

TO AUCTION OR TO GIVE FOR FREE: DOES THE ALLOWANCE ALLOCATION REGIME MATTER FOR RENEWABLE DEPLOYMENT IN THE EU ETS?

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Extended Abstract

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Abstract Summary

Phase III of the European Union Emissions Trading System (EU ETS) marked a shift in the power sector from free allocation to auctioning as the default method of distributing allowances. To ease the transition, some lower-income countries were granted derogations that allowed them to retain free permits, provided the equivalent monetary value was invested in renewable energy and modernization of energy infrastructure. This created a policy divergence between auctioning and derogated countries. Did these contrasting allocation regimes lead to different renewable deployment outcomes between the two groups? We address this question using a partial equilibrium model and an empirical analysis of EU ETS data. The model shows that fossil fuel use in power generation depends on the degree of cost pass-through, rather than the allocation rule itself. With full cost pass-through, auctioning does not raise carbon costs for power generators, while free allocation creates windfall profits. In neither case do renewables gain a relative cost advantage, suggesting that the method of allocation is unlikely to produce differences in renewable deployment. Consistent with this prediction, our difference-in-differences estimates indicate that renewable capacity expanded and power sector emissions declined during Phase III, yet there is no evidence of differential outcomes between auctioning and derogated countries. As more countries implement emissions trading systems, our findings suggest that their effectiveness in promoting renewable deployment depends less on the allocation method than on clear, enforceable rules that channel resources toward the clean energy transition.

Presenting Author Biography

Fatih Karanfil is a Principal Fellow in the Energy Macro and Microeconomics Program at KAPSARC, with expertise in energy and environmental economics. Before joining KAPSARC, he was an Associate Professor of Economics at the University of Paris Nanterre and a Fellow at EconomiX-CNRS. His research focuses on developing economic frameworks for

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