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RESPONSE TO ENERGY REVIEW

Cargill is an international marketer, processor and distributor of agricultural, food, financial and industrial products and services. It is our belief that the UK agricultural industry can, by using suitable set-aside land and, more importantly, land currently used to grow wheat which is not needed by the domestic market, quickly produce sufficient oilseed rape to supply some 3% of the UK’s diesel requirement. Oilseed rape is a crop which can be used to produce transport fuels that are renewable, have security of supply and are diverse and which therefore, are perfect fuels of the future. Cargill welcomes the opportunity to submit evidence to the Performance and Innovation Unit's Energy Review, and notes the comments of Lord Sainsbury in June this year: *"If a review [of energy] were to take place, it would need to be open-minded, and to consider the contribution that all sources of energy can make to our objectives" (Official Report, 25 June, cl 127, emphasis added).* We agree that the present situation means that all options need to be considered, but wish to draw the PIU's attention to the huge potential of biofuels. Biofuels are already widely used in the US and Europe and have proved themselves to be a viable fuel.

One of the key energy issues facing the UK at the moment is the need to fuel our apparently insatiable demand for transport. DTI statistics show that transport is responsible for 34% of final energy demand in the UK *(Digest of UK Energy Statistics 2000, DTI/National Statistics, 2000 Edition).* This is projected to rise to 38% by 2020. At the moment, the vast majority of this is satisfied by carbon-based fuels, and whilst the proportion of final energy demand taken up by transport continues to increase, the supply of carbon-based fuels continues to decline. The DTI's own submission to the Energy Review shows that if current trends continue, UK oil production will *"fall from around 129 million tonnes in 2002 to around 88 million tonnes by 2006" (DTI initial contribution to Energy Review, July 2001, p.4).* Given this, there is an urgent need for the Government to take action to address the situation, and encourage the production of non fossil transport fuels.

Logically, the following solutions (or a combination of them) present themselves:
- Find new sources of oil to satisfy our never-ending demand for hydrocarbon-based fuels.
- Reduce demand for fuel.
- Shift to alternative fuels.

A brief analysis of each of these shows that the third of the options is the only realistic one in today's climate. Finding new sources of hydrocarbon-based oil will not ensure that the UK has a secure supply of *UK-based* transport fuels, and would eventually force us to import hydrocarbons. A continued reliance on hydrocarbon-based fuels will also contribute nothing to the environmental concerns that must be considered. Searching for new sources of hydrocarbon simply delays dealing with the inevitable supply crisis we will have to face at some point in the future and does nothing to address greenhouse gas and tailpipe emissions.

Reducing the demand for fuel is a laudable objective but one that is very difficult, if not impossible to achieve. Evidence submitted to the Trade and Industry Select Committee's inquiry on motor fuel taxation last year pointed to the fact that increases in fuel duty in isolation had little impact on overall demand. Differentials in duty rates have proved useful in stimulating demand for one fuel against another, but have not been successful in reducing the overall demand for fuel.

This leaves only one option: finding alternative fuels. The European Commission's fuel action plan, expected this month, will propose to take the share of alternative fuels in European fuel consumption to over 20% by 2020. Although this is a desirable aim, especially in the light of the problems of dwindling supply of petroleum-based fuels, it is important to bear in mind that a variety of different alternative fuels are on offer at the moment, all with their own distinct advantages and disadvantages. It is possible to target individual fuels through the use of fiscal instruments and thereby stimulate a market for specifically chosen alternative fuels. Therefore, we must first decide which fuels we should be promoting.

Alternative fuels need to fulfil a variety of criteria to be accepted as credible alternative sources of energy that can be used in our vehicles on an everyday basis. They should have good environmental credentials, both in terms of greenhouse gas emissions and tailpipe emissions. The transport sector can and should make a positive contribution in the drive to reduce emissions. Currently, 26% of emissions can be traced to the transport sector (Transport Trends, DETR 2001). Secondly, there should be security of supply or we risk replicating the problems we are currently experiencing with petroleum. Thirdly, the fuels should have a positive energy balance. It is Cargill's belief that biofuels and oils are best placed to fulfil all these criteria and are superior to the other fuels currently available. A short audit of the fuels available at the moment follows, outlining why biofuels and oils are superior.

Gas-based fuels: The DTI's *Energy Trends March 2001* projected that the UK will have to import *15%* of its gas by 2006. It does not seem logical to move production from one fuel in short supply to another in similarly short supply. Environmentally, the record of biofuels on CO_2 emissions is at least as good as liquified petroleum gas and compressed natural gas, if not better. LPG and CNG also have safety limitations; for example, they are not allowed in the Channel Tunnel at present because of fears of explosion. To summarise, gas-based fuels are not renewable, add substantially to greenhouse gas emissions and require substantial engine modifications. Gas will not be able to provide us with the security of supply we should be looking for in a replacement fuel for fossil fuels.

Hydrogen fuels: At the moment, 96% of hydrogen in the world is produced from fossil fuels also producing carbon dioxide and other pollutants, and 4% from water decomposition which is very expensive. The production process for hydrogen-based fuels uses twice as much energy as one would obtain from burning it. Given this, hydrogen fuels would appear to be too expensive in the short term to make a significant contribution to our transport fuel needs.

Biofuels and oils: Biofuels and oils are strong performers on all of the counts detailed above. They are energy positive to a factor of 2, increasing to 4 if the straw is used to generate heat. Cargill disputes the carbon saving figures used by the DTLR at the moment, as they fail to take into account the fact that biodiesel feedstock crops will displace other crops in the rotation cycle, but are wholly based on set-aside instead.

Environmentally, biofuels could have a significant impact on both greenhouse gas emissions and local air quality. ETSU figures *(Alternative Road Transport Fuels Preliminary Life Cycle Study for UK Volume 11,1)* has shown how valuable bioethanol could be in improving UK local air quality. They are also very safe as they are less flammable than other available alternatives.

Not only are biofuels strong performers environmentally and in energy balance terms, they are also renewable and, therefore, in secure supply - require no conversion to vehicles and could provide a much-needed boost to the beleaguered British agricultural industry. European Union figures show that on an EU-wide basis, between 45,000 and 75,000 jobs could be created by the biofuels industry, mainly in farming regions. As a member of the British Association for Biofuels and Oils, Cargill supports the "10% campaign", aimed at ensuring that 10% of our transport fuels are produced from renewable sources by 2010.

Cargill welcomes the steps the Government has taken so far to promote biofuels through the Green Fuels Challenge and applaud the 20 pence per litre duty incentive awarded to biofuel over ultra-low sulphur diesel in Budget 2000.

However, an indication is needed that the Government intends to go further. The present rate of 20p/litre will be insufficient to stimulate production on a scale that will make a noticeable contribution to greenhouse gas emissions, local air quality and the regeneration of the rural economy. Capital infrastructure projects will also make little difference; what is important is the appropriate tax regime.

Biofuel production in the UK could commence tomorrow if the duty incentive was sufficient to kickstart the production process. Cargill are ready to start production, but need the inducement of a further duty cut before production can commence. It is particularly disappointing to see the DTI refer to biofuel as a "potential medium-term" option in its submission to the Energy Review. The preparations Cargill has made to date to prepare biofuel production show that we think of it as a definite long-term option. The Liberal Democrats have also promised *"to reduce the fuel duty on biodiesel to the level applied to LPG"* (Liberal Democrat Policy Paper on Transport, August 2001) in an indication that they recognise the benefits the fuel has to offer.

The European Commission is expected to publish a draft directive later this month, allowing member states to apply a reduced rate of excise duty to biofuels over the next ten years. David Jamieson MIP, Under-Secretary of State at the DTLR recently said *"[the Government] intends this country to be a world leader in biofuel technologies"* (Official Report, 4~ July). If this is to be realised, it is vital that the tax regime is favourable enough to stimulate demand for biofuels. The Chancellor's November statement presents the Government with an ideal opportunity to signal its support for this industry.

Cargill, 5 September 2001