

# **A simulation model for a competitive generation market**

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## **Abstract-**

**The simulation of a wholesale electricity market should go beyond a simple optimization based on the operating costs of the generating units. A model of a competitive electricity market must consider the market structure, the strategy of the market participants and any other factor that lead to prices different from costs. This paper presents COSMEE, a model of a wholesale electricity market based on simple bids, that estimates expected bid prices and quantities, system hourly prices and generation schedules, taking into account the bidding strategies of generators and the structure of the market. The model reflects the profit-maximizing behavior of the market agents, subject to different types of constraints. COSMEE has been used to simulate a real wholesale market**

**Index Terms- Agent's behavior, intertemporal links, iterative equilibrium, marginal price, simple bids.**

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