



Centre for Energy and
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THE EUROPEAN EMISSIONS TRADING SYSTEM:

LESSONS LEARNT, PROSPECTS
AND LINKING OPTIONS FOR AUSTRALIA

Presented by Dr. Regina Betz © CEEM, 2007

Impacts, Solutions / Strategies for Carbon Emissions Trading, Brisbane



Content

- What are the lessons learnt from the 1st phase of EU Emissions Trading Scheme (ETS)?
 - Efficiency
 - Effectiveness
 - Distributional consequences
- Has the 2nd phase improved?
- What can Australia learn from the EU ETS?
- How can an Australian Scheme link to the EU ETS?

Betz and Misato 2006: Emissions trading: lessons learnt from the 1st phase of the Eu ETS and prospects for the 2nd phase, *Climate Policy*, 6, p. 351-359



Brief overview of EU ETS

- A cap-and-trade type scheme ...
- Operates in stages: 2005-07, 2008-12 etc.
- Initially covers direct CO₂ emissions of major emitting sectors (close to half of CO₂ emissions of EU) -> optionally from 2008 further GHGs
- Banking between 2007 to 2008 only partially allowed in Poland and France, unrestricted from 2008 onwards
- Harmonised monitoring, reporting and verification of CO₂ emissions based on Monitoring Guidelines
- Harmonised financial penalties for non-compliance (40 €/t in 2005-2007 / 100 €/t from 2008) + surrender missing allowances + public notification
- Links to project credits established
- Partially harmonised allocation rules: up to 95% for free 2005-07 and 90% in 2008-2012, rest to be auctioned

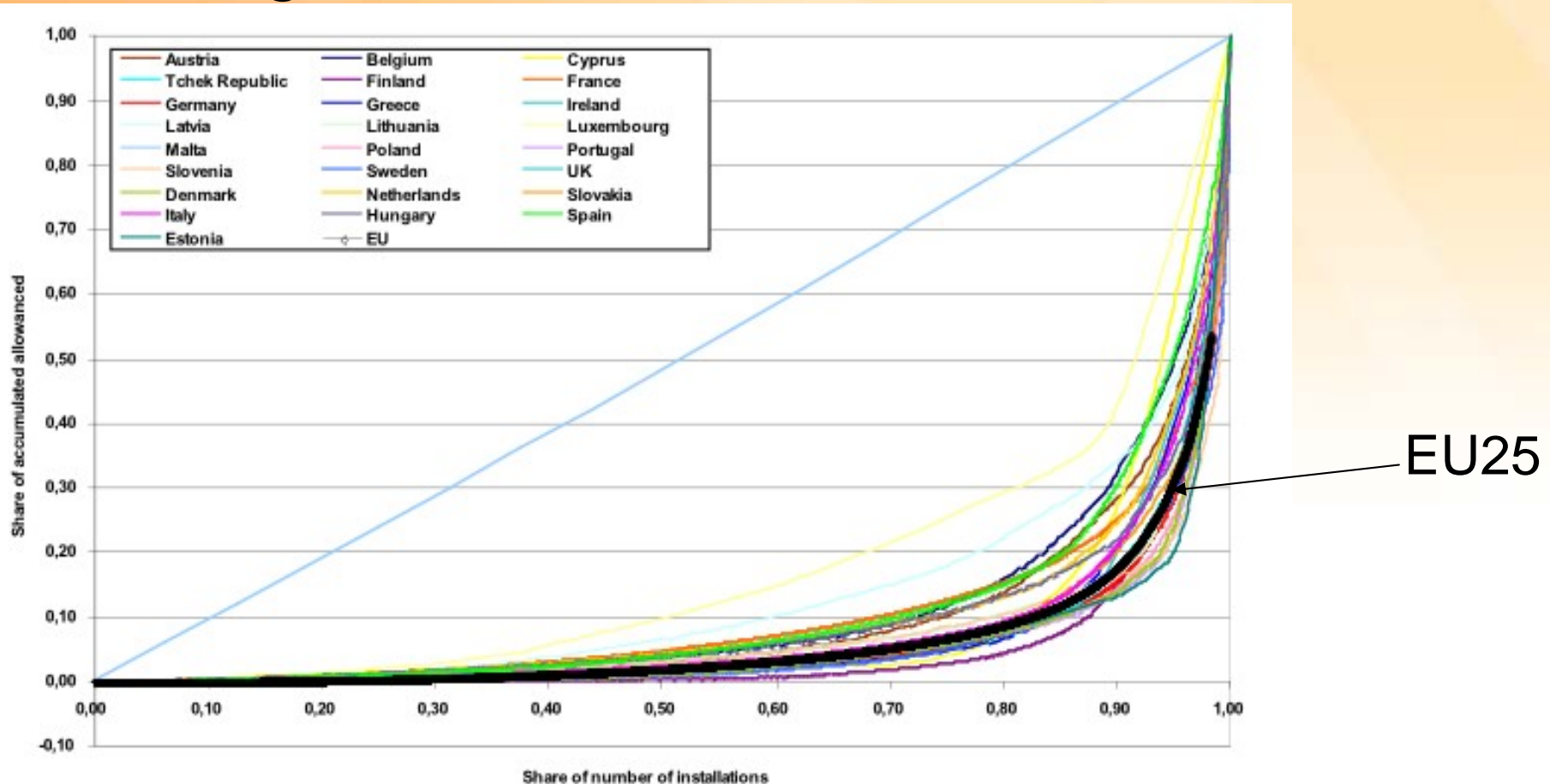


Is the EU ETS efficient?

- Too many small companies: Costs outweigh the benefits
- Up-dating dilemma
 - If future allocation is a function of today's emissions it provides a perverse incentive for less abatement today in order to receive more permits in the future
- Perverse incentives for new entrants and closures:
 - Free allocation to new entrants coupled with withdrawal of allocation from ceasing installations gives an incentive to keep inefficient plants in operation
 - Allocation to new entrants based on benchmarks on capacity installed gives perverse incentive to build oversized boilers (Denmark has reduced allocation BAT/benchmark)
- Price volatility and uncertainty: Negative impacts on investment



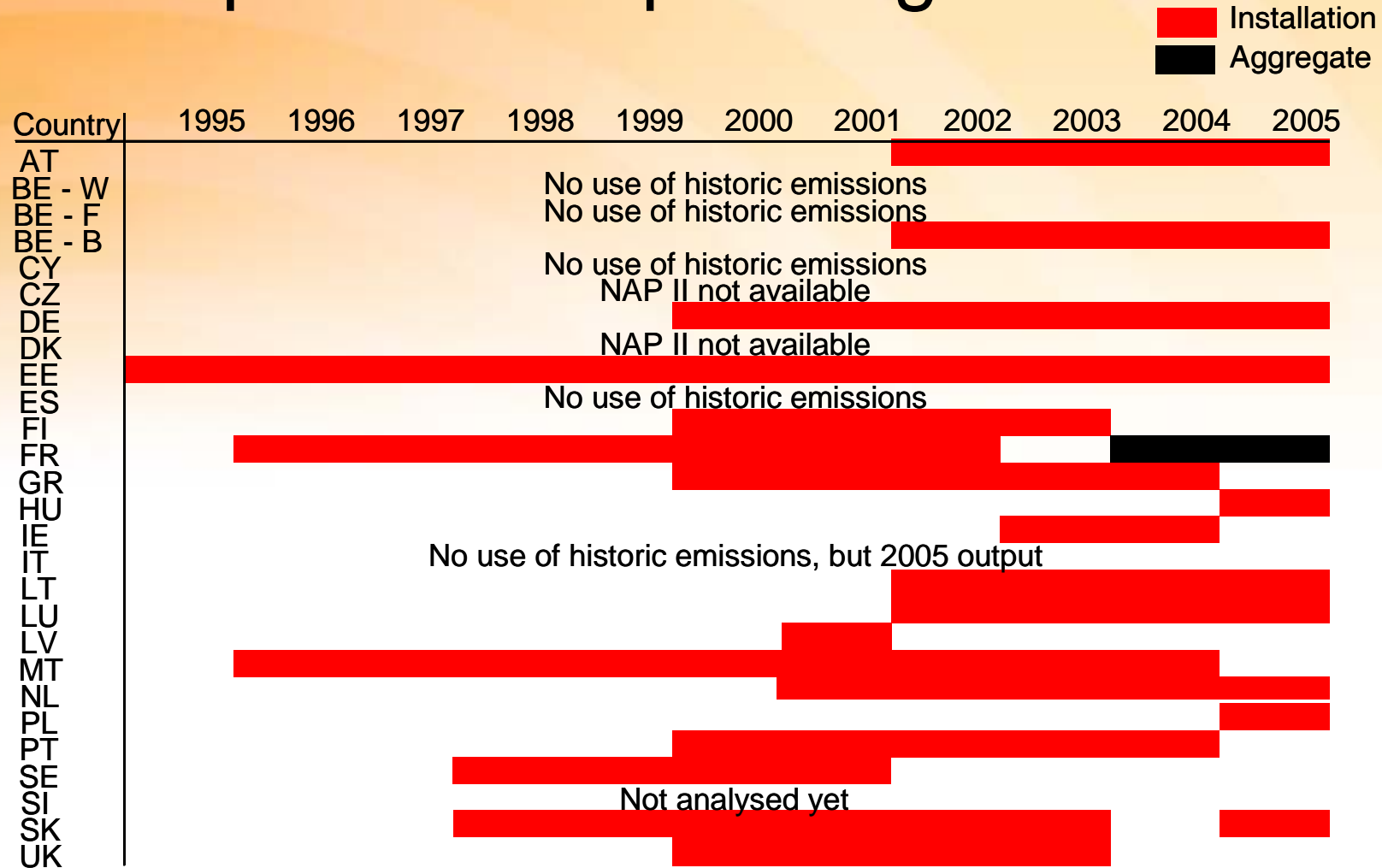
Coverage: Emissions – Installation relation



Share of allowance allocation compared to share of number of installations (Lorenzcurve): around 50% of the covered installations received less than 2% of the total allocated EUAs



Base periods – Up-dating





Price development

Figure 1: Spot and Dec'08 Prices for EUAs 2006-Q1'07 (Source: Powernext, ECX)



Collapse in late April 2006 in response to news about "overallocation"

Trading Volume in 2006: 1101 Million EUAs
Market Share: 65% of global carbon market
Asset value of EUAs: €24bn/yr



Is the EU ETS effective?

- EUAs allocation exceeded 2005 emissions by around 100 Mio. t CO₂
- Reasons:
 - Uncertainties in base data were significant compared to small cutbacks
 - Technical and time constraints when determining the reductions:
 - Existing sector definition does not match actual coverage
 - Definition and coverage of installations was uncertain
-> total set before final coverage determined
 - Base year data was gathered on the basis of other monitoring requirements since EU guidelines for monitoring were not finalised
 - Data was not verified by independent auditors (lack of time and accredited institutions) -> potential exaggeration of emissions
 - Over-optimistic economic growth in the baseline since government and business sector like to believe in strong economic growth
 - Difficulties with new entrants: dividing between growth of existing installations and new installations -> double counting possible

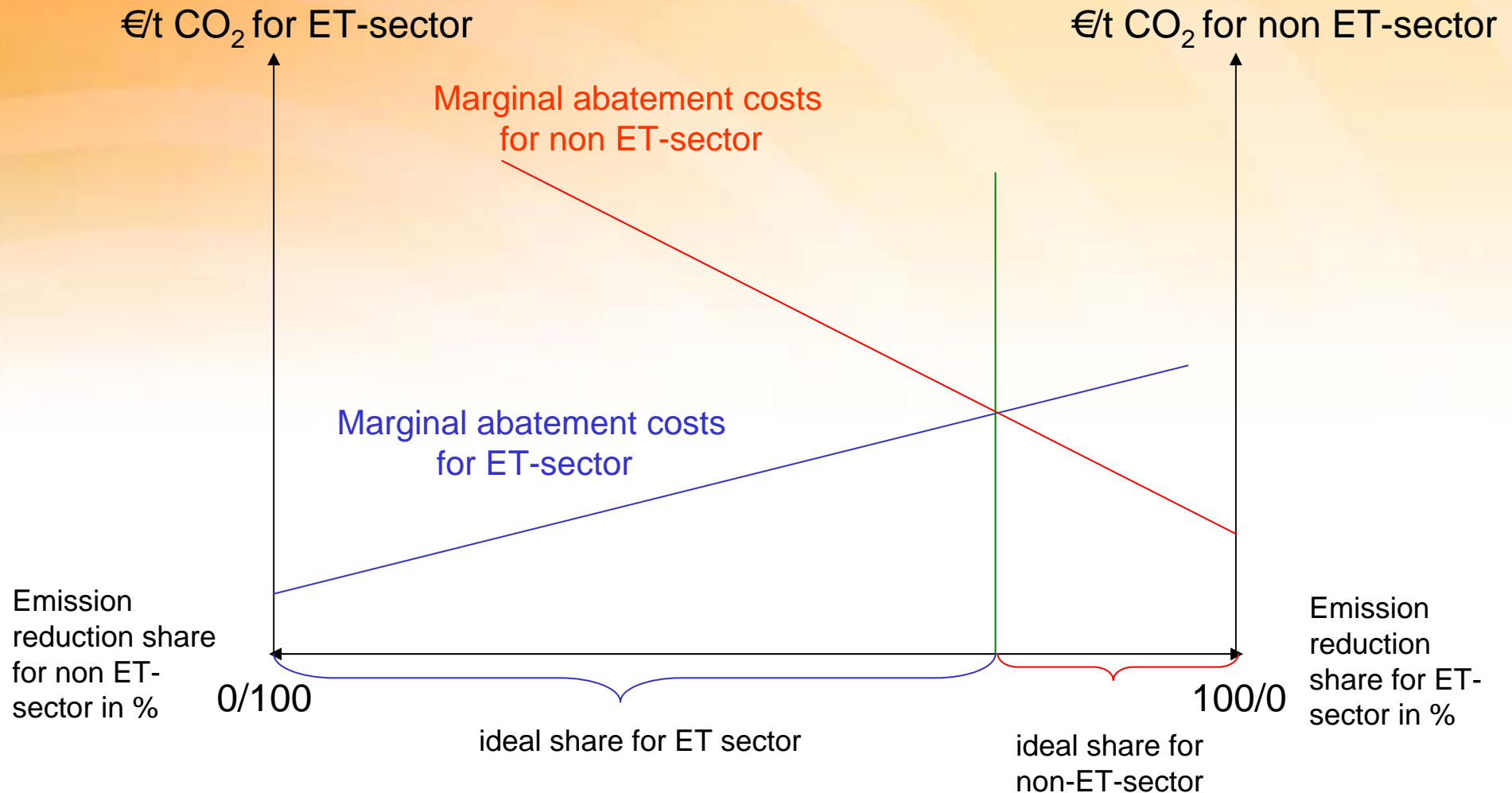


Is the EU ETS fair regarding equity?

- Windfall profits
 - Companies pass through the carbon opportunity costs to their customers
 - Free allocation leads to high windfall profits
 - Broad estimate of windfall profits:
 - non-fossil producers EUR 8-11 bn
 - fossil generators approximately: EUR 13-17 bn
- Sectoral Burden Sharing
 - Cut in emissions for ETS covered sectors relatively low
 - Empirical evidence from bottom-up and top-down models: mitigation costs in ET-sector are smaller than in other sectors (households, services, transport)
 - To meet Kyoto target non-covered sector and government treasuries will bear costs e.g. by buying Kyoto credits

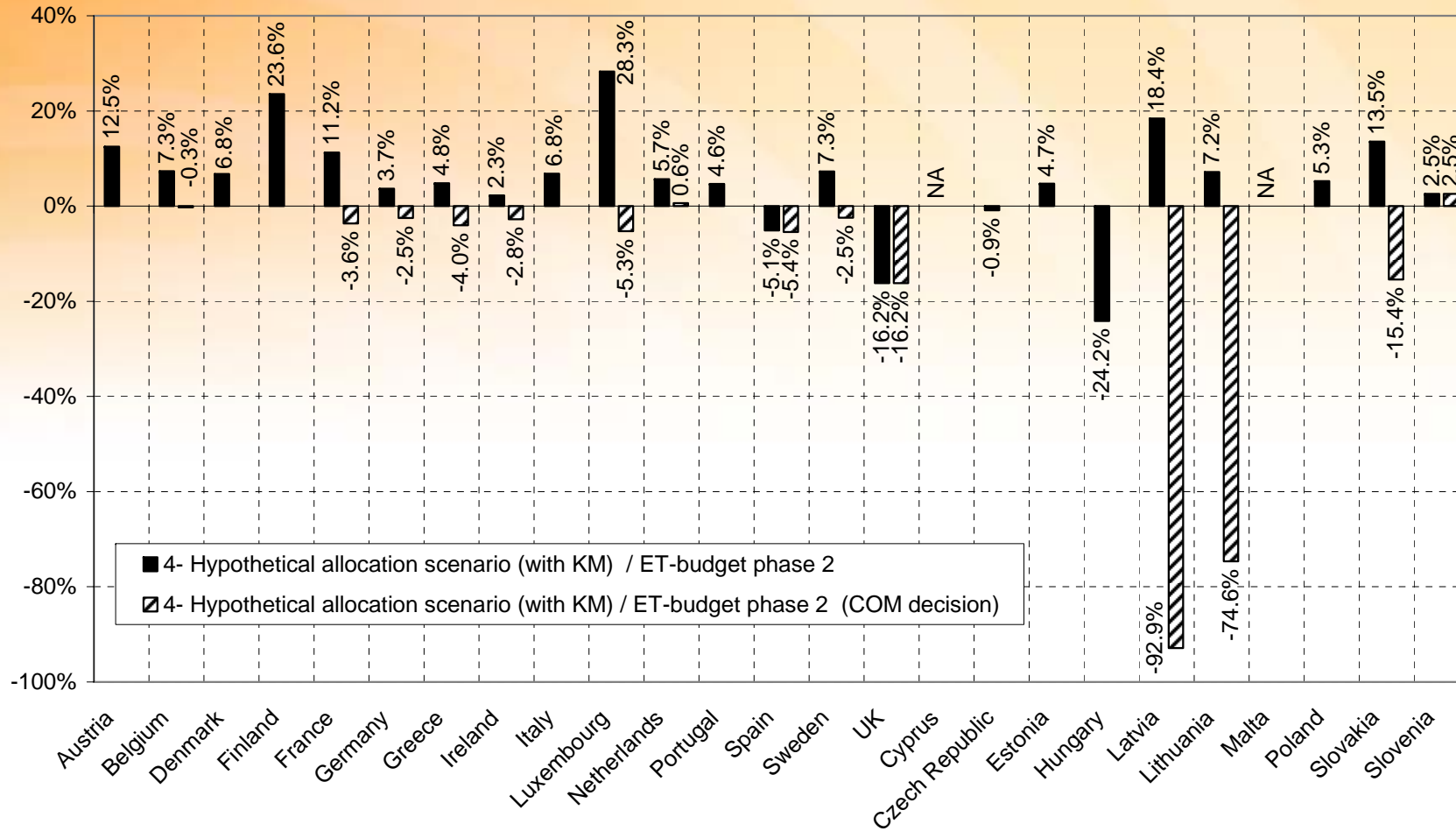


Allocation between ET and Non-ET sector





Sectoral Burden Sharing



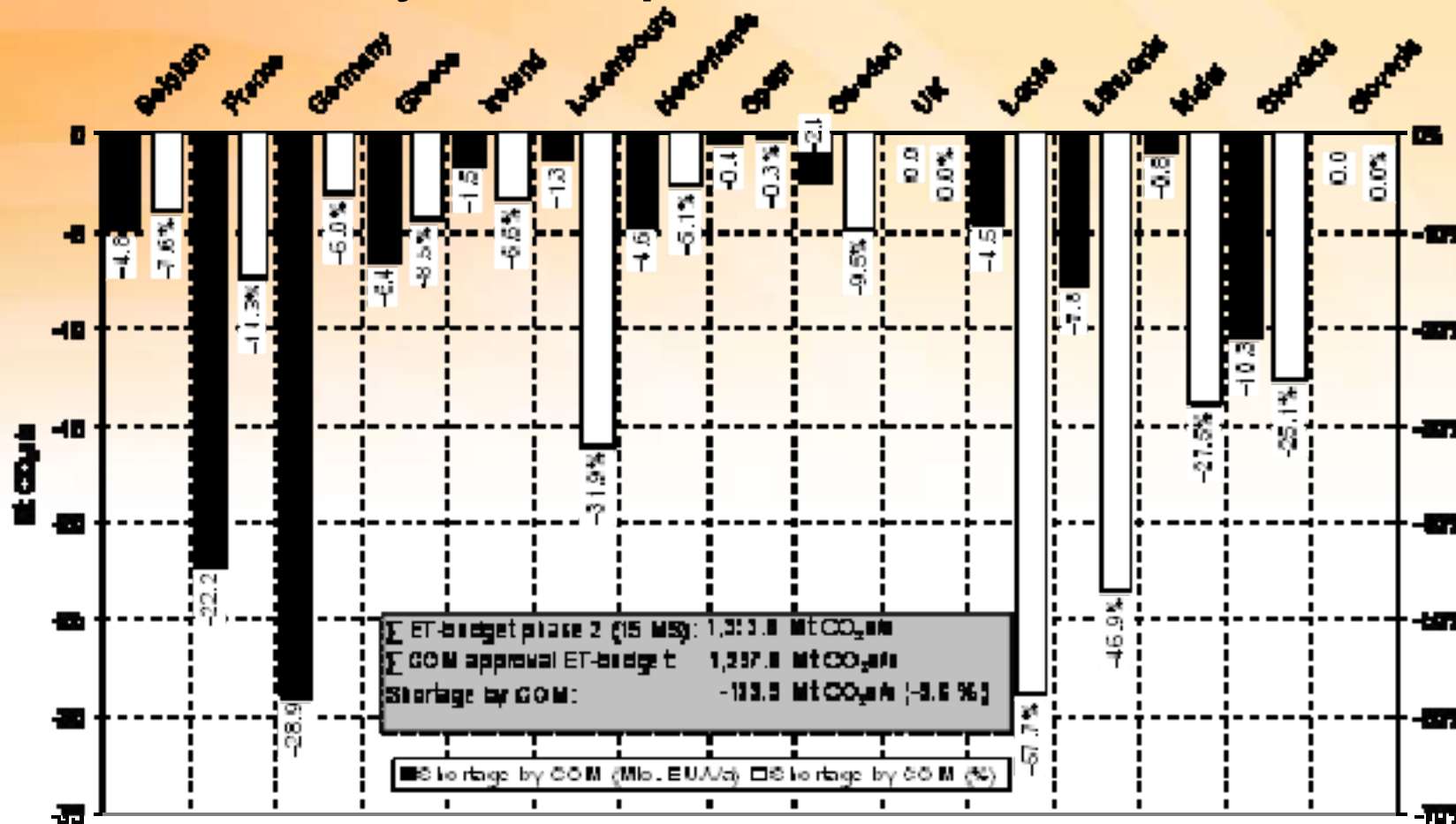


Has the 2nd phase improved?

- Economic efficiency
 - Improved by EC decision at macro level
 - auction share lower than allowed; must increase in future (MIN rather than MAX)
 - benchmarking as "second best"
 - need change in Directive to outlaw updating and free allocation to new projects; fix closure rules
- Environmental effectiveness
 - Substantially improved by EC decision, higher prices for EUAs; signal to other MS and carbon markets ("EC is serious about climate change and about ET")
- Distributional fairness
 - Electricity sectors allocation was substantially reduced, less windfall profits
 - Sectoral burden sharing improved



Decision by European Commission



Aggregate reduction of ET-budgets for 21 MS 195 million EUA or -10%.



Lessons learnt

- Generous caps will lead to low price levels
- Important role of the EU Commission to ensure stringency of 2nd NAPs
- The devil is in the details!
 - Perverse incentives are easily created
 - BUT auctioning could cure most of the problems
- Test phase important, although
 - path dependency of methods and concepts
 - "improvements" are small (auctioning, use of benchmarks, standardised load factors, less special provisions in old MS, but additional in new MS, transparency)
 - increased harmonisation does not always lead to increased efficiency



Main linking options for Australia

- **With** Kyoto Protocol ratification through
 - Project based mechanism (JI + CDM)
 - Article 17 KP trading (government level)
- **Without** Kyoto Protocol ratification
 - Unilateral link (via CDM or Australian companies buy EU allowances)
 - Bilateral link (fully link EU ETS with Australian scheme) depends on political willingness of European Union and flexibility of directive



Potential linking issues: Australia (under multi-state principle) – EU ETS

- **Sink-projects:**
proposed inclusion (A) –not currently included (EU)
- **Non-CO₂-gases:**
proposed inclusion (A) –not currently included (EU) but e.g. N₂O from 2008 in some countries

Risk to import uncertainty of accounting
- **Monitoring and Verification:**
equal stringency
- **Sanctions:**
proposed price cap (A) – currently no price cap (EU)

CEEM Short courses: Climate change, Emissions trading, Clean Development Mechanism

Next 16-18 of July 2007 in Sydney



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