

# **An Integrated Approach to Simulate the impacts of Carbon Emissions Trading Schemes**

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**Abstract— Article from Special Edition 2009: Climate Change Policies after 2012**  
The present paper aims to reliably depict the impact of the European Union Emissions Trading Scheme (EU ETS) on Spain under different assumptions about the industries involved. Prior analyses, based either on highly aggregated macroeconomic or specific electricity industry models, have been limited in degree of detail or scope. Two types of modeling were combined in the present study: general equilibrium was used to assess the impact on different industries and to explain cross-industry changes, and partial equilibrium to suitably model the complex and crucial electricity system. Combining and interrelating these two models yields the effects on price, carbon dioxide (CO<sub>2</sub>) emissions and distributional patterns in Spain of both the current policy and of an alternative in which all industries take part in the EU ETS. Since Spain is a key participant in this scheme, the conclusions and policy implications stemming from this paper are relevant to and useful for post-Kyoto arrangements.

## **Index Terms—**

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