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Europe, Cutting Biofuel Subsidies, Redirects Aid to Stress Greenest Options

By **ELISABETH ROSENTHAL**

Governments in Europe and elsewhere have begun rolling back generous, across-the-board subsidies for biofuels, acknowledging that the environmental benefits of these fuels have often been overstated.

But as they aim to be more selective, these governments are discovering how difficult it can be to figure out whether a particular fuel — much less a particular batch of corn ethanol or rapeseed biodiesel — has been produced in an environmentally friendly manner. Biofuels vary greatly in their environmental impact.

“A lot of countries are interested in doing this, but it’s really hard to do right,” said Ronald Steenblik, research director of the Global Subsidies Initiative in Geneva. “You can’t look at a bottle of ethanol and tell how it’s produced, whether it’s sustainable. You have to know: Was the crop produced on farmland or on recently cleared forest? Did the manufacturer use energy from coal or nuclear?”

Several countries — including [Australia](#), Britain, [France](#), [Germany](#), the Netherlands, Switzerland, as well as parts of Canada — have removed or are revising incentives for farmers, biofuel refiners and distributors.

The manufacturers and sellers will have to quantify their fuel's net effect on the environment before being eligible for subsidies, or even to count toward national biofuel quotas. Many European countries aim to have 5.75 percent of their transportation fuel made from renewable sources by the end of the year.

There is increasing evidence that the total emissions and environmental damage from producing many "clean" biofuels often outweigh their lower emissions when compared with fossil fuels. More governments are responding to these findings.

Under a proposed Swiss directive, for example, a liter of biofuel would have to produce 40 percent less in emissions than fossil fuel to qualify for special treatment. It will be hard to make corn ethanol or even rapeseed (used to make canola oil) meet the standard, said Lukas Gutzwiller of Switzerland's Federal Energy Office.

With a fuller picture of "the pros and cons of various biofuels, it was very obvious to us that we should not just push forward blindly," Mr. Gutzwiller said. "We had to base the political debate on environmental analysis to make sure that biofuels were having a positive effect."

Similarly, Germany recently canceled tax exemptions for biodiesel at the pump and is about to pass a mandate that only biofuels meeting sustainability criteria would count toward the national quota.

The biofuels craze was founded on the theory that plant-based fuels are carbon-neutral: The carbon dioxide released from burning biofuels would be canceled out by the carbon dioxide absorbed by plants as they grow. But this equation does not include emissions from processing the crops. Nor does it cover the environmental cost of fertilizers. Such factors vary significantly from biofuel to biofuel.

This week, the [European Union](#) will put forward an energy policy that, among other things, is expected to restrict imports of biofuels that are not produced in an environmentally sound manner. European governments have sought to encourage production with blanket incentives and mandates to plant crops and build refineries, as well as tax breaks for those who sell biodiesel and those who produce electricity.

Such policies have often led manufacturers to use the cheapest biofuels, rather than those that are best for the environment. The policies have also produced unintended consequences, like the sale by farmers of food crops for use as biofuel, leading to price increases for foods.

Last year, for example, Europe paid farmers a subsidy of 45 euros a hectare, or roughly \$27 an acre, for any biofuel crop produced.

The payments, “don’t encourage the best biofuels — just to grow more of what they are already growing,” said Jean-Philippe Denruyter, global bioenergy coordinator at the World Wide Fund for Nature in Brussels.

Last month, the Netherlands announced that it would no longer subsidize the importation of palm oil, its major source of green electricity generation, after investigators showed that the product was grown on Asian plantations created from drained peat land, with disastrous environmental consequences.

To address such problems, Germany is planning to require that a biofuel be certified as “sustainable,” on the basis of its emissions reductions and the way the crops are grown, if it is to count toward the annual target of biofuels making up 5.75 percent of transportation fuel.

Corn ethanol from the United States, for example, will have trouble meeting the standard, because its carbon dioxide reduction is 10 to 20 percent from the level of regular gasoline, said Jürgen Maier, director of the German Forum on Environment and Development, a nongovernmental organization.

Under the Swiss policy, which the Federal Council is expected to approve this month, very few types of biofuel sources — like corn stalks — would qualify automatically for financial incentives. Food crops — sugar beets, rapeseed and soy — will fall into a second category, in which producers will have to prove that their biofuel is environmentally beneficial, on numerous levels.

The next step for many countries is to factor in the broader environmental and social effects of biofuel growing, particularly those imported from the developing world.

While Western subsidies and tax breaks were begun to benefit the environment and to help reduce the West's dependence on foreign oil, they have been a boon for farmers around the world. Nascent biofuel industries in many countries, including in the West, are resisting cuts in such payments, without which they fear they cannot be profitable.

Tax breaks for corn ethanol and subsidies for building ethanol plants in the United States are motivated more by the desire to help farmers than to reduce greenhouse gas emissions, critics say. Corn is a relatively inefficient crop for making biofuel, because it requires intensive processing and in most cases yields only a minor emissions benefit.

Three years ago, Quebec started building a subsidized corn ethanol plant, to move toward the provincial goal of supplying 5 percent of its fuel from biofuels by 2010. A few months ago, the province's environment minister announced that it would build no more.

“We had to think about the environmental impacts of corn-based ethanol, the availability of feedstock and also greenhouse gas emissions,” said Daniel Bienvenue, the province’s deputy minister for Energy Strategy.

The government of Quebec, like many others, is supporting research into making biofuel out of waste products like corn stalks and forest debris.

But the Quebec plant has also demonstrated that, under the right circumstances, even corn ethanol can have some environmental advantage: it uses only local surplus corn. That means it is grown with low energy use and does not have to be transported long distances. The ethanol plant also uses electricity generated in a relatively clean manner.

“In general Europe and the U.S. will have to move away from vegetable oils,” Mr. Denruyter said.

“But even with these crops, if you have the right incentives you can improve the greenhouse gas profile a lot.”

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