European Gas Hubs

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UNECE Working Party on Gas

Geneve, 22 January 2013

Outline of Presentation

- **2014 deadline for completion of Internal Energy Market**
  - Where are we now: looking to the EC for guidance
  - Can we be more explicit: where is a single market developing?
- **Starting premises**
  - What, in essence, is a single market: looking towards the GTM
  - Measuring market performance
- **Results**
  - Results and…… anomalies?
  - A single market must imply… a single relevant market
  - Recalibrating for a relevancy
- **Conclusions**

Internal Energy Market by 2014

- From EC communication *Making the internal energy market work*:
  - Today the EU is not on track to meet this deadline.
  - Third package not implemented across all MS
  - Inward-looking nationally inspired policies slow to adjust
  - Uncompetitive markets and regulated prices.

- Yet there are signs of progress:
  - Northwest EU markets with liquid gas hubs have been able to benefit from exposure to gas-on-gas competition.
  - "*The stark contrast between the beneficial effects this has had on wholesale gas prices in liquid and competitive markets in the EU, compared to less liquid and competitive markets, is striking*."

Starting Premises

- So where is the progress, and how can we measure it?
  - We can turn to the CEER Gas Target Model for guidance

- The *CEER Vision* can be characterized by:
  - A fully liquid or “spot” internal market, where long-term contracted volumes are delivered at border points and then traded to their destination.
  - Certain performance norms focusing on:
    - Liquidity (a very spot market notion)
    - Competition (also distinctly spot)
    - Security of Supply

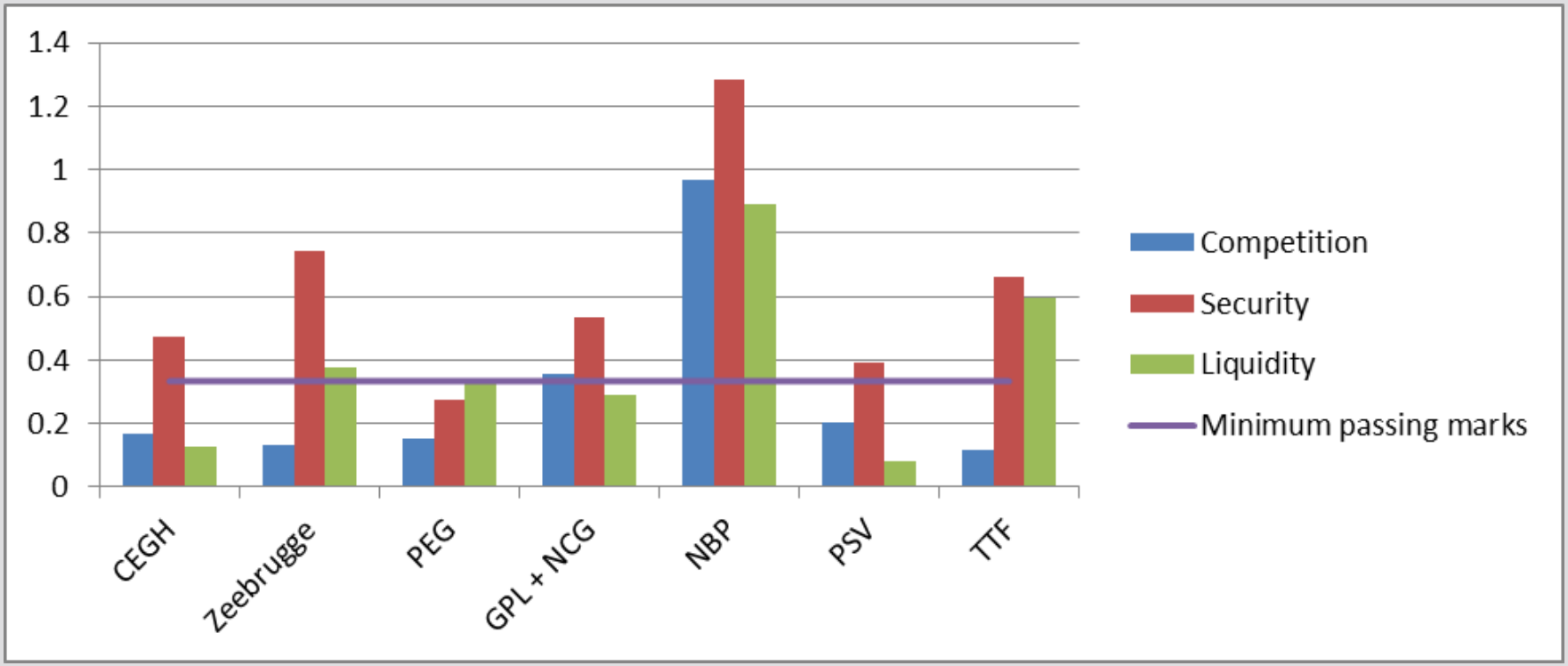
- What can we take from this?
  - **An Internal, single energy market will likely be characterized by a liquid, competitive spot market that is able to secure supply for European customers.**

Starting Premises cont'd

- Measuring "performance" with indicators:
  - Source: CEER Gas Target Model
  - Liquidity: Churn Rates…
  - Competition: Herfindahl-Hirschman Index (HHI)
  - Security of Supply: "number of gas sources", proxy: N-1…

- …but also with econometrics:
  - Econometric analysis of gas hub price time-series
  - Cointegrated time-series as evidence of the Relative Law of One Price

Results: Indicators

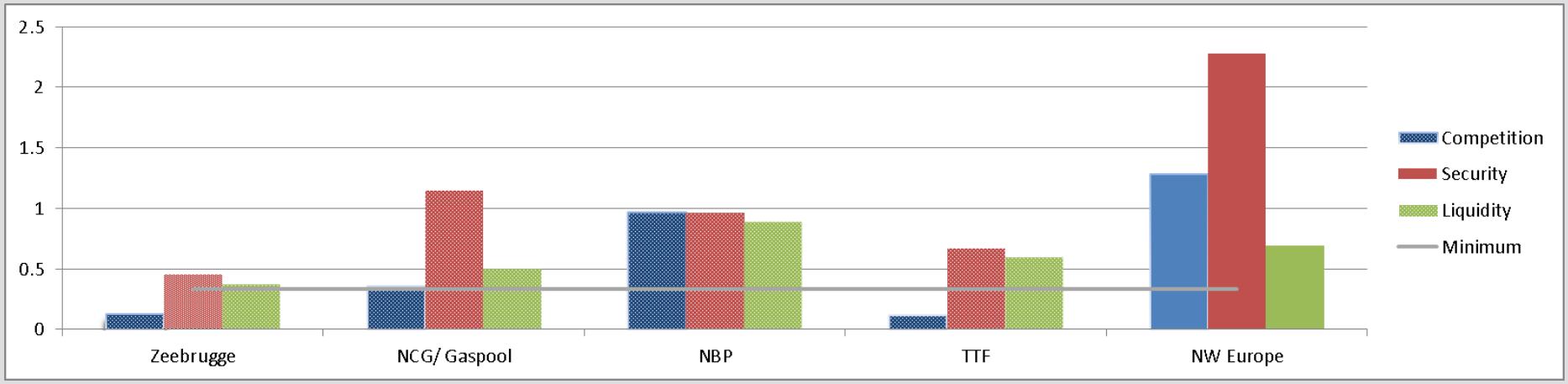


- Hub performance is generally high, yet competition scores are quite low: cause for concern or anomaly?

- “Low levels of liquidity are an entry barrier to both gas and electricity markets.” – European Commission

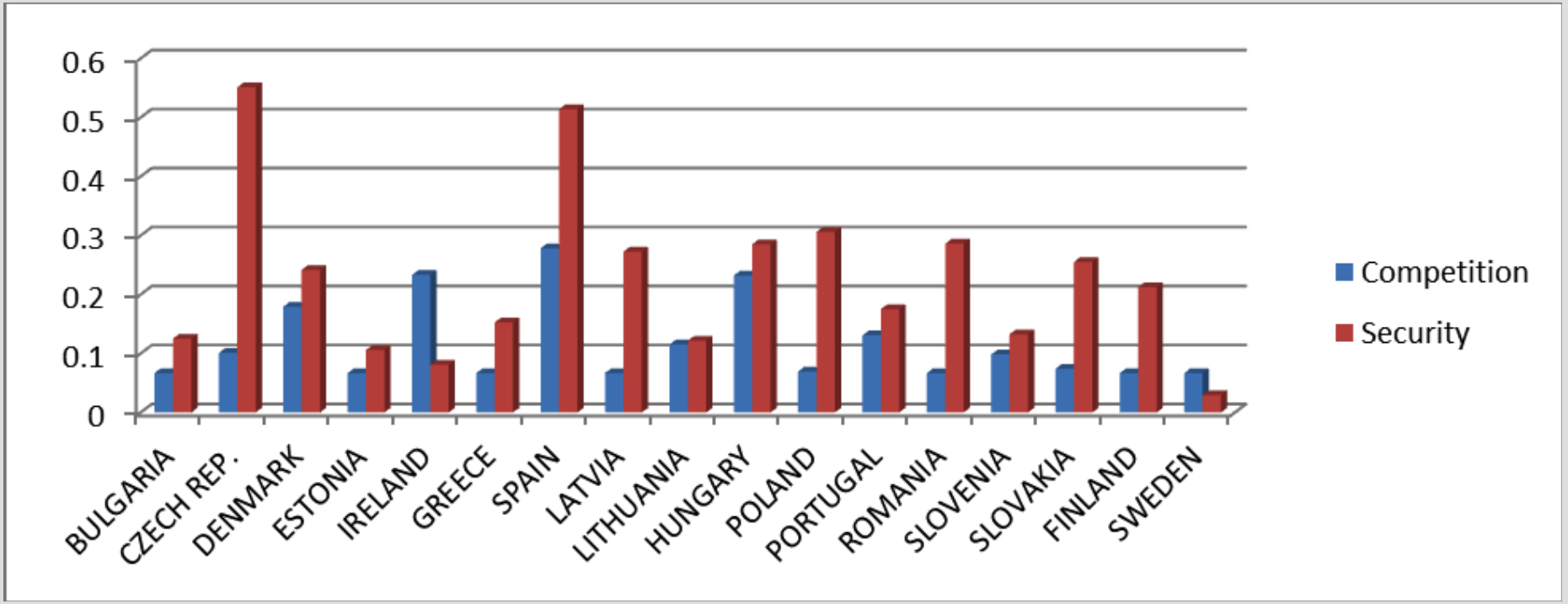
Results: Econometrics

European Gas Wholesale: Recalibrating for Relevancy



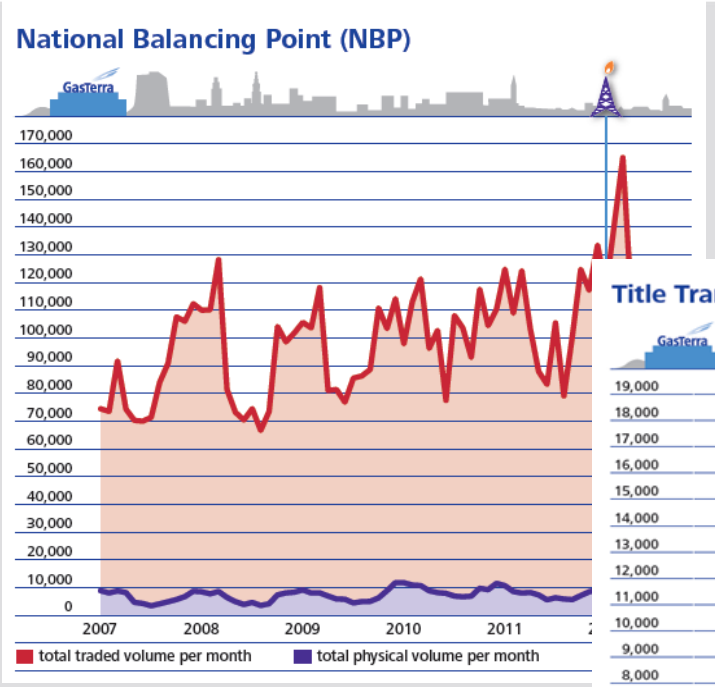
- When we take a regional approach to measuring competition, liquidity and security of supply, we get very high regional scores.
- NW Europe (UK – NL – DE – BE) passes all CEER norms and requirements to be considered well-functioning.
- Back to our anomaly → these results imply a serious disaggregation bias!

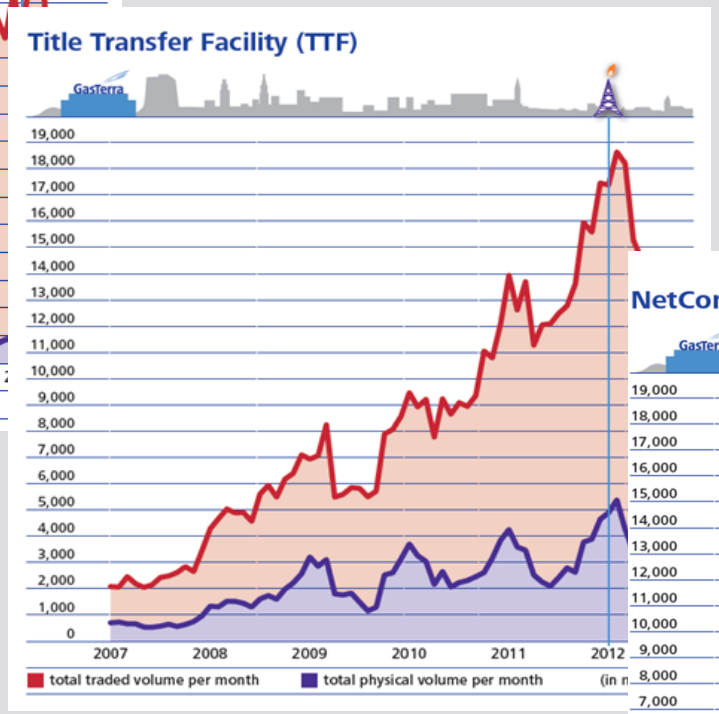
Results: Indicators

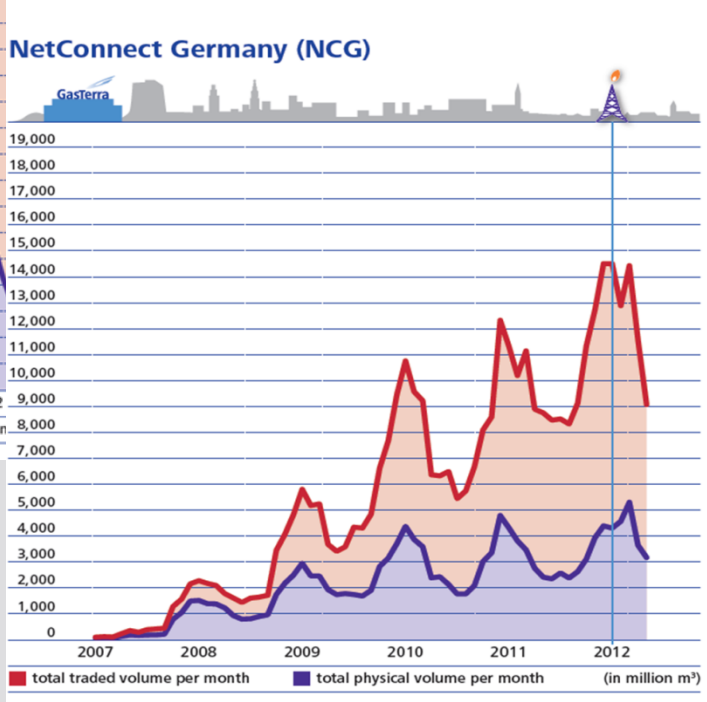


Applying indicators to Europe's non-spot national markets...

The Gas Hubs: Volumes







Liquidity Development takes time: 2007 - 2012

Conclusions

- NW Europe is a functioning single integrated market.
- Wholesale competition is a characteristic of mature liquid markets → the rest of Europe needs to follow a developmental process that will take time.
- Nationally inspired policies are a stumbling block, but so is nationally inspired regulation when evidence points to a **regional market**.
- Though much remains to be done, we need to recognize progress where it exists
  - If we continue measuring markets as if they're national, we will get misleading results ands take inappropriate, perhaps harmful, action.
  - Integrated energy market creation is not a binary reality, but rather a process.