



### <u>Improving Allocation</u> Performance-based allocation is feasible ...

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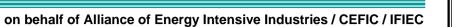
### Introduction

Allocation methodologies
The question of auctioning
Benchmarking as solution



### **Allocation methodologies**

- Question effective ETS: Scarcity of allowances sufficient ?
  - Lesson learned: allocation method is equally vital (Grubb, Delbeke)
- Historical grandfathering poses fundamental challenges
  - Uncertain incentive for improvement, "updating" problem
  - Short allocation new plants → <u>highly distorting</u> transfer rules, barrier to entry – enhancing market concentration;
  - Unsolvable dilemmas new entrants (NE) & closures (C) (see e.g. also Grubb and Neuhoff, 2006)
    - Theory says: freeze allocation [all allowances after C & zero for NE]
    - Zero for NE actually hinders low carbon investments / competitiveness
    - Retaining allowances after C how long? is worse than transfer rules
    - Withdrawal allowances after C: perverse incentive keeping inefficient plants operational
  - Other fundamental challenges not addressed here
    - "Leakage", distortions of free market, economic rents (see A. Loske)
- Therefore focus on benchmarking or auctioning





### The question of auctioning

- Serious concerns
  - Competitiveness is undermined Lisbon strategy
  - Same "leakage" as present rules
  - Recycling of revenues poses challenges for effectiveness
  - Revenues with Member States outside EU jurisdiction create temptations: recycling but also investments in "nice things" etc., which also create Internal Market distortions
- A present trend: benchmarks for industry & auctioning for electricity to counter windfall profits issue
  - Electricity prices remain highly impacted competitiveness
  - 45% EU electricity CO<sub>2</sub>-free (nuclear, hydro, other) will increase
  - Recycling to users by far insufficient take France distortions
  - Plus general problems mentioned above
- Partial auctioning also no solution



### Benchmarking as solution

#### Benchmarking addresses fundamental problems

- Key principles & general technical criteria addressed here
- Allowances must be allocated in relation to actual production to solve major problems (see presentation A. Loske)
- Concept of practical approach: apply Pareto analysis
  - Benchmarks of "<u>the vital few</u>" (20% of products) cover 80+% of emissions, which holds for each sector (electricity 100%)
  - Too many benchmarks of "the trivial many" not feasible, minor impact – special solutions, guiding principle: "be generous"

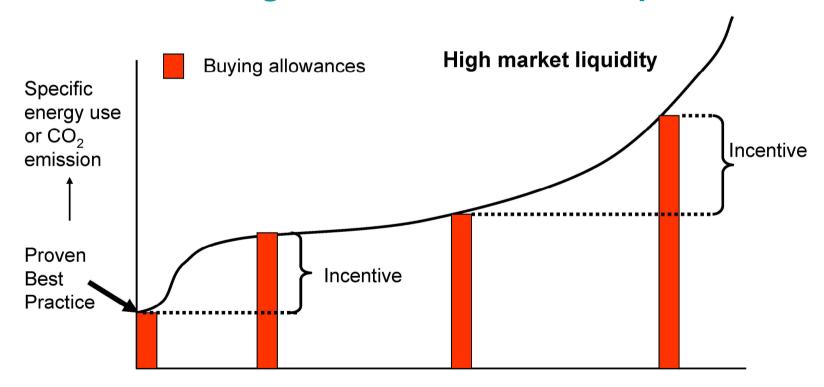
# True benchmarks give same incentive as auctioning for an ETS

Same incentive for low carbon technologies
Suitable benchmark formula
Experience shows it works



### **Auctioning:**

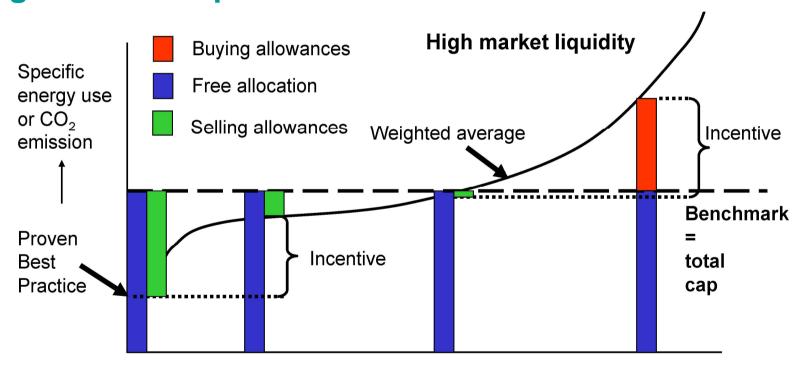
### Clear incentive for low carbon technologies, but emissions leakage & detrimental for competitiveness



Decreasing efficiency order of plants

### Performance-based allocation:

### Same incentive as auctioning, (hardly or) no leakage, good for competitiveness



Decreasing efficiency order of plants



## Key principles of benchmarking

What a CEO wants to know Why is it always stimulating?



### **Key principles of benchmarking (1)**

- What a CEO wants to know?
  - He wants to know e.g. with cost-price:
    - Where his plants stand?; then
    - Why? + What can be done about it?
  - He refuses notions like "We are the best in the peer group of our [obsolete] technology, or in our [small] scale, or in our plant vintage" (many corrections make everyone equal)
- Key principle: benchmarks relate
  - The product
  - ... with
  - the <u>objective function</u> CO<sub>2</sub> in the EU ETS
  - Deviations shall be possible, but temporary and aimed to
    - avoid leakage outside EU (... objective function)
    - safeguard competitiveness (... objective function)
  - Example: energy efficiency as objective function can avoid leakage by switch to gas and shipping of carbon-rich fuels outside EU 10

### **Key principles of benchmarking (2)**

- Same benchmarks for incumbents and new plants
  - Avoid
    - Distorting transfer rules
    - Barriers to entry
    - Enhanced market concentration
  - Ensure
    - Equal incentive for plant improvement & plant replacement
  - No "maximisation" or "minimisation" rules (NL 110% and 85% now)

### Benchmarking: clear incentive to reduce emissions

Incentive to reduce emissions is independent of the exact value of benchmark in a certain year

Incentive = avoided purchases + possible sales of allowances

#### Example:

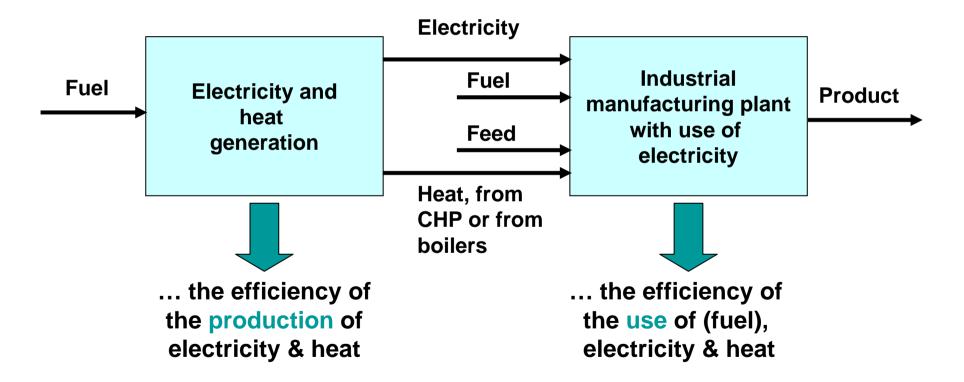
Investment to reduce emissions from 900 to 600 kg CO<sub>2</sub> per unit of product (in old plant or new plant)

- •Year 1, BM = 750: incentive = 150 + 150 = 300
- •Year n, BM = 700: incentive = 200 + 100 = 300
- Predictability of investment climate



### Benchmarking in the product chain

Benchmarking provides incentives in the whole product chain ...



### <u>Transition with performance-based allocation</u> <u>for a faster global trading scheme</u>

Benchmark: specific energy use or CO<sub>2</sub> emission

