



UNIVERSITY OF
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Electricity Policy
Research Group

Electricity Interconnection Financing Issues

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FEEM, 29 September 2009



Some issues

Cost-benefit questions:

Is the net benefit from additional interconnection positive?

What is the distribution of costs and benefits?

Should only users of assets pay?

How should interconnectors be financed?

What would a smart EU policy look like?

Who benefits?

- Not clear that consumers in both regions benefit (e.g. Nor-Ned, (Parail, 2009)).
 - APX price -2.6%; South Norway price +4.2%
 - Also reduces variance of APX price.
- Given foreign ownership not clear that national welfare improves in both regions (e.g. Czech Rep-Ger)
- Even where there are net benefits in both regions, there may be a payment problem. (e.g. Nor-Ned).

How should they be financed?

- Who would be counterparties?
 - TSOs/TOs or independents?
- Type of funding?
 - In regulatory asset base (all customers contribute)
 - Merchant
 - EU subsidy (Trans European Networks)
- Risk and Rate of Return?
- Depends on above
 - Assumed real cost of capital 7.5% BritNed
 - Compares with perhaps 5.1% on regulated assets

Specific Cases: 1

- Nor-Ned:
 - Ownership: Statnet-Tennet
 - Returns unregulated
 - Cable landing points: Feda (Norway) and Eemshaven (NL)
 - Investment €550; 580Km cable length
 - 700 MW capacity
 - Capacity available 2008
 - 100% open access by auction

Specific Cases: 2

- Brit-Ned:
 - Ownership: National Grid-TenneT
 - Returns unregulated
 - Cable landing points: Maasvlakte (Netherlands) and Isle of Grain (UK)
 - Investment €600 million; 260km cable length
 - 1000MW capacity (nominal)
 - Capacity available late 2010
 - 100% open access by auction

Specific Cases: 3

- East-West (IRL-GB):
 - Ownership: EirGrid
 - Returns unregulated
 - Cable landing points: Rush North Beach, Dublin (IRL); Barkby Beach, North Wales (GB)
 - Investment €600 million (110 from EU); 185km cable length
 - 500 MW
 - Capacity available 2012
 - 100% open access



Smart EU Policy

- International interconnection is like generation capacity / new load requirement from individual country perspective.
- Merchant projects should have right to go ahead on this basis, subject only to use it or lose it rule.
 - Exemption from rTPA rules.
 - Currently some regulators / TSOs will not apply for this exemption (e.g. France-GB interconnector)
 - Unbundling of transmission clearly helps (09/72/EC)
 - 32 priority projects in 2003 (MVV, 2007)?
- Regulated projects should be subject to national, bi-lateral and EU wide cost-benefit tests.