The new geography of power generation
Geography of New Energy Development

Key
- Round 3 Wind Farms
- Proposed Nuclear Power Stations

- Hartlepool
- Sellafield
- Heysham
- Wylfa
- Oldbury
- Hinkley Point
- Bradwell
- Sizewell

1.3 GW
3.5 GW
4.2 GW
4 GW
7.2 GW
9 GW
1.5 GW
0.9 GW
0.6 GW

Pylons in your parish?

Suffolk County Council
Key players 1

• Windfarm/nuclear operator – builds and operates new power station (e.g. EAOW or EDF). Sells to:
  • Distribution company - sells to the end consumer (e.g. UKPN)
  • National Grid – Responsible for the network of high voltage cables linking the generator and the distribution company
Key players 2

- Ofgem – Office of Gas and Electricity Markets. Regulates the market. Sets out what costs can be re-charged to the customer.

How does a new operator go about connecting to the National Grid?

1. Operator makes a request to National Grid for a connection to main network

2. National Grid obliged to offer a connection to operator and a timetable

3. Operator then decides whether to accept this offer
East Anglia Offshore Wind Connection Point
East Anglia Offshore Wind Connection Point
Who decides?

- Not the Local Planning Authorities!
- Currently Infrastructure Planning Commission
- Will be Major Infrastructure Planning Unit preparing a report
- Secretary of State for Energy and Climate Change makes the decision
- But Local Authorities (county and district councils) have a key role in representing the local area in the process
What’s the problem?

Graphic credit: Stour Valley Underground
Legislation

- “To protect the interests of existing and future customers”
- “To contribute to the achievement of sustainable development”

Regulates National Grid;
- “To develop and maintain an efficient, co-ordinated and economical system of electricity transmission”
- “Shall have regard to the desirability of preserving natural beauty”

Planning Act 2008
- Creates the planning policy framework (National Policy Statements) and consenting body (Infrastructure Planning Commission)
- The Secretary of State must exercise his functions with the objective of contributing to the achievement of sustainable development

Mismatch in respective duties of Ofgem and the IPC with National Grid potentially leads to difficulties in reconciling consideration of social and environmental issues

Main issue: Duties of National Grid do not align with the wider objectives of the planning system
Policy

Department of Energy & Climate Change
• Secure, affordable and low carbon energy
• Guidance to Ofgem (Electricity Act)
• National Policy Statements (Planning Act)

Electricity Networks (EN 5)
• Undermines principles of planning system
• Expects new transmission lines in non-blighted areas
• Suggests overhead lines can be largely mitigated
• Insufficiently supportive of alternatives

Main issue: National Policy Statement EN5
Regulation

- Ofgem
- Onshore – ‘RIIO’ (Revenue = Incentives + Innovation + Outputs)
- Offshore – ‘Enduring regime’

Main issue: Need for greater coordination between onshore and offshore and mechanism to deliver infrastructure in advance of need

Graphics credit: Siemens - as presented at National Symposium on Future Electricity Networks, 19/1/2011
Summary

Melting Pot
Legislation
+ Regulation
+ Policy
= Irrational outcome

Solution
• Cheaper
• Less damaging
• Reduced consenting risk

Graphic credit: National Grid, Offshore Development Information Statement (2010, p98)