

## **The EU ETS as instrument to create signals for greener business investment decisions?**

Second ECP Seminar  
Strategic Aspects of the 2006 EU ETS Review  
Brussels, 5 April 2006

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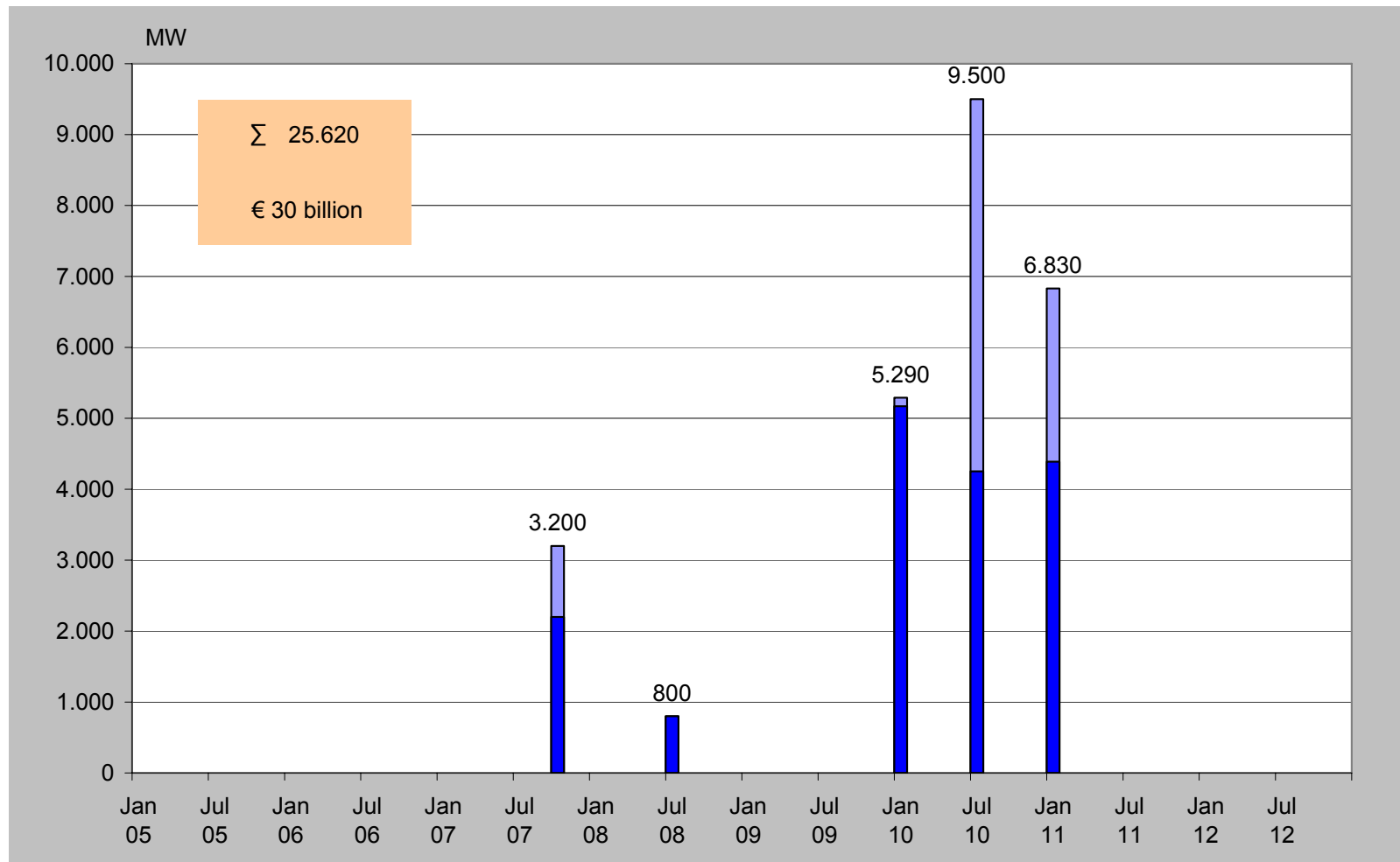
## Background

- EU ETS - An Open Scheme Promoting Global Innovation to Combat Climate Change (EC 2004)
- Innovation requires investment in new technologies (at least in the long run)
- The degree of uncertainty limits investment decisions
- Rather long investment cycles (20 to 40 years) in the sectors covered under the EU ETS
- The EU ETS has added another factor and thus increased the degree of uncertainty

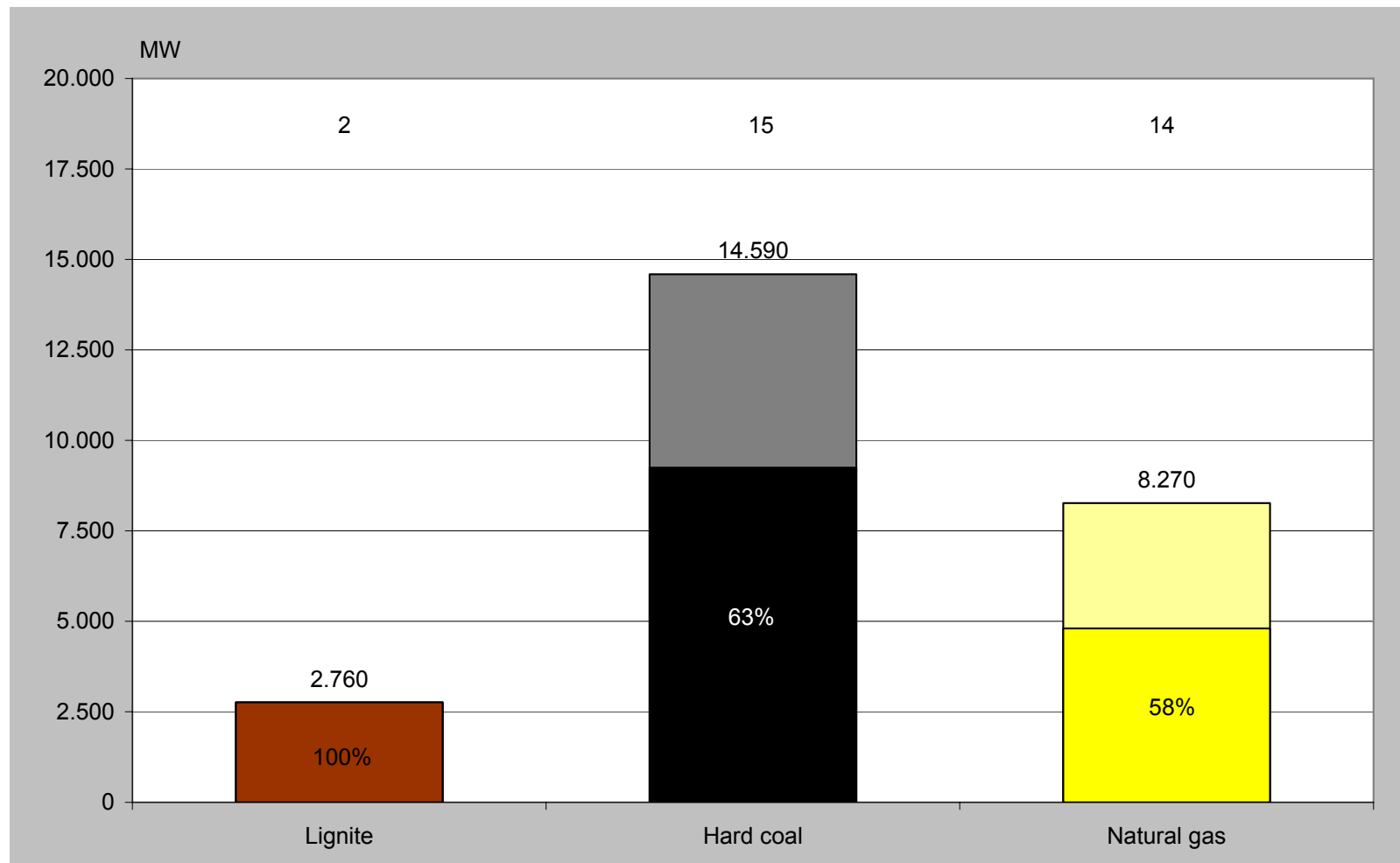
## Background

- Many factors determine the degree of uncertainty
  - demand
  - electricity- and product prices
  - factor prices (primary energy, feedstock, labour, transport, etc.)
  - technological progress (automation, new technologies, etc.)
  - strategies of competitors
  - regulation (promotion of CHP & renewables, eco and energy taxes, etc.)
- EU ETS, namely the allowance price, is just one additional factor among several others
- Investment under uncertainty is the normal business, it is not created by the EU ETS
- The role of the EU ETS in creating uncertainty is often exaggerated

## Planned investment in the German power industry



## Planned investment in the German power industry



## Efficiency improvements?

	Efficiency			CO <sub>2</sub> saving/% improvement	CO <sub>2</sub> savings
	2000	2007 - 2011	Improvement (percentage points)		
Lignite	37,5%	40,9%	3,4%	3,6%	12,1%
Hard Coal	40,6%	42,8%	2,2%	2,0%	4,3%
Natural Gas	49,5%	54,2%	4,7%	1,7%	7,9%

- Highest CO<sub>2</sub> reductions in lignite PP: still highest absolute emissions
- Lowest CO<sub>2</sub> reductions in hard coal PP: largest share of investment
- Fuel switch from lignite to hard coal rather than from coal to gas
- Which of these investments can be attributed to BAU and which to the EU ETS?

## Options to improve incentives for innovation

- Longer allocation and trading periods
  - Coaseian allocation (once for ever): would overcompensate incumbents
  - 10 instead of 5 years
    - Compatibility with the Kyoto Protocol?
    - Increased problem with new entrants?
  - DE - 14 or 18 years compliance factor 1: too long
- Rules for closures and new entrants
  - Prisoners dilemma results in race to the bottom, harmonisation required
- EU-wide benchmarks (BM)
  - Important: EU-wide, i.e. comprehensive agreement & long term stability
  - BM will increase incentives for efficient technologies
  - Uniform BM (i.e. not fuel specific) will promote fuel switch

## Options to improve incentives for innovation

- Long term efficiency targets (shifting to baseline and credit)
  - Will it create more predictability
  - Uncertainty will also be reduced in a cap and trade scheme if governments restrain from discretionary interventions
- Auctioning of allowances and recycling of revenues
  - Would increase costs (although opportunity costs have already been largely passed through in some sectors)
  - Compensation sectors which face fierce international competition (aluminium, steel, etc.)
    - Distortion of the internal market unless in harmonised manor?
    - Compatibility with WTO rules
  - Reducing taxes (income, corporate, VAT?)

## Options to improve incentives for innovation

- 10-year rule
  - Similar to longer trading periods
- Long term quantitative targets
  - Strong commitment by Member States needed
  - Should be supported through a long term burden sharing agreement
  - Should be continuously reiterated in public communication
- Allowance price caps
  - Would rather increase than decrease predictability