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## **COMPETITIVE ASSESSMENT OF THE CO<sub>2</sub> COST PASS-THROUGH INTO THE ELECTRICITY PRICES**

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According to the Energy Sector Inquiry published on January 10, 2007 the electricity producers have started to factor in the value of CO<sub>2</sub> allowances in their pricing decision as an additional factor of production. This practice was seen by competition authorities of some Member States as an evidence of generator's market power. The German Bundeskartellamt has issued a warning on December 20, 2006 to German power producers RWE and E.ON on account of anticompetitive pricing in the context of CO<sub>2</sub> emission allowance trading. In particular, the Bundeskartellamt suggested that factoring the value of CO<sub>2</sub> allowances is abusive since these allowances were freely allocated to the power producers.

Some critics also mention that higher electricity prices caused by the pass-through of the value of CO<sub>2</sub> permits allow power generators to earn "windfall profits" from their entire generation portfolio.

The critics however, often fail to recognize that the pass-through of the value of CO<sub>2</sub> allowances into generation costs is necessary to provide an incentive for electricity producers to decrease the CO<sub>2</sub> emissions, something the CO<sub>2</sub> trading program was establish for in the first place. In particular, accounting for the opportunity cost of CO<sub>2</sub> allowances in the electricity production decision results in reduction in the CO<sub>2</sub> emission through the substitution of the electricity generated from coal power plants by more costly but less CO<sub>2</sub> intensive gas power plants.

Thus, even though the CO<sub>2</sub> allowances are allocated for free, the additional profits raised by power producers from selling electricity at higher price due to CO<sub>2</sub> pass-through are partly offset by the increase in generation costs due to coal-to-gas substitution.

This paper studies the economics of the interplay between the CO<sub>2</sub> emission trading program and power generation in the Member States of the European Union. It reinforces the economic rational for the pass-through of the market value of freely granted CO<sub>2</sub> allowances into the cost of power generation by the European power producers.

The paper uses the data on forward and spot prices of electricity, gas, coal, and CO<sub>2</sub> allowances as well as parameters of European power generation sources to estimate the cost of CO<sub>2</sub> abatement through coal to gas substitution as well as the additional profits earned by European power producers due to the pass-through of the CO<sub>2</sub> allowances.

These additional profits turn out to be offset by the estimated cost of the CO<sub>2</sub> emission abatement born by electricity producers to a significant extent. This suggests that the practice of the generators to factor the market costs of the freely granted CO<sub>2</sub> allowances into the cost of power generation is justified by the economics and the objectives of the emission trading programs and, in general, is not at all anticompetitive.