

Title: Alternative Road Transport Fuels -- A Preliminary Life-Cycle Study for the United Kingdom

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Summary:

A number of alternative transport fuels exist which offer the prospect of reducing emissions cause by UK road transport and improving efficiency. This study has examined the overall economic, energy and emissions implication of fuels, namely petro, diesel, liquefied petroleum gas (LPG), compressed natural gas, electricity, biomethanol, bioethanol and biodiesel, in a national context. The analysis is reported in two volumes: this overview report which summarizes the major results and implications and a volume showing detailed findings. Light goods vehicles are considered to be one of the most likely first applications of alternative road fuels and have been selected as a basis for comparison of the fuels in a number of tests in this overview.

For the reduction of urban pollution, the most appropriate alternative fuels are LPG, natural gas, electric power and alcohol fuels. With respect to greenhouse gases, biofuels have particularly low life-cycle CO₂ emissions; natural gas and LPG also give CO₂ savings compared with petrol. Particular issues limiting the market penetration of alternative fuels are: economic competitiveness, security of fuel supply, harmonization of fuel distribution, and availability of maintenance services. However, there are certain market segments where early uptake of those fuels could be envisaged, in particular, among fleet operators who can dispense fuel from a central depot to vehicles operating in a limited geographical area. LPG and natural gas seem the most likely fuels for early introduction. Nevertheless, petrol and diesel will remain the major fuels for the foreseeable future.

Market Segment: General Interest

Accessibility: Private

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