



Paper for presentation at the BIEE Conference – The Energy
White paper: An Academic Critique – 25th September 2007

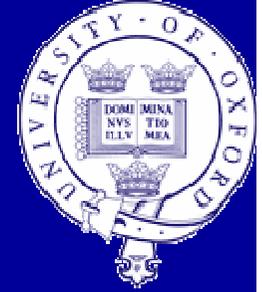


REDUCING ENERGY USE IN UK TRANSPORT

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The Context of the Energy White Paper



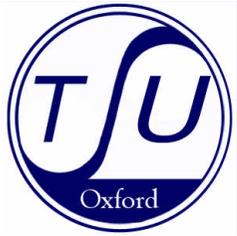
Transport – 25% of UK Energy and 27% of GHG

No explicit targets for transport – expected to make a contribution

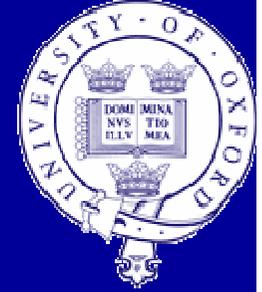
But evidence less convincing: 1990 – 2010

Relative contribution to CO₂ = 24.3% to 31.0%

Absolute increase in CO₂ = 14.3%



Fuel Duty Escalator in the UK



1993 3% then 5%

1997 7%

Increased price of fuel by about 20% (1994-2000) in real terms

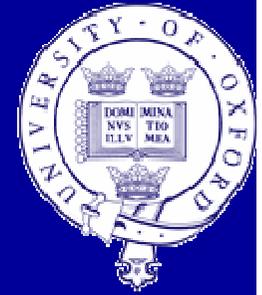
Reflected in lower demand and switching to smaller cars

Carbon emissions reduced by 1.9MtC (1994-2000)

Abandoned in 2000



National System of Road Pricing



Motivation to reduce congestion, not reduce CO₂ emissions





Options discussed in the 2007 EWP



1. Voluntary Standards for Fuel Efficiency – set at EU level. Current UK level 167.2 g CO₂/km with about 20% under the 140 g CO₂/km target – these do not work. Mandatory targets needed
2. Biofuels – adding 5% to diesel. EU Biofuels Directive means that 5% of all fuels in UK from renewable sources by 2010/11. The RTFO is the main mechanism to reduce CO₂ emissions in transport
3. EU Emissions Trading Scheme – to include aviation and land transport

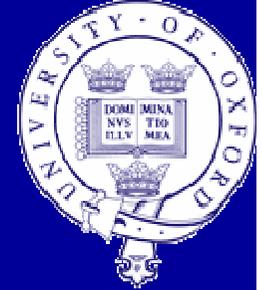


2007 Energy White Paper (2005-2020)

	Total savings =	3.0-7.5 MtC
a) Increased fuel efficiency – mandatory targets for new cars		1.8-4.1 MtC
b) RTFO – higher levels after 2010		1.0 MtC
c) Domestic aviation – ETS being extended to aviation		0.2-0.4 MtC
d) Behavioural change – unspecified but ETS for land transport central to this proposal		1.0-2.0 MtC



Conclusions on transport and EWP



1. Transport's role is an uneasy one – fuel duty escalator (abolished), voluntary schemes (ineffective), and policy interventions (unspecified)
2. Contribution of RTFO and biofuels limited
3. Transport emissions will continue to grow (+14.3% from 1990-2010), but at a lower rate than traffic growth +35%
4. Initiatives are coming from the EU – mandatory agreements, Biofuels Directive and the EU ETS



The Way Forward



Four basic ways to reduce energy consumption in transport

1. Making fewer trips
2. Encouraging modal shift away from the car
3. Reducing trip lengths
4. Encouraging greater efficiency in the transport system



VIBAT APPROACH



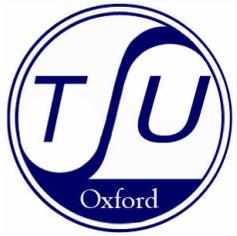
60% CO₂ reduction target in transport 1990-2030

UK domestic transport – 38.6 MtC to 15.4MtC

Two Images of the future – New Market Economy (+35%) and Smart Social Policy (-10%)

122 policy measures – 11 packages – clustered

60% is achievable with strong behavioural change and technological innovation – but only with Image 2



Conclusions



1. Important to open up the debate about the issues raised in the 2007 EWP with all stakeholders – barriers to implementation, sector based targets and making energy central to transport decision making
2. Raising public awareness and getting active involvement in seeking solutions – take ownership and individual responsibility for change
3. Low Carbon Transport Innovation Strategy, the King Review and the communications strategy on smarter driving – some progress



4. Air transport – huge issue not addressed here and only covered through the EU ETS in the 2007 EWP
5. Behavioural change must lead debate and actions needed, as technology innovation on its own cannot succeed