UNIVERSITÄT ZU KÖLN

Energiewirtschaftliches Institut an der Universität zu Köln

Titel:
Emissions Trading with Supply Adjustment Mechanisms and Market Power

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Abstract:

Endogenous supply adjustments have become a typical design feature in permit markets. Yet the policies across markets differ in the choice of the market-observable used to condition the supply adjustment. In this paper, we show that incentives for regulated agents who hold market power are sensitive to the choice of the market-observable. To do so, we develop a stylized dynamic model of a permit market with an endogenous supply adjustment mechanism and increasing stringency over time, where a subset of players holds market power. Our results indicate that, given seller power, a quantity-based adjustment, as implemented in the EU-ETS, either exacerbates potential price distortions from market power or leaves them unchanged. In contrast, a price-based adjustment can mitigate them. Further, we show that a specification of a price-based supply adjustment exists that restores a socially optimal allocation. Since market power concerns may become increasingly salient as the permit market size decreases and net-zero targets are nearing, our insights further inform the ongoing debate about the design of endogenous supply adjustment mechanisms.