Low Emission Strategies
Phase 2 Programme

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Phase 2 Programme

- Regional Group Initiative (RGi)
  - Leeds City Region (York)
  - Sussex (Lewes)
  - Liverpool City Region (Sefton)
- Low Emission Toolkit (LET)
  - Technology Guidance
  - Fleet Renewal Options Tool
  - Development Planning Tool
- Procurement Guidance
  - PG Tips!
Regional Group Initiative (RGi)

Leeds City Region

- Overarching Low Emission Strategy York
- Integrate LES thinking into LTP3 development
- Develop LES themes within Core Planning Strategy
- Develop Regional Supplementary Planning Document (SPD)
- Low Emission Technology Demonstration Handbook
- Build on biomethane vehicle trials / Sainsburys’ / GWE
- Look at implementation of Low Emission Zone
- Real-world vehicle emission analysis/micro-simulation (ITS)
Regional Group Initiative (RGi)

Sussex

- Develop LES themes within Core Planning Strategies
- Produce Regional SPD
- Integrate LES thinking in LTP3 development
- Produce Regional Low Emission Strategy
- Inform & introduce low emission technology demonstration projects
Regional Group Initiative (RGi)

Liverpool City Region

- Re-inforce regional working
- Develop Regional LES SPD through integration with ‘Ensuring Choice of Travel’ SPD
- Integrate LES thinking into LTP3 development
- Look at developing off-setting formula to support low emission bus services, through MerseyTravel
- Look at possibility for low emission technology differentiated tolling for Mersey Tunnel
Low Emission Toolkit (LET)

- Evidence based approach / assessment of benefits
- Overcome current assessment practice issues
- Robust option analysis
- Competitive Tender Process (Oct – Dec 2009)
- TTR Ltd / CERC / RPS awarded contract Jan 2010
- 2 phase approach with completion July 2010
- Initially Toolkit available FoC and supported by training
- Peer Review options
Low Emission Toolkit (LET)

- Phase 1: Review available data & analysis tools
- Phase 2: Toolkit development
- Technology Guidance
- Fleet Renewal Options Tool
- Development Planning Tool
- Off-setting formulae
- Key issues:
  - Robust emission data
  - Applicability
  - Usability
DFT Low Carbon Transport: A Greener Future

Source – An independent report on the future of the Automotive industry NAIGT
Aggregated Well to Wheels Analysis

Concawe 2007
Figure 1: Relative energy density of common cell chemistries

Source: MPower
Figure 2: Energy density of batteries vs. liquid and gas fuels

Source: Cenex data
Figure 3: Fuel input for electricity generation 2005

- Oil
- Other (incl. renewables)
- Nuclear
- Natural gas
- Coal

Source: DTI
Figure 4: Comparison of passenger car powertrain type CO₂ emissions

- Electric vehicles
- Plug-in hybrid 50-50 operation
- Diesel ICE
- Gasoline ICE

Effective CO₂ emissions g CO₂/km

Source: DIT and CONCAWE/JCR/EUCAR
Cenex EV Trials

Range by driver (100-0% SOC)

<table>
<thead>
<tr>
<th>Driver</th>
<th>Range (km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a (30 journeys)</td>
<td>61.2</td>
</tr>
<tr>
<td>b (70 journeys)</td>
<td>64.4</td>
</tr>
<tr>
<td>c (15 journeys)</td>
<td>74.0</td>
</tr>
</tbody>
</table>

Range by driving condition (100-0% SOC)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Range (km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban (24 journeys)</td>
<td>56.9</td>
</tr>
<tr>
<td>Rural (24 journeys)</td>
<td>69.9</td>
</tr>
<tr>
<td>Mixed (73 journeys)</td>
<td>63.9</td>
</tr>
</tbody>
</table>

MIEV Equivalent CO2 emissions

Equivalent CO2 emissions g/km

SOC vs km

%SOC

Heater ON

Heater OFF

Courtesy Mitsubishi
Dennis Eagle RCV

Iveco Daily

Dennis Eagle RCV
Stornaway

Electricity from biogas
Procurement Guidance

• Evidence of effective emission reduction potential
• £25k seed budget
• Work towards draft consultation
• Focus on process as well as output material
• Engagement leading to new working relationships
• Policies and measures
  - Forward commitment/articulation of need, leasing innovation/residual vehicle pricing, sustainable tender evaluation, green procurement strategies, aggregated procurement, fleet emission certification/recognition systems
• Scoping report leading to workshop (April/ May)
• Draft consultation report early Autumn 2010