

# Coordination between medium-term generation planning and short-term operation in electricity markets

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## Abstract-

**This paper analyzes the coordination between medium-term generation planning and short-term operation in electricity markets. This coordination is particularly important from a practical point of view in order to guarantee that certain aspects of the operation that arise in the medium-term level are explicitly taken into account: limited-energy resources and obligatory-use resources. Three different approaches are proposed in order to guarantee that short-term decisions made by a generation company are consistent with its operation objectives formulated from a medium-term perspective. These approaches make use of technical and economic signals to coordinate both time scopes: primal information, dual information, and resource-valuation functions. This paper presents the main advantages and drawbacks of the three approaches and applies them to a case study that uses a conjectural-variation-based representation of the market.**

**Index Terms-** Electricity markets, medium-term planning, medium- and short-term coordination, short-term operation

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