

Combined methods for dynamic spatial auction market models

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Abstract

An equilibrium model for description of behavior of a system of auction markets joined by transmission lines subject to joint balance and capacity flows constraints for a certain time period is suggested. We treat this model as an extended primal-dual system of variational inequalities or a saddle point problem. Several splitting type methods are proposed to find its solution. © 2011 Springer Science+Business Media, LLC.

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Keywords

Proximal method, Spatial equilibrium model, Splitting method, System of auction markets, Variational inequality problem