Shell's investments in agrofuels

Biofuelwatch, April 2009

Shell declared in March 2009 that they would pull out of all 'renewable energy' except for biofuels (tinyurl.com/dx8ez5). They describe themselves as "the world's largest distributor [of biofuels]" (tinyurl.com/d62wws). Shell has not so far directly invested in either plantations or biofuel refineries; however they are significant investors in 'next generation' agrofuel research and development.

Shell's involvement with current 'first generation' agrofuels:

In the **UK**, Shell has entered into a purchasing agreement which helps facilitate the construction of a wheat ethanol refinery being built by the Ensus Group. Across Europe, major expansion of wheat ethanol is being planned which, if it goes ahead, would seriously impact on global wheat stocks and thus on food security.

Shell has a long record in distributing **Brazil**ian sugar cane ethanol, which is, directly and indirectly, linked to deforestation and the destruction of the world's most biodiverse savannah, the Cerrado, as well as to human rights abuses, including slavery, poor working conditions, and the loss of food sovereignty in large areas of Brazil. Recently, Shell has shown interest in buying up ethanol 'assets' (companies and refineries) in Brazil (tinyurl.com/dxxwx4).

Shell has five (corn) 'ethanol hubs' in the **US,** providing the distribution infrastructure for 30% of US ethanol. Corn ethanol in the US is widely considered to be a major reason behind the accelerated destruction of the Amazon rainforest: The growing demand for corn ethanol has encouraged US farmers who were growing soya to grow corn instead. This has helped to push up the price of soya and triggered soya expansion in South America (tinyurl.com/ywev2z). US corn ethanol is also linked to increased soil erosion, loss of biodiversity and water pollution, including the worsening of the 'dead zone' in the Gulf of Mexico.

Shell blends biodiesel and ethanol for seven countries, including the UK (tinyurl.com/cagntn).

Lobbying for agrofuels and helping to greenwash the industry:

Shell was a member of the Biofuels Research Advisory Council which was set up by the European Commission and which largely drafted the biofuels policy put forward by the Commission, one which has in largely been implemented. The 'successor' to this forum is the European Biofuel Technology Platform, which calls for a 25% biofuel target by 2030. Shell is a member of one of the working groups (on "sustainability") of that forum.

Shell is a founding member of the Roundtable for Sustainable Biofuels, a stakeholder forum which has played a significant role in legitimising agrofuel expansion, without having put forward any credible mechanism for ensuring the sustainability of biofuels and which is not concerned with questions around unsustainable demand.

Shell is also involved in two roundtables which aim to 'certify' industrial monocultures, including for biofuels, as 'sustainable':
- the Roundtable for Responsible Soya, which has been rejected by a large number of civil society groups as an attempt to greenwash an inherently unsustainable industry (tinyurl.com/c8sq43).
- The Better Sugarcane Initiative is another voluntary stakeholder initiative, one which has not developed any clear definition of what they mean by 'sustainable sugarcane'. They differ from the other roundtables in that only members who have paid $25,000 get voting rights (tinyurl.com/dlxn5j).

Shell investment in 'next generation biofuels'

Shell invests heavily in research and development of 'next generation biofuels', i.e. those made from solid biomass, including wood, algae, and aviation biofuels. There are serious concerns about biofuels from solid biomass: Any technological breakthrough would allow biofuel companies to turn wood in particular into liquid biofuels. This would greatly increase the pressure on all of the world's forests, at a time when demands from the pulp and paper industry already cannot be sustainably met and are causing major deforestation and displacement of communities, to a large part due to expansion of industrial tree plantations. Research into 'next generation biofuels', relies heavily on genetic engineering of microbes, crops, trees and algae, including synthetic biology, with unknown and potentially very serious environmental consequences. Synthetic biology developments are not globally regulated. For a discussion of the serious concerns regarding potential environmental, health, economic and social impacts, see:
www.etcgroup.org/en/issues/synthetic_biology.html.

Any breakthrough in the development of aviation biofuels would open up a very significant new market for biofuels.

Shell investments and partnerships are:

+ A partnership with Iogen, starting in 2002, with Shell as an equity investor. Iogen tries to develop cellulosic ethanol, i.e. ethanol from wood and other solid biomass, involving genetically engineered microbes, i.e. synthetic biology. This is partly financed by the US Department of Energy.
+ A partnership with Choren, starting in 2005. Choren is developing synthetic diesel from wood.
+ A partnership with Codexis Inc, together with Iogen, starting in 2007. Codexis is working on genetically engineered microbes and biocatalytic process to more cheaply produce pharmaceuticals, industrial chemicals and also cellulosic ethanol and other types of biofuels from solid biomass. Other coroporate partners are Merck, Shering-Plough, Bristol-Myers Squibb and Pfizer (tinyurl.com/dagctq).
+ A joint venture with HR Biopetroleum (Cellana) for research and development into biofuels from algae. Cellana state that they use non-GE algae.
+ A partnership with Virent, starting in 2008. Virent is working on a technology called 'bio-forming' to crack biomass down into different components and to reconstitute some of those as 'bio-gasoline'. If successful, this could allow sugars and possibly later solid biomass to be turned into aviation biofuels.

+ Biofuels research agreements with universities and university departments in the US, Brazil, China, and the UK (CoEBio3 at Manchester University and the School of Biosciences at Exeter University).
+ Shell's own biofuels research and technology team is based in the UK (Thornton), the US, Netherlands and India.