POLICY UPDATE

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Proposed amendments to EU Fuel Quality and Renewable Energy Directives

ICCT **POLICY UPDATES** SUMMARIZE REGULATORY AND OTHER DEVELOPMENTS RELATED TO CLEAN TRANSPORTATION WORLDWIDE.

The European Commission is finalizing a new proposal for amendments to Europe's Fuel Quality and Renewable Energy Directives that will address indirect land use change (ILUC) and limit support for food-based biofuels. A draft of the proposal was leaked to Reuters, which published this article on 10 September. The proposal, prepared by the Directorates General for Energy and for Climate Action, was subsequently published by ENDS Europe here. At the time the Reuters article appeared, the proposal had not yet been approved by the inter-services group of the European Commission (the forum for other Directorates General to comment on the proposal).

The proposal would introduce accounting for ILUC emissions through ILUC factors[1] in the Fuel Quality Directive, both in assessing compliance with the 6% target by 2020 for greenhouse gas (GHG) savings in EU road transport fuels and in assessing compliance with the minimum carbon saving thresholds. While ILUC factors would not be included in the Renewable Energy Directive (except for Member State reporting to the Commission on the impacts of the policy), in order to limit the effect of the EU biofuel mandates on food prices the Commission also proposes that at most half of the 10% renewable fuels in transport required by the Renewable Energy Directive may be met with food-based fuels, and that these fuels would receive no support after 2020.

BACKGROUND ON EU DIRECTIVES

In 2009, the EU Commission passed two major directives supporting the increased use of renewable fuels. The Renewable Energy Directive (RED) mandates that 20% of all energy usage in the EU, including at least 10% of all energy in road transport fuels, be produced from renewable sources by 2020. Alongside the RED, an amended Fuel Quality Directive (FQD) was passed requiring that, by 2020, the road transport fuel mix in the EU should be 6% less carbon intensive than a fossil diesel and gasoline baseline. The Directives include sustainability criteria to prevent production of biofuels on recently deforested land or ecosystems with high biodiversity, and also requires qualifying renewable fuels to meet

1 An ILUC factor is a value for the carbon emissions per unit of energy expected to be caused by indirect land use change when demand for a give biofuel increases.

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a GHG savings threshold of 35% based on a defined lifecycle analysis methodology (see RED, Article 17, Section 2). This methodology does not currently include indirect emissions, but the Directives include a requirement that the Commission propose an appropriate methodology to deal with ILUC.

The biofuel support framework has been controversial, both for the absence of indirect emissions accounting and for the impact of expanding biofuel mandates on global food prices. Groups including the World Bank have found that biofuels increase food prices and price volatility, leading to calls from several International Governmental Organizations, as well as anti-poverty NGOs, to revise targets downwards. Research for the European Commission, and by third parties including the ICCT, has suggested that ILUC emissions significantly reduce the potential carbon savings from biofuels and that biodiesel from vegetable oil is unlikely to deliver any emissions savings at all. Introducing ILUC factors, which are already included in American biofuel legislation, has been suggested as one response to this evidence.

WHAT IS IN THE NEW PROPOSAL?

As noted above, the RED and FQD require the EU Commission to make a proposal to address indirect land use change by the end of 2010 (RED, Article 19, Section 6). This leaked draft is the somewhat delayed response to that mandate.

If passed, the proposal would introduce ILUC factors in the FQD for categories of food-based biofuel: grains and other starchy crops (wheat, corn, etc.) would have an ILUC factor of 13 $gCO_2e\ MJ^{-1}$ added to their direct lifecycle emissions profile, sugar crops (sugarcane, sugarbeet) 12 $gCO_2e\ MJ^{-1}$, and oil crops (rapeseed oil, palm oil, etc.) 55 g $gCO_2e\ MJ^{-1}$ (Annex II, Part A in the proposal, and proposed Annex V in the FQD). For comparison, fossil diesel lifecycle emissions are around 89 $gCO_2e\ MJ^{-1}$.

The ILUC values are presumably based on modeling results from the International Food Policy Research Institute (IFPRI) using the economic model MIRAGE. The proposal assumes zero ILUC emissions for wastes, residues and aquatic materials (Annex I/II, Part B). Feedstocks that cause direct land use change (e.g. clearing a plot of grassland to plant wheat) and report the emissions from this change would also be exempt from reporting ILUC (Annex I/II, Part B).

The result of this proposal is that any conventional biodiesel from unused cooking oil would almost certainly not be able to meet the emissions reduction threshold to allow it to be used for compliance with the FQD. The new proposal would also require member states to include ILUC emissions in their reporting to the European Commission on the GHG impacts of the implementation of the RED (Article 1, Amendment 16), but does not call for ILUC factors to actually be included in the RED when determining compliance of biofuels with the minimum carbon saving thresholds, meaning that high ILUC biofuels could still be counted towards the 10% RED target while not being eligible to contribute towards achieving carbon savings under the FQD.

To give an example, the “typical” direct emissions from palm oil biodiesel with methane capture under the RED are about 32 gCO_2e/MJ, a saving of 64% compared to the carbon

intensity of European diesel.[2] This biodiesel would therefore be eligible for use to comply with the RED. However, adding the 55 gCO_2e/MJ for ILUC would bring the carbon emissions up to 87 gCO_2e/MJ, a saving of less than 3%. Palm oil biodiesel would therefore not be eligible for use under the FQD, and even the modest 3% expected carbon reduction could not be counted towards operator or member state targets.

In a step to further curb ILUC and reduce the impact of renewable fuels on food prices, the proposal also caps the contribution of food-based fuels to the RED targets at 5% of total energy in EU transport fuels (Article 1, Amendment 4). The definition of food includes vegetable oils, starchy crops such as grains, and sugars. This means that at most half of the renewable fuel requirement under RED could be met with biofuels like rapeseed biodiesel and wheat ethanol. The remainder of the renewable fuel requirement would need to be met with biofuels made from waste (e.g., used cooking oil, tallow) and cellulosic material, including forestry and crop residues like wheat straw, plus any contribution from electric vehicles.

To promote these more sustainable feedstocks, the EU Commission proposes to allow fuels made from municipal wastes, residues, algae, and "gaseous fuel of non-biological origin" to *quadruple count* towards the 10% RED target (Article 1, Amendment 4). Biofuels made from cellulosic material that is not wastes or residues, and other wastes such as used cooking oil, are currently doubled counted under the RED and would be under the proposal as well (Article 21, Section 2 in the RED; Article 1, Amendment 4 in the proposal). Given this quadruple counting of some feedstocks, the overall 10% target could in theory be met with, for example, 5% rapeseed biodiesel and 1.25% wheat straw ethanol, giving an actual renewable energy content in transport fuels of 6.25%.

The proposal further calls for an end to all legislative support for food-based biofuels after 2020. This goal would need to be reiterated in legislation to be implemented post-2020, and will no doubt be subject to further discussion. Presumably, any post-2020 biofuel mandates would provide continued support to those feedstocks that are now double and quadruple counted: cellulosic material, wastes, residues, algae, and hydrogen. The proposal also calls for the Commission to review the effectiveness of the measures laid out in the proposal, and "if appropriate" to develop another proposal for ILUC factors to be applied post-2020 (Article 4). If food-based fuels are indeed phased out after 2020, these post-2020 ILUC factors would presumably only apply to land-using cellulosic crops such as *Miscanthus* or short-rotation poplar trees.

One last important element in the proposal is that the GHG savings thresholds under both the RED and FQD for biofuels from new plants[3] would be raised from 35% to 60%. Older plants would be grandfathered in and would have to raise their GHG savings to 50% by 2018 (Article 1, Amendment 7). To give an example, under the RED the default saving for rapeseed biodiesel is 42%[4] (RED Annex V, Part A[5]). Under this proposal, grandfathered biodiesel plants could therefore continue to use rapeseed oil as a feedstock for compliance with RED based on its default carbon intensity through 2017. Even though rapeseed biodiesel would be allowed for compliance with RED based on its default direct emissions,

2 89.1 gCO_2e/MJ, value taken from the proposed implementing measure for the Fuel Quality Directive is higher than the default comparator in RED/FQD, which is 83.8 gCO_2e/MJ; however, it is expected that this higher number will be adopted in due course.
3 Starting operation on or after July 1, 2012
4 Again, assuming the comparator of 89 gCO_2e/MJ will replace the current comparator of 83.8 gCO_2e/MJ.
5 Obligated parties may either report the default savings value of their feedstocks or calculate the actual lifecycle emissions

Member States would have to report the ILUC to the European Commission; so, in member state reporting, rather than a 42% saving, default rapeseed biodiesel would be ascribed a 20% emissions increase compared to fossil diesel. The default savings for rapeseed oil would not be adequate for compliance with FQD (because of ILUC), and from 2018 onwards suppliers would need to report better-than-default performance to meet the increased 50% RED threshold. New plants could only use rapeseed oil as a feedstock under RED if they found ways to increase the direct emissions performance to allow them to report savings of 60% or higher (e.g., use renewable electricity in fuel processing).

AN ONGOING PROCESS

In the next few weeks, the proposal will be debated in "inter-services consultation" within the Commission, including the various Directorates General and the Secretariat General, which reports to Commission President Barroso. The proposal could be amended in the course of this process. When the Commission adopts a final proposal, it will be officially published. It will then be subject to discussion and potentially amendment through the European Union's co-decision process. In this process, which is likely to take between one and two years, the European Parliament, Council of Ministers, and Commission will negotiate any proposed revisions, which could result in changes to, or even abandonment of, the proposal before it becomes legislation.

Because this is a proposal to amend existing directives and is not introducing entirely new legislation, there is no official opportunity for public comment; however, Members of Parliament will of course represent the concerns of their constituents, and stakeholders will also have opportunities to make representation to their national governments to ask for concerns to be raised through the Council.