

# SUGAR POWERS A REVOLUTION ON BRESILIAN ROADS

Tom Philips and David Gow

Driven by soaring oil prices, petrol in Brazil already costs 70% more at the pumps than “alcohol”, the bio-ethanol fuel derived from sugar cane that Brazilians increasingly favour for their cars.

Fuels such as biodiesel are renewable and can be made from agricultural products, like palm oil or soya beans, which can then be mixed at up to 30% with petroleum-based products such as diesel. As with samba and football, it is an area in which Brazil leads.

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The prime reason is that the South American country boasts dozens of vegetable species which can be used to make bio fuels – and even cow tallow. Bertin, the country's largest beef exporter, is building a new plant to convert tallow into biodiesel, with an annual output of 100,000 tonnes. Brazil doesn't just have the land mass – it also produces half the globe's ethanol output of 21m tonnes.

Brazil has been here before. In the 80s the then military government reacted to the oil price shocks of 1973 and 1981 by offering tax advantages to run cars on ethanol – so much so that between 1983 and 1988 up to 90% of vehicles were powered by the fuel. The bottom fell out of the market when oil prices collapsed – and sugar cane producers jacked up ethanol prices by more than 40%.

The difference now is that drivers have a much greater choice, being able to mix ethanol and petrol at will in “flex fuel” engines that Volkswagen introduced in 2003 and are being built by rivals such as Peugeot, which launches a 1.4-litre version next month to go with the 1.6 engine it already produces here. It is developing a biodiesel model. As many as 80% of new Brazilian-built cars are powered by “flex fuel” engines, up from 17% last year, and, says Serge Habib, Citroën's managing director in the country, it will be at 100% in two years. Like hybrids, flex-fuel cars retain a greater second-hand value, adding to their attractiveness.

Mr Habib says producing ethanol from sugar is profitable so long as oil costs more than \$37 a barrel – well below its present price. The lower price for bio fuel offsets the 25% higher consumption that consumers report. But its overriding advantage is macro-economic. “The Brazilian economy has saved \$400bn in imports since the creation of the National Alcohol Program, and that's without mentioning interest,” said Luiz Custodio Martins, president of the Sugar and Alcohol union in Minas Gerais, Brazil's second largest sugar-producing state.

Brazil's government also views bio fuel as a way of helping to haul rural parts of the country out of grinding poverty. The use in biodiesel of castor beans, from Brazil's arid north-eastern sertao, for example, is expected to create thousands of jobs in the impoverished region where tax breaks are being given to families producing the raw products used in biodiesel production.