

Choosing Efficient Combinations of Policy Instruments for Low-carbon development and Innovation to Achieve Europe's 2050 climate targets

Political feasibility of climate policy instruments in the EU

Annex A: The Political Feasibility of Reforming the EU Emissions Trading Scheme. A comparison of different countries.

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The Political Feasibility of Reforming the EU Emissions Trading Scheme

A comparison of different countries

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Preface

This thesis was conducted as part of a project that is embedded in the EU-funded CECILIA2050 program. CECILIA2050 aims to identify the optimal mix of climate policy instruments to achieve the EU long-term climate targets. Within CECILIA2050 Prof. Dave Huitema and Dr. Stefania Munaretto investigate the political feasibility of climate policy instruments. I am very grateful to them for letting me be part of this project and for supporting me in various ways throughout the past three months. That my thesis was part of CECILIA2050 enabled me to organize interviews with high-level stakeholders and talking to them was a unique experience for me. I also got very valuable insights into how such projects are conducted. Last but not least, I learned a lot from Stefania about political science research, interviewing in particular and writing in general and am very grateful for her being there whenever I had a question. I would also like to thank Catherine Reynolds, Valérie Labonté and Stefania for reading my thesis in earlier versions. Without them it would be much harder to read.

Abstract

EU climate policy relies heavily on its emissions trading scheme (ETS) that covers 45% of the overall emissions. However, so far the EU ETS has not been effective in stimulating emissions reductions. Political struggles between EU member states (MS) and between different levels of governance have led to an implementation that differs from theoretical optimality. This report assesses the political feasibility of EU ETS reform proposals in different MS - Germany, Poland, and the UK – and at EU-level. It assumes that the preferences of relevant stakeholders, their power constellations and the institutional setting determine the political feasibility. Interviews with relevant stakeholders revealed a general acceptance of the ETS as cornerstone of the EU climate policy. While institutions and beliefs appeared not to influence specific positions, perceptions and motivations, power constellations, and contextual factors seem to explain why stakeholders exhibit distinct positions across case studies. For example, in Poland the ETS' distributional impacts across MS played an important role, while German actors were concerned about the low effectiveness of the ETS in light of the national climate target. Opponents were mainly driven by self-interests in redistributive measures. All stakeholders clearly identified a lack of political will as the major obstacle of any ETS reform. The analysis did not identify alternative policies preferred by all actors. As it remained questionable whether alternative policies would perform better under the same political obstacles, the results underline the importance of restoring the effectiveness of the EU ETS to help reach Europe's climate targets.

List of abbreviations

Bundesministerium für Umwelt, Naturschutz, Bau und Reaktorsicherheit – BMUB

Bundesministerium für Wirtschaft und Energie – BMWi

Christlich Demokratische Union – CDU

Commission of the European Communities – CEC

Council of the European Union – CEU

Cross-sectoral correction factor – CSCF

Department of Energy and Climate Change – DECC

European Union – EU

Emissions trading scheme – ETS

Energy-intensive industries – EII

European Union Allowance – EUA

European Parliament – EP

Freie Demokratische Partei – FDP

Greenhouse gas – GHG

Linear reduction factor – LRF

Market stability reserve – MSR

Member States – MS

National allocation plan – NAP

Non-governmental organization – NGO

New environmental policy instruments – NEPI

Qualified majority voting – QMV

Umweltbundesamt – UBA

United Kingdom – UK

United States of America – US

World wildlife fund – WWF

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1. Introduction

Stabilizing or reducing anthropogenic greenhouse gas (GHG) emissions necessitates an unprecedented degree of collaboration among different actors. Virtually all our daily practices relate to emissions in some way and need to be managed in order to ensure the transition to a low-carbon society. One way to collectively manage GHG emitting processes is to establish an emissions trading scheme (ETS). Such a scheme requires all actors to cover their emissions by certificates, of which the amount is limited according to emission reduction targets. Certificates are allocated each year and can then be traded by actors. The European Union (EU) aims at reducing GHG emissions by 80-95% by 2050 (compared to 1990 levels; CEU, 2010; CEU, 2011; EP, 2010). This implies a fundamental change of the nowadays very carbon-intensive industry. One cornerstone of the EU climate policy is the EU emissions trading scheme (EU ETS) (EEC, 2014). It covers about 45% of all European emissions and has been running since 2005.

So far, the EU ETS has failed to stimulate the transition of the European economy to a low-carbon future, currently primarily due to a large surplus of certificates (in the EU ETS called European Union Allowances, EUAs) on the market. Because of the economic crisis, overlap with other policies and the use of international offset credits, fewer EUAs were needed than were given out (Hermann and Matthes, 2012). The surplus undermines the short-term incentive of scarcity of certificates and endangers the achievement of the climate targets in 2020 and 2030. To address this problem, the European Commission (Commission of the European Communities, CEC) has decided to “back-load” a portion of the EUAs that were scheduled to be auctioned in the coming years, i.e. postpone their sale until later years. However, there is consensus among all stakeholders that the EU ETS needs to undergo a more structural reform. The CEC has proposed different EU ETS reform options. They include a market stability reserve (MSR) with which the total amount of EUAs can flexibly be adjusted, and a higher annual rate of cap decreasing (CEC, 2014b; CEC, 2014c). The challenge that the CEC is now faced with is to come to an agreement of a reformed EU ETS.

According to economic theory, policy instruments should be selected based on whether they achieve a certain policy objective in a cost-efficient manner (Duval, 2008). Emissions trading is cost-efficient, because emissions reductions are implemented where they are cheaper than the certificate price, and marginal abatement costs are thus equalized (Tietenberg and Lewis, 2010). In practice, however, the design and adoption of a policy instrument depends on a number of other factors which determine its political feasibility. The factors determining political feasibility include: actors’ motivations, i.e. the quality of the outcome they desire, actors’ preferences for a certain type of instrument, actors’ capacity to influence the policy design, and the political and institutional context where decisions are made (Hahn, 1989). While interests vary across different stakeholder groups (Hahn, 1989), preferences are likely to be influenced by a number of factors including the mode of

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governance that is prevailing in the actor's country of origin (Howlett, 2011). Consequently, the factors shaping the political feasibility of a policy proposal are expected to differ among countries (Hahn, 1989).

Coming to a compromise at European level is thus complicated by the fact that different member states (MSs) favor different proposals. Furthermore, EU policy-making happens at MS and EU level (Arts and van Tatenhove, 2004), where the institutional setting differs. Consequently, this project aims to investigate how the political feasibility of the EU ETS reform is shaped at the national and European level. The research question is: *Why are some proposals for the reform of the ETS politically acceptable to the European Commission and / or to some countries but not to others?*

Given the above, the political feasibility of a policy proposal can be hypothesized to depend on the existing power constellations, actors' preferences and the institutional setting. The interplay of these factors is expected to determine the position of EU MSs and the CEC on the EU ETS reform design. Subquestions that will be addressed on the way thus include:

- What determines the political feasibility of policy instruments in the environmental policy realm?
- What are the preferences of different actors for certain EU ETS reform proposals at national and EU level?
- What are the reasons underlying actors' preferences for particular EU ETS reform proposals?
- What are the institutional constraints and opportunities for actors' preferences to be adopted at national and EU level?
- How do actors exercise power in order to support their preferences in decision-making fora at national and EU level?
- How does the interplay of preferences, institutions and power affect the political feasibility of the ETS reform proposals at national and EU level?

The factors determining the political feasibility of the EU ETS reform are identified through in-depth interviews with representatives of the relevant stakeholder groups from different countries. They are analyzed according to a political economy framework of political feasibility. The report is organized as follows: The next chapter will elaborate the analytical framework. Chapter 3 will introduce the method and justify the selection of the countries used for the case studies, followed by

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Chapter 4 outlining the history of the EU ETS and the current situation. Which of the factors play a role for the stakeholder will be analyzed in Chapter 5, elaborating on the differences between stakeholder groups and countries. The results will be critically assessed in comparison to the literature and with regard to policy advice in Chapter 6. In Chapter 7 the conclusions are presented.

2. Analytical Framework: Factors for Political Feasibility

Policy instruments are the tools with which governments aim to achieve their policy goals (Howlett, 2011). Theoretically, governments would design a policy instrument to effectively and efficiently reach their goals (Duval, 2008). However, policy instrument design is embedded in a permanent political struggle (Jordan *et al.*, 2013). Political feasibility describes the likelihood that a policy proposal will be adopted by relevant political actors. Theories of political feasibility describe the political processes underlying policy design as the interplay of different actors who try to support their interests (Majone, 1975, Hahn, 1989, Dror, 1969, Keohane *et al.*, 1998). What determine the outcome are the interests of these actors as well as the contextual factors that shape the interplay of those interests. This report divides the contextual factors further into power relations and institutions. These three categories are introduced in this section in relation to the case at hand. A summary of all criteria elaborated in this section is presented in Table 1.

2.1 Actors and their preferences

Policy instruments are designed in a political struggle of relevant stakeholder, i.e. actors who have a genuine interest in the outcome of the policy process. In general, actors involved in policy-making are divided in theory into public and private (Pappi and Henning, 1998), or between a policy's demand and supply side (Keohane *et al.*, 1998), according to the control they have over policy related decisions. The demand side of policies is subdivided into industry and individuals, where individuals are usually organized in different groups such as environmentalists, consumers or workers (Keohane *et al.*, 1998). As they are especially important in climate policy and often represent views opposing those of industry (Hahn, 1989), a focus is put here on environmentalists. On the supply side of policy, actors are subdivided into legislators and bureaucrats (Bressers and Huitema, 1999), as well as according to whether they are subject to (re-)election or not (Dür, 2008) and whether they are agenda-setters or veto-players (Skodvin *et al.*, 2010). In addition to these groups, well established in the literature, the number of other influential actors has increased in recent years (Pappi and Henning, 1998). Especially in the design of market-based instruments, academics and "bureaucratic entrepreneurs" play an important role (Hahn, 1989). The evolution of emissions trading has also led to the formation of another stakeholder group, the constituents (Voß, 2007). An example is carbon market business intermediaries.

Drawing from the above, the subsequent analysis focuses on the following six stakeholder groups:

- Bureaucrats, who are policy-makers not subject to re-election and/or who have more power over agenda-setting than over policy adoption

2. Analytical Framework: Factors for Political Feasibility

- Politicians subject to re-election and/or having veto power
- Environmentalists
- Industry
- Academics/ policy entrepreneurs
- Emissions trading constituents

Note that voters are not always represented by interest groups and are sometimes viewed as another stakeholder (see for example Pappi and Henning, 1998). Here it is assumed that voters influence the interests of stakeholder groups via the ideas dominating public opinion.

The actors are assumed to have a certain utility function that they try to maximize during the course of the policy process (Hahn, 1989). The utility function of an actor combines his different interests. Whether an actor can maximize his utility function depends on his position in the decision-making process. For simplification it is often assumed that legislators are in charge and influenced by interest groups (Hahn, 1989). However, recent years have seen a shift of governance practices from government to network (Arts and van Tatenhove, 2004). This report analyzes the interests and constraints of all actors with a unified framework.

The utility function of an actor materializes in his preference for a certain policy proposal. The preference is shaped by different factors, which can be broken down into criteria (highlighted here in bold letters) and sub-criteria (presented in italics). The first influencing factor that is identified is the **motivation** of an actor (Meltsner, 1972). Motivation is made up of three sub-criteria. The first, *self-interest*, is exhibited, for example, when representatives of industry aim to minimize costs, or when environmental organizations strive for their wellbeing, or legislators follow their constituents' preferences (Keohane *et al.*, 1998). *Strategic interests* serve self-interests but indirectly, for example, when industrialists support strict regulatory policies in order to manage collective risks or when environmentalists favor symbolic policies because they increase the likelihood of stricter action in the future (Hahn, 1989). However, especially environmentalists and legislator may also be motivated to strive for a high environmental status due to *ideological interests* (Hahn, 1989; Keohane *et al.*, 1998).

2. Analytical Framework: Factors for Political Feasibility

Table 1: Analytical framework. The factors determining the political feasibility of a policy proposal as derived from literature are listed. The main categories are divided into criteria, which are further divided into sub-criteria.

Category	Criteria	Subcriteria
Preferences	Motivations	Self-interest, strategic interest, ideological interest
	Beliefs	Ideology, experiences, modes of governance
	Perceptions	About distributional effects, policy saliency, flexibility
Power	Resources	Financial, knowledge, legitimacy
	Relations	Resource exchange, coalitions, networks
	Influence	Attributed influence of actor and other actors
Institutional setting	Institutional requirements	
	Existing set of rules	Fora, voting rules

Which policy an actor prefers to support in order to serve his motivation is influenced by his **beliefs** about policy instruments (Meltsner, 1972). These are shaped by *experiences* (Howlett, 2011) and historical attitudes (Dror, 1969), but also by the current *mode of governance* (Howlett, 2011). This term describes a prevailing occurrence of certain state-society interactions and governance aims. A preferential use of certain policy instruments and the discourse about policies reflects the mode of governance. Furthermore, *ideology* shapes beliefs about policy instruments, both regarding intended goals as well as the type of instrument employed (Keohane *et al.*, 1998).

In addition to motivations and beliefs, **perceptions** about the effect of a policy influence the preference of an actor (Bressers and Huitema, 1999; Keohane *et al.*, 1998). Possibly the most important perception is that of *distributional effects*, i.e. the perception of who is going to win and lose on account of the policy (Majone, 1975, Hahn, 1989, Keohane *et al.*, 1998). The perception of the *urgency or saliency* of the policy also plays an important role. Another factor, particularly important for policy-makers, is the *flexibility* of an instrument, i.e. how well it can be adapted to changing circumstances and uncertainties in the future (Bressers and Huitema, 1999).

2.2 Power

To which extent an actor can influence the decision-making process in his favor depends on his **power**. Power is central to the bargaining process of political decision-making (van Dyke, 1968). It is one of the most contested concepts in political science and a thorough review of its conceptualization is beyond the scope of this report. In this report the definition of Arts and van



2. Analytical Framework: Factors for Political Feasibility

Tatenhove (2004) is used who describe power as “the ability of different actors to mobilize resources in order to achieve a certain outcome in social relations”. They acknowledge that different definitions of power describe it either as a dispositional or as a relational phenomenon. The focus in the first definition lies on the capacity of actors to make use of resources to support their own position. In the second one power is defined over the actual act of influence of one actor on another one. There are two underlying differences in these definitions: First, the emphasis is either on resources or on the relation between actors; second, the focus is either on the capacity to act or the actual outcome. This is connected to the difference between power and influence: An actor can possess power without exercising it, while his influence is a causal concept and necessitates the exercise of power (Dür, 2008).

Following from the above, power is subdivided into three categories: resources, relations and influence. **Resources** can be of different type depending on the stakeholder group (Dür, 2008): Industrialists and legislators have substantial *financial* resources to their disposal; many target groups possess expertise and *knowledge*; environmentalists, on the other hand, often fall back on a high *legitimacy*. An important resource is also the degree of organization that a certain interest group exhibits (Dür, 2008; Svendsen, 2002). Similar to resources, **relations** can be of different kind (Pappi and Henning, 1998). They can be characterized by a *resource exchange* common in the relation between private and public actors: public actors trade the control over the legislative agenda and decision-making in exchange for expert knowledge and public support from private actors (Skodvin *et al.*, 2010; Pappi and Henning, 1998). Whether or not the possibility of resource exchange also crystallizes into **influence** of an actor on another depends on the interdependence of the two, i.e., for example, on how much the public actor needs the resource of the private actor (Skodvin *et al.*, 2010). Influence can be assessed by letting all stakeholders estimate their own influence and that of others involved (Dür, 2008).

2.3 Institutions

Whether or not actors can use their power to push their positions is constrained by the institutional setting. Institutions can be defined as the **existing rules of the game** (Majone, 1975) which include the *forum* in which a proposal is discussed (Bressers and Huitema, 1999) and the *voting rules* with which it is adopted (Jordan *et al.*, 2013). The forum determines the actors that decide over the proposal and thereby the aspects that gain importance. For example, the Ministry of Finance has different priorities over policy targets than the Ministry of the Environment (Bressers and Huitema, 1999). If a policy is classified as a fiscal policy and handled by the Ministry of Finance, it might be designed and evaluated with respect to different goals than if it was classified as an environmental one and developed by the Ministry of the Environment. The stricter the voting rule, on the other hand, the easier it is for interest groups to block proposals, because it is sufficient to convince one decision-maker (Skodvin *et al.*, 2010). The voting rules and fora for an upcoming decision need to be considered as given for an actor (Majone, 1975). However, interest groups can decide where to lobby (Dür, 2008) and take the institutional constraints into account in their strategy.

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A policy might also demand an institutional change, i.e. a change of the authority or the rules with which a problem is handled. Different policy proposals thus differ in the **institutional requirements** they demand and the constraints they face. Actors might anticipate these constraints and include them in their preference for a certain proposal.

3. Methods and Country Selection

3.1 Data acquisition and analysis

The factors contributing to the political feasibility of the EU ETS reform were assessed by 21 semi-structured in-depth interviews with representatives of the relevant stakeholder groups (Section 2.1). The criteria developed in the analytical framework (Section 2) were operationalized into an interview guide (Appendix A). For each stakeholder group the following representatives were chosen:

- Bureaucracy: In the EU this group is represented by the CEC (Svendsen, 2002), in the national cases by the agencies that are responsible for the operational activities of the EU ETS.
- Politicians: this group is presented by the EP on EU-level and by representatives of the ministry that is responsible for climate policies and thus for implementing the EU ETS in each country (Section 4.2). As it was not possible to reach actual politicians, advisors for the politicians were interviewed.
- Environmentalists: represented by non-governmental organizations (NGO) with an environmental focus.
- Industry: representatives of the covered sectors. Since this group encompasses several subgroups that have different characteristics in terms of their interests at stake (Skodvin *et al.*, 2010) two sectors were chosen: electricity and steel. The reason of this choice is that these two sectors are those with the biggest emissions (EEA, 2014a) and employ the two allocation methods: free allocation and auctioning, respectively.
- Academics: researchers who conduct policy-oriented analyses of the EU ETS in think-tanks or academic institutions.
- Business intermediaries: this group includes both associations of companies participating in the ETS and service providers specialized on the ETS.

This study is based on an assessment of the positions of the relevant stakeholder groups at the EU level as well as in three countries: Germany, Poland and the United Kingdom (UK). In order to have a balanced representation of the EU MS, countries are chosen that vary in institutional setting,

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prevailing form of governance, climate ambition and historical experiences with the ETS (Section 3.2). The interviews were conducted in person in Brussels and in Berlin and over the phone with representatives in Warsaw and London. All interviews were recorded and subsequently summarized. It was not possible to get representatives of all stakeholder groups in all countries (Table 2). Because there was only one interview with business intermediaries, the interview was only included in the general analysis and the group was discarded from the analysis.

Table 2: Stakeholder representatives included in the analysis. Invitations were sent out to representatives of all stakeholder groups in all case studies, but not all were willing to participate.

	EU-level	Germany	Poland	UK
Bureaucracy	X	X	X	X
Politicians		X	X	
Environmentalists	X	X	X	X
Industry – power sector	X	X	X	X
Industry – steel sector	X	X		
Academics	X	X	X	X
Business intermediaries	X			

Qualitative data analysis of the interviews was then conducted with help of the computer program atlas.ti (www.atlasti.com). An initial coding frame was based on the analytical framework and the occurrence of the different criteria marked in the interviews. The codes were then refined in a bottom-up manner during the coding process. In the end 142 codes were used. After identifying the occurrence of the criteria in all interviews, information was retrieved about their occurrence per stakeholder group, per country and in the whole sample. The co-occurrence of different codes was used when analyzing the data. Codes that appeared only once were not considered in the analysis.

3.2 Country Selection

Germany is a federal, parliamentary democracy (Mehling *et al.*, 2013) with a social market economy (Wurzel, 2008). Climate policy is a federal responsibility primarily by the federal ministry in charge of environmental affairs (BMUB, Bundesministerium für Umwelt, Naturschutz,



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Bau und Reaktorsicherheit). However, the coordination with other ministries plays an important role, particularly with regard to the federal ministry of economic affairs (BMW, Bundesministerium für Wirtschaft und Energie) which now also holds the exclusive responsibilities for energy policies. The BMUB is supported by the federal environment agency (Umweltbundesamt, UBA) with scientific assistance. Within the UBA the Deutsche Emissionshandelstelle implements and monitors the EU ETS.

Table 3: Contextual factors in case studies.

	EU	Germany	Poland	UK
Binding national GHG emissions targets	20% by 2020	40% by 2020		80% by 2050 and 5 year budgets
National features of the ETS			Free allocation to power sector	Carbon top up price
Kyoto target for 2012	8%	21%	6%	12.5%
Emissions reductions Kyoto base year-2012	19,23%*	23.8%*	29.1%*	25,2%*
Share of ETS emissions in 2013	100%	25,26%*	10,8%*	11,84%*
Emissions reductions in ETS sectors 2005-2013	12,8%*	5,57%**	6,13%***	17,06%****
Share of EU ETS emissions in total GHG emissions (2011)	41,2%*	49,1%**	49,6%***	40,2%****

*Data taken from EEA, 2014b; *'Data taken from EEA, 2014a **data taken from EEA, 2012a; ***data taken from EEA, 2012b; ****data taken from EEA, 2012c.

Germany is by far the greatest emitter of GHG in Europe. Within the ETS it is responsible for roughly a fourth of the emissions (Table 3). It is generally seen as a progressive actor in climate policies (Mehling *et al.*, 2013) and had a high Kyoto target of 21% by 2012 which was achieved by a small margin (23.8%, Table 3). It has announced national targets of 40% by 2020 and 80-95% by 2050. The 2020 target of 40% is purely declaratory and conflicts with the the legal commitments

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made to the EU which amount to about 33%. However, there is a general consensus among all parties in the Parliament about the target (Geden and Tils, 2013).

Germany's climate policy mix traditionally consists of regulations, informational instruments (such as eco-labelling, for example, Blauer Engel) and voluntary agreements (Mehling *et al.*, 2013). In 1999, an ecological tax reform was adopted. Germany became a laggard of implementing the ETS during the first years of the ETS maybe due to the lack of experience with the instrument (Wurzel, 2008). For example, Germany had to deal with a high number of law cases (799 of 1849 in the ETS included companies filed law cases, Mehling *et al.*, 2013) and developed a NAP of generous overallocation of EUA in 2008 that became corrected downwards by the CEC (Wurzel, 2008).

Poland is a constitutional republic and employs a representative form of democracy with an economy that rapidly changed to a market-based economy since 1989 (Mehling *et al.*, 2013). The responsibility for climate policy lies with the environmental ministry, while energy policies are done by the ministry of economic affairs. It has little history of climate legislation. Before 1989 it employed charges on polluting emissions which also dominated environmental policy thereafter (Mehling *et al.*, 2013).

Poland joined the EU in 2004 which means that both the Kyoto protocol and the EU ETS were negotiated before it became a MS. Meanwhile, it has become the leader of opposition among MS against climate policies in the EU (Mehling *et al.*, 2013). This was seen, for example, in the way it blocked a more ambitious EU GHG emission target for 2020 in the CEU twice and opposed back-loading (Section 4). It also lobbied strongly for special allocation rules for new MS and now is one of the eight countries who may allocate free EUA to their power sector (while the power sectors of other countries have to purchase EUA in auctions, Section 4). Furthermore, it is reluctant when it comes to implementing European climate and energy legislation and has not implemented the revised ETS Directive (Client Earth, 2013), although it was fast to implement the ETS in the beginning (Mehling *et al.*, 2013).

In contrast to its role in EU negotiations, Poland is outperforming virtually all its targets on reducing GHG emissions (Table 3). In relation to its Kyoto base year 1988 it reduced emissions by 29.1%, a multiple of the target of 6%. However, the Polish economy is still about twice as carbon intensive as the European average and 90% of the energy is produced by burning coal and thus highly emissions intensive (Mehling *et al.*, 2013).

The UK is a unitary parliamentary constitutional monarchy. It is a front-runner of climate policies in Europe. Its first climate change program dates back to 1994 and as the first country in the world the UK adopted legally binding GHG emissions targets for 2050 in 2008 (UK Government, 2008). In the same year the Department of Energy and Climate Change (DECC) was set up, which now is responsible for climate policies. According to the 2050 target, GHG emission budgets are set up in periods of 5 years that are split between trading sectors (covered by the ETS) and non-trading

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sectors. Its climate policy mix consists of levies, agreements and ETS. Its regulatory tradition is described as more flexible (Mehling *et al.*, 2013) and therefore fits to the ETS better than, for example, the German tradition.

Accordingly, the UK is an ETS pioneer (Wurzel, 2008). This is reflected in the fact that it established a voluntary ETS between 1999-2002. It also set NAPs that – in contrast to the German and Polish ones – did not have to be revised by the CEC. Since 2013 it has a unilateral floor price for EUA. According to the DECC the Carbon Floor Price was set up in order to “encourage sufficient investment in low-carbon electricity generation in the UK“ (DECC, 2011) to stay within the national GHG budget. British coal and gas producers have to pay the difference between an announced floor price and the real price of EUAs. This top-up price is assessed ex-ante, i.e. calculated in advance for two years based on a prediction of the EUA price.

To sum up, the three countries are different in their institutional setting: unitary vs. federal; constitution: monarchy vs. democracy; regulatory tradition: regulatory vs. flexible; climate ambition: front-runner vs. blocker; and experiences with the ETS: pioneer vs. laggard. All three countries are on track with reaching their international GHG emission targets. However, in Germany and the UK the weak ETS threatens the achievement of the national goals.

4. EU ETS: history and current state

The next section gives an overview of the history of the EU ETS with a focus on the aspects relevant to the current situation. Specific problems facing the EU ETS today and their possible solutions are also presented.

Emissions trading emerged as one of the 'new' environmental policy instruments (NEPI, Jordan, 2013) in the 1980s in the United States of America (US) to manage air pollution. Traditionally, the environmental policy realm was dominated by regulations, which are not cost-efficient. With the NEPIs (mainly taxes and ETS), governments thought to overcome the shortcomings of regulations. In the EU policy-makers first focused on taxes and were skeptical about ETS (van Asselt, 2010). However, strenuous efforts to introduce an EU-wide energy or carbon tax were blocked repeatedly, because fiscal policies require unanimity in the Council of the European Union (CEU). Two different developments subsequently pushed emissions trading onto the EU agenda: First, during the adoption process of the Kyoto protocol, the US pushed heavily for the inclusion of ETS in the design (Wurzel, 2008). Second, following Treaty changes applied in the 1990s, environmental policies (that included ETS) could be adopted by qualified majority voting⁴ (QMV) in the CEU (van Asselt, 2010). The CEC first mentioned ETS in a 1998 communication (CEC, 1998), after which the adoption went quickly: A Green Paper was published in 2000 (COM(2000)87), a Directive proposal issued in 2001 (COM(2001)581) and eventually the Directive was adopted by the

⁴ Qualified majority requires a majority in the CEU that also resembles represents/reflects? the majority of the European population. Therefore, the votes of bigger MS are weighted more heavily. The percentage of the population that is required used to be 62% but is changing to 55% in 2014 (EU, 2014).

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European Parliament (EP) and the CEU in 2003 (03/87/EC).

The Directive established the ETS in consecutive phases to allow for improving the very new policy. A trial phase ran from 2005 to 2007 to build up the infrastructure for the scheme (Ellerman *et al.*, 2007), leading to a second phase in line with the Kyoto protocol's commitment period from 2008-2012. For the third phase, the period was increased to 8 years. It is running from 2013 until 2020. The main decisions to be made in designing an ETS concern the sectors covered, the cap and the allocation method, all of which have changed over the course of the first 10 years. Covered are, roughly, power generators and energy-intensive industries (EII, Table 4), and aviation was included in 2012. The cap was specified by MS in national allocation plans (NAP) in the first two phases. However, in the second phase they had to be compatible with the Kyoto targets and were accordingly revised by the CEC. While the Green Paper of the CEC had planned to auction all EUA, the Directive proposal and following legislations prescribed free allocation (Svendsen, 2002). In the second phase MSs were allowed to auction up to 10% of the EUA, but hardly any MS did. The free allocations in the first two phases were generally done via grandfathering, i.e. based on historical emissions.

Table 4: Coverage of the EU ETS (from CEC, 2014a).

Carbon dioxide from	Power and heat generation
	Energy-intensive industry sectors including oil refineries, steel works and production of iron, aluminum, metals, cement, lime, glass, ceramics, pulp, paper, cardboard, acids and bulk organic chemical
	Commercial aviation
Nitrous oxide from	Production of nitric, adipic, glyoxal and glyoxalic acids
Perfluorocarbons from	Aluminum production



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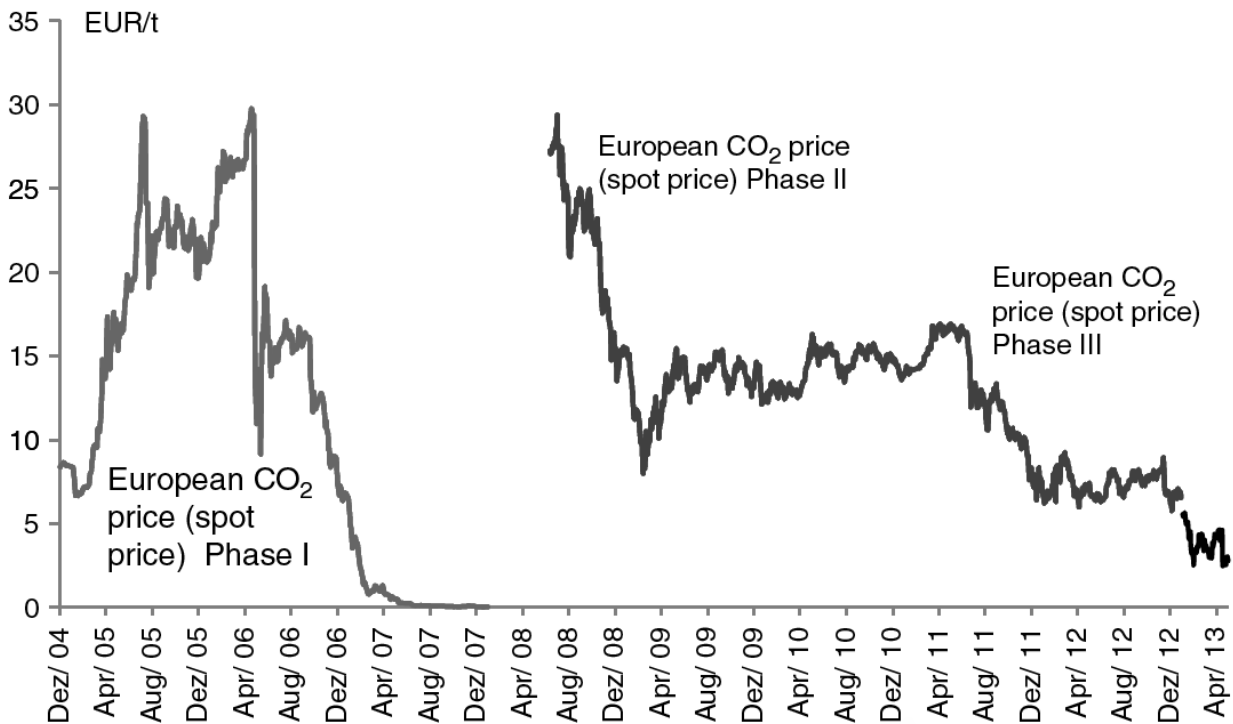


Figure 1: EUA price until April 2013 (from Grubb, 2014).

Especially the first phase saw tremendous overallocation of EUAs in NAPs following lobbying by national industries. The European institutions therefore decided that the cap would be centrally determined starting in 2013. It decreases by 1.74% each year to meet the goal of 20% reductions in 2020 (EP, 2009). This linear reduction factor (LRF) does not have any expiration date and will thus continue beyond the third phase if not changed in newer legislation. EUAs are now auctioned by default; only those industries that stand in international competition are allocated free EUA. Because it had become apparent that the grandfathering mechanism privileges emissions-intensive installations, free allocation is now carried out according to benchmarks. These are reference numbers for each sector that resemble the emissions of the 10% most efficient installations. The benchmarks are multiplied by the cross-sectoral correction factor (CSCF) to make sure the total allocation stays below the cap. The revenues from auctioning are spent nationally, but the Directive instructs that at least half the funds be devoted to climate protection.

The effectiveness of an ETS in stimulating emissions reductions and technological change hinges on price incentives. The current EUA price internalizes the cost of GHG emissions for the short term and the planned path sheds light on the availability of certificates in the future and thus anticipated future costs (CEPS, 2012). Both are incorporated into investment decisions and may motivate direct expenditure on low-carbon technologies. Accordingly, the EUA price over the first two phases is an important indicator of how effective the instrument has been so far (Fig. 1). In

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phase I the EUA price rose to 30€ and stayed between 20€ and 30€ in the first year. According to a preliminary study it led to 90 Mio. tonnes of emissions reductions during that time (Grubb, 2014). However, when the first verified emissions levels⁵ were published in April 2006 it became clear that everyone had emitted less than their allocations. Subsequently the price fell suddenly by 20€ to about 10€ (van Asselt, 2010). It remained low and eventually even collapsed to 0€ in 2007. Building on this experience, the second phase allowed the practice of banking, i.e. reserving EUAs for use in later periods. Because the economic crisis led to decreases in production, and international offset credits were very cheap and used abundantly⁶, the allocation in the second phase was again above the actual demand of EUAs and the price fell to around 15€ in 2009. The price stayed stable between 10-15€ as the UK and Germany pushed for increasing the 2020 reduction target to 30% (Grubb, 2014) and more ambitious goals were anticipated. However, when no action followed, the price collapsed again to under 5€ in early 2013 (Fig. 1).

The CEC has made extensive use of the possibility to learn from experience and the ETS-setup is now clearly more effective than during the first two phases (Grubb, 2014). However, the decision to allow banking led to a substantial problem that has become apparent at the start of the third phase: the phase began with a surplus of about 2 billion EUAs on the market (CEC, 2014a). This surplus accumulated because of the lower production levels due to the economic crisis as well as the extensive use of international credits (Hermann and Matthes, 2012). Considering that the verified emissions amounted to 1,9 billion t of CO₂ in 2013, there are about twice as many EUAs on the market as needed (Fig. 2). This imbalance between supply and demand has led to the current very low EUA price. Furthermore, the huge surplus endangers the longer term targets, as installations can cover increased emissions in the future with their banked EUA.

⁵ Covered installations are required to have a monitoring plan under which they monitor and report their GHG emissions in the course of a year. The emissions then have to be verified by an accredited investigator. This monitoring, reporting and verifying procedure is called the compliance cycle of the ETS (CEC, 2014).

⁶ The Linking Directive in 2004 allowed the use of the flexible mechanisms of the Kyoto protocol and EUA could thus be acquired by buying international credits from CDM or JI.

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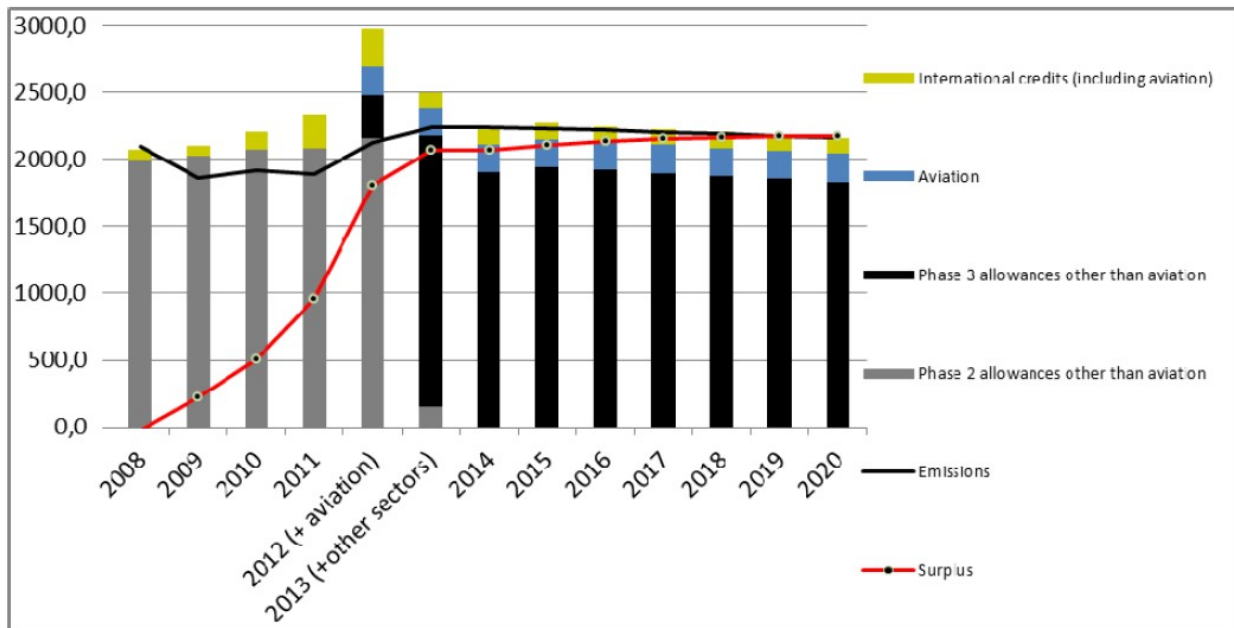


Figure 2: Historical evolution and future projection of the number of EUA on the market (from CEC, 2012).

To address this issue the CEC proposed in 2012 to amend the auctioning regulation such as to postpone (“back-load”) the auctioning of 900 billion EUAs to later years. The proposal was first defeated in the EP in April 2013, but was eventually approved in July. After the CEU had passed it, the final legislation was adopted in December 2013 following 1,5 years of debate. However, since the back-loaded EUA will be put back on the market, this only provides a temporary measure against the surplus problem. The CEC therefore proposed in its Report on the Carbon Market six measures for a more structural reform of the ETS (CEC, 2012): (a) increasing the 2020 EU reduction target to 30%, (b) retiring EUA in phase 3, (c) revising the annual LRF, (d) extending the scope to other sectors, (e) limiting access to international carbon credits and (f) a price management mechanism. These proposals differ in the implications they have for the level of ambition, degree of flexibility of the EU ETS or the institutional requirements (opening or amending the Directive, requiring unanimity or QMV).

Interestingly, following stakeholder consultations, the CEC in January 2014 put forward a completely different proposal (CEC, 2014c). The proposal recommends the establishment of a MSR for the ETS, a quantity-based mechanism to introduce flexibility in the supply of EUA. Based on two triggers, namely EUAs in circulation and price volatility, EUAs are resigned to or released from a reserve. The mechanism is parametrized as follows: if the number of EUAs in circulation exceeds 833 Mio. EUA, 12% of the EUAs in circulation (whose number shall be published once a year starting in 2017) or 100 Mio. EUAs – whichever is greater – shall be put into the reserve. If there is

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a deficit of EUAs on the market greater than 400 Mio. EUAs or a price jump as defined in Article 29a of the Directive⁷, 100 Mio. EUAs shall be introduced into the market. The mechanism shall start in 2021. This proposal was published simultaneously with a Green Paper on the general climate and energy roadmap leading up to 2030 (CEC, 2014b). The Green Paper proposes an overall emissions reduction target of 40% by 2030 and to increase the LRF for 2021-2030 to 2.2%.

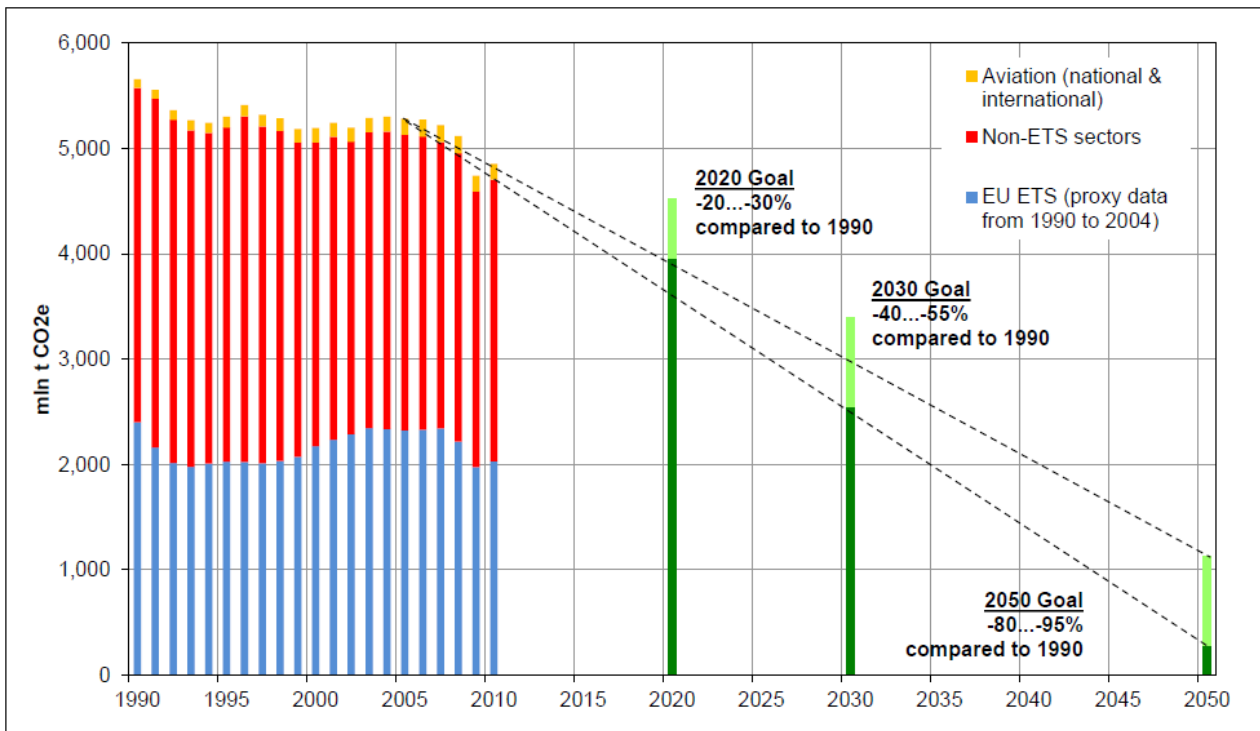


Figure 3: Emission trends and European targets (from Hermann and Matthes, 2012).

The ETS is, of course, embedded in a bigger policy framework on climate change. Other policies are incorporated in the design especially of the cap. In general, the cap resembles the policy goal, which in the EU is reflected by the overall goal of climate policies of a 80-95% reduction of GHG emissions by 2050. This long-term goal has repeatedly been affirmed by both the CEU and the EP (CEU 2010, CEU 2011, EP 2010). In addition to the ETS, complementary policies on renewable energy and climate policies in non-ETS sectors will also lead to emissions reductions. They are therefore considered when designing the cap. The former are incorporated via predictions on the development of renewable energies. The predictions from 2008 have approximately met the actual development (Hermann and Matthes, 2012). The share of emissions reductions in ETS- and non-ETS sectors are regulated via the so-called effort sharing decision. Overall, up to 2020 the non-ETS sectors shall achieve a reduction of 10% as compared to 2005 levels (CEC, 2014a). The different

⁷ A price that is more than three times the price of the preceding 2 years for three consecutive months.

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policies taken together should then lead to an emissions reductions path to meet the overall target in 2050 in a cost-efficient manner, i.e. with intertemporal efficiency. Whether the EU is on an intertemporally efficient track remains questionable. The intermediate targets for 2020 (20%) and 2030 (40% as proposed in CEC, 2014b) do not lie on a linear track to 80% in 2050 (Fig. 3). Furthermore, the surplus endangers the achievement of these set targets.

5. Results

This report aims to identify the factors determining the political feasibility of distinct EU ETS reform options in different countries. In a first step the analytical framework is applied to all interviews to see which factors are relevant for the case at hand. Subsequently, differences among stakeholder groups and across case studies are elaborated. In all case studies, the acceptable reform options and their obstacles are first reviewed, before the factors that influence this situation are investigated. The analytical framework was applied to the data by marking and analyzing the occurrence of the criteria in all interviews. How many times each criterion occurred in the data is stated in the text. Note that multiple referencing by one person was counted as multiple occurrences. The number of occurrences thus differs from the number of people who referred to a certain criterion. The complete list of result tables is included in the Appendix C.

5.1 General observations

Reform options

Removing the EUA surplus was by far considered the most necessary reform of the current ETS system (mentioned 17 times in the interviews). The main reasoning behind this was that an ETS does not work with such a big surplus of allowances (4). According to the interviewees, removing the surplus would rebuild credibility (2), ensure intertemporal efficiency (2), give long-term incentives (2) as well as a short-term price signal (4). Related popular reform options were lowering the cap (8), aligning the reduction path to the long-term targets (2) and accelerating the reduction path by increasing the LFR (3). Several interviewees mentioned the need to increase the flexibility of the EUA supply (6). This is precisely what the MSR is meant for and reflects that the issue of supply flexibility is on the political agenda.

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Table 5: Reform options mentioned in different stakeholder groups. The numbers specify how often a certain reform proposals was mentioned by representatives from the different stakeholder groups.

	Academics	Bureaucrats	Environmentalists	Legislators	Power sector	Steel sector	Total
Remove surplus	2	4	7	1	3	0	17
Lower cap	2	1	4	0	1	0	8
Supply flexibility	4	1	0	1	0	0	6
Different treatment EIs	0	1	0	1	2	1	5
Accelerate reduction path	1	0	2	0	0	0	3
Different treatment MS	1	0	0	0	2	0	3
Align reduction path	0	1	0	0	1	0	2
Ex-post allocation	0	0	0	0	0	2	2
Different carbon leakage rules	0	0	2	0	0	0	2
Price control	1	0	1	0	0	0	2
Remove CSCF	0	0	0	0	0	2	0

Interviewees also recognized that those industrial sectors prone to international competition need special attention in the ETS design. There was, however, controversy about how that should be addressed. While environmentalists pointed out that the current carbon leakage rules are based on wrong assumptions⁸ and have to be revised (2), and the power sector was skeptical about a “two

⁸ Whether a certain sector is prone to a risk of carbon leakage and thus granted free EUA is determined by the carbon

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speeds ETS”, the steel industry and a representative from politics supported the idea of either exempting certain sectors from the ETS scheme or granting them full coverage with free EUA (3). Associated reform options included to remove the CSCR⁹ (2), and to allocate them ex-post¹⁰(2).

Most interviewees highlighted that the MSR is a good reform option to introduce the necessary flexibility in the supply (14). Several interviewees appreciated that it is rule-based and that it works on the quantity of EUAs. In fact, several interviewees claimed to have come up with the concept themselves (5). However, some were concerned that the MSR alone will not be sufficient to tackle the surplus (6) and many interviewees stressed that it should be introduced earlier (9) in order to not create a zigzag course¹¹. One interviewee would have preferred using a “macro” factor such as GDP to parametrize the introduction and release of EUA from the reserve. Another one criticized the number of EUA that is taken as the threshold for taking EUA out of the market (Felix Matthes, interview). This number (833Mio.) is based on the assumption that hedging demand can balance a surplus of 1100-1600 EUA (Schopp and Neuhoff, 2013). This assumption is, however, disputed. Those that were more negative about the MSR (3) were concerned that it would tighten the targets by working more stringently on taking EUA out of than releasing them back into the market (2) and that it would interfere with the market mechanism of the ETS (1).

More interviewees were in favor of unilateral actions to improve the effectiveness of the EU ETS¹² (14) than against it (8). Nevertheless, these interviewees recognized that such actions are not environmentally effective if they don't change the cap – through for example national cancellation – and that they potentially make emissions reductions more expensive. Supporters of unilateral actions considered them as a legitimate means to exert pressure on the CEC to increase ambition and as an important policy option to increase incentives in national industries for low-carbon investments. In contrast, the opponents of these actions highlighted the fact that unilateral action distorts the market and creates complexities and increased costs for carbon market participants.

There was a general appreciation among respondents that the ETS is institutionally well established. The only aspect that was repeatedly mentioned as demanding decentralized organization was the spending of revenues. Apart from the revenue spending the centralizing trend of the ETS

leakage rules from 2008. They assume an EUA price of 30€, that no non-EU countries are part of the EU ETS and that sectors would exceed benchmarked allowances by 60%, all of which are not true today (de Bruyn *et al.*, 2013).

⁹ Free allocation is now based on the number of a production benchmark of the 10% most efficient installations multiplied with the production level and the CSCR. The CSCR normalizes the number such that the sum of all allowances equals the cap. Removing the CSCR corresponds to giving out free allowances that would fully cover the benchmark.

¹⁰ Free allowances are now given out ex-ante, i.e. in the beginning of the year in relation to the production level of a certain installation in 2005-2007. Ex-post allocation denotes an allocation in the end of the year according to the actual production level.

¹¹ In the later year of this trading period the back-loaded EUA are reintroduced and lead to a peak in the number of auctioned allowances. If the MSR would be introduced in 2021, this would create a dip right after that.

¹² MS have the freedom to introduce national measures in the ETS. The UK took advantage of that (Section 3).

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organization was appreciated. The only doubts came from the German Environment Agency who claimed that the CEC might overextend itself by wanting to handle an increasing number of issues with limited capacity (Christoph Kühleis, interview). This interviewee was concerned that consultants get a problematic degree of influence. Furthermore, he emphasized that those aspects of ETS management for which knowledge specific to MS is needed, as for example, reviewing the reports of covered installation, should be handled by national agencies.

Table 6: Obstacles mentioned in different stakeholder groups.

	Academics	Bureaucrats	Environ- mentalists	Legis- lators	Power sector	Steel sector	Total
Political will	2	2	5	0	1	0	10
Political will – Eastern European MS	1	1	3	1	1	0	7
Political will – climate skeptics	4	1	0	0	0	0	5
MS	1	2	0	0	1	1	5
EII	0	0	2	0	2	0	4
money	1	2	0	0	0	0	3

From all possible obstacles to an EU ETS reform respondents clearly identified the lack of political will as the most important (10). Where this lack of will originates from was more controversial. Because the economic crisis and the austerity policies have made it difficult for European countries to spend money, the political climate is perceived as inopportune for climate policies in general. However, one interviewee highlighted that technology policies are still possible at the moment. Thus, not the general political climate but rather the narrative about policy instruments has changed (Felix Matthes, interview). The lack of political will on MS level was more prominently denounced (5) than that of the EP (1), although the problem of climate skeptics in the EP was often mentioned (5). Among MSs the Eastern European MSs are perceived as those blocking climate policies. The “old” MSs were blamed co-responsible of this stalemate because they did not sufficiently take into consideration the concerns of the Eastern European countries about climate policy in the beginning. Also, several interviewees highlighted that big MSs, especially Germany, have a higher responsibility in how the negotiations go and have not always been as progressive as they claim.



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Lobbying of EIIs and the will to protect national industries were perceived as the motives for MSs to be hesitant to strengthen the ETS.

Preferences

After having reviewed the reform options that are acceptable to the actors, the factors that played a role in their considerations are looked at now. According to the analytical framework, the preferences of actors are shaped by their beliefs, their perception on the EU ETS and their motivations.

Table 7: Overview of the criteria concerning actors' preferences as identified in the interviews. The categories and criteria from the analytical framework are listed together with the according criteria found in the interviews. The interview codes are ordered according to their occurrence frequency.

Category	Criteria (Subcriteria)	Criteria in interviews ordered according to number of occurrence
Preferences	Beliefs (Ideology, experiences, modes of governance)	ETS important Carbon pricing important Cost-efficiency ETS skepticism ETS harmonized, comprehensive policy ETS theoretical concept R&D more effective
	Perceptions (about distributional effects, policy saliency, flexibility)	Distributional effects across MS EU ETS not working Distributional effects within MS small Distributional impacts internationally Policy overlap with other policies problematic Small adjustments sufficient Targets not feasible Alternative policies important EU ETS too complex Distributional effects within MS relevant Fundamental reform needed Urgent reform needed ETS nontransparent Long-term function



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Category	Criteria (Subcriteria)	Criteria in interviews ordered according to number of occurrence
		Merit points Price signal
	Motivations (ideological interest, self-interest, strategic interest)	Increasing the price signal (strategic) Level of ambition (ideological) Decreasing price (Self-interest) Environmental effectiveness (ideological) Protecting industries (self-interest) Credibility (strategic) Giving long-term incentives (strategic) Intertemporal efficiency (strategic) Recycling revenues (strategic) ETS in place (strategic) Protecting the market nature of the ETS (strategic) Transparency (strategic)

Beliefs

Most interviewees agreed that the ETS should remain a cornerstone of EU climate policies (14), because it is cost-efficient (7) and because carbon pricing is an appropriate way of internalizing the cost of GHG emissions (6). Furthermore, they favored the ETS because it is a comprehensive policy and harmonized across Europe (4). Criticism was expressed (5) by those who believed that emissions trading is a good theoretical concept, but fails to be effective in practice because it is too prone to influence by industry (2). This group of critics also mentioned a number of positive aspects of the ETS, including the fact that it potentially raises revenues that can support decarbonization projects and that it can be used as monitoring tool to make the carbon intensity of different industries transparent. A second skeptical group questioned the feasibility of the targets (2) especially in EIIs.

The findings did not identify a preferred alternative policy. Alternatives that were mentioned include taxes (12), regulations (7) and R&D policies (2), but the opinions about taxes and regulations were controversial. Taxes were generally evaluated positively in the sense of combining the advantages of the ETS (cost-efficient way to price carbon) with good predictability. However, interviewees considered them as politically infeasible because of the EU decision-making procedures (Section 4). Standards were controversial (2 positive, 3 negative). Because many different standards would be needed for the different power stations and industrial installations interviewees perceived them as complicated to adopt and implement (3).

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Perceptions

In contrast to the positive valuation of the ETS in general, interviewees consistently appraised the ETS as not working properly (10). The ETS works through incentives on the short-term through EUA price and on the long-term through the anticipated path of the cap (Section 4). While most interviewees agreed that the current price does not give an incentive to invest in low-carbon technologies (4), there was more controversy about how to estimate the importance of price and long-term signals. A representative from the power sector emphasized that the long-term signal is much more relevant than the exact price and that it would therefore be most important to re-establish the credibility of the scheme: “The fear is that national actions will come that are not predictable. The danger of such actions is much more important to the power sector than precise details in the debate, whether 1.74 or 2.2 or 2.5% [LFR], or carbon prices of 5, 10 or 15 €” (Martin Ruhrberg, interview). Another interviewee described the situation as leaving to a wait-and-see, because the short-term signal (a low price of carbon emissions) and the long-term signal (the decreasing cap) contradict each other (Felix Matthes, interview).

Regarding distributional impacts of the ETS, findings revealed that the most important effect for interviewees is the distribution of benefits and costs across MSs¹³ (12). The ETS includes measures to counteract such effects¹⁴ (Section 4). However, there was controversy among interviewees whether these measures are sufficient. Another important point were the distributional impacts on the international level in the sense that the ETS might now or in the future discriminate European firms because it unilaterally puts a cost burden on them (8). Interviewees highlighted that the distributional impacts within MS (across societal groups or sectors) have been low because of the low EUA price (8).

Energy policies are perceived as overlapping with the ETS and possibly undermining its functioning¹⁵ (8). However, several respondents pointed out that this is already incorporated in the design of the cap (Section 4). The weak ETS was perceived as threatening progress on climate policies, because the opponents use the ETS as an argument against other policies. The proponents of climate policies exhibited a strong notion that it is important that alternative policies are developed as fall-back options (6). Concerning the saliency of the reform, more interviewees assessed the required reform as small (8) rather than fundamental (5). They regarded the reform options as rather minor adjustments. However, they also highlighted that this does not mean that they are politically feasible.

¹³ As the climate targets for ETS sectors are higher than for non-ETS sectors, the current climate policies are perceived to discriminate countries whose economies have a higher share of ETS sectors.

¹⁴ Revenues are overproportionally directed to poorer MS and Eastern MS can allocate free allowances to their power sector.

¹⁵ National governments have the authority to decide over the national policy mixes. Since the energy mix determines the GHG emissions in the power sector, this also affects the ETS.

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Motivations

Many actors were driven by strategic interests in their position on the EU ETS. They wanted to strengthen the ETS, for example, because it is in place already. It was perceived easier to reform the ETS than to set-up another policy from scratch (2). Participants were often focused on a certain purpose that the ETS should fulfill, such as giving a price signal (6), providing for revenues that can be earmarked (3), giving long-term incentives for low-carbon investments (4) and contributing to inter-temporal efficiency (3). Also, some interviewees embraced the ETS as an cost-efficient instrument to achieve the climate targets, that they accepted rather than supported ideologically. These interviewees were usually interested in reestablishing credibility of the scheme (4), making it predictable (4) and transparent (2). Interviewees demanded transparency about the exact effects the ETS has, such as which cost burdens it generates and which investments it drives. This was perceived as important for policy-makers to influence decisions, but also for investors to see which effects the ETS might have now and in the future.

Many actors were also driven by ideological interests, in terms of aiming for a high level of ambition in climate policy (5) or establishing environmental effectiveness (4). Self-interest (5) was usually financial and concerned free allowances or compensation to industries and MS. One European representative also acknowledged that the ETS could increase public support for European policies, because climate policies are popular with the public.

Power

Power constellations played an important role for the respondents in evaluating the feasibility of a reform proposal (Table 8). Many perceived EIIs as having the strongest voice (12) and presenting a great obstacle to an ambitious ETS, as EIIs generally take on an opposing position. The influence of EIIs was perceived as greater on national level (5), because a particular national company represents a bigger clout on national than on European level and because politicians are elected locally. As Felix Matthes stated: “If Edf¹⁶ says no in France, that is no, but in Europe it is not.” Also, interviewees stressed MS specific circumstances: some countries as Germany and Poland are shaped more strongly by EIIs than others as the UK. This further waters down the influence of EIIs on European level. Many interviewees acknowledged that Germany plays an important role in the EU ETS reform negotiations (11). They highlighted that one of the major burdens in the back-loading debate was the indecisiveness of Germany¹⁷. The impasse in the biggest and most powerful country offered smaller countries an opportunity to hide in opposition.

¹⁶ Électricité de France is the biggest producer of electricity in France, the second biggest in the world, and majority-owned by the French state.

¹⁷ During that time the BMWi was led by the Freie Demokratische Partei (FDP) and the BMUB by the Christlich Demokratische Union (CDU). While the FDP was against back-loading, the CDU was in favor. The ministries could not come to an agreement.

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Table 8: Overview over criteria concerning power constellation, institutional setting and contextual factors (set-up as Table 7).

Category	Criteria	Subcriteria
Power	Resources (financial, knowledge)	Relevance for employment Knowledge Dishonest use of knowledge by industry Media access Clarity of message Closeness to public opinion
	Relations (Resource exchange, coalitions, networks)	Germany's role Progressive alliance Coalitions Political network Access to governments
	Influence	Influence of industry Influence of NGOs Influence of power sector
Institutional setting	Required rule changes	No difference between directive, amendment or comitology Against opening the Directive
	Existing set of rules	Lobbying strategy depends on policy process
Contextual factors		International action Debate Political climate German national target Energy security Targets Economic crisis Achieved process Church Technology



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Overall, there was no clear consensus whether proponents or opponents are more influential in shaping the EU ETS reform. Proponents seemed to be perceived as having had more influence in the past (4), but because of growing influence of opponents (5) the influence is now perceived as a tie (3). The growing influence of opponents was explained by a change in the political climate because of the economic crisis.

According to the interviewees, the level of influence that participants have is determined by the share of employment they represent (4), their political network (3) and the access they have to governments (MS and CEC/EP)(2), by the clarity of their message (4), their ability to build coalitions (3) and to make their message heard by the media (4). Knowledge also plays an important role (4), however, it seems to be used strategically. While bureaucrats, academics and environmental NGOs commission and conduct studies of the effects of the ETS, the EII is in general reluctant to disclose information. The German representative of the world wildlife fund (WWF) noted: “I would like to know what the benchmarks mean for the German industry. But nobody knows. The EII says the benchmarks are a big burden, but I don't even know what to say or think about it“ (Juliette de Grandpré, interview). Accordingly, several participants acknowledged a dishonest use of knowledge by the EII (4).

Institutions

Institutional burdens were not perceived as crucial when determining the feasibility of an EU ETS reform proposal. Institutional burdens of a proposal include the change of rules that it requires, such as amending or re-opening the directive, and the procedure it has to go through in terms of voting rules (QMV or unanimity) or institutions involved (such as comitology or codecision¹⁸). All these aspects were considered less important than the actual substance of the reform (6). Several participants recognized that proposals are adopted easier by QMV, but that, on the other hand, an ambitious proposal might not pass QMV, while a compromise might pass unanimity. More interviewees were against a re-opening of the Directive at the moment (4) than in favor of it (1). They feared that the political climate is such that the current good setup of the ETS might be washed out.

Furthermore, stakeholder groups decide which institution to lobby depending on the circumstances of the policy process, i.e. which institution is responsible at a specific moment. There was a small tendency that academics and environmentalists felt heard more in the CEC and the steel representatives more in the EP and the MS governments.

¹⁸ The ordinary legislative procedure today is the codecision procedure, in which both the EP and the CEU have to approve a legislative proposal of the CEC. Powers can also be attributed to only the CEC or the CEU. The CEC is thereby then supported by MS in committees, which is why this procedure is called comitology (EU, 2014).

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Contextual factors

According to the interviewees, contextual factors strongly influence the feasibility of EU ETS reform proposals. Among them, the degree of action in the international context stuck out as most important (22). Respondents saw the need to balance the level of ambition and the treatment of EII to international action. They perceived a possible relocation of EIIs due to a high burden of the EU ETS as both unacceptable and counter-productive, because it would increase emissions in other countries. However, in order to not fall behind with regard to innovations in a low-carbon future the level of ambition should not be too low either. A majority of the participants acknowledged that there is a lot of climate action in other countries such as China, South Korea and also the US. A minority found these actions not comparable to the level of action in the EU. The actual carbon intensity and carbon price in different economies seems to be up to political interpretation, because countries employ different policies at different starting points. A representative from academia suggested that linking different ETS systems could help to overcome this intransparency, even if it was not environmentally effective (Sarah Riesenber, interview).

Another strong determinant of the feasibility of an EU ETS reform proposal regards the framing of the associated debate, particularly how it is influenced and politicized (15). One factor that was mentioned with respect to the back-loading debate, was the impact that actors can have on the debate, that are not expected to raise their voice on the topic (3). An example was the German church that spoke out in favor of back-loading and probably influenced some conservative German Parliamentarians. Overall, the long lasting back-loading debate was perceived – surprisingly by all stakeholder groups – as unjustified, sidetracked and as a substitute debate for a reform that is yet to come. Several participants acknowledged that the negative influence of the long discussion on the credibility of the ETS by far overruns the impact of back-loading itself. Several participants said they were disillusioned by this debate, as the Juliette de Grandpré put it: “The back-loading debate is the Copenhagen of the ETS”.

The political climate also tremendously influences the political feasibility according to the interviewees (10). They mentioned two major influencing factors: the economic (4) as well as the Ukrainian crisis that fueled new discussions about energy security (5). Both were largely perceived as complicating ambitious climate policies. The economic crisis because it causes politics to largely focus on economic growth, which stands in the way of a policy that increases costs. The Ukrainian crisis because it increased the skepticism about importing gas from Russia. Prominent in this debate was an article by the Polish Prime minister Donald Tusk in the Financial Times where he proposed the establishment of a European energy union that negotiates and secures the European energy supply and makes sure the available fossil fuels are used (Tusk, 2014). Especially the focus on available fossil fuels worried interviewees that the crisis will lead to a coal revival.

5. Results

Differences of the criteria across stakeholder groups

The overall analysis has shown that preferences, power constellations and contextual factors influence stakeholders in their evaluation of the political feasibility of different reform options. In the following the situation in each stakeholder group is described with respect to specific characteristics of the group's position on the EU ETS reform.

Academics were the most heterogeneous group in terms of their perceptions and beliefs. Some representatives addressed fundamental skepticism about the EU ETS, while others appreciated the opportunities of the ETS to provide a cost-efficient way to achieve the climate targets. Several interviewees from this group highlighted that the effectiveness of the price signal is limited. Academics were also aware of the overlap with other policies, but did not regard that as an unsolvable problem.

Similarly, there was heterogeneity among **environmentalists** concerning the fundamental view of the ETS. They expressed no big enthusiasm about the instrument itself. To a higher degree than other stakeholders representatives perceived it as not working. However, the majority of environmentalists still endorsed the instrument out of strategic reasons, such as that it is in place already. In this group, the call for a stronger price signal was very prominent. This might be due to a stronger perception of the urgency of the policy and short-term effects mainly work through the price. However, there was also some double discourse, as environmentalists often highlighted that the advantage of the ETS is to put a limit on emissions. Environmentalists generally regarded the employment of unilateral or alternative policies as necessary to ensure that emissions are also reduced if the ETS continues to provide low incentives.

Representatives from **politics** and **bureaucracy** were almost exclusively affirmative about the EU ETS as an instrument. They were not as aware of the overlap with other policies as other stakeholders. Some acknowledged the distributional impacts and especially the representatives from politics often aimed at protecting their industries from distributional impacts that could cause relocation.

The **power sector** is in a quite unique position that leads to a very progressive position on the EU ETS reform. Because investments are necessary in the sector, it is particularly struck by the contradiction of long-term incentives and short-term prices (see above). Therefore, the positions are strongly influenced by strategic interests such as predictability, credibility and transparency. The claim for higher prices was also very prominent, because this would realign short- and long-term incentives. A different position was taken by the Polish representative of this sector. In Poland about 90% of the electricity is coal-based (Section 4) and higher carbon prices hit Poland hard.

The views in **the steel industry** opposed the views in other stakeholder groups in many ways. The reform options that representatives of this sector mentioned (ex-post, free allocation for full benchmarks) were not mentioned by anyone else. Furthermore, the desired reform was perceived as

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fundamentally changing the ETS, while most other stakeholders found minor adjustments sufficient. There seemed to be a fundamental opposition against the overall climate targets, that the representatives regarded as infeasible. In Germany the sector is interconnected with climate skeptics, as was pointed out by a German representative from academia. This is embodied for example in the move of the director of the German steel association to the climate skeptic institute Eike. Preferred policies in the steel sector would be R&D for innovation technologies. This represents a small double discourse, as representatives, on the one hand, repeatedly underlined the low potential of alternative production technologies, while they on the other hand lay expectations in R&D support. In contrast to other stakeholders, steel representatives regard the influence of EIIIs as low and that of environmental NGOs as high. The debate about back-loading was perceived by the steel industry as too technical and not offering points for political discussion, while all other stakeholder groups perceived it as too politicized. The motivation within the steel sector was exclusively self-interest in the sense of avoiding additional costs.

5.2 Case Studies

While the last subsection assessed the criteria that came up in all interviews and the differences across stakeholder groups, this section describes variabilities in perceptions and preferences across case studies, i.e. MSs and EU-level. Only those factors are taken into consideration that are particularly salient in a certain country or level. A table of the criteria that stuck out is included in Appendix D together with the result tables of the case studies. In the following, the popular reform options, their perceived obstacles and the differences in the political feasibility criteria are elaborated for each case study.

Table 9: Reform options mentioned in different case studies.

Reform option	EU-level	Germany	Poland	UK
Removing surplus	4	9	0	4
Lowering cap	4	3	0	1
Different treatment of EIIs	0	4	1	0
Supply flexibility	1	2	1	1
Accelerating reduction path	0	3	0	0
Aligning reduction path	1	2	1	1
Different treatment MS	0	0	3	0

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Ex-post allocation	1	1	0	0
Different carbon leakage rules	1	1	0	0
Price control	0	0	1	1
Removing CSRF	1	1	0	0
Unilateral action – positive	2	5	4	3
Unilateral action – negative	3	3	0	1

EU level

Removing the EUA surplus and lowering the cap were the most important reform options for representatives at EU level (Table 9). No European representatives mentioned a differential treatment of EIIs or of MSs as possible reform options. Also, representatives evaluated unilateral action rather negatively. The observed obstacles to an EU ETS reform resembled those found in general: respondents identified the lack of political will as the most important factor, connected the blockage of the Eastern MSs as well as the climate skeptics on European level to it (Table 10).

Table 10: Obstacles mentioned in different case studies.

Obstacle	EU-level	Germany	Poland	UK
Political will	4	9	0	4
Political will – Eastern MSs	4	3	0	1
Political will – climate skeptics	0	4	1	0
EIIs	1	2	1	1
Money	0	3	0	0

The notion that the EU ETS overlaps with other policies was rather low on EU-level. The targets were disputed on this level. Especially the steel industry's representatives perceived them as infeasible. None of the European representatives mentioned the influence of EIIs as being too high. On the other hand, the influence of the media on the ETS was almost exclusively mentioned here.



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Germany

Removing the EUA surplus, lowering the cap and accelerating or aligning the reduction path were the most important reform options for German representatives. These are in line with the general observations. A particularly strong attention was put on the treatment of EIIs. Many representatives evaluated a differential treatment as non-desirable. The interviewees identified the same obstacle to an EU ETS reform as in the other countries: the political will of MS and climate skeptics in the EP. In particular, German interviewees also referred to the EII as an obstacle.

Accordingly, the influence of the EII was a factor that dominated the perceptions of German representatives about the EU ETS. Interviewees explained the high influence of EIIs in Germany with the relevance that they have for employment. One interviewee pointed out that the focus on exports makes the German economy very dependent on the EII. Respondents also mentioned knowledge as a resource being used in the power game, however, its role was disputed (Section 5.). German representatives stressed more than representatives from other countries that the EU ETS is not working properly and that it necessitates an urgent reform. It was perceived as nontransparent and complex. Respondents focused on its long-term functioning. While representatives did not regard policy overlap as a problem, there was a strong urge to look into alternative policies. One factor that played a big role in the reasoning of the representatives was the national target of 40% emissions reductions by 2020. Representatives repeatedly mentioned that a strong EU ETS is needed to achieve the target. The target also served as a justification for unilateral action. Interviewees acknowledged an important role of Germany in the international negotiation dynamics. They perceived it as positive that the BMUB and the BMWi are now led by one party, the Sozialdemokratische Partei Deutschlands, and that an impasse as in the back-loading debate is less likely to happen again.

Poland

Surprisingly, none of the Polish representatives mentioned removing the EUA surplus or changing the cap or the reduction path as possible EU ETS reform options. Instead, a differential treatment of MSs in the form of, for example, national targets, was the most popular reform proposal. Representatives also mentioned a different treatment of EIIs, a price floor or a price cap and flexibility of supply as other reform proposals. The representatives focused on the political will of MSs as the obstacle to a reform, as well as money, which would have to be transferred from richer to poorer countries if MSs had different treatment.

Not surprisingly, given the most popular reform option, the Polish representatives focused on the distributional impacts across MSs. Even the representative of the environmental NGO said: “Although I see my role in looking over the implementation of climate policy in Poland, I understands the point made by the Polish government that the burden is too high on Central and Eastern new MSs” (Marcin Stoczkiewicz, interview). Interviewees used two main arguments to support that newer MSs are discriminated by the ETS: first, through the effort sharing decision the

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ETS sectors have to abate more than non-ETS sectors. Since the newer MSs traditionally have more EII, the overall burden on their economy is higher (Table 3). Second, if reductions are made where they are cheapest, most of the reductions are made in the newer MSs, as prices are lower and industries still more carbon-intensive. A third factor that was mentioned by a German representative is that richer MSs benefit from the fact that compensations for indirect effects are handled nationally. Richer MSs can pay the compensation without problems, whereas poorer countries might not have the means to pay them.

Interestingly, Polish representatives were mainly driven by national self-interest rather than strategic or ideological motivations. They observed the ETS as needing a fundamental reform. The NGO representative highlighted that an urgent reform is required because there are current plans for more Polish coal plants (Marcin Stoczkiewicz, interview). The overlap with energy policies was perceived as problematic in this group and representatives were very aware of the discussion about energy security, not surprising given the big role Donald Tusk played in it (Section 5.1). The influence of the EII was not mentioned as an important factor.

UK

The British views of EU ETS reform options and their obstacles resembled in large part those of the overall picture: removing the EUA surplus was the most popular reform proposal, lowering the cap, flexibility of the supply and a price control got some attention. No representative mentioned the distributional impacts across MSs, and there was no sign of self-interest in this group. Interviewees mentioned policy overlap with energy policies prominently as well as the influence of EIIs. The influence of international action received comparably little attention. There was a general positive evaluation of unilateral action.

5.3 Comparative observations

In the following, the findings of the preceding subsections on each of the case study are brought together to show how different preferences, institutional settings and power constellations lead to the distinct positions on the EU ETS reform proposals.

Polish representatives perceived the distribution of costs and benefits across MSs as very important, while none of the British interviewees mentioned them. At the same time, self-interest was particularly high in Poland and remarkably low in the UK. Because the distributional impacts disadvantage Poland, the Polish representatives were interested to protect their economy. This explains that a different treatment of MS was the most popular reform option in this group. In contrast, in the UK this reform option did not get any attention.

The findings in Germany and on EU-level reveal the importance of power constellations. German representatives highlighted repeatedly the high influence of the EII in shaping the EU ETS. They explained great influence of the EII by the political climate after the economic crisis. In contrast,

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interviewees on EU-level did neither mention the influence of EIIs nor the political climate as major influencing factors. Consequently, the different treatment of EIIs got attention by German representatives when speaking about reform options while none of the representatives on EU-level mentioned it.

German and the EU-level representatives also revealed very different perceptions about unilateral actions and alternative policies. On European level, representatives evaluated unilateral actions more negatively than on national level. The ETS is a unifying and centralized policy and EU-level representatives are inclined to support these characteristics, because they give them more influence. On the other hand, German representatives mentioned unilateral actions particularly often and related them to the national 2020 climate target. The target was used to justify unilateral action, but also to apply pressure on the German government to take on a stronger role in European negotiations of an EU ETS reform. Interestingly, the UK target was not mentioned during the interviews. This might be attributable to the fact that the UK target already led to unilateral action.

Overall, institutions and beliefs did not turn out to cause different situations in the case studies. With respect to the research question it can be concluded that perceptions, motivations, power constellations and contextual factors bring about differences in the feasibility of different EU ETS design proposals in the different case studies.

6. Discussion

This chapter reflects on the findings reported in the last chapter with respect to relevant literature and their implications for the policy design process. Limits that the methodology places on the generalizability of the findings are elaborated along the way. Those factors that cause distinct positions on reform proposals in the different case studies are discussed first. Subsequently, the overall findings and implications for a successful strengthening of the EU ETS are elaborated.

Actors in different countries preferred distinct reform proposals. The variability could be explained by perceptions, motivations, power constellations and contextual factors. Surprisingly, beliefs and institutions did not emerge as factors determining distinct views in different countries. Fundamental views and beliefs about the ETS were similarly distributed in MS: most actors embraced the instruments and a minority was critical about it. In theory, the mode of governance and experiences with policy instruments determine the actors' preference for certain instruments (Howlett, 2011). The three countries included in the analysis employ different modes of governance in the environmental policy field and have different experiences with the implementation of ETS (Section 4). They would thus be expected to embrace the instrument to differing degrees. Theoretically, German actors would be inclined to be more critical of the EU ETS than British ones, as Germany has traditionally used regulations in the environmental field, while the UK has embraced this instrument from the beginning (Section 3). This was indeed shown for the first two phases of the EU ETS (Wurzel, 2008). The fact that this difference does not emerge from the data at hand might

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reflect the positive experience that actors had with the ETS or it might simply come out of opportunism (strategic motivation of actors), which would mean that actors accept this policy because it has already been established and implemented. This seems very likely, since many interviewees exhibited such strategic interests.

In contrast to the MS analysis, the analysis of stakeholder groups revealed belief variability across groups. While bureaucrats and legislators were in general enthusiastic and EII representatives skeptical, academics and environmentalists were divided. The affiliation to a stakeholder group thus determined beliefs to a greater degree than nationality. This supports the theory of Hahn (1989), who describes the beliefs and motivations of actors as depending on their stakeholder group.

No interviewee mentioned the institutional setting in a MS as a factor contributing to the feasibility of EU ETS proposals. However, power constellations emerged as a very important determinant of feasibility and accounted for the influence of EII in Germany as well as the position of Poland. Indeed, power constellations are shaped by the institutional setting, to the point that some researchers include institutional settings in the definition of dispositional power (Arts and van Tatenhove, 2004). In this thesis institutional aspects might thus be hidden behind power constellations.

Actors appreciated the institutional set-up of the EU ETS. In the two first phases of the EU ETS European and national institutions engaged in a power struggle over the design of the ETS and NAPs (Grubb, 2014). This seems to be resolved to a large degree, but a remainder of that power game can be found in today's unilateral actions. European representatives evaluated these actions less positively than national representatives. Furthermore, one motivation behind promoting unilateral action by national representatives was to exert pressure on the European institutions to reform the EU ETS.

Power constellations are not only shaped by the institutional setup, but also by contextual factors. Among those the overall emission targets play a particularly interesting role. Many German actors from bureaucracy, academia, politics and NGOs used the German national target in their political narrative to justify unilateral action or pressure on the German government. Overall emissions targets had also appeared to be important in the earlier phases of the EU ETS. The Kyoto targets helped the European Commission in the beginning of phase II to prevent too generous over-allocation in the NAPs (Grubb, 2014). The finding about Germany supports Grubb's (2014) point that targets are more important politically than economically.

The analysis of differences across countries is, of course, constrained by the choice of the case studies. The three countries differ in their institutional setting, regulatory tradition, climate ambition and experiences with the ETS (Section 3). It can thus be assumed that they represent the variability found under European MS. However, there might be other country groups, such as Southern European countries, where climate change might have a bigger impact in the future, or Northern European countries such as Denmark which have a high share of renewable energy and rely less on EIIs. Future studies should evaluate the policy instrument preferences for these country groups also.

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Furthermore, the number and type of interviewees that participated in this study differed across case studies (Table 3). Germany and the EU-level are better represented than the UK and Poland. However, British and Polish representatives exhibited unique motivations and perceptions that cannot be explained by their stakeholder group affiliation. It can therefore be assumed that the findings are robust and resemble actual differences between the countries.

In the following the implications of the findings with respect to a successful strengthening of the EU ETS are elaborated. Removing the surplus of EUAs was clearly identified as the key EU ETS reform option. The proponents of a strengthening of the low-carbon incentives of the ETS strongly felt that this is the essential measure required at the moment. This is surprising, since this option was included in the proposals of the CEC on structural reform (CEC, 2012), but did not emerge from the stakeholder consultations as one of the feasible options (CEC, 2014d).

The fact that this option is prominent in this dataset partly depends on the selection of representatives and the identification of the relevant stakeholder groups. This list of stakeholder groups might be biased. For example, legislators are represented by the environmental ministries. However, those ministries responsible for energy and economic affairs are also involved in the policy design process and have different interests. This report focused on environmental ministries as they are in charge of implementing the EU ETS, but the position of other involved ministries should be a focus of future studies. Also, some stakeholder groups were more keen on participating in this research than others (environmentalists, the power sector and academics, Table 3). Their claims are therefore more prominent than those of the others. Finally, one representative was chosen for each identified stakeholder group, but the influence of the groups varies. This, however, reflects the actual situation: the proponents represent a larger group of stakeholders, but their influence is at a tie with the opponents. The opponents represent a larger share of GDP, which might explain their greater influence.

Opponents of a strengthening of the EU ETS are strongly opposed to removing the EUA surplus. From all case studies considered in this report, Poland and the steel industry represent the most fundamental opposition as their viewpoints are often contrary to other groups' positions. Both Polish and steel representatives were mainly driven by self-interest based on redistributive claims. Negotiations among stakeholders and consequent distributive measures, such as redistributive measures across MS as well as special rules for EIIs, are part of the ETS. However, it is hard to imagine an ETS that excepts the EII on the long term which was essentially what the steel representatives demanded. They seemed to be against any climate policy that would go beyond currently feasible benchmarks (or the potential as anticipated in current roadmaps). In contrast, the power sector embraced the ETS on the prospect that its alternative is another climate policy of similar ambition. This could also be a way to get the EII on board. As the German representative of the power sector puts it: "Industry has to be persuaded that 'no-action' is not an option and that a common EU-wide market-based instrument is better for them than fragmented national measures" (Ruhrberg, interview). While the EII sectors have to realize this, it also necessitates clear signals

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from politicians.

In general, those forces that are in favor of ambitious climate action are rather heterogeneous in their positions on the ETS. Especially among environmentalists there is skepticism as to whether the ETS can in principle work. This skepticism is growing with the time the EU ETS does not work. An association of NGOs already demands to shut down the EU ETS (Scrap the EU ETS¹⁹). Even the very dedicated German WWF representative said: “We have been on board of the ETS since the beginning, but the ship is getting empty, because everyone says, what shall we do here, the ETS is not working. We will also take this step if nothing is going to happen” (Juliette de Grandpré, interview). The reasoning behind the “scrap the EU ETS” campaign is that the EU ETS does not lead to emissions reductions, has led to windfall profits and gives perverse incentives (Scrap the EU ETS, 2013). However, the question is whether such problems would not occur with other instruments if the political constellation remained unchanged.

The fundamental question whether other instruments could work better was a reoccurring topic in the interviews: Would other instruments encounter less obstacles than the ETS? Would they have bigger chances to function effectively? Interviewees mentioned taxes, standards and R&D policies as possible alternative policies. Taxes and standards were, however, disputed and for the implementation of R&D policies some revenues had first to be generated. Thus, representatives did not agree on a clear, feasible alternative to the EU ETS.

According to the interviewees, the main obstacle for reforming the EU ETS itself is the lack of political will of relevant decision-makers at the European level, which include MS representatives and Parliamentarians in the EP. While one interviewee stressed that the political will is still there to implement technology policies, most perceived it as if the political majorities are lacking to undertake ambitious climate action independent of the type of instrument. However, the ETS does differ from other instruments in several aspects. First of all, it includes target groups that are very diverse. Through the cap system, ambitious action in one group does not always imply overall emissions to decrease. Also, in negotiations progressive positions in one group might be thwarted by opposition in another. This holds true for MS as well as for sectors. The power sector now accepts much more ambitious targets than the EII. If the policies treated the two separately, it would potentially be possible to adopt more stringent measures in the power sector. At the same time the ETS could offer an opportunity to set more stringent measures for the EII than would otherwise be possible. It remains speculative whether alternative policies would overall be more or less ambitious.

In the case of MSs, the more ambitious countries might now be hindered in their action by the fact that laggards and front-runners are treated similarly. This claim was particularly prominent in the interviews with German representatives. However, some interviewees also noted that it is questionable whether the political majorities would be there for ambitious national action while

¹⁹ <http://scrap-the-euets.makenoise.org> (assessed on 20.6.2014).

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they are not there to negotiate ambitious action on a European level. Germany is the biggest player in the EU ETS and a clear progressive German position would seem to have great influence. A reform on European level is preferred over unilateral action by all stakeholders. It therefore would seem more straightforward if Germany used its political will to act on European level.

Surprisingly, the German Environmental Minister, Barbara Hendricks, announced (after the interviews for this research had been conducted) that Germany will buy off allowances, thus doing a national set-aside, in case the EU ETS was not strengthened (Germanwatch, 2014). This action reflects a change in the circumstances: first, the German government has changed in 2013 and second, both US and China announced to take climate action in their countries. In fact, shortly after the interviews for this study were conducted, US president Barack Obama announced a plan to cut emissions from US power plants by 30% below 2005 level by 2030 (Goldenberg, 2014). A Chinese official, He Jiankun, consequently announced that China is also planning to put an absolute cap on its carbon emissions – something they had precluded previously (Vaughan and Branigan, 2014).

This shows how important international action and overall climate targets are for the political feasibility of a policy proposal. In this light ambitious 2030 targets and a global agreement in Paris in 2015²⁰ are highly important for the EU ETS reform. While the German position has not always been very progressive on the EU ETS reform, the German government takes on a very progressive position in the international negotiations on overall targets. The reason of this behavior is opportunistic: German citizens are strongly in favor of climate action and the negotiations on targets are highly symbolic and extremely visible to the public.

The political obstacles vary across countries: Germany wants to protect their EIIs, while Poland is more focused on preventing actions that harm their carbon-intensive power sector. One opportunity for proponents to gain political leverage might lie in identifying the distinct progressive forces in different countries and building a strong coalition for progressive action. Traditionally, networks run along stakeholder groups – Eurofer as the European steel association or Eurelectric for the power sector. In the past, unexpected actors such as the German church have shown to have a strong influence. A similar role could be played by more unexpected coalitions.

The ETS is fundamentally different from other policies also in the smaller number of key political decisions required to set up the scheme – basically, only the cap and the allocation method have to be set. This is thought to increase the democratic legitimacy of the instrument (van Asselt, 2010) and seems easier to pass the legislative procedure than setting many different standards for a variety of installations (Kühleis, interview). However, the New Institutional Economic theory also points to the effect that a more centralized organization facilitates lobbying, because a target group only has to lobby one institution (Svendsen, 2002). Similarly, less decisions might make the system more vulnerable to lobbying. However, the European case might be different in that sense that industrial

²⁰ The Conference of the Parties to the United Nations Framework Convention on Climate Change and to the Kyoto Protocol will be held in Paris in 2015. Its objective is to come up with a new world-wide binding agreement on climate action.

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groups seem to have more influence at national level. Also, a centralized organization makes lobbying easier for environmentalists as well.

Overall, it is not straightforward whether other policies would be less vulnerable to fundamental opposition or not. One option could be to have additional policies as a fallback. Here the ineffective ETS takes on a very negative role, as some interviewees pointed out (2). The ineffectiveness of ETS is used by opponents as an argument against additional policies in the sense of “We are already targeted by a climate policy”. The objective should be the opposite: in order to prevent additional policies, the EU ETS has to be strengthened.

7. Conclusions

The EU ETS is a classic example of a policy exhibiting a gap between the theoretical optimum and the actual implementation. While the instrument is embraced as a cost-efficient and easy-to-manage way to reduce emissions, political struggles between EU MSs and actors at different levels of policy-making have made it ineffective in the past and endanger a successful reform. This report assessed the factors that shape the political feasibility of EU ETS reform options in different MS and at EU level. From the three categories of factors influencing political feasibility, actors' preferences and their power constellations emerged as the most important. Beliefs – one aspect influencing the preferences – varied more along stakeholder groups than along country borders. Institutional requirements of a reform proposal did not explicitly influence actors' preferences. Crucial for country differences was whether actors perceive the ETS as leading to an unfair distribution of costs and benefits and whether they perceive the ETS as not working. The standing of industries is especially important regarding power constellations. In the analysis, important contextual factors were identified. These include national policies and the energy mix. Institutional setting did not emerge as a determinant variable for country specific positions, but might partly explain the different power constellations.

Overall, there is a consensus among actors that the EU ETS must be reformed. Actors consistently referred to the lack of political will as the biggest obstacle to successful reform. The proponents perceive the necessary reform as rather simple adjustments. However, the political forces against such a reform are very strong. This report considered three European MS: Germany, Poland and the UK; and five stakeholder groups: bureaucrats, politicians, academics, environmentalists and industrialists. The analysis was focused on politicians from the environmental ministries. Future studies should include also legislators from other fields and carbon market intermediaries which were excluded from the analysis due to procedural reasons. Representatives from the industry – in this case the steel sector – emerged as taking on a position that contrasted with most other positions. Furthermore, they were referred to as very influential and as presenting one of the obstacles to a successful reform. How their opposition can be softened or included in a reform of the EU ETS appeared as the biggest challenge for a successful strengthening of the scheme and more work is needed on how this could be done.

7. Conclusions

Overall, it is not clear whether other policies would perform better under the same political circumstances. That the majority of stakeholders embraces the instrument, that they agree that a reform is needed, that they do not identify fundamental burdens and that the climate problem becomes more prominent on the international political agenda, should give the European institutions momentum to make sure the cornerstone of European climate policy helps Europe to reach its climate targets.

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Appendix

A) Interview Guide

A) Preferences (Beliefs, Perceptions)

Let us start with the questions. We will start with some general questions about the EU ETS and its reform. Think of your preferences regardless of whether they are realistic to be adopted.

- 2. Do you think the EU ETS should be or remain an important corner stone of EU climate policy or not, and why?**
- 3. If you could change one thing about the ETS, what would you change?**
- 4. Why do you think that this is the most important thing to change?**
- 5. In general, do you think it is necessary to radically reform the EU ETS or do you think that small adjustments would be sufficient and why?**

In their report of the state of the carbon market, the EC proposed a number of reform options. They included tightening the reduction targets, retiring some allowances permanently, increasing the annual reduction factor, extending the scope to other sectors, limiting the access to international credits, or a price management mechanism. Eventually, a stability reserve was proposed.

- 6. Each ETS reform option has different implications for example in terms of distributional**

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impacts, level of ambition, flexibility of the instrument, source of authority. Which are the implications that most significantly contribute to form your opinion on ETS reform proposals?

- 7. Which element do you think is most prominent in the current debate about ETS structural reform? Do you think that these implications that you have just mentioned are reflected in the current debate about ETS structural reform?**
- 8. I would now like you to focus on the distributional impacts. How do you perceive the distribution of costs and benefits of the current ETS and the proposed reform?**

In January 2014, the Commission then published the directive proposal in which an increase of the annual reduction factor is assumed (linked to the 2030 target of 40%), but which particularly proposes the establishment of a market stability reserve.

- 9. Could you share your view of the market stability reserve with me?**
- 10. Do you think the current plans for the reserve regarding for instance the level of automation or discretion, size of reserve, timing of introduction and withdrawal) will work to produce a more effective ETS?**
11. Do you think the Commission proposal of ETS reform should have been more ambitious? Why and how?

Let's now think of the long-term perspective of decarbonizing the European economy by 2050 in a cost-efficient manner.

12. What are relevant future socio-economic and environmental developments that might require changes of the ETS?
13. Based on these developments, what changes might the ETS need in the future?

B) Institutional constraints

The EU ETS is of course not an emergent phenomenon but embedded in an institutional and legal framework as well as in political struggles. I would now like to learn how these contextual constraints play a role for your position.

- 14. You said earlier that you think the most important thing that needs changing is X. This change has obviously not happened yet. What do you think is the biggest obstacle for this to change?**
- 15. Various reform proposals have different institutional and legal requirements to fulfill. For**

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example some might be handled by an amendment of the Directive, while others need a re-opening of the Directive. How do institutional and legal barriers play a role in shaping your position on the reform proposals?

Can you think of a case where institutional barriers stand in the way of an efficient EU ETS?

16. Member states might try to get around the institutional barriers on EU level by implementing unilateral policies. What do you think about unilateral actions such as the British floor price?
17. Is there any element that should in general be subject to decentralized organization – at the level of the Member States, or even below? Why?
18. Which administrative and organizational implications do you see for the ETS reform, if any?
19. Can you think of any European law either constitutional, environmental or any other law that imposes a barrier to a more ambitious or more coherent EU ETS?
20. Are there any measures or approaches you can think of that are suitable to prevent such conflicts in the first place?

C) Power constraints

Transitional remarks: From now on I am interested in the reform process.

21. When you think of the recent EU ETS reform processes of the - such as the backloading discussion and the consultation phase on the structural reform - which were in your view factors that positively or negatively played a role in initiating and shaping the development of the policy?
22. **When you think of the current debate of the EU ETS reform who are the opponents to the further strengthening of ETS, and who are the proponents?**
23. Who do you think are of these opponents and proponents the most influential in the reform process and why?
24. **What in your view determines the level of influence that participants in the debate have?**
25. **Different proposals have different political support from different interest groups. There may be proposals that you would support but that lack support from other interest groups. How does the support that other interest groups give to a proposal influence your preferences on that proposal?**
 - Can you give an example of a reform proposal that you would support but that is not realistic to be adopted because it lacks the support of other key players? Who would these players be and what are their concerns?

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D) Current activities of the organization (Motivation, Strategies)

I would now like to focus on your organization, what you are doing, and the reasons why you are engaged in shaping the EU ETS.

26. In general, what do you see as the role of your organization in shaping the EU ETS?

Are there any benefits for the organization (like more publicity)?

27. Please tell me about how you push your views in different policy making circles and why you think that this is especially effective?

Make sure the following is covered:

1. Who do you address? When you think of political fora, such as the Parliament, the Council or the Court, they involve different actors and have different voting rules. What aspect plays a role in your decision where to push your proposal?
2. Which partnerships, collaborations, alliances have you set in place regarding the EU ETS?
3. How many resources do you devote to the EU ETS in terms of employees and financial resources?

Closing question

28. We have reached the end of the questions that I had prepared for you. Can you think of important aspects about the political process of shaping the EU ETS that we haven't touched upon yet?

B) List of Interviewees

Hanna Arnold, Deutsche Emissionshandelsstelle

Andrzej Blachowicz, Climate Strategies

Krzysztof Bolesta, Polish Environment Ministry

Tom Burke, E3G London

Maciej Burny, PGE Polska Grupa Energetyczna S.A.

Danny Croon, Eurofer

Sarah Deblock, International Emissions Trading Association

Paul Drummond, University College London

Christian Egenhofer, Center for European Policy Studies

Alex Egger, Eurofer

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Juliette de Grandpré, WWF Deutschland
Roderik Hömann, Deutsche Wirtschaftsvereinigung Stahl
Haydn Jones, British Environment Agency
Christoph Kühleis, Deutsche Emissionshandelsstelle
Andy Limbrick, UK Energy
Felix Matthes, Öko-Institut
Damien Meadows, European Commission DG Climate Action
Julia Michalak, Carbon Action Network
Sarah Rieseberg, arepo consult
Martin Ruhrberg, Bund Deutscher Energie- und Wasserbetriebe
Jesse Scott, Eurelectric
Meike Söker, BMUB
Marcin Stoczkiewicz, Client Earth

C) Criteria Tables for General Analysis

Beliefs in different interest groups

	academics	bureaucracy	environmentalist	politics	power	steel	TOTALS:
ETS important	3	3	4	2	2	0	14
carbon pricing	2	2	0	0	2	0	6
cost-effectiveness	1	2	0	2	1	0	6
ETS skeptical	1	1	1	0	0	2	5
harmonizing, comprehensive policy	0	1	0	1	2	0	4
ETS theoretical concept	1	0	1	0	0	0	2
policy instrument - R&D	0	0	0	0	0	2	2

Perceptions

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	academics	bureaucracy	environmentalist	politics	power	steel	TOTALS:
distributional impacts - MS	2	2	3	0	5	0	12
policy not working	2	1	4	2	1	0	10
distributional impacts - domestic - sma	3	1	2	1	1	0	8
distributional impacts - international	1	1	0	2	2	2	8
policy overlap	5	0	0	1	1	1	8
small adjustments sufficient	0	3	3	1	1	0	8
Targets not feasible	1	0	0	0	0	6	7
alternative policies important	0	1	3	1	1	0	6
complexity	1	1	1	0	3	0	6
distributional impacts - domestic	1	1	0	0	2	2	6
fundamental reform needed	1	0	0	0	1	3	5
urgency	1	1	2	0	1	0	5
intransparent	1	0	2	0	1	0	4
long-term function	2	0	0	0	2	0	4
merit points	1	0	1	0	2	0	4
price signal	1	1	2	0	0	0	4

Motivations

		acad.	bur.	envi	politics	power	steel	TOTALS:
ideologic interest	ideological interest - environmental effectiveness	0	0	3	1	0	0	4
	level of ambition	2	3	0	0	0	0	5
self-interest	self-interest	1	1	0	0	0	3	5
	self-interest - protect industries	0	1	1	2	0	0	4
strategic interest	credibility	1	0	0	2	1	0	4
	intertemporal efficiency	0	1	1	0	1	0	3
	long-term incentives	1	0	0	2	1	0	4
	price signal	0	2	2	0	2	0	6
	recycling revenues	0	2	1	0	0	0	3
	strategic interest	0	0	2	1	3	0	6
	already in place	1	0	1	0	0	0	2
	markt	0	0	0	0	0	2	2
	predictability	0	1	0	0	2	1	4
	transparency	0	0	1	0	1	0	2

Power

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	academics	bureaucracy	environmentalist	politics	power	steel	TOTALS:
influence of industry	4	1	1	2	1	3	12
Germany's role	2	2	1	3	2	1	11
employment	0	0	1	0	0	3	4
knowledge	1	1	1	0	0	1	4
knowledge - dishonest information by industry	0	1	3	0	0	0	4
media	0	1	2	0	1	0	4
message	0	1	1	0	1	1	4
progressive alliance	1	0	1	0	2	0	4
coalitions	0	2	1	0	0	0	3
influence of NGOs	0	0	0	1	0	2	3
influence of power sector	1	0	0	1	0	1	3
political network	1	0	0	1	0	1	3
public opinion	0	1	0	1	0	1	3
access to governments	0	0	1	0	1	0	2

Institutions

	academics	bureaucracy	environmentalist	politics	power	steel	TOTALS:
institutions - directive, comitology, amendment does not matter	2	1	2	0	1	0	6
institutions - against opening directive	0	0	1	2	1	0	4
institutions - lobby	1	0	0	0	1	1	3

Contextual factors:

	academics	bureaucracy	environmentalist	politics	power	steel	TOTALS:
international action	4	6	3	3	3	3	22
debate	3	3	3	1	4	1	15
political climate	4	1	3	1	1	0	10
German national climate target	1	1	2	2	0	0	6
energy security	0	1	3	0	1	0	5
targets	1	1	2	0	1	0	5
economic crisis	1	2	1	0	0	0	4
achieved progress	0	1	0	0	1	1	3
church	0	0	2	0	1	0	3
technology	0	1	0	1	0	1	3

D) Criteria Tables for Case Studies

Criteria that were found to differ between case studies

		EU	Germany	Poland	UK	Total
Perceptions	Distributional impacts - MS	4	3	5	0	12
	Policy not working	1	5	1	2	9



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	Small adjustments	4	3	0	2	9
	Policy overlap	0	1	4	3	8
	Feasibility of targets	4	2	1	0	7
	Alternative policies	1	4	0	1	6
	Urgency	1	3	1	0	4
	Intransparent	0	4	0	0	4
	Long-term function	0	3	0	1	4
	Perspective: debate	0	1	3	0	4
	Complexity	0	3	0	0	3
Motivations	Self-interest	4	2	3	0	9
	Ideological motivation	2	3	0	4	9
	Strategic motivation	11	17	1	8	37
Power	Influence of industry	0	7	0	4	11
	Germany's role	1	5	2	1	9
	EU/national level	1	3	1	0	5
	Employment	1	3	0	0	4
	Knowledge	1	3	0	0	4
	Media	3	1	0	0	4
Contextual factors	International action	9	9	4	1	23
	Political climate	0	3	3	4	10
	Energy security	1	1	3	1	6
	German national target	0	5	0	0	5

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beliefs

	Berlin	Brussels	England	Poland	TOTALS:
ETS important	5	4	3	3	15
policy instrument - tax	5	2	1	4	12
cost-effectiveness	3	1	2	1	7
carbon pricing	2	3	1	0	6
policy instrument - regulatic	2	2	2	0	6
ETS skeptical	2	1	1	0	4
harmonized	3	0	1	0	4
ETS theoretical concept	1	0	1	0	2
experience UK unilateral	0	0	2	0	2
policy instrument - R&D	0	2	0	0	2

Perceptions

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	Berlin	Brussels	England	Poland	TOTALS:
distributional impacts - MS	3	4	0	5	12
policy not working	5	1	2	1	9
small adjustments	3	4	2	0	9
distributional impacts - domestic - small	3	1	4	0	8
distributional impacts - international	3	4	0	1	8
policy overlap	1	0	3	4	8
feasibility of targets	2	4	0	1	7
alternative policies	4	1	1	0	6
distributional impacts - domestic	3	1	0	1	5
urgency	3	1	0	1	5
intransparent	4	0	0	0	4
long-term function	3	0	1	0	4
merit points	3	1	0	0	4
perspective - debate	0	1	0	3	4
complexity	3	0	0	0	3
flexibility	2	1	0	0	3
price signal	1	1	0	1	3
radical reform	0	1	0	2	3
fundamental reform	2	0	0	0	2
new compromise difficult	1	1	0	0	2
policy working	2	0	0	0	2
technical / political debate	1	1	0	0	2

Motivation

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		Berlin	Brussels	England	Poland	TOTALS:
Self-interest	self-interest	1	3	0	1	5
	self-interest - protect industries	1	1	0	2	4
Ideological motivation	level of ambition	1	1	3	0	5
	environmental effectiveness	2	1	1	0	4
Strategic motivation	price signal	1	2	3	0	6
	strategic interest	4	2	0	0	6
	credibility	3	0	1	0	4
	long-term incentives	3	0	1	0	4
	predictability	1	1	1	1	4
	intertemporal efficiency	2	1	0	0	3
	recycling revenues	0	2	1	0	3
	already in place	0	1	1	0	2
	market	0	2	0	0	2
	transparency	2	0	0	0	2

Power



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	Berlin	Brussels	England	Poland	TOTALS:
influence of industry	7	0	4	0	11
Germany's role	5	1	1	2	9
EU / national level	3	1	0	1	5
growing influence of opponents	0	1	2	2	5
employment	3	1	0	0	4
knowledge	3	1	0	0	4
knowledge - dishonest information by industry	1	2	1	0	4
lobbying depends on policy process	0	4	0	0	4
media	1	3	0	0	4
progressive alliance	2	2	0	0	4
proponents more influential	0	3	0	1	4
industry feels not heard	1	2	0	0	3
influence of NGOs	3	0	0	0	3
influence of power sector	3	0	0	0	3
message	0	2	1	0	3
political network	3	0	0	0	3
public opinion	1	0	1	1	3
coalition	0	1	1	0	2
misuse of ETS	2	0	0	0	2
resources - EC	0	2	0	0	2
tie	1	0	0	1	2
access to governments	0	0	1	0	1
credibility	0	1	0	0	1
homogeneity	1	0	0	0	1
intermediaries	1	0	0	0	1
member state coalitions	0	0	1	0	1
political capital	0	0	0	1	1
resources	1	0	0	0	1
TOTALS:	65	43	27	17	152

Contextual factors

	Berlin	Brussels	England	Poland	TOTALS:
international action	9	9	1	4	23
political climate	3	0	4	3	10
energy security	1	1	1	3	6
German national climate target	5	0	0	0	5
technology	2	2	0	1	5
economic crisis	1	1	0	1	3
targets	1	1	1	0	3