



‘Towards a Low Carbon Economy for Scotland’ discussion paper

Response from Transform Scotland

Tuesday 22nd June 2010

1 About Transform Scotland

- 1.1 Transform Scotland is the national sustainable transport alliance. We campaign for a more sensible transport system, one less dependent on unsustainable modes such as the car, the plane and road freight, and more reliant on sustainable modes like walking, cycling, public transport, and freight by rail or sea. We are a membership organisation bringing together rail, bus and shipping operators; local authorities; national environment and conservation organisations; local environment and transport campaign groups; and individual supporters.

2 Summary of points made in our response

- 2.1 The paper does not adequately reflect the importance of reducing emissions from the transport sector.
- 2.2 By concentrating on innovation, the paper fails to adequately address other necessary policy changes (e.g. the redirection of funds away from damaging investments, the need for demand management measures).
- 2.3 Inadequate attention is given to the economic benefits of active travel or the potential for electrification of public transport.
- 2.4 Undue prominence is given to Low Carbon Vehicles.
- 2.5 The Scottish Government should base its Low Carbon Economy strategy for transport on expanding the Scottish manufacturing base for public transport vehicles – as it is in this area, rather than that of private car manufacturing, that Scotland has significant potential.

3 Comments on the document

- 3.1 The discussion paper does not adequately reflect the importance of reducing emissions from the transport sector. The transport sector makes up around a quarter of all emissions, and according to the Committee on Climate Change, transport represents the largest contributor to non-traded emissions, meaning that a significant reduction in transport sector emissions is needed if the Government is going to meet its 42% emissions target. In order to address this, the Scottish Government needs to recognise the true importance of sustainable transport when it comes to environmental policy.
- 3.2 The document mentions transport several times but does not address the centrality of transport to other economic activity. In order for Scotland to move to a low carbon economy, every new place of business will have to carefully consider its location and how that fits with existing transport systems. The public and private sector will have to consider how its employees, clients and customers travel to their place of business, and how the goods they provide and procure are transported.
- 3.3 Transform Scotland welcomes the paper’s statement that “equity and fairness should be at the heart of the transition to the low carbon economy.” We would hope that this is acted upon to ensure that public transport is easily affordable for all members of society, and that the interests of car users are not given undue weight against the interests of non car users when it comes to spending on the transport sector.
- 3.4 The document concentrates on innovation but does not address the changes that need to be made to existing policy (e.g. the existing prioritisation of road-building over other types of transport investment). In particular, the reference to the Second Forth Road Bridge as a sustainable transport solution (“prioritisation

of the Forth Replacement Crossing demonstrates commitment to this vision” page 44) is deeply misleading. Even if the existing bridge is retained, as we are told it will be in Government literature, for walkers, cyclists and a bus every few minutes, the new bridge represents a vast and unnecessary spending commitment, and one which will primarily benefit long-distance commuting by private car.¹

- 3.5 Undue prominence is given to the benefits of low carbon vehicles (LCVs) in the discussion paper. While LCVs are an important part of making the transport sector more energy efficient it must also be recognised that they are only part of the solution, and may actually have some negatives when trying to achieve sustainability.
- 3.6 The use of Electric Vehicles (EVs) places additional requirements for electricity generation. If this electricity is generated from non renewable sources then the switch to EVs may not be cost-effective in terms of reducing emissions when compared to the procurement of lower-emission Internal Combustion Engine vehicles.² A similar criticism can be made against hydrogen fuel cells, as at the moment the majority of hydrogen used in fuel cells is obtained from fossil fuel sources.³
- 3.7 As the discussion paper points out, it is as yet unclear which low carbon technology will become the clear alternative to fossil fuels. For this reason the Government should exercise caution when investing in the extensive charging infrastructure necessary for the widespread adoption of electric private cars (for example, in tenemented areas). There is a danger that this could become an expensive white elephant.⁴
- 3.8 If the absolute number of vehicles on the road continues to grow, congestion can only get worse, which will negate the benefits of more efficient vehicles. Merely substituting low carbon vehicles for existing, petrol- or diesel- powered ones does not address the public health, community severance, resource use, land use, or (to some degree) noise issues associated with excessive use of private transport. Increased energy efficiency in vehicles is necessary in order to reduce emissions, but it is also crucial that the government encourages people to travel less by car if efficiency gains made by switching to LCVs are going to make any difference.
- 3.9 A move away from motorised transport need not be seen as a challenge to economic productivity.⁵ In fact a modal shift away from the private car towards active travel and greater use of public transport can provide economic benefits through increased productivity and greater savings. Over-congested roads lead towards greater CO₂ emissions, slow traffic, and longer journey times. Reducing road congestion by reducing the number of private vehicles on the road would decrease commute time and increase productivity.
- 3.10 Placing an emphasis on Active Travel - walking and cycling - should be seen as a clear opportunity for the Scottish Government. Active Travel has clear benefits: getting people out of cars and walking or cycling is one way to reduce traffic and emissions, while at the same time making people healthier.⁶ The economic cost of not encouraging more Active Travel should not be underestimated. Scotland is one of the worst

¹ We can see no case for the Government to be making financial provision for the constructing the Second Forth Road Bridge while the evidence points to the existing Forth Road Bridge being able to be repaired. This position is set out in the ForthRight Alliance's objection to the Forth Replacement Crossing Bill, and evidence papers to Parliamentary Committees, see:

- <http://www.transformscotland.org.uk/GetFile.aspx?ItemId=228>
- <http://www.transformscotland.org.uk/GetFile.aspx?ItemId=229>
- <http://www.transformscotland.org.uk/GetFile.aspx?ItemId=267>

² David Quarmby, Chair of Edinburgh Napier University's Transport Research Institute, reported in his 2010 'Chairman's Lecture' that battery electric vehicles (seen as the optimal form of EVs), would have a carbon intensity of 82gCO₂/km under current electricity generation mix. He went on to argue that similar gains could be made by the purchase of existing ICE engine vehicles. See http://www.tri-napier.org/index.php?option=com_content&task=view&id=239&Itemid=50.

³ Mench M. M. 'Fuel Cell Engine', John Wiley & Sons Inc., Hoboken, New Jersey 2008

⁴ Quarmby, *op cit.*, "wonder[ed] if the charging infrastructure plans are not premature and presume too much about the direction of development and market take up."

⁵ Goodwin, F. et al. (2001) 'Transport and the Economy: The Myths and the Facts', p. 10.

⁶ See e.g. Sustrans Scotland / Transform Scotland joint evidence to Scottish Parliament TICC inquiry into active travel. See <http://www.transformscotland.org.uk/GetFile.aspx?ItemId=216>.

performers in the developed world in terms of obesity. Obesity in Scotland costs the NHS around £175 million a year, while if the health costs associated with being overweight are also included the figure roughly doubles, and this cost does not include the additional indirect costs to the economy, such as working days lost through illness associated with obesity. Estimates of the indirect costs of obesity to Scotland are between £420 million and £1.2 billion per year, and these costs are only set to rise if obesity isn't tackled.⁷ By prioritising a travel choice that has obvious health benefits for the public the Scottish Government can make significant savings on future health expenditure.

- 3.11 Improvement to public transport infrastructure should be a priority for the Scottish Government, in order to encourage public transport use and reduce congestion. In the short term and medium term there are many cost effective measures that could be implemented to improve public transport.
- Ensuring that public transport is clean, safe and easy to use. Investments in improving factors such as waiting time, ticket information and cleanliness of buses can be cost effective in encouraging people to use public transport.
 - A national public transport smartcard, similar to the London Oystercard, can improve public access to public transport and encourage its use.
- 3.12 Scotland has a tradition of high-quality, compact urban areas, which gives Scotland a comparative advantage in terms of delivering low carbon travel options. However, this advantage is being eroded by edge-of-town sprawl. The planning system needs to design places for people to live and work that are not car dependent.⁸
- 3.13 The easiest part of the transport system to de-carbonise is the railways, through electrification. The government is at least committed to large scale electrification in principal through STPR but beyond the Edinburgh-Glasgow Improvement Programme (EGIP), there is as yet no clear long term programme of investment. Further electrification of the railways should be undertaken by government, as it is a cost effective way to improve efficiency.
- 3.14 The only other current scheme in Scotland to electrify a major transport corridor, the Edinburgh Tram (which will replace a major cross-city bus route), has suffered from a lack of both political and financial support. Compare the Government's unequal treatment of the Edinburgh Trams project (where spending has been capped at £500m) with that of road schemes (where no such cap on spending is made). There are currently no other committed projects to electrify public transport in Scotland's cities (beyond a vague plan to provide something in the Glasgow area in STPR) and yet these schemes would use the proven technologies of trams, light-rail and trolleybuses, used in cities around the world and far from the experimentalism of electric cars. Public transport infrastructure projects such as the Edinburgh Tram network represent a clear opportunity for Scotland in creating modern and efficient public transport in its major cities. Delays to the tram network present a threat to Scotland's low carbon future, in the form of future action not being taken to provide projects that truly reinvigorate inner city public transport, due to fears over cost and delays.
- 3.15 A significant area of competitive advantage for Scotland can be realised through investing in public transport rather than in cars and vans. A substantial part of Alexander Dennis's bus manufacturing is located in Falkirk. Although the company currently only produces diesel and hybrid vehicles (including the most successful hybrid bus in the UK so far) it is worth noting that Alexander and Dennis, as separate companies, produced an experimental trolleybus in the 1980s and Alexander also produced passenger rail vehicles. There is no reason to suppose that, with the right signals from Government, the company could not diversify its production to include all-electric buses and even light-rail vehicles.
- 3.16 Although some operators (most notably Transport for London) are committed to hybrid buses, the benefits of hybrids are by no means clear cut and some operators (Arriva in particular) are looking to produce the

⁷ Preventing Overweight and Obesity In Scotland: A Route Map Towards Healthy Weight, The Scottish Government, Edinburgh 2010

⁸ See e.g. Transform Scotland evidence to Scottish Parliament TICC inquiry into transport and land use. See <<http://www.transformscotland.org.uk/GetFile.aspx?ItemId=263>>.

same sort of fuel savings as claimed for hybrids by buying lighter, simpler vehicles without the complication of hybrid drives. A modern Enviro 500 double decker is almost double the weight of an original Routemaster and many modern single-deckers are around 30% heavier than a Routemaster.

- 3.17 The levels of internal flights between Scottish airports and the rest of the UK should be seen as a significant threat to climate change targets.⁹ At least three-quarters of all travel between Scotland and the south-east of England currently uses air. The Scottish Government should push for greater taxation of internal air travel so that the ticket cost more appropriately represents the true cost of flying. At the same time there are opportunities available to increase the capacity and efficiency of the rail network, in order that it becomes a clear favourite for internal travel within Scotland and the UK.
- 3.18 Investment in the railways over air should not be seen as a measure that inhibits growth. In fact, findings show that the railways are a more cost effective way to travel when additional costs are included on top of the respective ticket prices, and that travel times for the two modes are roughly comparable when accounting city centre to centre journey length.⁵ Encouraging businesses and individuals to choose the train over the plane should be an important priority for the Scottish Government.
- 3.19 There are many steps that the public and private sectors can take in order to move to a low carbon economy. For many businesses, investing in a low carbon future is seen as an extra cost to them. However the truth is that there are a multitude of sustainable options that business can take, that can actually provide savings for those businesses. Therefore it is important that government supports these options and works together with business to provide effective sustainable travel solutions. Actions government and business can take include:
- Encouraging employees to use alternatives to the car to travel to work through programmes such as the cycle to work scheme
 - Help organisations reduce their grey fleet (where employees use their own car for work use). This can be done by investing in green company fleets or by using a car club to provide transport needs. Edinburgh City Car Club, the largest car club in the UK outside of London, currently provides vehicles for use by City of Edinburgh Council, providing significant savings for the council, while at the same time supporting car club development creating a greater opportunity for members of the public to reduce car use through joining a car club.
 - Business should be encouraged to reduce the amount of travel they need to do through greater use of video conferencing. To help encourage this, local authorities (and/or RTPs) should increase access for small businesses and voluntary organisations to affordable conferencing facilities through creation of local ICT hubs.
 - Further investment in broadband infrastructure can increase the viability of people working from home.
 - Staggered work and school start and finish times could help avoid peaks in traffic.
- 3.20 Government needs to provide linked up transport infrastructure for business. This needs to be based on sustainable transport modes such as public transport and active travel for inner city commutes. For other commuters the railways should be the first option. This requires investment in the railways rather than focusing investment on road expansion, a strategy that will only encourage individuals to commute to work by private car.
- 3.21 Reducing the number of employees who make the commute to work by private car can also provide additional savings from reduced demand for parking spaces. By reducing the need for parking spaces at work businesses and local authorities can free up valuable land that can be put to more productive use.

⁹ Transform Scotland (2007) *The Railways Mean Business*. See <<http://www.transformscotland.org.uk/GetFile.aspx?ItemId=37>>.

4 Conclusions

- 4.1 The transition to a low carbon economy presents a number of opportunities where Scotland has a comparative advantage, such as generation of renewable electricity.
- 4.2 However, this transition also presents notable challenges to existing policy, particularly on transport, which the paper fails to address.
- 4.3 The Government needs to re-focus transport policy away from road-building and towards:
- A long-term plan to electrify the railways
 - Investment in public transport in urban areas
 - Encouraging active travel, particularly for short journeys
 - Reducing the need for travel through facilities such as video-conferencing
 - Ensuring the planning system creates facilities that are not car-dependent.
- 4.4 Investing in public transport has a significant economic impact for Scotland as we are already a volume producer of public transport vehicles. Scotland has not had volume car manufacturing capacity for three decades and it would be delusional to think that this could now be reinstated. Instead, given the presence in Scotland of two homegrown international bus operating groups (FirstGroup and Stagecoach) and the UK's largest bus manufacturer (Alexander Dennis Limited), the Scottish Government should instead actively support the expansion of bus and light rail manufacturing as a key component of its Low Carbon Economy strategy.

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Transform Scotland is the national sustainable transport alliance, campaigning for a more sustainable and socially-just transport system. Our membership includes bus, rail and shipping operators; local authorities; national environment and conservation groups; consultancies; and local transport campaigns. Transform Scotland Limited is a registered Scottish charity (SC041516).

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