

The impact of the EU ETS on electricity prices

**– perspective from non-ferrous metal producers
operating in Europe**

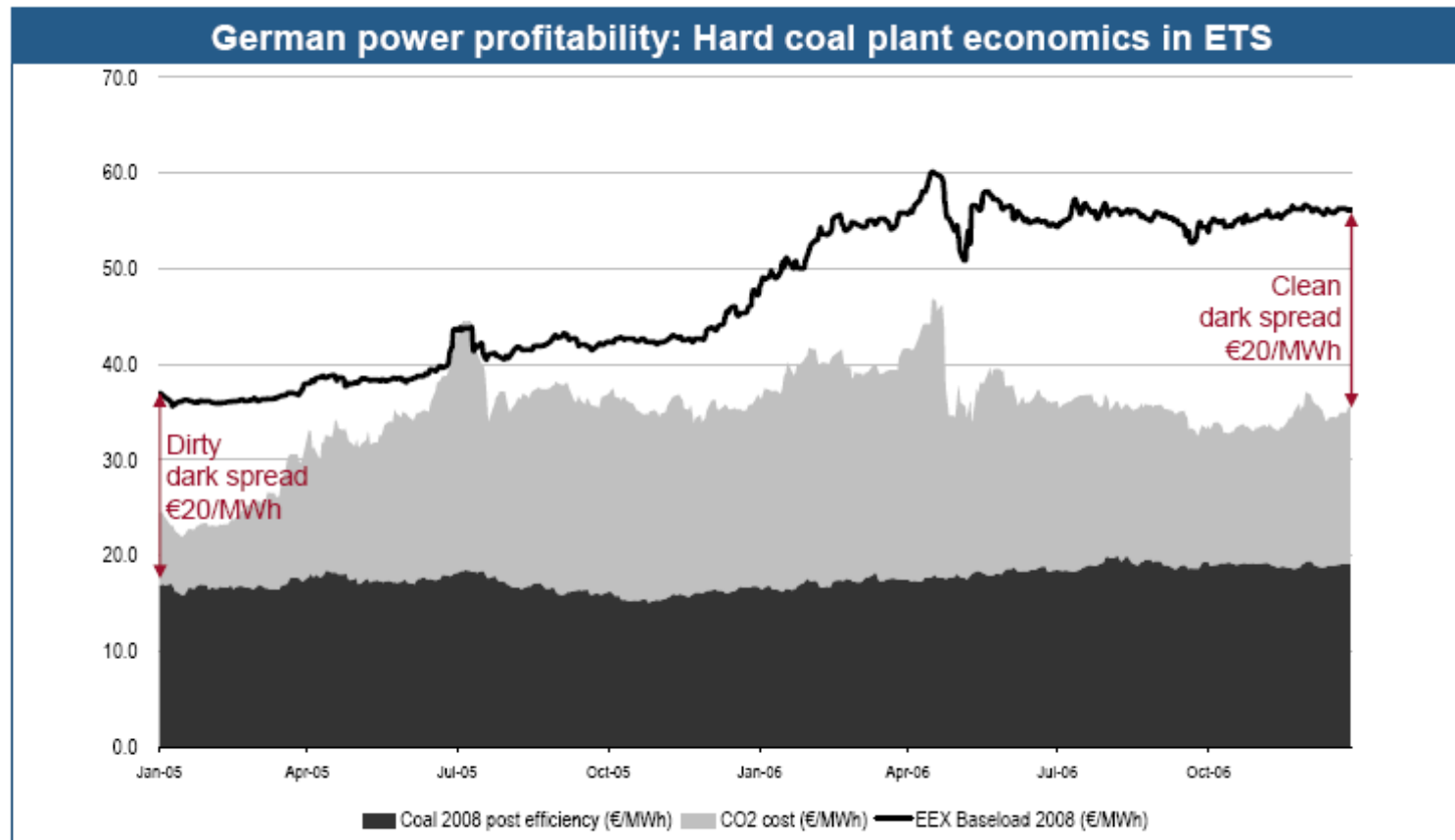
Simon Baker
Energy Director, Alcoa Europe

Sensitivity to electricity prices

- Primary aluminium production is extremely electro-intensive – typically around 15 MWh of electrical power is required to produce 1 tonne of metal. For zinc around 5 MWh/tonne is required.
- Non-ferrous metals are globally traded commodities – producers cannot pass-through local cost increases and are therefore classical “price takers”
- Primary producers are acutely sensitive to local electricity price increases

CO2 pass-through into power prices is a reality

CO2 IS FULLY REFLECTED IN TODAY'S POWER PRICES



CO2 pass-through into power prices

- Since the introduction of the EU ETS European electricity prices have risen - logical consequence of power generators including the opportunity cost of CO2 in pricing decisions. This is fully consistent with economic theory
- Using an allowance represents an opportunity cost regardless of whether CO2 allocations have been provided free of charge or purchased
- Economic theory predicts that the degree of CO2 opportunity cost pass-through will be absolute in a perfectly competitive market
- These outcomes are well documented and backed by observation

Consequences for non-ferrous metal producers

- Non-ferrous metal producers need long-term predictable cost-based power supply arrangements:
 - Uncertainty on future permit allocations, methodologies and the application of the CO₂ constraint makes pricing long-term power supply agreements very risky
 - Generators may look to push the CO₂ price risk to buyers or simply not be prepared to enter into long-term deals
 - Power costs will increase post 2012 as the CO₂ constraint is tightened
- Without shielding measures from the pass-through effect of CO₂ into power prices trade exposed energy intensive industries in Europe such as primary aluminium will close and be replaced elsewhere with no global environmental benefit

Mitigating CO2 cost pass-through into long-term power sales to trade exposed energy intensive industries

- **Long-term power sales to trade exposed energy intensive industries should be entitled to an equivalent free allocation of EUAs**
- **EUA allocation dependent on the generator technology backing the contract & could be based on benchmark power conversion efficiencies by fuel type/ technology type (both power plant & producer plant) to ensure the correct environmental incentives**
 - **Does not affect fundamentals of the scheme nor monitoring and reporting**
 - **Implementation on a competitive EU wide basis to alleviate state aid concerns**
 - **Reduces risk & promotes efficient technologies lowering GHG emissions**
 - **Simple to implement - no embedded cost of CO2 in power price to calculate**
- **Removes CO2 indirect effect in power prices for those trade exposed energy intensive industries unable to pass-on the cost**