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Energy
Trading

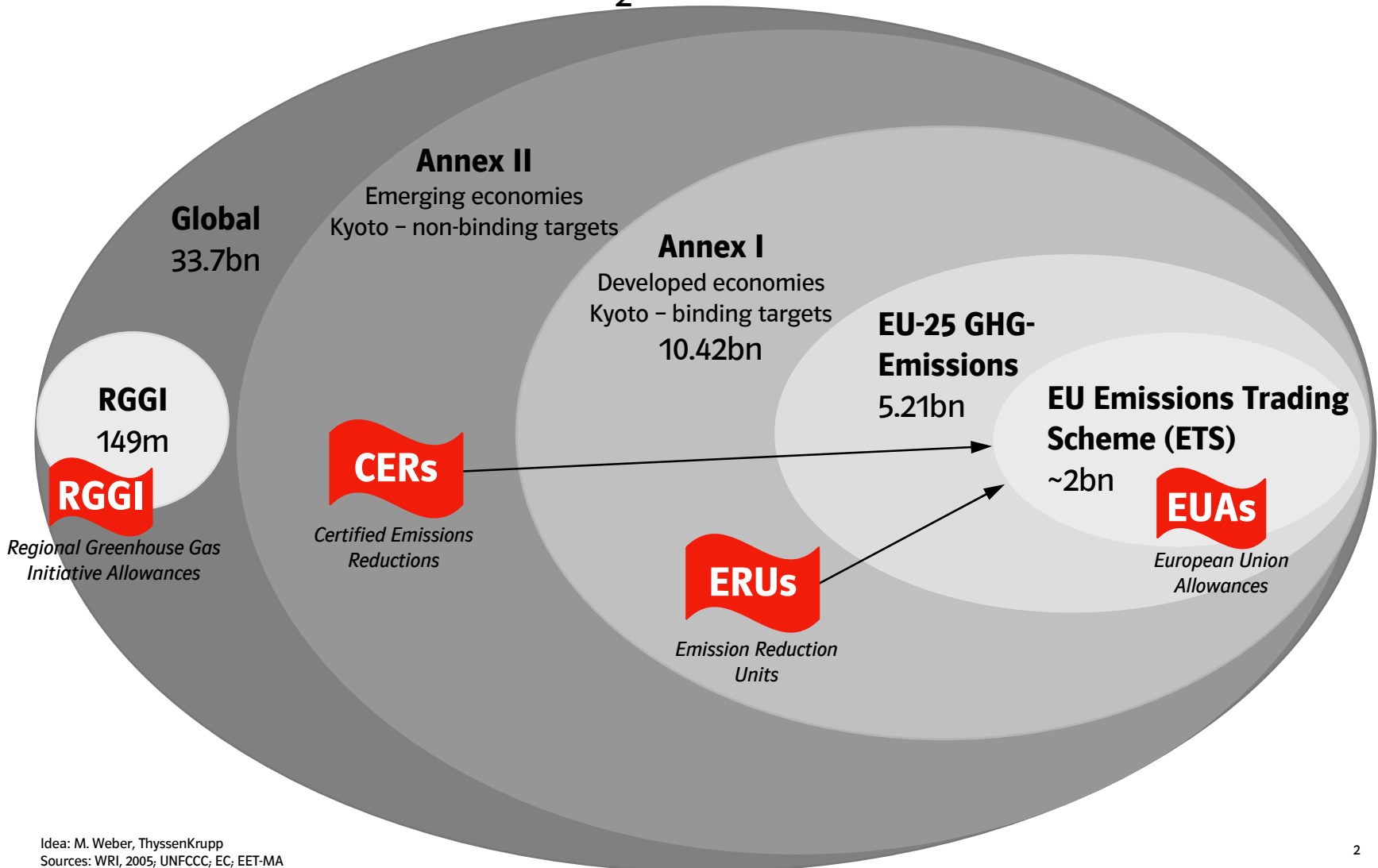
The impact of the EU ETS on power – The price to be paid for CO₂ abatement?

Dallas, 3 December 2009

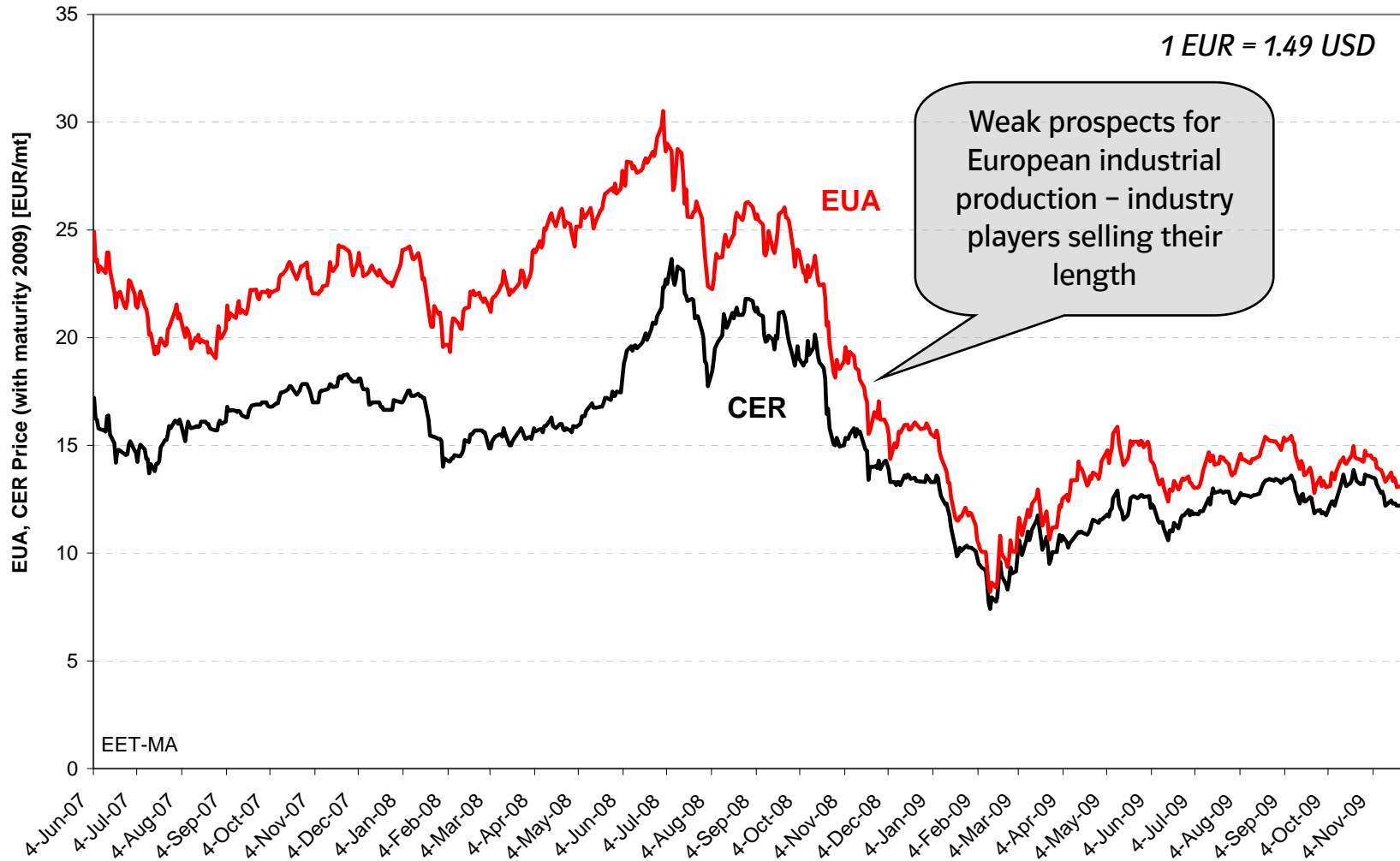
Dr. Ralf Wagner

Market Analysis/Manager of Forward Analysis

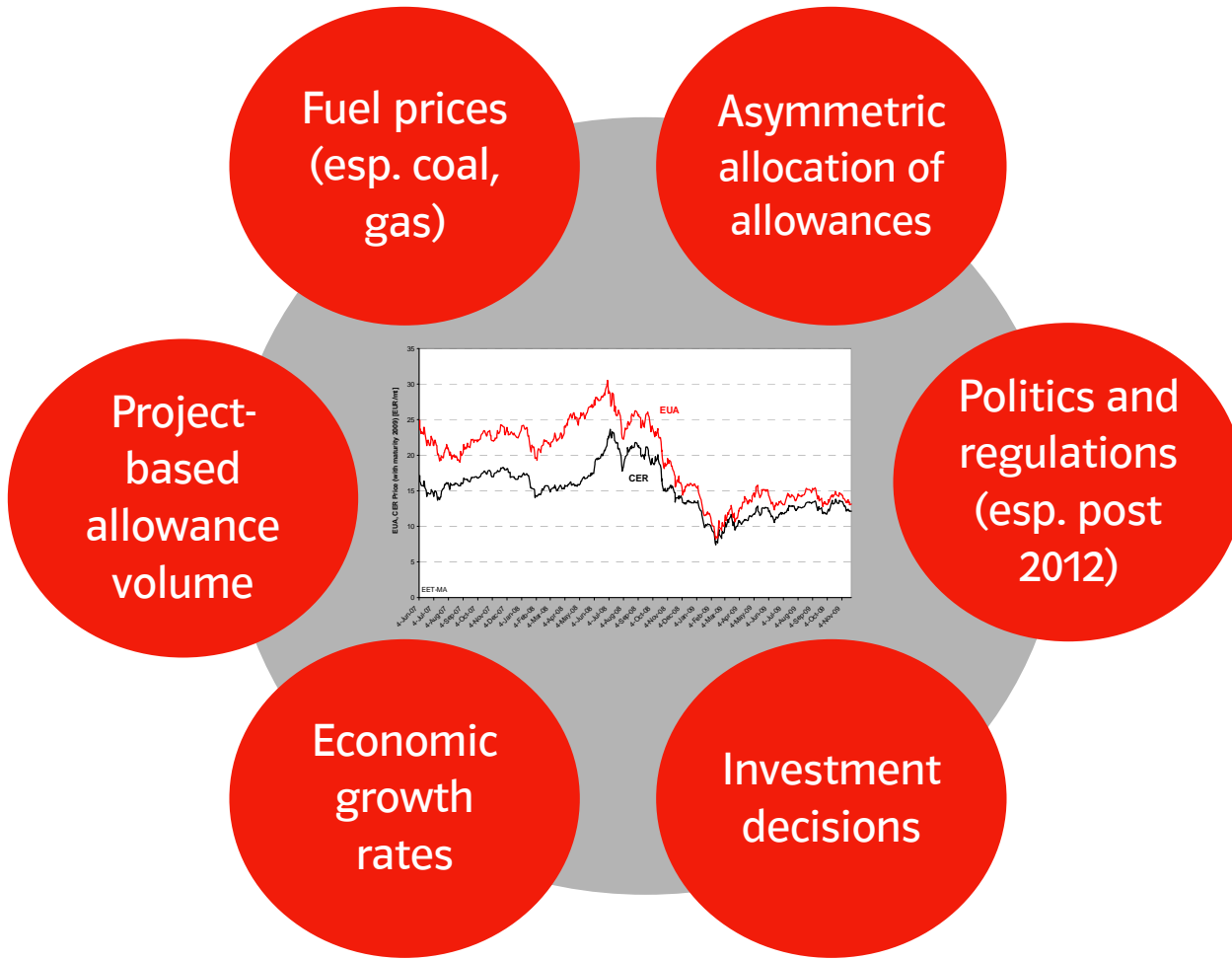
The Carbon Markets (t CO₂e)



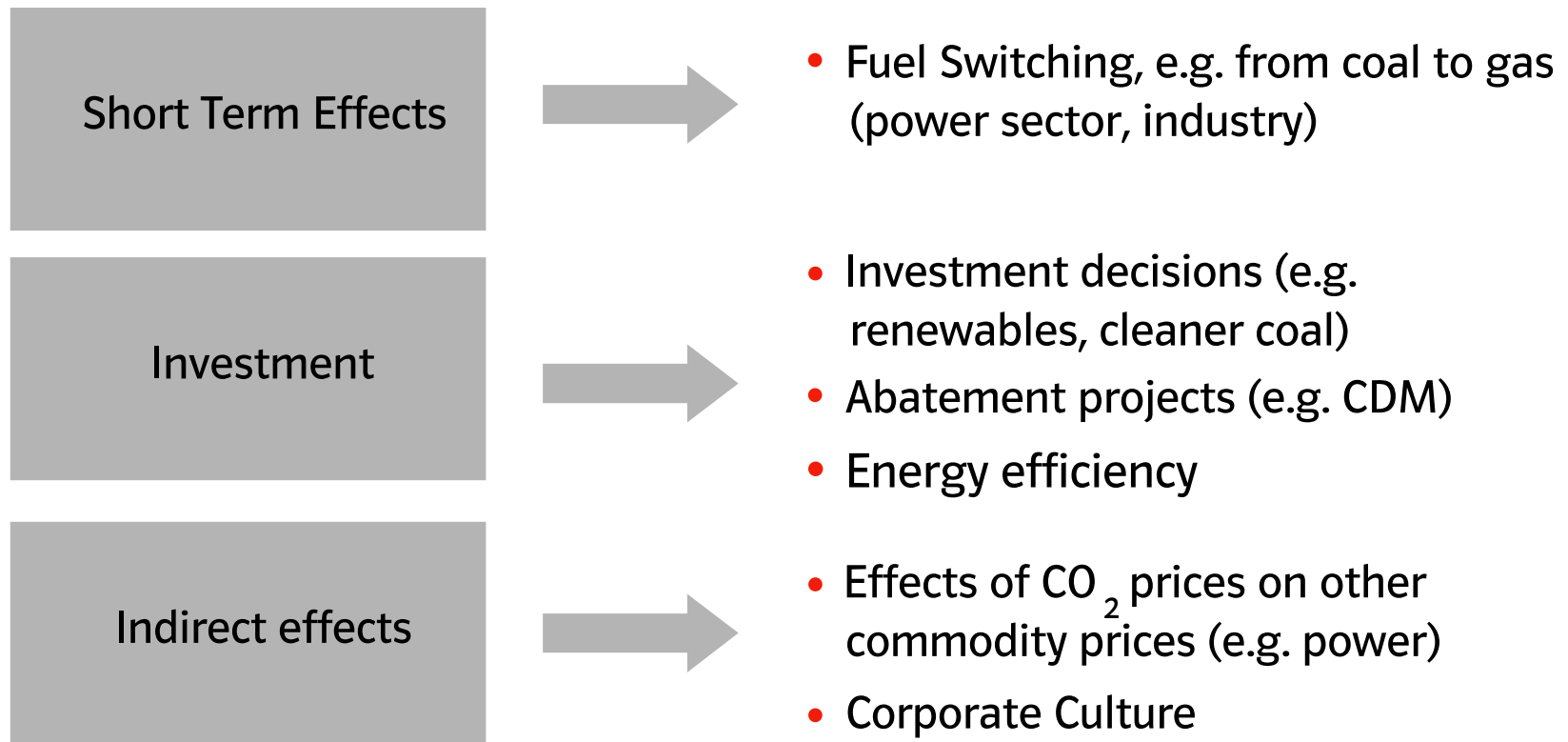
EUA prices respond to economic development



The price of carbon is a function of different drivers



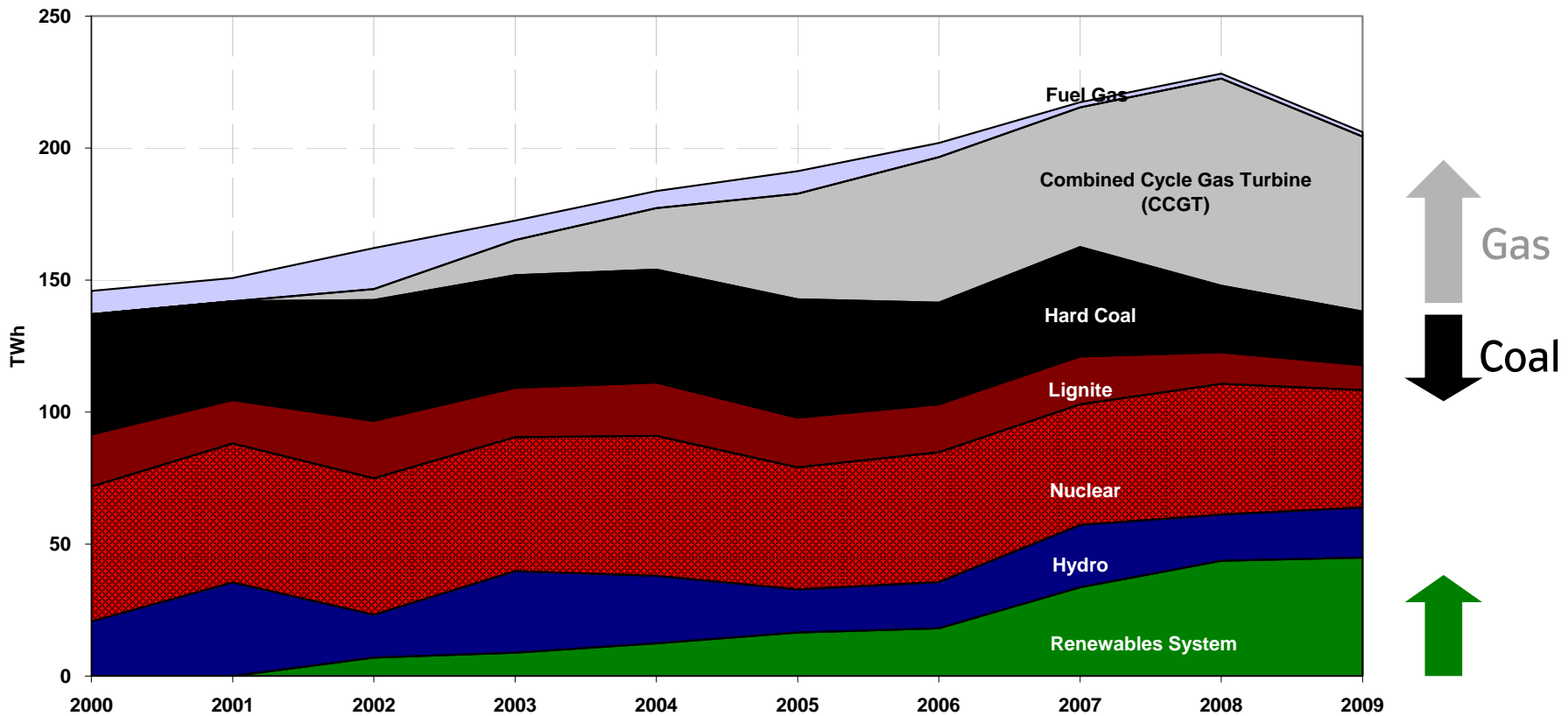
How can abatement be induced under a carbon price regime?



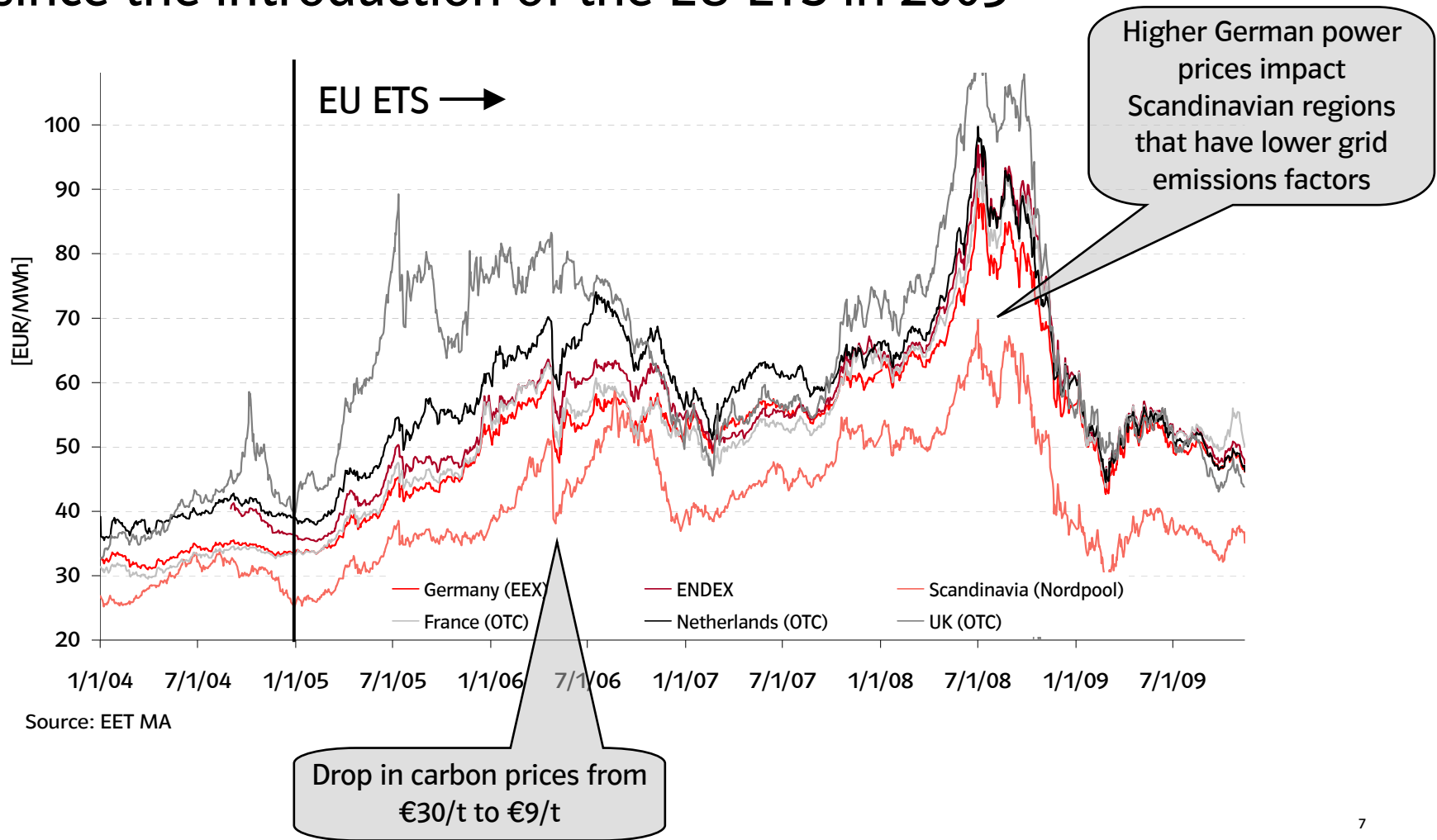
Spanish power supply is shifting from coal towards gas and renewables in response to climate policies

Development of Power Production in Spain by Generation Activity: Jan-Oct

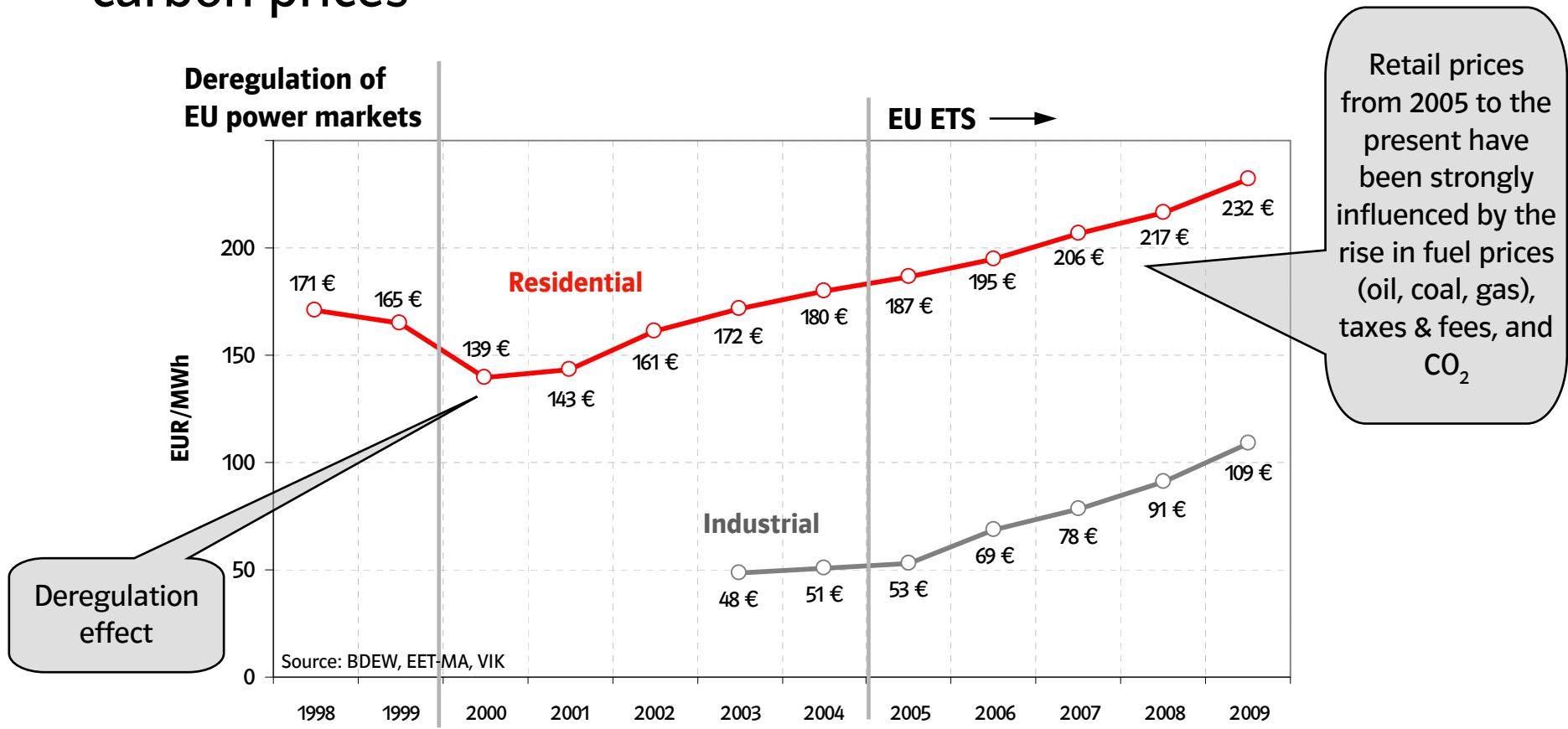
Source: Red Elctrica de Espana



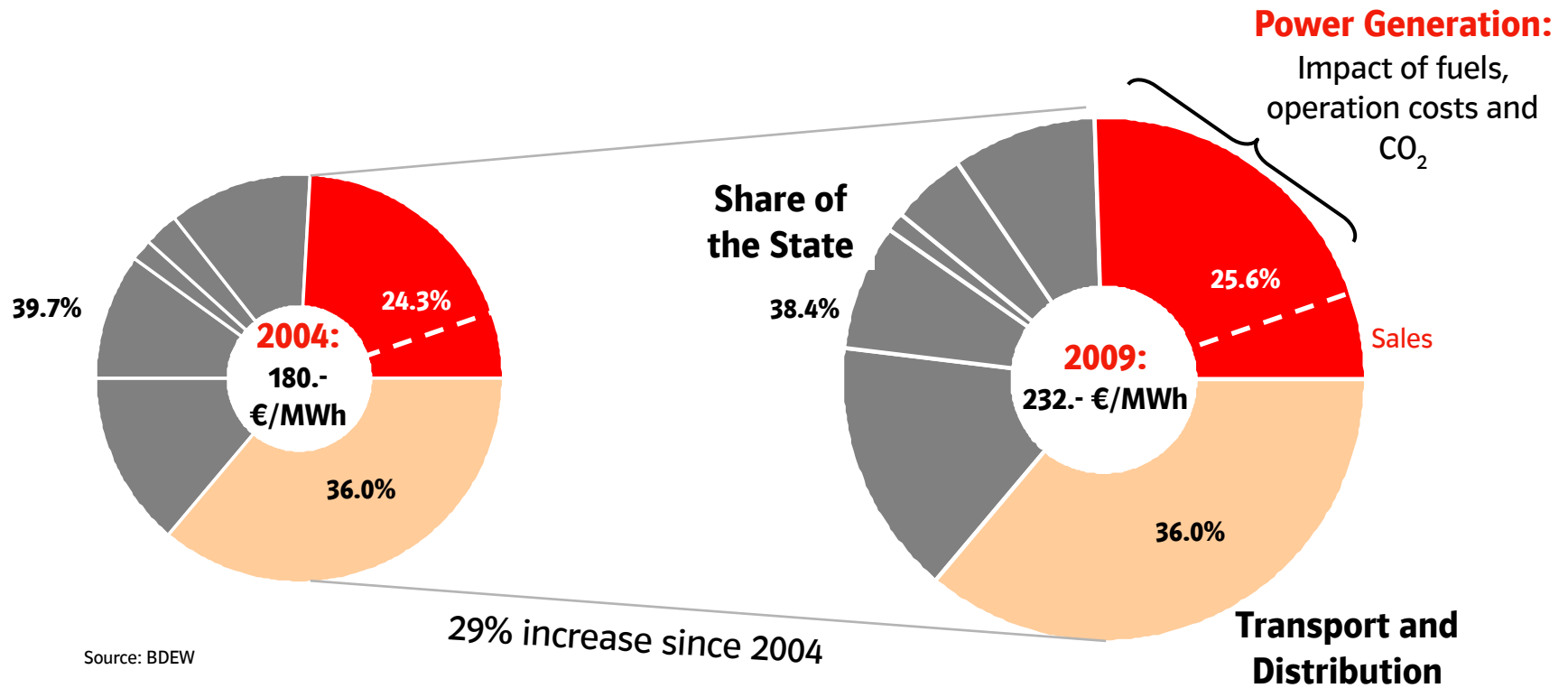
Wholesale power prices in Europe have been more volatile since the introduction of the EU ETS in 2005



German retail power prices are only slightly influenced by carbon prices



German Power Tariff: Together, the share of the sales and generation component has increased by 1.3% since 2004



Conclusions - Carbon needs a Global Market

- As the price of carbon rises, we observe a switch from carbon-intensive fuels to low-carbon fuels (e.g. "fuel switching" from coal to gas, coal to renewables).
- The impact of CO₂ prices on wholesale power prices is much more pronounced than the impact on retail prices. Retail prices are highly influenced by state induced components (e.g. taxes) and distribution fees.
- Global emissions reduction efforts will be most effective when:
 - More countries participate
 - Markets are connected more strongly
 - The price of carbon converges globally