Directive 2003/87/EC So as to Improve and Extend the Greenhouse Gas Emission Allowance Trading Scheme of the Community. *Official Journal of the European Union*, L140/63.
- . 2010. Commission decision of 24 December 2009 Determining, Pursuant to Directive 2003/87/EC of the European Parliament and of the Council A list of Sectors and Subsectors which are Deemed to be Exposed to a Significant Risk of Carbon Leakage. *Official Journal of the European Union*, L1/10
- Point Carbon*. 2008. MEPs Vote to Change EU Carbon Market from 2013. 7 October.
- Sijm, Jos, Karsten Neuhoff, and Yihsu Chen. 2006. CO<sub>2</sub> Pass-through and Windfall Profits in the Power Sector. *Climate Policy* 6 (1): 49–72.
- Skjærseth, Jon Birger and Jørgen Wettestad. 2002. Understanding the Effectiveness of EU Environmental Policy: How Can Regime Analysis Contribute? *Environmental Politics* 11 (3): 99–120.
- . 2008a. *EU Emissions Trading: Initiation, Decision-making and Implementation*. Aldershot: Ashgate.

- . 2008b. Implementing EU Emissions Trading: Success or Failure? *International Environmental Agreements* 8 (3): 275–290.
- . 2009. The Origin, Evolution and Consequences of the EU Emissions Trading System. *Global Environmental Politics* 9 (2): 101–122.
- Skjærseth, Jon Birger. 2010. EU Emissions Trading: Legitimacy and Stringency. Accepted for publication in *Environmental Policy and Governance*. Forthcoming.
- UNFCCC, 2009. Copenhagen Accord. Copenhagen: FCCC/CP/2009/L.7, 18 December 2009.
- Underdal, Arild. 2002. One Question, Two Answers. In *Environmental Regime Effectiveness: Confronting Theory with Evidence*, edited by Edward L. Miles, Arild Underdal, Steinar Andresen, Jørgen Wettestad, Jon Birger Skjærseth and Elaine M. Carlin, 3–46. Cambridge, MA: MIT Press.
- Weale, Albert, Geoffrey Pridham, Michelle Cini, Dimitrios Konstadakopoulos, Martin Porter and Brendan Flynn. 2000. *Environmental Governance in Europe: An Ever Closer Ecological Union?* Oxford: Oxford University Press.
- Wettestad, Jørgen. 2005. The Making of the 2003 EU Emissions Trading Directive: Ultra-Quick Process Due To Entrepreneurial Proficiency? *Global Environmental Politics* 5 (2): 1–24.
- . 2009. European Climate Policy: Towards Centralised Governance? *Review of Policy Research* 26 (3): 311–329.
- Zapfel Peter and Matti Vainio. 2002. Pathways to European Greenhouse Gas Emissions Trading History and Misconceptions. Paper presented at the 1st Workshop of the Concerted Action on Tradable Emission Permits (CATEP) in Venice, 3–4 December 2001.