



The Brattle Group

Competition and Security of Energy Supply: the case of the European Union

**Invited Presentation at the European
Economic Association's 22nd Annual
Congress, Budapest
Boaz Moselle
30 August 2007**

rue Ducale 83
1000 Bruxelles
tel: +32.2.790.35.80
office@brattle.com

Three types of concern

- “Supply adequacy”
 - ▶ Will market ensure sufficient availability of natural gas supplies and power generation capacity?
- “Transportation adequacy”
 - ▶ Will private, for-profit companies build enough pipes and wires?
- “Geopolitical”
 - ▶ Russian monopoly / “Gas OPEC”?
 - ▶ Supply interruption as political weapon?
- I will focus on first

How would the “ideal” policy debate look?

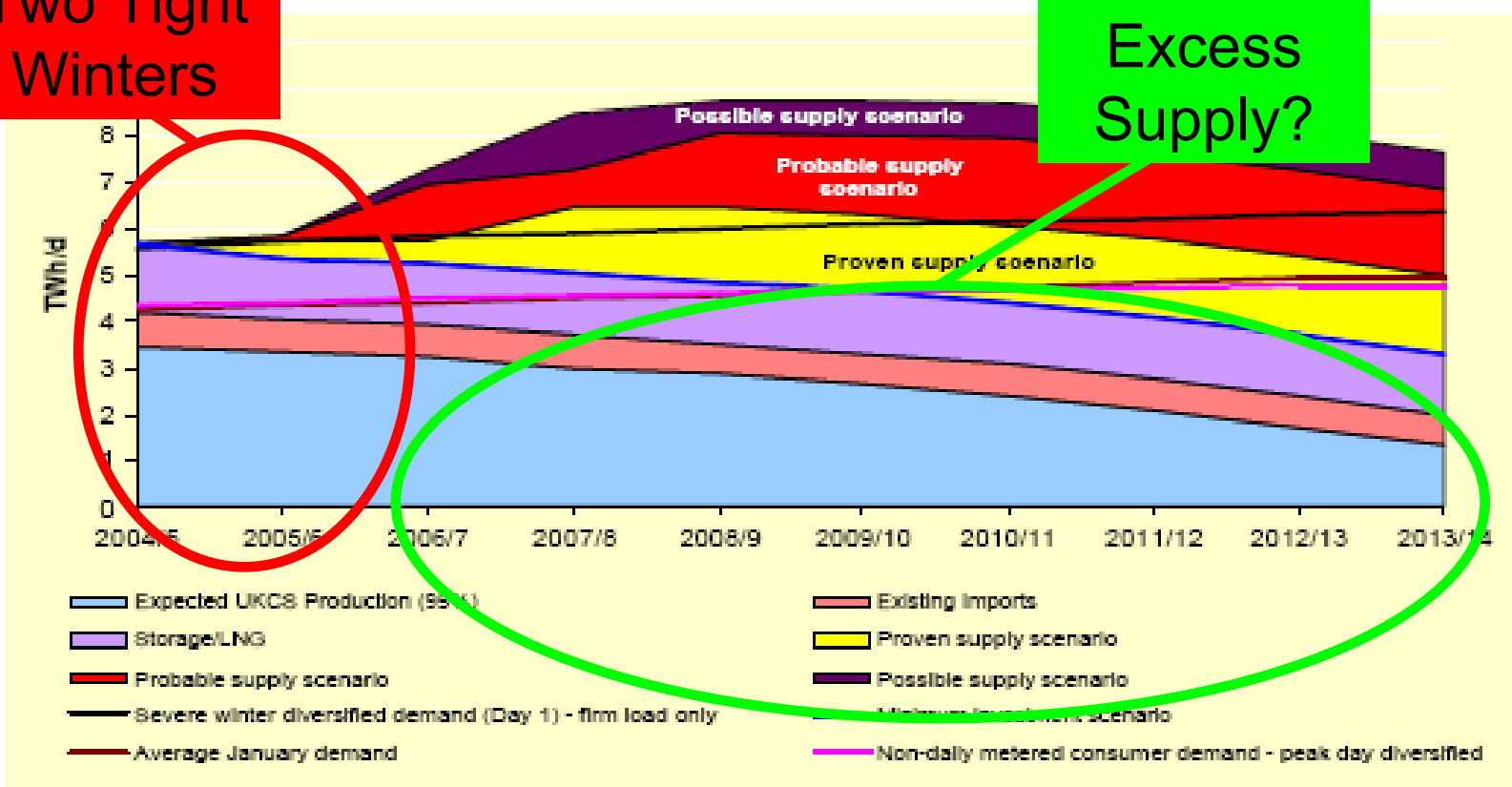
- Evidence-based, quantitative assessment of risk of market failures
 - ▶ Very difficult (always, but especially in this case)—rarely done.
 - ▶ Hard to estimate probability and cost of low probability, high cost events.
- Evidence-based, quantitative assessment of risk of “*government failures*”
 - ▶ Would be even more difficult—but no-one does it!
 - ▶ Lack of underlying theory.
 - ▶ Greatest weakness in application of CBA framework.
- Derive policy prescriptions
 - ▶ E.g., “capacity requirements”, “strategic storage”.

Where are the market failures?

- Investment in energy assets “too cyclical”?

Two Tight Winters

Excess Supply?



Source: JESS, November 2004

Where are the market failures?

- Stability of power network has “public good” aspects
 - ▶ Theoretically correct (Joskow-Tirole)
 - ▶ Materiality? Unknown—I suspect small
- Do markets under-insure against low probability high impact events?
 - ▶ If true, implies under-investment in “peaking capacity”
 - ▶ Human behaviour?
 - ▶ Or expectation of price caps? Or moral hazard? (Really government not market failures)
- In any case, all real world markets are imperfect!
 - ▶ How material are these failures?
 - ▶ Would policy intervention lead to better outcomes?

Risks of government failure?

- “Crowding out” of investment
 - ▶ Obligations to store gas or hold unused generation capacity lead to lower private investment in “peaking capacity”
- Credibility of commitment
 - ▶ Expectation of new interventions further undermines investment
- Generically, imperfect policy design and implementation
 - ▶ Complex markets, politically charged, easy to get it wrong

Personal view on supply adequacy

- Markets work best, provided have a credible government commitment to non-intervention
- First “test case” in EU was current wave of UK gas infrastructure investment
 - ▶ Markets probably delayed investment relative to “first best”. There was pain—but would government have done better?
 - ▶ Eventual outcome is impressive (high volume of investment, “productive efficiency”, diversity)
- Without credible commitment, it’s less clear
 - ▶ Constant interventions mean unrealistic to expect “market” decisions (e.g., Spain)
 - ▶ But no reason to think more intervention would be better

Open questions to academic economists

- Cyclical investment in this sector
 - ▶ Is it real and material?
 - ▶ Is it inefficient?
- Under-insurance against low probability high impact events
 - ▶ Is it real and material?
 - ▶ What drives it?
- Generically, how to assess “government failure”, incorporate into cost-benefit analyses