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GAS LOGISTICS COSTS: SIMULATION OF THE PROPOSED ENDESA/GAS NATURAL MERGER

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Convergent mergers between gas and electricity companies are a late fashion in the European Union. Efficiency gains are often claimed as the rationale behind these moves, but possible anti-competitive effects should be also taken into account by the Competition Authorities in order to authorize, forbid or propose remedies to these operations. Some of these anti-competitive effects have traditionally received a fair deal of attention both in the academic literature and in the judicial and policy practice; whereas other ones are relatively new, and require the development of new conceptual and quantitative tools.

In particular, in September 5th, 2005 Gas Natural, the major natural gas Spanish incumbent, launched a bid for Endesa, the major electricity incumbent. The bid has been followed with a remarkable attention by Spanish media. From the technical point of view, the bid arises complex issues, because of potential horizontal and vertical anti-competitive effects.

We present in this note a rather exotic argument against the merger, related to the retail gas market, concerning the market power in the short-term balancing arrangements. Concretely, it can result in an increased logistic costs that agents other than the merged ones could face as consequence of the increased market power and incentives to exercise it that the new company could have. A significant increase in these costs could lead to less competition, increased gas and electricity prices, and decreased customers' and social welfare.

Gas market agents must reserve basic infrastructure use (meaning high-pressure gas ducts, regasification plants and related facilities) and plan their operation accordingly. Such reservation must be made months or even years in advance. Cost of reservation is set by the Administration in a non-discriminatory way. However, there are penalties if reserved capacity is not fully used or a capacity in excess of that reserved is required. However, perfect forecast of required capacity is impossible, because of random events such as delays in LNG boats arrivals or errors in demand prediction. Although the regulations allow for a certain margin of error without imposing penalties, most or even all agents are exposed to the risk of not being able to comply with their forecasted operation plans within this margin. Therefore, a market mechanism based on swap contracts has developed among the Spanish gas market agents, in order that they can maximize the likelihood to fulfill their declared plans. For instance, if an agent suffers an unexpected increase in its demand, he can make use of this mechanism in order to obtain gas from another agent that may have an excess of it, in order that both can honor their commitments. Similar swap agreements can be relied upon to solve, or at least to minimize the cost of, other events.

Two things are, consequently, important. Firstly, to show that the concern withstands a logical analysis, and that the involved agents could actually have incentives to behave in an anti-competitive way. Secondly, to pin down the likely magnitude of the effect. With this aim, we develop a simulation procedure to compare the logistic cost, on a MWh basis, under the two hypothesis that Endesa is (pre-merger) or is not (post-merger) part of it, so that the increase of cost can be ascribed to the lack of liquidity that absence of Endesa brings to the swap mechanism, making several assumptions about market players behavior (e. g. the Iberdrola behavior as being out of the balancing mechanism).

This sort of models could be of interest to Competition Authorities and Regulators. Actually, obtained results depend both on regulation and on market structure. Significant reductions of market power concerns could be possibly obtained by modifying regulations, without any need to consider structural remedies (such as divestments, changes of property and the like) that are likely to be more complex and costly. Simulation could help to quantify the feasibility of this approach, or the lack of it.