

Reforming Emissions Trading

Four Core Requirements

Nima Nader & Götz Reichert



In its proposed revision of the Directive on the EU Emissions Trading System (EU ETS), the EU should take account of the following core requirements:

- ▶ Requirement 1: Even after 2020, the EU should issue free allowances to companies at risk of emigrating in order to prevent the relocation of carbon emissions to non-EU countries.
- ▶ Requirement 2: The EU should make additional carbon reductions dependent on concrete and credible international consensus in order to avoid unilateral cost increases for EU economies.
- ▶ Requirement 3: The EU should refrain from intervention on prices in the EU ETS as this undermines its market character and impairs its effectiveness.
- ▶ Requirement 4: The EU should extend the EU ETS to include additional sectors – particularly transport – thereby widening the increase in efficiency which it brings about.

Table of Contents

1	Introduction	3
2	The EU Emissions Trading System (EU ETS)	4
2.1	How it works.....	4
2.2	Economic Assessment	5
2.3	Allowance price level	5
3	Requirements for the reform of the EU ETS	6
3.1	Free allowances to companies at risk of emigration	6
3.2	New reduction targets must have international consensus.....	6
3.3	No price-based intervention in the EU ETS	7
3.4	Extend the EU ETS to more sectors	7

1 Introduction

Climate protection has enjoyed a special significance in the EU for many years. The aim in this regard is the reduction of greenhouse gas emissions (GHG emissions). In the long term, the EU wants to become a low-carbon economy.¹ With this in mind, it has decided to reduce its GHG emissions by 20% by 2020 as compared with 1990 levels² and it look likely to achieve this target.³ In October 2014, the European Council of Heads of State and Government agreed on the new Climate and Energy Policy Framework which aims to reduce GHG emissions by 40% by 2030 as compared with 1990 levels.⁴

The EU Emissions Trading System (EU ETS), which has existed since 2005 on the basis of the ETS Directive (2003/87/EC), plays a crucial role in achieving the climate targets. It includes certain emissions-intensive industrial installations and, since 2013, the aviation industry. These sectors are responsible for about half of all GHG emissions in the EU.⁵ The EU ETS has become widely discredited in recent years, however. According to critics, emissions trading does not work because the supply of allowances is too large or the price of allowances too low.⁶ In the first half of 2015, this ranged between € 6.30 and € 7.70.⁷ The European Commission has also expressed doubts about the "proper functioning" of the market for emissions allowances.⁸ Nevertheless, in October 2014, the European Council confirmed that the EU ETS would remain the most important European instrument for achieving the 2030 climate targets.⁹

On 15 July 2015 the European Commission proposed amendments to the ETS Directive.¹⁰ These are necessary, primarily in order to take account of the Decision of the European Council and to establish the form which emissions trading is to take between 2021–2030. In this ceplnput, we will first briefly explain the functioning of the EU ETS, evaluate its economic effectiveness and examine the impact of allowance price levels on the functioning of the EU ETS (Chapter 2). We will then set out the core requirements which should be considered when the ETS Directive is revised (Chapter 3).

¹ European Commission, Communication COM(2011) 112 of 8 March 2011 "A Roadmap for moving to a competitive low carbon economy in 2050"; see cepPolicyBrief "Low-carbon Economy by 2050", <http://www.cep.eu/en/eu-topics/climate/low-carbon-economy-in-2050-communication.html>.

² Art. 28 Directive 2009/29/EC of 23 April 2009 amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community.

³ European Commission, Impact Assessment SWD(2014) 15 of 22 January 2014, p. 15 et seq.

⁴ European Council, Conclusions of 24 October 2014, Doc. EUCO 169/14, para. 2; see also cepKompas "Die Klima- und Energiepolitik der EU", <http://www.cep.eu/en/eu-topics/climate/die-klima-und-energiepolitik-der-eu-stand-und-perspektiven.html>.

⁵ European Environment Agency (2014): Annual European Union greenhouse gas inventory 1990–2012 and inventory report 2014, www.eea.europa.eu/publications/european-union-greenhouse-gas-inventory-2014, last accessed: 2 July 2015.

⁶ Inter alia: Rebecca Harms, Member of the European Parliament, Chairman of the Die Grünen/Europäische Freie Allianz, <http://www.greens-efa.eu/de/emissionshandel-13614.html>, last accessed: 29 June 2015.

⁷ Market data of the European Energy Exchange (EEX), <https://www.eex.com/de/marktdaten/umweltprodukte/auktionsmarkt/european-emission-allowances-auction#/2015/06/22>, last accessed: 29 June 2015.

⁸ European Commission, Proposal for a Decision COM(2012) 416 of 25 July 2012 amending Directive 2003/87/EC clarifying provisions on the timing of auctions of greenhouse gas allowances, p. 2.

⁹ European Council, Conclusions of 24 October 2014, Doc. EUCO 169/14, para. 2.3.

¹⁰ European Commission, Proposal for a Directive COM(2015) 337 of 15 July 2015 amending Directive 2003/87/EC to enhance cost-effective emission reductions and low-carbon investments.

2 The EU Emissions Trading System (EU ETS)

2.1 How it works

Under the EU ETS, emissions-intensive industrial installations and the aviation industry require allowances in order to emit GHGs. The sectors covered include installations for supplying electricity and heat, metal production and processing, the mineral processing industry, pulp and paper manufacture and the chemical industry as well as installations for the capture and underground storage of carbon dioxide (Carbon Capture and Storage, CCS). Since 2013, all flights between two EU airports have been covered by the EU ETS.¹¹

Under the EU ETS, GHG emissions are only permitted if the operator of an industrial installation or an aircraft has the corresponding number of allowances for its planned GHG emissions. One allowance gives the owner a right to emit one tonne of CO₂. Once the GHG has been emitted, the certificates must be submitted and deleted. Operators of installations and aircrafts must submit the exact number of allowances necessary to cover their GHG emissions in the previous year. If they fail to do so, the Member States must impose a fine of € 100 for each unauthorised tonne of GHG.¹²

The EU ETS is characterised by what is known as its "Cap & Trade" approach. The allowances, which, to begin with, are either issued by the EU ETS to the relevant companies free of charge or sold to them by auction¹³, are tradeable and can be transferred to anyone within the EU. Consequently, companies that reduce their GHG emissions cost-efficiently, can sell their unused allowances for profit on the allowances market. If the cost of buying certificates is lower than that of the measures required to reduce emissions, it makes sense for the company to buy additional certificates in order to cover its GHG emissions. This guarantees that GHGs are reduced where avoidance can be achieved at the lowest cost. However, this mechanism only works under the proviso that the total number of available allowances is limited ("cap"). Only a scarcity of available allowances will result in companies either reducing their GHG emissions or acquiring additional allowances. By limiting the number of allowances, the overall total number of permitted GHG emissions will be precisely established. In order to achieve the GHG reduction target by 2020, the number of allowances is reduced every year by 1.74% ("linear reduction factor").¹⁴ For the period from 2021 to 2030, the European Council has decided to reduce the overall annual number of newly issued allowances by 2.2% each year.¹⁵

When GHG emissions are no longer free of charge, companies will have the incentive to relocate industrial installations and the corresponding GHG emissions to countries outside the EU ("carbon leakage"). Since 2013, in order to combat this risk, installation operators with a "significant risk" of emigration, have been issued with the required allowances free of charge. An installation operator qualifies for these free allowances where the additional cost of emissions trading would increase his production costs by at least 5% and exceeds the "intensity"¹⁶ of his external trade relations by 10%. Where only one of these two criteria is fulfilled, but exceeds 30%, there is also a right to free allowances. In order to prevent carbon leakage, Member States can also introduce financial

¹¹ Art. 2, 3a–3g, 4 and 24 Directive 2003/87/EC of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC.

¹² Ibid., Art. 4, 6, 12 and 16.

¹³ In addition, the companies covered by the EU ETS can receive credits for emissions reduction in other countries. This is the case where they fund climate protection projects in countries outside the EU or in sectors inside the EU which are not covered by the EU ETS (see Art. 24a ETS Directive 2003/87/EC).

¹⁴ Ibid., Art. 9.

¹⁵ European Council, Conclusions of 24 October 2014, Doc. EUCO 169/14, para. 2.3.

¹⁶ This is defined as the ratio between the overall value of exports to third countries plus the value of imports from third countries and the overall size of the "Union Benchmark" (annual turnover plus total imports).

compensation for industries which are indirectly burdened by the costs of emissions trading due to the correspondingly high electricity prices.¹⁷

2.2 Economic Assessment

The EU ETS is ecologically sound and at the same time economically efficient: On the one hand, it establishes a reduction target for the sectors covered thereby restricting the overall amount of GHG emissions which can be released by installation operators and airlines. Effective monitoring ensures that no more than the specified overall amount can be released (ecologically sound). On the other hand, the EU ETS leaves it up to the companies to find out in which sector the specified reduction can be achieved at the lowest cost. The freedom of companies to decide which reduction measures to take is therefore not restricted (economic efficiency). In order to ensure economic efficiency, it is crucial that the certificates are tradeable. Whether they have to be bought or are issued free of charge is irrelevant for the effectiveness and efficiency of the system because unused certificates can be sold for profit.¹⁸ Companies can decide for themselves whether to use certificates for GHG emissions or whether to reduce their GHG emissions such as by reducing their production or investing in CO₂ reduction technology.

The undisputed aim is a cost-effective climate protection policy guaranteeing maximum climate protection as a result of a specific level of expenditure. In order to make climate protection as cost-effective as possible, the cost of avoiding GHG emissions (abatement costs) should be minimised. This aim will be achieved when the abatement costs – i.e. the avoidance costs required to save an additional unit of GHG – are at the same level in all sectors.¹⁹ Within the EU ETS, the abatement costs for all companies are equal because the allowance price is identical for all companies and the companies use this price as a basis when considering whether to acquire allowances or take additional avoidance measures. This allows the avoidance of GHG emissions to take place where it can be achieved at the lowest cost which ensures that climate protection does not become unnecessarily expensive.

2.3 Allowance price level

It is widely believed by both politicians and the public that the EU ETS is not working due to the currently low allowance price.²⁰ This view must be challenged because, even where allowance prices are low, the EU ETS still ensures that the EU-wide upper limit for GHG emissions will be complied with by the affected companies. Thus the EU ETS fully meets its ecological remit. Since allowances are tradeable at any price, the economic efficiency is also provided at any allowance price. Low allowance prices are thus no indication of a malfunction in the emission rights market; as the supply of allowances is fixed, low prices are in fact the result of lower demand. This may be due either to an economic downturn and the accompanying fall in production, or to other energy and climate protection measures in the EU and the Member States which have brought about a reduction in demand. These include political measures aimed at increasing energy efficiency and

¹⁷ Art. 10a Directive 2003/87/EC of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC.

¹⁸ Fritsch, M. / Wein, T. / Ewers, H.-J. (2007): Marktversagen und Wirtschaftspolitik, 7th Edition, p. 141.

¹⁹ In this regard, and in this document, it is assumed that additional avoidance measures will become more and more expensive (rising abatement costs).

²⁰ Inter alia: Frankfurter Rundschau online of 22 January 2014, <http://www.fr-online.de/energie/co2-handel-neues-konzept-fuer-emissionshandel,1473634,25956236.html>, last accessed: 29 June 2015; Der Tagesspiegel of 19 February 2013, <http://www.tagesspiegel.de/politik/klimaschutz-eu-will-den-emissionshandel-retten/7792682.html>, last accessed: 29 June 2015.

supporting renewable energy.²¹ By imposing these measures, policy decides how CO₂ emissions are to be avoided and thus takes away a major part of the steering function of the EU ETS.

3 Requirements for the reform of the EU ETS

On 15 July 2015 the European Commission submitted a proposal to amend the ETS Directive.²² This is necessary, primarily in order to take account of the Decision of the European Council of October 2014 and to establish the form which emissions trading will take between 2021 and 2030.

3.1 Free allowances to companies at risk of emigration

As part of the revision of the ETS Directive, the Commission should continue, in the future, to give a high priority to the problem of carbon leakage because it is counter-productive for global climate protection if companies relocate their production to non-EU countries where they are subject to less strict climate protection measures or even none at all. In order to avoid damage to both the EU economy and the global climate, the EU should continue after 2020 to issue the required allowances free of charge to companies at risk of emigration. In addition, Member States should continue to have the possibility of bringing in financial compensation for branches which are indirectly affected by the costs of the EU ETS via higher electricity prices.²³

3.2 New reduction targets must have international consensus

The World Climate Conference will be taking place in Paris at the end of 2015. The Commission expects that, for the first time, a legally binding, international agreement on climate change will be signed there which will apply to all signatories.²⁴ This would be an important step towards effectively protecting the climate. Since climate change is the result of the global amount of GHG emissions, the climate can only be protected globally. The more countries that take part in climate protection the lower the risk of carbon leakage. However, as the history of international climate protection policy shows, it is doubtful that such a legally binding agreement will in fact be concluded. If no consensus is achieved at the Paris Climate Conference, the EU runs the risk that, by committing itself unilaterally to emissions reduction, as the European Council decided in 2014, it will bring about cost increases for EU economies which are not balanced by any relevant benefit in terms of climate policy. This would cause considerable damage to EU economies. But even if a legally binding agreement is signed in Paris, applicable to all parties, the crucial factor is the concrete form which the agreement takes. In order to avoid distortions in global competition, climate protection policy should at least place an equal burden on the economies of the major industrial countries. An agreement in which only the EU undertakes to drastically reduce its emissions whilst other large economies such as the USA, China or Japan are unwilling to commit to credible emissions reductions, will also result in unilateral costs for the EU. In order to avoid economic harm to the EU, it should in the course of its revision of the ETS Directive, take account of

²¹ The European Council has decided on a roll-out of renewable energy and an increase in energy efficiency of 20% by 2020 as compared with 1990 levels; see European Council, Conclusions, 8 March 2007, Doc. 7224/1/07 REV 1.

²² European Commission, Proposal for a Directive COM(2015) 337 of 15 July 2015 amending Directive 2003/87/EC to enhance cost-effective emission reductions and low-carbon investments.

²³ Art. 10a Directive 2003/87/EC of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC.

²⁴ European Commission, Communication COM(2015) 81 of 25 February 2015, "The Paris Protocol – A blueprint for tackling global climate change beyond 2020", p. 3.; see cepPolicyBrief No. 10/2015 "Paris Climate Conference 2015", <http://www.cep.eu/en/eu-topics/climate/paris-climate-conference-2015-communication.html>.

the results of the climate conference in Paris and make additional GHG reductions dependent on a concrete and credible international consensus.

3.3 No price-based intervention in the EU ETS

Interventions in the EU ETS should be rejected. This is particularly true for price-based interventions which the Commission has already considered in the form of a price floor for allowances.²⁵ A price floor would significantly undermine the market character of the EU ETS and substantially impair its ability to function. It would result in the price of allowances being determined by political decision rather than the interaction of supply and demand. Pricing should not, however, be influenced by political whim but – following the political decision on the number of allowances – exclusively on the basis of actual demand patterns. Furthermore, the principle that both the ecological soundness and the economic efficiency of the EU ETS are independent of the allowance price will apply provided the latter can establish itself freely (see Section 2.3).

3.4 Extend the EU ETS to more sectors

The EU should include more sectors in the EU ETS. This widens the increase in efficiency which it brings about as the range of possibilities for discovering cheaper avoidance potential grows with the number of sectors that are included. While the EU ETS does not include all sectors, it will not be able to make up for the abatement costs in all sectors as there are fewer possibilities for avoiding GHG emissions. Ideally, in order to achieve the greatest possible level of efficiency, the EU ETS must therefore be extended to all emitting sectors.²⁶ Transport, building sector and, in principle, also agriculture particularly lend themselves to inclusion in the EU ETS as these are the sectors outside the EU ETS which produce the highest levels of CO₂.

With regard to transport, an upstream approach to incorporating it into the EU ETS is recommended. Upstream emissions trading focusses not on the large number of small GHG emitters at the end of the fuel supply chain but on the (few) suppliers at the start of the supply chain – the oil producers and importers. These will try to add the allowance price on to the fuel price and pass it on. Thus allowance costs are passed down the entire supply chain to the end user, all players have an incentive to reduce their fuel consumption and thereby CO₂ emissions. Such a system is easy to implement whilst also being cost-efficient due to the low administration costs resulting from the small number of companies affected by an upstream approach.²⁷

²⁵ European Commission, Report COM(2012) 652 of 14 November 2012, "The state of the European carbon market in 2012", p. 10 et seq.

²⁶ Böhringer, C. and Lange, A. (2012): Der europäische Emissionszertifikatehandel: Bestandsaufnahme und Perspektiven, Wirtschaftsdienst, Springer Verlag, Vol. 92, p. 14.

²⁷ For more detail see: Nader, N. and Reichert, G. (2015): Extend the EU ETS!, cepInput No.05/2015, <http://www.cep.eu/en/eu-topics/climate/erweitert-den-emissionshandel.html>.

Recently published in this series:

- 12/2015: What to do with the EU Working Time Directive? (June 2015)
- 11/2015: The European Citizens' Initiative (June 2015)
- 10/2015: Das Braunkohle-Paradoxon. Klimaschutz durch „Klimabeitrag“? (June 2015)
- 09/2015: Exceptions to copyright. Should optional exceptions be made mandatory? (June 2015)
- 08/2015: Net neutrality (April 2015)
- 07/2015: Basel III: Liquidity Coverage Ratio for Banks (April 2015)
- 06/2015: Joint Gas Purchasing (March 2015)
- 05/2015: Extend the EU ETS! (March 2015)
- 04/2015: Reviving the Principle of Subsidiarity (March 2015)
- 03/2015: Make better use of the potential of the Blue Card (February 2015)

Authors:

Nima Nader is Policy Analyst in the Department for Energy | Environment | Climate | Transport.

Dr. Götz Reichert heads the Department for Energy | Environment | Climate | Transport.

cep | Centrum für Europäische Politik

Kaiser-Joseph-Strasse 266 | D-79098 Freiburg

Telephone +49 761 38693-0 | www.cep.eu

cep is the European-policy think tank of the non-profit-making foundation Stiftung Ordnungspolitik. It is an independent centre of excellence for the examination, analysis and evaluation of EU policy.