

Zero Emission Technologies: RISK, ECONOMICS AND FINANCE

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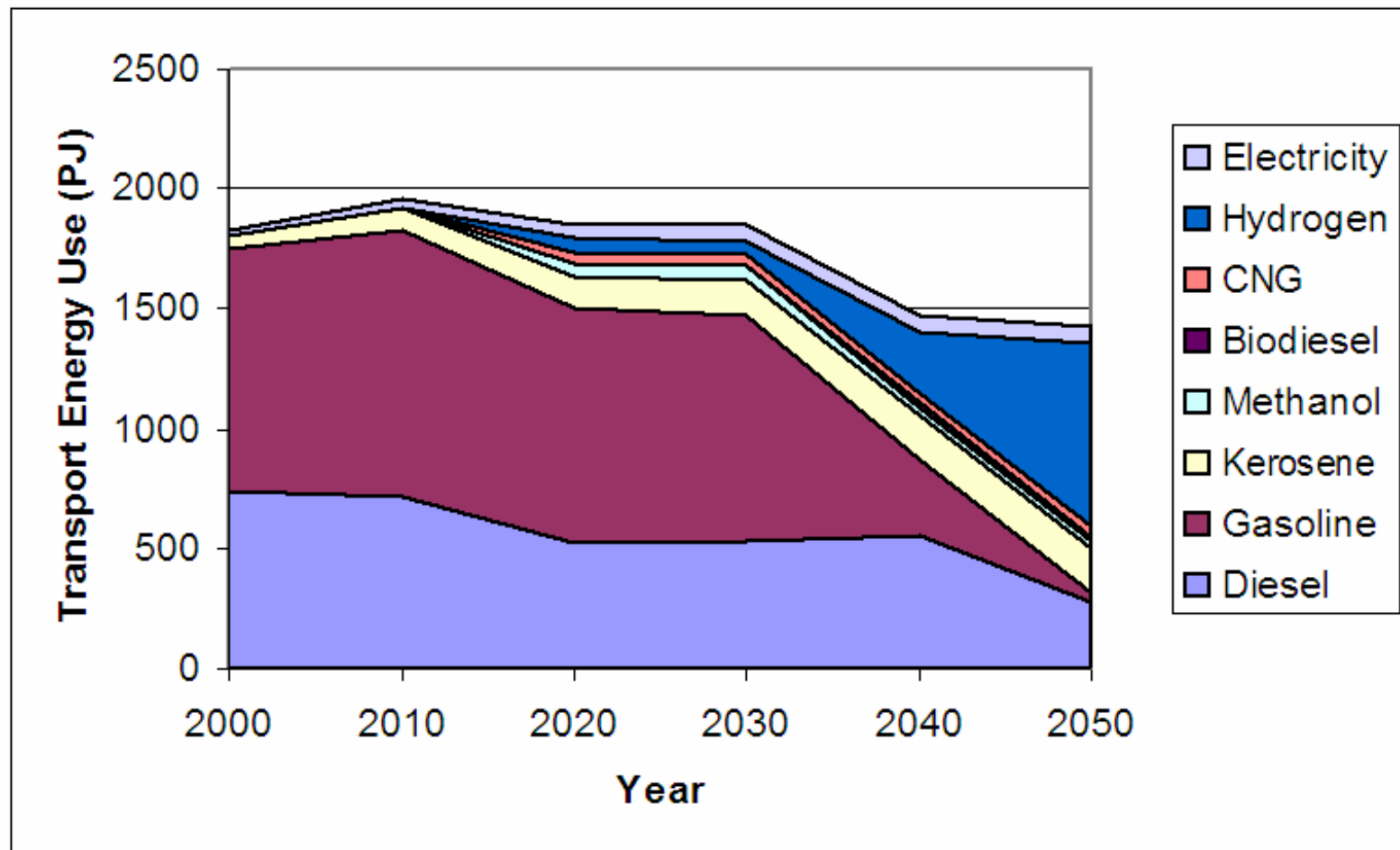
Department of Trade and Industry, UK

UK's Energy Policy White Paper

Key objective:

“putting the UK on a path to a 60% reduction in carbon dioxide emissions by 2050”

Energy Use in Transport - 60% CO₂ Reduction in 2050



Key Messages

- Carbon Dioxide capture and storage (CCS) potentially could be a major element of a low carbon energy economy.
- On a trajectory to a 60% reduction by 2050 CCS is a medium term (2020-2030) technology.
- There is an “economic gap” with conventional technology, therefore commercial deployment requires a sufficient value to be placed on carbon abatement.

The Economic Gap is comparable to other low carbon options

Abatement Cost Estimates for 2020/25 (£/te CO₂)	
Energy Efficiency	-70 - +10
Onshore Wind	0 - 35
Offshore Wind	45-130
Energy Crops	40-50
Wave Energy	30-120
PV	600-870
Nuclear Power	30-50
CCS-sequestration	34-93
CCS-EOR	6-50

Niche opportunities for early demonstration/deployment

Putting together a range of support options:

- Getting some value for the emissions abated (EU ETS)
- Capturing collateral benefits (EOR, ECBMR)
- Tax treatment for additional oil production

Issues to be resolved

- Authorisation and regulatory standards
- Compliance with Legal Frameworks
- Monitoring and verification standards
- Inventory/accounting framework
- Long term ownership/transfer