Energy Security and Interdependence
World Oil and European Gas

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9th September 2008
Main messages

• “Dependence v Interdependence” is not a very helpful distinction for policy purposes

• Reliance on dominant suppliers is only one determinant of the energy security situation – And energy supplies are not concentrating

• Energy security policies should pay more attention to how the markets work – and how they cope with supply disruptions – and less to relations with exporters
Defining the issue

• Conventional wisdom
  – Energy ‘dependence’ is risky
  – ‘Interdependence’ is safer – “We need their energy but they need our money”
Defining the issue (2)

• Testing the conventional approach
  – Russian gas is a much bigger political problem for Europe than OPEC oil for any country/region
  – Is Europe too dependent on Russia?
    • Lots of talk about “diversifying Europe’s gas supply”
  – Should the EU seek more interdependence? How?
    • European gas companies – and some governments – argue that cross-investment would deepen interdependence, increase energy security
Defining the issue (3)

- Testing the conventional approach (2)
  - World’s dependence on OPEC oil is larger than EU’s dependence on Russian gas (cf graph)
  - Europe is Russia’s only gas export market
  - Does (inter)dependence really matter?

Sources: Gazprom; BP Statistical Review of World Energy
Defining the issue (4)

• Beyond (inter)dependence: 3 important questions
  – General theme: *dominant energy suppliers*
  – Is supply concentrated? concentrating?
  – Do dominant suppliers threaten supply security?
  – Is “energy dependence” politically problematic?
Supply concentration – 1. World oil

Oil supply is much more diversified in 2006 than 1973.
Supply concentration – 1b. World oil

The diversification trend seems to have stopped – will it reverse?

Cumulative Oil Supply, various years

- 1965
- 1973
- 1980
- 1990
- 2003
- 2006
Supply concentration – 2. European gas

European gas imports have been diversifying significantly

Source: Eurostat

Source: Eurostat; BP Statistical Review of World Energy
But some countries in Europe are heavily dependent on Russia

Supply concentration – 2b. European Gas
Supply security

• “Do they have an incentive to cut us off?” – restrictive approach to supply security

• What happens if supply is disrupted – more interesting approach

• Supply security policy -- minimizing the loss of welfare due to supply disruptions
  – Ensuring that the market clears – Demand has to be met; Involuntary interruptions are very costly
  – Minimizing the cost at which the market clears – What price does it take for supply & demand to balance?
Supply security (2) – *Global oil*

- **Global market**
  - Supply disruptions trigger global price spikes
  - Bilateral dependence doesn’t matter – in most cases
  - Global supply diversity does matter

- **Supply security policy**
  - No price regulation or import restrictions
  - Emergency storage – better with int’l co-ordination
  - Taxes + R&D support – reduce oil intensity of GDP; promote alternatives
  - Current challenges – China & India not in IEA; Increased supply disruption risk; Scarcity risk
Supply security (3) – *European gas*

- Country specificities determine risks, efficient security policies – For example:
  - **Structure of gas supply**
    - More storage required if few suppliers / key infrastructure
    - Diversity means greater N-1 resilience
  - **Structure of gas demand**
    - More storage required if high residential peak demand
    - Industrial / powergen demand more interruptible – backup diesel may be more cost-effective than storage
- **Different risks, different instruments**
  - Prolonged v. short-lived interruption
Supply security (4) – *European gas (b)*

- **Market integration**
  - The wider the market, the lower the cost of ensuring supply security
  - An integrated European gas market would increase security for all consumers
    - Polish, Hungarian players can virtually import non-Russian gas from Western Europe (swaps)
    - Interruptible customers in (say) Belgium can help alleviate a supply crisis in (say) Poland
  - “Island” markets (Baltic states) are in a more difficult position
Political implications

- Dominant suppliers may exert market power
- But are they necessarily politically problematic?
- OPEC as a politically benign cartel
  - Has not emerged as a geopolitical force
  - Doesn’t link oil-export policy to foreign policy goals
  - Some heated rhetoric (Venezuela) but little action
- Russia as a politically problematic supplier
  - One of the most divisive issues in EU politics
  - Main barrier to EU unity on Russia
Political implications (2)

- **Key determinant – *How the market works***
  - Do bilateral relations matter
    - Global oil – No
    - European gas – Yes
  - Is the commodity ‘fungible’ across the market
    - Global oil – Very high fungibility
    - European gas – Low fungibility

- **Making Russian gas more benign means market integration**
  - Access to Russian gas would no longer be linked to relations with Moscow
  - Large bilateral import projects would be “europeanised”
Some conclusions

• Oil security risks do exist but are rather well addressed by existing policies – at least in the OECD

• Very little foreign policy implications from “oil dependence”

• Oil is not gas – but looking at global oil is very helpful to understand what’s wrong with European gas

• Before rushing to “external energy policy”, the EU should build an integrated gas market
  – Benefits of market integration: Enhanced supply security; Russian gas less divisive in Europe