

Chapter Four

EU Emissions Trading: Achievements and Challenges

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The European Union Emissions Trading Scheme (EU ETS) is based on an EU Directive that was adopted in 2003 and started functioning in 2005 (Skjærseth and Wettestad 2008).¹ It caps industrial emissions and allows trade of emission rights (hereafter: “allowances”).² EU officials refer to the ETS as both the “cornerstone” and the “flagship” of EU climate policy.³ As it represents something completely new for the EU, analysts have called the ETS the “new grand experiment” (Kruger and Pizer 2004).

The ETS has now been functioning for five years. To what extent is a big celebration warranted? According to EU environment commissioner Stavros Dimas, “the EU has a well-functioning trading system, with a robust cap, a clear price signal and a liquid market, which is helping us to cut emissions cost-effectively” (EurActiv 2009b). Point Carbon reports a relatively thriving market, apparently only moderately affected by the current financial crisis, and see the ETS as a substantial driver for emissions reductions (Point Carbon 2009a). However, some highly critical reports can certainly be noted. For instance, climate-policy analyst Dieter Helm has claimed that the EU has “landed itself with a complex and relatively inefficient tradable permits system” (Helm 2009, 11). Furthermore, the British environmental organization Sandbag has warned that the ETS at present is “a blunt tool” (Sandbag 2009).

This chapter seeks to take stock of the main achievements so far, in terms of institution building and ultimate effects on corporate practices. As further elaborated in the section “Achievements So Far: Mostly Mixed?” there are both strengths and weaknesses to be noted. In the section “Explaining Mixed Achievements: “Grand Experiment”—And Grand Uncertainty?” some key explanations are discussed, organized according to the main actors and

institutions involved: nonstate actors (industry and environmental organizations), Member States, EU institutions, and global actors and institutions. This leads up to an analysis in the section “A More Optimal ETS? Changes for the 2013–2020 Phase” of the considerable changes in the ETS for the post-2012 phase that were adopted in December 2008. The concluding section, “Conclusion: Beware of Hasty and Bombastic Judgements,” sums up the main findings and discusses some key uncertainties ahead for this intriguing and important political experiment. As I think the literature on international regime effectiveness can provide useful analytical tools and insights (see, for example, Miles et al. 2002; Young and Levy eds. 1999), this chapter should also be seen as a first and probing effort to draw upon some of these insights and apply them to the study of ETS achievements.

The first ETS Directive was adopted in mid-2003 (Directive 2003/87). It established a three-year pilot phase (2005–2007) to precede the main commitment period of the Kyoto Protocol (2008–2012). It covers around 50 percent of EU GHG emissions, and some 10,000 installations are included in the system. The ETS was initially established as a system in which Member States would have considerable power and flexibility, so the initial ETS is generally characterized as a decentralized system. Key decisions about the amount (the “cap”) and allocation of allowances were in the hands of the Member States, who drew up National Allocation Plans (NAPs). The overall cap on emissions then became the aggregate of national caps. As we shall see, the European Commission (hereafter: the Commission) was a core actor in the establishment of the system, but was allocated more of a back-seat watchdog role in the subsequent national allocation processes and first phase of implementation. Allowances were mainly handed out free of charge,⁴ and the system was rather narrow in scope. It targeted first and foremost the power sector and some selected energy-intensive industries (such as refineries, cement, steel, and pulp and paper), with an initial regulatory focus on CO₂ emissions. Although power producers and consumers were differently positioned in the energy systems and national economies, the 2003 Directive provided no signals to Member States about distributing allowances differently between sectors. As to the links between the ETS and global climate institutions, a specific Linking Directive was adopted in 2004.⁵ A central element in this later Directive was the opening up for the possibility to import credits from third countries through the Kyoto Protocol flexible mechanism, Clean Development Mechanism (CDM) credits from 2005, and Joint Implementation (JI) credits from 2008.

The link was initially based on a loose “less external credits than domestic abatement” rule, but was tightened in 2006.

How then has this system worked so far?

Achievements So Far: Mostly Mixed?

As discussed and clarified by the Norwegian regime theory scholar Arild Underdal (see, for example, Underdal 2002), there are at least two principal dimensions in assessing the effectiveness of international collaborative efforts and policy instruments:

- “*The distance to the collective optimum*”: the contribution that the institution/instrument makes to solving the problem at hand. As this optimum is extremely hard to pinpoint, a simple proxy can be the attainment of official goals.
- “*The relative improvement*,”: pertaining to the extent to which the institution/instrument has improved matters compared to a situation with no collaborative effort at all.

It would seem that how we assess the results of the ETS depends at least in part on which of these rather different (and certainly both analytically challenging) assessment lenses we emphasize. Furthermore, it should be noted that the ETS is the first large-scale, multinational system of its kind in the world. No wonder that it has been hailed as the “new grand experiment.” Not many years have passed, and the implementation of this unprecedented, complex transnational system is in many ways still in its infancy. Here we might recall that, according to conventional wisdom in implementation theory, in order to fully assess the implementation success of policies, considerable time should have passed—eight to ten years or so (see, for example, Cerych and Sabatier 1986, 6). Let us first sum up some elements of the ETS that have been seen as quite successful, before turning to some important criticisms.

Important Institution Building—And “Cognitive” Effects?

As noted and claimed by several scholars, in terms of fundamental institution building, the ETS has made considerable progress (see Asselt 2009, for a good summary).⁶

First, an unprecedented transnational marketplace has been established. EU emissions trading started officially on January 1, 2005. As of winter 2010, and even after the worldwide financial crisis really started to bite, allowance trading in the EU has clearly taken hold. In 2008, the EU ETS accounted for two-thirds of total global carbon market volume and three-quarters of the value (Point Carbon 2009a, 3, 5). As to allowance prices, as further discussed below, some volatility has indeed been experienced. But in recent years, allowances for phase two of the ETS have stayed within a band between 10 euros and 20 euros.⁷

Second, the infrastructure necessary for a properly functioning market has been established, including the assignment of competent authorities, national registries and the Community Independent Transaction Log (CITL). Most registries were operating in 2007, but faced scheduled and unscheduled downtime (EEA 2008,10). Reporting systems were established, and the reporting practices of the Member States have been improving steadily (EEA 2008). Some governments have also started gaining experience with auctioning allowances (Asselt 2009, 38).

Third, related to these ETS institutional achievements but certainly a different, “cognitive,” type of achievement, it has been argued the perceptions and mindsets of corporate leaders as to the climate-change issue have started to change. In an interesting interview in June 2009, chief ETS architect and Commission official Jos Delbeke stated that the most successful element of the ETS is the way it has “forced company boardroom activity to consider climate change... Attitudes toward CO₂ and the climate have changed since there has been a price on carbon” (Point Carbon 2009b). In a somewhat similar vein, analyst Frank Convery has stated that “carbon emissions trading in Europe has finally lifted environment from the boiler room to the boardroom, and from ministries of environment to ministries of finance. For chief executives of many corporations, the environment has become an omnipresent, if not always welcome, guest at their strategic tables” (Convery 2009,121). Furthermore, according to reports from the Carbon Disclosure Project, governance of climate change at board level has increased over time (Carbon Disclosure Project 2009, 11).

*... But Also Institutional Weaknesses and Limited Behavioral Bite?*⁸

This section first sums up and discusses some main criticisms of the ETS, related to allocations and price fluctuations; some “internal

anomalies” (windfall profits); and some possible “external anomalies” (“carbon leakage”). The extent of behavioral bite so far is then discussed, with regard to effects on abatement and shifts in technology utilization and/or innovation attributable to the ETS.

Generous Allocations and Price Fluctuations: Already in 2004/2005, preliminary assessments of the first National Allocation Plans (NAPs) indicated very moderate levels of ambition on the part of Member-State governments (see Ecofys 2004; Zetterberg et al. 2004).⁹ Nevertheless, allowances prices climbed to a surprisingly high level throughout 2005, peaking around 30 euros in April 2006. But suspicions of generous governmental handouts of allowances were further confirmed when the first verified emissions data were published in May 2006, showing that 4 percent more allowances had been handed out than actual emissions. This led to an immediate halving of the allowance price and a subsequent further drop, to almost zero. Trading actors saw the pilot phase of the ETS as clearly over-supplied; as there was no possibility to bank allowances for use in later phases, prices plummeted.

Although Member States in 2006 started out the allocation of allowances for phase two of the ETS (2008–2012) in the same generous manner, as further described in the section “Explaining Mixed Achievements: “Grand Experiment”—And Grand Uncertainty?” the Commission acted tougher as a watchdog and managed to turn a prospective 5 percent surplus to an anticipated 5 percent deficit (Carbon Trust 2007, 6). However, not least due to the global economic recession, updated estimates indicate that phase two will be some 300 million tons long (i.e. more emissions than allowances), not short (e.g. Carbon Trust 2009, 02). As surplus allowances from the second phase are bankable for use in phase three (2013–2020), a phase two surplus has the potential to dampen phase three allowance prices and incentive effects. As of May 2010, ETS allowances are traded for around 16 euros.

Internal Anomalies: Windfall Profits: The dominant initial method of allocating allowances, by handing them out for free, led to more than just over-generous allocations. It has also had the effect of giving power producers considerable “windfall profits.” Energy-intensive industries first warned that power producers might reap huge windfall profits in 2004 (Wettestad 2009b). These profits would emanate from the fact that electricity prices would increase related to the introduction of the ETS. Power producers would then gain huge profits, as they received allowances for free and would have no initial expenses due to the introduction of emissions trading.

From late 2005 on, these warnings became increasingly substantiated. For instance, a British 2006 report indicated a yearly profit increase of at least GBP 800 million for six large United Kingdom (UK) electricity generators related to the introduction of the ETS. Subsequently, several studies substantiated the reaping of considerable windfall profits (see e.g. Sijm et al. 2006). In a 2008 report, Point Carbon estimated ETS phase two windfall profits at between 23 euros billion and 71 billion in five central ETS countries (Point Carbon 2008).¹⁰ Over time, it has also become increasingly clear that generous and continued handing out of free allowances means windfall profits among energy-intensive industries as well, and possibly also airlines from 2012 on (see *ENDS Europe* 2009b; 2009c, Sandbag 2010).

External anomalies: carbon leakage?: “Carbon leakage” basically refers to the process whereby a carbon-producing firm in Europe reduces output which is then replaced by a producer operating from a noncarbon-constrained jurisdiction (see Convery 2009, 127).¹¹ Early studies of the ETS and carbon leakage possibilities, focused on the UK, indicated that only a few industries were at any serious risk (Carbon Trust 2004). Of the five sectors studied (electricity, cement, paper, steel, and aluminum), except for steel, global concerns would kick in only in a long-term scenario with considerably higher allowance prices (*ibid.*).

Political attention to this possible external anomaly increased in the EU from 2006 on. The issue was given considerable attention in both the High Level Group on Competitiveness, Energy and the Environment, and in the European Climate Change Programme’s ETS review stakeholder meetings in 2007 (Wettestad 2009b). But consultant and research reports have consistently presented a far more sober and less alarmist picture of this phenomenon than the industries themselves (which is of course not that surprising) (e.g., European Commission, 2006). One of the most recent reports is a German Marshall Fund study published in 2009 (Grubb et al. 2009). A central conclusion is here that “for most manufacturing sectors, cost differentials due to labor and other inputs far outweigh those induced by international differences in the cost of carbon” (p. 4; see also Wråke 2009, 26).

Low effects on company practices?: But what about the real “proof of the pudding”—the actual effects on companies’ abatement efforts, and how they utilize and invest in greener technologies? Is today’s situation of relatively floundering market activity bringing about more abatement, new technologies and environmental improvement, which

remain the ultimate goals of the ETS venture? Given the institutional weaknesses indicated above, and the limited time that has elapsed, expectations should be moderate in terms of finding significant effects on company practices.

It is important to emphasize that our knowledge is so far quite limited, although some scattered indications and data are available. Let us start with some survey data. In the Point Carbon annual surveys, the number of respondents stating that “the EU ETS has already caused emissions reductions in my company” has remained quite stable, with around 45 percent supporting this statement in 2007, 2008, and 2009. Around 30 percent reported no ETS-related reductions in 2008 and 2009 (Point Carbon 2009a, 8). A German survey, combining German company respondents and international experts, comes up with more modest results (KfW/ZEW 2009). Among the conclusions we may note: “while the majority of firms have implemented CO₂ reduction measures, price signals for CO₂ seem to have had only minor influence on investment strategies so far. Only 6 percent indicated that the reduction of CO₂ has been the main reason for the realization of a measure” (*ibid.*, 56, 57).

Denny Ellerman and Barbara Buchner have analyzed 2005 and 2006 emissions data that the EU Member States reported to the Community Independent Transaction Log (Ellerman and Buchner 2007; 2008). Does the reported figure of 4 percent lower emissions than allocated allowances mean simple “over-allocation”—or can this be interpreted as a sign that real abatement has taken place, hence providing support to the more optimistic Point Carbon survey data? After carrying out a counterfactual analysis, attempting to take into account the development of such control factors as economic growth, carbon intensity and energy prices, they tentatively conclude that the ETS *has* led to some modest reductions, between 50 and 100 million tons in each of these years (Ellerman and Buchner 2008, 286). Total ETS emissions in 2006 were slightly over 2 billion tons of CO₂. With regard to the sectoral picture, analysts agree that most effects have taken place among power producers (e.g. Grubb et al., 2009).

Kettner et al. (2008) have carried out a complementary analysis of the CITL data and the extent to which sectors and countries have been “short” (with more emissions than allowances) or “long” (the opposite). On the whole, they question the ETS abatement effect: “Given the rather low carbon prices, it is also extremely unlikely that industries with a heavy CO₂ cost component, such as cement and lime, have reduced their production levels because of the stringency

of allowances.” But in a few installations, the option for a fuel shift may have been used (Kettner et al. 2008, 59).

However, that behavioral effects so far have been moderate does not necessarily mean that there has been no effect on corporate strategies and investment plans (note the “cognitive effects” mentioned above), so that more and deeper behavioral effects may be seen in the years ahead. For instance the study conducted by Martin Cames on ETS effects in the German electricity industry concludes that expected carbon prices *are* taken into consideration in the companies’ investment decisions and “play an important role when it comes to the question of which technology or fuel should be applied.” Clean coal and particularly, carbon capture and storage (CCS) are the most relevant technologies (Cames 2008; 174–175). In December 2009, the consultancy firm New Energy Finance published a survey covering 13 large EU power companies.¹² All these companies responded that they factored a carbon price into their investment decisions. However, the consultancy firm noted that “the carbon price (current and projected) is not sufficient *in isolation* to justify an immediate wholesale shift to lower CO₂ emitting technologies” (New Energy Finance 2009, emphasis added).

The reported increasing effect on investment decisions is certainly an interesting element. However, there is a clear need for further counterfactual analyses here. For instance, CCS policy has experienced a significant development of its own (see, for example, Claes and Frisvold 2009), which makes it more difficult to single out and measure the specific ETS policy signals.

Summing Up: Mixed Performance So Far

Reports like those recently published by Sandbag (2009) and Helm (2009) are important reminders that the ETS design has so far been clearly sub-optimal. Allowance allocations have been generous, resulting in a surplus that again has led to volatile and, over time, seriously decreasing allowance prices in the pilot phase. More scarcity has been created in the current second phase, but considerable uncertainty remains. The handing out of allowances for free has meant significant windfall profits for power producers, and eventually also other industries. Lack of similar regulation of industries elsewhere in the world has led to unrest in EU industries about carbon leakage. Thus it is hardly surprising to find that the available evidence, although

limited, indicates that fluctuations and reductions in EU emissions can only to a very limited extent be attributed to the ETS.

However, all actors interested in the ETS should bear in mind that its overall score in terms of “relative improvement” is most likely better—although acknowledging also here the substantial analytical challenges involved in carrying out a satisfactory counterfactual assessment. After the “grand failure” of the 1990s to adopt an effective, EU-wide climate-policy instrument—a carbon tax (see, for example, Skjærseth 1994; Wettestad 2001)—the EU has now succeeded in putting into place a cornerstone climate-policy instrument. Important institution building has taken place, both at the EU level and in all its Member States. Market activity has become quite substantial, also in a global perspective, and the ETS seems to have survived the financial crisis fairly well. It can be argued that the ETS has been an important factor in making corporate leaders more aware of the climate change issue and to some extent also more positive to climate-policy regulation and making new, “greener” investments.

Furthermore, as will be further substantiated in the section “A More Optimal ETS? Changes for the 2013–2020 Phase,” the ETS has also developed and improved considerably over time. Not least, significant further harmonization of the ETS post-2012 means that the EU will, at least from that point in time, have a quite well-developed common policy in this area. This gives greater support to claims that the ETS is now really starting to influence corporate investment decisions. Although it may be more daring to declare grand successes or failures, for the overall achievement score it is tempting to echo Cerych and Sabatier’s title from 1986: “great expectations and mixed performance.”

Explaining Mixed Achievements: “Grand Experiment”—And Grand Uncertainty?

In the following, I identify and discuss some key explanatory factors. For analytical purposes, these are organized according to main actors and institutions, at various societal levels. The resultant perspectives are fundamentally grounded in and related to important on-going debates about the main and “real” driving forces in EU policy-making.¹³ However, a debate about the relative explanatory power of these perspectives is not the main point in this paper. The perspectives

are here used simply as complementary heuristic lenses, helping to organize and make sense of a complex web of relevant evidence.

Nonstate Actors: Cautious Industry; Skeptical Greens

Industry: a Cautious and Differing Embrace: How did industry feel about emissions trading back in 1997/1998, when the idea of an ETS was taking shape? A few industrial front-runners, mainly big oil companies such as BP and Shell, saw this almost untried instrument as promising and set about establishing internal pilot emissions trading schemes (see Victor and House 2006). Overall, the mood can be characterized as cautiously positive.¹⁴ Industry wanted to avoid the detested carbon tax option, but would also ideally have preferred softer voluntary agreements.

Already from 1999/2000, it became apparent that there were also clear sectoral differences within EU industry with regard to attitudes toward the emissions trading instrument. Power producers were quite open-minded and curious, and carried out several trading simulation exercises.¹⁵ Energy-intensive industries, on the other hand, held far more mixed and generally cautious positions. They had difficulty seeing what was in it for them with this instrument. Most skeptical was the chemicals industry—which was, in the end, also left out of the system. However, EU industries were quite united in favoring getting allowances for free, and having a basically flexible and not overly harmonized system.

In the subsequent processes of producing the initial National Allocation Plans in 2004 (for the ETS pilot phase, 2005–2007), industrial actors tried to cope with considerable uncertainty about the *practical* workings of this new instrument by lobbying for a maximum amount of allowances. This is a classic example of perfectly understandable individual rationality leading to collective sub-optimal outcomes. In the NAP I process, there is evidence from both the UK and Germany about the success of industry in this regard. Member States needed a cooperative industry, and in a situation with high uncertainty, it was probably tempting to simply let industry have its way.

Political decision makers were more successful in withstanding industry pressure in NAP II (in distributing allowances for the 2008–12 phase). But industry has still managed to secure so much in terms of allowances that they may need to conduct very little actual abatement to comply with the caps set for this phase. In fact, due also

to the financial crisis and lowered production (and hence less emissions), industry might even be able to bank (i.e., save) a considerable portion of allowances for the post-2012 phase, thereby seriously challenging the dynamic effect of the ETS also in this phase.

This said, there are still certain sectoral differences within this general picture. Generally, the power sector has experienced stricter allocations in phase two of the ETS, as is particularly clear in the case of the UK (*ENDS Daily* 2006). This unequal treatment seems to have been silently accepted by the power sector (and institutionalized in the revised ETS, as further described in the section “Conclusion: Beware of Hasty and Bombastic Judgements”). A main reason for this acceptance is probably the above-mentioned windfall profits earned by the power producers. Moreover, this difference in strictness of sectoral allocations can contribute to explain why most behavioral change and abatement seem to have taken place within this sector.

ENGOS: Skeptics Struggling to Embrace Trading: The Environmental Non-Governmental Organizations (ENGOS) initially opposed emissions trading for both substantive and normative reasons, arguing that trading pollution was ineffective as well as morally questionable. This resistance was gradually overcome by the belief that a cap-and-trade system in Europe, if appropriately designed, could guarantee a positive environmental outcome. Then, by around 2000, ENGOS had become more positive to the idea of emissions trading in Europe.¹⁶ This can probably be explained by these actors starting to recognize the potential of this complex instrument.

Still, along the way, ENGOS have continued to function as an external critical watchdog—in the process, strengthening the hand of those inside actors pushing for the most environmental ambitious options, such as the European Parliament. With regard to focused issues, ENGOS have given particular attention to the link between the ETS and the Kyoto Protocol mechanisms and the possible “flooding” of the ETS with CDM credits—and the related detrimental effects for the carbon price and incentives for internal EU abatement (see Open Europe 2007; Sandbag 2009; WWF 2006).

However, the intrinsically complex and technical nature of emissions trading as an instrument is poorly suited to the spectacular stunts often favored by ENGOS (Pinkse and Kolk 2009; Voss 2007). Although ENGOS have become much more positive to emissions trading over time, it seems fair to say that they have struggled in seeking to learn to *love* the instrument. A more systematic comparison with other issue areas may reveal that ENGOS have been far more effective pushers for a further greening of policies in other issue areas

than emissions trading. Recognizing this rather “tame watchdog” role helps us make sense of the moderate ETS achievements so far, although it is far from being among the most important factors.

Member States: Securing Control

The previous section “Achievements So Far: Mostly Mixed?” emphasized the new and untried character of the emissions trading instrument and the related cautiousness of nonstate actors. Very much the same goes for the EU Member States. When the Commission started to prepare the ground for an EU emissions trading system in 1998, only two Member States had begun to consider establishing domestic trading systems: Denmark and the UK. The latter, in several ways a key EU country, was generally open to market-based and flexible policy instruments in the 1990s. The UK was hence not opposed to the development of an EU-wide trading system, but it favored a flexible and decentralized ETS, in order to ensure compatibility with its domestic system.

But other important EU countries embraced trading much more reluctantly. Turning first to Germany, due to the size of its economy and the magnitude of the related emissions, the country was destined to be one of the really key ones in the ETS. Up to 1998/1999, climate policy in Germany mixed traditional regulation with voluntary agreements and eco-taxes, and there was no prior regulatory emphasis on flexibility instruments (Wurzel 2008, 13). Voluntary agreements sat well with German industry, which therefore saw little need to introduce new, different instruments. In the decision-making process that led up to the initial ET Directive, Germany emphasized exemptions and national flexibility.

In the first round of producing National Allocation Plans, assessments of ambitiousness (in aiming for emissions reductions) gave the German NAP a very average score.¹⁷ When the first verified ETS emissions figures were put on the table in 2006, Germany’s emissions proved to be 4.2 percent below its cap (hence possible “over-allocation”). Germany’s uneasy relationship with the ETS was further witnessed in the second round of producing NAPs. In something which has been described as a catalytic event in the history of the ETS (see Carbon Trust 2007), in November 2006 the Commission cut the proposed German NAP by 7 percent. After some weeks when “Brussels stood still,” Germany reluctantly accepted the Commission’s cut.

Poland can certainly be added to the list of important EU countries that have embraced the ETS only quite cautiously. It was greatly delayed in producing an initial NAP, with both the government and observers blaming limited administrative capacity. But Poland’s will to adopt ambitious ETS policies can also be questioned. As in several other Central and Eastern European Countries (CEECs), the Polish energy system is centered on coal power. A key priority for Poland has hence been to protect the future of this industry—and that includes securing a sufficient number of allowances to this industry. Poland has quarreled with the Commission over its suggested emission caps in both the first and second round of producing NAPs. In the second round in 2006, Poland’s NAP was among those cut most severely by the Commission—by a full 27 percent! This brief overview has shown that central EU Member States have embraced emissions trading only cautiously, giving priority to national control over environmental ambitiousness, and, related to this, a decentralized and flexible ETS design. These priorities can shed considerable light on the sub-optimal working of the ETS so far.

EU Institutions: Only a Tiny Crew Manning the Flagship?

As further analyzed in Skjærseth and Wettestad (2008), from 1998 on, there was only a small group of dedicated emissions trading entrepreneurs in the Directorate-General for Environment (DG ENV). Their main professional background was economics. A key figure was Jos Delbeke, who had been closely involved in the futile efforts to get a carbon tax adopted, and was now definitely ready to work on something else that could be more successful. The task facing DG ENV was truly formidable. So it is highly understandable that information dissemination and knowledge improvement became a key strategy. This involved both getting reports from external consultants such as the British FIELD institute and the US Center for Clean Air Policy, and efforts to develop a trading-friendly “epistemic community” of nonstate actors and Member States through stakeholder meetings. The DG ENV entrepreneurs concluded that a centrally governed ETS would be the environmentally optimal design, but realized early on that this idea was at odds with the sentiments of important Member States and industries.

Within the Commission, in the process of preparing the initial ET (Emissions Trading) Directive proposal in 2001, DG ENV successfully fought back efforts from other DGs such as Enterprise to weaken the

proposal further. In the subsequent EU processes, the clear impression is that the ETS remained something of a DG Environment “baby,” and perhaps even more than that: a “Delbeke drive.” Indeed, it is quite striking that the ETS became an EU cornerstone based on a very modest administrative foundation; *a flagship steered by a tiny (but dedicated) crew.*

But what about the European Parliament—could not the Parliament and particularly its comparatively large and influential Environment Committee (see for example Weale et al. 2000) have helped steer the ETS more smoothly through these rough waters? Here it should be kept in mind that the Parliament has been characterized as suffering from a “technological deficit” (e.g. Wurzel 2002, 71), and hence struggled in really getting a grip on the complex case of emissions trading. Among other things, this manifested itself in a problem of focusing on the truly key issues. Furthermore, in the decision-making process, the Parliament stood forward as the key proponent of a rather centrally governed ETS, but it failed to move the outcome very much in this direction. So, somewhat similar to the case of ENGOs, an actor that has otherwise often managed to push EU policies in greener directions achieved little in the case of the ETS.

From 2004 on, one of the central ETS tasks for the Commission was to act as a NAP watchdog.¹⁸ With the substantial leeway granted to the Member States by the directive, this watchdog job proved to be a tall order indeed. As pointed out by Commission official Peter Vis, “the Commission’s job was a difficult one.... Several plans were submitted to the Commission without elements that were nevertheless essential for the Commission’s assessment... The assessment process of all national allocation plans [in the pilot phase] took 15 months in total, in contrast to the three months foreseen in the Directive” (Vis 2006, 202, 203).

But, particularly in the second NAP process, the Commission made important contributions to achieving a more environmentally ambitious outcome. Overall, the Commission managed to turn a proposed aggregate emissions *increase* of 5 percent from 2005 levels into a 5 percent *decrease* (Carbon Trust 2007, 6). One strength for the Commission in this work has been a substantial continuity of key personnel, with Jos Delbeke as the “ETS captain” on board all the way.

Global Actors and Institutions: Not Securing Comparable Efforts to the EU?

Turning first to the Kyoto Protocol itself, the adoption of this protocol and not least the flexibility mechanisms in December 1997 served as

an important stimulant for the subsequent EU turn-about and development of an ETS. A very important “catalytic” event happened in May 2001: The USA, under President George W. Bush, decided to withdraw from the Kyoto Protocol. The immediate and short-term effect of this was in fact positive for the EU actors seeking to get an ETS established. As noted by Brussels insiders, “the huge luck the Commission had was Bush’s withdrawal... It united the EU in an extraordinary way.” On the other hand, as a more enduring, long-term cognitive effect, the lack of comparable climate-policy action in the United States—the key economic competitor to the EU—has acted to impede EU efforts. The US climate-policy impasse has functioned as a legitimating concern for actors within industry, Member States and EU institutions warning of the detrimental effects of a too strong and front-running EU system that imposes tougher carbon constraints than competitors.

From 2004 on and with the development of NAPs, institutional interaction with the Kyoto Protocol’s flexibility mechanisms, in particular the Clean Development Mechanism (CDM), became more of a reality. The entry into force of the Kyoto Protocol in February 2005 further bolstered the linkage between the ETS and the protocol and its mechanisms. However, in the pilot phase, this link was of scant practical relevance. Very few states announced any intentions to use such external credits, and the subsequent abundance of ETS allowances and the delayed formal link between the EU and global registries made this aspect rather irrelevant.

It was first and foremost in connection with the processes of producing the NAPs for the second phase of the ETS (the 2008–2012 phase) that this issue became more important. Generally, Member States announced intentions to utilize substantial amounts of external credits. This led ENGOs and independent analysts to fire several warning shots about the possible damaging effects of an overly liberal inflow of external credits, with a related weakening of carbon prices and abatement incentive effects (see, for example, Open Europe 2007; WWF 2006). To some extent, the Commission paid heed to these warnings. An *ad hoc* cap was introduced in the fall of 2006, and the Commission managed to cut the planned use of CDM and JI of key Member States considerably.¹⁹ In total, the EU ETS installations are allowed to use 1400 Mt of CDM/JI credits for compliance in the 2008–2012 period.²⁰

Although it is still quite early days in the Kyoto Protocol commitment phase, reported figures show that the external link (which finally became real and formal in October 2008) has not mattered

that much in practice. Data from 2008 show that companies used around 6 percent of the total (European Commission 2009a). So there has certainly been no “external flooding of the ETS,” and the specific links to the global flexibility mechanisms shed almost no light on the moderate results achieved so far.

A More Optimal ETS? Changes for the 2013–2020 Phase

The processes of revising the ETS for the period 2013–2020, which took place mainly in 2007 and 2008, must then be seen against the backdrop of this in many ways malfunctioning ETS up to that point. As described above, the “old ETS” had been decentralized, based on the handing out of free allowances, and with an initial loose link to the global CDM/JI mechanisms, with an ad hoc cap introduced in 2006.

Compared to this, the new ETS from 2013 onward, adopted by the European Council in December 2008, will be governed quite differently, in a far more centralized way (see Directive 2009/29).²¹ There will be a common and tighter ETS cap, based on the ETS’ contribution to achieving the overall ambition of a 20 percent cut in GHG emissions by 2020.

The cap is so far to achieve a 21 percent cut of ETS emissions by 2020, compared to a 2005 baseline. Further allocation specifications mean that the considerable flexibility enjoyed by Member States under the old ETS will disappear almost completely in the new ETS. Furthermore, much more allowances will be auctioned.

Most of the power sector’s allowances will be auctioned, while initially only around 20 percent of the allowances of energy-intensive industries (but increasing over time). Industries identified as particularly vulnerable to global competition and hence “carbon leakage” will be guaranteed free allowances all the way to 2020. A preliminary list produced by national experts and presented by the Commission in September 2009 identifies 164 sectors deemed to be at risk as to carbon leakage, representing 77 percent of the total emissions of manufacturing industries under the ETS (EurActiv 2009c; European Commission, 2009b). With regard to external links to the Kyoto flexibility mechanisms, the *ad hoc* cap has now been strengthened and written into the formal ETS constitution. In addition, the sectoral scope has been broadened somewhat in terms of sectors and gases, and aviation will come into the ETS already from 2012.²²

Although these changes mean that the Member States will lose earlier powers, it does not mean that all these powers are automatically transferred to the Commission. Some of these powers will be taken over by the Member States as a collective, as for instance the important, possible decision to tighten the ETS cap will ultimately have to be adopted by the Council and the Parliament. But the functions of the Commission as the general watchdog and overseer of the implementation of the ETS will be strengthened, for instance related to Member-States’ use of increasing auctioning revenues. In this connection, it is interesting to note that the Commission sought also to centralize the auctioning process by establishing a single auctioning platform. But a coalition of key ETS Member States (i.e. Germany, Poland, Spain, and the UK) resisted this and the Commission backed down in the spring of 2010 (e.g. EurActiv 2010).

In order to understand these significant changes, in the same manner as the discussion carried out in the section “Explaining Mixed Achievements: “Grand Experiment”—And Grand Uncertainty?” a multilevel framework is useful. First, closer scrutiny reveals a significant shift in Member-State positions on what constitutes the best design of the ETS, and a related request for reform. As indicated, a likely central background factor is unsatisfactory experiences with the old ETS.

Second, putting on “EU-level” lenses, as has been indicated, the ideas of a centralized and harmonized ETS based on auctioning of allowances were initially launched and favored by both the Commission and the Parliament (and supported by ENGOs). Due to, among other things, the increased saliency of the climate-change issue in the EU from 2005 on, these positions could be put forward more forcefully in 2007 and 2008. In addition, the EU institutions, as arenas for initiating and negotiating the reform, changed significantly and affected the ETS outcome somewhat. As the ETS reform was a key element in a broader policy package initially launched by the Commission in January 2008, the reform was linked to new mandatory targets, EU energy policy and a package of binding climate instruments; among other things adding further weight to the Commission’s quest for a more harmonized and effective design.

Third, putting on “international regime” lenses provides only limited additional explanatory value. The reform came not as a response to changes in the international climate regime, but partly as an effort to influence the international climate negotiations. In a way, the reform was to some extent a response to a *lack* of international change. The international regime context is thus relevant

for understanding the outcomes, but in a different way than may be readily anticipated.

Conclusion: Beware of Hasty and Bombastic Judgments

EU emissions trading has celebrated its fifth birthday: has it been a success or failure so far? The verdict here depends partly upon the assessment lenses chosen: the distance travelled toward a truly “optimal” design—or the more counterfactual “relative improvement” made. When analysts such as the Carbon Trust call the global flexibility mechanisms, with the EU ETS as the cornerstone, a “remarkable success,” they are probably implicitly adopting a “relative improvement” perspective (Carbon Trust 2009, 6). Without these mechanisms, with the ETS as the clear front-runner, the global political and institutional responses to climate change would probably have been quite meager indeed. But that does still not mean that the ETS has made a significant difference with regard to industrial practices so far.

Further, taking both assessment perspectives into consideration, ETS achievements stand out as mixed. There have been several institutional flaws, leading to among other things overgenerous allocations and windfall profits for power producers. The carbon price has been volatile, falling close to zero in the final half of the pilot phase. The scarce evidence of ultimate effects on company practices and emissions so far indicate quite moderate effects, although an increasing influence on investment decisions seems probable. But it is important to keep in mind that it is certainly early days in terms of expecting significant behavioral effects, and the recent strengthening of the ETS post-2012 will mean a substantially more optimal design for the future.

How then to explain such mixed results so far? Let us first sum up some of the main impediments, organized according to main actors and societal levels.

- Industry has only cautiously embraced the largely untried emissions trading instrument. Energy-intensive industries in particular have been quite lukewarm.
- ENGOs started out as rather fierce critics of the ETS. They have since moderated their stance, but have struggled to embrace this complex, “industry-friendly” and flexible instrument wholeheartedly, and function as a really hard-hitting external watchdog.

- Somewhat similar to industry, Member States have had a cautious attitude toward this new instrument, and have emphasized national control much more than environmental effectiveness. Certain key Member States like Germany have been particularly skeptical toward trading, due to the mismatch with their own preexisting climate-policy instruments.
- Although the entrepreneurial efforts by a dedicated group of DG Environment officials have been formidable, the Commission has struggled to keep abreast, due to the formidable regulatory challenges involved and a rather restricted mandate from the Member States.
- The long period of climate-policy inaction in the United States and a lax global climate regime have strengthened the arguments of those within the EU who resist a strong, ambitious front-running ETS.

The observations above also give some key clues to understanding the background for the achievements that *have* been made after all:

- *Some* key industries have been clear trading supporters and allies to the Commission all the way (the power producers).
- *Some* key Member States have been clear proponents of emissions trading (e.g., the UK).
- The entrepreneurial group in the Commission has been strong, with continuity in key personnel.
- Catalytic events in the global climate regime have helped Commission entrepreneurs at important crossroads—particularly the Bush/US exit from the Kyoto Protocol in 2001, and to some extent also the entry into force of the Protocol in 2005.

What about the prospects ahead? One important possible next step—particularly if and when anything substantial comes out of the negotiations on a new global climate regime, and if there is a related move of the EU from an overall 20 to 30 percent reduction target—would be to further tighten the ETS 2020 cap. The institutional machinery is in place (see Article 28 in Directive 2009/29). In spring 2010 it became increasingly probable that the EU would move to an overall 30 percent reduction target and a related deepening of the ETS cap from 21 percent to 34 percent (Point Carbon 2010). Several well-informed analysts predict an allowance price of around 40 euros as the most probable bet for 2020. This indicates a fundamental belief in real scarcity in the ETS post-2012. But few

analysts had managed to foresee the “over-allocation” effects and ETS crisis in the spring of 2006, and there are definitely some uncertainties ahead.

First, there is uncertainty related to the effect of banking within the ETS. How much of the probable second phase surplus of allowances, including CDM surplus, will be carried over to the third phase? We should also note that the more long-term climate-policy success of the ETS is definitely not “controlled” by the ETS alone. There are several interaction effects. In the fall of 2009, increasing attention focused on the possibility of “hot air” surplus allowances in the Kyoto Protocol being carried over post-2012 and contributing to downward pressure also on ETS allowances prices (see, for example, Point Carbon 2009c). Another uncertainty is the interaction with other EU policies like energy efficiency and renewables. It has, for instance, been claimed that if energy efficiency really picks up speed, then there will be little need for an effective ETS in order to deliver the overall 20/30 percent EU emissions-cut targets (see, for example, *ENDS Europe* 2009a). To this, add how the financial crisis and the related drop in emissions have instructively demonstrated that factors totally unrelated to environmental policy affect emissions, the related need for allowances—and ultimately the carbon price and the related abatement incentive effects.²³

Thus, even if the EU has already succeeded in seriously reducing the gap to the “optimal design” of an ETS from 2013 on, other factors may lead to a situation where the ETS will not manage a similar leap forward in terms of “relative improvement.”

Notes

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1. I.e., Directive 2003/87/EC.
2. Allowances are denominated in metric ton of carbon dioxide equivalent (CO₂ eq.). One ton CO₂ eq. is a unit of measurement reflecting the potency of greenhouse gases (GHGs).
3. See for instance European Commission (2008).
4. In the pilot phase, Member States were allowed to sell up to 5 percent of their allowances. This limit was increased to 10 percent in the 2008–2012 period.

5. I.e. Directive 2004/101/EC.
6. Here I concentrate on the “internal” effects and success of the ETS and do not discuss the possible front-runner inspirational influence the ETS may have had and has on efforts around the globe. For this, see e.g. Wettestad (2009a).
7. For instance, in March 2008, the price was 21 euros. One year later, it had sunk to 11.60 euros. However, by early September 2009, the price had climbed to 15.30 euros.
8. For a broad overview of weaknesses and criticisms of the ETS, see Asselt (2009). The Asselt report discusses among other things scope, cap setting, and allocation methods.
9. Ambitiousness is here understood as the setting of a cap on allowances reasonably below projected needs and hence contributing to overall market scarcity, relatively high and stable carbon prices, and related incentives for abatement.
10. These five countries were Germany, Italy, Poland, Spain and the UK.
11. For summaries of the carbon leakage issue, see EurActiv, January 27, 2009a (summary article) and Asselt, 2009, particularly pp. 62–69.
12. Among the companies included in the survey were E.On, RWE, Centrica, Scottish and Southern, Fortum, and EDF.
13. For a more comprehensive overview of these perspectives and debates, see for instance Skjærseth and Wettestad (2008), chapter two, and Boasson and Wettestad (2010).
14. For instance, the European industrial federation UNICE cautiously supported emissions trading in a 1998 position paper, stressing the need for a “well-designed” and “rigorous” system.
15. These were trading exercises organized by the power producers’ federation EURELECTRIC: the GETS I exercise in 1999 and GETS II exercise in 2000. See Skjærseth and Wettestad (2008: 79–80).
16. Zapfel and Vainio (2002).
17. Ibid.
18. As to the concept of institutional interaction, see Oberthur and Gehring (eds., 2006).
19. For instance, both Poland’s and Spain’s proposed uses of external credits were halved by the Commission.
20. This is equal to about 10 percent of the total allocation for the period.
21. This section is a summary of several related analyses; see Wettestad (2009c) and Skjærseth and Wettestad (2010a and b).
22. The inclusion of aviation took place in a separate decision-making process.
23. Note here that there is also an interesting interaction effect the other way around: The extent to which a low carbon price will provide suboptimal incentives to the development of renewables and enhancing of energy efficiency.

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