The UK: a vision for ultra-low carbon vehicles

Office for Low Emission Vehicles

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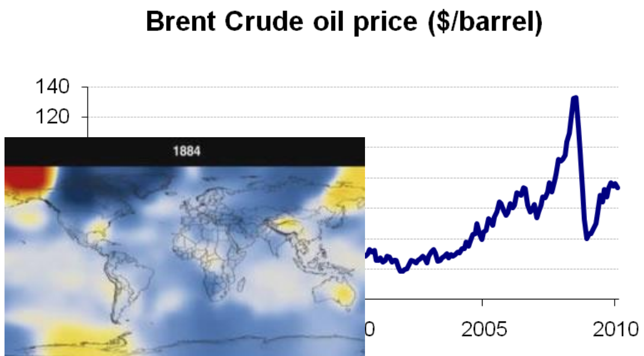
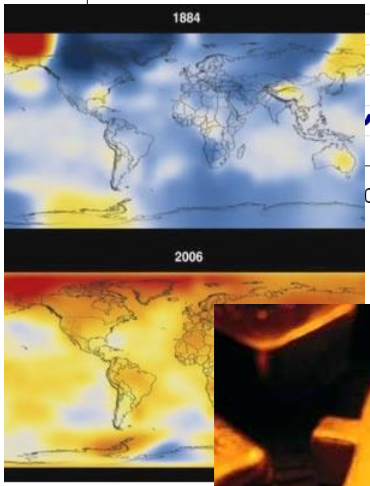
Ultra-low carbon vehicles: Scene setting

- Balancing three agendas: **climate**, **energy** and the **green economy**
- Climate - UK Greenhouse gas emissions targets are a legally binding **34%** reduction by 2022 and **80%** by 2050
- Energy - Uncertainties around the future supply/cost of oil; need to increase energy security
- Economy - A transformative shift to low carbon is an opportunity to re-invigorate the UK auto industry





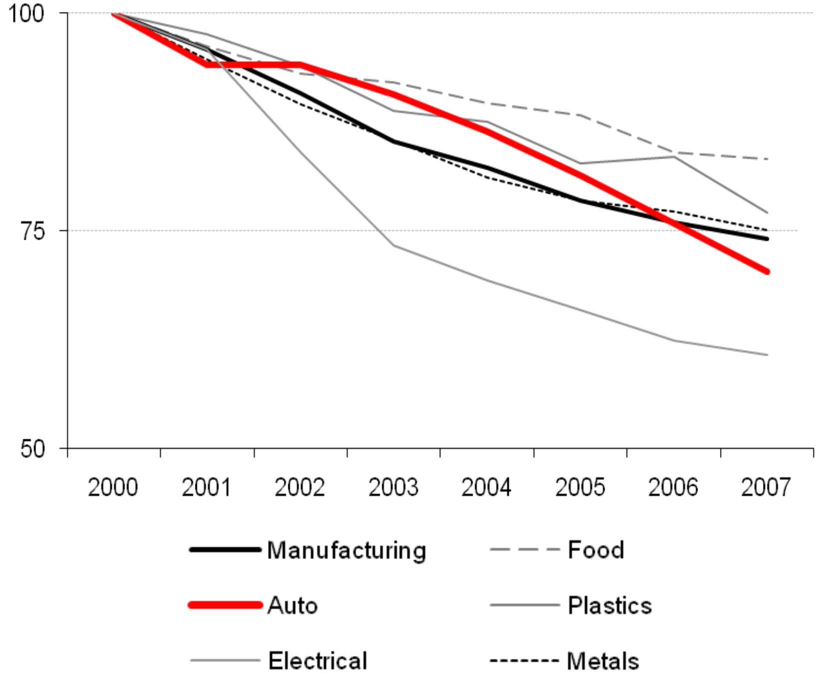
Vision

- Enabling the UK to stand at the global forefront of ultra-low carbon vehicle:
  - demonstration
  - development
  - manufacture
  - use
- Creating a flourishing early market for ultra-low carbon vehicles
- Supporting the optimal business environment for a company active in ultra-low carbon vehicles

A tale of two graphs

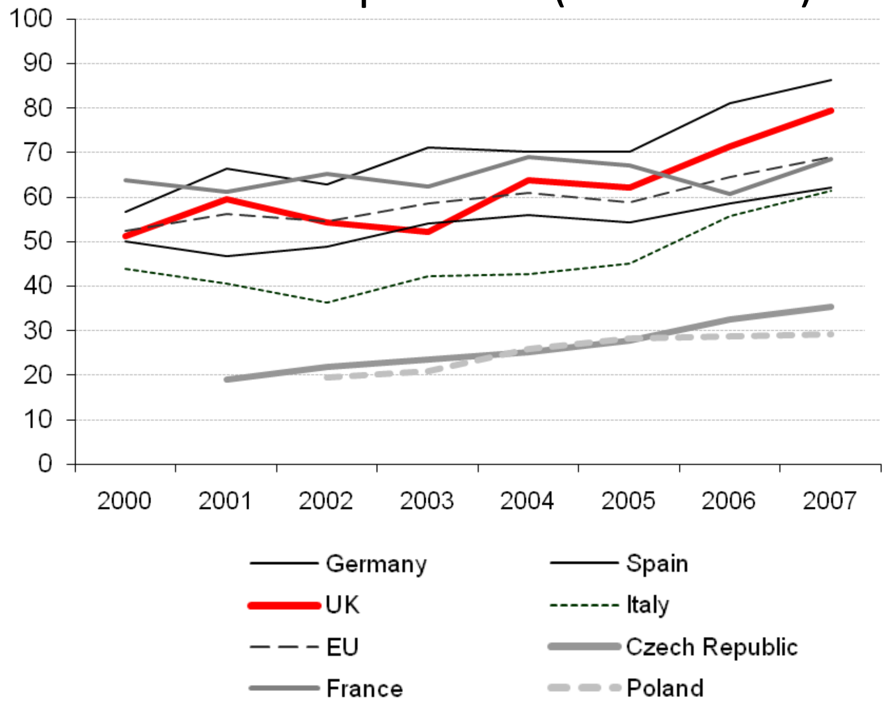
Employment trends

in UK industry (2000-2007)



Labour productivity

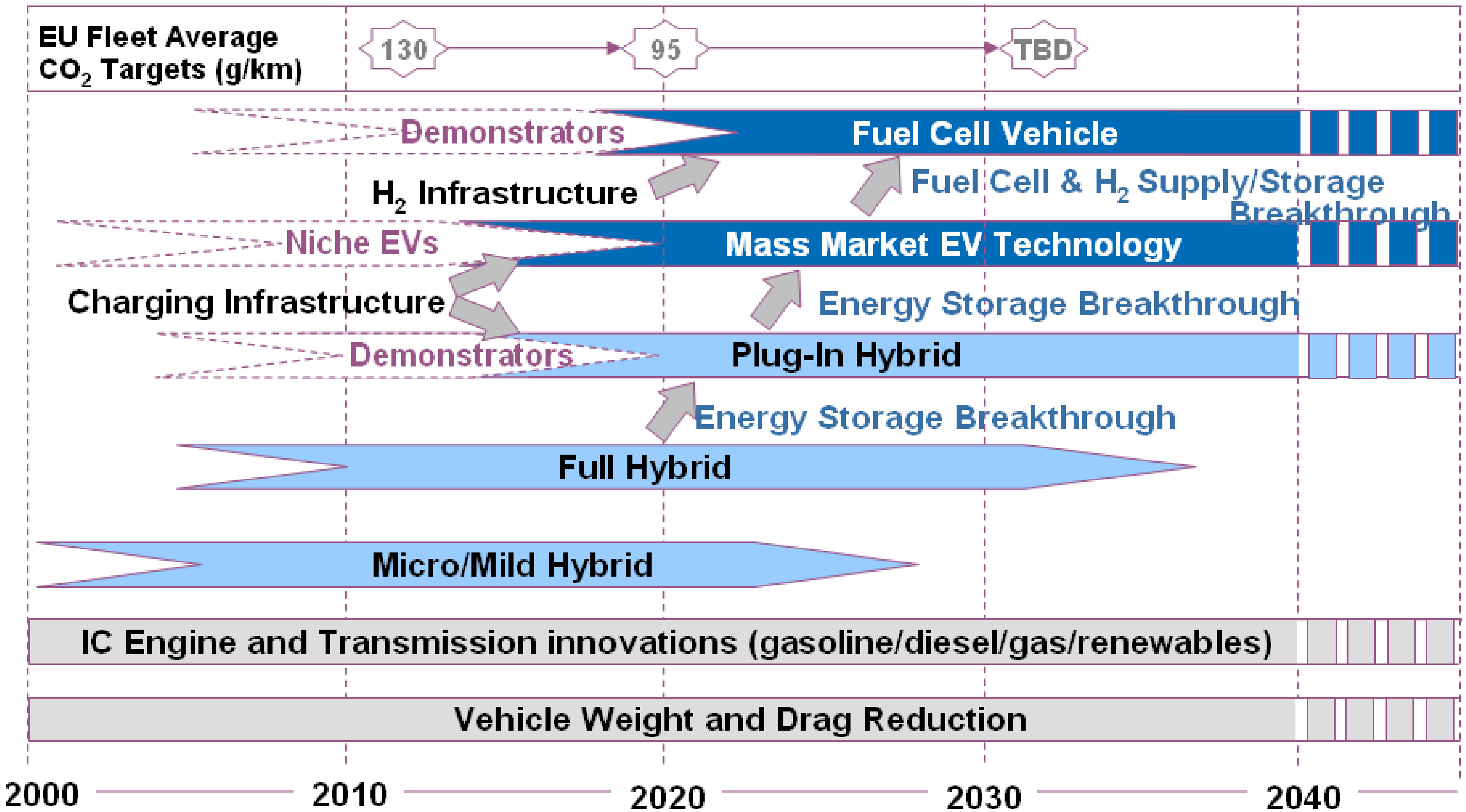
UK and comparators (2000-2007)



source: based on Howleg, The competitive status of the UK Auto industry (2009) http://www-innovation.jbs.cam.ac.uk/publications/downloads/holweg_competitive.pdf

but updated with best available data

A technology roadmap...



Supporting the transition

Demand

Places

Supply

Office for Low Emission Vehicles

- CO-ORDINATED DELIVERY AT PACE IS ESSENTIAL
- Developing and using vehicles that plug in to the electricity grid will require unprecedented co-operation both **across business sectors** and **between government and industry**.
- Office for Low Emission Vehicles:
  - All government come together with an agreed strategy and focus
  - A single point of entry into government for industry

Demand drives technology

Demand

Plug-In Car Grant

- 25% up to a maximum of £5,000 (€5,550)
- £230m (€255m) from January 2011 to March 2014

Vehicle Excise Duty (road tax)

- £0 for sub 100g/km cars

Enhanced Capital Allowances

- preferential rates for sub 100g cars

Company Car Tax

- 0% for electric vehicles

Local Incentives

- e.g. London congestion charge, free parking

Plugged In Places (£30m/€33m)

First successful places announced last month;

- London (City)
  - ‘Electric Vehicle Capital of Europe’
  - Congestion charge incentive
- Milton Keynes (Town)
  - A New Town with ambitious low carbon transport plans
- North East (Region)
  - Significant public and private partnership with industry (e.g. Nissan, Smiths Electric Vehicles, Avid)

Supply

- RD&D (£160m/€177m)
- Procurement (£20m/€22m)
- Skills support
- UKTi
- Clustering
- Knowledge sharing
  - *not forgetting UK best place in EU for doing business*[1]

[1] – World Bank, Doing Business, 2010 data

Example 1:
£25m ULCV demonstrator

Technology Strategy Board
Driving Innovation

- **Diversity** - 340 vehicles, 16 different manufacturers
- **Segmentation** - mini, supermini, C segment, MPV, luxury and sports
- **Technology** - Plug-in hybrid, all electric, hydrogen fuel cell
- **Feedback** - Users provide data on perception and use back to the trial – publicly available

Example 2: Clustering

Low Carbon Economic Area

in the North East for ULCVs

- Skills – Training College
- Industrial Base – e.g. Nissan, Smiths
- Innovation – Research park with test track
- Infrastructure – charging posts
- Procurement – local govt purchasing vans

It’s working

- Nissan – battery plant
- Toyota – hybrid Auris
- Infrastructure – being deployed
- Skills – people already being re-trained
- UK #1 most attractive market for EVs[1]
- What will come next…?

Frost and Sullivan (2010) – presentation at Reuben Power event March 2010

Thank you

… any questions?

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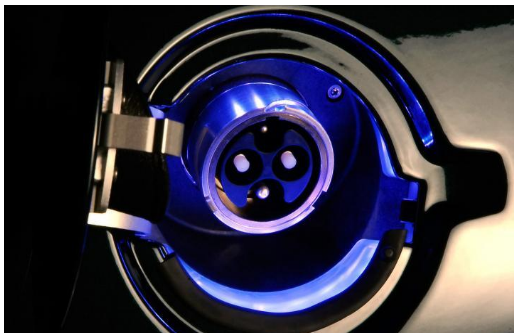
http://www.dft.gov.uk/pgr/sustainable/olev/

All exchange rate conversions to Euros calculated 16/3/2010

Plug-In Car Grant criteria

Vehicle Type
M1 and ECV, PHEV or H_2FCV



Emissions ceiling
75g/km or under

Performance –
Range 10/70miles
Max speed 60mph+

Safety
EC WVTA or if ss then other*

Warranty
3rs or 75,000miles (

Consumer Safety
UNECE Reg 100 compliant

* contact OLEV and we can provide full details