



Energy Co2 : Renewable Energy

Biofuels? Source Locally!

With biofuels attracting a lot of criticism lately, many companies and consumers have been reluctant to invest. Diana Profir manages the Green Power Market Development Group Europe at the World Resource Institute and talks about the does and don'ts.



Diana Profir, World Resource Institute, Green Power Market Development Group

"Many companies are asking for a standard, a sustainable biofuels standard, something that they can rely on."

You have been working a lot with companies interested in biofuels. How do they deal with the criticism that biofuels can be problematic?

Some companies decided not to pursue biofuels at this time until they can be satisfied that the feedstock can be sourced in a sustainable way. One company wanted to switch their vehicle fleet to biofuel, but they were worried about sustainability and made the decision not to switch at this point. They were not convinced that they can buy biofuels that is not palm oil from Indonesia or others that are unsustainable. So they decided to wait for a certification system to be in place.

Many companies are asking for a standard, a sustainable biofuels standard, something that they can rely on. They want to feel that by sourcing biomass feedstock they are not contributing to environmentally unfriendly methods of harvesting crops for fuel that could lead to the destruction of rainforest and more carbon dioxide in the atmosphere (especially in Malaysia, Indonesia, the Amazon, among other places). Deforestation also endangers rare animals and plants, not to mention unsustainable harvesting methods that lead to soil depletion and water scarcity.

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You mentioned palm oil. What is so bad about it?

Palm oil is one of the components in so many products that we buy - cosmetics, food. It is found in one in ten products that we purchase from the supermarket. But now it has also become a feedstock for biofuel and there is an increasing demand for it. So there is an incentive

for developing countries, including Indonesia, to increase their rate at which they cut down forests to grow oil palm trees and other crops.

It is one of these vicious circles. We already need so much of it and if we increase the need for it then in a few years time there might not be any forests remaining. In any case palm oil is one of the worst.

How about the United States? They work a lot with corn-based ethanol. Is that more sustainable?

The U.S. administration has set targets for an increased use of ethanol - which in the U.S. is mainly made from corn - with the hopes that this will reduce the country's dependence on foreign oil. But if you look at how much land they would have to convert from agricultural land to specific land devoted to biofuels, it is quite a large area.

Using 2005 numbers, about 14 percent of all the corn harvested in the U.S. was processed into ethanol. If the US were to devote all of the country's corn production into biofuels that year, it would still only be enough to cover just 12 percent of all the US gasoline demand. That will be very difficult and will mean that farmers will have to choose between growing crops for food or growing crops for fuel, and inevitably this will put pressure on prices for cereals, etc.

As for corn-based ethanol being more sustainable - I don't see it, yet. Experts say that corn-based ethanol produces 1.3 units of energy for each unit of energy input. Some even believe corn-based ethanol actually uses more energy than it produces. Compare that to sugar-based ethanol, for example, which is produced from sugar cane in Brazil. This bioethanol gives 8.2 units of energy for every unit of energy input, which makes it far more efficient than the fuel produced from corn.



Two sample jars, one showing used restaurant frying grease (R) and the second showing the refined end product of biodiesel, produced at the Rothsay plant in Quebec, Canada. The plant uses recycled restaurant grease as well as old foodstuff to produce biodiesel (Photo: Reuters)

So when do biofuels make sense?

In specific situations, where a plant is quite close to source products - maybe a factory that produces waste from wood cutting. It makes sense to use waste and by-products to co-fire, or use for process heat or in high-efficiency combined heat and power plants. The wood or feedstock resource would have to be quite close to the power plant in order to make something like that work economically.

An example of this is a DuPont plant in Uentrop, Germany, which can take advantage of a biomass-to-energy opportunity. The region has a healthy local forest-products industry so they can source wood chips locally with minimal transportation costs. The facility managers decided

several years ago to replace inefficient natural gas-fired boilers with a biomass combined heat and power installation using these wood chips. This type of a biomass project makes good sense. It helps the company become more efficient and reduce its emissions. But it also makes good business sense, because the company received public funding for renewable energy generation and it is contributing to the local economy. So it makes sense to source locally.

But suddenly switching all of a company's fleet to biofuels when the company has no control over the supply chain and is not quite sure where and how they are sourced - that is a different story.

editor: Thilo Kunzemann

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