



PROPOSALS
for
ACCOUNTING OF
GHG EMISSION RIGHTS

reflecting companies' business models

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I - Introduction

The European Union Emissions Trading System (EU ETS) for trading in greenhouse gas emission rights (also simply called emission rights) was launched in 2005 to enable EU Member States to comply with the greenhouse gas emissions reduction target under the Kyoto Protocol - a 20% reduction on 1990 levels by 2020 (Directive 2003/87/EC of the European Parliament and of the Council of 13th October 2003).

It has paved the way for similar systems (in New Zealand and for a group of some American states and Canadian provinces, for example) and has been the catalyst for many projects.

This scheme, which is the first on this scale, manages a constraint obligation by combining an administrative-based mechanism and a market-based mechanism.

- The administrative-based mechanism:
 - o For the installations referred to in the regulations, the administration authority (the State) sets greenhouse gas emission targets which are tightened every year to enable the overall emissions reduction target to be achieved in 2020.
 - o The State has sole responsibility for allocating emission rights, each representing one tonne of greenhouse gases (also called GHG). These allocations were granted for free during the scheme's initial trading periods but, as from 2013, there will be a progressive increase of emission rights being auctioned by States.

- The market-based mechanism :
 - o Unlike with some administrative authorisation mechanisms, the State does penalize companies which exceed their authorised emission levels by applying discharging penalties to them.
 - o At the start of each year, companies emitting GHG must surrender emission rights to the State which account for their actual emissions for the previous year. As consideration for this, the State authorises the trading of emission rights on the market.
 - o Companies which exceed GHG emission levels are obliged to buy emission rights on the market to comply with their obligations.
 - o The scheme allows the market to set the cost of exceeding GHG emissions targets and this is seen as being more efficient than costs being set by the State.
 - o Penalties are only applied when companies do not comply with emission rights surrendering obligations and do not discharge them from these obligations.

Following the phase I and II trading periods, when almost all emission rights allocated by States were granted for free, the phase III (2013-2020) trading period will introduce many changes for the EU ETS:

- The gradual phasing out of free emission rights, with electricity producers not receiving any emission rights for free as from 2013.
- Only companies which could otherwise relocate ("carbon leakage") are temporarily exempted.

As from 2013, around 50% of emission rights will require payment.

- The move towards auctioning of emission rights. All emission rights not allocated for free will be auctioned. The auctions will be organised on a common platform and be open, transparent, harmonised and non-discriminatory. Should they wish, States may establish their own platform which must comply with strict rules on harmonisation and coordination.

GHG emitting industries will be faced with very different case scenarios, ranging from:

- No charge at all, where GHG emissions within the authorised limits do not lead to additional costs. The system works on the basis of a “bonus-malus” principle between GHG emitting companies.
- Systematic charges (electricity producers), where the first tonne of GHG emitted generates a new cost.

There are many case scenarios in between these two examples but **the phase III trading period will lead to new production costs based on GHG emissions, under the “polluter pays” principle.**

II - The specific nature of emission rights is not covered by literal accounting definitions

From an accounting angle, owing to their specific nature, emission rights cannot easily be covered by the literal accounting definitions of the different classes of assets.

2.1 Nature of the emission rights

The emission rights trading scheme is an innovative scheme for which the target should be distinguished from the measures implemented to achieve it.

- Its aim is to force European industries to reduce GHG emissions.
- To achieve this, instead of coming up with a system of taxes or penalties if authorised emission levels are exceeded, it was decided not to administratively limit emissions for each installation but to provide the market with a limited amount of emission rights and to allow it to set the price of GHG emissions.

As access to the emission rights market is free, they may be purchased ;

- either compulsorily to comply with emission-related obligations ;
- or voluntarily to be sold on to generate gains.

These innovative features raise issues in terms of:

- accounting classification ; and
- measurement.

2.2 Accounting classification

Emission rights are defined as assets (resources controlled as a result of past events and from which future economic benefits are expected to flow to the entity).

But they do not fully belong to any existing asset category.

2.2.1 They are not financial instruments

They fall outside the definition of financial instruments as they are not cash, an equity instrument nor a contractual right to exchange or receive cash or another financial asset.

2.2.2 They are not intangible assets

They also fall outside the definition of intangible assets as, although they are without physical substance, they do not have the features common to known intangible items (such as fishing quotas, software, taxi licences, reproduction rights), especially in the context of emission rights requiring payment. Indeed :

- Installations must have a greenhouse gas emissions permit to join the scheme. Where applicable, this multiannual permit may be considered as an intangible item if it also meets the recognition conditions for assets.
- This permit is clearly distinct from the emission rights which have to be purchased to account for GHG emissions.
- There are sanctions if obligations in terms of surrendering emission rights to the State are not complied with. These are in the form of fines, that do not discharge companies from surrendering the emission rights, but neither European legislation nor French law provide for shutting down installations if they breach their emission rights surrender obligations.
- In addition, since the start of the scheme (but even more visibly in the context of emission rights not allocated free of charge), emission rights have not had to be held prior to the start of the emission period. From this date until the date for surrendering emission rights to the State, companies may emit without holding the corresponding emission rights. GHG emissions are not illegal and there are no sanctions for not holding emission rights during this period. Companies simply have to surrender the emission rights accounting for their emissions to the State on the scheduled date.
- Therefore emission rights held by a company do not legally entitle it to carry out a GHG emitting activity. The holding of emission rights is simply the consequence of carrying out such activity. In spite of their name, emission rights may not be considered as a right to emit GHG.
- Owing to these features, emission rights differ from the items usually recognised as intangible assets (taxi licences, fishing quotas, software, patents, reproduction rights, etc.), which either guarantee or allow for an activity to be carried out for more than one period. Prior to the activity being carried out, the absence of these items either prevents such activity or makes it illegal and could lead to shutdown sanctions.
- **Therefore, emission rights may not be considered as intangible assets.**

2.2.3 They are not strictly speaking inventories of physical commodities

Although they must be purchased owing to the manufacturing activity, emission rights are virtually and not physically consumed in the manufacturing process, as they are without physical substance.

Nevertheless, under French accounting standards (Avis du Comité d'Urgence n° 2004-C of 23rd March 2004), and under IFRS (IFRIC 3 of December 2004, withdrawn in 2005), emission rights have been considered as intangible assets on the following grounds:

- Emission rights are items without physical substance.
- As, at the start of the period, the State allocated a number of emission rights on the basis of GHG emission forecasts for the coming period to the relevant operators, allocated allowances have been considered as assets guaranteeing the course of business over the same period.

From now on, in the context of emission rights paid for by emitting companies, this logic is no longer applicable as companies can purchase emission rights when they see fit. Consequently, a new economic approach has to be proposed.

Furthermore, under IFRS, a uniform measurement of purchased allowances, regardless of the use they are put to, would be irrelevant.

2.2.4 Measurements

- Measurement of emission rights at cost is appropriate for companies which are obliged to purchase emission rights owing to their manufacturing activity. However, it does not accurately reflect the risks taken by using emission rights as a market instrument.
- On the contrary, measurement of emission rights at market value is appropriate within a financial approach, but it induces unjustified volatility for companies which are obliged to purchase emission rights.

III - Accounting standards do provide an answer by taking an economic approach

The issue of classification and homogenous measurement based on the uses of an asset is nothing new and accounting standards have provided for scenarios where the recognition and/or measurement methods may depend on the use to which a given item is put.

This is the case :

- for IAS 2 (Inventories) which provides that brokers may measure their inventories at fair value, whereas the same inventories used for a manufacturing activity are always measured at cost.
- with IAS 39 requirements for contracts to purchase at a fixed price which are usually considered as derivatives, unless they are physically settled for the company's own use, in which case they are not considered as derivatives (IAS 39.6).

Thus, identified scenarios reflecting common practices do exist, in which different recognition rules according to the use by the company and its business model apply to the same item (physical inventory, contract), owing to the inconsistencies in presenting financial statements which would have occurred by applying a homogenous rule.

An economic analysis of the emission rights scheme thus needs to be carried out to enable it to be appropriately accounted for. This should be based on :

- the specific nature of emission rights and their management by companies ;
- the reasons for which companies purchase emission rights :
 - o Obligation to purchase for GHG emitting companies
 - o Voluntary purchases with a trading purpose.

3.1 Emission rights are managed as a specific new commodity

3.1.1 GHG emissions lead to new production expenses deriving from the purchase of emission rights

GHG emitting companies incur new production expenses for goods and services based on the “polluter pays” principle.

However, unlike for taxes, GHG emissions do not lead to direct payments to the State but to an obligation to surrender emission rights to it. No other measure, such as cash payment or surrendering another asset, may be carried out, as even the penalty does not discharge the obligation.

As the number of emission rights allocated for free is reduced, GHG emissions lead to an obligation to purchase emission rights.

Production → GHG emissions → Obligation to purchase emission rights → Production cost (goods and services)

3.1.2 Emission rights are managed as a new type of commodity

Companies are therefore obliged to purchase emission rights to cover their GHG emissions. Purchasing is correlated to the production cycle.

In practice, emission rights are managed in the same way as all commodities which are essential for the production process.

Like all commodities, they may be purchased :

- due to the production process ;
- to be sold on.

3.2 Two business models apply, depending on whether companies are obliged to purchase emission rights (GHG emitters) or not (trading companies)

Two business models apply to emission rights, as they may be purchased under an obligation or traded:

3.2.1 A “Production” model: purchasing emission rights to comply with obligations towards the State

In this case, **the purchase of emission rights is unavoidable due to the company’s activity** and procurement is managed in a similar manner to that for all consumables used in the production process.

The purchase of emission rights is related to the company’s operating cycle and freezes the production cost.

The purchase of emission rights places the company in compliance with its obligations pursuant to its GHG emissions.

The final step is to surrender the emission rights to the State thus providing evidence of such compliance.

3.2.2 A “Trading” model: voluntary purchase of emission rights for purposes other than compliance

As emission rights may be traded at any time, companies may **voluntarily purchase emission rights** with such purchases being **a separate trading activity** unrelated to the company’s other activities.

This model applies to non GHG emitting companies but it may also be incidentally adopted by emitting companies alongside the “Production” model.

For emitting companies within this model, the purchase of emission rights does not freeze their production costs and does not guarantee compliance with their obligations, which is only established when the emission rights are surrendered to the State.

Model	Production	Trading
Purchase	Obligatory Related to the production activity	Voluntary Separate from the production activity
Purpose of purchase	Compliance	Appreciation in value / gains
Consequence of purchase	Freezes the production cost Ensures compliance	Does not freeze the production cost Generates a gain
Surrendering emission rights to the State	Proves compliance	N/A

The accounting should therefore reflect these two business models distinctively.

IV - Suggested accounting treatments, using this economic approach

The suggestions relate to accounting under both French accounting standards and IFRS unless otherwise specified, in which case attention is drawn to the differences between the two sets of Standards.

4.1 “Production” model: purchasing to comply with obligations

4.1.1 Emission rights are booked to inventory accounts

Emission rights are purchased and managed as a new commodity used in the production process.

Costs incurred to purchase emission rights represent a new production expense.

Emission rights are therefore booked to inventory accounts.

Emission rights differ from physical commodities owing to their administrative nature: they are not physically destroyed during the production process and may be purchased either before or after actual GHG emissions as the company sees fit.

However, companies must purchase them before the deadline for surrendering them to the State.

Therefore:

4.1.2 An emission-related liability is recognised when the company has not purchased the corresponding emission rights

In the context of purchased allowances, GHG emissions result in two obligations for emitters:

- the obligation to purchase allowances;
- the obligation to surrender them at the end of the emitting period.

The obligation to purchase allowances with the purpose of surrendering them to the State generates a liability, because it requires an outflow of resources without equivalent consideration.

However, the obligation to surrender purchased allowances does not generate a liability, because the outflow of resources is final when emission rights are purchased. There is no further outflow of resources when the emission rights are surrendered. The emission rights, for which the State has no use, as it receives the funds from the auctioning of emission rights, are destroyed when surrendered. The surrender of the allowances solely provides the proof that the company is compliant with GHG regulation.

A liability is only recognised when the company has emitted GHG without having previously purchased emission rights. It is booked as emissions are made. The liability will be discharged by the purchase of allowances destined for surrender to the State.

4.1.3 Accounting consequences depending on the timing of the purchase of emission rights (before or after GHG emissions)

4.1.3.1 Purchase of emission rights before GHG emissions

Emission rights are booked to inventory accounts and are measured as follows:

French accounting standards: emission rights are booked at their acquisition cost.

IFRS: they are stated at the lower of cost and net realisable value (IAS 2.9).

They are taken out of the inventory when greenhouse gases are emitted against production expenses.

Recognition of emission rights allocated by the State

The cost of emission rights purchased to comply with emission-related obligations is a production cost. The allocation of emission rights by the State enables companies to emit a corresponding volume of GHG without an additional production cost.

To correctly reflect the GHG emission-related production cost, allocated emission rights should logically be booked at nil.

This measurement approach is allowed under IFRS.

The allocation of emission rights represents a grant recognised in accordance with IAS 20, in the form of a transfer of a non-monetary asset.

Allocated emission rights and the corresponding grant may be booked at nil (IAS 20.23).

This measurement mode is also compliant with French standards.

The State grants emission rights only to operators authorised to emit greenhouse gas, and these operators have the obligation to surrender, without compensation from the State, the number of allowances equal to their emissions of the period.

The State grants emission rights for the sole purpose of enabling operators to avoid incurring additional production costs when they comply with their emission authorisation.

It does not represent the granting of a final economic advantage and the provisions of Article L 123-18 of the Commercial Code relating to accounting for assets acquired free of charge does not apply to them.

The allocated emission rights may therefore be booked at nil.

4.1.3.2 Purchase of emission rights after GHG emissions

A liability is recognised against a production expense.

It is measured on the basis of the best estimate of the outflow of resources, i.e. the market price of emission rights or the price of forward purchases with delivery prior to the surrender date.

The liability will be discharged by the future purchase of emission rights.

Recognition of a liability when the company executes a forward purchase contract with physical delivery after GHG is emitted

IFRS :

A contract to purchase a commodity at a fixed price is theoretically a derivative recognised according to IAS 39.

However, IAS 39.5 provides for an “own use” exemption for “contracts that were entered into and continue to be held for the purpose of the receipt or delivery of a non-financial item in accordance with the entity’s expected purchase, sale or usage requirements”, if the company is able to prove that the contract provides for a physical delivery option and that it will use this option (IAS 39.6).

Contracts which are physically settled for the purposes of the entity’s normal activity (i.e. not including trading activities) are classified as executory contracts and are not recognised as derivatives under IAS 39 (IAS 39.IG A.1).

A forward purchase contract for emission rights with physical delivery is settled by delivery for the company’s own use and is not recognised as a derivative but is booked off-balance sheet. Changes in fair value are not recognised.

As physical delivery has not taken place on the GHG emission date, the company recognises a liability linked to the emissions. The price provided in the contract is relevant for the measurement of the liability.

The liability is written-back on the emission rights delivery date, in the same way as for a cash purchase.

Under French standards, provisions are measured for the amount which corresponds to the best estimate of the outflow of resources required to discharge the obligation. Therefore the liability is also measured at the price provided for in the contract.

4.1.4 Monitoring emission rights held until their surrender date

Between the GHG emission date and the surrender date, emission rights removed from inventories are monitored off-balance sheet. They provide proof that the company has complied with its GHG emission-related obligations.

4.2 “Trading” model

In this model, the purchase of emission rights is voluntary and unrelated to GHG emissions.

Emission rights are managed as assets held for sale pursuant to the company’s normal activity.

They are recognised in **inventory accounts**.

Article 211-1-4 of Regulation No. 99-03:

“An inventory is an asset held for sale in the ordinary course of business...”

(IFRS have almost the same definition)

French Standards:

Initial measurement:

Emission rights are booked at their acquisition cost.

Subsequent measurement:

They are measured pursuant to the provisions of Article 322-6 of Regulation No. 99-03. If their current value falls below their net book value, the latter is reduced to the current value by booking a write-down.

Gains and losses on disposals are recognised in the income statement.

IFRS:

Initial and subsequent measurement: The emission rights are measured at fair value less costs to sell. Changes in fair value less costs to sell are recognised in profit or loss in the period of change (IAS 2.3 and 5).

Gains and losses on disposals are recognised in the income statement.

V - Justifying the company's business model

5.1 Issue

As recognition and measurement of emission rights are different according to the company's business model, the company must both identify and justify its business model.

In some cases, identification is obvious. For example, for an intermediary not emitting GHG, the business model is the Trading model.

However, for companies emitting significant volumes of GHG from many different sites, which have major procurement requirements and carry out more or less active strategies to optimise their production costs (such strategies may already exist for the commodities market), identification of the business model may be more problematic.

Therefore, the entity must specifically document its strategy, targets and contracts to purchase emission rights to validate the business model.

By way of example, for two companies both having:

- an annual emissions forecast of 1,000 tonnes (pursuant to a multiannual 3,000 tonne plan);
- and which hold 1,300 emission rights at the end of the first year;
 - o one not having sold on these emission rights since acquiring them;
 - o and the other having carried out a number of annual transactions on the market for several times more than the number of emission rights in the portfolio,

both entities seem to have implemented a different business model because their strategy seem to be different.

5.2 Application to emission rights

As stated in chapter 4, it is not unheard of to recognise an item of the same nature differently on the basis of its use. This already applies to commodities and purchase contracts with physical delivery.

Business model documentation requirements therefore have to be adapted to the specific case of emission rights for which it would seem appropriate to adopt the type of documentation used for derivatives pursuant to IAS 39 to classify own use contracts (which are not covered by the rules of IAS 39).

To justify its business model:

- The entity must declare its emission rights purchasing strategy and policy and prove that its initiatives are consistent with said strategy and policy.
- In practical terms, within the “Production” model, it must show, with documentary evidence, that contracts to purchase (in cash, forwards and derivatives on emission rights) are intended to cover highly probable past and future emissions. In this respect, the entity must precisely allocate procurement to specific production periods.

Within the “Production” business model, the disposal of previously purchased emission rights is possible:

- When emissions forecasts are revised downward and the company holds too many allowances to comply with its obligation; or
- To take advantage of price opportunities and to acquire further emission rights at least cost.

But these transactions must be limited and be used pursuant to a production cost-cutting strategy and not only to realise gains on the market.

Disposals made outside this framework invalidate the “Production” business model.

The entity therefore has to report on :

- the number of emission rights held at the period’s cut-off date and their association with past and future GHG emissions ;
- the total aggregate number of emission rights purchased and sold since the beginning of the multi-year plan and for each business model.

In addition, justifying the business model implies the durability of the policy implemented and significant changes in the emission rights purchasing strategy which are not justified by a specific event (e.g. fall in production owing to unscheduled and prolonged outage of facilities, loss of market share) may invalidate the business model.

VI - Accounting for “Carbon Credits” (ERUs and CERs)

6.1 Definitions

ERUs (Emission Reduction Units) and CERs (Certified Emission Reductions), known as “carbon credits”, are certificates issued by the United Nations Framework Convention on Climate Change in consideration for the implementation of approved projects either destroying GHG or preventing its emission.

Within limits, they may be surrendered to the State instead of emission rights to comply with GHG emission-related obligations.

They may be freely traded.

6.2 Analysis

In some ways, the use of carbon credits and emission rights is similar.

On the face of it, as no regulations make purchasing or obtaining carbon credits compulsory, holding them is always voluntary.

However, in the same way as emission rights, they may be held for two different purposes:

- either by a GHG emitting company, to comply with its emission-related obligations. In this case, this represents an economic arbitrage as, in order to minimise production costs, the company surrenders carbon credits to the State instead of emission rights. Here, the voluntary purchase or obtaining of carbon credits is only illusory as they simply replace the obligation of purchasing emission rights,
- or to be sold on to generate gains.

Therefore, carbon credits, like emission rights, may be used for two different purposes:

- mandatory use to comply with emission-related obligations pursuant to a production process;
- voluntary use to generate gains.

As with emission rights, owing to their specific nature, different accounting treatments according to their use and the company’s business model are required.

In addition, no other features have been identified which would make recognition principles, other than those put forward for emission rights, applicable (e.g.: intangible assets, financial instruments).

6.3 Recognition

In line with the economic approach adopted (refer to chapter III), carbon credits are recognised in **inventory** accounts and are measured differently according to the company’s business model:

6.3.1 Production” model

Carbon credits are recognised at cost.

There are two different scenarios:

- Purchased carbon credits
- Obtained carbon credits

6.3.1.1 Purchased carbon credits

These are recognised in the same manner as emission rights:

- French Standards: they are booked at their acquisition cost.
- IFRS: they are stated at the lower of cost and net realisable value (IAS 2.9).

6.1.3.2 Carbon credits obtained in consideration for approved projects

Unlike emission rights which can only be purchased on the market, the main way of obtaining carbon credits is by them being granted for free in consideration for the implementation of projects approved by the United Nations.

Carbon credits received in consideration for an approved project are a sub-product of the production process (e.g. a wind farm) or of an industrial process (e.g. methane destruction, firedamp recycling), having led to additional costs in relation to a production process which does not respect the environment.

They are considered as an inventory produced by the company and their initial cost is calculated as follows:

- costs relating directly to obtaining carbon credits;
- allocation of fixed and variable production overheads incurred to obtain them.

Should the carbon credits received be recognised at fair value under IFRS?

Some contend that carbon credits provided to companies in consideration for approved projects should be recognised at their market price as this provides an accurate reflection of the economic benefit granted by the United Nations in consideration for implementing the project.

By doing so, companies would be treating carbon credits as non-monetary subsidies granted in consideration of the additional costs generated by the approved project and would book in the income statement the difference between the fair value of the carbon credits and the production costs having enabled them to be obtained.

However, when carbon credits are obtained and held to be surrendered to the State instead of emission rights (“Production” business model), companies favour surrendering the carbon credits to the State as the cost of obtaining them is less than that for buying emission rights on the market.

This decision is part of the strategy to manage the additional production costs related to GHG emissions. Therefore, companies adopting this line should be considered to have frozen the cost of their corresponding emissions at the amount of production costs for the carbon credits which they decide to surrender to the State.

As a result, the relevant carbon credits should be booked at their production cost and not at fair value as the market price of the carbon credits would not provide an accurate reflection of the cost of GHG emissions borne by the companies.

6.3.2 “Trading” model

There is no specific feature in the “Trading” business model to suggest that carbon credits should be recognised differently from emission rights.

As a result, they are subject to the recognition and measurement requirements explained in chapter 4.2.



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