Biofuels' budget blu

This month's budget brought little cheer for UK biofuels. **Julian Gairdner** asks why it's so difficult to get the Government green light

BIOFUEL supporters continue to be frustrated by Gordon Brown. Having trailed a much-needed 20p/litre duty rebate for bioethanol last autumn, there was real hope that more would be forthcoming from the chancellor.

Instead, the bioethanol rebate has been delayed until January 2005, and by adding 1.28p/litre duty to ultra-low sulphur diesel — while maintaining the 20p/litre concession for biodiesel — Mr Brown has effectively slapped more tax on renewable road fuels.

"Putting up duty on diesel is a further example of the Government's wish to kick agriculture in the teeth and do nothing to help mainstream farming address the nation's real needs for cleaner air, fuel supply diversity, and a reduction in greenhouse gases," says Peter Clery, chairman of the British Association for Biofuels and Oils (BABFO).

But biodiesel supplier Greenergy puts a different spin on Mr Brown's announcement. "In the past, the Government has had great difficulty in putting up tax on road fuels, so the fact it has done it this time could give it room for manoeuvre to incentivise biofuels in the future," says the company's Andrew Owens.

Meanwhile, growers of miscanthus and short-rotation coppice (SRC) have welcomed a recent DTI announcement to grant fund £18m for five green power plants in England fired by biomass. It's yet another signal that the Treasury, along with other departments, is more persuaded by the merits of biomass over biofuels.

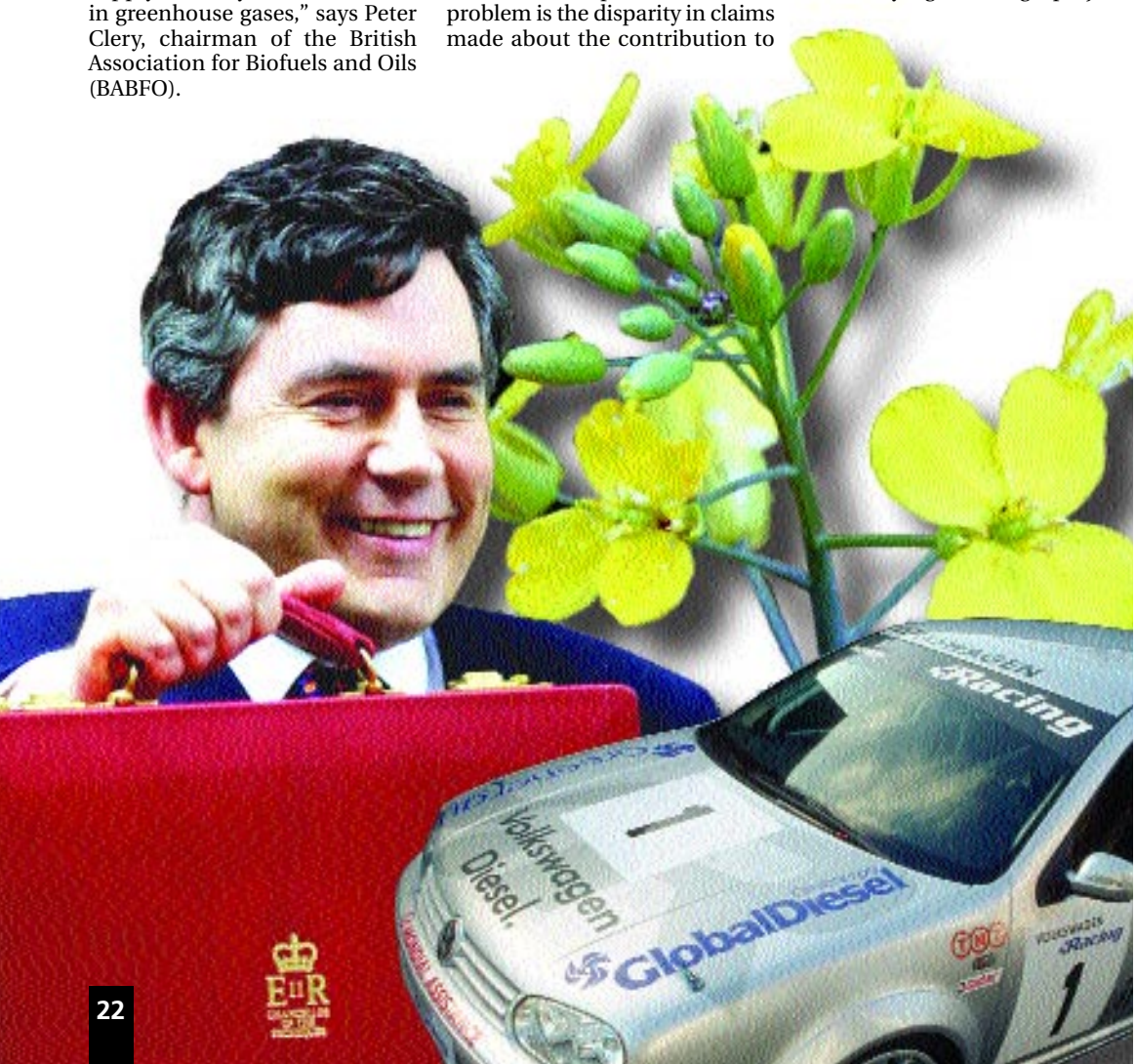
The reason is that biomass crops seem to offer more environmental potential. But the problem is the disparity in claims made about the contribution to CO_2 emission reductions, and the benefits to the environment from the "energy gain" by energy crops. Various figures are bandied about: a five-times energy gain for biodiesel; around 30 times for miscanthus and SRC.

"We have no idea what figures the Government is using to base its decisions on," says Mr Clery. He's concerned by "the bias" the Government has shown for biomass, at the expense of biofuels. "Comparing CO_2 and energy savings between biofuels and biomass is a bit like comparing apples and pears," he says. "What we do know is that biofuel crops such as oilseed rape, wheat and beet are already being grown. We can guarantee carbon savings, whereas I doubt the contribution biomass will make, because no one will grow the crops."

He has a point. The demise of ARBRE, the biomass electricity power station in Yorkshire built to burn SRC, is an example of the enormous hurdles green electricity generating projects have to jump over in order to get up and running. But others argue the change in focus towards smaller combined heat and power (CHP) plants, justifies the start-up investment.

"The Government is quite rightly looking towards CHP, which is a more efficient use of biomass crops," says David Croxton, of miscanthus producer BICAL.

Proposed changes under the mid-term review of the CAP have received mixed responses. On the one hand, not being able to crop set-aside has met with little enthusiasm from the renewable energy crop sector. But decoupling could give miscanthus and SRC a



RENEWABLES

- 20p/litre duty concession for bioethanol
- Disputed CO_2 savings from energy crops
- Government 'bias' for biomass
- Need for carbon certification 'assurance' scheme
- 20,000 jobs from potential bioethanol plant
- Fears of price squeeze by processors and generators on growers

Biofuels: key facts

- Government target: 2% biofuels inclusion in road fuel by 2005, rising to 5.75% in 2010
- UK road fuel consumption 41m tonnes a year
- UK diesel market 17m tonnes a year; 5% inclusion of biodiesel equals 700,000-800,000ha additional oilseed rape production
- 10% inclusion of bioethanol in petrol would utilise the average UK wheat exportable surplus of 3m to 5m tonnes a year
- 5p/litre tax concession on biodiesel blended at 5%, would cost only 0.25p/litre on the blend sold
- Recycled cooking oil already being turned into biodiesel but only at the rate of 6,000t a year. 5% inclusion in diesel would need 850,000t

ies

boost. Farmers will become much more focused on the profitability of individual crops. "If there was no more support for agriculture, miscanthus could be a huge crop. Decoupling at least creates land that will need low input crops such as miscanthus," Mr Croxton says.

He feels miscanthus offers greater potential than many of its competitors. "We've adopted a multi-use platform. We already have alternative fibre uses for the crop. These added value markets are key to getting commercial production under way." Confidence is high: BICAL is prepared to offer 18-year contracts with a firm legal commitment to buy the crop from the farmer at £45/t. "That gives a gross margin of over £600/ha," he says.

Tough targets

But doubts remain as to whether the UK will achieve its environmental targets: 10% of electricity from renewable energy by 2010; and 2% biofuels inclusion in road fuel by 2005, rising to 5.75% by 2010. We're currently lagging behind our continental competitors, and with the biofuels target only an EU aspiration (it's not mandatory), some believe the chancellor is not serious about kick-starting biofuels. "There's no way the fuels target can be met unless the Government rapidly changes its policies," says Mr Clery.

What is clear is that a UK biofuels industry cannot rely on any further Government help, although it can't altogether be ruled out. "There are two options," says Renewable Energy from Agriculture's Robin Twizell. "Either biofuels are made more competitive through tax breaks, or the customer has to be persuaded to pay more," he says.

"It would be nice to have a bigger tax incentive, but what we need to do is promote the environmental benefits of the product rather than concentrate on price," he says. He cites as an example the current situation with imported biodiesel. "It's rather like food miles. How can it make sense to burn fossil fuels to import a biofuel that we could produce over here?"

That's why the first carbon-certified oilseed rape crop, backed by Greenergy, is so ▷

important. "We need to develop a traceability system for carbon to persuade customers and the Government," Mr Twizell says.

But there are encouraging signs that Greenergy is getting the environmental message across. "Where it's available, blended biodiesel has about 10% to 20% market penetration," says Mr Owens. "And we're managing to sell it at a slight premium to normal diesel."

Mr Twizell believes it's time to update the figures for the carbon balance of oilseed rape, and indeed other energy crops. With establishment techniques having changed substantially in recent years (min-till and Autocast), previous figures are probably out of date, he suggests. "We need more scientific work on the way biofuel crops are produced now, compared to 10 years ago."

This is particularly important where the Government is concerned. "If the chancellor's end target is to use more arable production for biofuels to support farming, then a tax break is logical," Mr Twizell says. "But if it's environmental goals, then it's right that funding is targeted towards SRC and miscanthus, which seem to be more carbon efficient."

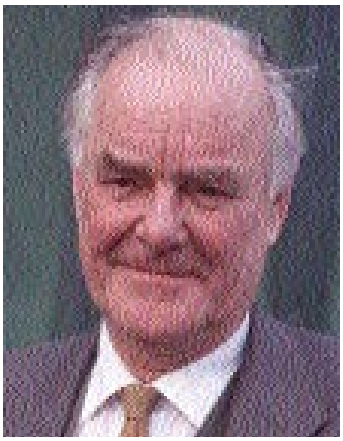
Challenge

That presents a challenge for biofuels. "The Government will put its money where it gets best return. We have to find ways of improving the production of biofuel crops to improve the energy balance."

What frustrates so many involved with biofuels, is being so near and yet so far. According to British Sugar figures, a further 5p/litre tax break for bioethanol would be sufficient to kick-start UK production. That would lead to a £500m investment by the company and create 20,000 jobs.

And although a duty reduction of between 26p and 30p/litre would cost the Treasury £170-195/t of CO_2 saved, the company claims the net cost is much less than this. "Data from Reading University suggests the additional jobs would result in £130-220m additional income into the economy with associated tax and national insurance," its report says. "The Treasury tax foregone would be approximately £390m-450m a year. However, a substantial proportion of this would be recouped in the form of additional economic revenues."

But even if there were better tax breaks for energy crops, would that be to the advantage of UK growers? There are concerns that the multinational biofuel processors, or power generating companies, will take over and squeeze the price. "The producers need to be getting involved in the production of energy so the farmer can get a fair price for his product. Otherwise we'll simply be swapping the food market for crops such as wheat and oilseed rape, with one for biofuels," says Mr Twizell.



Peter Clery says the Government is leading the UK up a biofuels backwater with its current policies

But getting up the supply chain isn't easy. "I've seen many efforts by farmers to get into heavy industry fail," says Mr Clery. "The main thing is to have enough competition among processors for the supply of biofuel crops. "

In the meantime it seems the industry will have to drag the Government along kicking and screaming, not the other way round. It's not often you can say that. ■

Government funding: what's available

DTI

Bioenergy Capital Grants Scheme — £66m (£30m DTI and £36m New Opportunities Fund — UK-wide)
Capital grants towards the cost of equipment in complete working installations.

Qualifying projects:

- Large-scale state of the art electricity generating installations
- Electricity Generating or CHP installations over 1MW, with preference for CHP
- Large-scale installations using technologies with much higher electrical generating efficiencies than current state of the art
- Projects comprising clusters of heat of small CHP installations
- Larger industrial heating units with outputs over 0.5MW for process or space heating

Community and Household Capital Grants Scheme £10m (UK-wide)
For schemes able to demonstrate a strong community or household interest — restricted to renewables deployed at household level, or buildings/ land owned by non-profit making organisations.

DEFRA

Energy Crops Scheme (in partnership with Forestry Commission) £29m to be spent by 2006 (part of England RDP)

Qualifying projects:

- Establishment grants of £1,600 or £1,000/ha — depending on land type — for SRC. £920/ha for miscanthus. Crops must be grown for power generation, CHP, or heat production. Must be evidence of an end use or market within reasonable radius of growing land.
- 50% grants for cost of establishing producer groups for SRC

Energy Crops Infrastructure Support Scheme £3.5m to be spent by 2006 (open for bids summer 2003 — UK-wide)
New scheme. For development of infrastructure required to harvest, store, and supply biomass to energy end-users

Enhanced capital allowances scheme (in conjunction with Inland Revenue and Carbon Trust)
100% first year capital allowances on investments in energy saving technologies and products including CHP (where quality assured). Biomass boilers (>300kW) expected to be included from summer 2003

Community Energy (operated by Energy Saving Trust) £50m over next two years — UK-wide
To help install and refurbish community heating systems into community buildings. Mainly CHP

Inland Revenue

ULSD and sulphur-free petrol duty up from 45.82p/litre to 47.10p/litre from 1 October, 2003