

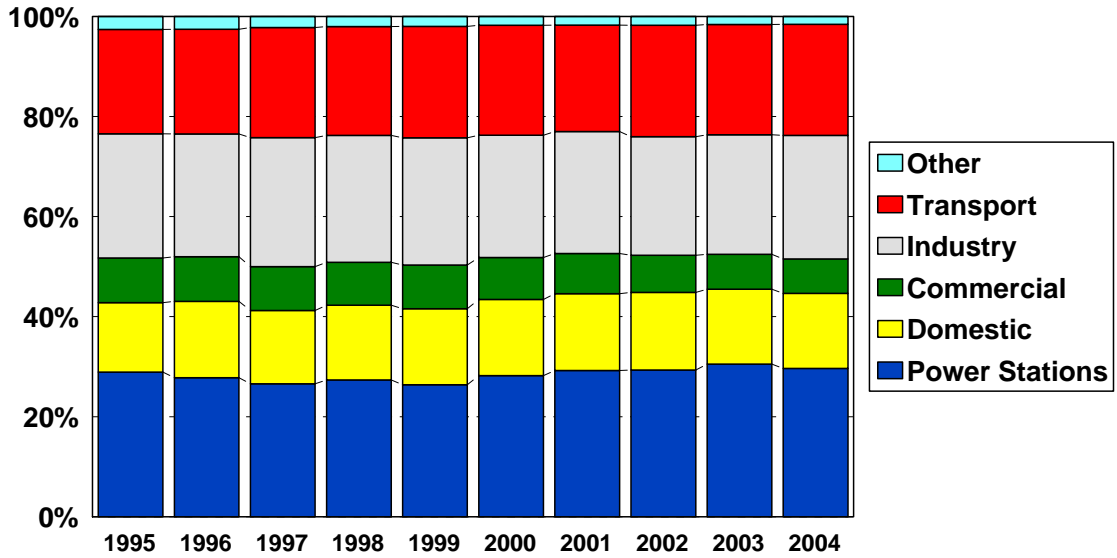
BWG-P-05-10

Role of Local Authorities In the introduction low carbon buses

Myles Mackie
Coventry City Council
23 September 2005

CO2 emissions by source

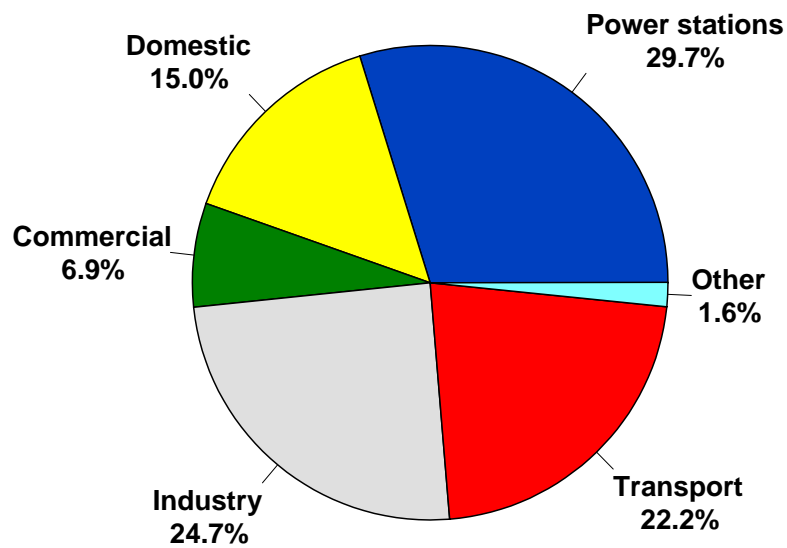
1995 to 2004



Source: DEFRA

CO2 emissions shares by source

2004



Source DEFRA

1 : Introduction

1:1 At the time of the UN Rio Earth Summit in 1992, the slogan **global to local** was seen as the way in which sustainability could be promoted and delivered. Most local authorities in the UK established Agenda 21 teams and expanded their policies and work towards building sustainable communities. This approach included work mainly on environmental improvements, reducing pollution, waste and combating poverty.

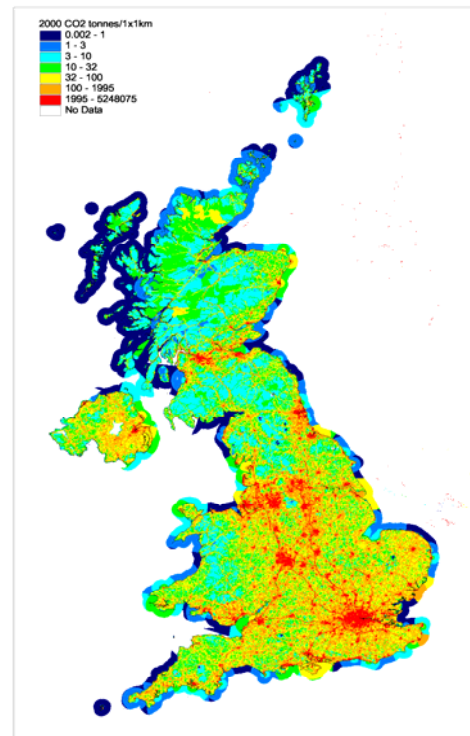
1:2 The Kyoto Protocol of 1997, which came into force in 2005, tackled the issue of global warming and seeks 12½% reduction on 1990 levels in UK greenhouse gas emissions by 2008-12. This Treaty has, not yet anyway, produced the same push for local action on carbon emissions. It is seen as an issue which affects everyone and aims at creating greater efficiencies in those activities that are emitting carbon and are contributing to climate change. The charts on carbon emissions show that power generation, industry and transport (mainly airplanes, trucks and cars) are the leading contributors. To some extent local government action is often seen as being marginal and, for that reason, the reduction in carbon emissions is not high on the local political agenda.

1:3 Greenhouse gas emissions are caused in localities as a result of a number of activities. Industry is generally seen as a leading contributor to urban pollution and by default greenhouse gas emissions. Smoking chimneystacks reinforce this view. However, industrial greenhouse emissions are stable at around 39 million tonnes. Domestic emissions at around 24 million tonnes of CO₂ are also stable.

1:4 The main growth in greenhouse gases has been the transport sector despite the significant improvement in vehicles technology which has seen car CO₂ emissions fall from 186g/km in 1998 to 171g/km in 2004 with a European – Asian car producer target of 140g/km in 2008 with a target of 120g/km after 2010. Transport emissions have risen to just over 35 million tonnes from 33 million tonnes ten years ago. The rise in the number of road vehicles has, however, meant that overall the volume of CO₂ emissions has risen. It is in the transport area where action needs to be taken. In taking action, public transport has a role to play as it is also a contributor to the sector's greenhouse emissions. There are a number of national and local initiatives that are taking place aimed at reducing the transport contribution to global warming gas emissions.

1:5 Transport and congestion are high on local agendas. There is still a need, however, for local authorities to recognise the solution to general transport issues they face in their areas can be directly linked to the reduction of greenhouse gas emissions and the climate change issue. Much positive work has been taken in improving air quality, reducing congestion and promoting public transport but there are no local performance indicators for curtailing the emission of green house gases. In a world measured by

UK: CO₂ per square km
From www.airquality.co.uk



targets, the lack of any local performance measurement means that the issue is not seen as a vital local policy imperative.

- 1:6 Generally, any targets set by the Kyoto Protocol, EU or UK government have been established on an overall national basis with no local targets. This does not mean that local action is not needed or important. The government and most local authorities acknowledge that they have a role to play. Their energies have been devoted to reducing the need to emit global warming gases through energy conservation and improved efficiencies. Indeed, efforts have become centred on conservation and efficiencies as many of these moves generate, also, financial savings on local government and/or end users. In effect there is a social gain and a relatively quick payback. This payback is ranked as a positive return while there is no recognised similar immediate benefit from the reduction in CO₂ emissions.
- 1:7 Some local areas have taken action to substitute traditional energy sources in favour of low carbon technologies. This is essential if the UK is to meet the Kyoto Protocol targets and it will require a major effort to make a significant impact. It does not mean, however, that low carbon technologies are replacing established technologies. There are barriers faced when any new technology is introduced. The switch to low carbon buses is no exception particularly when passengers may not even notice any change in their mode of travel. Public transport is a local service and that means local action is required if inertia and barriers to change are to be overcome.
- 1:8 Local action means that local authorities have a significant role to play in promoting and motivating local action and tackling barriers to reduce greenhouse gas emissions and climate change issues. This paper considers the contribution that local authorities can make in substituting low carbon buses for the familiar traditional powered bus. In recent years, local authorities have been working with bus companies to improve the local bus transport offer. By taking a further step, it is possible to reduce CO₂ emissions by employing innovative and practical bus technologies through the adoption of low carbon buses.

2 : Low Carbon Buses

- 2:1 If local action is to generate significant reductions in greenhouse gas emissions, then bus transport has a major role to play. A low carbon bus has been defined as:

Producing at least 30% fewer greenhouse gas emissions than a current Euro 3 equivalent diesel bus of the same total passenger capacity. The greenhouse gas emissions are expressed in grams of carbon dioxide equivalent measured over a standard test and covers WELL TO WHEEL performance therefore taking into account both the production of the fuel and its consumption on board.

The argument that what is meant by low carbon is confusing and this has contributed to inertia. The Low Carbon Vehicle Partnership Bus Working Group has developed a standard measure which helps remove any ambiguity in what is meant by a low carbon bus.

- 2:2 Local authorities and bus operators will now be able to acquire low carbon buses without the confusion of what low carbon means. It provides a clear CO₂ emission benchmark for manufacturers and purchasers of buses. This is a key step in establishing the market. Local purchasers of *low carbon* buses can, therefore, buy in the knowledge that if it passes the LCVP Bus Group standard, it is a low carbon bus. In effect, the standard removes any uncertainty as to what is meant by low carbon.

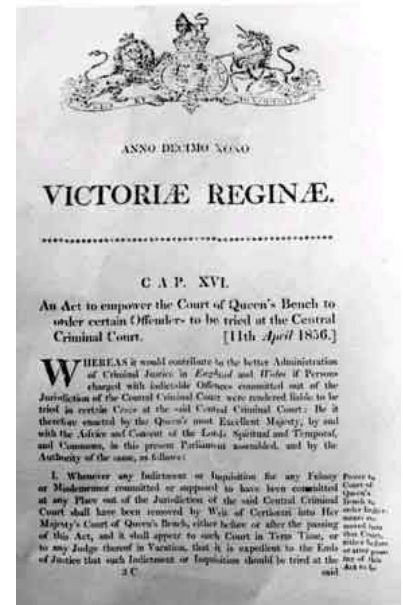
- 2:3 By substituting low carbon buses into local bus fleets, local communities are contributing towards improved bus services and making a clear local contribution to meeting the Kyoto Protocol targets. Low carbon buses employ innovative technologies and may offer other advantages such as less noise or improve the operation / management of buses.
- 2:4 Change is often seen as barrier rather than as an opportunity, or at best, as a part of a transition process which will lead to further changes. This has been used as a reason for delaying procurement. The 2002 *Powering Future Vehicles Strategy* set as a target 600 new buses joining the national fleet will be low carbon. This is a national target set to encourage the market to switch to low carbon buses but there are no market drivers to help ensure that this target is met. Given the barriers faced by the substitution of traditional buses by low carbon busses, there is a need to 'prime' the market. The proposed Low Carbon Bus Grant is an important measure to help establish the market. Another contribution in this process is local action to encourage the procurement of lowcarbon buses.
- 2:5 Procurement is often taken by bus companies taking into account local needs. Local government plays a key role in the formulation of local transport policies though not perhaps their implementation. Local authorities are constrained institutionally in how they can influence the market for low carbon buses. Working in partnership and using their powers effectively, local authorities can make an impact.

3 : Local Authority Legal Powers.

- 3.1 Local Authority legal powers are a bit of a maze and this constrains any direct action. This section seeks to demonstrate, in a rough and rather ready fashion, the limitations of the current legal powers of local authorities. The local government powers are directed towards achieving better bus services, reduced congestion and increased passenger numbers.
- 3.2 There is no direct and simple power which would enable a local authority to buy and operate local low carbon bus services or demand a bus operator to use low carbon buses. Under deregulation, how a bus operator works in a community is a commercial issue and not one for local authority intervention. However, the use of legal powers by local authorities may, if there is agreement, support the operation of low carbon buses within a community and this may help ease their introduction. It would depend on:
- ~ The low carbon technology employed in the bus
 - ~ The additional costs generated
 - ~ The routes used for the low carbon buses

Using a number of legal powers, moral suasion, consensus, a local authority might be able to work with local bus operators.

- 3.3 The **1985 Transport Act** generally precludes local authorities from operating regular bus services. This means Local Authorities are not bus operators in their own right and, generally therefore, do not procure new buses. Bus operators, in the main private sector companies, operate and run bus fleets.



- 3.4 Section 7 of the 1985 Act, gives the power to Local Authorities to ask the Traffic Commissioner to place traffic regulations to operators' public service licence. However, a condition to use low carbon buses would not be likely to get through as the Traffic Commissioner has to be satisfied that there is a *compelling* case for imposing a condition. The criteria for regulations do not necessarily cover environmental issues. The **1984 Road Traffic Regulation Act** does give powers to Local authorities to issue Traffic Regulation Orders. These orders cover the making of regulations on environmental grounds. Practical issues and issues of fairness does tend to limit the use of this power.
- 3.5 The Part IV of the **Environment Act 1995** does give power to Local Authorities to declare Air Quality Management Zones which in theory could lead to limiting access to specific types of vehicles. Nitrous oxides, greenhouse gases, are being tackled mainly through stronger emission controls on vehicles. The change in 2006 from Euro III to Euro IV emission standards will lead to a 30% drop in nitrous oxide emissions. Where local action has been taken under Air Quality Management Zones, local authorities have tended to divert traffic away from the hotspot rather than influence any traffic power train technologies. It would be too difficult though some authorities have exempted low carbon /alternative fuelled vehicles from restrictions such as paying the London Congestion charge. CO₂ emissions are not covered in the air quality assessments that are made under the Act.
- 3.6 Where bus routes are socially necessary but not economic, local authorities can put routes out to tender. 15% of bus routes outside London are allocated this way. Specific routes such as Park and Ride routes are also put out to tender by local authorities. The tender specification can set conditions concerning the provision of the service. A careful balance is needed as, however, as too stringent conditions might generate a Judicial Review.
- 3.7 Local authorities may own buses but not operate them as an in-house public service. There are a number of legal powers which would enable the authority to buy buses but whether the purchase was viewed as necessary or value for money would depend on the authority's auditors view of the policy and value for money. This authority owned buses would have to be put out to tender for an operator to run the services. This excludes limited in-house transport functions of local authorities such as school buses and social services buses
- 3.8 Local Transport Authorities under the **Transport Act 2000** are required to produce a *Local Transport Plan*. This plan is developed in conjunction with the local authorities, local bus operators and representatives of local bus users. The requirements in the Act are concerned with meeting the transport needs of people within the area, bus services conforming to standards and ensuring appropriate facilities are available. There is no specific requirement that enables local transport authorities to require buses to be low carbon. Though this legal power could be used as a basis for getting low carbon buses on tendered routes. It may, however, incur a higher subsidy element which might not be politically acceptable given other pressing priorities faced by local authorities and transport executives.
- 3.9 Newcastle upon Tyne started in July 2005 tendered hybrid electric bus services between the city centre and Gateshead town centre. The £5m 'Quayside' New Zealand Designline hybrid electric buses are operated by Stagecoach. This was decided by Newcastle and Gateshead Councils to meet the needs of a sensitive and prestigious area. The scheme was financed by £3m from the local

**Quayside hybrid electric bus
Newcastle**



Transport Plan, £1m from Regeneration Services and £1m from the development company.

3.10 The Transport Act 2000 established the concept of **quality partnerships**. These partnerships seek to get a kind approach between bus operators, local (transport) authorities and users. Over 30 areas have Secretary of State approval for Quality Partnerships. However, the aims of quality partnerships are the improvement of the bus service offer in an area rather than climate change issues. The partnership has also to ensure that there is no discrimination in favour of particular operators i.e. guarantee open competition amongst would be bus operators. The Neath - Port Talbot Quality Partnership have aims seeking to improve the bus offer in terms of routes, bus priority routes, pedestrian access to bus stops, inter modal public transport nodes, attractive fares, low floored buses, customer care etc. Lower carbon emissions do not feature in the quality partnership agreement.

3.11 The **Quality Partnerships** could gain a general consensus to employ low carbon buses in its area. It is not certain that the Traffic Commissioner would approve the low carbon condition as a criterion for the public service licence but here is nothing to stop a voluntary agreement by the partners to establish local agreements. This voluntary agreement is already done in respect of improving, in general, existing local bus services. Quality partnerships mean joint working to achieve specific ends and this has led to variety of projects in local areas, some of which, including Newcastle on Tyne, have led to low carbon or alternative fuelled vehicles.

The Solent Quality Partnership
17 partners including Southampton,
Plymouth & Hampshire Councils



3.12 **Public Service Agreements (PSA)** are a 'contract' between central and local public services aimed at delivering improvements in the delivery of services or their outcomes. A number of authorities have signed PSA agreements which can cover a wide range of services. The Government pays a performance reward grant if the targets are achieved.

3.13 Middlesbrough 2001–2004 PSA agreement covered education, creation of local jobs in disadvantaged wards, older peoples needs, children's and young persons needs, use of class A drugs, local environment, traffic congestion, crime, local neighbourhood management. The congestion target aimed to reduce late running of buses by 10%. Buckinghamshire 2005 PSA targets included a 10% increase in the use of local urban bus services in Aylesbury. In effect, PSA targets are aimed at practical delivery outputs and not particularly at the substitution of vehicle technologies. The contractual nature of the PSA demand measurable outputs aimed as improving local conditions. The reduction in greenhouse gas emissions as a target would be stretching the raison d' être of the PSA programme.

3.14 Under Part 1 of the **Local Government Act 2000**. Local authorities have *the power to do anything which they consider is likely to achieve any one or more of the following objectives:*

- ~ *The promotion or improvement of the economic well being of their area*
- ~ *The promotion or improvement of the social well being of their area, and*
- ~ *The promotion or improvement of the environmental well being of their area.*

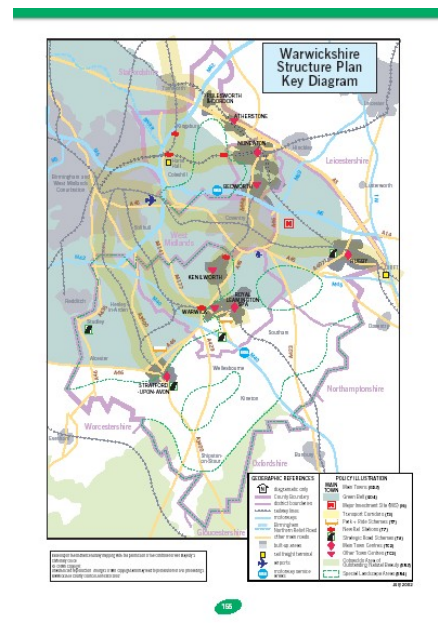
This legal power is constrained by other primary statutes such as Transport Acts but in theory a local authority can incur expenditure on low carbon buses provided that (a) it does not break an existing primary law or regulation or (b) benefits all or part of the

local authority area and / or its residents or (c) state aids regulations given that most bus services are operated by private companies.

- 3.15 This power requires local authorities to draw up for their area a community strategy in respect of the socio-economic and environmental will being of there are in line with the sustainable development of the United Kingdom. These community strategies are developed by **Local Strategic Partnerships**. These partnerships consist of public sector representatives (i.e. local and central government) and representatives of the higher education, community, business and voluntary sectors and form an increasingly important element in local policy formation. The Partnership oversees the development of a strategy and set performance markers so that the strategy's implementation can be measured.
- 3.16 Few Community plans have had a sufficient time profile to enable local areas to make any serious impact on global warming gas emissions in their area. Most Community Plans have concentrated on immediate issues: environmental matters centring on reductions in litter, recycling, composting, bio-diversity and maintaining green open space; and, transport matters working to increase bus service frequencies, park and ride and cycling. Issues of vehicular emissions are low down on the list though some local authorities promote car free days and clearzones. These latter initiatives are usually short-term events and/or limited in scope rather than forming an incremental strategy. Often any carbon reduction is a product of a side effect of another policy such as saving money through fuel economy.

3.17 **Planning obligations or Section 106** powers are legal agreements under the Town & Country Planning Acts. Local authorities can require developers to undertake specific actions or make contributions to the provision of services. This is often to exploit the financial benefit generated by the changing of planning uses and is often called 'planning gain.' Tunbridge Wells has identified the priorities for the use of these Section 106 resources

- Financial contributions relating to the provision of children's playspace and youth and adult recreation open space;
- Financial contributions relating to the provision of school places;
- Provisions relating to transportation issues, including facilities for pedestrians, cyclists and public transport; and
- The provision of affordable housing



Coventry City Council has required through a Section 106 agreement that the new £400m acute hospital on the edge of the city contribute to a prime line (quality) bus services across the city serving the hospital. The £40m investment is being financed by the hospital, Centro (the Passenger Transport Executive for the West Midlands and the City Council) and the Local Transport Plan moneys. In theory, this could have required the buses to be low carbon. In practice any Section 106 agreements have to be practical as often there is considerable pressure on the local Planning Committee to reach an agreement along established policy lines.

3.18 This power could be used to support the introduction of low carbon buses but the scope is limited not only by the Transport Acts but also by restrictions on state aid to private sector companies. **State aids** include subsidies, grants, loans, procurement orders, tax holidays, cash injections, write-offs etc. There are four tests for state aid:

- ~ Does the state grant aid or resource private sector actions?
- ~ Do the actions benefit certain businesses but not all
- ~ Are the activities tradable [including in theory] amongst EU member states?
- ~ Do the activities have the power to distort or potentially distort competition?

A positive answer to any question suggests state aid is being given and the proposed aid should be checked with the DfT or DTI state aids offices. The state aid regime needs to be taken seriously as the penalties that can be imposed can be very heavy.

- 3.19 Local authorities can and often do form **joint procurement consortiums** in order to gain the economies of scale. The Gershon report on public expenditure has recommended this approach as a way of generating public sector efficiencies. Coventry heads a 17 local authority joint procurement consortium. The EU Zeus project linked nine principal local authority EU partners and many other option partners (over 50) into the joint procurement of some 250 electric vehicles. The UK partners bought 50 electric cars. Attempts to tender for alternatively fuelled buses failed though Fiat NGV buses were bought individually by a number of partner cities. Attempts by the Alter initiative failed to replicate the Zeus car consortium as no general agreement could be reached.
- 3.20 Joint procurement is a positive way to help establish a market in low carbon buses and local authorities could join together to encourage bus operators to purchase particular bus types. There is a danger, however, that such a public-private mix may be seen as anti competitive in what is the present relatively small market for low carbon buses.

4 : Local Authority Carbon Management approaches

4:1 Legal powers only provide local authorities a limited approach to transport policies in their areas. The powers have more service delivery approach than one aimed at influencing vehicle types. Some global warming gases are clearly identified such as Nitrous Oxides and Carbon Monoxide but generally the most abundantly produced gas CO₂ is not. The start of carbon trading and vehicle emissions regulations – road fund charges is more of an exception to the concentration on toxic gas emissions.

4:2 Over 100 local authorities across the UK have turned to developing **carbon management strategies**, many have done this using the expertise and pro-formas of the Low Carbon Trust. These strategies look across the bulk of local government activities and establish performance indicators for various activities. Reduced carbon emissions in many cases are a result of reduced energy consumption and/or better energy efficiency. Bristol, for example has a target to reduce by 2010 carbon emissions by not less than 15% of 2000 emission levels. Many of the actions contained in the policy will generate expenditure savings to the City Council, which will help offset any initial costs.



Bristol Climate Protection & Sustainable Energy Strategy – Corporate Action Plan

Bristol City Council

*Local Authority Carbon Management Programme
March 2004 – March 2005*

4:3 Most Carbon management strategies seek to improve transport efficiencies and reduce fuel use. Some authorities link Air Quality plans with their climate change policies which aim to cut pollution and promote alternative fuelled transport and green travel planning and the promotion car sharing. Coventry has, for example, an electric car pool. Bus travel is usually promoted against

car usage. However, few local authority carbon strategies seek to substitute standard buses with low carbon buses and those that do are usually general or are aimed at meeting very specific local needs as in Newcastle upon Tyne on the Quayside route.

4:4 Carbon Management Programmes are still in their infancy though tied in legal powers and local contracting powers; local authorities can build a substantive carbon management strategy for their areas. Most local authorities have started to think about energy use and emissions but an overall carbon management strategy is still relatively new and needs time to develop innovative approaches. It is an area where most Regional Development Agencies or Regional Assemblies have not yet adopted regional lower carbon strategies.

5 : Project Initiatives

5:1 Over the years local authorities have participated in a number of projects, trials and initiatives which have tried to change the balance in transport vehicle procurement. These programmes may originate from **company promotions** arising out of their own strategies to move research and development towards the market. The DTI **Foresight Programme** has played a significant role in vehicle development and through initiatives such as Clearzones contributed to the spread of best practice. The **Energy Savings Trust** has been a leading UK institution in promoting the use of the alternatively fuelled vehicles. The **European Commission** Framework Programme and Directorate initiatives have also played a significant role. These programmes sometimes work together to reduce the costs of innovation.

5:2 Individual local authorities have take advantage of all these forms of support in their attempts to influence public transport in their areas. They have done so for various reasons:

- ~ Meet specific vehicle needs. Camden bought electric mini buses for its Community Transport Programme using Energy Savings Trust and EU Framework 5: Zeus project funding.
- ~ Cities have helped local manufacturers demonstrate vehicles in their area this has been done using company funding and / or Energy Saving Trust funding with perhaps some European funding. The Merseyside Electric Buses
- ~ Part of a major project aimed at improving the public transport offer in their area – this is usually done through a quality partnership and a Transport Bid with perhaps some European Funding.
- ~ Part of a campaign to improve efficiencies, reduce costs and meet policy needs in areas.

5:3 There are many thousands of local authority innovative projects uncovering all aspects of local needs and issues. Local authorities are well placed to act as a partner working in conjunction with other public sector agencies and private sector concerns. While constrained by legal obligations and the need to maintain probity, local authorities have taken a very flexible approach. The following list illustrates the scope and range of projects related to energy efficiency and alternative fuelled vehicle projects in the UK.

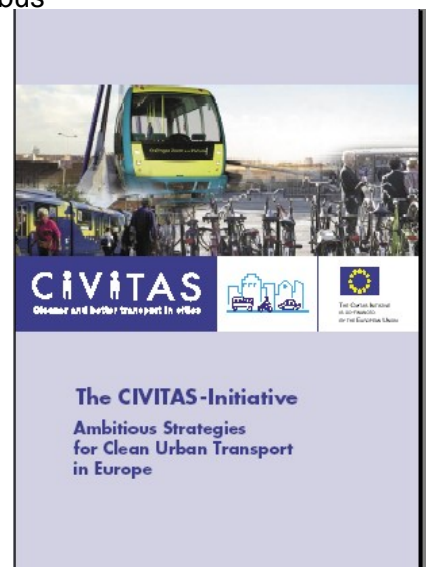
Selected Local Authority Projects in Fuel Efficiency & Alternative Fuels

<i>Local Area</i>	<i>Project name</i>	<i>Headline description</i>
Bristol	Intercept	Road user charging trial
Bristol	Civitas - VIVALDI	Taxi sharing, cycling, traffic management, clean fuel vehicles

Bristol	ELGAR	Bus priority, air quality measures and road charging
Bristol	Eneco	Hybrid electric buses
Camden	Green Transport	Clearzones, mobility management and car free days
Deven	Carshre	Establishment of CarshareDevon and Liftshare
Edinburgh	Greenway	Bus priority measures
Hampshire		Alternatively fuelled public sector vehicles
London	CUTE	Trial of fuel cell buses
London	Cleaner vehicles	CNG powered local authority vehicles
London	Liftshare	Journey sharing – this is one of many similar schemes in the capital aimed at reducing car congestion
London	Countdown	Real time information at bus stops etc
Merseyside	ALTEReco	Low emission zones and Euro III bus trials
Merseyside	CATCH	Vehicle emission reductions in existing and new vehicles as well as air quality
Merseyside	JUPITER 2	Optimisation of transport infrastructure, innovative technologies including electric battery powered buses, CNG buses and low sulphur buses
Norwich	Civitas – SMILE	Park & ride, emissions, etc
Preston	Civitas - SUCCESS	Traffic management and low carbon buses
Southampton	ENTRANCE	Citybus and energy savings
UK	Plus bus	Bus ticket add on to rail tickets
Winchester	Civitas – MIRACLES	Low emission and low carbon vehicles, traffic management, park & ride plus.
York	Electricity	Hybrid electric bus

This is not an exhaustive list and reflects mainly European projects. Across the UK, local authorities and partnerships have been developing initiatives which have often gone un-noticed. The introduction of particulate traps in the mid 1990's was undertaken by many local authorities and bus companies before they were generally adopted. The pioneers undertook their introduction as a matter of good business even before their use became standard.

5:4 Similarly, many areas are testing alternatively fuelled vehicles, often at the behest of companies developing the vehicles or the green fuel. In Coventry, two universities are developing fuel efficient and low carbon vehicles as well as five or six automotive



companies. The City Council has taken a lead by having an electric car pool, a fleet of LPG vans, green transport plans, the introduction of prime line buses, a proposed tram-bus system, cycle routes and car sharing / liftsharing etc. The motivating factor has been directed at cost reductions, better management, and reduction of health risks associated with air pollution. Higher fuel prices are now, also, a factor. Global warming is a consideration but more as a result of being an add-on and not a primary aim.

- 5:5 The decision to undertake a project requires a commitment by a local authority to support partners and to demonstrate political commitment to the project aims even where these may be uncertain and carry risks of failure. Projects involve change in the way of working and the development of new performance targets, both of which are naturally resisted. More significantly the project working means the commitment of limited resources by all the partners and this does represent an additional cost as expertise is directed away from the front line.
- 5:6 Projects can and do generate considerable publicity and if well presented can generate significant public support. This can help offset the risk element of the project as a result of good publicity. By working in partnership, the partner exposure to risks and costs of the project is reduced. The project's knowledge base is broadened out which can lead to significant time and cost savings. For most local authorities, the partnership project approach has worked well and helps overcome some of the legal constraints. In the transport field limited local authority powers in the implementation of key policies means that project partners can fill the gap.
- 5:7 The above list of projects show that much innovation work is being undertaken. Much of this work is pre-market and needs to have been demonstrated before authorities are convinced that the innovation is a viable alternative. There is a natural resistance to the new when the old seems to work reasonably well.
- 5:8 Programmes by the European Commission, Low Carbon Trust, Energy savings Trust etc seek to ease the development of markets in new transport technologies. The substitution of new higher cost drive technologies while not necessarily offering significant passenger benefits (though might reduce operating costs) is difficult when the established technology is well known and proven. Projects and initiatives can help develop market in substitution technology.
- *
- 5:9 A strong case could be made for the incorporation of these projects into the mainstream local transport plans. Transport itself should be integrated into a local carbon management plan such as has been done by Bristol. This would help raise local political profile of the issue of low carbon policies in general, and on transport in particular.

6 : A Role for Local Authorities

- 6:1 Local authorities are at the centre of their communities and as such can play a major lead in bringing about change within their areas. Although the legal powers for implementation of policy is limited, local authorities can and do play a significant role in local public transport. Local authorities have a transport planning function which sets all aspects of transport policy. The policy will be reflected in the Local Development Framework (overall medium term planning plan for the area). Local councillors sit on the relevant transport executive and local government officers on transport bodies both locally and nationally. The Association of Transport Co-ordinating Officers has a wide brief and has local authority officers on its committees. Local government also contributes substantially to regional level policy formation.

6:2 This means that local authorities can in practice have considerable influence in the delivery of public transport in an area. All the potential partners have access to a myriad of best practice approaches from European, government and project results. Some local authorities are pro-actively introducing changes in their areas while others tend to react to changes as a result external factors. There seems to be a criteria that distinguishes those local authorities and areas which are pro active:

1. Establish a local political commitment in the Council
2. Have a local champion to promote change
3. Make low carbon initiatives part of the Local Community Plan
4. Perhaps introduce a low carbon management strategy
5. Establish a quality partnership for local transport

6:3 Other key factors influencing local authorities and areas to lead on innovation are:

6. Need to boost public transport as a solution to acute traffic congestion leading to the development of an integrated transport initiatives aimed at generating operational savings - i.e. new or better routes, less congestion more passengers etc.
7. A local willingness to work together in a project
8. Opportunity to attract grant funding to offset the additional project costs – European Union and the Energy Savings Trust have been key players in England though the Foresight Programme, Clearzones etc have contributed
9. An understanding of the state aid regulations

These criteria are not exhaustive and even, if they are all present, there is no guarantee that a successful outcome will be achieved. There are a number of well-known barriers which can inhibit progress in achieving changes and within project working. Goodwill and a sense of humour are useful attributes.

6:4 Local authorities have been in partnership with bus companies which have resulted in low carbon buses being procured and operated in their areas. Winchester and Merseyside are examples of these. The fuel cell bus in London is also a pioneering project. Grant aid has been an essential part in these projects. The procurement of low carbon buses in an area is not impossible. If diesel substitutes are used, the up front cost is probably very small.

6:5 The success of a few pilot projects does not always lead to a successful adoption of the initiative by fellow bodies. This is despite all the best practice literature and demonstration projects, there seems to be a reluctance to adopt new technologies. This is particularly the case in alternatively fuelled vehicles where up front capital costs and operational costs are higher. An element of national policy as in some mainland European countries might be needed to reinforce local action.

7 : Conclusion

7.1 There is still a need to demonstrate that the issues of global warming require local action and this cannot be left to national governments to sort out. In effect global warming needs to be raised on the local political agenda as a major issue. Transport is already a major issue in local affairs as traffic congestion is high on the agenda of most local areas. It is also a major contributor to global warming emissions. It seems logical that the two issues should be linked together. Bus transport is a key link and reducing bus

carbon emissions has to be part of a 60% reduction in CO₂ emissions as part of the UK national long-term target.

- 7.2 The Low Carbon Bus Programme has a significant role in breaking down the reticence of transport authorities and companies to adopt low carbon buses. To ensure the adoption of low carbon buses, political action is needed to provide a stimulus to effect the change. Some local authorities have already made step changes in their approach to global warming issue and they could take the lead. Government has, also, a role to play. However once the low carbon bus market has been established it will become self sustaining and high carbon buses will be seen as an anachronism.

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