

# The European Emissions Trading Scheme and the Future of Kyoto

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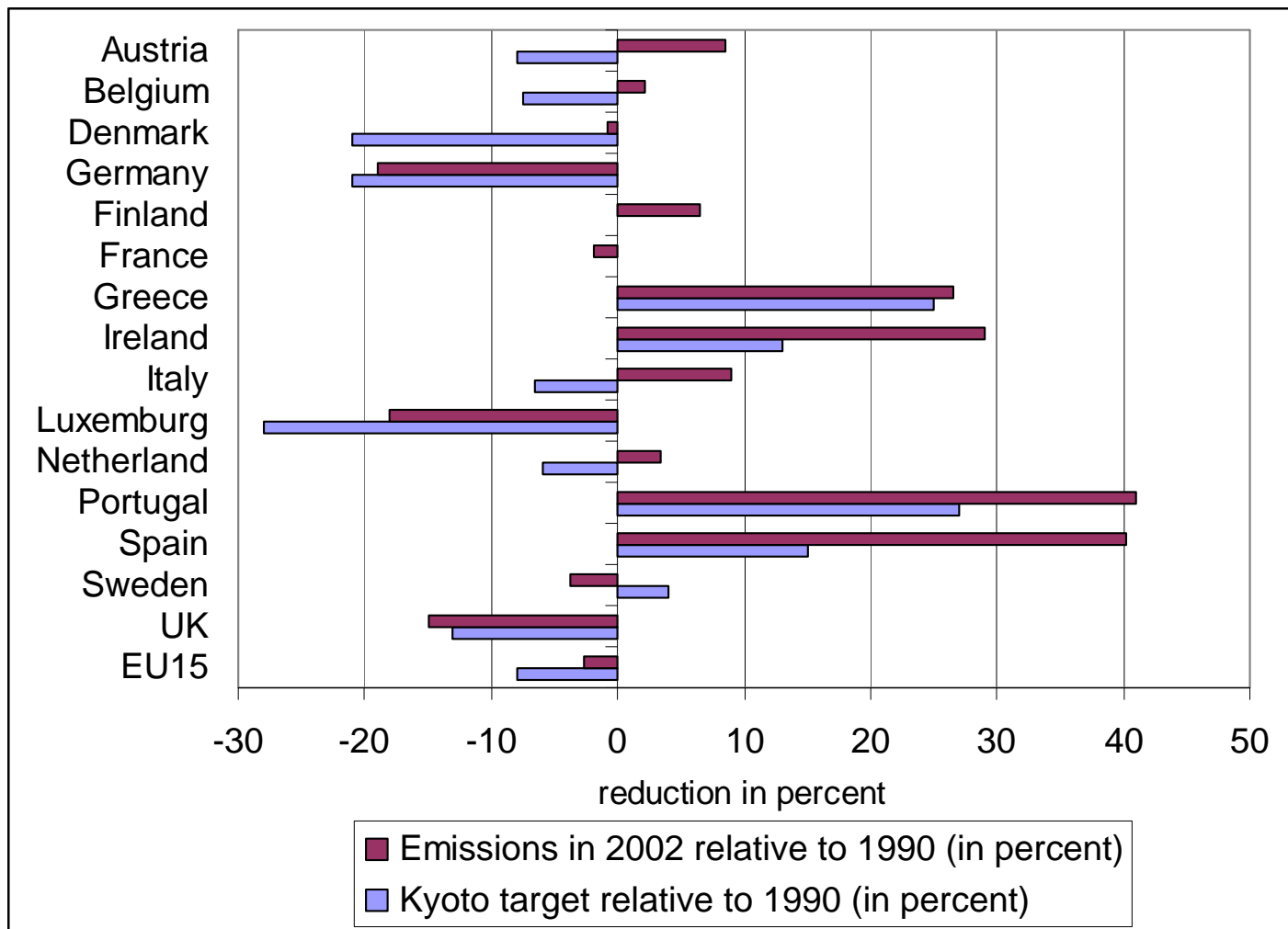
# Outline

- The European Emission Trading Scheme (ETS)
  - Design
  - Permit Allocation
  - Likely Effects
- The Second Commitment Period
  - The new NAPs
  - CDM and JI Credits
- The Role of Project Based Mechanisms
  - Market Size
- The ETS and the Post-Kyoto Process

# Climate Policies in the EU

- Kyoto Targets within the European Burden Sharing

# The Current Situation ...



# Climate Policies in the EU

- Kyoto Targets within the European Burden Sharing
- The national targets are to be reached through national policy measures plus the ETS

# Climate Policies

- Current EU climate policies are divided:
  - National activities in all sectors
  - All “energy intensive installations” are subject to the European Emission Trading Scheme for CO<sub>2</sub>
- The Governments of the member states determine the national strategies through
  1. Composition of national emissions reduction and CDM/JI (supplementarity)
  2. Emission targets for the energy intensive installations (from this automatically follow the targets for all other emitters)
  3. Grandfathering of emission rights to these installations in the National Allocations Plan (NAP)

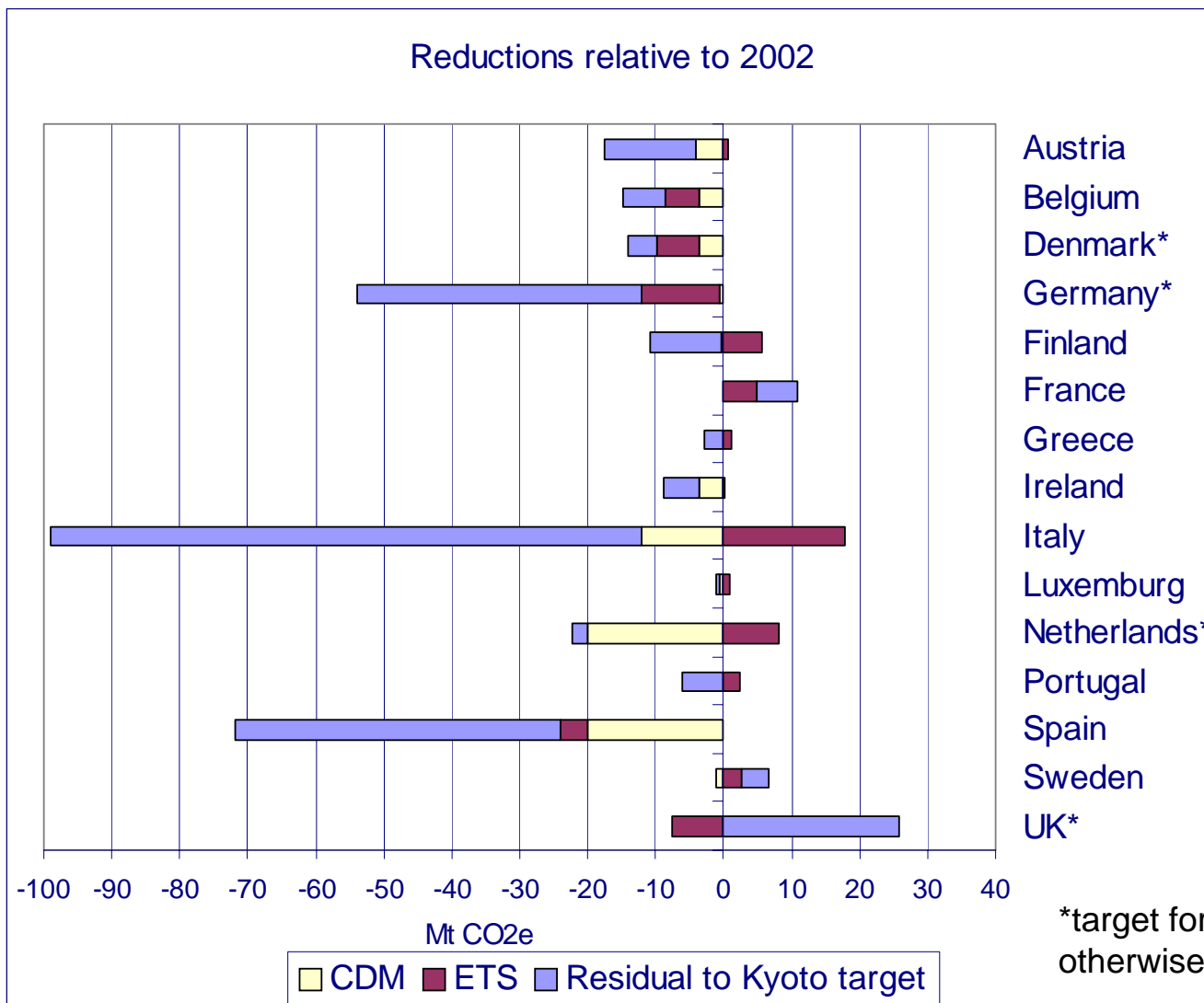
# Climate Policies in the EU

- Kyoto Targets within the European Burden Sharing
- The national targets are to be reached through national policy measures plus the ETS
- The ETS works as follows:

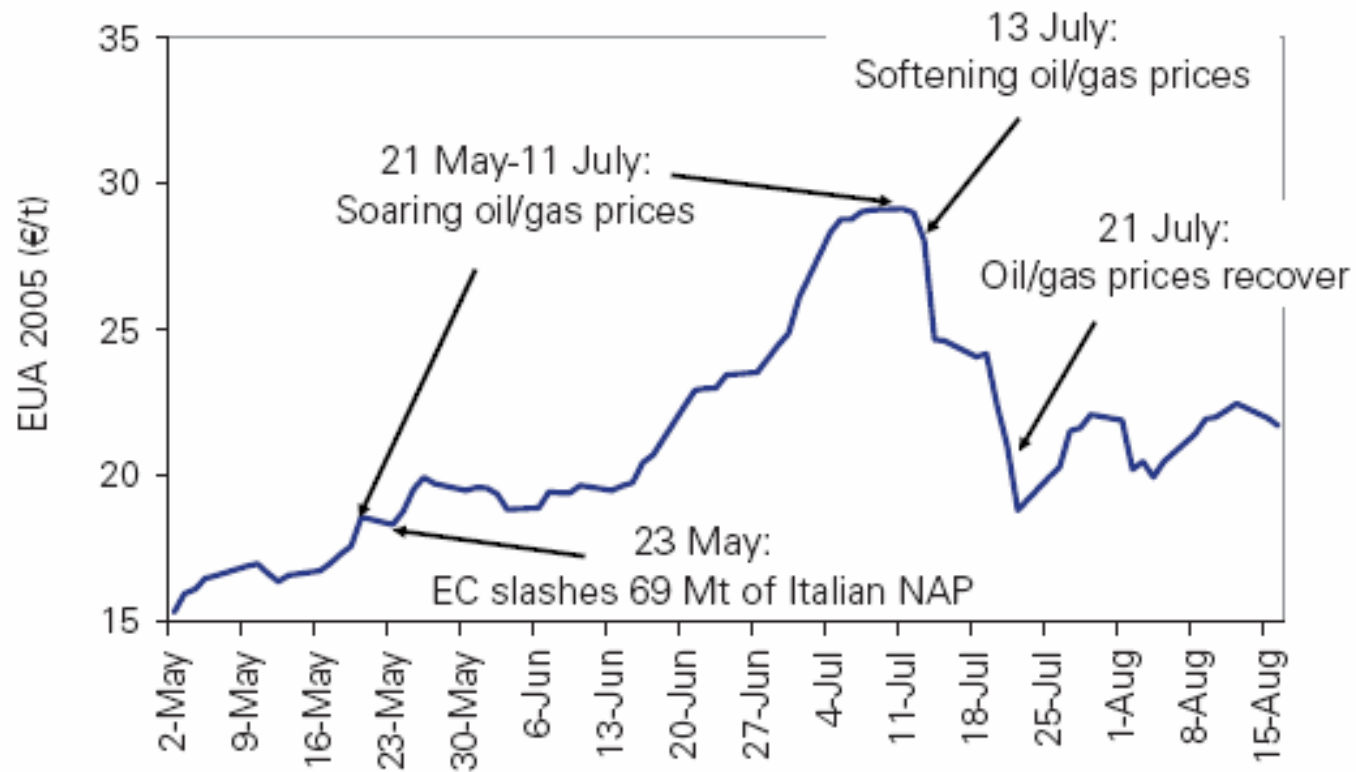
# The EU Emissions Trading Scheme (ETS)

- Two trading periods are introduced:
  - **2005 to 2007** (targets on the way towards 2012, but mainly for getting the trading system operating smoothly)
  - **2008 to 2012** (then the Kyoto Burden-Sharing-Commitments need to be met)
- Around **12,000 installations** are covered by the ETS
- **Linking Directive**: CDM/JI credits can be converted into ETS allowances by companies and governments
- **Supplementarity requirement** can limit CDM/JI credits
- Emission rights can be banked

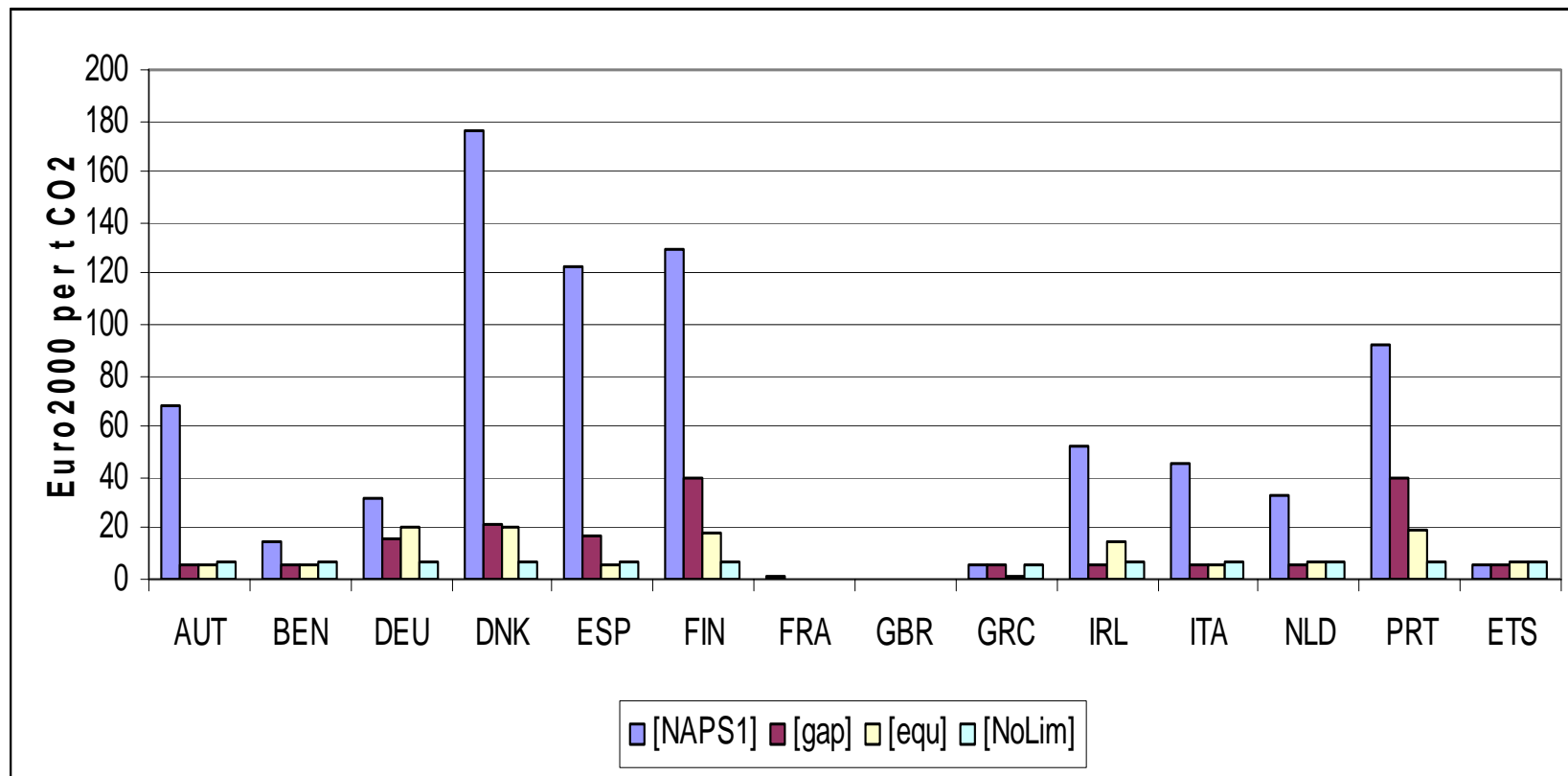
# Current Plans ...



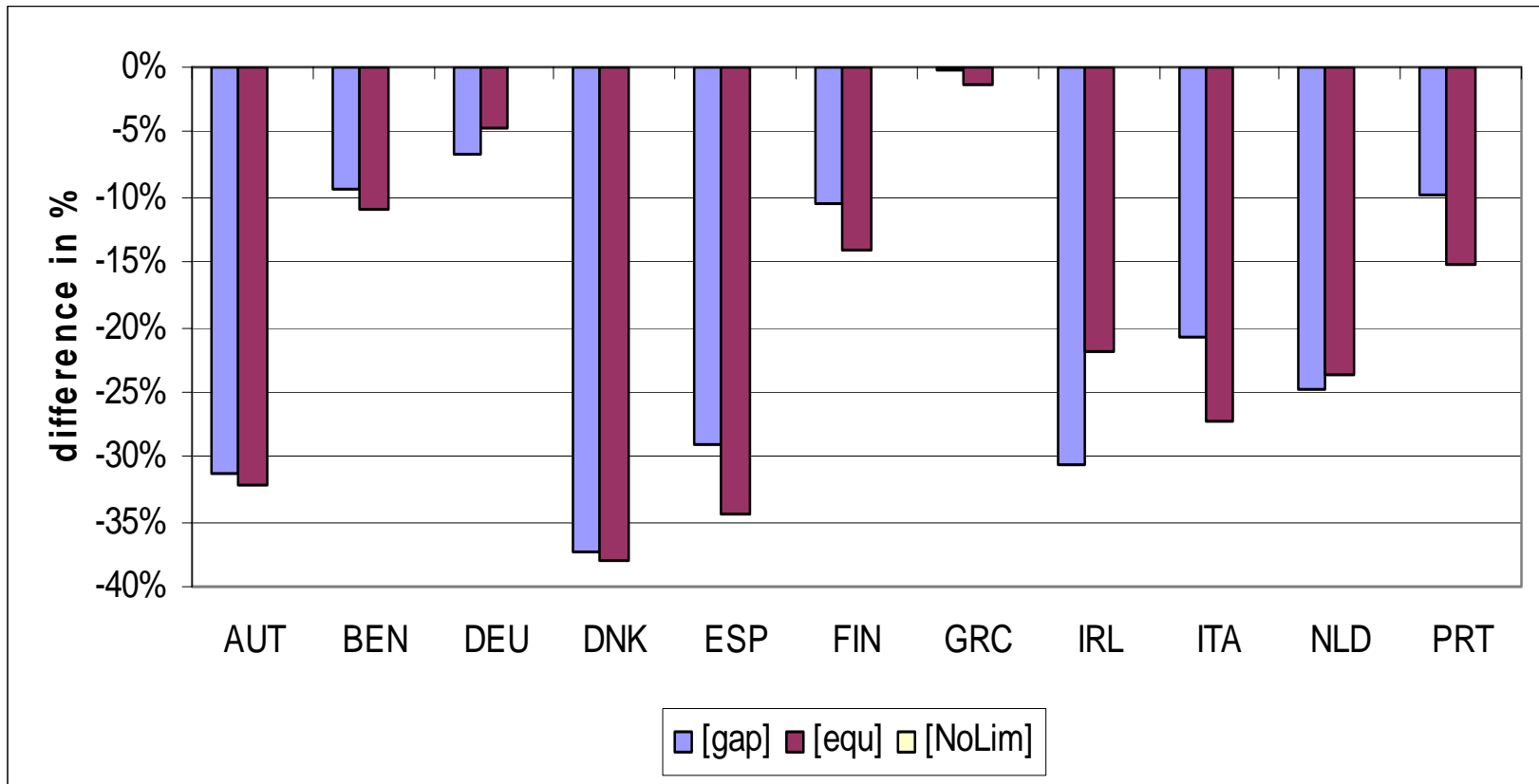
# Carbon Prices in 2005



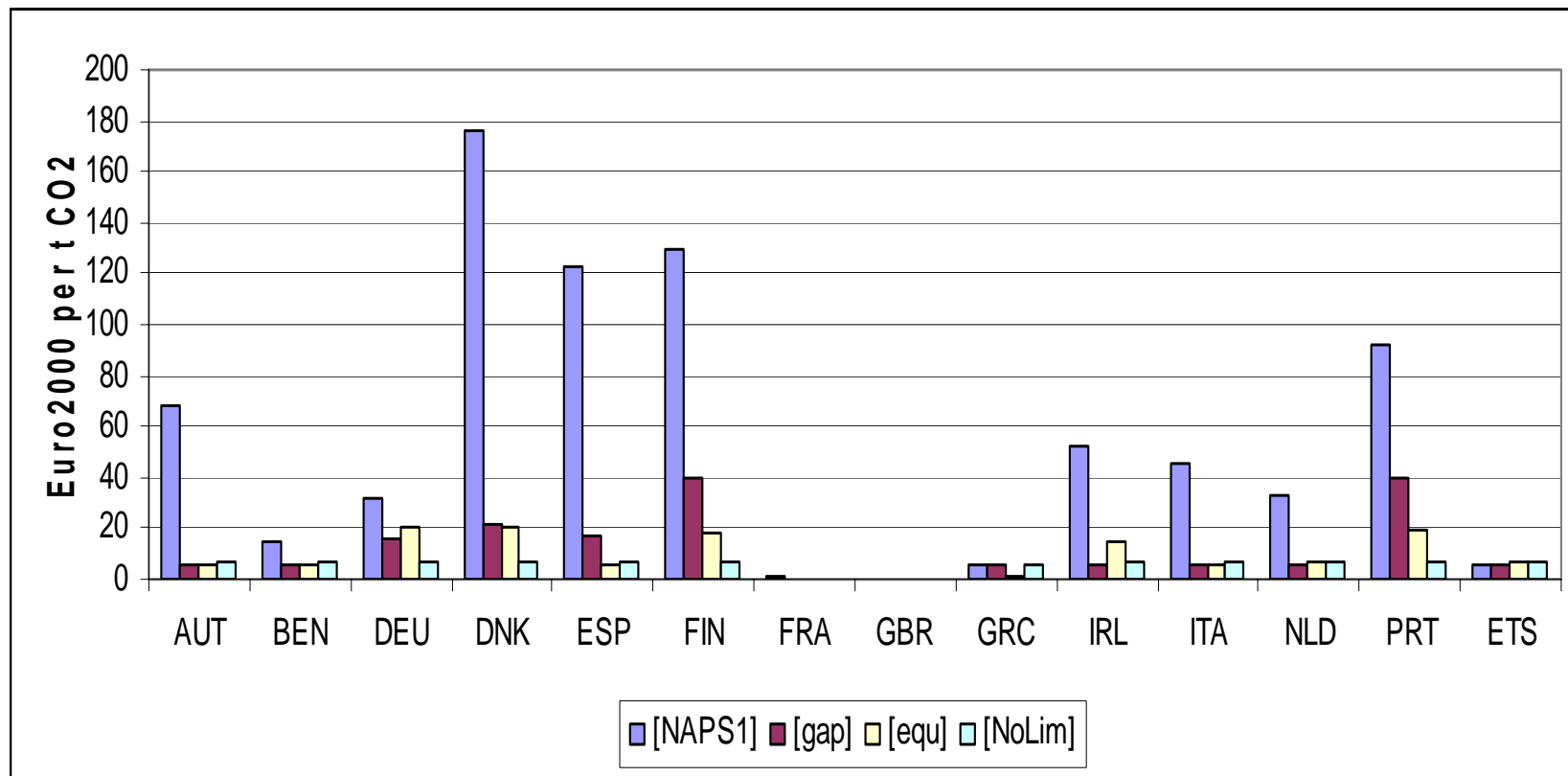
# Allocation effects



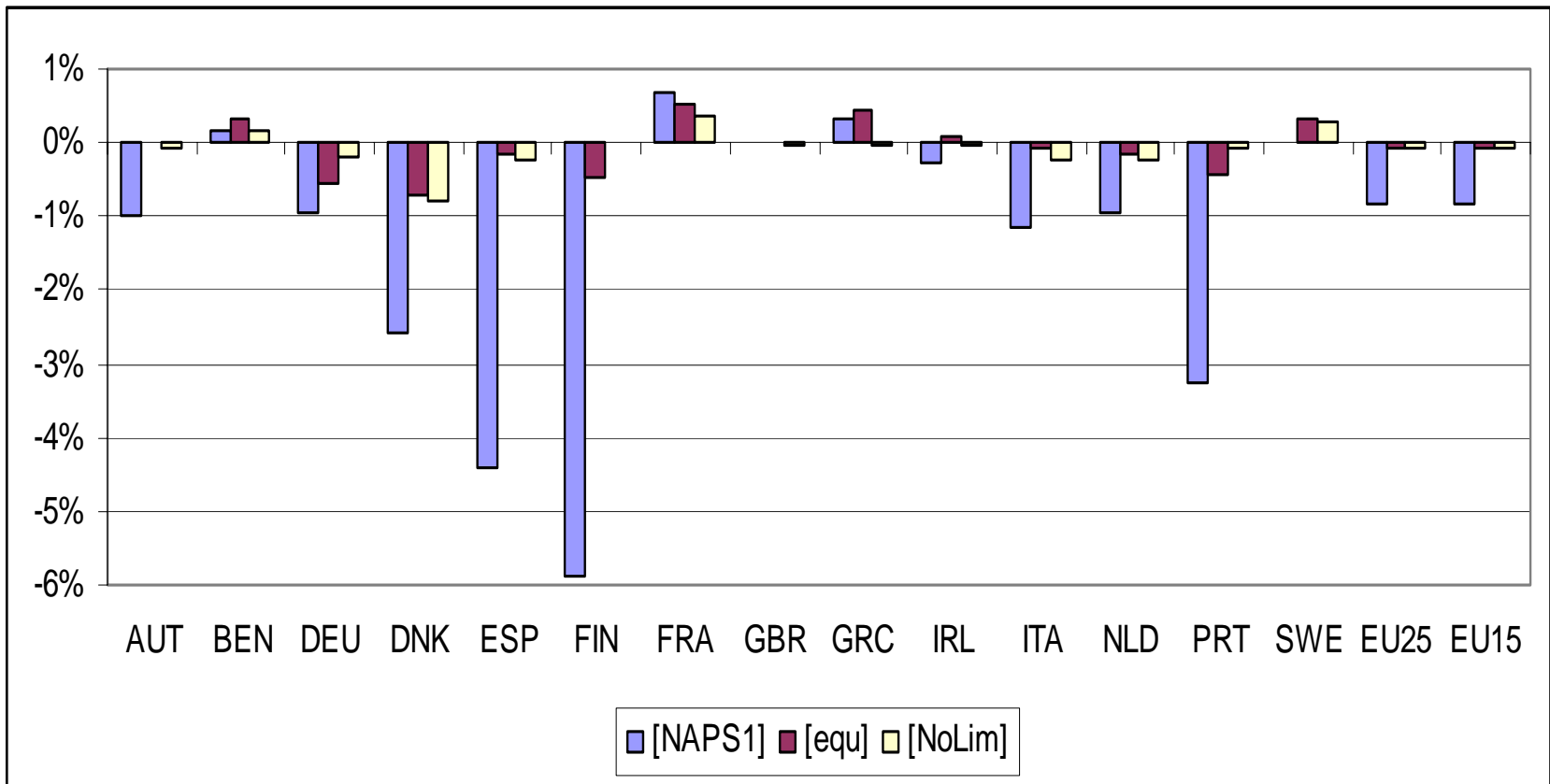
# Adjustments in the NAPs necessary to meet the Kyoto-Targets



# Allocation effects



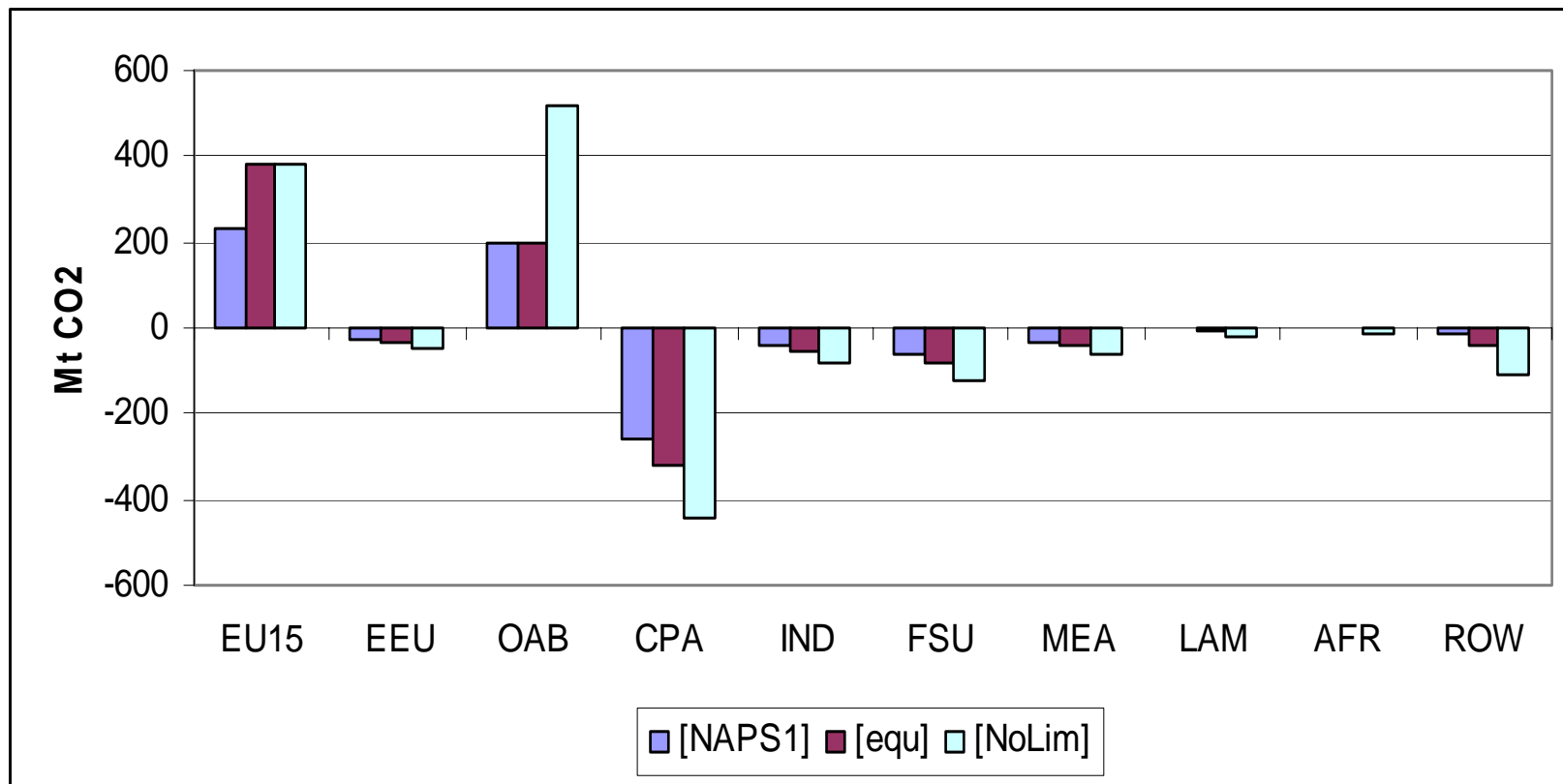
# Welfare effects of different permit allocations



# The Role of Project Based Mechanisms

- The Linking Directive establishes a global market for the trade with CDM and JI credits, both by governments and by firms.
- Rough estimates of the market for credits
  - Overall between 600 and 1200 MtCO<sub>2</sub>e
  - ETS demand 110 +/- 65 MtCO<sub>2</sub>
  - EU governments ~ 70 MtCO<sub>2</sub>

# Market for CDM and JI Credits



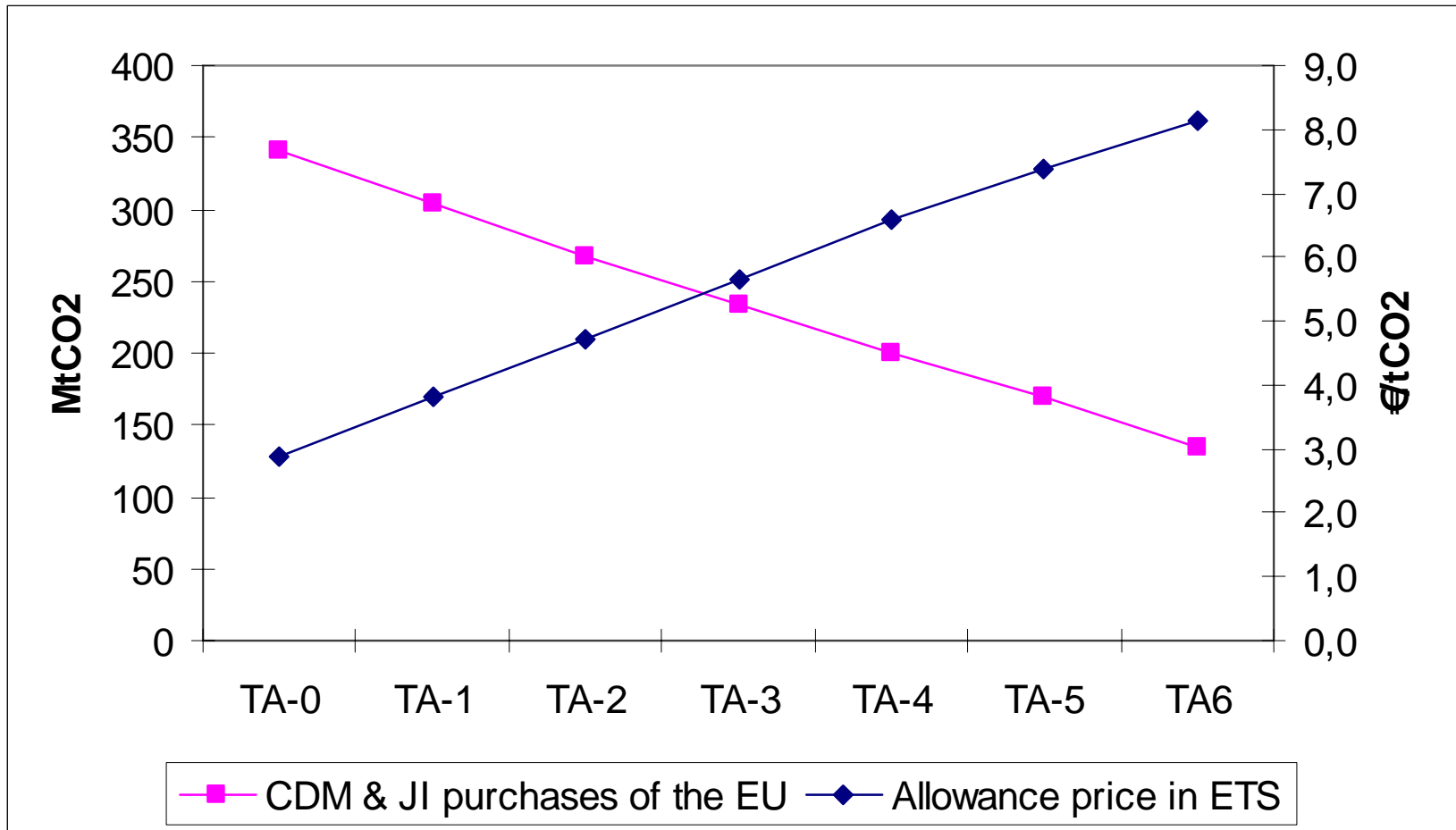
# The ETS and Post-Kyoto

- Through the CO2 Emissions Trading Directive of the EU a market for Carbon has been established.
- The institutional structure for trading Carbon is well developed (registry, electronic exchange, OTC exchange, brokers, funds, etc.).
- The Linking Directive has extended the functioning of the Carbon market beyond the borders of the EU.
- There are indications that Non-Annex B countries increasingly engage in CDM projects.
  - **There exists an international market for Carbon that is unlikely to become reversed!**

# Shortcomings

- The international part of the market is so far confined to CDM and JI credits.
  - But some countries or regions may join soon.
- Trading project credits is expensive, mainly because of the additionality proofs!
- For political reasons several low cost opportunities are only slowly developed (e.g. China).
- Transactions costs (project design, certification, etc.) can severely limit the size of the market for CDM and JI projects.

# Supply of CDM & JI Credits and Transaction Costs



## Problems

- In the short-run more countries and companies will become involved in Carbon Trading. The Carbon market may grow, but ...
- There are no caps for DCs thus creating a problem in the longer run.
- Even tighter caps of a few developed countries will not lead to a significant reduction of emissions overall.

## Opportunities

- North-South technology transfers take place.
- CDM credits transfer funds and/or capital into developing countries.
- Developed countries can offer relatively tight caps at low political and economic costs.
- Once a market has been created, caps may be easier to introduce in the future.

# Options

- The EU declares a *Carbon-Free Economy*  
..... and imports carbon credits from the developing world.
  - Demand ~ 8,000 MtCO<sub>2</sub>e
  - Supply at best 1,200 MtCO<sub>2</sub>e
- Other Annex-B countries join the EU with appropriate tight targets  
(no caps for the Non-Annex-B countries).
  - The scale of the Kyoto-Commitments could be reached at reasonable costs given the supply of CDM/JI credits.
- Convergence to intensity targets that can serve as temporary caps for DCs.
- Slow phase-out of CDM and JI (saving transaction costs).