Responding to Climate Change

A presentation to:

Multimodal Conference
NEC, Birmingham
23 April 2008
• Stern Report
  - Said that the economic costs of curtailing carbon dioxide emissions (1% of gdp) would be much less than the costs of dealing with climate change in 50 years time (20%)
  - Government to respond (Budget 2007?)
• Climate Change Bill
  - Gives statutory force to 2050 targets80% reductions!?
  - Grants powers to set sectoral targets
• Office of Climate Change
  - Established by DEFRA to advise Ministers in formulating future UK strategy
• Aviation included in EU emissions trading scheme
Government transport actions

- Eddington Transport Study
  - Confirmed urgency of action on carbon emissions
  - All transport users to pay their external costs
  - Road pricing endorsed as means of curtailing demand
  - Infrastructure improvements to reduce congestion and emissions
<table>
<thead>
<tr>
<th></th>
<th>Million tonnes Carbon</th>
<th>% total UK emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total UK CO2 emissions</td>
<td>152</td>
<td></td>
</tr>
<tr>
<td>Total domestic transport</td>
<td>35</td>
<td>23%</td>
</tr>
<tr>
<td>HGVs</td>
<td>7.6</td>
<td>5%</td>
</tr>
<tr>
<td>Rail</td>
<td>0.7</td>
<td>0.5%</td>
</tr>
<tr>
<td>Coastal shipping</td>
<td>1.0</td>
<td>0.7%</td>
</tr>
<tr>
<td>Domestic air</td>
<td>0.6</td>
<td>0.4%</td>
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</tbody>
</table>
Sources of CO2 emissions by end user: UK 2004

- Business: 40%
- Passenger transport: 22%
- Domestic: 27%
- Freight transport: 6%
- Public: 4%
- Agric / Forestry: 1%

Based on DEFRA 2006
32.4 million tonnes of CO2

5.8% of total UK emissions

20.5% of transport CO2 emissions
Trends in CO₂ Emissions from Road Freight Transport

Million tonnes of CO₂

CSRGT

NRTS / CSRGT

NAEI

Kilometres per Litre for HGVs

Source: DfT, 2006

Index (1990=100)

+11%

Source: DfT, 2006
Tonne-km per Litre of Fuel for HGVs

Based on DfT 2006

Index (1990=100)

+22%
“We’re already doing our bit!”

• Fuel Duty Escalator, 1993 – 1999
• Decoupling of hgv traffic and economic growth, from 1996
• Implementation of hub & spoke logistics, from 1990
• Uptake of 44-tonne lorries, from 2001
• Engine technology focussed on lower toxic emissions, Euro 1 = 1991, Euro 5 due 2009
“We’re already doing our bit!”

- Vehicle loading improvements (saved journeys)
- Journey savings (over non-consolidated shipments)
- Route rationalizations (mileage savings over previous schedule)
- Fuel efficiency improvements (per vehicle; per driver)
- Alternative fuels (net carbon dioxide savings per mile)

- Reported as ££££ savings
- Need to be reported as CARBON savings
Conversion factors

- 1 Litre diesel = 2.63 kg CO\textsubscript{2}

- 1000 Litres diesel ~ 3 tonnes CO\textsubscript{2}

- 1000 HGV km ~ 350 L diesel ~ 1 tonne CO\textsubscript{2}
The Business Audiences

• Road Fleet managers:
  - vehicles
  - drivers
  - fuel
  - journeys

• Logistics buyers
  - Modal choices

• CSR managers
  - Company-wide actions – carbon foot-printing

Record – Report - Reduce
• Establish baseline \((t=0)\)
• Define target and deadline
  - e.g. 10% reduction on 2005 emissions by 2010

• Identify actions to achieve target:
  - Driver training \((\text{kg CO}_2/\text{driver.km})\)
  - Vehicle utilization \((\text{kg CO}_2/\text{vehicle.km})\)
  - Journey planning \((\text{kg CO}_2/\text{vehicle.km})\)
  - Fuel replacement \((\text{kg CO}_2/\text{vehicle.km})\)
  - Modal transfer \((\text{kg CO}_2/\text{vehicle.km})\)
• Guidance on **Recording, Reporting and Reducing CO₂**
• Launching to members in Q1 – for road fleet managers
• £212 annual subscription
• Quarterly updates
• Supported by website, advice line, e-News & seminars