

Distributed energy – from the margins to the mainstream ?

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Background - the London Perspective



London's Energy Consumption and Emissions (heat and electricity - 2006)

Energy Consumption – 125,000 GWh

- ❑ 65% gas fuelled heat
- ❑ 28% electricity from National Grid
- ❑ 7% other

Carbon Emissions (heat and electricity, direct and indirect)

34.7 mt CO₂

- ❑ 56% from heat consumption
- ❑ 44% from electricity consumption

Background – the London Perspective



Targets

With Government help, the Mayor is committed to 60% reduction in carbon emissions in London by 2025

Decentralised energy has a large role to play in reaching the target, because of the need to generate low / zero carbon heat within distribution distance of its place of consumption.

' The Mayor's goal is to enable a quarter of London's energy supply to be moved off the grid and on to decentralised systems by 2025...'

[Mayor of London's Climate Change Action Plan – 2007]

Regulatory Reform

Barriers

There are market barriers affecting distributed energy which are particularly relevant to distributed energy schemes in the non-industrial environment –

- ❑ a large number of smaller to medium size schemes
- ❑ scheme providers not confined to a few major utilities
- ❑ schemes may be local/public authority/developer led.

The barriers are well known and referred to in the Ofgem / BERR consultation document –

- ❑ difficulties of buying and selling small packets of power in a market designed for bulk supply
- ❑ costs risks and complexities of the electricity market systems, dominated by large well resourced suppliers/ generators.

Regulatory Reform

The Principles

The number and size of future DE schemes will mean that it will not be possible or appropriate to rely on licence exempt status, except for very small schemes –

- ❑ consumers need to be protected by competition for supply
- ❑ Electricity Directive and current UK electricity regulation is based on 3rd party access
- ❑ extensive use of licence exempt status is an escape from a regulatory environment that is not adapted to accommodate some kinds of DE
- ❑ the solution is to adapt the electricity market arrangements to accommodate DE in addition to centralised bulk supply operations, not by-pass the problem.

However, to work, the review of the market system has to allow for new thinking, real change and if need be a radical approach.

Regulatory Reform

The Action

DE should be insulated from those parts of the electricity market system that are unnecessary for its operations and which belong to bulk electricity supply, for example by setting up –

- a 'virtual private wire' system that puts DE operators in a similar economic/risk position as with private wire, but allowing 3rd party access

Structures must be set up that allow DE to co-exist with a bulk electricity supply market without prejudice, for example –

- mechanisms to facilitate the export / import of power from and to DE sites
- market agent appointed to advise / represent DE operators in their interface with the BSC, MRA and other industry codes

Solutions that facilitate the market generally and with it DE, notably reform of BSC cash out mechanism.

Regulatory Reform for Distributed Energy



Why Bother ?

Why not consign to the 'too difficult' pile?

- Abating climate change caused by our own activity is a political, economic and social imperative
- In the urban environment in particular distributed energy has a major role to play in reducing carbon emissions caused by the consumption of heat and power
- The issue is not whether to make effective and possibly disruptive changes to our systems necessary to meet the targets, but how to make those changes work at least cost.



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