Entreprises pour l'Environnement

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PREDICTABILITY

1. A LONGER ENGAGEMENT PERIOD

The fact that the present five year allocation period is too short to provide a useful investment horizon has become the subject of a wide consensus. The lifespan of the installations of energy producers or big consumers is indeed far longer than that. A longer price signal is therefore necessary.

Moreover a longer allocation period would probably smooth the price of the quotas over time and diminish the temptation to somehow delay the reduction of greenhouse gas (GHG) emissions in order to get hopefully a higher free allocation for the next period.

2. A DILEMMA

An allocation encompassing the 25 to 50 year long life of these installations would encounter numerous obstacles:

- The regulators would be afraid to be wrong:
  - They do not know how the climate change issue is going to evolve, both scientifically and psychologically, over such a long time; nor are they able to forecast the reactions and emissions of non-parties to the Kyoto protocol.
  - They fear the information asymmetry between them and business which is often less knowledgeable than they think.
  - The dates and nature of technological breakthroughs are impossible to predict many years ahead.

- The regulators would therefore be likely to breakdown the allocation period with periodic revision dates; such a segmentation would willy-nilly restore the inconveniencies of short allocation periods.

- The regulators might not be perfectly credible over a long period that would greatly exceed any political life.

How to solve this dilemma between the inconveniency of a short allocation period and the difficulty of a long one?
To answer this question, it is relevant to consider that the time horizons of the key elements of climate change action are not necessarily identical. Each of them should have a proportionate predictability.

We shall consider 5 such elements:

- Climate change issue
- Global regime
- EU ETS
  a) Rules
  b) Objectives
  c) Allocations

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3. CLIMATE CHANGE ACTION

- **Horizon** : 50 to 100 years (at least)
- **Probability (for business)** : quasi-certain
- **Basis** : scientific observations and simulations
- **Signa**l : thanks particularly to GIEC, the signal is already strong enough to trigger public and private R&D and to make business aware of the importance of looking for the right investments. But the signal is not clear enough to enable industry to invest properly.
- **Action** : to pursue GIEC 's work.

4. GLOBAL REGIME

- **Horizon** (for its implementation) : 10 years?
- **Probability**
  - of a full fledged worldwide regime : low
  - of interlinked partial regimes : high
- **Basis** :
  - market regimes (e.g. EU ETS)
  - technological agreements (e.g. AP6)
  - sectoral agreements?
- **Signal** : weak (still at an early stage)
- **Action** : to pursue dialogues : UNFCCC, Kyoto Protocol, G8, etc.

5. REGIONAL REGIMES: EU ETS

a) Rules

- **Horizon** :
  - general rules : 30 years (2035), updated every 10 years for 10 more years.
  - detailed implementation rules : same length and updating as the allocations (see § c below)
- **Probability** : quasi-certain (*ne varietur* engagement by the regulator)
- **Basis** : quota system adjusted to international competition:
  - low international competition : towards full auctioning of the allocations.
  - high international competition : towards partial auctioning only, the bulk remaining made of free, transferable and technologically neutral allocations.
- **Signal** : strong, but still insufficient if alone.
- **Action** : revision of EU ETS.

b) Objectives

- **Horizon** :
  - Fixed objective : 20 years (2025)
  - Tentative objective : 30 and 50 years (2035 – 2055)
  - Updated every 10 years
- **Probability** :
  - high over 15 years
  - best efforts for the next 15 to 35 years
- **Basis** :
  Prospective and backcasting studies, modelisation, emphasizing the contribution of the broad sectors : energy, manufacturing, transportation, building.
- **Signal** :
  - strong over 15 years
  - indicative beyond
- **Action** :
  The European Commission and major European countries have already chosen objectives for 2020 and 2050. Objectives at the broad sectoral levels should be looked for.

c) Allocations [1]

- **Horizon** :
  15 years (a compromise due to the dilemma previously mentioned).
  - Updated every 5 years for 5 more years (the allocation is therefore known 10 to 15 years ahead depending on the date, which is probably a minimum).
- **Probability** : high for 10/15 years
- **Basis** : objectives (see § b above) + benchmark + technological forecasts
- **Signal** : strong
- **Action** : to be integrated to the revision of the EU ETS Directive.
- **Restitution dates** :
  Although the allocation would be fixed and known for 15 years, should the restitution of quotas be made on a shorter periodicity, e.g. every 5 years [2] ?

Pros	Cons
More regular market liquidity through the 5 year deadlines.	Reduced price predictability [3]. The 5 year objectives cannot be optimal. Making them flexible within the 15 year allocation should improve the solution.

At first sight, it seems preferable not to break the 15 year allocation into 5 year intangible blocks. In order to avoid it, the quotas allocated every 5 years 10 to 15 years ahead should be fungible with the quotas previously allocated. Otherwise, the system would be automatically based on a 5 year restitution from the 10th year following its implementation (see chart 1 below).

d) Another solution (without fungibility beyond each 10 year allocation)

- **Horizon** : 10 years *ne varietur*, 10 years semi-flexible, that is to say to be fixed 10 years later if significant change has occurred. Updated every 10 years: *ne varietur* for the next 10 years, semi-flexible for the subsequent 10 years.
- **Probability** : high for 10 years, significant for another 10 years.
- **Basis, signal, action** : as in paragraph *c*.

6. REVISION

A more predictable regime as suggested above will face unexpected events, equivalent to *force majeure*. They could be general for the region or particular to a company.

- Examples of general events: significant modification of the climate change perspective, war, economic world crisis, implementation of a much broader, if not worldwide, regime, etc…
- Examples of particular events: unexpected technological breakthrough in the company or in the production of an alternative product, trade war, company breakdown into separate entities, bankruptcy, etc.

Should it happen, the regime would have to be revisited and at least partially updated. But the appearance, nature and date of such events are unknown. This updating cannot therefore be decided in advance; it cannot have any periodicity; hopefully, most of the time, it might even not happen. Such conditional and unknown revisions are therefore essentially different from periodic revisions and do not systematically threaten the predictability of the regime. In other words, so called acts of god should not be supplemented by acts of man.

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[1] In case of a cape and trade scheme, the allocation is fixed with the exception of *force majeure*. In case of an output based scheme, the allocation is made of a fixed relative emission multiplied by a production forecast, to be corrected at the end of the allocation period.

[2] We distinguish the allocation period, which is stretched until the horizon of the allocation, from the restitution period, which spans the time until the next date when quotas have to match emissions.

[3] With a 15 year allocation, the price of the quota would be close to the actualized marginal abatement cost of the economy, which would be all the more high if the restitution period is longer and therefore the total cumulated reduction greater.

Chart 1 – A tentative "predictable" regime

	t=first implementation								time
	t	5y	10y	15y	20y	25y	30y	35y	40y
a) General rules									
b) Objectives									
fixed objectives									
tentative objectives									
c) Allocations and detailed rules									
new allocations									
already allocated									
d) Allocations and detailed rules									
fixed allocations									
semi-flexible allocations									