Shell Climate Change

Allowance Allocation Principles

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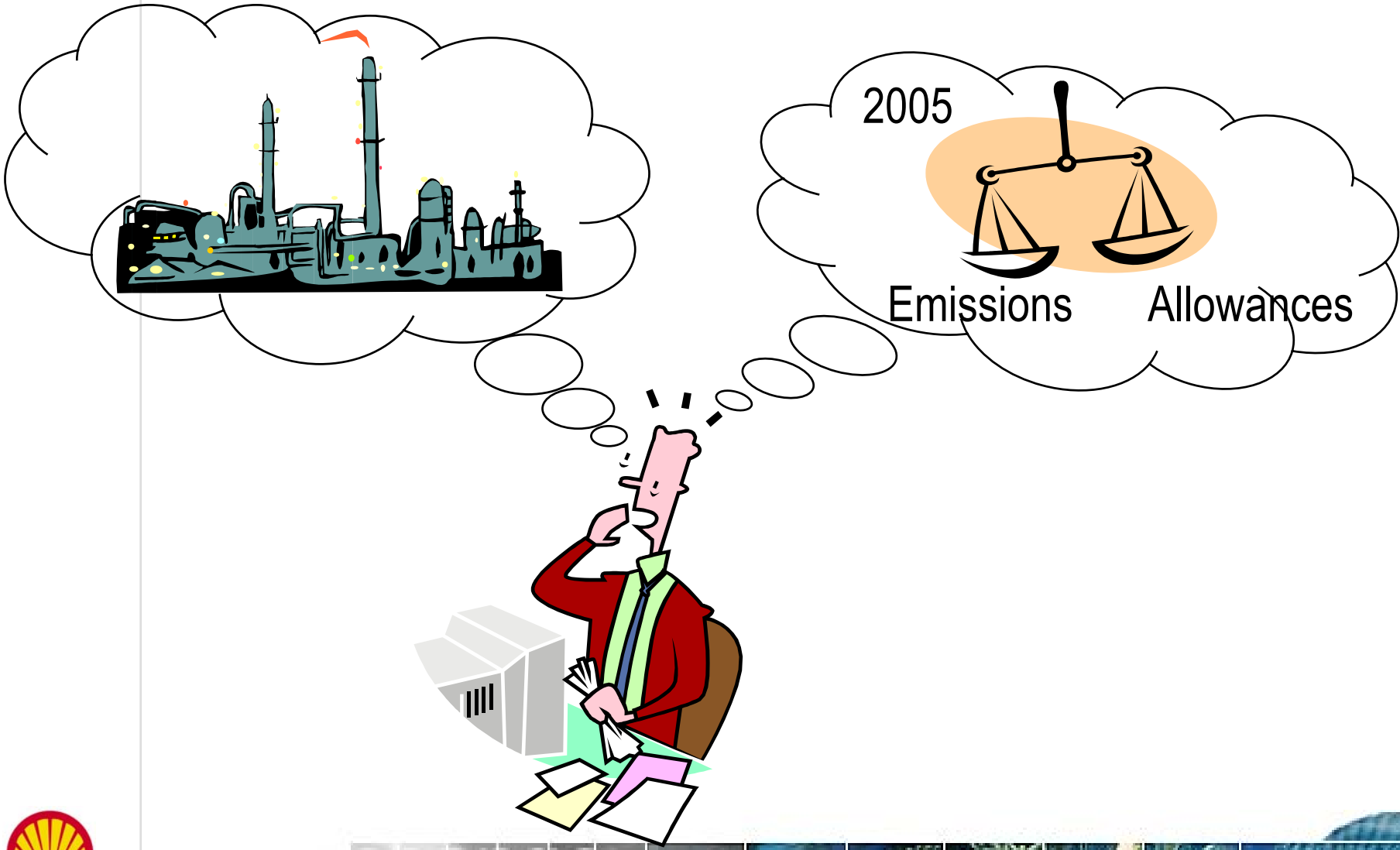
The CO_2 Commodity

- Typical commodity markets are underpinned by a real physical substance, such as oil or wheat or gold.
  - ✓The market knows much about the supply of and demand for this substance, both now and for many years into the future.
  - ✓As a result, participants in the market have the confidence to trade forward, often buying and selling years ahead.
  - ✓Future trading in such markets supports long term investment decisions.
- "Emitting CO2" is not a physical commodity. It doesn't exist.
  - ✓It must be created by legislation.
  - ✓The enactment of such legislation shapes the commodity and the resulting market.

Do we want this type of market . . . . ??



Or this one ??

CO_2 Prices	
2006	12.5
2007	13.2
2008	14.4
2009	15.1
2010	15.8
2011	16.5
2012	17.9

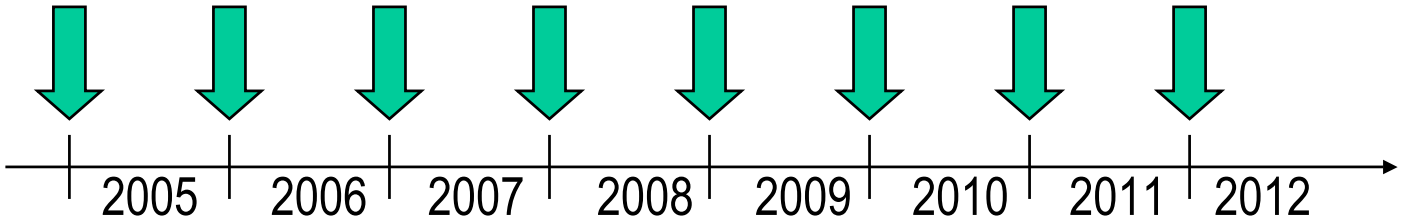
How does the market reduce emissions?

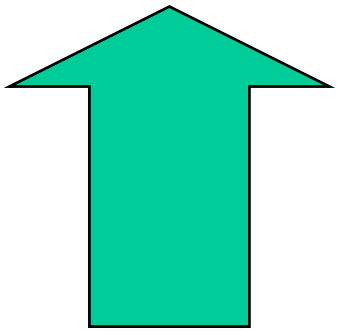
- An emission cap is established. If short, companies have a choice of:
  - ✓ Investing in new technology and capital stock to make emission reductions internally, or
  - ✓ Buying allowances in the market
- The ONLY way emissions are reduced are from investment & implementation of new technologies.
- Companies MUST make this decision efficiently. It is essential to compare:
  - ✓ The market cost of allowances, against
  - ✓ Marginal costs of abatement over time
- But investments may take several years. Hence we need prices for the future. This is called the “forward curve”.
- A lack of liquidity and poor forward curve means inhibited and inefficient investment.

What if allocation is piecemeal ?

Annual:

- The commodity doesn't exist past the current year.
- Uncertain future supply
- Trades cannot be completed on a registry
- No forward curve can develop.
- Investment is not encouraged





Once Off:

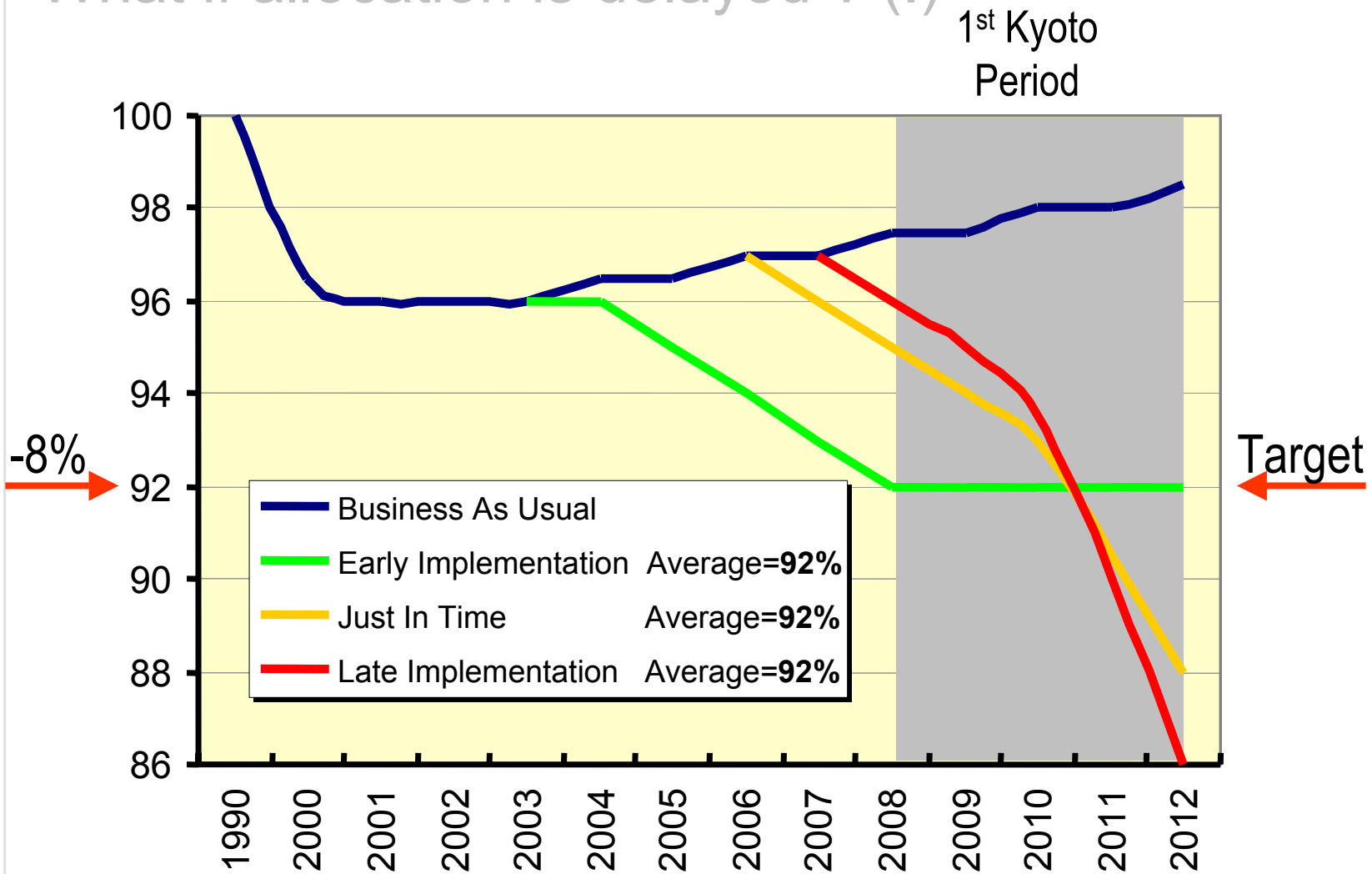
- Commodity established into future years.
- Clear ownership rights means sellers can sell.
- Forward curve established.
- "Make or buy" decisions can be made

= Allowance allocation

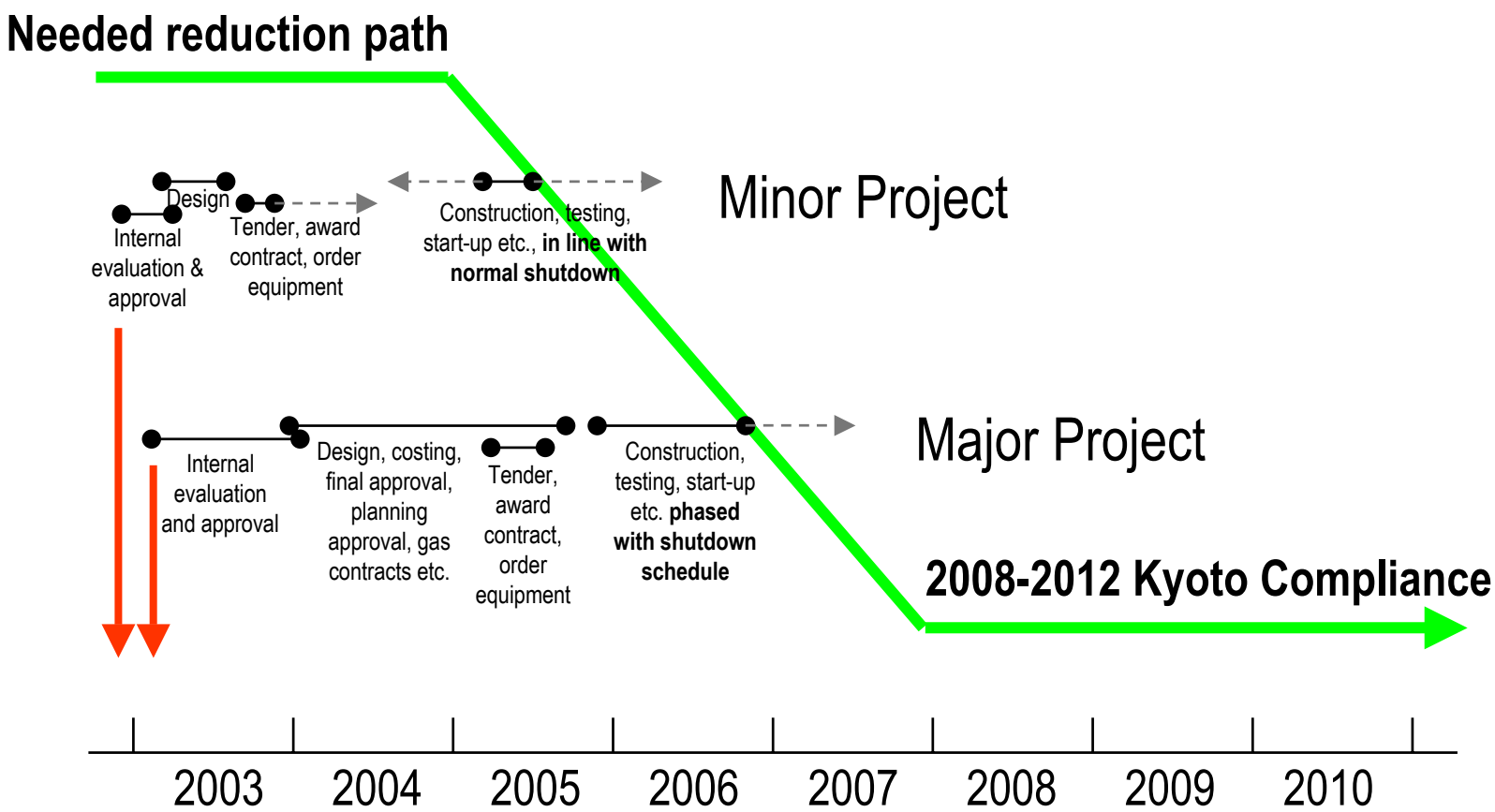
What if some allowances are auctioned?

- Withholds a % of allowances equivalent to annual uncertainty in emissions and expected reduction;
  - ✓ Uncertain annual supply
  - ✓ Potential sellers unwilling to sell forward (it would take them short)
  - ✓ Reduces liquidity and inhibits forward curve development
- Complex and difficult to organise and administer.
- An inefficient and inaccurate route to price discovery (3G example).
- Allocation process is already complex and taking the full attention of industry.
- Drives up the cost of compliance.
- Pure additional administrative burden (time, money)

What if allocation is delayed ? (I)



What if allocation is delayed ? (II)



Conclusions on allocation timing

- Planning needs to start as early as 2003 to make significant reductions in emissions by 2008.
- Industry needs early clarity on 2005-2007 (and beyond) allocation to spearhead the project development cycle.
- Allocation at the end of 2004 may be too late to see significant change in 2005, 2006 and even 2007.
- The allocation baseline year must be set before 2002 to support real action in the period 2003-2005.

Delay is costly for business and may result in

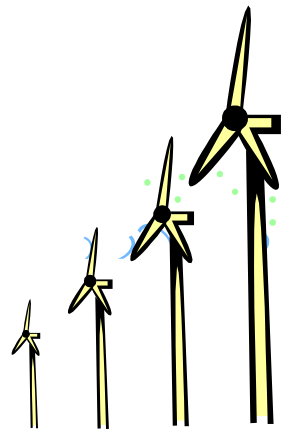
Europe missing its target.

Allocation Principles

- Establish the commodity now for the period 2005-2012.
- Give supply certainty for the period 2005-2012.

which means

- Trading is encouraged for all future years
- A forward curve develops
- Investment decisions can be made



by

Allocating for free all allowances for the period 2005-2012 as soon as possible