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ITALIAN POWER EXCHANGE AND UNILATERAL MARKET POWER IN ITALIAN WHOLESALE ELECTRICITY MARKET

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Since Law 79/99, following European Directive on energy sector liberalization, 96/94/CE, the Italian electric sector has been deregulated by means of a divesting plan regarding the former monopolist, until the launch of a Power Exchange on March, 31st 2004.

This paper analyses the Italian market design in order to evaluate if the liberalization process is proving effective in reducing main generators', and especially Enel's, incentive to exert market power.

Provided with economic models on strategic behaviour and evaluation of market power, specifically adopted for the electric sector, we measures unilateral market power by means of Lerner index. In this respect, this is an ambitious paper in that it analyses the strategic behaviour in the Italian wholesale electricity market by applying a methodology never adopted in Italy until now.

We develop specific algorithms that are applied to data concerning bid offers in the Pool from April to July 2004. In this way, we are able to build each generator's residual demand curve for each daily, hourly and zonal market. For the single curve we calculate the arch elasticity, the basis to obtain the Lerner index for each generator in each daily, hourly and zonal market.

The results suggest the generators play strategically in increasing market price, so they actually exert market power. As expected, Enel Produzione is still the most important generator in terms of market power in all the zonal markets, except Sardinia, where a duopoly exists with Endesa playing an important role as much as Enel.