Is small always beautiful or is bigger better?

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Overview

- Policy Context
- Factors impacting on deliverability
- Suggested scale of approach to decarbonisation
- Conclusions
Policy Context

- Unnatural pace, scale and technology mix required by national and international targets
- Credit crunch
  - Impact on economics and incentives
- Funding
  - Volume and cost of capital required
- Cost
  - Minimise burden on consumers/tax payers
- Desire to attract new entrants
- Localism
Delivery

• Prioritise solutions that:
  – Deliver the necessary quantum and pace
  – Give the biggest ‘bang for the buck’
• Distinguish between traded and non-traded sector
• Be prepared to compromise on multiple policy drivers – especially if timescales are to be met
Other factors for consideration

• Financing issues
  – Up front capital
  – Equity investment for development and construction

• Potential motivators
  – Symbol on the roof
  – Board room attention and competition
  – Fiscal incentives/disincentives
  – Regulation and standards

• Economic rationality of decision makers?
Communication

• How many must be influenced, and how easy is it to reach and convince them
• Obligations on large players are attractive, but
  – Impacts on smaller players?
  – Impacts on new entrants?
• Local and individual action sound great but
  – Voluntary action from the masses is hard to achieve
  – Cost of making it happen often not assessed
  – Unintended political consequences
Suggested approach in three distinct areas

• Energy Efficiency and Heat
  – Both particularly important since the bulk of savings are additional, ie in the non-traded sector

• Electricity
  – Particularly important since it will become a major source of decarbonisation in the heat and transport sectors
Overall carbon saving for each policy

MtCO₂

CESP CERT extension FIT RHI RO

0 50 100 150 200 250 300 350 400 450
Cost, delivery and scale

<table>
<thead>
<tr>
<th></th>
<th>Typical cost (£/tCO₂ saved)</th>
<th>Cost ratios large : small</th>
<th>Delivery volumes large : small</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Energy Efficiency</strong></td>
<td>- 48 (CERT)</td>
<td>1 : 0.5 – 1</td>
<td>30 : 70</td>
</tr>
<tr>
<td><strong>Heat</strong></td>
<td>65 (RHI)</td>
<td>1 : 3 - 4</td>
<td>85 : 15</td>
</tr>
<tr>
<td><strong>Electricity</strong></td>
<td>400 (FiT)</td>
<td>1 : 5 - 10</td>
<td>99 : 1</td>
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<td>100 (RO)</td>
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Conclusions

• Public and political priorities do not always reflect economic rationality, which should be:
  – Non-traded sector
  – Heat and energy efficiency with significant small scale and local deployment
  – Larger scale electricity solutions
• More focus is needed on finding the right balance of carrots and sticks to make small and community scale activities work
• At the small scale, automate – don’t rely on people doing the right things