Offshore Electricity Transmission in the UK
Theory and Practice

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Content

- UK Industry Structure
- Offshore Transmission in the UK
  - Transition (rounds 1 and 2)
  - Enduring regime (round 3)
- Implications
System operation:

Transmission ownership:

NGET

Transmission ownership:

SHET

0.5GW link to N Ireland

0.5GW link to Rep of Ireland

SPT

Offshore Transmission Owners (OFTOs)
Round 1 (9 projects, 2000MW)
4/9 OFTOs appointed
Round 2 (6 projects, 2750MW)
No OFTOs appointed
Round 3 up to 32GW
No OFTOs appointed

NGET

1GW link to Netherlands

2GW link to France

2GW link to France
Offshore Regime
Rounds 1 and 2

- Generators built wind farms and the network to shore-based connection points
- Offshore regime requires transfer of network to OFTO selected via a competitive process
- OFTO needs to:
  - Refinance a built asset
  - Provide ongoing maintenance and operation
  - Bids a revenue stream to Ofgem
Round 3
Enduring Regime

- Generators apply to SO for connection
- SO provides high level design and connection offer
- Two options….

Generator Build
- Generator undertakes detailed design, sea bed surveys, obtains consents
- Generator procures, builds, and commissions network.
- Winning OFTO takes over commissioned network, finances, owns, maintains and operates it

OFTO Build
- Generator undertakes detailed design, sea bed surveys, obtains consents for network
- Winning OFTO procures, builds, commissions, finances and owns, maintains and operates network
Rounds 1 and 2 - Practice

- Ofgem claim £350m savings?
- A case of
- No design or construction risk,
- Banks can refinance projects more efficiently than network companies
- Project finance approach
  - OFTOs very risk averse – lay off all risks
  - e.g. maintenance and repair risks transferred back to generators
  - Contract inflexibility
Offshore Transmission in Practice

- All projects “generator build” so far
- No OFTO has yet been prepared to accept design and construction risk (economical design, efficient and timely delivery)
- SO has co-ordination role but no powers – information provision only via ODIS
- Onshore infrastructure planning consent must demonstrate integrated approach
ODIS
Offshore Development Information Statement

http://www.nationalgrid.com/uk/Electricity/OffshoreTransmission/ODIS/
Other Framework Issues

- Compliance with Third Package? (generators involved in design and construction of transmission)
- Scope for Innovation?
- Political uncertainty?
Summary

- Thus far those that really want the network:
  - Have designed and built it, dealt with the risks
  - Will pay for it over project life (incentive for low costs)
- Ofgem have found new sources of finance for low risk network projects
- Future is Uncertain
- Will investors accept construction risk?
- Will the default approach be “generator build”, asset transfer to OFTO and refinance?
- Will the regime deliver - probably?
- At lowest cost for the consumer – probably not?