Effects of the natural gas liberalization and regulation in Italy with an overview to Europe

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• Overview of the Italian gas market

• The liberalization and regulation of the Italian gas market

• Consequences on the Italian gas system

• A glance on Europe
Gas Demand in Italy

Increase of gas consumption in the next years
Demand by energy source in Italy in 2005

Gas represents more than one third of the energy demand growing trend.
The natural gas market structure before liberalization

- Market share of the incumbent:

<table>
<thead>
<tr>
<th>Service</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Import facilities (Pipeline, Lng)</td>
<td>100%</td>
</tr>
<tr>
<td>Transport</td>
<td>96%</td>
</tr>
<tr>
<td>Storage</td>
<td>97%</td>
</tr>
<tr>
<td>Local Distribution</td>
<td>24%</td>
</tr>
<tr>
<td>Sales to final customers</td>
<td>55%</td>
</tr>
</tbody>
</table>

- Implementation of the EU Directive 98/30 in 2000
- Independent Energy Regulator (Autorità per l’Energia Elettrica e il gas – AEEG) since 1998
Market Regulation Milestones

• Strict implementation of Directive 98/30 (Letta decree)
  – Legal Unbundling (.. not only accounting unbundling)
  – Antitrust limits on import and supply market for the incumbent
  – RTPA on transport, distribution, storage, LNG
  – Eligibility of all customers from 01/01/2003

• Successive rules/laws to encourage new investments with the aim to increase competition

Italy’s gas market is the most advanced in regulation in continental Europe
# Main characteristics of the access regimes

<table>
<thead>
<tr>
<th>Activities</th>
<th>Tariffs</th>
<th>Access Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage</td>
<td>WACC : 7.1%, additional remuneration for new investments</td>
<td>RTPA, Storage code approved by Regulator</td>
</tr>
<tr>
<td></td>
<td>Capacity recovery charge 04/2006 – 03/2010</td>
<td></td>
</tr>
<tr>
<td>LNG</td>
<td>WACC : 7.6%, additional remuneration for new investments</td>
<td>RTPA, LNG code approved by Regulator</td>
</tr>
<tr>
<td>Distribution</td>
<td>WACC : 7.5% 10/2004 – 09/2008</td>
<td>RTPA, distribution code approved by Regulator</td>
</tr>
<tr>
<td>Sales</td>
<td>Compulsory tariff option for residential customers</td>
<td></td>
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</tbody>
</table>
Market dynamics after liberalization
- Initial Dynamic -

- Increase in the number of wholesalers (from 6 in 2000 to 55 in 2002)
- Increase in the number of Distribution and Sale companies mainly due to legal separation
- No relevant change in the transport and storage sectors

Position of ENI in Transport in 2004: 96%
Position of ENI in Storage in 2004: 97%
Market dynamics after liberalization
- Recent Evolutions -

• Some concentration in the Distribution and Retail Sale sectors (mainly in the North):
  – Aggregation in the Sale sector for local utilities (Hera, Blumet, Eta3, … but still strongly relying on Eni’s gas)
  – National champions (ENI, ENEL)
  – Foreign challengers (GDF, E-On, …) buying integrate companies in order to obtain control over captive markets

  Captive = No “war price”

• Low churn rate for residential customers (mid 2000 to mid 2005): around 0.6% of total customers
Market dynamics after liberalization
- Recent Evolutions -

- Entry / Development of ENEL in the gas activities
- Merger of Italgas Sales into ENI - 1 only supply company for both industrial and residential customers
- Reorganization of the presence of foreign companies in Italy merging their local sales companies into one only sale company (E-On, Gas Natural)
- Aggregation in the Distribution and Sale sectors
  - From 750 operators to around 450 nowadays: still too many!
  - In the wholesale sector from 55 in 2002 to 41 in 2005
Market dynamics after liberalization
- Recent Evolutions -

Market Shares of the main companies on the local network market in Italy in 2004

- ITALGAS (ENI) 34%
- ENEL RETE GAS 11%
- ITALCOGIM 3%
- AES TORINO 2%
- ARCALGAS 1%
- HERA 5%
- AEM MILANO 5%
- ENIA (REGGIO EMILIA, PARMA ET PIACENZA) 2%
- THUGA (E-ON) 4%
- ASM BRESCIA 2%
- OTHERS (around 400 companies) 31%
Market dynamics after liberalization
- Recent Evolutions -

Gas import in Italy in 2004

- "Innovative Sales": sales from ENI to other operators just before the Italian border

* « Innovative Sales » : sales from ENI to other operators just before the Italian border
Market dynamics after liberalization

- Trends -

- Distribution and Sales: few remaining medium/large operators
- Development of dual offer, gas + electricity, to medium – small companies: abandoning the commodity trap?
- In the medium term, ENI will continue to be a dominant player
- Strong incentives to invest in essential facilities (import pipelines, LNG, storage, transport)
- Increasing number of investment projects
Dynamic on the final prices

- No decrease of the final prices: among the highest in Europe
  - Less expensive for some residential uses (before taxes)
  - More expensive for the industry (before and after taxes)

In fact the regulated part does not influence so much the final price (20-30%)
Dynamic on the final prices

Components of the average residential gas prices in Italy for the second quarter 2006
(in € cents / cm)

- Gas: 20.98; 32%
- Taxes: 27.82; 43%
- Retail sale: 2.39; 4%
- Distribution: 7.53; 12%
- Storage: 0.95; 1%
- Transport: 3.03; 5%
- Wholesale: 3.58; 5%
Dynamic on the final prices

- Control of ENI over the import, transport and storage activities
- In fact we are facing a margin transfer from the regulated activities to the non regulated activities
- … due to supply costs and final prices which should be reduced: how to do that?

Market regulation failure?
Adopted countermeasures to decrease final prices

• Adoption of obligatory tariff option for residential customers: protection of weak consumers

“Market invasions” by the regulator = insufficient competition?

• Supply diversification: incentive for the construction of new import facilities (overcapacity)
  – 80:20 rule
  – Extra WACC
  – Capacity charge recovery mechanisms

• Creation of a national gas exchange market (but for the moment no real market offer and no liquidity…)

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Limits of the countermeasures

• Uncertainty of the rules (around 300 “delibere” (rules) by the regulator each year in addition to various laws and decrees)

• Difficulties to accomplish new investments
  – Long and bureaucratic authorization procedures are needed for new investments
  – NIMBY + Banana effects

• The regulator does not have the power:
  – to directly change the market structure in the short term
  – to directly limit ENI’s dominant position in the short/medium term
As a consequence, the regulator is asking to the Italian Parliament to:

- Oblige ENI to divest control of their transport activity (Snam Rete Gas: a law has already been approved by Parliament to decrease ENI’s share in Snam Rete Gas to less than 20% whereas regulator asked to 5% or less) and storage activity (Stogit: still under evaluation)

- Extension beyond 2010 of the present antitrust limits for ENI to import gas into Italy

- Gas release imposed on ENI

- Confer to Snam Rete Gas the international transport rights/pipelines presently owned by ENI

- Increase transport and storage facilities

- Maintain the regulated tariff option for residential customers
To privatize companies and liberalize markets is not an easy task …

• ENI still has a dominating position on the gas market
• 6 years after the beginning of the liberalization process, the price paid by the Italian final customers is still on the high side if compared to the others Europeans countries
• The churn rate of household customers is still low
... but:

• It’s not possible to stop the liberalization process now: this would maintain the liberalization burdens and costs without profiting from the benefits of the full competition

• there is a need to:
  – relaunch national energy policies (guidelines, moral suasion, etc…)
  – reinforce the role of the government as strategic pilot of the liberalization processes and investments
  – accelerate new investments in infrastructures
  – guarantee stable and clear rules to attract such investments in a market expected to move soon towards a real competition
The European directive was clear:

- Market Opening Timetable:
  - Definition of Eligible Customer
- Public service obligations and general rules for sector organization
- Organization of access to the system (Third Party Access)
- Account unbundling
- Derogations
- Entered into force 10 August 2000
But the European market integration is still insufficient:

• Asymmetric implementation of EU Directives by EU members
• Significant price differences within the internal market
• Low level of cross border trade in electricity and gas
The wholesale market in Europe in 2004

<table>
<thead>
<tr>
<th></th>
<th>Share of the 3 largest shippers</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>36%</td>
</tr>
<tr>
<td>Italy</td>
<td>62%</td>
</tr>
<tr>
<td>Spain</td>
<td>73%</td>
</tr>
<tr>
<td>Sweden</td>
<td>78%</td>
</tr>
<tr>
<td>Austria</td>
<td>80%</td>
</tr>
<tr>
<td>Others</td>
<td>&gt;80%</td>
</tr>
</tbody>
</table>

The UK seems to have a really open wholesale market.
Degree of switching in the European gas sector for small commercial/household (survey 2004)

<table>
<thead>
<tr>
<th></th>
<th>&gt; 50%</th>
<th>5-20%</th>
<th>&lt; 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>The UK</td>
<td>Belgium, and</td>
<td></td>
<td>All the others</td>
</tr>
<tr>
<td></td>
<td>the Netherlands</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A significant churn rate in only 3 countries
Implementation of unbundling in Europe

<table>
<thead>
<tr>
<th>Legal</th>
<th>Ownership</th>
<th>Not implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria, Belgium, France, Germany*, Italy, Spain, Poland, and Slovenia</td>
<td>Denmark, the Netherlands, Sweden, and the UK</td>
<td>Ireland, Luxembourg, Estonia, Latvia, Lithuania, Czech Rep, and Slovakia</td>
</tr>
</tbody>
</table>

* Partly legal
The internal European market

- Europe is on the way towards an integration of its national/regional markets
- But in most cases, the opening is more formal than real
- Everybody recognizes it
As a consequence:

- Second gas directive 2003/55/EC
  - Complete markets liberalization by July 2007
  - Grids functional unbundling
  - Reciprocity
  - Services of public interest with minimum standards (protection of consumers, security of supply, environment protection, …)

- Green paper establishes new goals:
  - Competitiveness: full development of the internal market, interconnections, research & innovation …
  - Environment: renewable energy, energy efficiency, …
  - Security of supply: European stock management, international dialogue, international dialogue, …

EU rules (top down) are not enough: needs of real commitment of national political and economic players
THE END