Anaerobic Digestion: the UK Policy Framework

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Benefits of Anaerobic Digestion

Climate Change
• Source of distributed renewable energy
• Reduces methane emissions from landfill and manure management
• If digestate used as fertiliser, reduces need for inorganic fertiliser and so reduces energy use and carbon emissions

Economic
• Contributes to low carbon economy and viable, diversified rural business sector; opportunities for UK technology companies

Other Environmental
• Reduces inorganic waste going to landfill
• Improves air and water quality
UK Government Strategy

• Strong Government commitment set out in May 2007 in
  – UK Biomass Strategy
  – Waste Strategy for England
  – Energy White Paper

• Being further developed in
  – UK Renewable Energy Strategy
  – Heat Call for Evidence
Potential of Anaerobic Digestion in UK

<table>
<thead>
<tr>
<th>Theoretical potential:</th>
<th>10-12 TWhₑ/h</th>
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<td>Carbon savings:</td>
<td>6.1-6.9 MtCO₂e</td>
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<tr>
<td>(including avoided landfill)</td>
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(Source: UK Biomass Strategy, Annexes A & B, combined figure for ‘wet’ materials, sewage sludge and poultry waste.)
UK Methane Emissions

Methane emissions by source: 1990-2006

Data source: AEA Energy & Environment

defra
Department for Environment
Food and Rural Affairs
International Leadership

• International Fora
  – International Energy Agency’s (IEA) Bioenergy Task 37
  – European Biogas Initiative
  – Methane to Markets Partnership

• Bilateral Cooperation
  – UK-Germany Experts’ Seminar on Agriculture and Climate Change, Feb 2008
  – UK-China Sustainable Development Dialogue
Methane to Markets Partnership

• International partnership:
  – Advances methane recovery and use as energy to reduce global methane emissions

• Focuses on:
  – Agriculture
  – Coal mines
  – Landfills
  – Oil and gas systems
Government Action

• **Addressing barriers in three areas:**
  – Economic
  – Awareness
  – Technological

• Underpinned by comprehensive stakeholder engagement

• Coordinated by cross-Defra Anaerobic Digestion Project
Government Action: getting the economics right

**Market**
- ‘Banded’ ROCs (2 ROCs/MWh)
- Standard and protocol for digestate

**Infrastructure**
- Bio-energy Capital Grants Scheme
- Axis 1 of Rural Development Programme for England 2007-2013 (RDPE)
Government Action: Demonstrating Benefits

• Anaerobic Digestion Demonstration Programme announced by Hilary Benn on 18 February 2008

• £10M available from Environmental Transformation Fund (ETF) towards construction of new demo plants
  – operating in different sectors and
  – with different feedstocks

• Will demonstrate benefits of anaerobic digestion to potential developers and customers
Government Action: Awareness and Understanding

• Will work with advice providers and their audiences to coordinate advice:
  – For each stakeholder group
  – On different issues
Government Action: Working in Partnership

Defra Ministers to convene high level stakeholder meeting which will:

• Bring together stakeholders from all the relevant sectors

• Discuss how we can work together to make best use of anaerobic digestion

• Identify specific issues for early attention through a process of ongoing collaboration
• For more information: