Estimating Marginal Costs and Market Power in the Italian Electricity Auctions

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Abstract

In this paper we examine the bidding behaviour of firm competing in the Italian wholesale electricity market where generators submit hourly supply schedule to sell power. We describe the institutional characteristics of the Italian market and derive generators' equilibrium bidding functions. We also discuss the main empirical strategies followed by the recent econometrical literature to obtain estimates of (unobservable) optimal bids. Then, we use individual bid data, quantity volumes and other control variables to compare actual bidding behaviour to theoretical benchmarks of profit maximization. We obtain estimates of generators’ costs to be used in conjunction with hourly market equilibrium prices to derive some measures of the extent of mark.