Bidders' Experience and Prices in Renewable Energy Auctions

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January 31, 2022

Abstract

This paper studies the role of auction design and experience of bidders on equilibrium outcomes. We make use of unique bid-level data from the Germany renewable energy auctions (2015-2019) and document bidding behavior of new entrants and incumbents over time as well as recover valuations of bidders by estimating a structural model of multi-unit auctions. Reduced-form evidence shows that the level of experience matters for the magnitude of the bid offers and that being a new auction participant increases the size of the bid offered and therefore, decreases the probability of winning. These behaviors change depending on whether we study the period when average bidding prices fall or when they have stagnated suggesting the existence of different rest points over time. We estimate the structural model for these two periods and perform counterfactual analysis regarding the implementation of uniform auctions.

JEL codes: D44, L51, Q42, Q48

Keywords: electricity markets, renewable energy, pay-as-bid auctions, government support policies.

^{*}We thank Natalia Fabra, Stan Reynolds and participants at presentations at the Toulouse School of Economics, University Carlos III Madrid and the Southern Economic Association Conference for their insightful comments. This Project has received funding from the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme (grant agreement No 772331). A previous version of this paper was titled "Learning in Multi-Unit Procurement Auctions for Renewable Energy".

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