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Presentation Title

Tacit Collusion in Repeated Unit Commitment Auctions

Abstract

In an infinitely repeated game, we study the level and conduct of collusion under two commonly used wholesale electricity market designs. Both market designs are uniform price auctions run by an independent third-party market operator. In a centrally-committed market, generating firms compete by submitting complex offers that reflect the non-convexities of their operating costs. Under a self-committed market design, generating firms compete by submitting simple offers that represent the minimum price at which a firm is willing to produce all of its capacity. These two market designs will be examined in the context of an infinitely repeated game to compare how they facilitate collusion by examining the optimal penal code and bidder deviation incentives, generating potentially useful regulatory and public policy insights.

Keywords

Electricity Market Design; Unit Commitment; Repeated Games; Collusion

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