



# **THE EUROPEAN TRADING SYSTEM | IS THIS FINANCIAL INSTRUMENT CONTRIBUTING EFFICIENTLY TO THE EU CLIMATE POLICY?**



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The European Union has committed to cut GHG (GreenHouse Gases) emissions by 8% by 2012 and by 20% by 2020. To help meet those targets, a financial instrument in the form of a cap and trade scheme, known under the acronym "EU ETS" (EU Emission Trading System), was adopted at the Environment Council of October 13, 2003. It was then launched on January 1, 2005. Following a "testing period" (2005-2007), the second phase will come to an end this year (2008-2012).

The EU ETS sets a cap on the amount of CO<sub>2</sub> that can be emitted. Companies or sectors of activities are given, under the trading system, credits or allowances (one allowance -EUA- equals one ton of CO<sub>2</sub>) which represent the right to emit a specific amount. Companies that exceed their limit (cap) must buy allowances from those who emit less or if they don't they have to pay heavy penalties<sup>1</sup>.

So a market for allowances emerged and trading platforms developed. Nowadays not only over-the-counter operations take place but also standardized spot and future contracts are concluded every day. Several private trading platforms co-exist, including Bluenext, Climex and so on. Bluenext is the leading spot exchange for EUAs. It is a multilateral trading facility, a joint venture of the NYSE and Caisse de Dépôts (a French financial institution).

Under this trading system, the EU Member States agree on national emission caps which have to be approved by the EU Commission. The allowances resulting from this agreement are allocated by each EU Member State to its industrial companies. The operators within the ETS scheme may reassign or trade their allowances directly or through brokers listed on the exchanges. The national registry and the European Commission are informed of each change of ownership in order for them to validate the transaction. However there is currently an initiative to centralize the allocation of EUAs under one Authority.

Following sectors are covered by the directive:

- Power and heat generation over 20 MWth
- Oil refineries
- Cokes, iron and steel production
- Glass production
- Pulp and paper
- Ceramics
- Lime and cement production

The number of allowances allocated to each emitter (i.e. the number of tons of carbon dioxide to be authorized for emission) is set out in National Allocation Plans (NAP) prepared by the Member States and approved by the Commission. In practice, each Member State has to establish an electronic register in which each installation has an account (the operator holding account). The competent Authority in each state is responsible for the issuance of allowances to the holding account. No allowances can be distributed before a plan has been accepted and approved by the Commission. However the Commission authority is limited. For example, the European court of first instance ruled that the Commission had exceeded its powers in 2007 by rejecting the NAP of Poland and Estonia. The Commission had cut the NAP figures by around 27% and 48% respectively. This leads to uncertainty. On the one hand the NAP figures need to be approved by the Commission before entering into force. Yet the Commission cannot impose a figure.

During the first phase, a minimum of 95% of the total amount of allowances had to be allocated for free. In the second phase, this amount is down to 90%.

For the 3d phase, starting in 2013, the EU comes up with a number of changes to the

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<sup>1</sup> In the period 2005-2007, the fine was EUR 40 per missing allowance. In the period 2008-2012, it is increased to EUR 100 per missing allowance.

scheme, including:

- centralized allocation (no more national allocation plan) by an EU authority;
- the setting of an overall EU cap, with allowances then allocated to Member States;
- tighter limits on the use of offsets;
- unlimited banking of allowances between phases 2 and 3;
- a move from free allowances to auctioning a greater share of permits. Sectors and sub-sectors significantly exposed to carbon leakage (see hereinunder) qualify for support in the form of allowances that would otherwise be auctioned.

In any case the ETS scheme is expensive. According to Mr Nobutani<sup>2</sup>, “Japan’s wealth has been drawing out due to buying carbon credits from East European countries and China”. A Japanese survey estimates that Japan has paid as much as USD 10.4 billion to buy 400 million metric tons of carbon credits.

The EU also agreed to incorporate flexible mechanism certificates as compliance tools within the EU ETS like the Joint Implementation (JI) and the Clean Development Mechanism (CDM) which produces Certified Emission Reductions (CERs). One CER represents the successful emission reduction equivalent to 1 ton of carbon dioxide equivalent. CERs can be obtained by implementing emission reduction projects in developing countries (carbon offset) that have ratified or acceded to the Kyoto protocol. UNFCCC ( United Nations Framework Convention on Climate Change), a body of the UN, has the task of monitoring and approving the CDM.

Between 2008 and 2020, the ETS allows the use of international credits for up to 50% of overall reductions.

Some CDM-projects (among others HFC gas projects) have long been criticized by environmental organizations. They claim that said projects do not really lead to lower emissions but are only carried out to generate credits. They have been accused of “gaming” the system. The EU Commissioner Connie Hedegaard wants to ban credits from such industrial projects even if they are approved by the UNFCCC.

There are indeed perverse incentives. For example, one Chinese company generated USD 500 million in carbon offsets by installing a USD 5 million incinerator to burn the HFC produced by the manufacture of refrigerants. The huge profits provided incentives to create new factories or expand existing factories solely for the purpose of increasing the production of HFC and destroying the resultant pollutants to generate offsets.

On the other hand, China, the world’s top polluter, appears to be benefiting most from the ETS scheme.

The European Commission is aiming at a major overhaul of the Clean Development Mechanism.

## **1 | Is EU ETS performing well?**

Although ETS is a centrepiece of European Climate Change and Energy policy as recently re-affirmed by the Commission’s 2050 energy roadmap, doubts are cast about the efficiency of this cap and trade system and its overall role. ETS displays a number of flaws that will be briefly analysed hereafter.

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<sup>2</sup> Director of the global Environmental Affairs office at the Ministry of Economy, Trade and Industry.

## | Surplus of allowances (over-supply)

According to Sandbag<sup>3</sup> (British environmentalist NGO), in 2010, 65% of EU ETS sites had more allowances than they needed. The effect had been:

- to depress carbon prices, hence reducing the incentive to invest in cleaner technologies;
- and to lessen the downward pressure on emissions.

"Most analysts agree that the problem of excess emission credits pertains to the industrial sector rather to the power sector. Sandbag estimates that the EU ETS will cut emissions by a negligible amount in 2008-2012 because 1.1 billion tons of emission reduction in the power sector will be nearly entirely cancelled out by leftover allowances in industry. These leftovers are the result of the recession combined with an over-generous allocation of emission permits.

Sandbag estimates that about 1.8 billion emission allowances bought in developing countries through the Kyoto protocol's Clean Development Mechanism will be carried over from the second to the third trading phase...

Sandbag points out that allowance surplus will actually put some industrial companies at a severe disadvantage... Arcelor Mittal dominates the industrial surplus and is expected to accrue 102 million excess permits with EUR 1.4 billion over the second phase of the trading scheme."

While the Commission has the competence to define the amount and timing of allowances to be auctioned during the third phase (2013-2020), it cannot decide on the cancellation or re-entry of allowances into the system without modifying the legislation. In the meantime the market would face uncertainty about whether, how and when the allowances withheld from auctioning would re-enter the market.

A surplus of allowances from the second phase of the scheme (2008-2012) which can be used in the third phase, is such that CO<sub>2</sub> emitters apparently need not to take any action until 2017. Proposals to curtail this surplus were discussed in the context of EU's 2050 roadmap but have been watered down in response to lobbying from energy intensive industries, and for technical reasons.

Moreover companies can use a lot of offset credits in phases 2 and 3 mostly derived from UN's Clean Development Mechanism (CDM). A very large percentage of the offsets used to date come from industrial gas (hydrofluorocarbon-23 (HFC), nitrous oxide (N<sub>2</sub>O) etc) projects which for the Commissioner Connie Hedegaard have "a total lack of environmental integrity". The Commission delayed a ban in the use of the industrial gas offsets to April 2013 in response to lobbying from the International Emissions Trading Association (IETA) and others<sup>4</sup>.

This surplus of allowances as well as other factors like the economic crisis have pushed down the carbon prices way below the EUR 25 to 40 per allowance considered as necessary to have a significant influence on business decisions relating to investments and innovation to sustain the European climate policy.

There is a temptation to set a price floor to offset such negative impact. However imposing a minimum price per allowance is not an option because it would be against the very principle of the carbon market.

The EU Climate Commissioner Connie Hedegaard has rejected calls to introduce a floor price

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<sup>3</sup> European Energy Review, 29 November, 2010.

<sup>4</sup> Corporate Europe Observatory, Lobby for industrial gas offset ban, April 2011.

on the ground that it would lead to a “politically oriented system”. She is reported to have said “if you start to toy with that idea, then you will also have a ceiling and very soon you will not have a market driven system”.

The EU MEP Roger Helm shares the Commissioner position but for different reasons: “we talk about re-balancing the economy towards manufacturing and in the same breath, propose a floor price for carbon”.

Other avenues are explored to make the ETS more attractive. For instance, the European Parliament’s industry committee is proposing to set aside an unspecified number of allowances in the 2013-2020 phase of the EU ETS in order to raise the carbon price.

The political and economical environment is such that other sectors of activities linked to the European climate policy are also impacted. It is the case of combined cycle gas power stations which are on the verge to be non-profitable whereas they are essential to secure electricity supply to compensate for the intermittency of wind and solar power. Should capacity subsidies be put in place to sustain their operation?

## **| Impact of EU ETS on long term investment and innovation**

The objective of a climate policy should be to create a credible “investment grade” framework to guide private economic decisions. For expensive, long term projects, what matters are expectations about future carbon scarcity. The credibility of the targets is essential and there is instead a debilitating uncertainty about the carbon market.

Interviews<sup>5</sup> with manufacturing firms in six European countries indicate that:

- Companies don’t consider carbon allowances as a financial asset providing opportunities;
- A majority of the 446 EU ETS participants interviewed do not trade on the allowance market;
- Firms expect an average carbon price of EUR 40 for the post-2012 trading period, hence tighter caps for phase 3 starting in 2013;
- Firms within the EU ETS which are just below the threshold established for free allowances are engaging more strongly in climate change related product innovation than firms that are just above the threshold.

## **| Carbon leakage**

There is a carbon leakage, according to EU directive 2003/87/EC where a sector or sub-sector cannot increase prices to pass on costs derived from ETS, without significant loss of market share to less carbon efficient installations outside the Community. Both direct costs, resulting from the purchase of allowances and indirect costs, resulting from higher electricity prices are taken into account in order to assess this exposure.

In December 2009, the Commission published the list of these sectors. Most of them qualify because of their exposure to international trade. Only the manufacturing of cement and lime qualify because production costs will increase more than 30% due to ETS.<sup>6</sup>

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<sup>5</sup> Ralf Martin, Mirabelle Muuls, Ulrich Wagner, Imperial College London, London School of Economics and Center for Economic Performance, Universidad Carlo 3 de Madrid.

<sup>6</sup> Market efficiency in the EU emissions trading scheme, a tool for the third trading period, Mirzha de Manuel, College of Europe, department of European Economic Studies.

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In total 25% of emissions covered by ETS qualify for free allocation of allowances due to carbon leakage. Actually 77% of the industrial sector which represents 35% of GHG emissions covered by ETS is at risk of carbon leakage.

Currently three actions have been devised to confront carbon leakage in the EU:

- First, sectors and sub-sectors significantly exposed to carbon leakage qualify for support in the form of free allocation of allowances that would otherwise be auctioned;
- Second, the sectors affected might receive financial support from the Member States to compensate the increase in the cost of electricity brought by the ETS;
- Third, the EU will consider the suitability of including importers within the emission trading scheme.

*And what about extending ETS to airlines?*

An European directive imposes to all airlines entering the European airspace to buy the equivalent of 15% of their CO<sub>2</sub> emissions.

In response to Beijing (February 2012) forbidding its carriers to complying with this scheme, Brussels insisted that non-complying airlines will face heavy fines and even bans on operating in Europe. China replied that it will consider necessary steps in accordance with the ways things develop to protect the rights of their national companies.

Americans, Chinese, Russians and Indians are considering retaliation measures such as taxes, cutting of airbus orders and over-flight fees against European airlines. Jos Delbeke, the European Commission's director-general for climate said that the EU would only agree to suspend inclusion of aviation in the ETS if a new ICAO (international civil aviation organization) scheme met three conditions:

- it must deliver more emissions reductions than the ETS on its own;
- it must have targets and concrete measures;
- and any action must be non-discriminatory and apply to all airlines.

Thomas White, the deputy chief of the US mission to the EU, said the US could not accept a tax on its airlines and that the inclusion of foreign airlines in the ETS amounted to a breach of sovereignty.

Moreover countries opposed to the inclusion of foreign airlines in the EU ETS signed in February 2012 a declaration condemning the European legislation and outlining options for retaliating action against the EU. The 29 countries including the US, China and India, met for two days in Moscow to explore ways to persuade the EU to abandon this carbon tax legislation for airlines. But the EU sticks to its position and only concedes that it "will review its regulation the day there is an ambitious global agreement in force".

This is one more example of the EU irrational climate policy. In the trade-off of climate and economy, the EU is choosing to jeopardize the competitiveness of its companies badly needing a wealthy air transport sector.

For the sake of a climate leadership and ideological policy, is the EU ready to fight against the rest of the world?

## **| Carbon fraud**

EU ETS scheme was meant to be the key to facilitating reduction of carbon emissions. To start with, it is amazing that the Commission promoted a financial system to foster decarbonisation whereas financial tools are blamed for wrecking havoc in the world economy

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through speculation and illegal operations.

The ETS is no exception in that respect! By creating a market where carbon emission allowances can be traded, the Commission took the risk of fraudulent misuses of the system. That is exactly what is happening through various avenues.

### **| VTA carousel fraud**

The fraudulent companies are alleged to have purchased carbon credits from overseas VAT-free sources and sold them on to business at VAT-inclusive prices. But VAT charged is never paid to the fiscal administration. This type of organized crime is not new and has been operated for many years in different sectors of the economic life. The result is a quick and difficult to trace profit. Part of the problem is that trading in the ETS happens over several different registries making transactions and authentic allowances difficult to verify.

Why did then the EU implement such a system for boosting a policy which is supposed to be clean?

The tax fraud is estimated today at more than EUR 5 billion.

### **| Cyber attacks on the ETS**

where the system is weakest: some national electronic registries. Through fake registries and prompting users to log on to their website, fraudsters called “phishers” get users identification codes to carbon registries. They would then use this information to carry out transactions in the corresponding national registries. On December 2011, Europol estimated up to 90% of market volume was fraudulent in some countries.

### **| Credit recycling**

Within the CDM, credit recycling also referred to as double counting, consists of selling the same credits on both the voluntary and the CDM markets.

### **| Hacking on the spot market**

It deals with hacking into computer systems and selling the allowances on the spot market against cash payments.

Stolen permits from a Czech firm in January 2011 prompted spot trading to close for nearly two weeks. The hackers sold over EUR 7 million in emission permits from Blackstone Global Ventures. In Greece hackers got onto the server system of the university of Patras and then stole EUR 4 millions in credits from the cement company Halyas.

Based on the experience of the failing first two phases of the ETS scheme, the Commission is going for a major overhaul of the system including the CDM, to better achieve the EU target of reducing GHG emissions.

However continuous adjustments are not contributing to increase the confidence in the system because they worsen the perception of the system as a stable policy framework in the long term which is precisely needed for investments.

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## 2 | What about a carbon tax instead of the EU ETS?

Although a carbon tax might seem a transparent and easier to apply system to modify industry's and consumers' behaviour, it is doubtful that it would serve the purpose of its implementation. Indeed such an additional tax:

- is inflationary;
- would not promote territorial manufacturing of "green" products because of competition from emerging countries;
- would harm energy intensive industry;
- would not be easily accepted by democratic electorates;
- is not proven to be effective for stimulating innovation or reducing energy demand;
- could be used in some European countries to fuel the public treasury eager to find new sources of revenue, especially in a period of prolonged crisis.

To extend such tax to the EU requires unanimity approval by EU Member States which gives a lot of influence to countries that are traditionally cool on EU tax ideas, such as UK and Ireland.

## 3 | Conclusions

The EU ETS scheme displays major flaws:

**A surplus of allowances** from the second phase of the scheme which can be used in the third phase. As a consequence, many CO<sub>2</sub> emitters do not need to take action domestically apparently until 2017 or so. Cancellation of surplus allowances would arouse very strong opposition and implies to overcome many obstacles. Incidentally proposals to curtail those surpluses were discussed while drafting EU 2050 roadmap and have been watered down.

**This surplus of allowances as well as other factors such as the economic crisis have pushed down carbon prices.** Today one allowance is traded way below the EUR 25 to 40 considered as necessary to have a significant influence on business decisions.

Imposing a floor price to make the system more attractive is however not an option because it would lead to a politically regulated system. As Connie Hedegaard put it: "If you start to toy with the idea then you will also have a ceiling and very soon you will not have a market driven system anymore."

Another objection is voiced by EU MEP Roger Helm: "we talk about re-balancing the economy towards manufacturing and in the same breath propose a floor price."

**The incorporation into the EU ETS scheme of the Clean Development Mechanism**



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**(CDM) as an offset**, is also controversial. The CDM allows companies to invest up to 50% of their emissions cuts via offsets in projects in developing countries that reduce carbon emission. This mechanism:

- does not ensure sufficient transparency and quality of the projects;
- is financing projects that would have gone ahead in any case;
- creates incentives to exaggerate estimates of “business as usual” emissions in order to win greater credits from subsequent emissions.

**Cap and trade is untested** in the international context; it has been unable to attain anything close to universal participation.

**EU ETS is also likely to induce energy intensive industrial companies to move to countries with less stringent rules, the so-called carbon leakage, all the more so when allowance price is high.** On the contrary when the price is too low, the incentive is insufficient to convince firms to invest and innovate in the field of CO<sub>2</sub> reduction.

This is a trade-off between climate policies and competitiveness. Europe cannot act alone in an effort to achieve global de-carbonization.

In a May 2010 study, the Commission estimated that the 20% CO<sub>2</sub> cut by 2020, would cost EUR 48 billion per year.

**The ETS scheme as well as other incentives promoting renewable energy fail to increase CO<sub>2</sub> abatement** because of increasing energy needs and building of new thermal power plants such as 60 new coal fired power stations on the drawing board or under construction.<sup>7</sup>

**Different types of carbon fraud** are spoiling the credibility of the ETS and causing big financial prejudices: VAT carousel, cyber attacks, credit recycling, hacking on the spot market, just to name a few.

The basic driver of the 20/20/20 European climate change programme is the drastic reduction of man-made CO<sub>2</sub> emission which according to IPCC (International Panel on Climate Change) is the cause of world temperature increase since the beginning of the industrial era. The EU ETS is a centre piece of this policy. In spite of adjustments of the scheme, it has failed to contribute efficiently to the European climate policy.

Hence the question is, should the EU ETS keep expanding or even is it rational to maintain the scheme while other parts of the world fail to develop their own abatement mechanism?

Wouldn't it be possible to radically reframe the “climate” approach by accepting that an European climate policy can be achieved successfully as a benefit contingent upon other goals that are politically attractive and more pragmatic? In other words, couldn't a environment responsible programme be worked out by promoting energy saving, efficiency improvements and alternative energy production through technological breakthroughs and innovations without the EU ETS scheme displaying so many shortcomings? Such a policy would be simpler, more transparent and more coherent.

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<sup>7</sup> *European Voice*, 18-24 February 2012.

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More globally, the EU should reconsider its policy to switch its domestic energy base away from carbon emitting sources in the absence of a *global* climate-change deal.

“If coordinated action on climate among global players fails to strengthen in the next few years the question arises how far the EU should continue with energy system transition oriented to de-carbonization”, the Commission says in a draft of its Energy Road Map 2050.<sup>8</sup>

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<sup>8</sup> The global warming policy foundation, October 20, 2011, The climate policy network, Green Agenda folds as governments retreat in all points.

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