Scottish transport review

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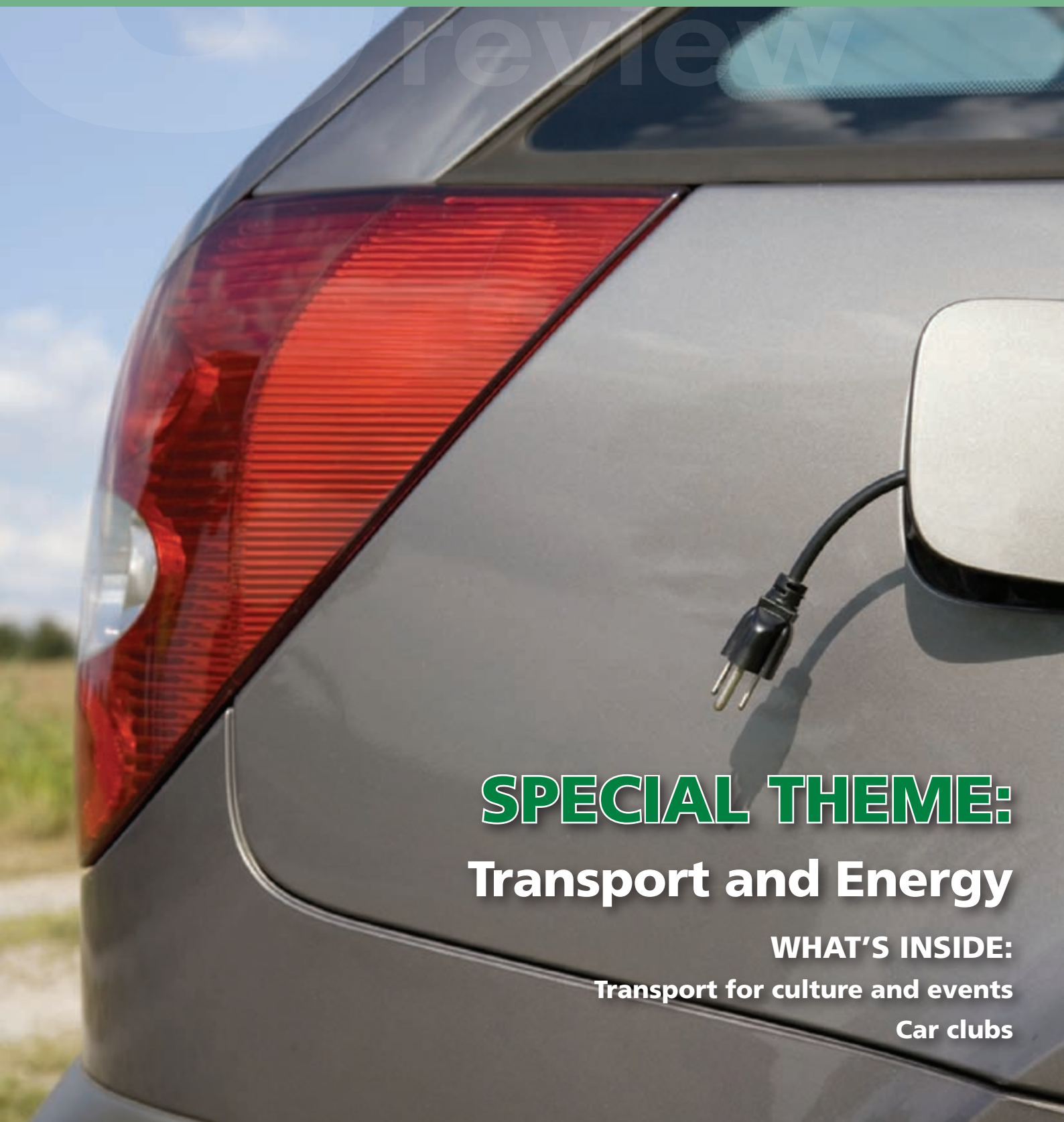

SPECIAL THEME:

Transport and Energy

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Car clubs

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The Scottish Transport Studies Group (STSG)

STR is the newsletter of the Scottish Transport Studies Group (STSG) and is largely funded from STSG membership subscriptions. STSG was formed in 1984 and now has corporate and individual members from transport operators, industry, national government, local government, universities, and consultants.

The aims of STSG are "to stimulate interest in, and awareness of, the transport function and its importance for the Scottish economy and society: to encourage contacts between operators, public bodies, users, academia and other organisations and individuals with interests in transport in a Scottish context; to issue publications and organise conferences and seminars related to transport policy and research". STSG is a charity registered in Scotland number SCO14720.

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Who decides what goes in STR?

Firstly the members of STSG - We rely on STSG members and others telling us about interesting studies they have completed or knowledge they have. To keep subscriptions low we need members to invest time to share their knowledge. STSG has some funds to commission some analysis and reporting but the editorial work is undertaken voluntarily.

Secondly the Editor Derek Halden, assisted by the STSG Committee tries to fit the contributions into 16 pages and create a readable document.

If you can contribute to STR please e-mail editor@stsg.org

Future Energy for Transport

Derek Halden, Editor STR and Director DHC

Transport is not only reliant on fossil fuels for 99% of its power, but is the only major sector of the economy where emissions from burning fossil fuels are predicted to grow. Yet the links between transport and energy policy remain poorly developed. Recent research has started to look at how transport and energy policy could be developed in tandem to benefit Scotland's economy.

The clear message remains that energy change in transport can be a huge opportunity for Scotland if the change is managed promptly and efficiently. However if the current situation is allowed to perpetuate, with late responses to problems, and the dominant focus on energy supply, then a very painful period lies ahead.

The market for electric vehicles will grow rapidly becoming one of the main power sources for transport within 20 years. As consumers purchase electric and plug in hybrid vehicles capable of being powered from renewable electricity sources, the constraints on zero carbon transport delivery will increasingly relate to infrastructure. Charging cars overnight when domestic and industrial use is low, makes better use of energy from renewables, storing the unused energy which would otherwise be lost.

The infrastructure changes will take many years to deliver so investment should to start soon. High cost projects will need to be phased. For example, electrification of the rail network can start with the busiest lines. The scale of change may appear daunting but without action the challenges will grow. These investment decisions should recognise that longer term view is needed for some new transport energy infrastructure.

Integrating transport into energy policy therefore helps to improve the viability of renewables. However for a mass market in plug in hybrids people will need power sources with smart metering near their homes, to ensure that transport only draws excess electricity from the grid off peak. This has major implications for the planning of infrastructure and the built environment to create power outlets on street and at homes and offices.

The infrastructure changes will take many years to deliver so investment needs to start soon. When planning transport by all modes infrastructure needs to change from oil to electricity. This will have significant implications for all aspects of the economy associated with the supply and management of energy for transport. Effective management of change needs to tackle the barriers to change and ensure that the skills, capacity and incentives are available to deliver on this vital agenda.

The way forward is increasingly clear. The leadership for delivery is not.

As electricity progressively replaces oil for powering vehicles, support is also needed for associated longer term technologies. Batteries have insuffient capacity for many transport needs, so hydrogen will be increasingly important to replace oil in cars, buses and lorries. However, hydrogen is not an economic short or medium term solution so a long view is needed of risk and reward. In the shorter term biofuels could be economic but their production competes with food from the a limited land resource. Unless world food production can be increased very substantially, biofuels will lead to higher food prices.

Transport can also help the wider energy economy move forward. Transport expenditure considerably exceeds domestic energy expenditure, so the capital investment in micro-generation by households is a much more saleable and affordable option if it contributes to both domestic and transport needs. Perhaps more importantly, the EC carbon trading scheme will place limits on burning oil for electricity generation but not for transport. This could create perverse incentives by treating energy for transport differently from energy for domestic and industrial use. Transport is a vital element of energy policy and needs to be more clearly part of the wider policy debate.

Two years ago, following STSG's transport and energy conference, STR reviewed the energy debate. Since then, major policy reviews by Stern, Eddington, King, the County Surveyors Society and professional institutions have also identified the need for early action. However, delivery has been very slow. As the September 2008 SCDI conference showed the national policy agenda has barely moved forward on promoting energy change in transport.

The transport debate remains stalled in discussions about demand management. Demand management is only one of the elements of a sustainable energy policy, and could be one of the hardest to deliver. The blueprint for transport and energy, depends on delivery that takes opportunities in both sectors and tackles problems across all aspects of energy generation, distribution and consumption.

The way forward is increasingly clear. The leadership for delivery is not.

Views from the Minister for Enterprise, Energy and Tourism

The Energy Minister Jim Mather spoke at the SCDI's conference on Scotland's Energy Future, where he stated that 5.5 Gigawatts (GW) of renewable electricity schemes either already operating or with planning permission. He suggested that this is enough to take Scotland past the target of generating 31 per cent of its electricity from renewable sources by 2011. Current installed renewables capacity in Scotland totals 2.8 Gigawatts.

He suggested that Scotland has won the energy lottery with renewable resources estimated at more than 60GW, ten times Scotland's peak electricity consumption and enough to meet projected domestic, industrial and transport needs. For electricity, the aim of the Scottish Government is that 50% of Scottish demand for electricity should be met from renewable sources by 2020, with a milestone of 31% by 2011.

Electric Powered Vehicles and Carbon Caps

Graeme Moffett, Shepherd and Wedderburn LLP

Under currently proposed Climate Change legislation the UK will be committing to a 60 percent reduction in total C02 emissions by 2050, and Scotland will be committing to an even higher target. This is a major challenge that will require almost total decarbonisation of the road transport sector.

The King Review of Low-Carbon Cars commissioned by the UK Chancellor concluded that almost complete de-carbonisation of road transport could be possible by 2050, with electric vehicles having a large part to play. Major technological improvements would however be required in battery and fuel cells, as well as de-carbonisation of electricity generation. Clarity and development of legislation will also be needed if use of electricity as a transport fuel is to be encouraged.

Tailpipe emissions from wholly electric vehicles would be non-existent, while emissions from upstream fuel production would become the focus. Electricity produced from any primary energy source, particularly renewables, is likely to offer significant CO2 savings compared with petrol and diesel.

There is a risk that current policies in the UK and Europe are focusing on biofuels and not enough is being done to drive development of other alternatives, such as electricity. The UK's Renewable Transport Fuel Obligation (RTFO) is arguably only a mandate for biofuels. Although in principle any completely renewably produced fuel could qualify, this would be difficult for electricity, as it would need to be shown that it was completely renewable. However his could, in theory, be done through tracking of Renewable Energy Guarantee of Origin (REGO) certificates.

To provide a more level playing field for all competing fuels, the RTFO could be reformed to focus on reducing the carbon-intensity of fuels. If carbon-intensity took account of drive train efficiency as well as carbon emissions per unit of energy in the fuel, then electric motors could come out ahead of combustion engines and biofuels.

Such a scheme could be enforced through tradable credits, where fuels that have lower carbon intensity than the target generate credits that can be sold to producers of fuels that are above the target. Fuel suppliers would be able to purchase credits generated by others if this was cheaper than reducing their own emissions. This would allow the carbon-intensity of fuels to be reduced at least cost.

Electricity companies could opt into such a scheme and would probably do so if electricity from most sources was likely to be lower CO2 than the target and would therefore earn them credits. This could be an important step in getting power companies engaged in providing electricity as a transport fuel – particularly in providing complementary infrastructure such as fast charging points and smart metering.

The EU Emissions Trading Scheme (EU ETS) is the EU's principal tool for achieving its 20 percent CO2 reduction target. The EU ETS currently covers energy intensive industries such as electricity generation, iron and cement and oil refineries. The EU is considering expanding the scheme to more sectors including, potentially, road transport.

Developments in electric vehicles could make it increasingly difficult to separate the road transport and power sectors, therefore having a single scheme to regulate both sectors may become increasingly appropriate. Including road transport in the EU ETS would mean another fifth of the UK's CO2 emissions would be covered by the scheme.

More electric cars would mean greater electricity demand. In theory, the amount of "clean" power available to the grid should also be increasing, but it remains to be seen whether that will happen at a sufficient rate to meet current carbon caps even before any increased electricity demand from an electric vehicles surge is factored in.

If the necessary percentage of clean power was not available then generator's emissions caps under the EU ETS would be tightening against increased demand for electricity that might not be able to be met in a carbon-free way. This could lead to a greater carbon cost that might need to be passed onto the consumer through higher electricity prices. If fuel suppliers and electricity generators were both caught under the scheme, the issue could be exacerbated.

In January 2010 the UK will be introducing the Carbon Reduction Commitment (CRC). Organisations with half hourly-metered electricity consumption of 6000MWh or more per year will be caught by the scheme and will have their emissions capped. They will need to purchase emission allowances in advance to be surrendered at the end of an emissions period.

The CRC doesn't currently include transport emissions. It's clear that emissions from an organisation's petrol and diesel fleet wouldn't be taken into account, but it's less clear how electricity used to charge vehicles would be viewed. A switch to electric vehicles could possibly see that organisation's electricity consumption rise to the point where its CRC liability is vastly increased, or could mean that organisation trips the threshold into the scheme where it was previously outside.

Clarity is needed as to what is covered by each scheme, and the effects needs to be carefully thought through to ensure that the most appropriate solution wins through.

Of course electric vehicles are only part of the solution and different technologies will offer the most potential to reduce CO2 emissions in the short, medium and long term. Good policy should target CO2 reduction, rather than one method of achieving it, recognising that the most appropriate methods are likely to change over time. This will create a stable framework that will help give the best chance of finding the most efficient and cost-effective methods of reducing CO2 from transport.

If you would like more information on any of the issues raised in this article please contact Graeme Moffett who is a Senior Associate in the Energy and Utilities Group at law firm Shepherd and Wedderburn LLP.

Transport Dimensions of Scotland's Energy Future

Edited from a review by SCDI

The Scottish Council for Development and Industry (SCDI) has commissioned a major independent study into the future of electricity generation in Scotland in response to widespread concerns over the economic impact of rising energy prices and uncertainty over Scotland's future energy mix. Both the UK and Scottish Governments have set stretching renewable energy targets and consulted on 80 per cent climate change emissions reductions. However these announcements on energy policy fail to explain how growing demand for transport energy will be generated.

Wood Mackenzie, based in Edinburgh will look at future supply and demand of electricity for SCDI, and the likelihood of Scotland hitting its target of 50 per cent of consumption coming from renewable sources by 2020. The SCDI note that:

- It is still not clear if Scotland will meet its target for 50 per cent of electricity consumed coming from renewable sources by 2020.
- We need to know what this will mean in terms of costs to business and households. The Scottish Government's objective of a lower carbon energy mix, needs to be consider the implications on the wider economy of Scotland.

Through this research, SCDI also intends to map out the necessary investment and infrastructure necessary to deliver the Scottish and UK Government's targets for renewable energy. The growth of renewables brings huge opportunities for Scotland, but there are massive barriers that need to be overcome, such as the speed of the consents process and connections to the grid, and skills shortages.

The growth of renewables brings huge opportunities for Scotland, but there are massive barriers that need to be overcome, such as the speed of the consents process and connections to the grid, and skills shortages.

The differences between demonstration of new technology, small scale deployment and large scale deployment, and the lengthy timescales between each stage, should be understood and much more clearly stated. Probably the biggest single challenge facing the energy industry is recruiting and training sufficient skilled people to research and development, design, manufacture and construct everything which must be done.

The demand for transport has been steadily increasing in recent years, but it can be limited or shifted to more environmentally friendly modes. Flexible working and home working can be promoted through better access to ICT and video conferencing, and workplace travel plans. BT's fibre-based broadband will become available for up to 10 million UK homes by 2010 and is an opportunity for investment in Scotland. The planning system can be used to discourage locating new housing where commuting and access to services and amenities is only achievable by lengthy car journeys. But many journeys are necessary and Scotland's economic competitiveness must be protected. Key priorities for transport are:

- Reducing Fuel Prices - Comparative statistics show that the UK has the highest prices for fuel in Europe, and most of this price is made up of duties. HM Treasury should immediately introduce a Fuel Duty Regulator.
- Support Island Communities – Prices on the islands are exceptionally high. As motor vehicles are a necessity of daily life and motoring costs make up a higher percentage of disposable income, the UK Government should introduce a dispensation scheme, similar to those in other EU countries.
- Demand Management – A UK-wide road pricing system, which replaces fuel duty, would reduce congestion and benefit many rural areas of Scotland.
- First Generation Biofuels – The European Commission's proposal for a Renewable Directive introducing specific target for transport sector of 10% by 2020 can only be met by using biofuels. Evidence has been presented this would reduce agricultural production for food and biodiversity in Europe and the developing world and increase food prices. More biofuels will be needed over time - and in Scotland biodiesel from the waste oil market or straight vegetable oil may offer particular environmental benefits - but the target needs to be reviewed and environmental safeguards introduced.
- Second Generation Biofuels – The Scottish and UK Governments need to encourage more research and financially support non-crop based biofuels. The Scottish Association for Marine Science, based at Dunstaffnage Marine Laboratory, are investigating the potential and practicality of using micro- and macroalgae.
- Electric and Fuel Cell Cars – A number of companies are planning to offer road-capable electric cars within a few years. Fuel cell cars are mainly unproven, costly and commercial production is many years away. One of the biggest obstacles is the lack of hydrogen fuelling stations and, as hydrogen is currently commonly produced from fossil fuels, overall carbon emissions may be higher than from a conventional engine. UK companies are testing new combustion engines which are 50% smaller than average and would use less fuel and produce fewer carbon emissions.
- Rail Electrification - Only 39% of the UK rail network is electrified. New diesel trains emit at least double the carbon dioxide per mile of a standard electric train. The Scottish Government is committed to 350km of electrification and Network Rail has launched a feasibility study into five possible high-speed rail lines. SCDI hopes that, as seems possible, the UK Government will later this year reverse its opposition to electrification in the investment programme from 2014. According to the UK Government, high-speed rail increases energy consumption by 90% at top speeds. However, the environmental benefits compared to domestic air travel are still considerable and SCDI supports the Greengauge campaign for a UK high-speed rail network.
- Ferries – The large vessels required for safe and comfortable travel on longer and exposed routes have high energy costs per passenger and rising fuel costs are having a serious impact on operators. Caledonian Maritime Assets Ltd estimates that a £200m investment is needed in new vessels over the next decade. Norway is currently allowing hydrogen-powered engines on vessels as part of a joint fuel system. New paint technology can reduce fuel use by 5%. SCDI believes that higher fuel efficiency and new engine technology must be priority considerations in procuring the new ships.

- Air Travel – In response to a HM Treasury consultation, SCDI argues for a new aviation closely reflecting carbon emissions per aircraft type rather than the proposal for one based on Maximum Take Off Weight. The Highlands and Islands' air services continue to warrant an exemption.
- Internal Fuel Supply – The recent tanker and Grangemouth disputes showed the vulnerability of fuel distribution. 90% is through Grangemouth. As imports grow, logistics and contingency arrangements must be kept under review. There is a growing threat of closures of rural petrol stations, reducing competition and increasing prices. These lifelines for communities must be sustained and radical solutions found to support them. SCDI understands that, subject to a review, the Renewable Transport Fuel Obligation will lead to Bio Gasoline replacing conventional petrol next year. Due to its character it cannot be shipped from Grangemouth or stored at petrol stations without modifications which are outwith the resources of smaller operators, and it is likely that it will be too expensive to construct blending plants on the islands or even the Highlands. A green policy would therefore result in significantly increased carbon emissions from Grangemouth-based tankers travelling around the region.

An Era of Evolutionary Change

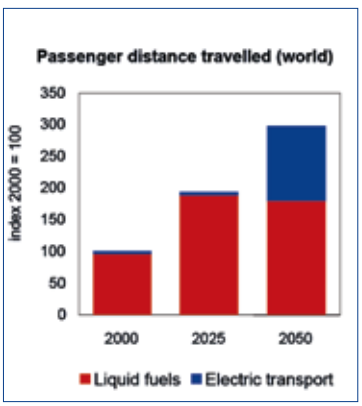
Edited from an article by Dr Peter Snowdon, Shell

Policy, prices, legacy, innovation and competition all combine to make a complex landscape for energy change.

Traditional energy pathways focus on existing infrastructure and take sequential responses to hard truths. This approach will lead to energy price volatility and knee-jerk reactions to climate events. Without an effective approach to carbon pricing the energy sector will find it difficult to adapt. In response to growing concerns renewables will be forced in by mandates and a patchwork of national standards will always be outpaced by events.

A more progressive approach can be delivered with a broad awareness of challenges at all levels, not only national. This will help to create a critical mass of parallel responses to hard truths. Through effective carbon pricing established early in the process of change economic incentives for change will help to deliver improved efficiency standards, particularly electrification of transport sector.

Although new infrastructure will take time to develop it is still possible to ensure that actions can outpace events. However the next five years are critical. Transition to a new energy economy for transport is both inevitable and necessary. Technology plays a major role, but there are no silver bullets. Political and regulatory choices are pivotal and tackling hard truths together is essential for a sustainable future.



Transport: New Technologies, New Behaviours

Jillian Anable, Aberdeen University

Transport cannot address climate change without addressing energy issues. It is also a neglected area of energy research and policy (and vice versa) despite accounting for 10% of energy consumption.

Transport is the only sector in which emissions were greater in 2005 than in 1990 (up 10%)

The approach to CO2 reduction is more important than any end target, and progress is being delivered through technology. However the policy framework is not keeping pace with this agenda.

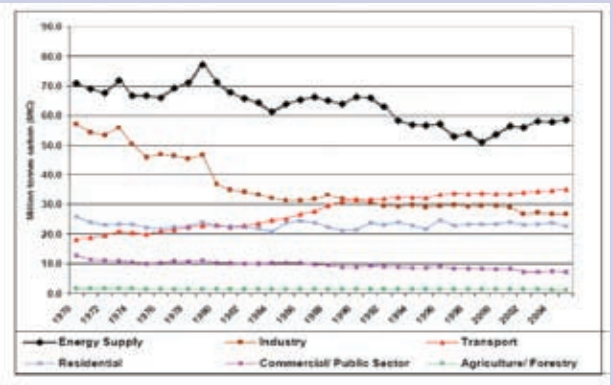
Travel demand reduction is important and possible in the short term. The gains are cost-effective but demand management is still politically difficult.

Since 1990, CO2 emissions have increased most for international aviation and decreased for public transport. Only car has seen a growth in demand but a stabilisation of emissions. Between 1990 and 2006, emission levels changed as follows:

- Cars accounting for 40% of the emissions stabilised at 1990 levels despite an 18% increase in traffic
- Public transport accounting for 4% of emissions were down almost 10%
- Lorries accounting for 15% of emissions were up around 30%
- Vans accounting for 12% of emissions were up nearly 50%
- Domestic aviation accounting for 1% of emissions were up 100%
- International aviation accounting for 21% of emissions were up 123%

There are four ways to save energy in transport:

- Operational efficiency
- Technical efficiency
- Travel demand
- Modal choice



Technology has great potential in the short and long term but there remains considerable uncertainty about what can be achieved and many barriers to change. These include long timescales, lifecycle

Emissions, cost, rebound effects, other externalities and the need for investment in the built environment.

The Eddington Transport Study showed that under a business as usual policy scenario, road transport in the UK is predicted to rise by 28% between 2003 and 2025 and extrapolating this trend, road transport could double by 2050. To achieve an 80% reduction in CO2 emissions from cars in the UK by 2050 implies a 90% reduction in emissions per km. This means almost complete 'decarbonisation' of cars.

Travel behaviour change is not just about mode switch. Behavioural factors include:

- Purchasing - which cars are bought
- Driving - how cars are driven
- Use - how much cars are driven

Mode choice, car occupancy, timing, route choice, frequency, trip-chaining, destination choice, residential location choice, and work location choice are just some of the decisions which affect travel demand. Overall there is a need to recognise the centrality of consumption and the way consumers relate to and think about their energy use.

Oil price changes cannot succeed where policy has failed. CO2 savings depend on the total price of motoring. In 2007 it was 23% cheaper to buy and 57% cheaper to run a car than in 1988. Price rises affect cost of public transport and it is now 200% more expensive to by PT than in 1988. CO2 reduction requires high and sustained increases in fuel prices and price rises will need to at least keep up with efficiency improvements.

There are broad impacts from fuel price increases which will not be compensated for by rising incomes. Price shocks give people little time to adapt and rising incomes will not necessarily affect the same people who face the burden of higher costs.

Technology benefits can be delivered if standards and accreditation are linked to products and services that deliver radical cuts in CO2. Vehicle efficiency standards can result in improved fleet fuel economy, provided they are mandatory, ambitious and cannot be circumvented. Significant benefits can be delivered by making the standards of the best in each class of car more normal and by more motorists downsizing.

The new technologies set to make an impact in the short to medium term are plug-in hybrids and battery electric cars. Complementary technologies will also be important including changes to tyres and in-car instrumentation.

The main technology challenges are that fuel cells and hydrogen a long way from commercial success (perhaps 2030), so the implications for electricity supply require approaches to be identified that smooth out peak loads in the electricity grid. There has been insufficient analysis even to identify whether the grid will be able to meet the demand from transport. Biofuels are at best a small part of the solution, and there are questions about whether they have a part to play at all.

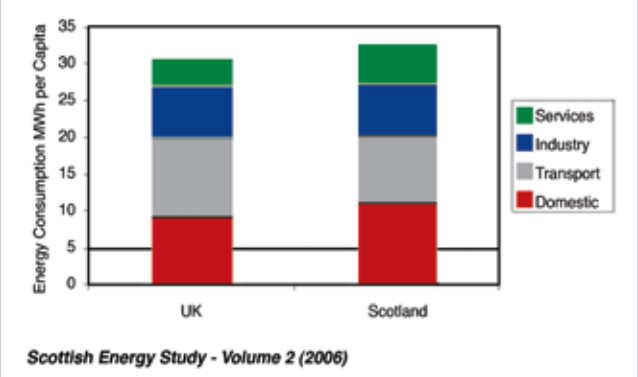
Key barriers are the lack of vision in planning system, and that consumer demand is not consistent with future realities. To lock in the benefits of technology change therefore requires supporting measures.

In the hierarchy of ways of tackling the energy problems in transport demand reduction is at the top of the tree. This includes

- Smarter measures such as travel planning)
- Consumer purchase of 'best-in class' cars and ecodriving
- Speed limit enforcement
- Information Communication Technology (ICT)
- Car clubs and demand responsive transport
- Planning transport, land use, and other services together through accessibility planning.

However to deliver these behavioural changes requires a local champions with joined up policy in health centres and schools and stronger consumer engagement. To support this local action a conducive framework is needed with a complementary fiscal framework, targets, milestones and monitoring, endorsement across the political spectrum, measures to tackle skills shortages and coordination of information.

Overall a package approach is needed with changes to technology and behaviour and policies which lock in savings. The short term emphasis should be on demand reduction with an emphasis on accessibility, not mobility. Change needs to be supported by incentives and interim targets and budgets need to be used to used to tackle the agenda in meaningful steps.



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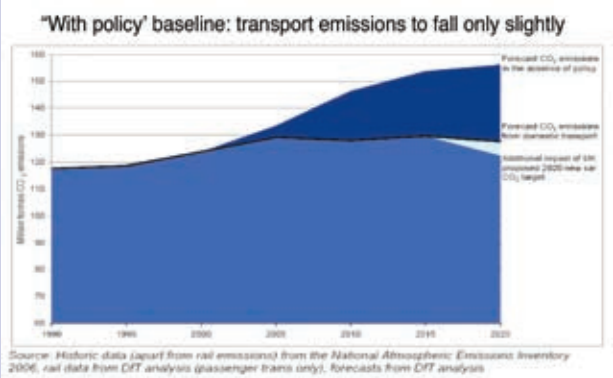


News Update – Transport in the Scottish Media

AVIATION

The Competition Commission has ruled that passengers will gain from a break-up of BAA, including the sale of one airport in Scotland – expected to be Glasgow. Manchester Airport and Dutch interests have expressed interest in Glasgow. There are concerns about implications for Prestwick and that 'outside'operators would seek to develop feeders rather than the direct overseas services which are of greater benefit to the Scottish economy.

Under the Prestwick Arport Masterplan, usage is expected to rise from 2.4m passengers to around 5m per year. This will require improved rail and bus capacity for access, including a rise in train frequency to Glasgow from 2 to 3 per hour, shorter trip times and earlier and later services.

Air France/KLM is planning extra flights between Scotland, Amsterdam and Paris – possibly including new direct flights from Inverness.

The arrival of the Boeing 787 Dreamliner is expected to allow further expansion of direct long-haul routes from Glasgow, building on the success of 10 years of direct flights from Glasgow to New York.

Flyglobespan is to introduce fuel surcharges on long-haul flights and the collapse of Zoom in August has cut air capacity from Glasgow across the Atlantic.

From October, BA is cutting the number of flights from Glasgow and Edinburgh to Gatwick and Heathrow. Aberdeen-Heathrow flights are also being cut.

Business interests have increased campaigning for a third runway at Heathrow but there is substantial opposition to additional runways whether at Heathrow, Gatwick or Stansted.

Aer Lingus plans to increase flights from Edinburgh to Dublin in November.

Ryanair will end Cork-Prestwick services on 28 October, citing higher fuel costs and higher landing charges at Cork.

Edinburgh Airport has unveiled plans for a new £9.5m car rental centre, linked to the terminal by a 500 metre covered walkway.

Oban Airport was formally opened in August.

EU plans to extend carbon trading to aviation will add an average of £40 to long-haul return fares and £9 to short-haul.

PORTS & SHIPPING

Scottish Government has announced a ferry service review which will run until autumn 2009. It will include rationalisation of fares and changes in the ferry network routes and frequencies, modes of operation and consideration of bridges or causeways as ferry alternatives..

Highland Councillor Roy Pedersen and Prof. Alf Baird have repeated calls for an innovative approach to ferries, including the break-up of CalMac as a means of giving communities better value within a reduced level of public spending.

Due to rising fuel costs, Stena has slowed vessels on the Belfast-Stranraer crossing by 14 minutes and added a £10 surcharge for vehicles and £2 for foot passengers.

The Crinan Canal has reopened after a 3 week closure for repairs. 88 extra yacht berths are to be provided at Tarbert Loch Fyne.

SPT, Clydeport and North Ayrshire Council are to share the cost of a £130,000 covered walkway between Ardrossan Harbour rail station and the Arran ferry terminal.

Pentland Ferries have proposed a larger 300 passenger vessel on the planned route between Burntisland and Granton. The company sees this as offering a commercial service, only requiring initial public funding for pontoons and waiting rooms.

SPT has concluded that an opening bridge replacement for the passenger ferry at Renfrew would be costly with better value gained from replacing the present two vessels with a lower capacity, smaller vessel and emergency back-up.

With a three year commitment of public funding, Islay Sea Safari introduced a fast 12 seater passenger ferry link between Jura and Tayvallich in June. A connecting bus gives a 90 minute travel time to Lochgilphead, compared to 5 hours by the alternative route via Islay.

Pentland Ferries is seeking approval for a direct vehicle ferry route from Lochboisdale to Mallaig.

CalMac has decided not to introduce Sunday sailings to Lewis and Harris this winter despite the impact of the RET pilot raising usage on this route. From January 2009 the last weekday sailing from Ullapool to Stornoway will be put forward from 5.15 pm to 6.15pm.

Due to tankers and other traffic diverting from the Minch to west of the Outer Hebrides, the Monachs lighthouse is to reopen after 60 years of closure and with a range of 18 miles.

RAIL

ORR considers that planned Network Rail spend of £29bn across Britain for the 2009-14 period could be cut to £26.5m without damage to key projects. ORR is seeking a 21% cut in projected overall NR spend in Scotland, including savings of £40m on the Glasgow Airport Rail Link.

Final figures and access charges for 2009-14 are due to be settled by October.

Delays continue to affect DfT plans for a new generation of trains to replace the existing diesel HSTs. A higher proportion of electric stock is expected, with specification including speeds up to 155 mph and possibly to continental 200mph plus standards for some trains able to use new lines.

Positive press coverage of the case for high-speed Anglo-Scottish rail has risen with extra support in new reports from Network Rail and from London area councils opposed to expansion at Heathrow. The Scottish lobby for high-speed rail has gained business support in a campaign now led by Edinburgh Chamber of Commerce. GB Transport Minister Tom Harris supports high-speed lines close to existing route but argues that trains limited to 150mph and mainly using

existing route could reach Edinburgh and Glasgow in a little over 3 hours from London.

In July, Finance Secretary John Swinney announced a £180m deal for 130 electrically powered and air-conditioned carriages for ScotRail services with delivery from December 2010. Siemens will be the supplier with HSBC acting as third party. These trains will operate on the Ayrshire Coast and Inverclyde routes (with Transport Scotland providing £40m for platform extensions to allow 7/8coach trains). Existing Ayrshire electrics are to be reallocated to the reopened Airdrie-Bathgate route to Edinburgh. Contrary to the 2011 completion date in STR40, electrification of the through route via Falkirk is not likely to be completed until 2015/16.

The Scottish Government has again emphasised its commitment to the Central Borders rail link though former MSP Brian Monteith has called for an end to the 'madness' of over-running and under-used rail schemes.

Patronage of the newly opened Alloa rail service has exceeded expectations, especially in the high use of the line for local trips between Alloa and Stirling.

ScotRail trains are to have a Saltire livery. Labour MSP and transport spokesman Des McNulty has called this 'a huge waste of money'. Present SPT rail branding is to be phased out.

ORR data shows that average rail fare increases continue to exceed inflation. In Scotland, rail fares rose by 4.8% in 2007/08 compared to 4.3% in the previous year. This is lower than the average British rail fare rise of 6.9% in 2007-08. A 'simplified' rail fare structure across Britain was introduced in September.

To save £130,000, West Lothian Council is considering removal of its support for concession travel by rail by those over 60 and the disabled. At present, a £1 return to Edinburgh is available with half-fares to Glasgow.

Showing a 5% rise in customer satisfaction, ScotRail has beaten a falling trend in satisfaction with most rail operators.

Transport Minister Stewart Stevenson expects that improved rail frequencies from Edinburgh to Dunbar will soon be available. He sees improving prospects for a reopened station at East Linton, costed at £2.7m. Pleas have again being made for later trains from Edinburgh during the Festival period. An enlarged car park at Musselburgh station opened in August.

South Side commuters in Glasgow faced a month of disruption due to repairs following at collapsed mineshaft.

BUS, TRAM & TAXI

The DfT proposal for a tramtrain pilot on the Huddersfield-Sheffield line has sparked Scottish interest in tramtrains – essentially lighter weight, high acceleration vehicles which could run on both heavy rail routes and on tram routes:

- SEStran and SPT have both expressed interest – the former in a wider tramtrain network running up to 10/12 miles from Edinburgh based on expansion of the initial tram route now building.
- Edinburgh City Council also sees potential for tramtrains to restore passenger services on the South Suburban line but using Princes St in central Edinburgh and out to the West Edinburgh employment and airport zone.
- SPT has experienced difficulty in getting support for additional tramtrains on the Argyle Line in Glasgow. Services are more likely to be improved by a new generation of Urban Metro trains with potential later conversion to trams of some existing rail routes and related extensions.
- SAPT has suggested that a tramtrain route from Lower Deeside to the Dyce airport and employment zone, but utilising existing rail through central Aberdeen, could offer good value.

Tramtrains remain candidates for possible introduction after 2014.

Citylink/West Coast Motors competition in Argyll has ended with West Coast again becoming an operator of Citylink Argyll services at the end of September. West Coast also operate local bus services in the Oban, Rothesay and Dunoon areas plus sightseeing tours in Glasgow. National Express has adopted a Saltire livery for Glasgow-London coach services.

Fuel costs now account for as much as 26% of bus costs but Stagecoach and First report that greater rises in car fuel and parking charges have brought net gains for bus use and revenue.

Lothian Buses report a fall in profits and in usage in the first half of 2008, mainly due to the direct disruption of tramworks in Edinburgh and the indirect impact of having to recruit more drivers to cover extended trip times.

Attempts to contain costs by selective cuts in frequency and some route withdrawals have provoked local complaints. The economics of rural routes have been hardest hit by fuel price rises with Scottish Borders Council providing extra support to maintain two routes.

Stagecoach are seeing encouraging results from improved services from Glasgow to Cumnock and in the Cumnock Connect network. The two year old Ayr-East Kilbride service has achieved massive passenger growth while the summer frequency on the Greenock-Largs-Ayr service has been increased from half-hourly to every 20 minutes. In partnership with SPT and NHS, a new hourly service has started from Ayr and Ailsa Hospitals via Prestwick and Dundonald to Crosshouse Hospital.

SEStran has announced plans for a £54m orbital Bus Rapid Transit route from Queen Margaret University in the East via Edinburgh Royal Infirmary and the Edinburgh Bypass to Edinburgh Park and Gogarburn. If funding is assured, the first phase could open in 2012. The full scheme is expected to carry 6m passengers a year.

Plans are being prepared for an outbound bus lane from Edinburgh on Queensferry Road. SEStran is also spending £1.5m to extend electronic timetable signs to less frequent bus services in East and Midlothian.

Four Renfrewshire bus firms and a minibus operator in Easter Ross have lost their licences after serious breaches.

ROADS & PARKING

DfT has decided against a large increase in lorry length but a small rise in permitted length may be allowed. FTA has argued that this will limit the scope for cutting lorry costs.

Technical reports to FETA suggest that plan to dehumidify Forth Road Bridge cables will prove successful with no early requirement to strengthen or replace cables. The bridge is likely to remain open to HGVs until 2017 or later. Earlier statements had HGV bans from 2013.

The £4.2bn estimated cost of a new crossing has been queried by comparing it with the £3.4bn cost of a 12.4 mile road/rail bridge linking Denmark and Germany and scheduled for completion in 2018.

Recent A9 accidents and further reports on economic benefits for the north have increased pressure for an accelerated timescale for full upgrading to dual carriageway of the A9 betweeen Perth and Inverness. Alex Salmond has stated that he would have preferred a dualled A9 to the Edinburgh tram project but a Herald editorial and the Deputy Leader of the Perth and Kinross SNP Group both query the urgency for full A9 upgrading given pressures on public finances.

FTA is urging that the speed limit for lorries on the Perth-Inverness road should rise to 50mph.

A9 improvement at the Ord of Caithness has been completed.

Carillion has been awarded the contract for the £21m 2.4 mile road link from the M80 to Kirkintilloch. Using information to ease congestion, 'trip time' signs on the M8 in Glasgow are likely to be extended to Edinburgh.

Transport Scotland is conducting a survey to pinpoint where more work needs to be done to prevent landslides with special attention to A9, M74, A82, A84 and A93.

The Scottish Government has published a consultation outlining the action needed to ensure 'quiet zones' in Edinburgh and Glasgow.

Measures to cut road deaths and injuries among young drivers and their passengers are being examined as is a safety scheme targeted at 40 to 55 year old bikers.

The Scottish Government has decided to abolish hospital parking charges (except at PFI hospitals). This will result in loss of income and increased problems for hospital visitors in finding parking spaces but has been a popular move.

Edinburgh City Council is divided on whether higher residential permit parking charges should apply to gas-guzzling cars. Controlled parking zones should extend as far south as the South Suburban rail line by late 2009. Though controversial, the trend is increase the use of parking as an income source as well as a control.

The Livingston Designer Outlet is planning to introduce parking charges next year. East Lothian Council is considering parking charges at 13 beach sites in 2009. Income could reach £330,000 a year, to be used for new toilets and other beach improvements.

WALKING & CYCLING

Seven parts of Scotland have been selected as 'sustainable travel demonstration communities'. Funding of £10m will come from the Scottish Government and £5m from local authorities and the South-west RTP. Areas to benefit are Barrhead, Kirkwall, Dumfries, Dundee, Kirkintilloch/ Lenzie, Larbert/Stenhousemuir and Glasgow's East End. Measures will include personalised travel planning, park and choose, extended pedestrian zones and free trial bus and rail passes. Dundee and Dumfries are both planning bike hire schemes.

Edinburgh is planning to move coach parking away from the Castle esplanade with courtesy buses for those unable to make the short walk from an adjacent alternative coach parking. The aim is to improve conditions for pedestrians on the approach to a leading tourist attraction.

The Round the Forth Cycle Route is being extended from Edinburgh to Berwick-on-Tweed with the aid of dedicated volunteers providing new signage.

SPOKES has criticised Edinburgh City Council for a failure to maintain the momentum of improvements for cyclists, already accounting for 19% of peak vehicles on routes close to the city centre.

In Glasgow, work has started on the new pedestrian and cycle bridge across the Clyde connecting Broomielaw and Tradeston close to the city centre.

PROPERTY & LAND USES

The credit crunch and a slowing economy has led to large short-term cuts in plans for housing, shopping and other commercial development. Plans for a £120m mixed use 40-storey development adjacent to the M8 south of Charing Cross in Glasgow have been abandoned.

Plans have been approved for a £200m development for hotels and shops on the former Morrison St goods yard in Edinburgh opposite Haymarket station. The developers will make a £4m contribution to the Edinburgh tram project. A Transport Scotland financed expansion of concourse capacity and other improvements at Haymarket are expected to start in 2011 with private finance adding shopping at a later date.

Braemore Estates has proposed a £5m leisure development on the A9 at Tomatin. More than 1 in 7 Scottish Post Office are to be downgraded or closed but the UK government is requiring the Post Office to ensure that 99% of the population are within three miles of an office with 90% being within one mile.

To allow for expansion at Edinburgh Airport, the Royal Highland Society will move to a new site south of the A8 by 2013 at a relocation cost around £350m.

Glasgow Caledonian University is considering relocation to Glasgow's East End. Plans have been approved for the renewal of Easterhouse Shopping Centre and the expansion of Glasgow Fort (close to the M8) to become the sixth most visited retail destination in Scotland.

The rise in fuel prices has had a more severe impact on out-of-town shopping than on city centres.

Responses to the draft National Planning Framework have included requests for Glasgow Crossrail, Prestwick Airport, Edinburgh tram and waterfront developments and a dualled A9 to Inverness to be included as priority schemes in the final draft.

Exploring The Links Between Transport and Culture

Summary of Research by Steer Davies Gleave

In 2007 Steer Davies Gleave was commissioned by the Scottish Executive to carry out research on the links between transport and culture. The work explored the role of transport as a barrier to participation and attendance in cultural activity throughout Scotland, and makes recommendations on how accessibility by public transport could be improved, whilst also considering other modes where relevant (including walking, cycling and community transport).

It was important that local issues which may affect the accessibility of a site by public transport were also considered as any public transport journey inevitably includes a walking (and potentially cycling) "leg". Furthermore, the ease by which a site can be reached by private transport can be a factor in the extent to which individuals consider using public transport, which in turn affects the demand for improvements to public transport accessibility.

The study involved a review of the policy background, across transport, tourism, cultural policy

and sustainable development, interviews with a range of key stakeholders and key players to scope out the main issues to be addressed, initial mapping of a selection of cultural sites and events across Scotland, selection and study of 8 case studies to examine the issues of public transport

access in more detail, and a review of good practice.

There are a number of key barriers to enhancing public transport and sustainable accessibility to cultural activity across Scotland. Notwithstanding this, many of the barriers to public transport access identified within this study are common to any effort to promote access by public transport, whatever the type of activity, destination or group of people being discussed (for example staff, visitors, healthcare patients, students, commuters and shoppers). It is therefore incumbent upon a range of policy and decision makers to play a role in reducing and/or eliminating these barriers.

Key barriers include:

- Lack of information and lack of promotion of available information sources by those involved in generating travel – this is not exclusive to the cultural sector. Technology that could deliver journey planning information to customers when booking tickets, through a direct link from a venue website is not currently adequately utilised.
- Lack of motivation to promote and achieve access by public transport appears to be particularly significant for transport and culture when compared with other trip purposes. In many cases, the need to develop audiences and attain visitor numbers appears to override consideration about how they reach the venue. This lack of motivation is exacerbated by the absence of stipulations for public transport access within funding grants to the cultural sector, and/or lack of emphasis on this issue in advice and support mechanisms provided by umbrella cultural and tourism groups.
- Relating public travel to other objectives – there is a case for cultural activity providers making the most of tangential but related reasons to encourage public transport solutions, and many may not currently recognise the benefits to themselves and their local communities of encouraging more access by public transport. Climate change issues have risen significantly on the political agenda of late, and similarly in the media and the public mind. Cultural activity providers may wish to consider the potentially changing motivations of future audiences, who would like their participation in cultural activity to have a lower carbon footprint than in the past. This can be used as a driver for the promotion of sustainable transport options, and can help demonstrate the green credentials of a particular cultural body.
- Lack of know-how – there is a clear divide between those providing cultural activity, and those involved in promoting and providing public transport solutions. Many of the case studies in this research had instances of cultural activity providers struggling to understand how to promote public transport, and being unaware of whom to contact within the transport sector, be it the local authority or local transport operators.
- Lack of clarity over who is responsible for promoting public transport access – throughout the research, differing views have been offered by individuals from cultural and transport sectors on who is responsible for promoting access to cultural activity by public transport. This uncertainty and lack of ownership is a clear barrier to effective action and progress.
- Underutilisation of community transport and demand responsive transport solutions – a critical barrier to developing generic solutions to promoting public transport access to cultural activity is the diversity in size and type of cultural body. There was widespread under-appreciation of the role of community transport and demand responsive transport solutions to enhancing access in rural and remote areas in particular.
- Transport issues are not flagged up at an early enough stage – Public transport needs must be flagged up at an early stage by cultural providers as transport operators need advance notice to put on new or additional bus services (registration issues).
- Lack of knowledge sharing on successful initiatives or ideas– building a support resource relevant to and maintained by the cultural sector.
- Lack of integrated entry and travel ticketing options – the ability to easily combine the purchase of an entry and travel ticket is often an important incentive for visitors to use public transport, yet examples of this in Scotland are not widespread and tend to be limited to a few larger attractions or city contexts.
- Lack of consideration of the end-to-end journey for the visitor – many visitors are deterred from taking up such opportunities due to deficiencies in the provision and infrastructure from "front door-to-destination". Examples of this include lack of signing from a bus stop or station to the venue itself, and/or poor environmental conditions for those who have to walk or even cycle on a leg of the journey for example poor lighting or poor pathway surface from a bus stop to a venue entrance.

Use and Perceptions of Public Transport in 2007

Julie-Ann Goodlet-Rowley of the Scottish Government

1. Introduction

This short note uses data taken from the 2007 Scottish Household Survey (SHS). In 2007, there were several transport orientated questions added to the survey, including how respondents travel to key medical facilities, i.e. doctor's surgeries, dentists and hospital out-patient departments. This note provides a snap shot of public transport use in 2007, including how respondents travel to work, education, medical care, and how satisfied respondents are with public transport in general.

In 2006/07, local bus services in Scotland reported 482 million passenger journeys and passengers travelled 377 million kilometres on local services. In comparison ScotRail, the main rail provider in Scotland, reported 77.29 million journeys in the same financial year (*data source*: Department for Transport).

2. Who are the users and how satisfied are they?

Younger people (16 – 29) and women were the sub-groups most likely to use the bus on a regular basis. Women reported feeling less secure on buses than men.

The SHS collects information on how frequently respondents use public transport. In 2007, just under a quarter of all respondents regularly used their local bus service (at least twice per week) compared to just three per cent who regularly used the train (Table 1). Younger people (16 – 29) and women were the sub-groups most likely to use the bus on a regular basis. Across all sub-groups, the percentage *not* using train services was significantly higher than those *not* using the local bus service, in the past month.

Respondents who had used public transport in the past month were then asked a follow-up question on how satisfied they were with their public transport provisions. In general there was no real difference between buses and trains. However, respondents strongly agreed that trains were significantly more reliable (on-time) than buses (Figure 1). This may be due to the fact that trains are less prone to the same delays that road users may face (e.g. congestion). There were also a larger percentage of respondents who strongly agreed that bus ticket choices were simple than strongly agreed about train ticket choices.

There was little difference between different gender responses except that women reported feeling less secure than men on buses (22 and 28 per cent strongly agreed, respectively).

3. How do people travel?

The majority of journeys (69 per cent) to work were by car, either as a driver or passenger. Over half (53 per cent) of school children walked to school, with 22 per cent going by car. Car was predominantly used when travelling to dentists, GPs and hospital out-patient departments. Around 3 per cent of respondents never used the car to go supermarket shopping.

Two of the main transport questions in the SHS focus on how respondents usually travel to work and how their dependents (4 – 18) usually travel to full-time education.

In 2007, almost seventy per cent of respondents used the car as their usual method to work, of which only six per cent were as a passenger (Figure 2). This has increased since 1999 where 67 per cent of journeys were by car, but the percentage travelling as a passenger has dropped from 12 per cent in 1999. Rail and buses (including non-service buses) accounted for around 15 per cent of all usual methods to work, a constant trend since 1999. For school children the majority of journeys (53 per cent) were made on foot, with rail and buses (including non-service buses) accounting for 22 per cent of the modal share, a slight drop from 2006; however, this drop may simply be due to sampling variability.

In 2007 a new question was added to the SHS focusing on how respondents would normally travel to key medical services. In all three questions, car was predominantly the mode of choice, especially when travelling to out-patient departments. Bus and rail services were normally used by between 10 and 16 per cent of survey respondents (Figure 3).

Table 1: Frequency of using local pubic transport, 2007

	Frequency of using local bus service			Frequency of using train service			
	Regularly	Sometimes	Not used in past month	Regularly	Sometimes	Not used in past month	*Sample size (=100%)*
2007	24	22	55	3	19	78	*12,118*
by age:							
16-29	34	24	42	7	26	67	*1,665*
30-59	17	21	62	4	20	76	*5,991*
60+	29	21	50	1	13	86	*4,462*
by gender:							
Male	20	20	60	4	19	78	*5,209*
Female	27	23	51	3	19	78	*6,909*

*Table 2: Top ten main reasons given for not using buses more often, 2007**

	No need	Health reasons	Takes too long	Inconvenient	Use my own car	Lack of service	No direct route	Prefer to walk	Need a car for/at work	Cost	Other	Sample size (=100%)
												row percentages
All	13	10	10	9	9	7	7	7	5	4	20	*1,880*
by gender:												
Male	15	7	9	9	9	8	8	5	8	3	20	*823*
Female	11	12	11	9	9	7	7	8	3	4	21	*1,057*
by urban/rural:												
Large urban	15	11	14	9	8	2	6	8	5	3	18	*499*
Other urban	14	10	7	12	11	4	4	8	5	4	21	*577*
Small accessible towns	14	12	10	9	8	8	8	4	5	5	18	*159*
Small remote towns	15	9	5	4	13	4	12	9	4	6	20	*138*
Accessible rural	9	7	9	6	7	16	11	4	5	3	24	*265*
Remote rural	9	6	6	8	9	23	9	2	4	3	21	*242*

**As this is a small sample the year-on-year variations may be large.*

Of those respondents who had used a car or a taxi to attend to key medical facilities, 48 – 55 per cent said that it would be possible to use public transport instead of a car or taxi.

Almost nine out of ten respondents always used a car to go to the supermarket (Figure 4), compared to around 49 – 57 per cent for small and town shopping, respectively. Only a small percentage (3 per cent) of respondents always used another mode of transport to go to the supermarket.

4. Reasons for not using buses

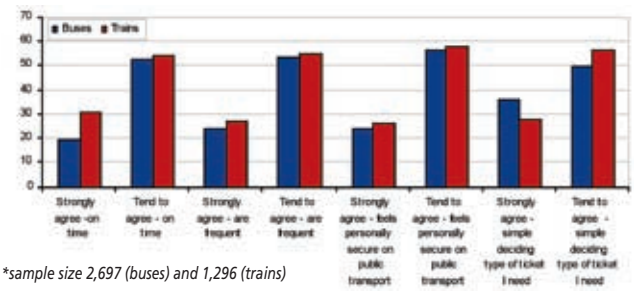
Lack of service in rural areas was one of the main reasons given by respondents for not using buses more often. Respondents over 60 and those in the 15 per cent most deprived areas cited health reasons for not using buses more often.

Table 2 gives the top ten main reasons given by all respondents who had not used the bus in the past month. Men cited 'no need' as the main reason for not using buses more often, whereas women cited 'health reasons'. Interestingly 'inconvenient', 'takes too long', 'lack of service', 'no direct route' and 'cost' were other main reasons cited for not using the bus more frequently.

Rural areas cited 'lack of service' significantly more than other areas as the main reason for not using the bus more often, suggesting that in these areas there needs to be more public transport provisions.

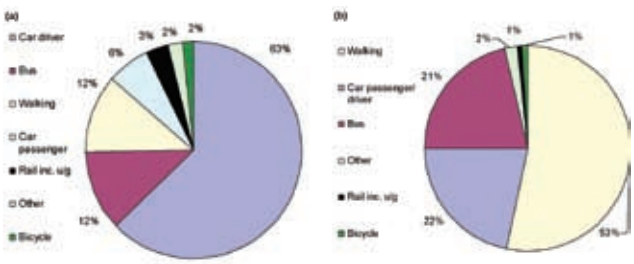
Respondents in the 15 per cent most deprived areas cited 'health reasons' as the main reason for not using buses more often (21 per cent in a sample size of *212*). There was also a difference between the age groups. 'Takes too long' was one of the top reasons cited by 16 – 29 year-olds and 30 – 59 year-olds (13 and 12 per cent, respectively), whereas this was not one of the main reasons for older respondents (4 per cent). 'Health reasons' was cited as the main reason by older respondents for not using buses more often.

*Figure 1: Satisfaction on public transport**



**sample size 2,697 (buses) and 1,296 (trains)*

*Figure 2: Travel to a) work by adults (16+) and b) full-time education by school pupils, 2007**

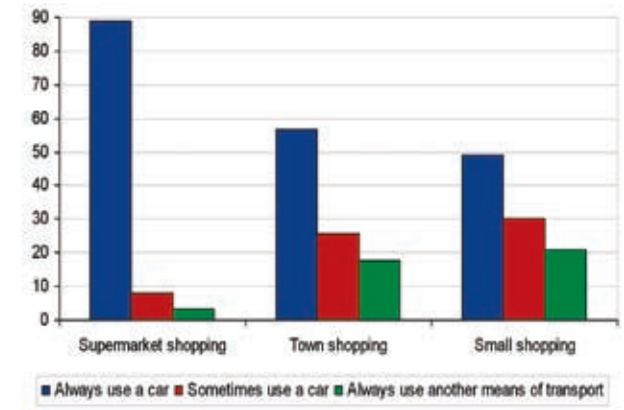


**sample size 5,176 (commuting) and 2,518 (school travel)*

5. Conclusions

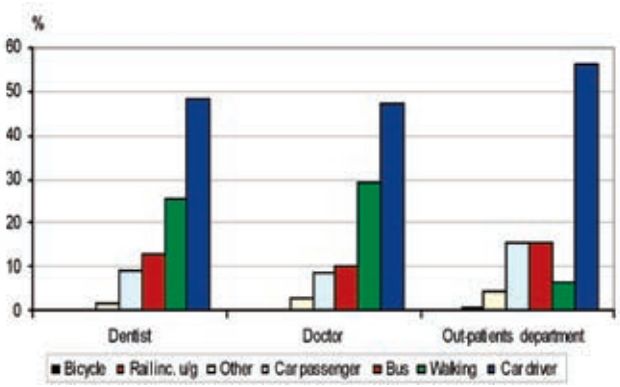
This short note gives a snap shot into transport use across Scotland. In 2007, over half of respondents had not used a bus in the past month and the majority of journeys to work were made by car. Reasons included a mix of personal preferences and perceived issues with the service. Although it is unlikely that everybody would be prepared to make the change from car to public transport, the promotion of efficient alternatives to the car has the potential to alter perceptions and change the habits of some. The Smarter Choices Smarter Places policy initiative aims to do just that.

*Figure 4: Use of cars to go shopping, 2007**



**sample size (2,421 – 2,496)*

*Figure 3: How respondents normally travel to key medical facilities, 2007**



**sample size 2,970*

These responses give us a good starting platform to inform policy across Scotland, to improve our public transport network and increase its use across all areas of Scotland.

Note: Last edition's article included provisional 2007 travel diary data that has since been identified as incorrect. Updated travel diary data should be available at the end of the year.

6. Further information

- For more information on the Scottish Household Survey: http://www.scotland.gov.uk/Topics/Statistics/16002 or contact the survey manager on 0131 244 0824.
- For up-to-date information regarding transport related topics in Scotland: http://www.scotland.gov.uk/Topics/Statistics/Browse/Transport-Travel
- For Local Authority breakdowns of major transport tables: http://www.sns.gov.uk/
- For more information on sustainable transport: http://www.scotland.gov.uk/Topics/Transport/sustainable-transport and the National Transport Strategy: http://www.scotland.gov.uk/Topics/Transport/NTS
- For general transport related queries: transtat@scotland.gsi.gov.uk

Main transport trends 2008

Catriona O'Dolan, Napier University

The Scottish Government annually publishes a statistical bulletin reporting on the key transport trends in Scotland for the previous year using data from a number of sources including the Department for Transport, Transport Scotland, Scottish Household Survey, National Travel Survey, Civil Aviation Authority and Office of Rail Regulation.

'Main Transport Trends' is a preview and summarised version of the *Scottish Transport Statistics* document that is published in December of every year and contains transport figures in more detail. This review for STR readers summarises the key findings.

Number of vehicles on Scotland's roads

A snapshot of vehicle numbers shows:

- The number of motor vehicles licensed – 2.6 million vehicles in Scotland in 2007, an increase of 2% on the previous year. Though still increasing, the number of cars licensed per head of population is lower in Scotland than in Great Britain as a whole.
- New vehicle registrations – 251,000 new vehicle registrations, an increase of 3% on 2006.
- Scottish Household Survey – 70% of households had at least one car and 25% two or more cars.
- Length of road - relative to the size of the population, the length of the road network was greater in Scotland than in Great Britain in 2007.
- Traffic volume – estimated at over 44 billion vehicle kilometres in 2007, an increase of 1% on the previous year and consistent with the pattern across Great Britain as a whole.
- Road-type use – Scotland had less traffic overall on all road types than in Great Britain, but more traffic on A roads.

No one of the above data sources provides a reliable picture of the exact number of vehicles in regular use in Scotland. The number of motor vehicles licensed is a good source of information, but, unlike the Scottish Household Survey (SHS), takes into account both private and commercial vehicles.

Increases in the number of vehicles licensed every year may in part be attributed to tighter regulations that have reduced the number of unlicensed illegal vehicles on the roads. Whilst the number of new vehicle registrations may be more of an indication of demand for new vehicles, an increasingly affluent population, rather than a direct increase in the number of vehicles on the road.

The SHS is a sample survey and as such its results are subject to fluctuations attributed to different samples used year on year and slight changes in the questions asked from 'do you have regular use of a car?', to 'is there one car available for private use?' make direct comparisons difficult. The length of road in Scotland and type most frequently used is simply indicative of the rural nature of the country and lends little in building a picture of the traffic volume or vehicle use and is likely to remain the same for the foreseeable future. Traffic volume is, of course, an estimated figure and

caution should always be employed in relying solely on estimates, however the methodology used is consistent throughout locations across Britain and year on year and so provides a valuable snapshot of the situation.

In terms of the number of vehicles on Scotland's roads, all sources of information point to an increase in the number in 2007 from the previous year that is inline with, but less per head of population that Great Britain as a whole.

Road casualties

The following road casualties were noted in Scotland in 2007:

- 282 people were killed, 10% less than in 2006
- 2598 were seriously injured, a reduction of 12%
- There were 16,056 road casualties in 2007, 7% less than the previous year

Care should be taken in comparing figures not based on per 1000 population as Scotland's population is changing and declining in many areas. This is particularly important in the comparative decline in deaths between Scotland and Great Britain. It is suggested that there is a greater decrease in deaths and injuries on Scottish roads since 1997 than in Great Britain, but further analysis would be needed to relate this to the population.

Public transport

- The bulletin highlights a 1% increase in the number of passenger journeys on local bus services, but places less emphasis on the fact that this is only a 1% increase from 1996-97 compared to a 12% increase in Great Britain and a dramatic decline from figures in 1975. Bus journeys per head of population still remain higher in Scotland than in Great Britain.
- ScotRail passenger journeys have increased 5% from 2006-07 to 2007-08, lower than the increase seen in Great Britain and lower per head of population in comparison. Paragraph 4.5 of the bulletin is unclear but seems to refer to passenger numbers on all services in Scotland for which it says figures are not available for 2006-07 and 2007-08.
- Air passengers increased 3% from 2006 and 2007 to the largest recorded figure. For the past 10 years the number of passengers per head of population has been higher in Scotland than for the rest of the UK. No breakdown has been given as to the number of short-haul vs long-haul flights or a reason for this sustained disparity with the rest of the UK.
- In 2007 over 6 million passengers were carried on shipping services within Scotland, a 0.1% decrease on the previous year. The bulletin suggests that this can be attributed to the opening of the Skye Bridge, although this occurred 12 years previously. The ferry passenger statistics, unlike, bus, rail and air are not mentioned in the 'main points' summary at the beginning of the report.

Personal travel

It is not clear where all the data in this section originates from but it appears to be mainly from the SHS. Due to the previously discussed limitations of this survey, the source of each piece of information should be made clear. Key points include:

- 68% of people over 17 had a full driving licence in 2007, 78% of men, 60% of women. No figures are given for comparison from previous surveys.
- 45% of driving age said they drive every day with no figures to compare this to previously.
- 51% had walked somewhere in the previous 7 days. It was stated that this figure fluctuated from year to year 'presumably due to sampling variability' and therefore raises a query as to the purpose of including this statistic and whether a more suitable indicator can be found.
- The amount of people cycling as a mode of transport or for pleasure has remained constant since 1999.
- Two thirds of commuters travel to work by car, an 8% increase on previously according to the SHS while the Labour Force Survey (LFS) puts this figure as less than Great Britain as a whole. The bulletin, however, only gives LFS percentages for Scotland and Great Britain, not Scotland alone making the situation a confusing read.
- 53% of school pupils walked to school in 2007, 21% took the bus, 22% the car, 1% cycled and 1% went by rail. The bulletin only gives comparative figures for car trips to school which shows an increase of 16% compared to in 1999. It is interesting from consulting the tables that this increase is compensated by a decrease in use of buses and walking as modes of transport to school. Perhaps this should be included within the narrative.

Freight

- Freight lifted by road in Scotland in 2006 was 172 million tonnes, which by head of population is slightly higher than in Great Britain. Figures cannot be compared to those prior to 04/05 because of changes in survey methodology, but no narrative comparison is given between 2004 and 2006 which shows a slight decrease in the amount of road freight carried.
- Rail freight has increased slightly with coastal, coast-wise, inland and pipeline freight remaining almost constant from the previous periods.
- The amount of freight lifted by pipeline per head of population is significantly higher in Scotland than Great Britain, presumably due to the offshore oil industry, though this is not cited as a reason.
- In terms of kilometres carried, coast-wise shipping accounts for the largest amount of freight moved in Scotland followed by road freight.

No statistics regarding freight transport are summarised in the 'main points' summary of the bulletin. Is this because it is felt to be of little interest to the general reader? If so, does this section have a place in such a bulletin?

The tables presented following the statistics summaries are interesting to consult for those with a further interest and time to peruse. It would perhaps be of use to clearly cross reference all stats given to the table from which they are sourced which, in turn, would give the original data source. Consistency in figures presented for each section would also add clarity e.g. list table reference, original source/s, data for most recent period, comparison with previous period, comparison with long term trends, comparison with Great Britain (as per thousand population) and then shortfalls in data available/source. In places some additional narrative to explain the figures would be of use and presentation of all favourable and non-favourable stats in the bulletin should be presented in the 'main findings' summary section.

Electric Cars in Clydebank

Clydebank Housing Association has launched an e-car scheme in August. Car clubs have become more widespread in recent years and have been driving innovation in new technology for transport.

The new Clydebank "eCar" scheme will enable residents to ditch their oil burning cars in favour of a cleaner, greener, electric alternative. The eCars are charged using the excess power generated at CHA's own power station and will cost the residents £5.00 per day.

The cars cost less than 2p per mile to run and so make a very cost effective alternative to petrol and diesel powered cars. The scheme is the first of its kind in Scotland, and gives residents a low cost alternative to owning a car, whilst retaining the freedom of having use of a car when required. The introduction of the electric car scheme, combined with the existing Combined Heat and Power (CHP) system, will make Radnor Park one of the most environmentally sustainable communities in Britain.

The scheme also reflects resident's concerns about the lack of parking space in the area. Most residents use their cars to get their shopping once a week and owning a car is a major drain on their finances, due to the annual costs associated with insurance, maintenance and tax. The car club helps people to save money and drive the latest clean technology vehicles at the same time.

The Housing Association developed this scheme with grant assistance from the Communities Scotland. They also constructed a brand new car park with an additional 26 spaces to co-incide with the launch of the eCar scheme.

The cars are expected to be ideal for shopping trips. The pioneering scheme will also provide lessons for other parts of Scotland. Residents will also be avoiding the rising costs of petrol and Road Tax and doing their bit to protect the environment.

The initial pool of three cars may be expanded in the future, allowing even more of our residents to benefit from cheap, clean motoring. Clydebank Housing Association was formed in 1984 and currently owns and manages 1850 homes throughout the Clydebank Area.

Housing developments round the UK are increasingly putting in car clubs, making better value use of land than traditional approaches with more parking spaces.