



The Royal Academy
of Engineering

Consultation on the Draft Renewable Transport Fuel Obligations (Amendment) Order 2009

Response from The Royal Academy of Engineering to the Department for Transport

December 2008

1. The Royal Academy of Engineering is pleased to respond to the Government's consultation on the Draft Renewable Transport Fuel Obligations (Amendment) Order 2009. The response has been compiled from contributions of Fellows of the Academy with expertise and experience of the issues involved. We would be pleased to expand on any of the points raised.
2. In choosing which option the Renewable Transport Fuel Obligation (RTFO) level should be set at, two main considerations must be taken into account. Firstly, the environmental issues of sustainability and emissions of greenhouse gases; and secondly, the economic issues surrounding the expansion of the biofuels industry.
3. Given that the purpose of the RTFO is to help deliver significant reductions of greenhouse gas emissions from the transport sector, this must be the primary concern and failure to deliver cannot be tolerated. Clearly, following the initial widespread belief that all biofuels would necessarily provide such emissions reductions, it is now accepted that this is not the case. The work done by organisations such as the Royal Society¹ and, in particular, the Gallagher² review is to be commended. This would indicate that while certain biofuels can contribute to reductions in greenhouse gases, some do not. In addition, the introduction of biofuels can have potentially detrimental effects on land-use and food prices. It is clear, therefore, that each biofuel must be judged on its own merits and all aspects of its production must be taken into account.
4. Recently, the Government has committed itself to demanding renewable energy and emissions reduction targets both domestically and within Europe. If these are to be met, the transport sector will have to play its part. Other low-carbon options are available such as hydrogen fuel cells and electric vehicles. These are to be encouraged, but at present, blending biofuels with traditional hydrocarbons represents the most straightforward means of introducing renewables into transport, particularly in terms of infrastructure and the current vehicle fleet.
5. The major difficulty associated with the promotion of biofuels is how to ensure the sustainability of the biofuels being used. The trade in biofuels is worldwide and robust, quantitative international standards are still to be developed. Progress is being made but it is a complex issue that will require a great deal of effort. This has caused a number of organisations, including the Environmental Audit Committee³, to call for a moratorium on the use of biofuels in the UK; freezing the level of the obligation until mechanisms are put in place that can objectively quantify the sustainability of a particular biofuel. This point of view is understandable and indeed, some Fellows of the Academy are sympathetic to this approach.
6. There is, however, a serious concern that freezing the level of the RTFO at its current rate would have a detrimental effect on the fledgling biofuels industry in the UK. The Government, by implementing the RTFO, sent out a strong signal to industry that there would be continuing and increasing support for biofuels in the UK. On the strength of this policy, a number of companies have been set up to produce such fuels, the majority of which are run on the highest possible environmental standards. To significantly alter the RTFO, particularly in such difficult economic conditions, would seriously undermine these companies' ability

¹ <http://royalsociety.org/document.asp?id=7366>

² <http://www.dft.gov.uk/rfa/reportsandpublications/reviewoftheindirecteffectsofbiofuels.cfm>

³ http://www.parliament.uk/parliamentary_committees/environmental_audit_committee/eac_210108.cfm

to plan for the future and manage the financial risks faced by any business. Sending out such uncertain signals might therefore have the effect of scuppering the emerging biofuels industry in the UK at a time when the UK is looking to expand its renewable energy industries. For this reason it is felt that the option to freeze the RTFO at its current level would not be the correct choice.

7. Overall, it is the opinion of the majority of Fellows who made their views known that the most sensible way forward is to adopt the recommendation of Professor Gallagher to slow the rate of increase of the RTFO while sufficient controls and standards can be implemented. This should still allow biofuels companies in the UK to plan for expansion but at the same time temper the overly optimistic policies that were put in place before the limitations of biofuels were fully understood. It is also felt that the RTFO is still the most effective mechanism for encouraging the use of biofuels in transport. It is important that if this approach is adopted that the Government keep the situation under close review so that any developments can be quickly implemented. This should include support for biofuels research and development, here and internationally.
8. In terms of 'second generation' fuels: this covers a wide range of technologies, some of which are close to being commercially viable with the right market incentives and some of which require very significant levels of development. The UK should aspire to be a centre of international development into the long-term future, building on continued expansion of first-generation biofuels.
9. There are significant research and development challenges to the next generation of biofuels for road, rail, shipping and aviation made from low-grade feedstocks. We should aspire to see a series of well-conceived pilot plants of increasing scale being built in the UK using public and private sector funding. Beyond such development funding, any market mechanism needs to take account of both the greenhouse gas emissions reductions and the difficulty of penetrating the market.
10. It will be important to ensure that the transition from first to second generation fuel is smooth and timely. There is concern that the transition could be hampered by being locked in to first generation manufacturing processes as the plant equipment will not be adaptable to second generation fuels. The increased yield from second generation fuels should ensure a certain level of incentive to switch technologies, but it is incumbent on the Government to ensure that this is sufficient for industry to move to the more sustainable product.
11. In conclusion, the Royal Academy of Engineering supports the recommendations of the Gallagher Review, in particular the need for a slowing of the rate of increase of the RTFO. The changing status of biofuels as a technology to help combat climate change highlights the complexity of the problem. It shows that policies must be considered carefully in light of the best available scientific and engineering evidence and that turning forecasts and targets into reality can prove problematic.

Submitted by:
Mr P Greenish CBE
Chief Executive
The Royal Academy of Engineering
3 Charlton House Terrace
London SW1Y 5DG

Prepared by:
Dr Alan Walker
Policy Advisor