European gas demand and pricing

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GAS DEMAND

Back to the levels of the early 2000s and little light at the end of the tunnel
Economic Recovery??

- General level of energy demand is low and is not growing
- Downward revisions are succeeded by downward revisions!
- Now out of the tunnel by 2014... ???

Sources: OECD and Eurostat
Since mid 2011: Coal vs Gas

Sources: IEA – Platts
Electricity generation from gas is declining

- Squeeze out of conventional generation
- Reduced hours of production
- The power sector, “the former key driver for additional demand”, is now the key driver for demand decline!

Source: A. Honore (Forthcoming 2014)
CO2 price on the EUETS does not help gas!

- The EU ETS are ‘technically’ working... EC just hadn’t planned for the impacts of the economic recession!
- Down from 20 euros/t in early 2011!

- IEA: $67/t needed to switch back to gas, and every $1/MMBtu increases the prices of CO2 needed by $15/t
- “Switching price” differs from one market to another depending on the energy mix
- => BUT general conclusion: it needs to be a lot higher !!!
European Gas Demand: IEA WEO “New Policies” Scenario: differences 2012/13 (Bcm)

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEO 2012*</td>
<td>569</td>
<td>585</td>
<td>619</td>
<td>643</td>
<td>669</td>
<td></td>
</tr>
<tr>
<td>WE0 2013**</td>
<td>525</td>
<td>537</td>
<td>568</td>
<td>584</td>
<td>605</td>
<td></td>
</tr>
<tr>
<td>2013 cf 2012</td>
<td>-48</td>
<td>-51</td>
<td>-59</td>
<td>-64</td>
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* WEO 2012, Table 4.2, p. 128; **WEO 2013, Table 3.2, p.103

In a single year, the IEA have downgraded their central scenario projection of European gas demand by 50-65 Bcm or by 8-10% up to 2035; the 2013 WEO does not see European gas demand returning to 2010 levels until after 2025!!
WEO – changes in OECD gas demand scenarios

GAS PRICING

Hub pricing becoming dominant in the north and west of the Continent; oil-linkage still dominant in the south
European Gas Hubs

8 main price areas, where contracts for delivery of gas are traded:

- On the **OTC markets**
  Possibly with Brokers intermediation

- On **organized energy exchanges**
For most of 2011-13, monthly hub prices averaged 25-30% below unreformed oil-linked contract prices.

Source: Platts European Gas Daily, Monthly Averages
European Wholesale Gas Pricing 2012


- OPE: oil-indexed
- GOG: gas/gas competition
- RCS: regulated cost of service
- RSP: regulated social pricing
- NP: no price
- EOR and refinery gas in Norway
- Production in Poland, Hungary, Croatia and Bulgaria
- Romanian domestic production

OPE 50%  
GOG 45%  
RCS 2%  
RSP 2%  
NP 1%
## European Wholesale Gas Pricing 2012 (%)

Source: IGU 2012 Wholesale Gas Price Survey 2012, June 2013, pp.41-44

<table>
<thead>
<tr>
<th>Region and approx % total European demand</th>
<th>OPE (oil)</th>
<th>GOG (hub)</th>
<th>RCS (regulated)</th>
<th>RSP</th>
</tr>
</thead>
<tbody>
<tr>
<td>North West Europe 50%</td>
<td>28</td>
<td>72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Europe 10%</td>
<td>48</td>
<td>37</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Medit’nean Europe 30%</td>
<td>88</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>South East Europe 10%</td>
<td>42</td>
<td></td>
<td>46</td>
<td>12</td>
</tr>
</tbody>
</table>

Up to 2012, the impact of hub-based pricing was limited to north west and central Europe; the southern part of the Continent is still pricing gas on an oil-linked and regulated basis.
Conclusions on Hubs (Petrovich 2013)

- Price correlation between European Gas Hubs has been very strong since 2007 (regardless of contract type)
- Since late 2012, CEGH and PSV became increasingly aligned to other hubs
- NWE hubs move closely together, TTF leads
- OTC day ahead/month ahead and exchange trading express the same price signal
- NBP – NWE hubs delinking in 2011 is explicable by physical factors

Most correlations have strengthened year on year, hubs represent market prices at least in NW Europe; no sign of “manipulation”; NBP is the £ hub, TTF is the € hub
The Transition from Oil Linked to Hub-Based Pricing in Europe

A secular trend is under way and will not be reversed BUT:

- in some regions (eg South East) this process may not get under way for several years
- this does not mean that oil prices are no longer relevant to gas price formation only that specific contractual linkage is no longer appropriate but a contractual link to oil prices is no longer logical
- hub-based pricing does not mean that gas prices will automatically and always be lower than oil-linked prices
**Pricing in Continental European long term contracts with major exporters**

- Statoil and Gasterra: adaptation to hub pricing in north-west European markets BUT...
- Statoil-ENI arbitration (commenced August 2013) shows that problems continue even in Norwegian contracts
- Gazprom has settled most of its arbitration proceedings (except Edison, Lithuania); DG COMP decision on central/east European contracts expected Spring 2014
- Sonatrach is resisting the transition to a hub-based pricing index and has many arbitrations running concurrently
Gazprom continues to speak against hub prices but... 

Source: SocGen Cross Asset Research

By 2013, Gazprom prices are within 5% of NBP
The good news: gas demand may have reached the bottom, i.e., the future is up.

The bad news: even hub prices are still far too high for a sustained recovery of gas demand; for demand to recover in power generation either coal prices need to double or gas prices need to halve (there is no sign of either happening!)
Thank You

Relevant published research:

- European Gas Hubs: how strong is the price correlation? Beatrice Petrovich
- The Impact of a Globalising Market on Future European Gas Supply and Pricing, Howard Rogers
- Continental Gas Hubs – Are They Fit For Purpose? Patrick Heather
- The Transition to Hub-Based Pricing in Continental Europe: a response to Sergei Komlev of Gazprom Export, Jonathan Stern & Howard Rogers

- The Future of European Gas Demand, Anouk Honore (forthcoming 2014)

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