

Title: Predicting Electricity Prices in the Brazilian Market by Stochastic Differential Equations

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Abstract: We propose a model based on stochastic differential equations to predict forward electricity prices in the Brazilian market. The model accounts for usual stylized facts for commodities, such as mean-reversion and jumps. Since in the Southeast market, the primary power resource is hydroelectric, the model also depends on the level of water reservoirs. The model parameters are estimated from observed end-of-day forward contract prices by nonlinear regression with ridge penalty.