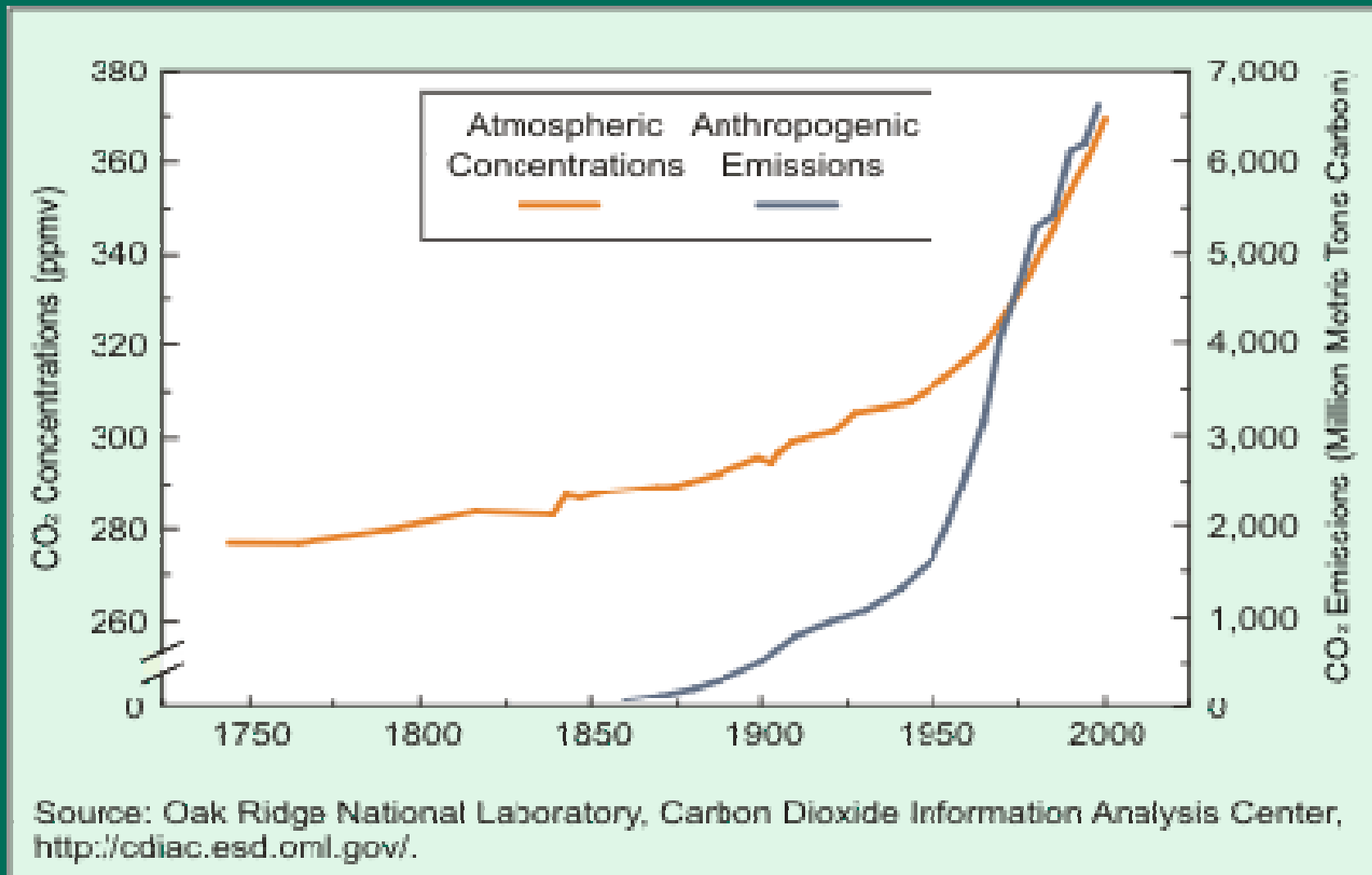


Biofuels: **turning policy into legislation**

Howard Emmens

Biofuels Strategic Policy Branch



Stern review: *The Economics of Climate Change*

Department for
Transport



“The scientific evidence is now overwhelming: climate change is a serious global threat, and it demands an urgent global response.”

“Ultimately, stabilisation – at whatever level – requires that annual emissions be brought down to more than 80% below current levels.”



Department for
Transport

“The draft Climate Change Bill creates a new legal framework for the UK achieving, through domestic and international action, at least a 60% reduction in carbon dioxide emissions by 2050, and a 26-32% reduction by 2020, against a 1990 baseline.”

dti

MEETING THE
ENERGY CHALLENGE

A White Paper on Energy

MAY 2007



At the summit led by the UK in 2005, EU leaders gave the European Commission a mandate to develop a common energy policy for the first time. In March 2007, the European Council approved an ambitious climate change and energy package to build a low carbon economy in Europe. The Council agreed:

- That developed countries should continue to take the lead by reducing their greenhouse gas emissions by 30% by 2020 compared to 1990 levels with a view to reducing them by 60% to 80% by 2050;
- that the EU should cut greenhouse gas emissions by 30% by 2020 compared to 1990 levels in the context of a global and comprehensive international agreement; and make a firm independent commitment to cut greenhouse gases by at least 20% by 2020;
- to implement the EU's energy efficiency action plan as the means of reducing the EU's energy consumption by 20% by 2020; and
- on a binding target of a 20% share of renewable energies in overall EU consumption by 2020, and a 10% minimum binding target for the use of biofuels.

dti

MEETING THE
ENERGY CHALLENGE

A White Paper on Energy

MAY 2007



Benefits of biofuels?

Department for
Transport

reduce
greenhouse
gases

increase
security of
fuel supply

encourage
rural development

support
agriculture

So are they the good guys?

....

... or the bad guys?



THE  **TIMES**

September 22, 2007

**Rapeseed biofuel ‘produces
more greenhouse gas than
oil or petrol’**

THE  **TIMES**

March 7, 2008

Rush for biofuels
threatens starvation
on a global scale

Prime Minister, 19 November 2007

Department for
Transport



• “I take extremely seriously concerns about the impact of biofuels on deforestation, precious habitats and on food security”

Prime Minister, 19 November 2007

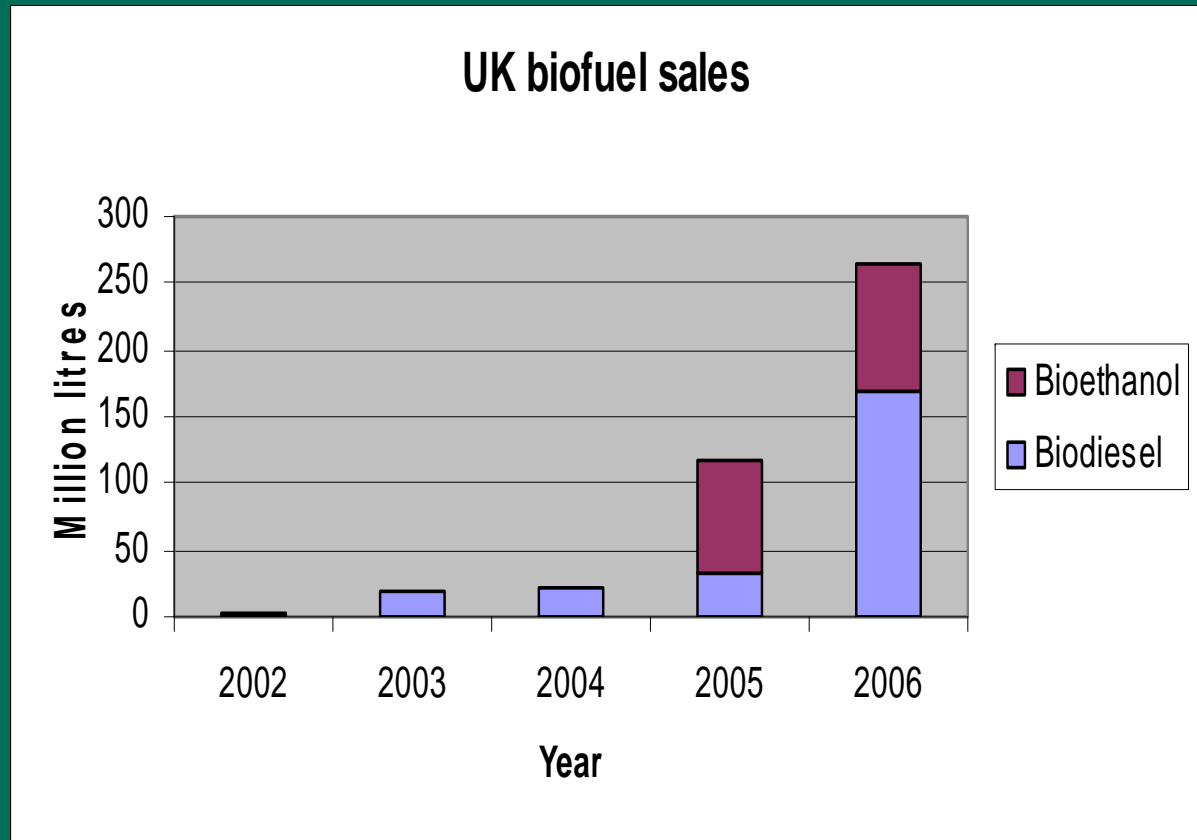
Department for
Transport



• “the UK is working to ensure a European sustainability standard is introduced as soon as possible, and we will not support an increase in biofuels over current levels until an effective standard is in place”

UK sales of biofuels

- Fuel duty incentives
- Some success, but not an ideal support mechanism
- RTFO will replace fuel duty incentives

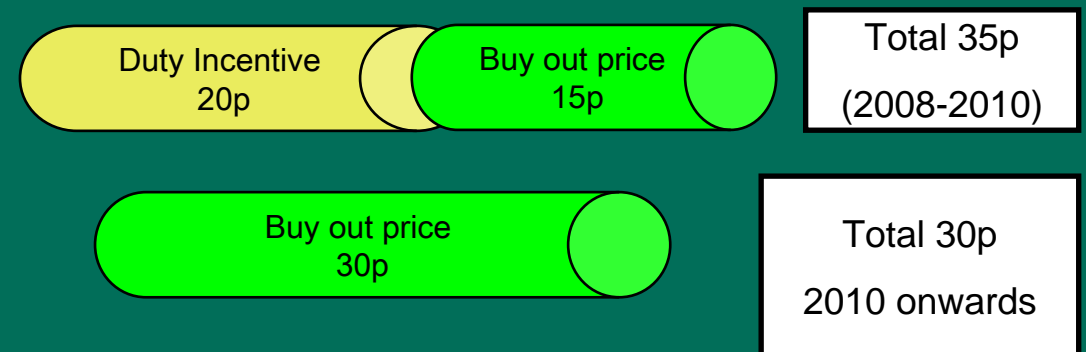


Renewable Transport Fuel Obligation *Department for Transport*

- came into effect in April 2008, requiring all suppliers of fossil transport fuels in UK to:
 - sell a given amount of renewable transport fuel each year (for which they receive certificates); or
 - purchase certificates from another company; or
 - pay a “buy-out” price
- the level of the RTFO has been set at 2.5% of total fuel sales in 2008, 3.75% in 2009 and 5% in 2010
- the RTFO will have created a demand for 2.5 billion litres of biofuel a year
- administered by the Renewable Fuels Agency (RFA)

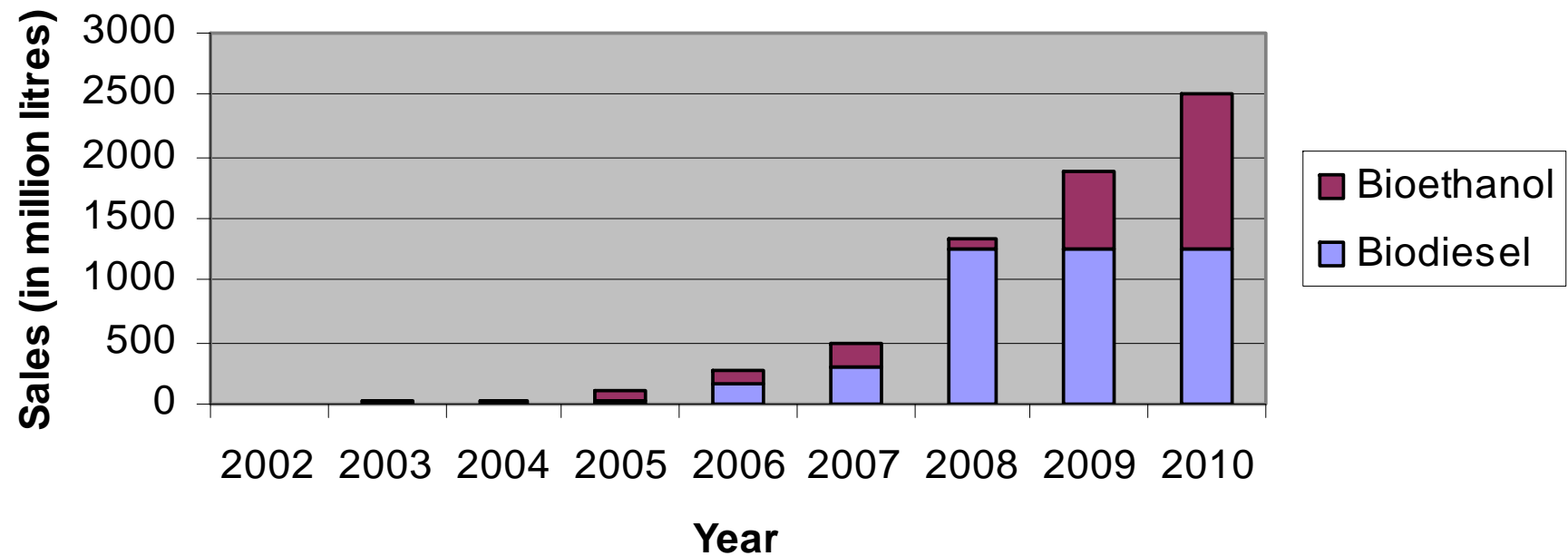
Buy out and duty incentive

- If a company cannot produce enough certificates at the end of each compliance period, it will have to pay a “**buy-out price**”, which goes into a **buy-out fund**
- For first two years of the obligation 2008/10, the buy-out price has been set at 15 pence per litre
- **This is in addition to the 20 pence per litre fuel duty incentive which remains in force for that period**
- Fuel duty incentive removed in 2010



Possible future sales

Possible biofuels sales with RTFO



What are we doing to get the right biofuels?

- RTFO includes a “carbon and sustainability” reporting mechanism
- Transport fuel suppliers have to report on the carbon savings and wider sustainability impacts of their biofuels in order to receive any certificates in respect of them
- Renewable Fuels Agency will report regularly to Parliament on impacts of the policy, and will draw attention to the performance of different transport fuel suppliers

Department for
Transport



Illustrative Monthly Data Sheet

Department for
Transport

Ref	Fuel type	Quantity of fuel (litres or kg)	Biofuel Feed-stock	Origin	Sustainability Information			Carbon Information		
					Env. Stnd	Social Stnd	Land use in Nov 2005	Carbon intensity	Impact of LUC	Accur-acy level
								g CO ₂ e / MJ		
3301	Bioethanol	250,000	Wheat	UK	LEAF	Mech + LEAF	Crop	72	0	2
3302	Bioethanol	100,000	Wheat	France	-	Mech	Crop	76	0	2
3303	Bioethanol	250,000	Sugar beet	UK	ACCS	Mech	Crop	45	0	4
3304	Bioethanol	1,000,000	Sugar cane	Brazil	-	-	Crop	19	0	2
3305	Bioethanol	500,000	N/K	N/K	-	-	N/K	72	N/K	0
3306	Biodiesel	1,000,000	Oilseed rape	UK	ACCS	Mech + RTFO	Crop	79	0	2
3307	Biodiesel	250,000	Oilseed rape	N/K	-	Mech	N/K	79	0	2
3308	Biodiesel	500,000	Palm oil	Malaysia	RSPO+ RTFO	RSPO+ RTFO	Crop	49	N/K	2
3309	BioCH ₄	150,000	Dry manure	UK	By-product	By-product	By-product	36	0	2
3310	Bio-ETBE	500,000	Wheat	UK	LEAF	Mech + LEAF	Crop	12	0	2

RTFO: Environmental and social principles

Environmental principles

1. Biomass production will not destroy or damage large above or below ground carbon stocks
2. Biomass production will not lead to the destruction or damage to high biodiversity areas
3. Biomass production does not lead to soil degradation
4. Biomass production does not lead to the contamination or depletion of water sources
5. Biomass production does not lead to air pollution

Social principles

6. Biomass production does not adversely affect workers rights and working relationships
7. Biomass production does not adversely affect existing land rights and community relations

Moving beyond reporting

- Announced in June 2007 that UK Government:
 - **from April 2010** aims to reward biofuels under the RTFO according to their **carbon savings**
 - **from April 2011** aims to reward biofuels under the RTFO **only if they meet appropriate sustainability standards**
- Provided that the above is:
 - compatible with EU and WTO rules; and
 - consistent with policy framework developed by the European Commission as part of review of Biofuels Directive

The EU dimension

Department for
Transport



- March 2007 European Council: 10% target for biofuels (by energy – equivalent to about 13% by volume) for 2020, to be introduced in a cost-efficient way
- Target binding subject to:
 - sustainable production
 - second generation biofuels commercially available
 - Amendments to Fuel Quality Directive to allow for adequate levels of blending

The EU dimension

Department for
Transport

Renewable Energy Directive



- draft published 23 January 2008
- 10% biofuels target (by energy)
- environmental sustainability criteria

The EU dimension

Department for
Transport

Fuel Quality Directive



- draft amending directive published 31 January 2007
- 10% greenhouse gas reduction target

The EU dimension

Department for
Transport



Core sustainability criteria

- European Parliament Environment Committee proposals for Fuel Quality Directive
- Commission proposals in Renewable Energy Directive
 - ❖ forests
 - ❖ biodiversity
 - ❖ carbon stocks

What does the science say?

- Review of indirect impacts of biofuel production announced by Ruth Kelly on 21 February
- being conducted by the Renewable Fuels Agency



“... future biofuel targets must take into account the latest scientific evidence about the environmental effects of biofuel production

We are not prepared to go beyond current UK target levels for biofuels until we are satisfied it can be done sustainably. The review ... will ensure that the full economic and environmental impacts of biofuel production are taken into account in the formation of UK policy beyond 2010.”

Gallagher review

- Recent evidence on the indirect or “displacement” impacts of biofuel production
 - ❖ The extent to which the production of biofuel feedstocks leads to land-conversion
 - ❖ GHG emissions arising from changes in land use and cultivation practices
- objective, evidence-based assessment of the risks and uncertainty and how this can be quantified

Second-generation biofuels

- Renewable Energy Directive: biofuels produced from wastes, residues, non-food cellulosic material, and ligno-cellulosic material would count double for national renewable energy obligations
- BUT report for DfT says that the use of tallow as a biofuel results in greater emissions
- ... there aren't always easy solutions



Website: www.dft.gov.uk/pgr/roads/environment/rtfo