Market Design and Complementary Policies for the EU ETS2: Estimating Price and Welfare Effects*

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Abstract

The EU ETS2 is highly contended in the political discourse because of potentially high prices. Complementary policies and market rules might dampen demand for emission permits and reduce future prices. This paper proposes a dynamic calibrated model of the ETS2 that allows to examine these price effects in a transparent way accounting for (i) changing abatement costs over time and (ii) different designs of price stabilization mechanisms in a modular way. We develop a conceptual framework for calculating carbon-price equivalents of complementary policies. We find ETS2 prices for 2027 in the range of 311 to 422 EUR/tCO_2 depending on the assumed equation of motion of the price elasticity over time. Complementary policies consisting of national carbon prices, EU vehicle regulation and international offsets can reduce the ETS2 price by up to 56 EUR/tCO_2 in total. We also study the proposed one-year delay of the ETS2 and show that postponement increases carbon prices in subsequent periods if the cumulative emissions cap remains unchanged.

Keywords: carbon pricing, emissions trading, complementary policies, EU ETS2, welfare analysis
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