Energy Sector Inquiry: Policy Implications

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http://www.electricitypolicy.org.uk
Outline

• *Energy Sector Inquiry* identifies problems
  – more in gas than electricity
  – companies have market power but is it abused?
• Unbundling T&G - why attractive?
• Can competition authorities force unbundling?
  – requires finding of market abuse
  – and unbundling as suitable remedy
• How best to achieve competitive markets?
Rising prices prompt Inquiry?

Year ahead base-load

Sector inquiry launched

Source: information received within the scope of the Sector Inquiry from Argus Media, Platts, and Nord Pool.
Sector Inquiry calls for action

Key areas calling for action:
1) effective unbundling
2) deal with cross-border regulatory gaps
3) address market concentration, barriers to entry
4) increase transparency

All easier with unbundled utilities
Unbundling

• Does unbundling prejudice T investment?
  – VI companies may gain from scarce T
  – no incentive to encourage cheap imports

• Does it risk coordination failures?
  – Not where VI co.s aim to protect local markets

• Does it threaten SoS?
  – On the contrary - improves liquidity, flexibility and hence robustness, reduces entry barriers
Critical role of gas

• electricity prices increasingly set by gas

• merchant generation prefers gas
  – quick, low capital cost, clean, hedged

• a pan-European gas price would equalise entry prices for electricity
  – relax interconnector constraints
  – increase competition, integrate market
Day-ahead price levels 2005

- >51 Euros/MWh
- 41-50 Euros/MWh
- 31-40 Euros/MWh
- < 30 Euros/MWh
- n.a.
Gas problems

• rTPA for transmission and balancing required but “far from universal”
  – publish *methodology* rather than tariffs
  – nTPA still OK for line pack, storage, ancillary services, new risky investments

• only *legal* unbundling of T & D required
  – only *accounting* unbundling for LNG, storage

• Transparency
  – transit pipelines claim confidentiality exception;
    => infringement proceedings
Transit pipelines comprising the East-West and Benelux-Italy axes

Access almost impossible

100% booked until 2022

99% sold until 2015

Gas Trading 2003-4

*Hub trading is sparse, illiquid, concentrated*

- UK-related trading 86% of *all* EU hub trade
- > 90% hub incumbent purchases by 3 co.s
- 2 co.s account for 87% of hub sales
  - and 80% of hub purchases

*Transit pipelines*: 100% booked until 2015-22
  - only 3% capacity for new entrants
Transit pipelines deny access

Refusals of capacity left the pipeline under-used

Source: Energy Sector Inquiry 2005/2006 fig 27
Gas assessment

“Cross-border sales do not currently exert any significant competitive pressure”
- nor across TSO boundaries within Germany
- Transparency often denied because < 3 rule
- Long-term contract prices linked to oil
  => remarkably similar levels across all countries
  => suppresses seasonality of spot pricing

Entrants: hard to source gas and access hubs
Contrast with US (and UK)

• US model: single regulator FERC
  – evolved well-defined rules to set tariffs and protect pipeline investors and report accounts
  – 1935: PUHCA deals with abusive behaviour
    => encourages unbundling
• complete transparency for regulated pipelines
  – 1992: pipelines relinquish title to gas they ship
    => efficient, competitive, flexible, secure system that can finance merchant pipelines
Prospects for Continental gas?

• Strong opposition to unbundling
  – seen as expropriation, threatens national champs
• EC 3rd energy package requires at least ISO
• Proposed amendment to 1775/2005 on access
  – requires transmission, storage and LNG system
    operators to “take reasonable steps to allow
    capacity rights” to be traded

Will this facilitate effective access and liquid markets?
Impact on electricity

• Gas prices apparently similar across EU
  => fine if gas used in base-load electricity

• high gas price => GTs run intermittently
  – needs access to liquid gas market
  => risky to build GTs => coal generation
  => deters entry, entrenches incumbents
  => encourages gas+electricity mergers

  Builds up more resistance to market reform
London Economics data analysis

- 1 billion data points - an analyst’s dream
- uses Residual Supply Indices
  - corrected for LT contracts, interconnectors
  - based on PX prices (OTC prices slightly higher)
  - uses a dispatch model to compute SMC

\[=> \text{significant relation between RSI and PCMU}\]
- confirms theoretical predictions
Danger of higher PCMUs

Second largest Co?
Price formation in 6 EU countries 2003-5

Price after ‘loss’
Market abuse?

• Regional wholesale prices are converging
  – despite differences in costs
• Mark-up = spot price less fuel cost of marginal flexible plant
  – but plant has to cover capital and O&M costs

*Compare prices with cost of new entry*
Contribution to overhead costs of selling at SMP 2004

- IEA estimate for cost of new coal
- EU estimate of overhead required for new coal plant
- Overhead required for new CCGT

**Company by country and rank**

- DE all years
- DE A
- DE B
- DE C
- DE D
- ES all years
- ES A
- ES B
- ES C
- ES D
- NL all years
- NL A
- NL B
- NL C
- NL D
- GB all years
- GB A
- GB B
- GB C
- GB D

D Newbery
London Sep 07

Source: Platts, UKPX, EEX, zfk

D Newbery  London Sep 07
Real GB electricity and fuel costs 1990-2007

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David Newbery  Data from J Bower and C Humphries
Assessment on prices

• Prices rose because of gas and carbon prices
  => less variation in cost of different fuels
• Wholesale prices mostly below entry price
  – tight markets (GB) lead to higher margins
• Incumbents able to deter entry
  – and continuing to buy companies cheaply?
• France is pricing off neighbouring markets
  – but subsidising local consumers
Suggestions of plant withholding in DE?

Estimated “withholding” 1,230 MW, o/w 1,000 MW coal for Company B
Is unbundling the answer?

• Evidence supports *ownership* unbundling of Transmission - which is resisted
• 19 Sep CEC adopts 3rd package of measures for electricity and gas markets
  – *advocates* ownership unbundling
  – but *accepts* ISO solution (also for SOEs)
    • with possible derogations for new infrastructure
• ISOs also responsible for *investment*
  
  *but how financed?*
Critical role of cross-border trade

- effective unbundling could remove obstacles to cross-border cooperation
  - and facilitate market coupling
- national concentration and transmission constraints limit effect on market power
- plan more cross-border capacity?

*Is there a good economic case?*
EC cross-border proposals

• Agency for Cooperation of European Regulators for contentious cross-border issues
  – “no power of discretionary substantive decision”
• European network for TSOs to plan investment
• Energy release programmes where excessive concentration?
• Transparency requirements extended - somewhat
• Data to be retained by all relevant companies
What else can be done?

• Mergers - resist more concentration
  – prognosis not encouraging
  – at least trade approval for *ownership* unbundling

• Improve trade
  – better cross border management (market coupling as in Nordpool, Benelux)
  – more transparency - obligatory data provision

• Competition policy route unpromising?
  – Unless specific abuses can be proved
Conclusions

• EC’s 3rd energy package: sound analysis
  => lack of unbundling damaging
    – but so is market power with limited interconnection
    – removing access restraints may allow entry
      • but this is a long-term solution
  • Remedies limited by lack of jurisdiction?
    – and difficulty or establishing abuse

Slow evolution rather than dramatic progress?
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