

Low carbon transport

Andrew Adonis, Secretary of State for Transport

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Can I first thank Stephen Joseph and the Campaign for Better Transport for organising today's event, and for all they have done over the years to promote public transport and joined-up local transport systems – two causes close to my heart.

The diversity of this audience reflects the critical importance of cutting carbon right across the transport sector, and promoting green transport.

Transport today accounts for 21% of the UK's total domestic greenhouse gas emissions.

It is self evident that we need to invest in modern transport systems to support our economic recovery and meet future needs. But we need to be clear that "modern" means "green". Unless our transport industries help us meet our climate change commitments in the years ahead, they are likely to become increasingly uncompetitive as we move towards a low carbon economy.

So today, I want to talk to you about how we can meet the low carbon transport challenge together...

First, by supporting a shift to greener technologies and forms of travel...

And second, by encouraging people to reassess their travel options, providing a better, greener range of choices **within** and **between** different modes of transport, improving public transport, and promoting healthier, ultra green choices like cycling.

What's required is nothing short of a transformation in the way we plan, deliver and use transport.

A new way of thinking that puts Britain's transport designers, manufacturers, suppliers and operators on a low carbon trajectory, to help us meet our climate change objectives, and to ensure that British industry is enabled to take advantage of the significant opportunities presented by the green transport agenda.

There is no more fitting place to discuss these issues than the London Transport Museum.

From the early horse-drawn buses and trams, to the stunning Metropolitan Line Electric Locomotive from 1922, and the iconic Routemaster, Britain pioneered both transport systems, and transport industries, together. This should be no great surprise; it stands to reason that those who pioneer the demand for new products are also likely to meet that demand first, and to export their products when the demand becomes international. George and Robert Stephenson and Brunel designed and built locomotives as well as railways.

The trouble is that while we were brilliant at pioneering new transport systems, and meeting the associated demand in the 19th and early to mid 20th centuries, in too many areas we dropped out of the running in the 1970's. We need to get back into contention now. As Sir CK Chow, the irrepressible and in many ways visionary Chief Executive of Hong Kong's MTR, said to me recently when setting out Hong Kong's plans for new metro and high speed lines: "In the 1970s, we thought we were copying Britain. In the 1980s we thought we were copying Japan. Now we see there is no-one to copy, and we are writing the page ourselves."

Alas, there is too much truth in this.

In some areas, notably aviation, we have continued to write the page anew, but we need to be writing the page too on urban public transport, high speed rail, cycling, with low carbon and electric cars and trains, bus design, road design and more besides.

As long ago as 1847, George Stephenson told one of his protégés: “I have credit of being the inventor of the locomotive and it is true that I have done something to improve the action of steam for that purpose. But I tell you young man, I shall not live to see it, but you may, when electricity will be the great motive power of the world.”

Well, nearly two centuries on, most of our railways, and virtually all of our motor transport, remains unelectrified; and it is only this year, 179 years after the opening of George Stephenson’s Liverpool and Manchester Railway, that its electrification has been agreed.

Rumour has it that George Stephenson’s great great grandson decamped to Switzerland in about 1930 to electrify their railways, and that his great great grandson is an engineer at SNCF, building their 400 miles of high speed line over the next five years, including one of the world’s longest tunnels under the Alps, linking Lyons and Turin.

His son, in turn, is apparently studying at Imperial, and is tempted by the prospect of working on HS2, but is reported to have told Rail Technology Magazine: “This is England. It takes decades before anything happens on these new technology projects, so I’m off to China to work on that brilliant Beijing to Shanghai high speed line – 1,300 km, with fantastic new stations at each end.”

Maybe it’s just my optimistic nature, but as I look around this museum, I don’t feel nostalgic or dewy eyed about a bygone golden age for British transport.

Rather, I feel excited and inspired to think that what we’ve achieved in the past we can achieve again in the future.

What I see here is a celebration of British design, manufacturing and entrepreneurial excellence... just the skills and qualities we will need if we are to put transport on a more sustainable, low carbon footing.

Climate Change

Just as the industrial revolution inspired dramatic changes in technology, transport and society, so climate change does today.

It is the most urgent and serious issue facing humanity, and it’s something that our generation has got to deal with. Copenhagen is the next stage.

The scientific consensus shows that by 2050 we must cut greenhouse gas emissions around the world by at least 50%.

As a developed country, it is right that we go further. So we have passed the landmark Climate Change Act, and set ourselves a binding target to reduce the UK’s greenhouse emissions by at least 80% over the same period.

That’s a massive challenge for transport, but it’s also a massive opportunity.

Already in the UK, it is estimated that 50,000 companies employ 880,000 people in the low carbon market, and the sector is set to grow rapidly as we change the way we produce energy, the way we do business, and the way we travel.

Through our New Industry, New Jobs programme – part of Building Britain’s Future – we have set out a policy of industrial activism to equip businesses for the challenges ahead, so they can compete and win in the green economy.

Transport is at the heart of this industrial activism.

That’s why in July we launched our low carbon transport strategy, which very clearly spelt out how we are planning to make the fundamental, transformational changes required to meet the challenges ahead.

It means supporting our transport industry to provide low carbon transport choices, by funding and developing green technologies.

And it means promoting those choices to the travelling public, and encouraging people to change their travel habits.

Our goal is to make Britain a global centre for low carbon transport development, manufacturing and delivery. And a global leader in sustainable travel.

Low Carbon Vehicles

If transport is going to play a full part in meeting our climate change objectives, reducing greenhouse gas emissions from road vehicles must be our priority.

We have seen enormous changes in the motor industry over the past decade – both in the modernisation of plants and the development of cleaner vehicles. The EU New Car CO2 Regulation which we agreed in 2008 establishes a clear long term framework for action by the motor industry to reduce vehicle emissions.

We must continue to secure significant further improvements in fuel efficiency from the internal combustion engine, which will be with us for many years to come.

But the next stage in the low carbon vehicle revolution will be to unlock the market for emerging electric and hybrid technologies, and accelerate the transition to low and ultra-low carbon vehicles in this country.

The Government has already made a commitment worth around £400m to accelerate the transition to ultra-low carbon vehicles, and to encourage take-up and support the technology as it comes to market.

This includes customer incentives of between £2,000 and £5,000 a vehicle from 2011, when we expect these vehicles to come onto the market in volume.

In the summer we also announced the result of a competition run by the Technology Strategy Board. The £25m programme will see more than 340 ultra-low emission cars tested out in cities around the UK.

The competition was designed to act as a catalyst for the development of low emission vehicles, and brought together car manufacturers, energy companies, Regional Development Agencies, councils and our universities.

The result is a test-bed of demonstrator programmes in eight locations across the UK – from Glasgow to North East England, the West Midlands, Oxford, London and the South East – making it possible to showcase new and emerging low carbon vehicle technologies in real world situations.

This week we are taking a significant further step. The take-up of electric cars depends upon the development of electric charging infrastructure. Today I am launching a 'Plugged In Places' scheme, to set up charging points for electric vehicles at key parts of the network.

We are inviting bids for up to £30m of funding to create up to six pioneering cities and regions that will make e-mobility a reality in the UK within two to three years.

The fund – which will be allocated from 2010 – will enable thousands of charging points to be installed on streets, in car parks, and in commercial, retail and leisure sites, based around hubs to give critical mass. In these locations, it will be a viable option for drivers to move to electric mobility.

I see this as the start of a National Grid for Electric Vehicles.

I hope to see local authorities, businesses, development agencies and electricity companies come together to propose innovative schemes to help build local markets for electric cars.

Bids should show integration with other modes of transport, and support the uptake of electric vehicles in both public and private sectors. We will also be looking for consortia to match government bids with private sector funding and support to establish an effective infrastructure as quickly as possible.

Our aim is for ultra-low carbon vehicles to be an everyday feature on the roads of these pioneering regions in less than five years.

The Government is also publishing proposals to make it easier for councils and businesses to install charger points on streets and in car parks without needing to make a planning application.

The relaxation of the planning rules will help stimulate the development of a charging network, and support the uptake of electric cars across the country.

The purchasing power of the public sector is a vital part of stimulating the low carbon economy.

Vans are responsible for some 12% of this country's road transport emissions. We have announced a £20 million scheme for public sector fleets to trial up to 180 low emission and all-electric vans, supplied by four British companies – Ashwoods, Allied Vehicles, Smith Electric Vehicles and Modec.

From its Somerset base, Ashwoods is an expert in hybrid technology and LPG conversions – and the winner of the 2008 Green Fleet Award. Its hybrid conversion achieved a 14% CO₂ reduction in independent tests.

Modec is a leading electric vehicle manufacturer based in Coventry, which has vehicles already being used in large fleets like FEDEX and UPS.

Smith Electric has been at the forefront of the electric commercial vehicle industry for more than 80 years.

Glasgow's Allied Vehicles is an established supplier of electric vehicles as well as minibuses and wheelchair accessible vehicles.

The four companies will supply the vans for use by six large public fleets, including the Royal Mail, and the Environment Agency, and six local authority groups, including Liverpool and Leeds - with a view to rolling out more vehicles as the scheme progresses.

By offering vital support to British companies competing in the green technology sector, this scheme makes sound economic and environmental sense.

We are also working with our European partners to develop an ambitious and achievable regulatory mechanism for further reducing CO2 from new vans.

Buses

Public transport forms a central part of the Department's strategy to reduce road vehicle emissions, tackle congestion, and make transport more sustainable.

Bus patronage is now at its highest level for two decades, and through the Local Transport Act we have made it easier for bus operators and local authorities to work together and deliver better services for passengers. I am delighted that the CBT is helping some areas to make the most of these new powers. I also want buses to be easier for people to use. As we have seen in London, smart ticketing can make public transport more attractive to passengers, and has the potential to deliver quicker and more seamless journeys. We recently consulted on a smart and integrated ticketing strategy, and following a very positive response, I hope to publish our final plans shortly.

Buses play a core role in our low carbon transport plan. That's why we have reformed the Bus Service Operators Grant to reward operators who improve fuel efficiency. And it's why we are working hard to get new low carbon buses into the market.

Low carbon buses use at least 30 per cent less fuel and emit nearly a third less carbon than equivalent conventional buses. They have the potential to significantly reduce the impact of road transport on climate change, and meet the most stringent air quality emission standards to help improve air quality.

We are already a world leader in low carbon buses – through companies like Alexander Dennis based in Falkirk, and Optare in Leeds and Blackburn, which supply a range of vehicles to markets worldwide – but we want to stimulate the market further in the UK and across the EU to help reduce development and marketing costs.

So we have launched a £30m Green Bus challenge fund to encourage uptake of low-emission buses, and to boost jobs in bus manufacturing.

It provides support towards the additional up front cost of buying low carbon buses. Over the next two years we expect the fund to support the purchase of several hundred low carbon buses and, just as importantly, help to stimulate the development of a new green technology industry, and help safeguard up to 900 jobs in bus manufacturing.

We have received a strong range of bids, and intend to announce the winners before the end of the year.

Rail - Electrification

Moving to railways, rail electrification is a key plank in our green transport strategy.

Only 33 per cent of the British railway is electrified, compared to half the French, three-quarters of the Dutch, and the whole of the Swiss network.

So we have announced a £1.1bn package to electrify the Great Western Main Line from London to South Wales and the inter-city line from Manchester to Liverpool. And we are looking at the case for further electrification, including the Midland Main Line from London to Sheffield, and further electrification in the north-west.

The Great Western electrification will bring electric inter-city trains into Paddington, and along Brunel's classic railway for the first time. The eight year project will extend electric trains to Reading, Bristol and through the Severn Tunnel to Cardiff and Swansea, including commuter lines to Oxford and Newbury.

The passenger and operational benefits of electrification are huge. An electric train typically emits up to a third less carbon per passenger mile than a diesel train – and less than half as much as a private car and a quarter as much as a short haul plane.

As a result, these main line electrifications will pay for themselves over the medium term in reduced train and track running, leasing and maintenance costs.

The Great Western electrification will be integrated with both the £425m upgrade of Reading station and the £16bn Crossrail project, to which we remain wholeheartedly committed.

Electrification comes just as we are planning for the replacement of Great Western's 30 year old diesel Intercity 125 fleet, and for extra capacity on the Thames Valley commuter routes.

By working with our rail industry, it enables us to move directly to electric trains for most of these services, while also developing a hybrid diesel and electric traction Super Express Train to enable through running to destinations on the Great Western which will not be electrified within the current programme.

The £7.5bn Super Express Train contract represents the biggest single investment in inter-city trains in a generation. As part of the contract, Hitachi is constructing a state of the art train assembly and manufacturing facility here in the UK.

By bringing together British and Japanese expertise, technology and manufacturing capability, we will help boost and equip our rail industry to compete more effectively in the fast-developing international rail market.

Rail is already a cleaner form of travel than either road or air transport, but that's no excuse to be complacent.

I began by mentioning our great rail engineering forebears. Equipping our workforce with the skills to support new rail construction and maintenance is vital.

So today I can announce my backing for a bid to launch a National Skills Academy for Railway Engineering, to address skills shortages in the rail sector and to develop UK railway industry expertise.

The Academy would train railway staff at all levels, and equip apprentices with a broad range of design, construction and maintenance skills to support key projects like Crossrail, and our rail electrification programme. It will complement the Crossrail Tunnelling Academy, which will be set up next year to train 1000 people in tunnelling skills.

It's all about preparing Britain's rail industry for the future, and not just delivering a better, more efficient railway at home, but also selling our products and expertise abroad.

The Academy, if approved, could very likely have its first centres in Crewe and London.

I fully support its bid for funding from the National Skills Academy, for which a fifth competitive round was announced in this month's Skills White Paper.

I'm pleased to announce today that Terry Morgan – formerly chief executive of Tube Lines and now non-executive Chairman of Crossrail – will be the new chair of the steering group for the Rail Academy.

And can I also express my sincere thanks to the Railway Industry Association; to David Rayner, the current chair of the steering group; and Gill Howarth, the project director, for the tremendous effort and contribution

they have made to progress the Academy thus far. I know this initiative has the strong backing of industry and trade unions.

High Speed Rail

The fact that we are behind most other developed countries in building a high speed rail network is, in my view, a reflection of the reality that for too many years we saw the future of rail as one of steady and irreversible decline, and failed to develop a long term strategy for transport.

Over the past decade, far from following a downward trajectory, rail has experienced a stunning renaissance in Britain. High speed rail has the potential to take this transformation far further.

Not only could high speed rail increase capacity and slash travel times in the UK, it also has the potential to lower carbon emissions – as against alternative forms of inter-city transport infrastructure – by encouraging a modal shift of people and goods from road and air transport, and freeing up conventional track for other passenger and freight traffic.

International experience bears this out.

Before high speed rail just 24% of journeys between Paris and Brussels were by train. Since the introduction of a high speed line between these cities, the proportion of train journeys has more than doubled to 50%.

In Germany, high speed rail has proved so popular with passengers that Lufthansa has scrapped flights between Cologne and Frankfurt – little wonder when you consider that the new high speed line has slashed the 110 mile journey time by train from 2 hours 15 minutes to just under an hour.

Before high speed rail in Spain, 67% of journeys between Madrid and Seville were by plane and just 33% were by train. But, with the advent of a high speed line, the railway now takes an extraordinary 84% of the market.

Spain provides a fascinating and impressive model for high speed rail development not just in the rest of Europe, but worldwide.

In its first term in office, the Zapatero government spent £15.7bn as part of a 15-year, £60bn project to transform the rail network. Around 70% of this will be spent on high speed.

The aim is to have 6,200 miles of high-speed track in Spain by 2020, with the objective that 90% of the population will be no more than 30 miles from a station through which the train passes.

Spain has also been successful in attracting investment from major high-speed rail manufacturers and suppliers, and locating key production plants in the country.

Bombardier employs more than 500 at four different sites, and sees its partnership role with the Spanish government to add value to the economy, and to develop the country's railway expertise. The company has also located a key part of its manufacturing operation within RENFE facilities in Malaga.

But RENFE has also signed a series of alliances with other companies – including Siemens, Talgo, and Alstom – to manufacture and maintain high-speed rolling stock, and to maintain the network. Such is Spain's growing reputation as a centre of excellence for high speed that it is increasingly looking to sell its products and know-how abroad.

It is no secret that having studied international high-speed rail works, I believe its advent in Britain, north of London, is now just a matter of dates. But a huge amount hangs on whether we embrace high speed rail in this generation or the next, and I would like it to be this generation.

By the end of the year High Speed Two will have delivered a dedicated route plan for the first stage of a high-speed line between London and the West Midlands including all associated environmental and economic assessments. I have also asked it to recommend a broad route north to Scotland.

I am focused on developing a credible and plan for a new high speed network. The decision we take on the report on High Speed Two in the New Year will be the most important transport policy decision before the next election.

With the right plan, the right resources and the right commitment there's no reason why we couldn't have the first part of the north-south high speed line open and carrying passengers within ten to fifteen years.

A high-speed project would present massive opportunities for British engineers, British manufacturing, and Britain's rail supply chain.

Aviation and Maritime

Elsewhere in transport, the low carbon imperative is also opening up new opportunities and markets.

In January, we uniquely set a target to reduce CO2 from UK aviation to below 2005 levels by 2050, and to pose a challenge to the aviation industry to find more innovative ways of improving fuel efficiency. The Climate Change Committee will advise us on that target next month.

Clearly, though, this is a global issue that must be addressed within a global framework.

That's why we pushed – successfully – for the inclusion of aviation in the European Emissions Trading System, which will begin from 2012.

And that's why we have been leading calls to get international agreement to reduce carbon emissions from both shipping and aviation at Copenhagen in just a few days' time.

For both aviation and shipping our aim is to switch to progressively cleaner, greener aircraft and ships. We expect industry to drive and adopt technological improvements that will increase efficiency and reduce the environmental impact of these sectors.

At the same time, we recognise that – even in the longer term – the decarbonisation of aviation and shipping and the switch to alternative fuel sources will be more challenging than for rail and road transport.

But we recognise the crucial importance of supporting the aviation industry in its efforts to cut carbon emissions – for example, we currently provide tax relief of 130% to encourage companies to undertake research in the UK.

Since 2004, the Government has invested over £230m in collaborative research, matched by business, to develop lighter, more efficient aircraft. And we've provided significant investment to support Airbus, GKN and Bombardier Aerospace manufacturing facilities in the UK.

The industry has made recent advances in producing a biofuel for use in aviation. We have seen a series of successful test flights involving several airlines, including Virgin. But the emphasis remains on developing a truly sustainable biofuel for aviation.

Smarter Choices

I have already explained how we must offer accessible and viable low carbon options if we are to persuade people to change the way they travel.

But we need to do more to change people's travel habits, and particularly to reduce the dependency on car travel.

That's why I am so serious about improving stations and transport interchanges. We have also just launched the next stage of our Act on CO2 Campaign aimed at getting drivers to reduce their mileage by five miles a week.

It's a major initiative that focuses on five key ways to cut driving – including better journey planning, vehicle sharing, cycling and walking.

Through our Sustainable Travel Towns, we have shown that significant increases in cycling, walking and bus use are achievable given the right support and emphasis at local levels.

In the past five years the three Sustainable Travel Towns of Darlington, Peterborough and Worcester have seen car trips fall by around 9%, walking increase some 14%, and cycling increase by 12%.

Demand for car travel, for example, can be further reduced by introducing other measures like work-based travel plans, and car clubs.

I have also placed particular emphasis on the importance of cycling – not as an occasional travel option, but as a mainstream form of transport.

Increasing numbers of people are discovering that there is no healthier, more sustainable and cheaper way than cycling.

More than half of all journeys are five miles or less, so may be cyclable.

Although half of us own a bike, and 60% live just 15 minutes from a railway station, only 2% of train passengers travel to the station by bike.

So I am boosting cycling facilities at stations with a £14 million package of investment, as part of a wider focus on improving door-to-door journeys.

And I am encouraging employers to provide staff with much improved cycling facilities through the recently announced 'Cycle to Work Guarantee'. This will commit employers to provide their staff with safe bike storage, changing facilities and access to the Government's generous tax break scheme - 'Cycle to Work' - for new bikes and cycling equipment.

I hope all the large organizations represented here are signed up to the Guarantee; if not, perhaps I could have a word with you afterwards.

Cycling England has a three year budget of £140m, and is doing a lot of excellent work – including the designation of Cycling Demonstration Towns. Across the six towns, cycling levels increased on average by 27% over the first three years of the project.

And we recently announced that the Department will be funding Sustrans to the tune of £12m over two years to build cycling and walking links to schools, making it easier for children, and others living nearby, to travel on foot or by bike.

To be honest, our record on cycling in the past has been mixed, at best. But I am determined that cycling should be at the heart of all our efforts to put local transport on a more sustainable footing.

Conclusion

Let me return to the big picture.

The global market for low carbon and environmental goods and services was worth £3 trillion in 2007/08, and growing all the time.

Britain already has a significant slice of that market – worth £106 billion and employing 880,000 people directly and through the supply chain.

It is imperative that we compete effectively in the future.

And as I've explained today, transport has a dual role to play in this process.

First, investment in our transport system will provide the links and support needed to bring our economy out of recession. That's why we are absolutely committed to essential but sustainable transport infrastructure projects like Crossrail, rail electrification, and Managed Motorways, including hard shoulder running.

And second, by investing in transport that contributes to lower carbon emissions, we are building a foundation for sustainable growth in our transport industry for the future.

These two considerations are now inextricably linked.

Without an effective, efficient transport system, our economic recovery and subsequent economic growth would be hampered.

But without a clear strategy to promote transport that helps reduce our carbon footprint, we cannot hope to be competitive in the 21st century global economy, and neither our economy nor our society will be sustainable. That's why it's so vital that together – government, industry and transport professionals – we promote green transport for the future.

(This speech represented existing departmental policy but the words may not have been the same as those used by the Minister.)