



BWG-P-05-11

Bus Working Group sub-group study on the Routemap to achieving 600 new low carbon buses coming into service operation per year by 2012

Project Brief

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Revision History

Version	Date	Author	Status
0.1	24.06.05	AR	Initial draft

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1. Purpose

The purpose of the project is to establish by end of 2005 a routemap to deliver the Government's target of 600 new low carbon public service buses per year by 2012. The routemap will be submitted by the Partnership for consideration in the Government's overall review of its targets in its strategy document *Powering Future Vehicles*.

2. Background

The strategy published in 2002, states that the Government's objective for the UK is that the country lead on the shift towards clean, low carbon transport. This shift is expected as result of the opportunities offered by new vehicle technologies and fuels and by the setting of a number of challenging targets for the UK that are intended to make it a world leader in the shift to low carbon transport. These targets are directed at all major types of road transport, including buses and the Government has stated that it aims by 2012 that 600 or more buses coming into operation each year are low carbon buses.

The term 'low carbon bus' has been successfully defined by the Partnership as a bus emitting greenhouse gases 30% below current levels of an equivalent size and passenger capacity vehicle . It has also established a test protocol against which new vehicle technology can be assessed. Both the definition and the protocol have been adopted by the Government. In this respect, two major elements of a routemap can be said to be complete.

A third might be the launch in 2003 by the Government of a Low Carbon Bus Programme (LCBP) with the aim of encouraging greater awareness and acceptance of low carbon buses through the award of purchase grants for fleet demonstrations. This is intended to stimulate longer term, volume market adoption and is a key 'first step' towards developing an early market for low carbon bus technology. The programme currently awaits European Commission approval before it formally commences.

The first but unintended barrier or challenge is raised by the delay to the LCBP. This has major implications for both manufacturers and potential purchasers. The former are greatly affected by the uncertainty and consequent risks to committing to new technology development whilst the latter are unwilling to commit to firm purchase orders until the status of the grant programme is clarified. The implications of this ongoing delay needs to be fully accounted for in the routemap, particularly in relation to both the later availability of technology and the in-service experience which is expected to be an important factor in market acceptance and sustained volume adoption.

Notwithstanding this, the delay is not necessarily the most significant factor. Beyond the life of the programme (two years), it is unproven that significant market adoption will occur immediately thereafter without either incentives or mandates.

The second challenge concerns the validity of the target in relation to the realities of the current market. The target of 600 low carbon buses currently represents about 20% of current market (2004) for new buses but the trend in bus purchase patterns is less easy to gauge and is determined by a number of market factors. The market is also marked by declining ridership in low density areas surrounding gems of strong passenger growth potential. The trend in bus purchase patterns towards 2012 and the key determining market factors affecting the trend need to be fully accounted for in the routemap.

One particular market factor that is worth singling out is the Bus Service Operators Grant (BSOG) and its impact on purchasing patterns. In what way, if at all, can the impact of BSOG be ameliorated in the routemap? If not, what would be a proportionate alternative recommendation to BSOG?

Another area of market uncertainty is the scale of the opportunity for low carbon buses. More data is required to identify potential low carbon bus route applications, e.g. park and ride schemes, European Commission funded projects

Following on from this, a third challenge is the lack of clear targets for CO₂ as opposed to air quality targets and the role of CO₂ in local transport strategies, planning and implementation. Climate change is still seen by some to be a national issue rather than a local issue to which local transport authorities should be focussed.

There are a number of technical challenges, including availability of technology, its on-cost, unproven reliability, and differences in service performance. New technology may also have a marked impact on spare fleets. Assuming that bus operators are likely to take a strong risk averse position, are manufacturers and suppliers able to meet all of these risks and can they be reasonably expected to? Recent trials of new technology in New York¹ and Genoa² have indicated that expectations need to match a commitment from all parties to successfully introduce new technology. These demonstrations and others could be very relevant for a UK routemap

Finally and more generally, whilst the Government has set itself a target for buses and is launching the LCBP, these initiatives are problematic if they are the limit of the plan to deliver the target. As mentioned earlier, barriers such as BSOG, lack of mandate or local targets for transport planning or issues such as what follows LCBP to encourage/lead to volume adoption, all need to be accounted for in any routemap. The approach of the routemap should therefore aim to include the present initiatives and whatever further initiatives are considered most appropriate to overcome barriers to meet the stated target. The sub-group will need to consider the overall acceptability of the routemap to both Government and the market as it considers each new initiative.

3. Objectives and Exclusions

The project will deliver a routemap that shows a clear and achievable route to delivering the Government's target. The routemap will provide the Government with the basis upon which it can review its current target and where necessary, introduce further initiatives to ensure that its target is met. The project should assume that the target is met in 2012 and examine what it will take to achieve it.

To achieve this objective, the project should:-

- 3.1 Establish a low carbon technology pathway up to 2012 and the full range of costs of low carbon buses.
- 3.2 Identify the opportunities and barriers to introducing low carbon buses, including BSOG.
- 3.3 Establish current and future bus purchase patterns to 2012, the key market factors that influence them and the market mechanisms that will enable the target to be met.
- 3.4 Assess the role of fiscal incentives.

4. Outline Project Deliverables and Constraints

It is proposed that the project be developed by a sub-group of the WG. Because of the need to produce a report in a fairly short order, it is also proposed that work activities be assigned out to sub-group members and regular monthly meetings are held to support progression. The monthly meetings can take the form of workshops, where appropriate.

Phase 1 (01 Jul 05)

- Sub-group set –up and kick-off meeting 01 Jul. 05.
- Establish routemap approach and headline content.
- Agree content owners and supporters
- Set timing actions on

Phase 2 (Aug 05)

- Sub-group meeting
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Phase 3 (Sept 05)

- Sub-group meeting
- Report to WG

Phase 4 (Oct 05)

- Sub-group meeting
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Phase 5 (Nov 05)

- Review and agree first draft of the routemap
- Establish close-out of outstanding items

Phase 6 (Dec 05)

- Agree final version of the routemap for completion as a report.
- Submit to WG for approval.

The work will commence on 01 July05 and will be completed by 31 December 05 at the latest. A summary of activity is shown below:

Date	Action
01.07.05	Project kick-off meeting – project content to be agreed
Aug 05	Draft technology pathway available
Sept 05	Bus purchase patterns and key market factors identified
Oct 05	Incentives, costs and barriers identified
Nov 05	Review first draft of routemap
Dec 05	Complete Report and approve
Jan 06	Final report submitted to DfT

5. Outline Business Case

6. Initial Cost/Resource Estimates

7. Communication Plan

Project will be managed by a small sub-group with representatives of all key sectors of industry.

The BWG will oversee the project and members will be able to comment upon documents.

Project sign-off will be via the BWG (if a meeting is scheduled) or by the Director, Chair BWG and project G (if not).

8. Success Criteria

The project can be considered successful if it provides a report in a style and substance which enables the Government to make an educated decision about the full requirements that it should commit to in order to deliver its target for low carbon buses.

9. Outline Project Arrangements

9.1 Project Governance (sub-group members to sign up to roles and contributions).

Lead Facilitator to be agreed

9.2 Milestone Map

Notes:

1 see website http://www.eere.energy.gov/afdc/pdfs/nyct_diesel_hybrid_final.pdf

2 see website <http://www.energy-futures.com/Samples/900cfr/Y3.htm>

Appendix A to Project Brief - Bus Working Group sub-group study on the Routemap to achieving 600 new low carbon buses coming into service operation per year by 2012

