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## Sector Inquiries on the Italian Electricity and Natural Gas Markets Expose Failures in Both Liberalisation Processes.

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## **Abstract**

On 9 February 2005, the Autorità Garante della Concorrenza e del Mercato (AGCM) and the Autorità per l'Energia Elettrica e il Gas (AEEG) concluded a joint sector inquiry on the progress of liberalisation in the Italian electricity market (Electricity Sector inquiry). The Electricity Sector inquiry follows another joint inquiry by the two authorities a few months earlier on the progress of liberalisation of the natural gas market in Italy (Natural Gas Sector inquiry). The Natural Gas Sector inquiry was published on 19 June 2004. This article summarises the findings and the conclusions of both sector inquiries and describes the methodology used by the two authorities. After several years since the beginning of both liberalisation processes in both sectors, the AGCM and the AEEG find that Italian electricity and natural gas markets still lack competitiveness and are characterised by the presence of a dominant operator, ENEL (in the electricity sector) and ENI (in the natural gas sector). The last part of the article summarises the reasons which brought the AGCM to open two antitrust investigations into alleged abuses of dominant positions against ENEL and ENI.

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By **Antonio Capobianco\***

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This article summarises the findings and the conclusions of both sector inquiries and describes the methodology used by the two authorities. After several years since the beginning of both liberalisation processes in both sectors, the AGCM and the AEEG find that Italian electricity and natural gas markets still lack competitiveness and are characterised by the presence of a dominant operator, ENEL (in the electricity sector) and ENI (in the natural gas sector). The last part of the article summarises the reasons which brought the AGCM to open two antitrust investigations into alleged abuses of dominant positions against ENEL and ENI.

The Italian sector inquiries are part of an broader review of the energy markets currently ongoing in Europe. The interest in the Italian inquiries therefore lies not just in their analytical framework and conclusions, but also in the fact that they may well anticipate themes that will be taken over by other national regulators and competition authorities and even by the European Commission in its own sector inquiry in the European energy markets.

## The Electricity Sector inquiry

The main objective of the Electricity Sector inquiry was to set up the analytical framework for the definition of the relevant markets in the electricity sector and to measure unilateral market power of the players acting in these markets. The Electricity Sector inquiry did not review the conditions of competition on the Italian market for the sale of electricity to final users. This market will only open to competition in 2007.

### *Meaning of relevant markets for antitrust purposes*

From a product perspective, the Electricity Sector inquiry identified two separate markets:

- *The electricity wholesale market.* This market includes all transactions between electricity suppliers (ie national electricity generators and electricity importers) with large industrial clients, the single purchaser (which acquires electricity for the non-eligible customers) and wholesalers. This, regardless of whether such sales are made on the

centralised supply market (the power exchange) and/or in the context of bilateral agreements.

- *The dispatching services market.* This is the market in which the Transmission System Operator (TSO) acquires the capacity required for purposes of balancing the system in view of the grid structure. This market is indispensable for the safety of the whole system and it has been kept distinct from the wholesale markets for several reasons. First, all demand for the dispatching services is from only one purchaser, the TSO. Second, participation in the ancillary market is mandatory for the owners of those plants that are necessary for the stability of the system and is limited only to those plants that have specific technical characteristics. Third, demand is inelastic to the price, since it depends on the need to insure the stability of the system. Finally, prices are set through a pay-as-bid mechanism. This mechanism is different from the system of marginal price used to set the price on the power exchange.

From a geographic perspective, the Electricity Sector inquiry found that several factors plead against the wholesale product market having a supranational dimension:

- The limited interconnection capacity between Italy and other neighbouring countries, which is always congested.
- The existence of regulated procedures to allocate scarce interconnection capacity.
- The structural price differences between Italy and neighbouring countries.

According to the Electricity Sector inquiry, several factors also plead against this market having a national dimension. In particular, the power exchange works on a zonal basis and prices are set on a zonal basis. This happens when the network is congested – ie when electricity flows reach the maximum transport capacity between different areas. In that case, the power exchange separates the national territory in several zones and fixes different prices to signals where the offer should be efficiently allocated. For example, between April and September 2004, Italy was a single price zone only for 9% of the time.

Therefore, from a geographic perspective, four different zones were identified as relevant geographic markets: Sardinia, Macro-Sicily (which includes Sicily and Calabria), the North and finally the rest of Italy (known as the Macro-South).

### *Assessment of unilateral market power – structural indices*

On the basis of the above definitions, the Electricity Sector inquiry proceeded to assess the market position of each player

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on the basis of its market share, the CR4 index and the HHI index.

Based on these traditional concentration indices, the Electricity Sector inquiry concluded that ENEL, the former electricity monopoly, had retained a leading (dominant) position in the Italian market despite the legislative efforts to create the conditions for a more competitive environment.

ENEL appeared to be the first operator in terms of market shares in the Northern wholesale market, in the Macro-South and in Macro-Sicily. The HHI index in all the markets showed that these markets are highly concentrated and, in some cases, of a quasi-monopolistic structure.

Other structural indicators confirmed ENEL's leading role in the wholesale electricity markets:

- ENEL's market share of the overall domestic production is just below 50%.
- In terms of type of generation plants, ENEL owns approximately 56% of the total efficient capacity installed in Italy. More specifically, ENEL owns 46% of the total base-load capacity, 63% of the mid-merit capacity and 96% of the peak-load capacity, giving it an unmatched advantage in the supply of peak demand. ENEL is the only electricity generating company with a mix of plants equally distributed between the various type of plants.
- In terms of geographic spread, ENEL owns 47% of the capacity installed in the North, 72% of the capacity installed in the Macro-South, 52% of the capacity installed in Macro-Sicily and 39% of the capacity installed in Sardinia, making ENEL the only generating company with plants equally distributed throughout the country.

As for the dispatching services market, the analysis showed an even more concentrated market structure than that of the wholesale market. ENEL is by a long way the largest operator in terms of market shares: in each zone, ENEL's market share is well above 50% (in some cases it is close to 90%).

### ***Assessment of unilateral market powering the wholesale markets – pivotal index***

Next to the traditional structural indexes, the Electricity Sector inquiry introduces the notion of pivotal operator, which is more commonly used by energy regulators. A pivotal operator is an operator whose supply of electricity is necessary to meet the residual local demand on a given market. Residual local demand equates to the hourly demand for electricity on the relevant market, net of imports from abroad less the generating capacity of all other competitors on the same geographic market.

Because the supply by the pivotal firm is necessary to meet local demand, such a firm is also considered to have the power to fix the price in the relevant market. Given the zonal configuration of the Italian wholesale electricity market, one operator can have a pivotal role in a given zone if:

- the import capacity from neighbouring markets is not used in total or in part; or
- the export capacity towards neighbouring countries is used in total or in part.

The pivotal index calculates the number of hours when a certain operator is pivotal. According to data available to the two authorities, in a given period, ENEL turned out to be a

pivotal operator for 100% of the hours on the Macro-South market; for 44% of the hours in the North market, for 29% of the hours in Sardinia; and for 24% of the hours in Macro-Sicily. Other operators also turned out to be absolutely indispensable (ie pivotal), but to a much more limited extent: ENDESA was indispensable for 67% of the hours in the Sardinian market and EDIPOWER for 19% of the hours on the Macro-Sicily market.

ENEL's pivotal role was emphasised by the fact that if one were to join together neighbouring zones, ENEL's pivotal position would show an even higher degree of market power:

- In the North and Macro-South markets, ENEL was able to set the wholesale price during 95% of the hours.
- In the Macro-South and Macro-Sicily markets, ENEL was able to set the wholesale price during 91% of the hours.
- Finally, in the Macro-South and Sardinian markets, ENEL was able to set the wholesale price during 63% of the hours.

No other competitor of ENEL had the power to fix the wholesale market price of electricity on the North and Macro-South markets.

### ***ENEL's pivotal role and dominance in electricity wholesale markets***

While a dominant firm on the relevant wholesale market is also considered to be a pivotal enterprise, the opposite is not always true. In fact, a firm is pivotal when its supply is necessary to satisfy zonal demand and to guarantee market equilibrium, irrespective of the amount of residual demand supplied and the time period over which the residual demand is supplied by the pivotal firm. Therefore, under certain circumstances, even a generator with a small market share can be indispensable to bridge the gap between supply and demand on a given zonal market, at a given time.

According to the case law of the European Court of Justice, the concept of dominance implies more stringent conditions, namely the power to fix price and to behave independently from competitors, clients and final customers. This means that in order to find dominance in the wholesale electricity market a competition authority has to find:

- a stability in the exercise of market power for a sufficiently long time period; and
- a market share (residual demand supplied) that is sufficiently large so that its market strategies cannot be replicated by other competitors.

According to the antitrust criteria for finding dominance, the Electricity Sector inquiry concluded that ENEL is dominant in the following wholesale electricity markets in Italy: the Northern markets, the Macro-South market and Sicily. On the Sardinian market, ENEL and ENDESA were found to be part of a duopoly.

### ***The recommendations formulated by the two authorities***

In order to promote more competition in the Italian electricity wholesale market, a number of structural measures were put forward by the two authorities:

- To favour investments on the national transmission grid, in order to reduce interzonal congestions to the minimum

and to ensure that the new generation capacity that will be installed in the coming years will provide a real opportunity to compete with the dominant operator.

- To invest in increasing interconnection capacity with neighbouring countries and to promote the installation of direct lines.
- To encourage the creation of new production sites, particularly in those zonal markets where demand is currently not fully met.
- To adopt measures to remove or minimise incentives to the exercise of individual or collective market power, in particular during the interim period before a more competitive supply structure is established.
- To prevent production capacity being removed from the market.

In addition, a number of incentives have been proposed to develop a more competitive supply of electricity. These measures are aimed at preserving the market position of energy suppliers vis-à-vis ENEL and to guarantee the development of a stable and healthy energy market in the coming years.

### The Natural Gas Sector inquiry

As was the case in the Electricity Sector inquiry, the Natural Gas Sector inquiry concluded that the liberalisation of the Italian market for natural gas has not achieved the expected results.

Despite the fact that the Italian legislator went beyond the minimum level of liberalisation required by Directive 98/30/CE, the general competitive conditions of the market did not show any major improvement in the 2000–2004 period. On the contrary, industrial gas prices increased by approximately 20% compared to the European average and no long-term, committed entry into the Italian gas market has occurred since 2000.

#### *ENI's dominant position*

The two authorities concluded that this poor state of competition was mainly due to the existence of an unchallenged dominant position held by the ENI group in the following relevant markets:

- Wholesale supply (including imports and national production).
- International transportation (ENI controls all the four pipelines carrying gas to Italy from North Europe, Russia, Algeria and Libya and the only existing LNG terminal).
- National transportation (this is a regulated legal monopoly held by a subsidiary of ENI, Snam Rete Gas).
- Storage of gas in depleted underground fields (regulated monopoly of Stogit, another subsidiary of ENI).
- Retail sales to industrial, thermal and domestic consumers at a national level.

The inquiry found that, in 2004, all importers of natural gas (with the exception of ENEL) purchased gas from ENI at the border at a price higher than that paid by ENI to its own suppliers (such as Gazprom, Sonatrach and the Norwegian producers). These shippers, therefore, being at the same time ENI's clients upstream and ENI's competitors downstream, were therefore considered to be seriously undermined in their ability to compete on the final sale market for natural gas.

The inquiry also found that, in order to develop a healthy competitive environment, it is essential to promote entry of new operators independent from ENI, which can supply gas on competitive terms and conditions to the Italian market. The inquiry also suggests that entry should be pursued under short-term supply contracts rather than long-term take-or-pay contracts.

#### *The recommendations formulated by the two authorities*

In order to promote competition in the Italian natural gas market, the two authorities suggested the implementation of the following measures:

- The creation of an Independent System Operator (ISO) to control access to domestic and international pipelines and storage facilities.
- The development of a standardised product wholesale market for gas, through a centralised gas (a gas exchange).
- New investments by ENI to favour the increase of import capacity of existing facilities.
- The development of new LNG regasification facilities through the realisation of at least two new independent terminals.
- A gas release scheme, under which ENI could assign adequate supplies of gas for supply near cost price, without further controlling the buyers' gas activities downstream.
- A contract release scheme, under which existing long-term supply contracts should be transferred to third parties, in order to increase the positive effects that the new Directive 2003/55/EC is expected to bring once it is transposed into Italian law. It is recognised that such a measure would probably require appropriate legislation.

#### **Recent investigations into alleged abuses of dominant position by ENEL and ENI**

It is interesting to note that the analysis made in both the Electricity and the Natural Gas Sector inquiries was immediately used by the AGCM to support and strengthen its antitrust enforcement activity.

As a consequence of the findings in the two sector inquiries, in the course of 2005, the AGCM opened two separate antitrust investigations against ENEL and ENI for alleged abuses of their respective dominant positions in the electricity and natural gas markets.

#### *Alleged abuses by ENI – market foreclosure by refusal to increase import capacity*

On 27 January 2005, the AGCM opened an investigation into alleged abusive conduct by ENI aimed at preventing the entry into the Italian gas sale market of ENI's competitors (in Bollettino AGCM 4/2005).

According to the decision opening the investigation, ENI had decided to increase the transport capacity of its gas pipeline from Oued Saf Saf (on the Algerian border) to Cap Bon on the Mediterranean coast, which is the main pipeline for the import of Algerian gas into Italy. ENI has exclusive long-term transport rights over the gas pipeline, which is owned by the Tunisian state.

Between 2002 and 2003, ENI had decided to increase the

transport capacity of the Algerian gas pipeline, which had by then reached its level of saturation. ENI received many requests from independent gas shippers to co-finance the increase of transport capacity. It therefore established a procedure for the pro rata allocation of the additional capacity between the interested shippers. Following this procedure, ENI entered into ship-or-pay transport agreements with a number of shippers, which agreed to share the investment in new capacity and to start importing gas into Italy as of 2007–2008, subject to a number of conditions. Four shippers met the conditions.

According to the evidence obtained by the AGCM, ENI subsequently sent a letter to the shippers who had entered into the ship-or-pay transport agreements, informing them that it could not pursue the pro rata allocation of the new capacity because of changed conditions in the Italian gas market as from 2007. In particular, ENI claimed that the revised forecasts on the medium-term gas supply and demand prospects in Italy were now such that, if the four new shippers were to import gas as of 2007–2008, the Italian gas market would be in a situation of oversupply threatening ENI's commercial position in the downstream market and consequently its ability to meet the take-or-pay obligations in its own gas supply agreements.

According to the AGCM, ENI's refusal to pursue further the expansion of the import capacity on the Algerian pipeline can only be justified by the commercial attempt to prevent the entry into the Italian market of four new suppliers. The AGCM therefore decided to investigate whether such strategy amounts to an exclusionary abuse of ENI's dominant position under article 82 of the EC Treaty, with the effect of hampering and/or preventing the entry of independent operators into the Italian wholesale market for the supply of natural gas.

The investigation will be concluded by 31 December 2005.

### ***Alleged abuses by ENEL – leveraging and pricing strategies***

In April 2005, the AGCM decided to open formal proceedings against ENEL for alleged infringement of article 82 of the EC Treaty (in Bollettino AGCM 14/2005). The investigation originated in a referral by the energy regulator (AEEG) to the AGCM on ENEL's pricing behaviour on the power exchange (in particular, on the day-ahead market).

The alleged anticompetitive behaviour of ENEL was found to have consisted in raising its rivals' costs in the wholesale markets, by fixing prices in different zonal wholesale markets so as to put its competitors in the Northern and Sardinian markets at a competitive disadvantage. In particular, the AGCM is investigating whether the fact that ENEL has lowered prices in areas where its competitors were present, but kept prices high in the zones where ENEL was almost a monopolist, could amount to an abuse of its dominant position.

According to the AGCM, ENEL seems to have exploited its power to set prices in the Macro-South geographic area where it is absolutely indispensable (ie pivotal), in order to affect the import/export flows from this zone towards the bordering interconnecting zones. It is alleged that the only purpose of

this pricing strategy is to keep prices extremely high, and therefore extend ENEL's ability to dictate the wholesale price on separate but neighbouring geographic markets. According to the decision opening the investigation, since the establishment of the power exchange on 1 April 2004, ENEL has used its ability to set prices in order to pre-emptively discipline its competitors so as to eliminate any risk that the liberalisation would lead to the creation of truly competitive markets.

According to the information available to the AGCM, ENEL has apparently changed its strategy in January 2005, starting to set prices uniformly across the zones. According to the AGCM, the fact that ENEL now has a single unitary price across the various zones is part of ENEL's overall foreclosing strategy. After an initial punitive phase, which was aimed at indicating to competitors that ENEL had the power to influence the competitive conditions on the various markets, ENEL adopted a more lenient strategy. In this phase, starting in January 2005, ENEL allowed its competitors to enjoy higher prices uniformly spread through all national territories. According to the AGCM, this strategy is aimed at signalling to ENEL's competitors that any aggressive strategy is bound to fail since ENEL, the dominant company on the market, will immediately adapt its pricing strategy and punish its rivals.

The investigation will be concluded by 31 March 2006.

### **Energy liberalisation in the spotlight**

After years of legislative activity at EC and national level to adopt and implement legislation allowing for the liberalisation of the electricity and natural gas markets in Europe and ultimately for the creation of a single European market for energy, it is hardly surprising that these are now subject to scrutiny as to their effects.

The Italian sector inquiries are just one example of national regulators and competition authorities revisiting the progress made in this area:

- After reviewing the status of the electricity markets in Ireland, the Irish Commission for Energy Regulation has recently claimed that the failure to create a truly competitive electricity market in Ireland is the cause of a structural lack of electricity generating capacity in the country. The Irish authorities have concluded that the non-emergence of a domestic market is particularly disappointing after many years of planning.
- At the beginning of 2005, the German Federal Cartel Office (FCO) has launched a public discussion on the legality of the prices charged to end customers and of the long-term gas supply contracts under German competition law. This position of the FCO is summarised in a discussion paper. The conclusion of the review process – to which all interested parties have participated – will be presented to the industry and to the European Commission, and will form the basis for adjustments, where necessary, of the general principles of evaluation applied by the FCO in this area.

The European Commission has also been extremely active in promoting the full implementation of the electricity and natural gas liberalisation, initiating administrative proceedings against those member states who had delayed the implementation of

either (or both) the Directive on the Internal Electricity Market (Directive 2003/54/CE) or/and the Directive on the Internal Gas Market (Directive 2003/55/CE) (see Commission Press Release IP/05/319). These two directives are fundamental to the opening up of the electricity and gas markets in the EU, providing freedom of choice of supplier for industrial customers as of 1 July 2004 and for domestic customers as of 1 July 2007. The directives combine opening up to competition while maintaining service quality, universal service, the protection of vulnerable customers and the objectives of security of supply. The underlying objective is to make Europe more competitive, by reducing basic energy costs.

As noted at the outset, the European Commission is now launching a European sector inquiry focusing on the progress of liberalisation of the electricity and gas sectors in Europe. The inquiry is likely to be the occasion for the Commission to draw a detailed picture of the status of competition in all phases of the electricity and natural gas industries in Europe. It will be interesting to see what will happen then. Judging by

the Italian experience, we may expect both calls for specific responses (eg building new connections, storage facilities, etc. to promote competition and European integration) and, in the light of what the Commission will learn, probably also a new wave of antitrust cases where companies' behaviour is found to be the obstacle to the full implementation of the liberalisation directives (although admittedly such issues are not straightforward, as restrictions may reflect necessary protection for investments).

In this context, the recent experiences of member states like Italy matter. The Commission is likely to follow national examples in structuring the scope of its inquiry and may also make use of their analytical tools (such as the pivotal index) to analyse and define the energy markets. One may expect such tools to be discussed and agreed in wider forums of national regulators and spread further across Europe. In the Modernisation Regulation 1/03 era, the European Competition Network and its subcommittee on energy offers such opportunity already.

