

Optimal demand-side bidding strategies in electricity spot markets

R. Herranz Pindado; A. Muñoz San Roque; J. Villar Collado; F.A. Campos Fernández

Abstract-

This paper proposes a methodology for determining the optimal bidding strategy of a retailer who supplies electricity to end-users in the short-term electricity market. The aim is to minimize the cost of purchasing energy in the sequence of trading opportunities that provide the day-ahead and intraday markets. A genetic algorithm has been designed to optimize the parameters that define the best purchasing strategy. The proposed methodology has been tested using real data from the Spanish day-ahead and intraday markets over a period of two years with a significant cost reduction with respect to trading solely in the day-ahead market.

Index Terms- Electricity markets, genetic algorithms, strategic bidding.

Due to copyright restriction we cannot distribute this content on the web. However, clicking on the next link, authors will be able to distribute to you the full version of the paper:

[Request full paper to the authors](#)

If your institution has an electronic subscription to IEEE Transactions on Power Systems, you can download the paper from the journal website:

[Access to the Journal website](#)

Citation:

Herranz, R.; Muñoz, A.; Villar, J.; Campos, F.A. "Optimal demand-side bidding strategies in electricity spot markets", IEEE Transactions on Power Systems, vol.27, no.3, pp.1204-1213, August, 2012.