Low Emission Strategies
Phase 2 Programme

Andrew Whittles
LES Technical & Strategic Advisor
Andrew.Whittles@cenex.co.uk

web: www.lowemissionstrategies.org
email: info@lowemissionstrategies.org
Using the planning system to reduce transport emissions

**Current Emissions**

**Baseline**

**Business as usual**

**Proposed Development**

**Increasing acceptability of development**

**Low Emission Development**

**Target**

**Residual Emissions**

Options include:
- Travel planning,
- Smarter choices
- Public transport,
- Road charging

**Trips**

- Fewer Journeys
- Mode Shift
- Technology

Options include:
- Hybrids, Electric, Biogas,
- Biofuel and Hydrogen

Using the planning system to reduce transport emissions
Phase 1 Programme

- National Policy development
  - Guidance published by Defra January 2010
- Communications Strategy
  - www.lowemissionstrategies.org
  - newsletter
- Peer Group projects
- National qualification development
- Advisory Group
- Programme Board
Phase 1 Programme

Peer Group Projects

- Mid-Devon
- Sheffield / Greenwich
- Leeds
- Oxford
- Wandsworth
- Sefton / Wigan / South Cambs / Maidstone / Lewes
- Tunbridge Wells / City of London / Croydon
- Leicester
Extending the Reach of Low Emission Strategies

Spatial Planning
Transport Policy
Procurement
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
- RTPI workshop
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
European Emission Standards
DFT Low Carbon Transport: A Greener Future

Source – An independent report on the future of the Automotive industry NAIGT
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

Million tonnes of oil equivalent

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

<table>
<thead>
<tr>
<th>Powertrain Type</th>
<th>Effective CO₂ emissions gCO₂/km</th>
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<tbody>
<tr>
<td>Electric vehicles</td>
<td></td>
</tr>
<tr>
<td>Plug-in hybrid 50-50 operation</td>
<td></td>
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<tr>
<td>Diesel ICE</td>
<td></td>
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<tr>
<td>Gasoline ICE</td>
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Source: DIT and CONCAWE/JCR/EUCAR
Cenex EV Trials

Range by driver (100-0% SOC)

- Driver a (30 journeys): 61.2 km
- Driver b (70 journeys): 64.4 km
- Driver c (15 journeys): 74.0 km

Range by driving condition (100-0% SOC)

- Urban (24 journeys): 58.6 km
- Rural (24 journeys): 69.9 km
- Mixed (73 Journeys): 63.9 km

MIEV Equivalent CO2 emissions

- Linear (CO2 Emissions g/km rolling average)
- Linear (CO2 Emissions g/km 2019 figure)

SOC vs km

- Heater ON
- Heater OFF

Courtesy Mitsubishi
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