

Electricity Markets modeling trends

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Abstract— The trend towards competition in the electricity sector has led to efforts by the research community to develop decision and analysis support models adapted to the new market context. This paper focuses on electricity generation market modeling. Its aim is to help to identify, classify and characterize the somewhat confusing diversity of approaches that can be found in the technical literature on the subject. The paper presents a survey of the most relevant publications regarding electricity market modeling, identifying three major trends: optimization models, equilibrium models and simulation models. It introduces a classification according to their most relevant attributes. Finally, it identifies the most suitable approaches for conducting various types of planning studies or market analysis in this new context.

Index Terms— Deregulated electric power systems; Power generation scheduling; Market behavior

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