

## **Greenergy Biofuels Ltd and Tesco: Promoting palm oil and soya expansion for biofuels**

### **Who are Greenergy?**

Greenergy International is primarily an oil company which supplies around 10% of the UK's road transport fuel, as well as gasoil for off-road applications and kerosene for domestic heating and industrial use. They sell around 84 million litres of fuel per week. They specialise in fuel blending, and transport rather than on oil production or refining of fossil fuels. Greenergy fuel is sold in the UK, Central Europe and Germany.

All of Greenergy's petrol and diesel is blended with biofuels, both imported biofuel (primarily Brazilian sugar cane ethanol) and biodiesel made at Greenergy's refinery at Immingham in Teeside. Greenergy International describe themselves as the UK's largest supplier of biofuels, and aim to become the UK's largest supplier of biomass for heat and power, seeking a wide range of domestic as well as imported feedstock through their subsidiary, Greenergy Bioenergy. They have merged some of their business with carbon consultancy and management company ESD (Energy for Sustainable Development). Greenergy and ESD have set up ESD Camco as a joint venture, a subsidiary which offers carbon management consultancy services, including biomass, wind and solar energy, carbon trading and building energy efficiency, with clients, including the World Bank, national governments and multinational companies. ESD and Greenergy own the Edinburgh Centre for Carbon Management, a company which provides carbon emissions assessments for companies - including for Greenergy, as well as having business interests in carbon offsetting projects, corporate carbon management and providing technical and policy advice to governments on climate change mitigation and in particular on land use and forestry. Greenergy Biofuels Ltd is a subsidiary of Greenergy Fuels Ltd which in turn is a subsidiary of Greenergy International Ltd. Tesco owns a 25% share in Greenergy Fuels Ltd (suppliers of petrol and diesel in the UK), and Cargill owns a further 25% share in Greenergy Biofuels Ltd.

### **What is Greenergy's role in the biofuel market?**

Greenergy Biofuels Ltd claim to be the UK's largest biofuel supplier. They are a subsidiary of Greenergy Fuel Ltd, itself a subsidiary of Greenergy International Ltd. Tesco and Cargill hold majority shares in the company. Greenergy Biofuels started selling biodiesel blends in the UK in 2002 and ethanol blends in 2003. They opened a biodiesel refinery with a 100,000 tonne capacity at Immingham in March 2007. A second 100,000 tonne plant has been built at the same location but appears not to be in operation as of July 2008. Plans for a joint biodiesel refinery with Cargill in Merseyside were published but appear to have been abandoned for the time being. Greenergy sell additional biodiesel which is blended at the Vopak terminal in Rotterdam.

From Rotterdam, Greenergy petrol and diesel already blended with biofuels is shipped to the UK via the Vopak terminal at West Thurrock, Port of London, which they share with Harvest Energy. From there, it is distributed across the south-east of England. In June 2008, Greenergy acquired a new terminal in Plymouth.

They buy and blend bioethanol, most of it Brazilian sugar cane ethanol. All of Greenergy's fuel is blended with up to 5% biodiesel or ethanol. Greenergy also supply higher biodiesel blends. In June 2007, Virgin Trains launched the UK's first train running on a biodiesel blend in a joint trial with the Association of Train Operating Companies and the Rail Safety and Standards Board. Greenergy supplied the fuel – a 20% biodiesel blend. The first stage of the 6-month trial has been concluded. Virgin Trains have stated that they intend to convert all their trains to run on biofuel blends and the government's proposals for new

renewable energy legislation include a possible mandate for biofuels in trains – a potentially important new market for Greenergy.

Greenergy stated in 2006 that their customers include BAA, the Metropolitan Police, London Underground, TDG, Eddie Stobart, Stagecoach, Mercedes Benz, Sainsbury, Shell, Conoco-Phillips, Tesco, Transco and a large number of local authority and UK government departments ([tinyurl.com/25w7d8](http://tinyurl.com/25w7d8)). No information is available about current Greenergy customers, except for Tesco and Morrisons.

### **What is Tesco's involvement with Greenergy:**

Tesco bought a 25% share in Greenergy Fuels Ltd in 2002. They appear to be the only UK supermarket which, as a shareholder in an agrofuel company, has invested in an agrofuel refinery. Tesco was one of the first UK supermarkets to start selling biodiesel blends in 2003, a 5% blend. In December 2006, Tesco announced plans to run 75 of its 2,000 trucks and vans on a 50% biodiesel blend from January 2007. By 2006, the company was selling biodiesel and ethanol blended into standard petrol and diesel at more than half their forecourts. Under the Renewable Transport Fuel Obligation, which came into force in April 2008, all road transport fuel has to be blended with 2.5% of biofuels and fuel suppliers that do not meet that quota have to pay a penalty. No data about the actual amount of biofuels used at present in the UK has been published. Information as to which of Tesco's forecourts currently use Greenergy fuels and thus biofuel blends is not available.

### **Which feedstocks do Greenergy use?**

Greenergy state on their website that they use rapeseed oil from the UK, Europe and North America, as well as soya and palm oil in biodiesel, and primarily Brazilian sugar cane ethanol for blending with petrol. In 2006, they signed a contract with British Sugar who will be supplying bioethanol from their Wisington ethanol refinery, which uses sugar beet.

Greenpeace had a sample of Greenergy biodiesel, sold at a Tesco filling station in Edmonton, tested in early 2008. They found that 70% came from soya and 30% from palm oil ([tinyurl.com/6mul47](http://tinyurl.com/6mul47)).

Greenergy say that they are committed to using only 'sustainable feedstock', and that they are putting into place a 'sustainable sourcing policy' for their suppliers. They have appointed UK-based company ProForest to oversee this programme. They also regard the Roundtable for Sustainable Palmoil and the Roundtable for Responsible Soy as instruments for ensuring sustainability in future. They also state that they have developed 'sustainability criteria' for Brazilians sugar cane ethanol, together with ProForest, but those have not yet been published.

Biofuelwatch believes that no instruments exist for guaranteeing the sustainability of large-scale agrofuels from monocultures such as soya and palm oil and that there is no evidence that such large-scale monocultures, let alone their massive expansion for agrofuels, can be sustainable. The issues around Greenergy's 'sustainability' policy will be discussed below.

### **Biodiesel from palm oil**

The United Nations state that palm oil is the main driver for forest loss in both Indonesia and Malaysia and that, at current rates, 98% of Indonesia's rainforests will be destroyed in 15 years, driving orangutans and countless other species to extinction ([tinyurl.com/yqclta](http://tinyurl.com/yqclta)). This will include virtually all of South-east Asia's peatlands. Those peatlands store up to 50 billion tonnes of carbon – as much as over 6 years of global fossil fuel emissions. They have played a vital role in helping to regulate the global climate over long geological periods. Once the peat forests are cut down and the peat is drained, all the carbon will

eventually oxidise and enter the atmosphere. Annual fires, mostly set by plantation companies, greatly speed up this process. The destruction of South-east Asia's peatlands could release enough carbon to make it impossible to keep global warming below 2°C regardless of any cuts in fossil fuel use burning. At or beyond this level of warming, global warming may accelerate out of human control.

Europe's biofuel expansion is a driving force for palm oil expansion and deforestation in Indonesia and other countries. The Indonesian government plans 20 million more hectares of oil palm plantations to satisfy the demand for biofuels, as well as 10 million hectares of *Jatropha* for biodiesel and millions of hectares for other biofuel feedstocks. The Chair of the United Nations Permanent Forum on Indigenous Issues has warned that 60 million indigenous peoples worldwide are at risk of becoming biofuel refugees in the near future – 5 million of them in West Kalimantan, Indonesia, alone ([tinyurl.com/2rxgv6](http://tinyurl.com/2rxgv6)).

Palm oil companies are not just destroying rainforests but also taking over community land, often illegally and in some cases violently. In Indonesia, there are countless reports of communities being evicted from their own land. In Colombia, NGOs have documented 113 killings in the one area at the hands of paramilitaries who are working with palm oil plantation companies to take over land which legally belongs to Afro-Colombian communities ([tinyurl.com/2zrm9l](http://tinyurl.com/2zrm9l)). The use of toxic agrochemicals, including Paraquat, is widespread on oil palm plantations, causing serious health problems and even deaths amongst plantation workers and small holders.

### **Biodiesel from soya**

Soya is mainly grown on large-scale plantations which employ few people and require large inputs of agrochemicals. Soya plantations offer very little employment and require intensive use of agro-chemicals, including synthetic fertilisers and pesticides like glyphosate and paraquat which have severe effects on people's health and their ability to grow food close to the plantations, as well as on water, soil and biodiversity. So far, Europe's livestock industry has been the largest importer of soya but the biofuel boom is leading to a new wave of soya expansion across many South American countries, including Brazil, Argentina, Paraguay. Already, more than one-fifth of Brazil's cultivated land is covered with soy and the government is now planning to triple this area. Half of Argentina's agricultural land is now under soya. In Paraguay, 60% of all land under cultivation is covered by soya monocultures and the industry is now expanding into Bolivia, Uruguay, Chile, too. Soya monocultures are being established at the expense of rural communities and sustainable farming systems on the one hand, and at the expense of ecosystems, including biodiverse oldgrowth forests, on which many indigenous peoples and other forest communities depend, on the other hand. In Argentina, some 200,000 rural households have been displaced by soya and 1 million hectares of forest has been destroyed in four years, most of it for soya. In Paraguay, around 100,000 families have lost their land and forest cover has been reduced from 85% to 10%. In 2007, the country's worst drought and forest fires on record occurred, and there are reports that situation was exacerbated and exploited by plantation companies expanding into remaining forests. In the Legal Amazon, the rate of deforestation has been shown to correlate directly with the price of soya ([tinyurl.com/37mpss](http://tinyurl.com/37mpss)). Amazon deforestation rates had been falling between 2004 and 2006, during a time of lower soya prices, but have been rising again since 2007, with biofuels pushing up the price of soya. There is growing concern that increasingly frequent and severe droughts might be a sign of the Amazon ecosystem being close to the point of collapse, beyond which there will not be enough closed canopy to recycle enough rainfall for the forest to survive. This could trigger an irreversible cycle of mega-fires and drought which, in a worst-case scenario, could very quickly lead to global warming spiralling out of control.

## **Biodiesel from rapeseed oil**

More than two-thirds of rapeseed oil produced in Europe is now used for biodiesel. Demand is growing much faster than production. As a result, the food and cosmetics industry are increasingly switching from rapeseed oil to palm oil. The UN Food and Agriculture Organisation have stated that European rapeseed biodiesel is a leading cause behind the rise in palm oil prices ([tinyurl.com/2o9bab](http://tinyurl.com/2o9bab)). There is thus a clear link between rapeseed biodiesel use and deforestation and human rights abuses for palm oil expansion. Even without those indirect impacts, rapeseed biodiesel could be worse for the climate than fossil fuels: A recent study by Nobel laureate Paul Crutzen suggests that rapeseed biodiesel causes up to 70% more greenhouse gas emissions than mineral diesel, due to emissions from nitrate fertiliser use ([tinyurl.com/2elcyc](http://tinyurl.com/2elcyc)).

Compulsory set-asides of cropland have been scrapped this year, following strong biofuel industry lobbying. The RSPB warn: "We already have reports of set-aside that has existed for years being ploughed up and we fear that the predictions of farmers' leaders will not be met. The decline in farmland bird populations has been levelling off, in part because of set-aside. Without it, or compensatory measures, numbers may well tumble further." ([tinyurl.com/3drwvp](http://tinyurl.com/3drwvp)).

## **Bioethanol from Brazilian sugar cane**

The Brazilian government seeks to expand sugar cane monocultures from 6 million to 30 million hectares – the agriculture minister has even spoken of 150 million hectares being available. Contrary to information on Greenergy's website, some sugar cane is being grown in the Legal Amazon. Last year, a raid on an ethanol factory using slavery in the Amazon was widely reported ([tinyurl.com/35w3lj](http://tinyurl.com/35w3lj)). A Brazilian scientist and expert on the Amazon and climate change, Carlos Nobre of Brazil's National Institute for Space Research, has just warned "If oil prices keep increasing there will be an explosion of biofuel production in the Amazon, contrary to Brazilian government policy" ([tinyurl.com/2tj2la](http://tinyurl.com/2tj2la)). As mentioned above, there is growing evidence of the Amazon being at an imminent risk of die-back if deforestation continues.

Most of the impacts of sugar cane ethanol on rainforests are currently indirect impacts: Sugar cane plantations are displacing other types of agriculture and rural activities, including cattle. In Sao Paulo, the main sugar growing state in Brazil, for example, cattle numbers are declining in line with increased cattle ranching in the Amazon, which is one of the causes of rainforest destruction ([tinyurl.com/2dx6nl](http://tinyurl.com/2dx6nl)). Large sugar cane plantations are displacing small-scale farming and food production, which provide far more and better work. Working conditions on sugar plantations are notoriously poor, with a large number of reported deaths from overworking and of illnesses. Soil erosion and freshwater depletion and pollution threaten the future fertility of the land. Here is a statement from a resident of a resettlement project for landless people: "The arrival of cane is damaging. They want to get rid of everything. After the plants arrived the cane belt closed in around the settlement, and that compromises our future. It's scary, we're threatened here...soon you'll be able to travel 100, 200 kilometers in this region without seeing a single bean, corn or cassava plant.

The land becomes degraded, and after the ethanol plants have used it up, only then the land can be bought for agrarian reform. This settlement right here used to be sugar cane land. It took a lot of sweat to get this piece of land productive again" ([tinyurl.com/2dx6nl](http://tinyurl.com/2dx6nl)).

## **How meaningful is Greenergy's 'sustainability' policy?**

Greenergy pride themselves of having been the first company to have developed 'sustainability standards' for Brazilian sugar ethanol ([tinyurl.com/6l85qo](http://tinyurl.com/6l85qo)). The details have

not been published, however Greenergy have never acknowledged the disastrous environmental, climate and social impacts of sugar cane production, including in Brazil. They have not publicly stated who will actually be verifying whether 'sustainability criteria' are being met, however, we understand that they intend to use SGS for certification, a company which has been one of the main certifiers of FSC wood. In July 2008, SGS announced a 'business decision' not to issue any further FSC forest management certificates, pending a 'review' of their forest management certification process, following years of criticism of them having certified plantations and logging activities which clearly breach FSC criteria. Since then one plantation company certified by SGS, Veracel Celulose, has been ordered by a Brazilian court to pay \$12 million in fines, to remove millions of eucalyptus trees and to restore native forests which they destroyed, due to the serious environmental damage they caused. SGS have been approved by the Roundtable for Sustainable Palm oil as one of the firms which can certify 'sustainable palm oil'.

Greenergy also strongly support the Roundtable for Responsible Soya. This has been condemned widely by civil society groups, particularly in South America as 'greenwashing' the disastrous expansion of soya monocultures at the expense of communities and the environment (<http://www.lasojamata.org/node/110>).

Greenergy acknowledge some of the serious impacts of agrofuel production, whilst denying others. They deny that sugar cane is being grown in the Amazon, contrary to well-publicised evidence. They also downplay the link between agrofuels and rising food prices, and the seriousness of rising food prices and their impact on food-importing countries and on poor people, contrary to widely published evidence.

Greenergy acknowledge that biodiverse ecosystems in countries like Brazil are being destroyed for sugar cane, but say that there are 'opportunities to minimize any further negative impacts of sugar cane expansion'. The reality, however, is that biodiverse grasslands, wetlands and forests are being destroyed ever faster for sugar ethanol. This includes the world's most biodiverse savannah, the Cerrado, which, according to Conservation International, could be completely destroyed by 2030 ([tinyurl.com/3a79j3](http://tinyurl.com/3a79j3)).

Biofuelwatch believes that, regardless of their sourcing policy, Greenergy biofuels will directly and indirectly, contribute to deforestation and other ecosystem destruction, thus accelerating climate change, the eviction and displacement of rural communities in the global South, soil erosion and depletion, freshwater pollution and depletion and more people going without enough food.

Almuth Ernsting, updated July 2008