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### Research Announcement

Are fossil fuel prices react if marginal costs are higher than the equilibrium?  
evidence from spanish electricity generators

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### Abstract

To address open research issues on the relationship between power plant marginal cost and fossil fuel prices in the Spanish wholesale electricity market, this paper defines an econometric methodology which combines statistical accuracy with economic interpretability. This approach provides valid empirical inference on the causal relationship between power plant marginal costs and fossil fuel prices for Spanish generators in a multivariate time series framework over the period 2002-2005, using an econometric view: VAR and VECM models and Impulse response functions. We show the asymmetries: “ fossil fuel prices react if marginal costs are higher than the equilibrium do not show any significant feedback if power plant marginal costs are lower. We found the coal and gas prices appear to have significant effects on Iberdrola, Viesgo and others generators' power plant marginal costs and seem to have a inelastic effect on power plant marginal costs for Endesa, Hidrocantabrico and Union Fenosa. Thus our findings tell a story about the sources of shocks affecting power plant marginal costs in Spanish electricity production. On the other hand, our estimates show that fossil fuel price shocks have permanent effects on the level of power plant marginal costs leading to a transition from one equilibrium to another.

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