



The Brattle Group

The ISO model for Scotland: Lessons from UK experience

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27 April 2007

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Introduction

British Electricity Transmission and Trading Arrangements (BETTA)

- Introduced in 2004 via primary legislation (Energy Act 2004)

Unified Scottish electricity market with England & Wales

Unified transmission rules and operation under a single, independent system operator

- Great Britain System Operator (GBSO): National Grid (NG)
- Transmission Owners (TOs): National Grid, Scottish Power, SSE

National Grid both GBSO and a TO (in England & Wales)

GBSO responsibilities

- System Operation: single control room
- Balancing and congestion management, procuring reserve etc: all done by NG under “SO Incentive Scheme”
- Access arrangements: entry and exit rights allocated by NG
- Connection agreements
- All contacts with customer (exception: safety-related agreements)
 - Underlying philosophy: TOs are contractors providing services to GBSO, GBSO is single point of contact for market participants

Joint responsibilities

- Planning maintenance
 - TOs prepare plans, GBSO can require changes
- Investment planning
 - Each TO prepares an investment plan, sends to GBSO, GBSO proposes a GB investment plan
- Proposing amendments to the “SO/TO Code” (STC)
 - STC comprises detailed rules governing relation between GBSO, TO.
 - GBSO and TOs have a committee that can propose changes.
 - Ofgem accepts/rejects proposals.

TO responsibilities

- Own, maintain and expand system, subject to rules established by regulator
- Safety and security rules (also from other bodies)
- Interface with GBSO (e.g., investment plans, STC)
- No other/“privileged” role in GBSO arrangements (e.g., unlike in US RTOs, GBSO has no stakeholder committees)
 - Input via normal consultation processes

Why a “regional ISO” for Scotland?

- ISO was viewed as second-best to ownership unbundling, but latter politically not achievable
 - GBSO arrangements therefore in part “faute de mieux”
- The regional ISO model attractions included:
 - Unification with England & Wales gives necessary scale for competition (Scotland is small) and can use existing market model (NETA)
 - Relative lack of congestion allows single price area in GB
 - National Grid well-placed to do the job: ownership unbundled, large for-profit company
 - Single regulator already in place, and (more or less) single legal system

Investment Issue

- ISO is clearly good for non-discriminatory access
 - ▶ But impact on incentives for under-investment by vertically integrated transmission owners?
- GBSO proposes investments, but no obligation on TOs to agree
 - ▶ TOs do have strong legal obligations, defined and enforced (via fines up to 10% of turnover) by regulator – would have to justify refusal to comply
- Whatever the rules, a TO can always try to avoid building by failing to get necessary permits
 - ▶ Make weak application, avoid pro-active campaign for political or community consensus

Complexity and costs

- BETTA was extremely complex
 - ▶ Years of work
 - ▶ Significant resources from Ofgem, DTI, companies
 - ▶ Detailed primary and secondary legislation
 - ▶ Many thousands of pages of documentation
 - ▶ Changes to IT systems, balancing and settlement arrangements, etc
- Significant administrative costs:

	Development Costs £ million	Ongoing Costs £ million/year
Central Systems	26.0	-
Interface between GB SO and asset owners	4.0	1.5
Market participants	7.5	0.5
Ofgem	8.0	-
DTI	0.2	-
TOTAL	45.7	2.0

Source: DTI, BETTA Regulatory Impact Assessment

Complexity: implications

- Developing a multi-jurisdiction regional ISO elsewhere in EU would face much greater challenges
 - ▶ Multiple legal systems: what is legal basis for regional ISO (does it require a treaty?)
 - ▶ Multiple regulators: decision-making process, enforcement etc?
 - ▶ Need to invent a market model
 - ▶ Need to design the ISO (no NG “waiting in the wings”)
- However, BETTA is a Rolls Royce!
 - ▶ OK to start with something less sophisticated

Conclusions

- Ownership unbundling is best, but ISO model clearly works in GB
- Investment remains an issue
 - ▶ Would like a “deeper” ISO (i.e., more ISO control over investment)
- Regional ISO elsewhere in EU could have greater costs than BETTA
 - ▶ Much greater legal and operational complexities
- But also greater benefits
 - ▶ Potential to bring needed reforms to market arrangements
 - ▶ Improved congestion management
 - ▶ Create regional markets