



MAKING SURE RENEWABLES POLICY DELIVERS: THE KEY ISSUES

A Presentation to the Ofgem Discussion Day on Renewables

by

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Objective of Day

- How to improve the effectiveness of Government policy

NOT

- Put forward an alternative to Government policy

The Energy White Paper

Our energy future - creating a low carbon economy

Objectives (in context of need to update UK energy infrastructure)

- To put UK on path to cut CO₂ emissions by 60% by 2050
- To maintain reliability of energy supplies
- To promote competitive markets and improve productivity
- To ensure that every home is adequately heated

Renewables have a Role

- Renewables are low or no carbon
 - Renewables are an indigenous energy source
 - Renewables are a potential source of new and exportable industrial activity
 - Renewables may be able to bring economic activity and income to rural areas
- ➔ Renewables Obligation

What Can Renewables Deliver?

- What can renewables deliver in terms of carbon reduction?
- What can renewables deliver in terms of security of supply?
- What technologies might the UK exploit and how can this be encouraged?
- What economic activity and income might renewables bring to rural areas?
- How much will different levels of renewables penetration cost?
- What now needs to be done to deliver on the potential of renewables?

Challenges of Renewables

- Approach of the day: challenges are problems to be solved, not opportunities for point-scoring or the presentation of pet alternatives. Challenges include:
 - Intermittency
 - Transmission
 - Distribution
 - Environmental impacts
 - Cost and market-creation

Intermittency

- Mix of renewables
- Geographical distribution of renewables
- Correlation with peak demand
- Demand management (interruptible supplies)
- Capacity credit
- Need for back-up capacity
- Environmental implications of back-up capacity (reduction in carbon savings)
- Technical implications of intermittency

Transmission

- Location of renewables in relation to demand
- Technical issues of transmission
- Environmental impacts of transmission
- Institutional issues in respect of transmission (incentives for investment, distribution of costs)
- Put issues in context, e.g. location of renewables in terms of rural economy issues

Distribution

- Technical issues in relation to distribution (system strengthening, stability etc.)
- Institutional issues in relation to distribution (incentivising DNOs, distribution of costs)

Environmental Impacts

- Carbon reduction (fuel substituted, life-cycle impacts, back-up capacity assumptions)
- Wind: visual impacts, noise, bird issues, marine and terrestrial habitats
- Biomass: visual impacts, land take, water take, air pollution (combustion), biodiversity
- Importance of rigorous assessment (ex ante and ex post)

Costs of Renewables (1)

- At one level all the ‘challenges’ can be expressed as costs
- Conviction-driven cost analysis
 - Cite favourable studies without question (the phenomenon of circular citation)
 - Ignore or critically scrutinise unfavourable studies
 - Present worst-case assessments of unfavourable scenarios to be compared with favourable scenarios
 - Find ‘personal communication’ or newspaper articles to make worst-case scenarios seem plausible

Cost of Renewables (2)

- Inquiry-driven cost analysis
 - Source of data (e.g. primary or secondary, industrial or independent)
 - Indication of levels of uncertainty (e.g. installed technology against pre-prototype)
 - Transparent assumptions (e.g. baseline)
 - Ranges of costs
 - Consistent comparisons

Regulatory Issues

How to create a dynamic, efficient market and vibrant technological innovation in a regulated industry with aspects of natural monopoly?

- Balance the need for private sector profit (in some cases the chances for abnormal profit) with protection and value for the consumer.
- Generation
- Transmission
- Distribution

Outputs from the day

Implications of renewables for

- Carbon reduction (fuel substituted, life-cycle impacts, back-up capacity assumptions)
- Reliability, security of supply (intermittency – availability, system stability, gas imports, vulnerability)
- Environmental impacts
- Cost (and components of cost) of renewables, especially wind
- Regulation (incentives for transmission, distribution; institutional issues e.g. NETA; cost-distribution)
- Feed into review of Renewables Obligation in due course



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