

Reducing CO₂ emissions from vehicles by encouraging lower carbon car choices and fuel efficient driving techniques (eco-driving)

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Department for Transport - the role of government and my team



We are providing enough funding to fix 18 million potholes

The government is investing to make journeys better, simpler, faster and more reliable.

This will support jobs, enable business growth, and bring our country closer together



HS2 will drastically improve journey times

We are making journeys safer and more secure. We are making journeys cleaner and more sustainable.

My team's role is to support all these objectives in delivering a step change in how people drive their vehicle through promoting 'efficient', 'eco' or smarter driving.





Two examples of our commitment (a) The most comprehensive programme of ULEV market support in the world?

MANIFESTO

'Our aim is for almost every car an van to be a zero emission vehicle by 2050 ... and we will invest **£500m** over the next five years to achieve it.'

The Government has increased its funding commitment and set stretching goals

SPENDING REVIEW NOVEMBER 2015



The government will spend more than **£600m** between 2015-16 and 2020-21 to support uptake and manufacturing of ultra-low emission vehicles (ULEVs) ...and keep the UK on track for all new cars to be effectively zero emission by 2040.

Plug-in Car Grant

Other vehicles

Go Ultra Low comms campaign

Go Ultra Low Cities

Buses

Taxis

Chargepoint infrastructure

Hydrogen

Highways England

chargepoints

London

HGV gas infrastructure

Research and development

Battery prize

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(b) Over 1 Billion invested from 2011 to 2021 in sustainable and active travel

We want to double the number of journeys made by bicycle and will invest over £200 million to make cycling safer, so we reduce the number of cyclists and other road users killed or injured on our roads every year. (Conservative Party manifesto)

Cycling And walking	£374m	Between 2011/15 on supporting cycling (including £151m through the Local Sustainable Transport Fund).
	£12m	For Bikeability training.
	£15m	For cycle-rail to improve facilities at railway stations.
	£1m	To support the five cities under the walking cities programme.
	£191m	For the Cycle Ambition Scheme with £77m to 8 English cities to March 2016, and £114m over 2017/18 supporting a second phase.



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Frt Efficient driving - why do we care?

Around a **quarter** of UK total greenhouse gas emissions come from transport

Longer term solution ULEVs. Fossil fuels will remain dominant for the next 20 years - need interim policy solutions, focusing on cleaner more efficient fleets



Efficient driving can deliver 3-6% reduction in fuel and CO_2



repeatedly highlighted the potential for energy efficient driving to reduce emissions.

Fleets present a great opportunity, both in terms of carbon and cost savings



4.2 million commercially owned vehicles in the UK commercially owned vehicles in the UK. A business with 50 vehicles could save more than **£2,500/year**



5% of household expenditure, £37bn, goes on fuel. We could save **£50 per person**.





Wider benefits of efficient driving – improved air quality, faster journey times and reduced accidents

Poor air quality affects health and wellbeing

- Poor air quality contributes to 29,000+ early deaths each year, at an estimated annual cost £16bn+
- Average reduction of life expectancy of six months
- Other health problems respiratory, lung capacity, learning difficulties
- Growing evidence base of harm from NO₂ exposure eg children's lung-growth

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Congestion increases journey times and costs to individuals and to business

- Efficient driving leads to smoother driving that can help reduce traffic congestion and improve journey times
- Average speed on major roads during peak times fell by around 3% 2013-14 to 23.4 mph (37.5 kmh)



Each year over a 1000 people die, and 20,000 seriously injured on roads in Great Britain

 Particular interest in novice drivers.





New technology provides further opportunities for UK interests including connected and autonomous vehicles

- UK automotive industry £60.5bn turnover equivalent to £12bn to the economy.
- Equates to 146,000 manufacturing jobs
- Export opportunities for green technologies
- High value jobs in engineering industries





£3m to the Energy Saving Trust to offer business's advice

- The EST is an independent not-for-profit organisation which supports the Department in tackling climate change by:
 - delivering advice and hands on support to businesses and the public sector on ways to reduce the environmental impact of motoring;
 - delivering fuel efficient driver training;
 - and supporting OLEV in facilitating the uptake of electric vehicles.
- There is great potential in EST's work providing direct support and advice on fleet management and ULEV uptake to the public sector. For example, through this work package EST helped Birmingham City Council save over £2 million in costs.

Provide information on fuel efficiency to consumers and industry

- Policy on new and used car labelling
- Manage the publication of the fuel economy guide

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Investigate how behavioural insights can offer new ways to encourage greater fuel efficiency

- We have been working with others, to explore and test innovation in this area
- The Behavioural Insights Team (formerly from the Cabinet Office) are keen to conduct some trials to test technology and its impact on driver behaviour.







We have looked at the barriers and motivators to increased efficient driving by individuals and organisations

The biggest barrier to changing driver behaviour is that driving is habitual – people don't think about it, it's subconscious



There is also a lack of awareness of efficient driving behaviours – what they are and what the potential fuel cost savings are

But even if people are aware, most think they're already good drivers

UK drivers scored an average '6 out of 10' on an efficient driving scale





Well educated, affluent women aged 25-65, with low annual mileage using a small vehicle most likely to practise efficient driving

Rapid Evidence Assessment robust methodology: identified 245 international sources and reviewed 55 in depth



- Attitudes
- Emotions
- Social, cultural and moral norms
- Structural factors
- Cost
- Habit
- Knowledge and awareness
- Capability and self efficacy



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The key motivators for adopting efficient driving behaviours are cost savings and road safety

When asked to think consciously about it, people and organisations are motivated to adopt efficient driving techniques by:

Cost savings due to reduced fuel consumption



Some organisations also recognise other cost savings eg lower maintenance and insurance costs



Safety

Subconscious link – many safer driving techniques are also more fuel efficient, but it's safety that is driving the behaviour



Environmental factors are less important, but do feature for some people, and can be more important for **larger organisations** who are concerned about **corporate social responsibility**

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We could use behavioural insights in a number of ways

Media/communications

- Media campaigns could be used to increase awareness of efficient driving behaviours and their benefits
- Need to target carefully



Possibly less effective if people already think they are good drivers? Technology

- Technology can be effective, especially if it is the default/ autonomous
- If it's not the default, is there anything more we can do to ensure drivers take notice of

feedback on their driving from technology?

Driver training



- Timing could look at ways of embedding efficient driving techniques better into training of new drivers – so they form better habits
- Fleet drivers potentially easier to sustain change via employers (eg incentives)

A combination of measures is often most effective – to both change behaviour and sustain behaviour change



What more can we do to promote and support efficient driving?

Publicity and events









Support and endorse technological solutions



Options for the Highway Code and driving test





HARVARD BUSINESS SCHOOL

Department for Transport

> Motoring Services Strategy Consultation

> > Moving Britain Ahead

Campaigns





Questions?

