Memorandum on Government Discrimination against Innovative Low-cost Light Rail in favour of Urban Diesel Buses

Statements by Government Ministers seem to indicate that there are four main principles on which Government Transport Policy is meant to be based:

1 **Public Health** – reducing human mortality caused by toxic traffic emissions
2 **Climate Change** – reducing carbon emissions from transport
3 **Energy Security** – phasing out dependence on fossil fuels by substituting renewable energy
4 **Energy Efficiency** – increasing passenger kilometres per unit of energy

To an outsider there does not appear to be any evidence that the Department for Transport (DfT) has a coherent strategy designed to achieve the objectives implied by these principles. In fact just the reverse seems to be true. In particular the DfT seems determined to promote the wider use of subsidised diesel buses, whilst resisting any measures that might favour alternative modes, such as low-cost light rail, which meet the above principles better than buses. The following points illustrate this apparently perverse policy:

- The DfT, with the treasury, is responsible for the Bus Service Operators Grant. This is a subsidy which donates £1 million per day (£365 million pa) to buses by reducing the cost of their diesel fuel. This subsidy appears to be in direct contradiction to Government's declared policy of promoting energy efficiency and has the effect of actively encouraging transport emissions.

- The criteria under which DfT awards funding for LTP projects are weighted so that "accessibility" receives 30%, "safety" receives 25% and "air quality" (pollution) only 5% weighting. This gives out a clear signal to local authorities that pollution and carbon emissions are not important to DfT. This is particularly ironical since toxic emissions from transport's burning of fossil fuels are officially responsible for the "premature mortality" of no less than 24,000 people a year, as compared with road safety accidents, which account for 3,200 deaths. This means that road traffic emissions actually affect human mortality more than the issues normally addressed under the heading of transport "safety", such as reducing traffic accidents. It also means that zero emission transport is a prime example of a "no regrets" climate change policy – a policy that is worth implementing anyway, regardless of climate change.

- The public pronouncements of the Minister for Transport constantly stress the priority which he gives to supporting urban diesel buses, rather than light rail, despite the fact that buses are themselves a major source of pollution (cf Oxford Street, London or Carfax, Oxford) and require at least three times as much energy (ie fuel + resultant pollution) to do the same job as a similar sized light rail vehicle. The Minister recently called for a "model guided bus system" to be developed to replace the Leeds tram project, for which he refused funding, rather than calling for innovation to reduce the cost of light rail. He also found time to attend the launch of the absurd "ftr" or "bus that thinks it's a tram", whilst apparently being too busy to discuss innovative, low-cost, zero-emission electric trams that have been already demonstrated successfully to the public over a number of years.

- numerous Government grant schemes are in operation for reducing carbon emissions from "road transport" (eg Low Carbon Vehicle Partnership, New Vehicle Technology Fund, Foresight Vehicle, Energy Savings Trust transport schemes, Low Carbon Bus Programme and "other important initiatives" referred to in the Government's Powering Future Vehicles report). The DfT definition of "road transport" is however unique in that it specifically excludes trams, even though trams have

been running on roads all over the world for two centuries and are everywhere in direct competition with buses. Repeated efforts to get the DfT to provide an explanation for their arbitrary exclusion of innovative light rail from all these programmes have been unsuccessful. The result is that innovative, energy efficient, zero-emission light rail vehicles have been officially discriminated against, compared with inefficient, polluting diesel buses.

- The DfT seem unwilling to acknowledge the established fact that vehicles on steel wheels, running on steel rails, are three times as energy efficient as similar capacity vehicles running with rubber tyres on tarmac. Adapting buses to run on rails can thus provide the "step change" in energy efficiency in transport, called for by the Cabinet Office in their White Paper on energy – even diesel powered light rail vehicles would be able to effect this "step change" in reducing carbon emissions.

- The DfT also ignores the fact that trams have proved to be far more popular than buses all over the world. They are therefore likely to create a much greater degree of modal shift from cars to public transport than can be achieved with buses. By doing so they can make a double impact on emissions.

- DTI and DfT both claim, at Ministerial level, that innovative, low-cost light rail is eligible for funding under existing grant programmes. But at official level this is acknowledged not to be the case. There are currently no grant funds available, for example, to support the development of a prototype hydrogen fuel cell powered tram, even though all the necessary technology is available. Such a vehicle could be as much as ten times more efficient than the fuel cell powered CUTE buses running in London, which cost over £1 million and were paid for by EU and the Government. This represents a serious misallocation of limited R&D funding. This development is currently blocked by lack of Government support, which then also has the incidental effect of acting as a barrier to private funding, since public transport is controlled by the public sector.

- The National Audit Office, in their report on light rail published in April 2004, recognised the lack of grant funding for innovative light rail and recommended on page 11 as follows:
"The Department (for Transport) should bring this report to the attention of the Department of Trade and Industry and the Energy Saving Trust, for them to consider the case for including the developers of light rail technologies as eligible recipients of grants for energy savings technologies." On page 8 it states that "there are barriers to the development and adoption of new and cheaper technologies. For example there are no government grants available to develop innovative, energy saving light rail technologies" and later, the Department "should also consider the case for establishing its own grant scheme to promote and develop innovative light rail technologies as a means of supporting the government's objective to reduce greenhouse gas emissions through cleaner vehicles".
Despite repeated efforts to obtain a response from DfT and DTI both Departments have refused to act on these NAO recommendations whilst declining to give their reasons for ignoring them. The result is that light rail has been discriminated against whilst generous support has been lavished on subsidising buses and bus development, with negligible effect on pollution as compared with what could have been achieved by channelling the funds into innovative light rail, with its far higher levels of energy efficiency, public popularity and hence modal shift.

- The DfT does not have any special grant funds available to support innovative low-cost light rail projects. Innovation, they say, can only be introduced by local authorities. But the DfT does not require local authorities to invite open bids for supplying transport systems without specifying the technology to be used. If they did so, innovative technologies would have a chance to compete. Thus if a local authority such as Luton insists that it wants to replace an existing unused rail track with a guided bus system there is no way to compare this with an Ultra Light Rail system, even though the former would cost £78 million as compared with £24 million for the latter, according to figures revealed only because they were given in evidence at a Public Inquiry.

- Local authorities will only purchase vehicles that have been proven in service, but since public transport vehicles can only operate in service if they are chosen by local authorities, this constitutes an effective official "Catch 22" barrier to innovation in public transport. –

- Even though the Bristol City Council (BCC) has included an Ultra Light Rail (ULR) project in its current Local Transport Plan since 2000, no funding has been provided for it by the DfT. When £50,000 was offered to Bristol by the EU for a pilot ULR scheme, the project collapsed because DfT refused the BCC's request for matching funding.

- The DfT has never disputed any of the claims made by the promoters of low-cost light rail showing how it can meet all four principles of Government Transport Policy better than diesel buses. Despite this the DfT has never discussed ways by which it might facilitate the introduction of low-cost light rail in the public transport market. The Department confines its role to repeating the existing rules and regulations which have been proven to be 100% effective in preventing the introduction of low-cost light rail into the public transport market over the last 8 years.

Specific steps needed to end discrimination against innovative low-cost light rail:

- reclassification of road transport to include light trams designed to run on roads as well as on segregated routes. This will at least create a level playing field between buses and trams
- phasing out of Bus Service Operators Grant to encourage clean, energy efficient vehicles
- phased switching of bus subsidies generally towards innovative zero-emission light rail
- increased weighting to be given to air quality in LTP assessment
- a serious public health campaign should be initiated, in co-operation with the Department of Health, to tackle air quality at the same level of urgency as reducing traffic accidents
- reappraisal of existing evidence that trams are more popular with the public than buses, backed by a new study of the public transport market in UK, if this is thought to be necessary
- initiation of a strategic DfT plan for increasing energy efficiency in transport and gradually phasing out reliance on fossil fuels, taking into account the fact that there is now a consensus amongst oil experts that world production of oil will peak between 2008 and 2020 – if it has not peaked already
- implementation of the NAO recommendation for either DfT or joint DfT/DTI grant funds to be made available for developing and demonstrating innovative light rail
- initiation of a joint DfT/DEFRA policy for the production of Renewable Natural Gas (methane) from organic wastes and a programme of incentives for its use as an alternative transport fuel. This will help to reduce the release of methane into the atmosphere whilst at the same time integrating transport with waste recycling. This policy avoids the special cultivation of expensive, energy intensive fuel crops which take up scarce land and water
- introduction of new public procurement rules which ensure that local authorities call for transport system tenders without specifying the technology to be used. This will allow promoters of innovative low-cost light rail to tender in competition with guided bus and conventional light rail so that DfT obtains lowest pollution as well as best value for money
- Priority to be given in DfT funding awards for a) value for money b) energy efficiency of vehicles and c) clean operation so that more attention is given to reducing emissions.

James Skinner
Sustraco Ltd

March 2006