

# **EU Emission Trading - Better Job Second Time Around?**

ECEEE Summer Study  
La Colle sur Loup, France  
5-9 June 2007

***Joachim Schleich***

*Fraunhofer ISI, Karlsruhe, Germany*

***Regina Betz***

*CEEM, Sydney, Australia*

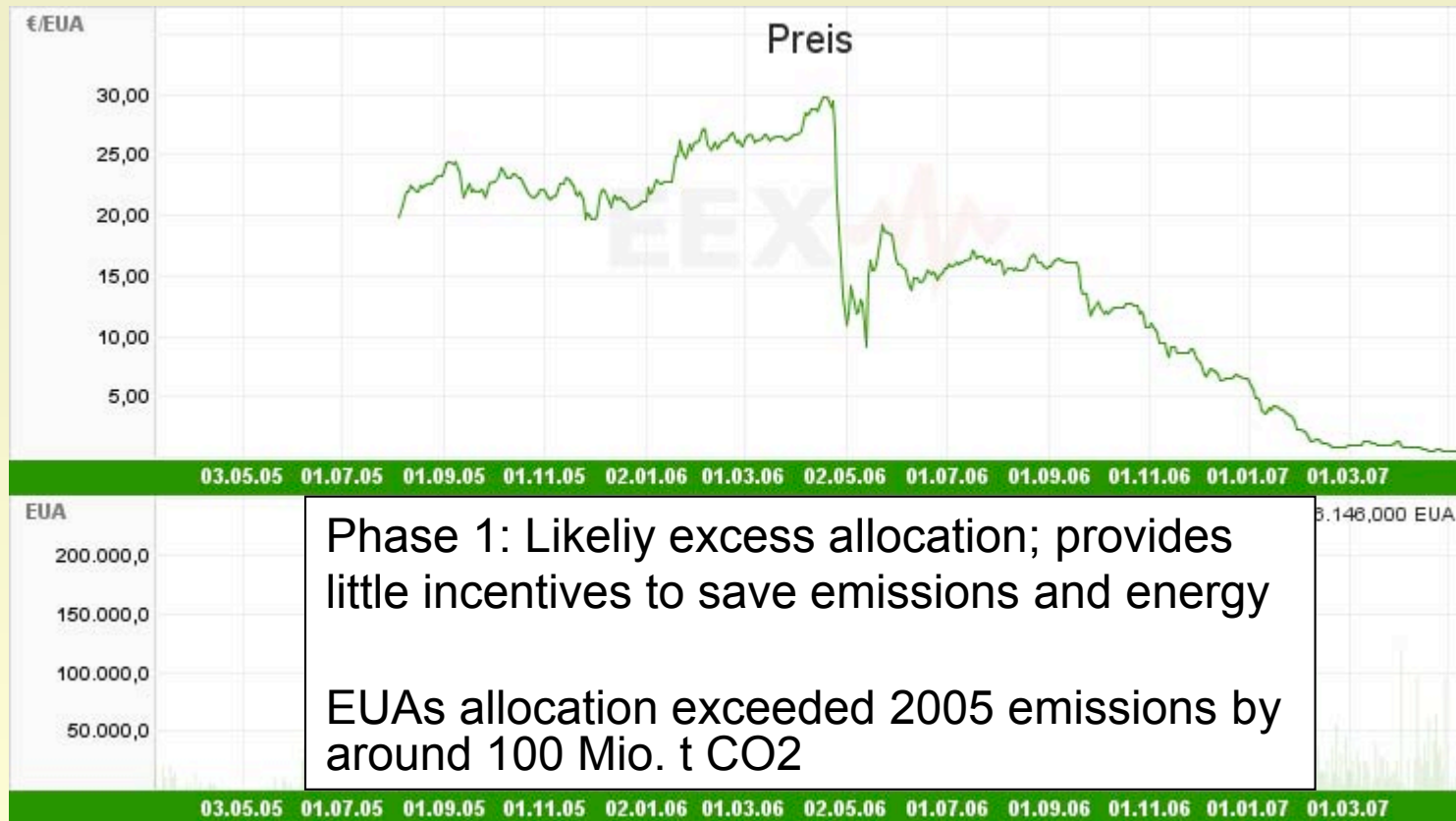
***Karoline Rogge***

*Fraunhofer ISI, Karlsruhe*

## *Overview of EU ETS*

- Cap-and-trade type scheme
- Operates in phases: phase 1 (2005-2007), phase 2 (2008-2012) etc.
- Banking between phase 1 and phase 2 not possible but unlimited afterwards
- Links to credits from JI and CDM projects established
- Allocation rules given by EU Emissions Trading Directive:
  - at least 95% for free in phase 1 and 90 % in phase 2, rest may be auctioned off
- National Allocation Plans (NAPs) for each phase:
  - MS set ET-budgets (Macro) and rules on installation level (Micro)
  - need to be approved by EU Commission

# *EUA spot prices and volumes traded in the EU ETS*



Source: EEX (download 11 May 2007)

## *Outline of presentation*

### Analysis of notified and approved NAPs for phase 2

#### **Macro Analysis**

- Assess stringency of ET budgets based on three criteria
- Assess economic efficiency of the split in reduction efforts between sectors covered by the ETS and those not covered

#### **Micro Analysis**

- Assess economic efficiency by comparing basic allocation rules for existing and new installations with "ideal" rules

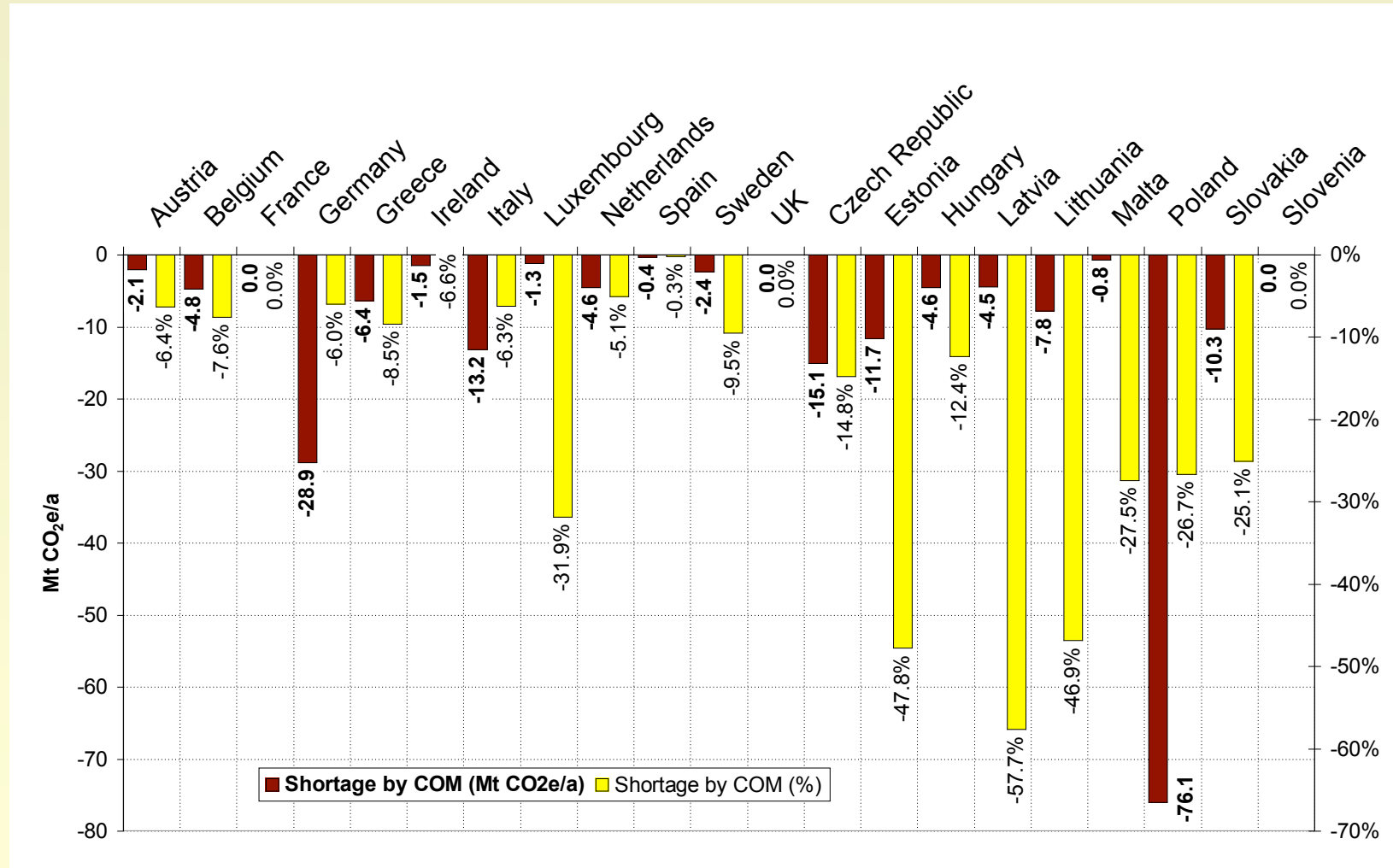
#### **Conclusions**

## Assess stringency of ET budgets

	VET 2005 (criterion 1)		ET-budget in phase 2 compared to				KM limit for companies  in million ERU-CER/a
	in million EUA	in % of VET 2005	ET-budget in phase1 (criterion 2) in million EUA	in % of ET- budget phase 1	Emission projections for 2010 (criterion 3)		
					in million EUA	in % of projected emissions	
EU-15 (15) Notified	-149.1	-9.6%	-111.5	-6.7%	-119.7	-7.2%	286.4
<i>(10) Accepted</i>	-176.6	-15.0%	-152.9	-12.3%	-150.8	-12.1%	163.3
EU-10 (10) Notified	127.9	25.8%	65.8	12.7%	67.9	13.1%	86.7
<i>(5) Accepted</i>	1.8	3.6%	-7.0	-13.2%	-20.4	-38.1%	4.1
<b>Total (25) Notified</b>	<b>-21.2</b>	<b>-1.0%</b>	<b>-45.7</b>	<b>-2.1%</b>	<b>-51.8</b>	<b>-2.4%</b>	<b>373.1</b>
<b><i>(15) Accepted</i></b>	<b>-174.8</b>	<b>-14.2%</b>	<b>-160.0</b>	<b>-12.3%</b>	<b>-171.1</b>	<b>-13.2%</b>	<b>167.4</b>

- ET-budgets in notified NAPs imply little efforts (because of very generous EU10 budgets)
- ET-budget in NAPs accepted by EU Commission are significantly more ambitious
- If maximum of credits from Kyoto Mechanisms is used, gap could be closed without internal reductions

# Budget cuts required by European Commission

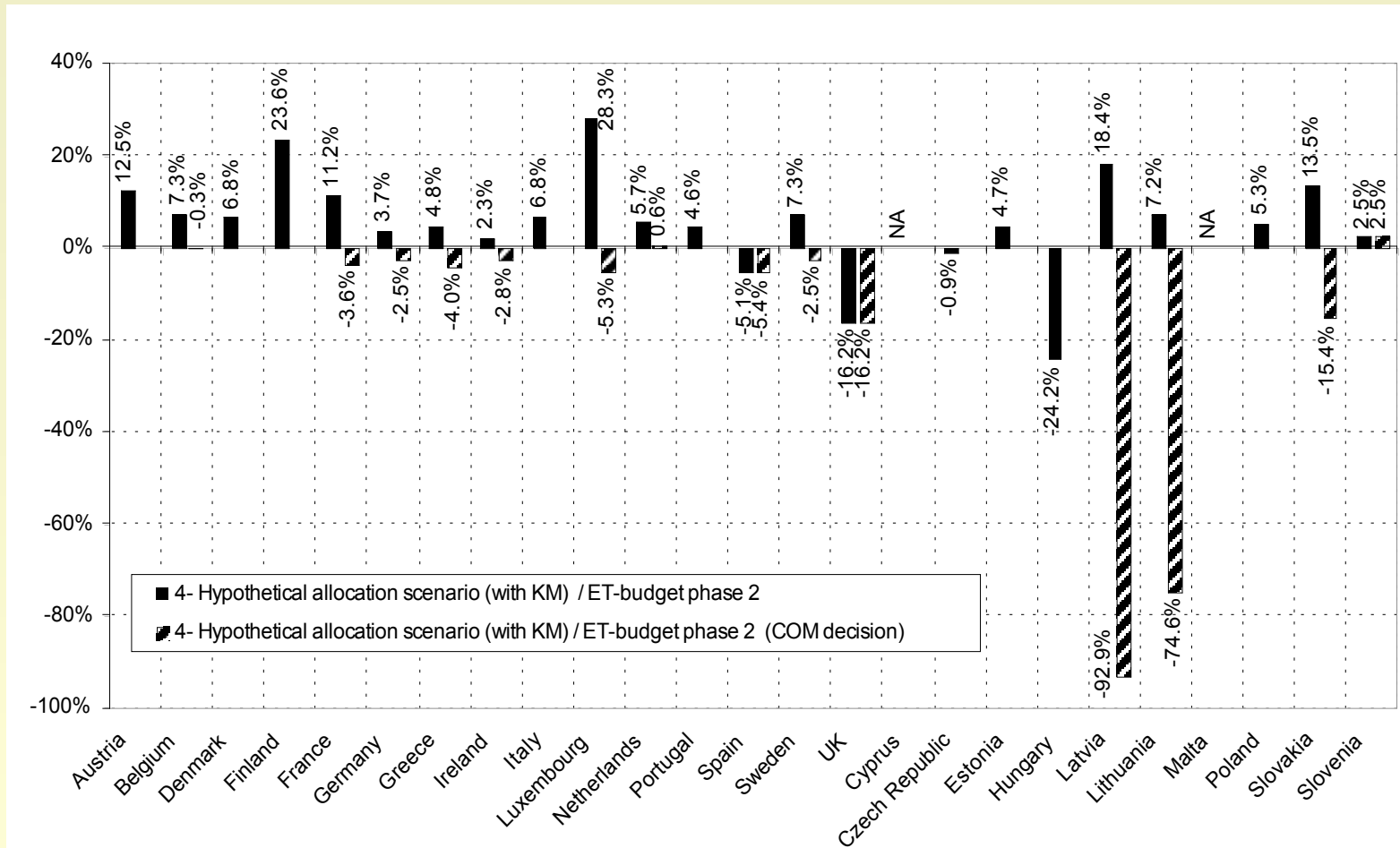


# Prices and volumes traded for EUA futures (2008)



Source: EEX (download 11 May 2007)

# Are emission budgets economically efficient?



- Notified NAPs imply inefficient split of reduction burden between sectors covered by EU ETS and those not covered
- ET budgets approved by EC imply more efficient "split of pie"



## *Micro level allocation (selected issues)*

### **Rules for existing installations**

- *Ideal*: full auctioning ("polluter pays", "double dividend", generate price signal, reduce complexity)
- *Possible second best*: benchmarks (early action recognized; higher incentives for replacements)
- *Actual*: most MS: grandfathering based on historic emissions still dominating

### **Rules for new installations**

- *Ideal*: purchase all allowances (investment decision based on full social costs)
- *Possible second best*: uniform benchmarks (provide full flexibility)
- *Actual*: most EU 15 MS: fuel/technology-specific benchmarks (BAT);  
most new MS: installation-specific emission values and projected output

# Conclusions

## **Environmental effectiveness**

- + Substantially improved by EC decision, higher prices for EUAs; improved incentives to invest in energy efficiency; signal to other MS and carbon markets ("EC is serious about climate change and about ETS")

## **Economic efficiency**

- + Improved by EC decision at macro level
- auction share (2 %) lower than allowed (10%); must increase in future (MIN rather than MAX); future share should be 100%
- + increase in benchmarking (primarily in energy sector) as "second best"
- free allocation to new projects (= technology-specific subsidies);

## **Comparison to phase 1**

- path dependency of methods and concepts
- "improvements" are rather small (auctioning, use of benchmarks, standardized load factors, less special provisions in old MS, but additional in new MS, transparency)