

## Green fuels set for breakthrough?



Environmentally friendly substitutes for petrol and diesel have been commercially available for years. However, their high **price** compared to fossil fuels, along with the expense and inconvenience of adapting cars to run on them, has so far prevented them from being sold to the **mass market**.

However, a surge of **entrepreneurial** activity in the alternative fuels sector and ever-increasing warnings over climate change from emissions of gases such as carbon dioxide is changing all that.

The most striking measure of the new mood of confidence sweeping the biofuels **industry** is that, for the first time, green and alternative fuel companies are beginning to sell shares on international stock markets in order to raise the finance needed to fund their future **expansion**. For example, the Biofuels Corporation has floated on the London Stock Market, while other firms, such as D1 Oils, are planning to do likewise. Both firms produce biodiesel, seen as the green fuel most likely to make major inroads into the mainstream market.

Biodiesel is an environmentalist's dream. It is a modified vegetable oil made from crops such as rapeseed and does not cause climate change since the carbon dioxide generated by burning it as a fuel is completely cancelled out by the carbon dioxide absorbed from the atmosphere by the plants that are grown to make it. In addition, when compared with ordinary diesel, biodiesel generates up to 60% fewer environmentally-harmful toxic emissions that cause acid rain and smog. But biodiesel's biggest advantage over other alternative fuels is that most diesel cars can be easily and cheaply adapted to run on it, without any loss of performance.

The main challenge for the biodiesel industry now is to produce the fuel cheaply enough to compete head-on with ordinary diesel on the garage forecourt. The industry consists of a fragmented network of small companies, and as a result, **production costs** - and prices - are high. As long as prices of ordinary diesel remain cheaper, biodiesel will remain an **uncompetitive** choice for **consumers**, who will vote with their wallets for the cheaper option.

Firms such as Biofuels Corporation and D1 Oils are leading a concerted push to narrow or eliminate the price gap, hoping to tap into pent-up demand for affordable green fuel. However, the lack of a carbon tax on polluting products such as oil and diesel is slowing the development of the market. "The consumer awareness is there, but we need the economics to fall into place," says D1 Oils chief executive Mark Quinn. "We're confident that price is the issue". His counterpart at the Biofuels Corporation, John Nicholas, is equally certain that the market is ripe for expansion. "We've been looking at this for two years, and we feel we're here at the right time," he says.

The attempt by Biofuels Corporation and D1 Oils to shake up the green fuel market may be helped by wider **political and economic developments**. Firstly, the **European Union** has urged member states to ensure that 2% of all transport fuels are derived from renewable sources by 2005 - in Ireland the figure is currently 0%. Ireland looks certain to fall far short of this target. However, the green fuels industry is nonetheless hopeful that it may persuade some European governments to stimulate biodiesel sales through, for instance, further **tax cuts**. Green fuels enthusiasts point to Germany, where biodiesel accounts for a large chunk of the diesel market thanks to a **favourable tax** regime. Secondly, further surges in oil prices, triggered by soaring global demand and unrest in the Middle East, has reminded consumers that fossil fuels are a finite resource whose **supply** can be precarious.

1. What factors might persuade motoring consumers to switch over to green / alternative fuels?
2. Identify the stages that a new brand of low cost biofuel should go through before being launched on the market?