



Biofuels for transport in the UK: status and prospects

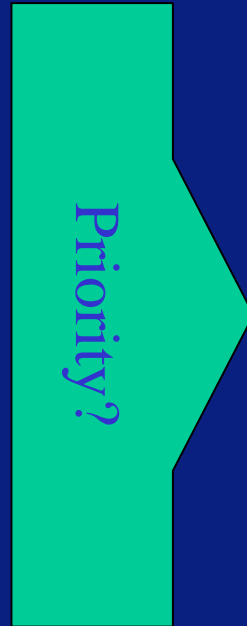
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SAE Fuels and Lubricants meetings, 10 June 2004

Different alternative and renewable fuels and fuel chains offer solutions to a number of issues

- Energy security
- Climate change
- Air quality
- Rural development



Priority affects the fuel choice and its supply chain

Biofuels seen as important part of meeting energy and environment objectives over the long term

EU communication on alternative fuels

- alternative fuels should represent 20% of transport fuel energy by 2020 (indicative 8% biofuel contribution)

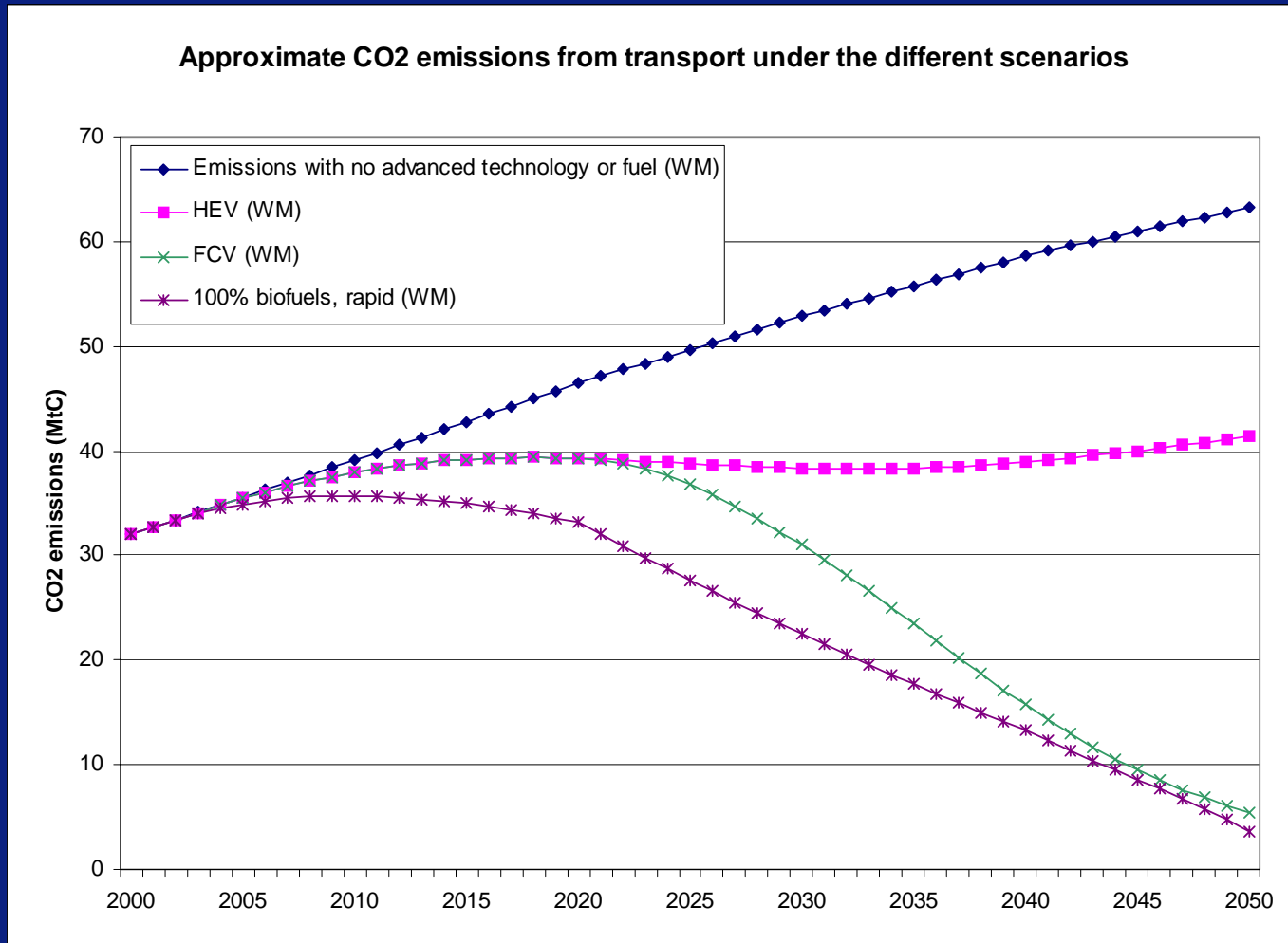
EU directive on biofuels

- 2% transport fuel energy by 2005 and 5.75% by 2010

UK Energy White paper:

- suggests that the overall energy implications of large-scale use of biomass-based fuels and of a hydrogen economy need to be assessed
- suggests that roadmaps for the possible transition to these fuels need to be developed

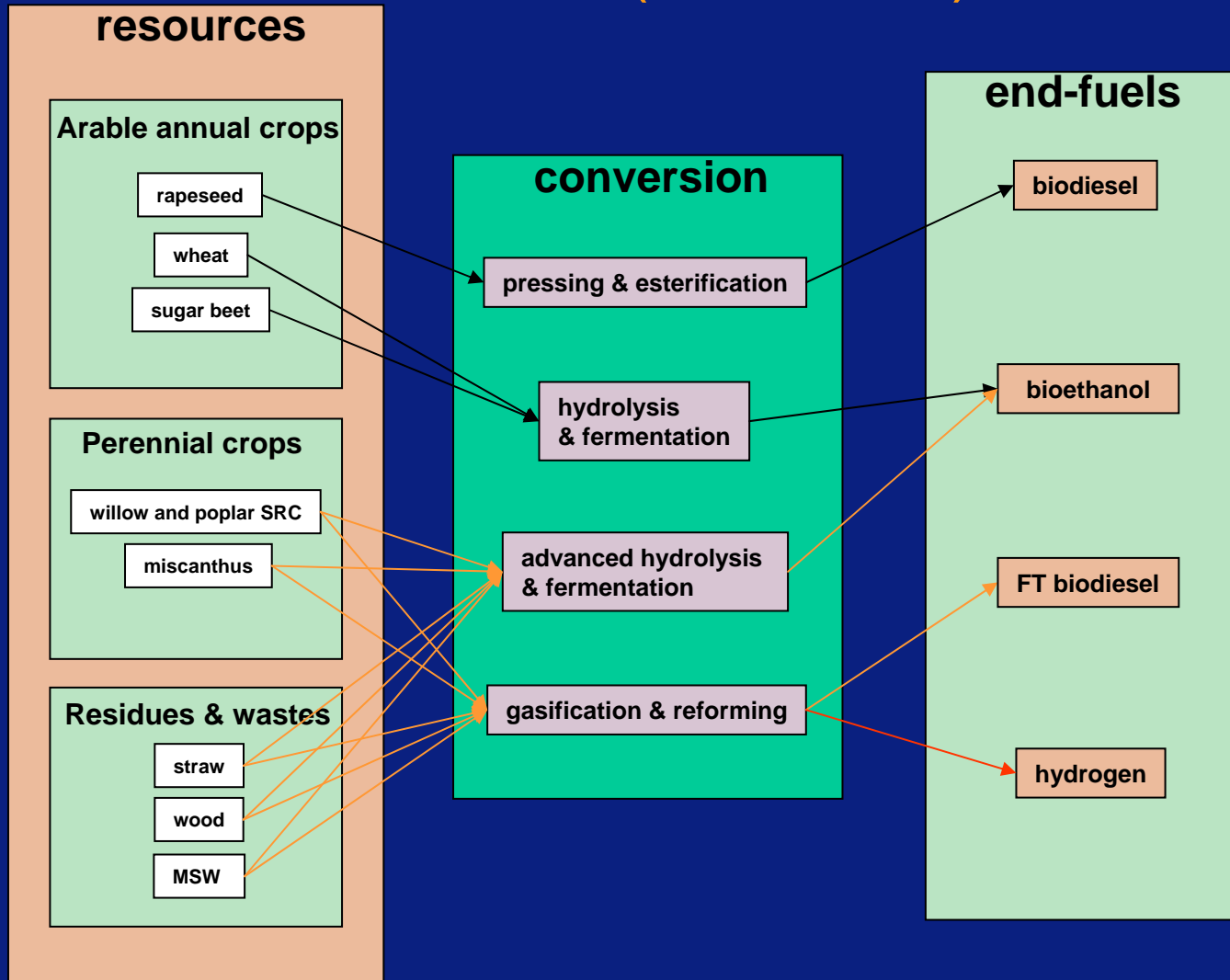
Energy and CO2 reductions from vehicles likely to be limited as a result of growing vehicle use



Very small production and use of biofuels in the UK at present

	Production	Use	Incentives
Biodiesel	Small UK production – expected to reach 230MI in 2005, mainly from waste vegetable oils and animal fats	5% biodiesel blends are available from around 110 sites in the UK, with 20% blends and 95-100% blends also available from a very small number of sites.	Eligible for a 20p/l fuel duty reduction – guaranteed for next 3 years
Bioethanol	No production in the UK. One plant in the planning	No use of bioethanol in the UK	Eligible for a 20p/l fuel duty reduction – guaranteed for next 3 years

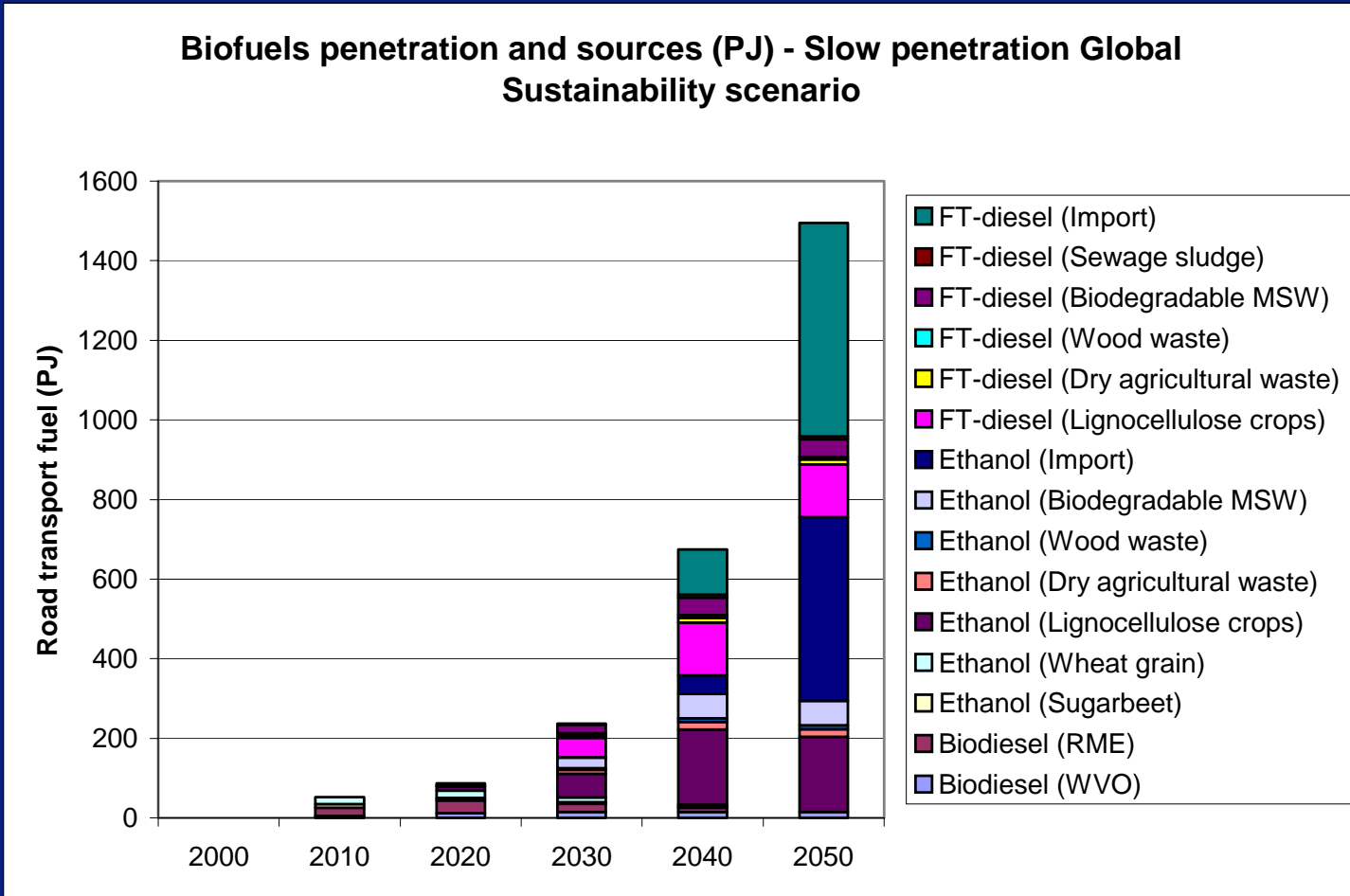
There are a number of options for increased biofuel production in the UK (over time)



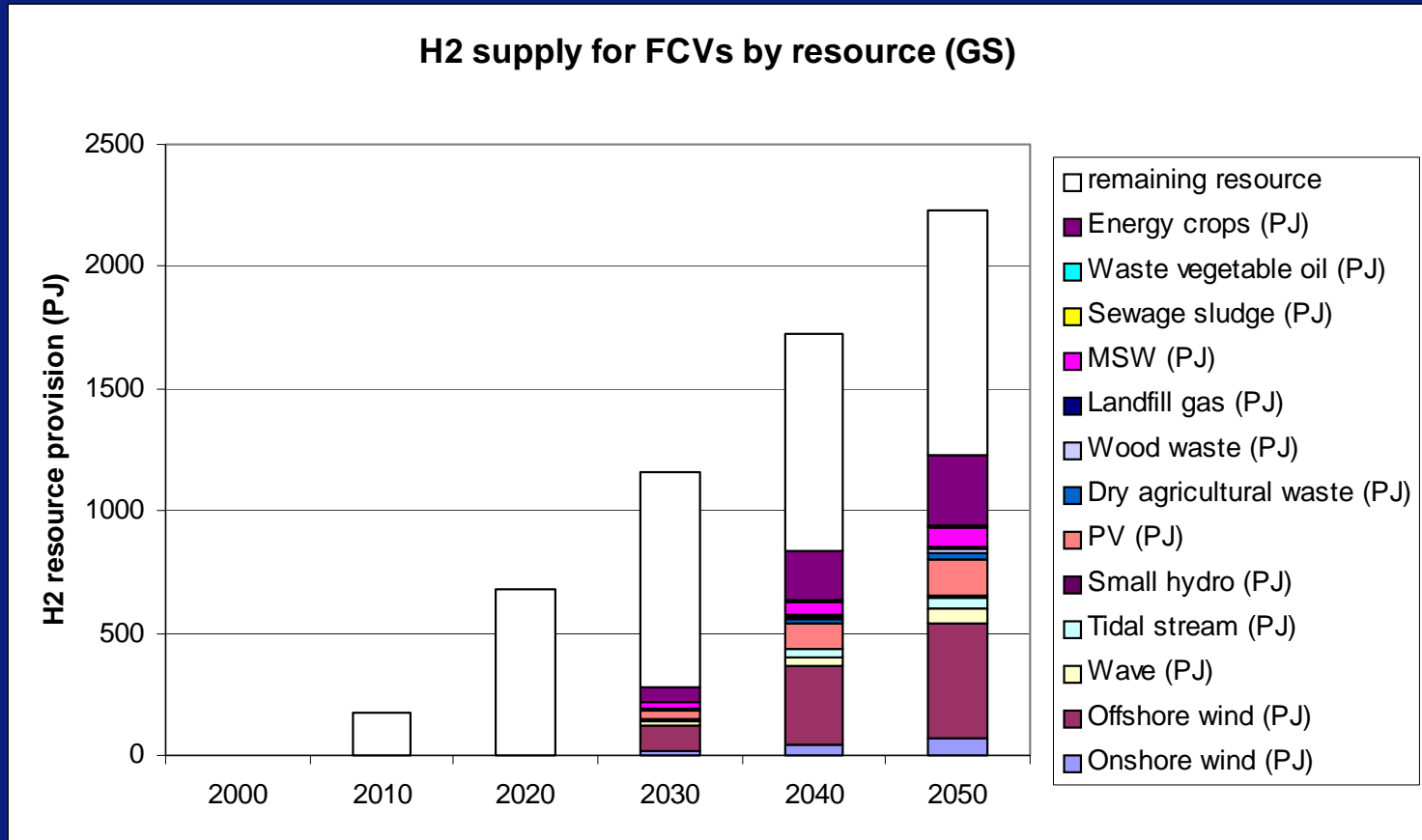
Other fuels could be produced from these routes such as DME, methanol, biogas

- commercial today
- commercial 2010-2020
- commercial 2020-2030

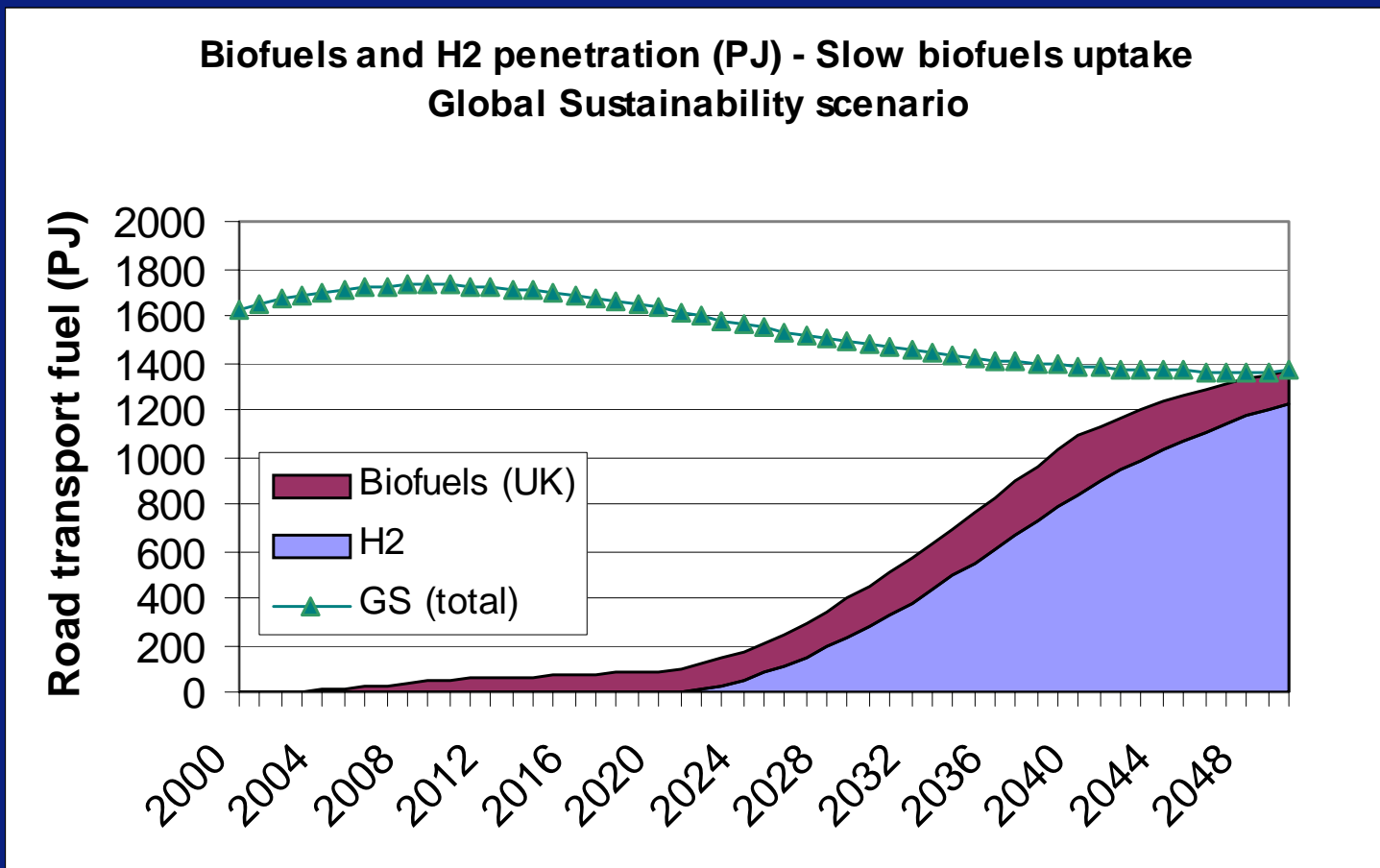
Liquid biofuels based on indigenous resources could produce at most one-third of UK transport



Hydrogen from a variety of UK renewable resources could cover UK road transport fuel



A possible future could comprise a mix of liquid biofuels and hydrogen



A number of issues need further consideration to assess the full implications of biofuel use

- Evolution of demand for biomass outputs and biofuel mix?
 - Policy, regulation, end-use technologies, infrastructure, industry and consumer preferences
- Supply chains and role of imports?
 - Resource potential, distribution and conflicts; biofuel production technologies and infrastructure
- Trade-offs between different biomass options?

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References

- Technology status review and carbon abatement potential of renewable transport fuels in the UK, ICEPT for DTI
- Liquid biofuels and hydrogen from renewable resources in the UK to 2050: a technical analysis, E4tech Ltd for DfT

Acknowledgements

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