

# EU action against climate change



## The EU Emissions Trading Scheme

2009 edition

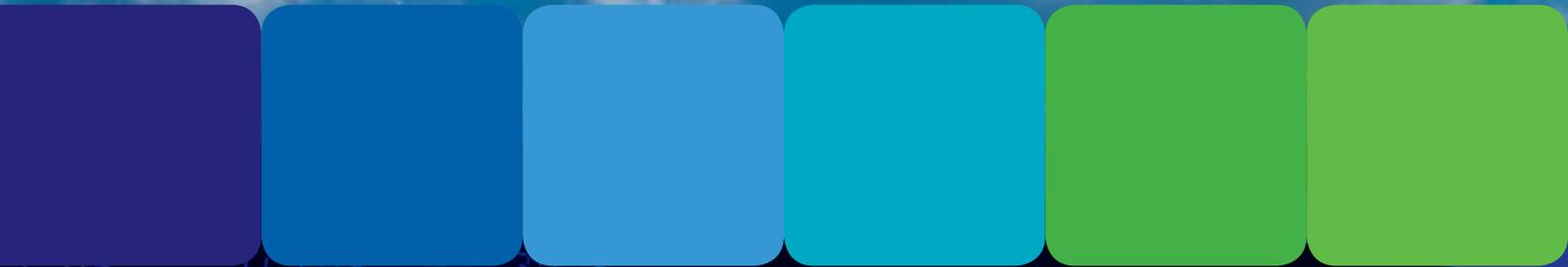
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## The EU Emissions Trading Scheme

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## Introduction

An open system for cutting greenhouse gas emissions and driving global innovation



The European Union is leading global efforts to reduce greenhouse gas emissions from human activities that are threatening to cause dangerous changes in the world's climate. As the cornerstone of its strategy for cutting its own greenhouse gas emissions cost-effectively, the European Union has developed the EU Emissions Trading Scheme (EU ETS).

Launched at the start of 2005, the EU ETS is the world's first international company-level 'cap-and-trade' system of allowances for emitting carbon dioxide (CO<sub>2</sub>) and other greenhouse gases. Building on the innovative mechanisms set up under the Kyoto Protocol - international emissions trading, the Clean Development Mechanism (CDM) and Joint Implementation (JI) – the mandatory system has rapidly become the dynamo behind the expansion of the international carbon market.

By putting a price on each tonne of carbon emitted, the EU ETS is driving investment in low-carbon technologies. It has forced the cost of emissions onto the agenda of company boards, thus marshalling the ingenuity and creativity of the business community in finding innovative and least-cost ways to fight climate change. The system has spawned a host of related new service sectors such as carbon trading, carbon finance, carbon management and carbon auditing.

The EU ETS should allow the European Union to achieve its emission reduction target under the Kyoto Protocol at a cost of below 0.1 % of GDP, significantly less than would otherwise be the case. The system will also be key to meeting the EU's more ambitious emission reduction targets for 2020 and further into the future.

Besides providing a cost-effective means for EU-based industries to cut their own emissions, the EU ETS is also channelling substantial amounts of investment and clean technology to developing countries and economies in transition, thereby supporting their efforts to achieve sustainable development. This is happening because the system allows companies to use credits from emission-saving projects carried out under the CDM and JI to offset a proportion of their emissions.



The EU ETS has developed in several ways:

- Geographically, its scope has grown as the EU itself has enlarged to 27 Member States, and since the start of 2008 the EU's neighbours Iceland, Liechtenstein and Norway also participate in the system. To enlarge the international emissions trading market further, the EU ETS is open to establishing formal links with compatible mandatory cap-and-trade systems for greenhouse gases in other parts of the world.
- In terms of industry sectors, the EU ETS currently covers some 11,000 heavy energy-consuming installations in power generation and manufacturing. From 2012 it will be expanded to include emissions from air flights to and from European airports.
- After an initial three-year pilot phase of 'learning by doing,' tighter caps on emission allowances have been implemented for the 2008-2012 trading period which will make a substantial contribution to EU Member States' achievement of their Kyoto Protocol targets.
- In 2013 a revamp of the EU ETS will take effect which will strengthen, expand and improve its functioning. This will enable the scheme to play a central role in the achievement of the EU's emission reduction targets for 2020 and beyond, in line with Europe's future commitments under the international climate change agreement currently being negotiated.

Emissions trading is here to stay. It is proving itself to be a key instrument for reducing greenhouse gas emissions cost-effectively and driving the shift towards the low-carbon economy of the future. This brochure explains how the EU ETS works and the main changes that will take effect in 2013.

## Principles of the EU ETS



The EU Emissions Trading Scheme (EU ETS) is based on the recognition that creating a price for carbon offers the most cost-effective way to achieve the deep reductions in global greenhouse gas emissions that are needed to prevent climate change from reaching dangerous levels.

The system, established through binding legislation<sup>1</sup> proposed by the European Commission and approved by the EU Member States and the European Parliament, is based on four fundamental principles.

- It is a 'cap-and-trade' system
- Participation is mandatory for businesses in the sectors covered
- It contains a strong compliance framework
- The market is EU-wide but taps into emission reduction opportunities in the rest of the world by accepting credits from emission-saving projects carried out under the Kyoto Protocol's Clean Development Mechanism (CDM) and Joint Implementation instrument (JI). The EU ETS is also open to establishing formal links with compatible mandatory cap-and-trade systems in third countries that have ratified the Kyoto Protocol.

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<sup>1</sup> Directive 2003/87/EC

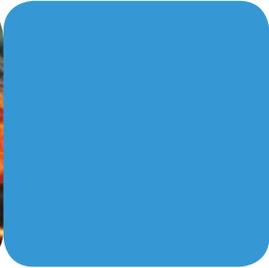
## Implementation in phases



The EU ETS is being implemented in distinct phases or 'trading periods.'

- **Phase 1**, from 1 January 2005 to 31 December 2007, was a three-year pilot phase of 'learning by doing' in preparation for the crucial phase 2. It successfully established a price for carbon, free trade in emission allowances across the EU and the necessary infrastructure for monitoring, reporting and verifying actual emissions from the businesses covered. The generation of verified annual emissions data filled an important information gap and created a solid basis for setting the caps on national allocations of allowances for phase 2.
- **Phase 2**, running from 1 January 2008 to 31 December 2012, coincides with the 'first commitment period' of the Kyoto Protocol – the five-year period during which the EU and its Member States must comply with their emission targets under the Protocol. The 2005-2007 pilot phase was necessary to ensure that the EU ETS contributes fully to the achievement of these targets by functioning effectively during phase 2. On the basis of the verified emissions reported during phase 1, the Commission has cut the volume of emission allowances permitted in phase 2 to 6.5% below the 2005 level, thus ensuring that real emission reductions will take place.
- **Phase 3**, will run for eight years, from 1 January 2013 to 31 December 2020. This longer trading period will contribute to the greater predictability necessary for encouraging long-term investment in emission reductions. The EU ETS will be substantially strengthened and extended from 2013, enabling it to play a central role in the achievement of the EU's climate and energy targets for 2020 (see page 11).

## Emission allowances



At the heart of the EU ETS is the common trading 'currency' of emission allowances. One allowance gives the right to emit one tonne of CO<sub>2</sub>. Member States are currently required to draw up national allocation plans for each trading period setting out how many allowances each installation will receive each year. Decisions on the allocations are made public.

The limit or 'cap' on the total number of allowances creates the scarcity needed for trading.

Companies that keep their emissions below the level of their allowances can sell their excess allowances at a price determined by supply and demand at that time. Those facing difficulty in remaining within their allowance limit have a choice between several options. They can take measures to reduce their emissions (such as investing in more efficient technology or using a less carbon-intensive energy source); they can buy extra allowances and/or CDM/JI credits on the market; or they can use a combination of the two. This flexibility ensures that emissions are reduced in the most cost-effective way.

So far most allowances have been allocated to installations free of charge — at least 95 % during the initial phase and at least 90 % in phase 2 from 2008 to 2012. Though only businesses covered by the EU ETS are given allowances, anyone else — individuals, institutions, non-governmental organisations or whoever — is free to buy and sell in the market in the same way as companies.



## How does emissions trading benefit companies and the environment?

Companies A and B both emit 100 000 tonnes of CO<sub>2</sub> per year. Let us say their governments give each of them emission allowances for 95 000 tonnes, leaving them to find ways to cover the shortfall of 5 000 allowances. This gives them a choice between reducing their emissions by 5 000 tonnes, purchasing 5 000 allowances in the market or taking a position somewhere in between. Before deciding which option to pursue they compare the costs of each.

Let us imagine that the market price of an allowance at that moment is € 20 per tonne of CO<sub>2</sub>. Company A calculates that cutting its emissions will cost it € 10 per tonne, so it decides to do this because it is cheaper than buying the necessary allowances. Company A even decides to take the opportunity to reduce its emissions not by 5 000 tonnes but by 10 000. Company B is in a different situation. Its reduction costs are € 30 per tonne, i.e. higher than the market price, so it decides to buy allowances instead of reducing emissions.

Company A spends € 100 000 on cutting its emissions by 10 000 tonnes at a cost of € 10 per tonne, but then receives € 100 000 from selling the 5 000 allowances it no longer needs at the market price of € 20 each. This means it fully offsets its emission reduction costs by selling allowances, whereas without the emissions trading scheme it would have had a net cost of € 50 000 to bear (assuming that it cut emissions by only the 5 000 tonnes necessary).

Company B spends € 100 000 on buying 5 000 allowances at a price of € 20 each. In the absence of the flexibility provided by the ETS, it would have had to cut its emissions by 5 000 tonnes at a cost of € 150 000. Emissions trading thus brings a total cost-saving of € 100 000 for the companies in this example. Since Company A chooses to cut its emissions (because this is the cheaper option in its case), the allowances that Company B buys represent a real emissions reduction even if Company B did not reduce its own emissions.

## A revised system from 2013



As part of a major package of initiatives agreed in 2008 to tackle climate change and increase the use of renewable energy, a substantial revision of the EU ETS will take effect from the start of Phase 3 on 1 January 2013.

This revamp, which follows a comprehensive review of the system's operation since it began, makes the ETS a key instrument in reaching the EU's goal of becoming a highly energy-efficient, low greenhouse gas-emitting economy.

The EU is committed to reducing its overall emissions by at least 20% of 1990 levels by 2020, and by up to 30% if other developed countries commit to comparable reductions under a new global climate agreement (see the brochure ***EU action against climate change: Leading global action to 2020 and beyond***). By 2020 the EU also aims to get 20% of its energy from renewable energy sources and, by improving energy efficiency, to reduce its energy consumption to 20% below projected levels.

The revised EU ETS that will operate from 2013 will have more harmonised rules, will offer increased predictability to market operators and will enjoy stronger international credibility. The main changes are:

- A modest broadening of the scope of the system (in addition to the inclusion of aviation from 2012) to bring in certain additional industries and greenhouse gases, as well as installations undertaking the capture, transport and geological storage of CO<sub>2</sub> emissions;

- The replacement of the current system of national caps on emission allowances by a single cap on allowances for the whole EU;
- A linear 1.74% reduction in the cap on allowances each year until 2020 and beyond. This means that by 2020 the number of emission allowances will be 21% below the 2005 level. The up-



front announcement of this linear reduction provides market operators with the clarity and predictability needed to make the necessary investments in emission reductions;

- A progressive move towards full auctioning of allowances in place of the current system of cost-free allocation. From 2013 at least 50% of allowances will have to be bought at auction and the aim is to reach full auctioning by 2027. Exceptions can be made for specific energy-intensive industries where it is judged that having to buy all allowances would damage their international competitiveness;
- More harmonised rules on monitoring, reporting and verification of emissions. These will enhance the reliability and credibility of the scheme;
- The possibility to link the EU ETS to mandatory cap-and-trade systems in third countries not only at national level but also at regional or state level;
- Harmonised rules on the use of carbon credits from CDM and JI projects in third countries. These rules are designed in a way that encourages third countries to ratify the future global climate agreement;
- The possibility for Member States to exclude from the system small installations emitting relatively low amounts of CO<sub>2</sub> provided these installations are subject to measures that will have an equivalent effect on their emissions.

These changes are explained in further detail in the sections that follow.

## What the EU ETS covers



While emissions trading has the potential to involve many economic sectors and greenhouse gases, the focus of the EU ETS is on emissions which can be measured, reported and verified with a high level of accuracy.

In the first trading period, from 2005 to 2007, the scheme covered CO<sub>2</sub> emissions from high-emitting installations in the power and heat generation industry and in selected energy-intensive industrial sectors: combustion plants, oil refineries, coke ovens, iron and steel plants and factories making cement, glass, lime, bricks, ceramics, pulp and paper.

In the second trading period, from 2008 to 2012, emissions of nitrous oxide from the production of nitric acid are also included. In addition, from 1 January 2008 the geographical coverage of the EU ETS has been extended beyond the 27 EU Member States to include Iceland, Liechtenstein and Norway.

In some cases, a size threshold based on production capacity or output determines which individual plants in the sectors covered must participate in the system. At present some 11,000 installations in the EU are included, accounting for around 50 % of the EU's total CO<sub>2</sub> emissions and about 40 % of its overall greenhouse gas emissions.

**From 2012** the EU ETS will also include CO<sub>2</sub> emissions from civil aviation. This means airlines of all nationalities will need allowances to cover the emissions from their flights to, from or within the EU. Using emissions trading to tackle the fast-growing emissions from the aviation sector is fully in line with the EU's international obligations and with decisions taken by the 2004 assembly of the International Civil Aviation Organization.

# ETS allowances per country 2005-2012

Country****	Kyoto target (% change against base year)	2005 - 2007		2008 - 2012	
		Allocated CO <sub>2</sub> allowances (million tonnes per year)	Share in ETS	Allocated CO <sub>2</sub> allowances (million tonnes per year)	Share in ETS
Austria	-13%*	33.0	1.4%	32.3	1.5%
Belgium	-7.5%*	62.1	2.7%	58.0	2.8%
Bulgaria	-8%	42.3**	1.8%	42.3***	2.0%
Cyprus	-	5.7	0.2%	5.2	0.3%
Czech Republic	-8%	97.6	4.2%	86.7	4.2%
Denmark	21%*	33.5	1.4%	24.5	1.2%
Estonia	-8%	19	0.8%	11.8	0.6%
Finland	0%*	45.5	2.0%	37.6	1.8%
France	0%*	156.5	6.8%	132.0	6.3%
Germany	-21%*	499	21.7%	451.5	21.6%
Greece	+25%*	74.4	3.2%	68.3	3.3%
Hungary	-6%	31.3	1.4%	19.5	0.9%
Ireland	+13%*	22.3	1.0%	22.3	1.1%
Italy	-6.5%*	223.1	9.7%	201.6	9.7%
Latvia	-8%	4.6	0.2%	3.4	0.2%
Lithuania	-8%	12.3	0.5%	8.6	0.4%
Luxembourg	-28%*	3.4	0.1%	2.5	0.1%
Malta	-	2.9	0.1%	2.1	0.1%
Netherlands	-6%*	95.3	4.1%	86.3	4.1%
Poland	-6%	239.1	10.4%	205.7	9.9%
Portugal	+27%*	38.9	1.7%	34.8	1.7%
Romania	-8%	74.8**	3.2%	73.2	3.5%
Slovakia	-8%	30.5	1.3%	32.5	1.6%
Slovenia	-8%	8.8	0.4%	8.3	0.4%
Spain	+15%*	174.4	7.6%	152.2	7.3%
Sweden	+4%*	22.9	1.0%	22.4	1.1%
UK	-12%*	245.3	10.7%	245.6	11.8%
Liechtenstein	-8%			0.2	0.0%
Norway	+1%			15.0	0.7%
<b>Total</b>		<b>2298.5</b>	<b>100%</b>	<b>2086.50</b>	<b>100.0%</b>

\* Under the Kyoto Protocol, the EU-15 (the group of 15 countries that were EU Member States before 2004) are committed to reducing their collective greenhouse gas emissions to 8 % below levels in a chosen base year (1990 in most cases) during 2008–12. This collective target has been translated into differentiated national targets, marked by (\*), through a legally binding agreement (Council Decision 2002/358/EC of 25 April 2002). The 12 Member States that joined the EU in 2004 and 2007 have their own binding national targets under the Kyoto Protocol with the exception of Cyprus and Malta, which have no targets.

\*\* Only for 2007

\*\*\* Provisional

\*\*\*\* Iceland is part of the EU ETS but at present none of its installations participate.

**From 2013** the scope of the EU ETS will be further extended to cover: installations undertaking the capture, transport and geological storage of greenhouse gases; CO<sub>2</sub> emissions from the petrochemicals, ammonia and aluminium sectors; nitrous oxide emissions from the production of nitric, adipic and glyoxylic acid; and perfluorocarbon emissions from aluminium production.

At the same time, it will become possible for governments to exclude small installations from the EU ETS if fiscal or other measures are in place that will achieve an equivalent reduction in their emissions.

These changes in scope are expected to bring into the system net additional emissions equivalent to 120-130 million tonnes of CO<sub>2</sub> per year from 2013, extending the coverage of the EU ETS from around 40% to 43% of total EU greenhouse gas emissions.



## National allocation plans

Member States' national allocation plans (NAPs) have to be based on objective and transparent criteria, including a set of common rules that are laid down in the legislative framework establishing the EU ETS. The most important of these rules are:

- An allocation plan has to reflect a Member State's Kyoto target as well as its actual and projected progress towards meeting it. The total quantity of allowances allocated is key. Allocating too many allowances would mean that greater efforts to cut emissions would have to be taken in economic sectors not covered by the EU ETS, in potentially less cost-effective ways.
- The allocations to each installation must take account of its potential for reducing emissions from each of its activities, and must not be higher than the installation is likely to need.
- Where Member States intend to use CDM and JI credits to help them reach their national emissions target, these plans must be substantiated, for example through budgetary provisions to buy the credits.

The European Commission has issued specific guidance on the application of these rules by Member States for the first<sup>2</sup> and second<sup>3</sup> trading periods.

<sup>2</sup> Commission Communication COM(2003) 830

<sup>3</sup> Commission Communication COM(2005) 703 final

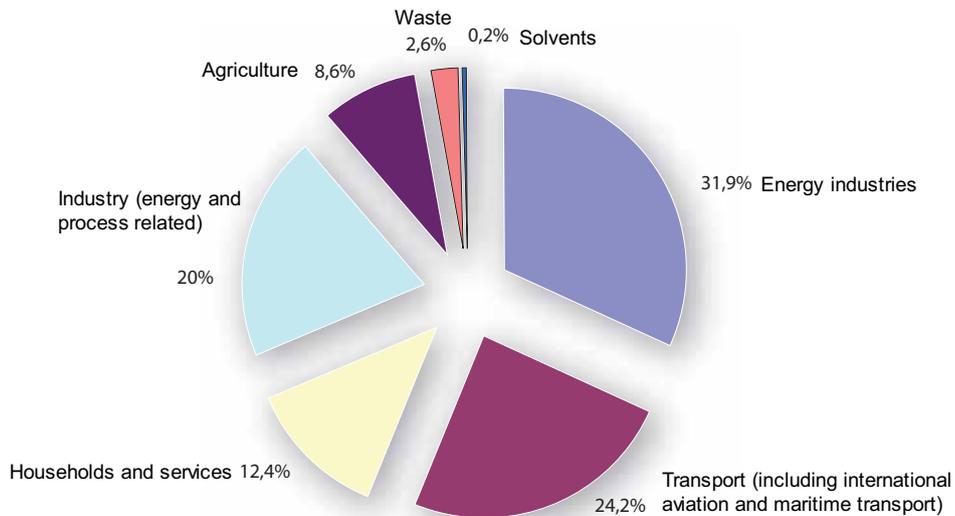
The Commission has assessed NAPs on the basis of these rules, as well as EU rules on state aid and competition, and in many cases has required changes, in particular reductions in the total number of allowances.

On the basis of verified emissions data for 2005 collected as a result of the EU ETS monitoring, reporting and verification requirements – the first time such data have been available – the Commission has taken a strict approach to NAPs for 2008-2012 to help ensure that Member States meet their Kyoto targets. The total number of allowances for phase 2 has been cut to 6.5% below the level of 2005 emissions.

Once the European Commission approves a national plan, the total quantity of allowances cannot be changed; neither can the number of allowances given to each installation be changed once a Member State has finalised its allocation.



**Total EU-27 greenhouse gas emissions by sector, 2007**



Source: European Environment Agency, based on provisional 2007 data

## Allocation of allowances from 2013

Under the revision of the EU ETS that will take effect in 2013, a single EU-wide cap on emission allowances will replace the current system of 27 national caps implemented through national allocation plans (NAPs).

Experience gained from Phase 1 of the EU ETS indicates that this more harmonised approach will provide stronger guarantees that the EU's greenhouse gas emission reduction targets for 2020 will be achieved. It should also be more effective in minimising the cost of meeting the targets.

The single EU cap on allowances needs to be set at a level that is both cost-effective and consistent with achieving the emission reduction targets. The cap will start at the mid-point of the 2008 to 2012 period and be reduced in a linear fashion by 1.74% each year until 2020 and beyond. This means that by 2020 the number of allowances available will be 21% below the level of verified emissions in 2005, thus making a very substantial contribution to the attainment of the EU's overall greenhouse gas emission targets for that year.

This clear up-front announcement of the size and frequency of the cap's reduction for many years ahead provides market operators with a long-term perspective and the necessary predictability on which they can base decisions to invest in emission reductions.

Auctioning will become the basic principle for allocating allowances from 2013, in place of the current system whereby the vast majority of allowances is given away for free by governments. This change reflects the fact that auctioning creates a stronger incentive for businesses to take early action to reduce emissions, complies better with the 'polluter pays' principle and will increase the efficiency, transparency and simplicity of the EU ETS.

The power generation sector will in principle have to buy all of its allowances from 2013 since experience shows that power generators have been able to pass on the notional cost of emission allowances to their customers even when they are free. However under certain conditions some Member States will have the option of derogating from this rule temporarily for existing power plants. They will be able to grant such plants up to 70% of their allowances for free in 2013, but this proportion will have to decrease progressively to zero in 2020.

Installations undertaking the capture, transport and geological storage of greenhouse gases will also have to buy all of their allowances from 2013 but will not have to surrender allowances for the emissions stored.



For other sectors there will be a progressive transition to auctioning, starting with a 20% share of allowances auctioned in 2013 and rising to 70% in 2020 with a view to reaching full auctioning by 2027. However, exceptions to the principle of auctioning could be made for certain energy-intensive industries if their competitiveness were judged to be at risk (see box below).

Given the significant weight of power generation in the EU ETS, it is estimated that more than 50% of total allowances will be auctioned from 2013.

Auctions will be held by national governments but will be open to buyers from anywhere in the EU. The Commission will adopt rules on the design and execution of auctions by 30 June 2010 to ensure they are carried out in an open, transparent and non-discriminatory way.

88% of the allowances to be auctioned will be distributed among Member States on the basis of their share of verified emissions from EU ETS installations in 2005. 10% will be distributed only to the least wealthy Member States as an additional source of revenue to help them invest in reducing the carbon intensity of their economies and adapting to climate change. The remaining 2% will be distributed as a 'Kyoto bonus' to Member States which by 2005 had reduced their greenhouse gas emissions by at least 20% of levels in their Kyoto Protocol base year (Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia).

It is estimated that auctioning could raise an EU-wide total of €30-50 billion per year by 2020, depending on the carbon price. Governments have agreed that they should use at least 50% of this income to combat climate change, in both Europe and developing countries.



## Preventing 'carbon leakage'

Exceptions to the auctioning of emission allowances could be made for energy-intensive industries if their competitiveness were judged to be at risk due to laxer emission constraints in other parts of the world.

This could be the case if, for instance, no satisfactory global climate agreement were reached or if some third countries decided not to adhere to it. Such a development could tempt Europe-based industries to relocate to less carbon-constrained jurisdictions with the result that European jobs would be lost and global greenhouse gas emissions would increase - a phenomenon known as 'carbon leakage'.

To prevent this, energy-intensive sectors and sub-sectors that are deemed to be at significant risk of carbon leakage will be allowed to continue receiving all of their allowances for free, on condition that they use the most efficient technology to limit emissions.

The sectors and sub-sectors judged to be potentially at risk will be determined by the Commission by the end of 2009 on the basis of an agreed set of criteria. The Commission will then reassess the situation in the light of a new global climate agreement and propose any adjustments considered necessary. These proposals could, for example, involve adjusting the proportion of allowances that sectors should receive free of charge, or extend the EU ETS to cover importers of products competing with those from European sectors considered at risk of carbon leakage.

## Ensuring compliance



Appropriately for a market-based instrument that puts a price on carbon, the EU ETS incorporates a robust framework of measures to ensure compliance that also gives a central role to economic incentives.

After each calendar year, installations must surrender a number of allowances equivalent to their verified CO<sub>2</sub> emissions in that year. These allowances are then cancelled so they cannot be used again. Those installations with allowances left over can sell them or save them for future use.

Installations that do not surrender enough allowances to cover their emissions in the previous year are penalised. They have to obtain additional allowances to make up the shortfall in the following year, are 'named and shamed' by having their names published, and must pay a dissuasive fine for each excess tonne of CO<sub>2</sub> emitted. The penalty, set initially at € 40 per tonne, is now € 100 per tonne. From 2013 it will rise in line with the annual rate of inflation in the Eurozone (the group of EU countries using the euro as their currency).

Some Member States have also laid down additional dissuasive sanctions at national level for any infringements of the EU ETS rules.

## Monitoring, reporting and verifying emissions

Each installation in the EU ETS must have a permit from its competent authority for its emissions of all six greenhouse gases controlled by the Kyoto Protocol. A condition for granting the permit is that the operator is capable of monitoring and reporting the plant's emissions. A permit is different from an allowance: the permit sets out the emission monitoring and reporting requirements for an installation, whereas allowances are the scheme's tradable unit.

Operators must report their emissions of the greenhouse gases covered by the EU ETS after each calendar year. The European Commission has issued a set of monitoring and reporting guidelines<sup>4</sup> to be followed.

The reports have to be checked by an independent verifier on the basis of criteria set out in the ETS legislation, and are made public. Operators whose emission reports for the previous year are not verified as satisfactory are not allowed to sell allowances until a revised report is approved by a verifier.

Experience has shown some divergence in Member States' monitoring, reporting and verification practices. To address this, and thereby strengthen the functioning and credibility of the EU ETS, the current guidelines will be replaced by harmonised regulations from 2013. A benefit for verifiers is that they will be able to seek a single accreditation that is valid in all EU Member States.

## Transaction registries

Allowances are not printed but held in accounts in electronic registries set up by Member States. Through legislation the European Commission has set up a standardised and secured system of registries based on UN data exchange standards to track the issue, holding, transfer and cancellation of allowances. Provisions on the tracking and use of credits from CDM and JI projects in the EU system are also included.

The registries system is similar to a banking system which keeps track of the ownership of money in accounts but does not look into the deals that lead to money changing hands.

The system is overseen by a central administrator at EU level who, through an independent transaction log, checks each transaction for any irregularities. Any irregularities detected prevent a transaction from being completed until they have been remedied.

The EU registries system is linked to the international registries system used under the Kyoto Protocol.



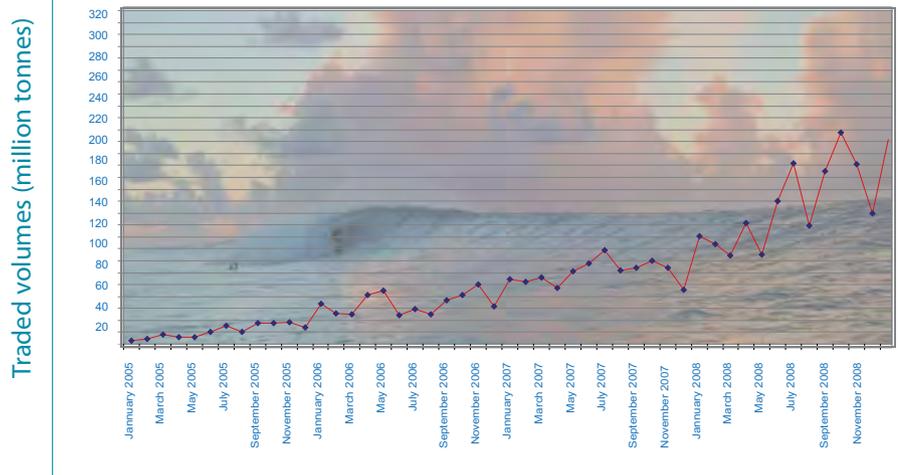
## Trading in practice

The legal framework of the EU ETS does not lay down how and where trading in allowances should take place. Companies and other participants in the market trade directly with each other or buy and sell through one of the several organised exchanges in Europe, or via any of the intermediaries that have sprung up to take advantage of this new market.

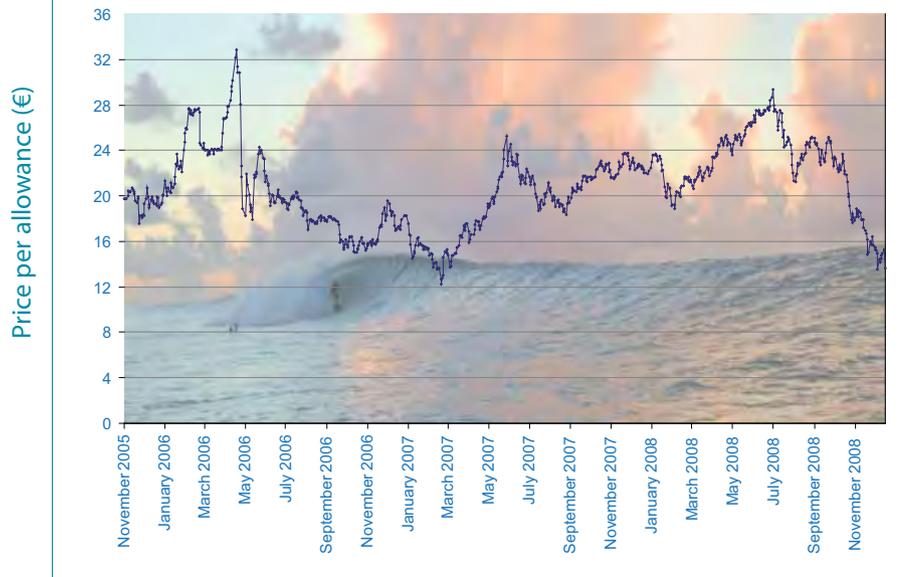
The price of allowances is determined by supply and demand. The market in allowances has developed strongly. In the scheme's first year of operation, 2005, at least 362 million allowances (tonnes of CO<sub>2</sub>) were traded, with a value of around €7.2 billion. Trading volume rose to 1 billion allowances in 2006, 1.6 billion in 2007 and almost 3.1 billion in 2008, according to Point Carbon, a consultancy which tracks and analyses the carbon market. European trading constituted some 73% of the global turnover in CO<sub>2</sub> allowances and credits, which was worth €92.4 billion in 2008.

The EU ETS has thus established itself as the engine of the global carbon market that is becoming a powerful tool for reducing greenhouse gas emissions cost-effectively.

## Traded volumes of EU allowances<sup>5</sup>



## Price of EU allowances<sup>6</sup>



<sup>5</sup> Represents volumes traded in organised exchanges and "over the counter", but not between ETS companies directly

<sup>6</sup> Allowances for 2008

## Creating demand for third-country credits



The Clean Development Mechanism (CDM) and the Joint Implementation (JI) instrument enable developed countries that have binding emission reduction or limitation targets under the Kyoto Protocol to invest in emission-saving projects in third countries. The emission credits generated by these projects can be purchased by companies in the EU ETS to offset a proportion of their emissions, in the same way as allowances.

The CDM covers projects in developing nations. Reductions are potentially eligible to receive credits called certified emission reductions (CERs). JI applies to projects in countries that have agreed to an emission target under the Protocol — industrialised countries and countries with economies in transition. JI projects yield credits known as emission reduction units (ERUs).

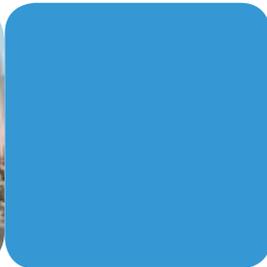
The EU ETS is the world's first trading system to recognise most of these credits as equivalent to emission allowances (1 EUA = 1 CER = 1 ERU) and allow them to be traded within the system<sup>7</sup>.

All credits except those from nuclear facilities and from land use, land-use change and forestry activities may be accepted.

The launch of the EU ETS three years before the start of the Protocol's first commitment period (2008-2012) thus provided certainty to investors in the rapidly emerging market for CDM and JI projects. This has encouraged additional investment in these projects, thus promoting the transfer of environmentally sound technologies to help the host countries meet their sustainable development goals.

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<sup>7</sup> Directive 2004/101/EC



For EU companies participating in the EU ETS, the recognition of CDM and JI credits increases the range of options available for limiting their emissions, improves the liquidity of the market and can potentially lower the price of allowances, thus reducing compliance costs.

The strong demand for emission credits has led major European banks and other financial institutions in both the private and public sectors to become active in providing finance for prospective emission reduction projects. In addition, many international carbon funds have been set up.

During Phase 2 from 2008 to 2012, businesses in the EU ETS are able to buy credits for a total of around 1.4 billion tonnes of CO<sub>2</sub> – a yearly average of 280 million tonnes – to help offset their emissions. (In addition, a number of EU governments plan to buy credits totalling around 550 million tonnes of CO<sub>2</sub> to help meet their Kyoto obligations, and have budgeted some €2.9 billion for these purchases. This use of credits is supplemental to their domestic action to limit emissions, as agreed by UNFCCC parties at Marrakech in 2001).

**From 2013**, rules on the use of credits will depend on the conclusion of a satisfactory international climate agreement for the post-2012 period. Until that is the case, operators will be able to carry over to Phase 3 any credits not used in Phase 2, plus a limited additional quantity. The overall effect will be that use of credits will be limited to no more than 50% of the EU emission reductions to be made between 2008 and 2020.

Once a satisfactory international agreement has been concluded, the European Commission may propose to allow additional access to credits as well as the use of any new types of project credits or other mechanisms created under the agreement. From January 2013 onwards, however, only credits from third countries that have ratified the new agreement or from new types of project approved by the Commission will be eligible for use in the EU ETS.

## Linking up with other emissions trading systems



The EU sees a key role for an effective global carbon market in helping to deliver cost-effectively the emission cuts that will be needed under a post-2012 climate agreement. Building this global market will require domestic carbon markets to be linked.

The EU ETS has been extended to Iceland, Liechtenstein and Norway since the start of 2008 and is open to linking with other compatible mandatory cap-and-trade systems that would not undermine its environmental integrity. The creation in 2007 of the International Carbon Action Partnership,<sup>8</sup> of which the European Commission and several EU Member States are founder members, will help to support this process.

The EU's vision is to create a carbon market among member countries of the Organisation for Economic Co-operation and Development (OECD) by 2015 and then to expand this to include the big emerging economies from around 2020. The company-level cap-and-trade systems that have been put in place in Switzerland, New Zealand and the north-eastern US states, the plans to set up such systems in Japan, Australia and California and the interest being shown in establishing a US federal system are all welcome developments in this context.

To support cap-and-trade systems around the world, the EU is sharing the lessons learnt from the EU ETS and the results of independent monitoring and evaluation with all interested parties and stakeholders.

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<sup>8</sup> [www.icapcarbonaction.com](http://www.icapcarbonaction.com)

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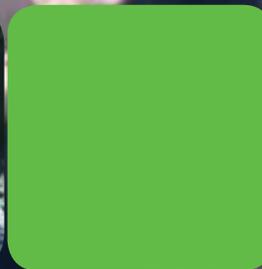


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