Effect of network congestions between areas on single-price electricity markets

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Abstract-

This paper presents a conjectural-variation-based equilibrium model of a single-price electricity market. The distinctive modeling feature introduced in this paper is the formalization of the equilibrium equations taking into account the effect of congestion between areas on generators' behavior. The results show that, when there is a congestion between two areas, generators valued differently the production of each area, giving more importance to the importing area.

Index Terms- Conjectural variation, market equilibrium, network constraints, single-price electricity markets

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