POLICY UPDATE

JULY 2014

EU ENERGY COUNCIL DRAFT DIRECTIVE ON INDIRECT LAND USE CHANGE

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

On June 13, the European Union's Council of Energy Ministers agreed to a common position on the draft 'ILUC proposal.' (See here for the official press release.) The Ministers' June proposal would amend the Renewable Energy and Fuel Quality Directives to take account of concerns about indirect land use change (ILUC) for biofuels.

This is the latest stage of a process that was started with a requirement written into both Directives for the European Commission to review concerns about ILUC, and propose revisions to Europe's biofuel support frameworks if appropriate. In October 2012, the European Commission duly presented a draft directive to the Parliament and Council, and the European Parliament has since put forward its own set of proposed amendments in September 2013, after a year of intense discussion and debate.

There have been three main points of dispute in the draft directive:

- Whether the contribution to EU targets of biofuels produced from food and feed crops should be capped, and if so at what level.
- Whether 'ILUC factors' should be included in the text, and if so whether they should be used for assessing regulatory compliance in the sustainability criteria under the Renewable Energy Directive and Fuel Quality Directive, used when assessing contributions towards the carbon reduction target of the Fuel Quality Directive, both, or neither.
- What level and type of support should be given to 'advanced' biofuels, and what should be included in that category.

In recent months, the negotiations for the Council vote have hinged around the third of these questions, support for advanced biofuels. The term 'advanced' is used in a few different ways in the biofuel literature. In this context, it refers to biofuels produced from non-food feedstocks using new technologies. These technologies, notably production of biofuels from cellulosic material, are only just reaching commercial deployment, but have great potential to deliver better carbon savings at lower costs in the long-run. There has been disagreement between Member States that are in favor of more ambitious binding targets, and Member States that are in favor of targets that would be less ambitious. Crucially, several states have been demanding that national governments should be given final decision on their level of ambition for advanced biofuels, rather than being legally bound to a single Union-wide target.

In short, the Council answered these questions as follows:

- A 7% cap on the amount of energy from food or feed-based biofuels that can be counted towards the 10% target for renewable energy in transport and overall 20% renewable energy target. No limit, however, on the contribution of these biofuels to the FQD carbon-intensity reduction target.
- ILUC factors to be included only for reporting by the Commission, and not for assessing regulatory compliance. This reporting to be based on ranges taken from Monte Carlo analysis by the International Food Policy Research Institute (IFPRI).
- A legally non-binding sub-target of 0.5% of transport energy to be supplied from advanced biofuels, meaning biofuels from cellulosic or ligno-cellulosic materials, or other defined feedstocks.[1] If national governments choose to adopt lower sub-targets they will be required to explain that decision to the Commission.

By increasing the proposed cap to 7%, the final position the Council has come to is more favorable to the first generation biofuels industry than the Commission or Parliamentary versions. It is therefore less ambitious as regards cellulosic and other advanced fuels. The non-binding character of the proposed sub-target for advanced biofuels means that debate on the actual level at which targets should be set (and hence uncertainty) will continue at the national level. Still, the advanced biofuels industry has been broadly supportive of the progress, with the 'Leaders of Sustainable Biofuels' stating that, "The Council of ministers have taken an important but small step forward in order to create certainty in the biofuels markets. The advanced biofuels mandate is essential to ensure investment decisions are made in Europe. We regret the fact that the targets have been diluted to non-binding but hope that the final directive will in the end ensure regulatory certainty for the sector." The industry will now be looking for further guarantees of support in the post-2020 framework.

The following table provides an overview of the position the Council has now reached, and compares it to both the Parliament's version and the original Commission draft. The text below gives further details related to the policy dialogue on the various issues.

1 Algae; biomass fraction of municipal solid waste; biowaste from private households; the biomass fraction of industrial waste not fit for use as food or feed excluding tallow and used cooking oil; glycerine; tall oil pitch; tall oil; black liquor; brown liquor; lignin; fibre sludge; and renewable liquids and gaseous fuels of non-biological origin.

Key positions of the European institutions on major issues in the indirect land use change proposal

Issue	Original Commission proposal (October 2012)	Parliamentary position (September 2013)	Council position (Energy Ministers) (June 2014)
Cap on food/land based fuels (as fraction of EU road transport energy)	Fuels from cereal and other starch rich crops, sugars and oil crops shall be no more than 5%	Fuels from cereal and other starch rich crops, sugars, oil crops and other energy crops grown on land shall be no more than 5%	Fuels from cereal and other starch-rich crops, sugars and oil crops shall be no more than 7%
Role of ILUC factors	Estimated ILUC emissions based on factors to be reported by fuel suppliers to Member States and by Member States to the Commission, but not used in any assessment of compliance	To be accounted when assessing contribution towards the FQD target, but not when assessing compliance with sustainability criteria under RED or FQD	To be used only in reporting by the Commission, but not in any compliance accounting. Additional requirements for review of factors
Support for 'advanced' biofuels	No advanced sub-target. However, when assessing contribution to the 10% RED target for renewable energy in transport advanced biofuels from cellulosic wastes and residues or algae to be counted four times and biofuels from energy crops to be counted twice.	In the RED, a binding 2.5% sub-target for energy from advanced fuels. Fuels from energy crops not to be counted towards the sub-target, but to count twice towards the 10% RED transport target. Advanced fuels are advantaged compared to first gen fuels under FQD due to zero ILUC factors.	In the RED, 0.5% non-binding sub-target for advanced biofuels. Advanced biofuels double counted to the 10% target for renewable energy in transport and the 20% overall renewable energy target
Definition of advanced biofuels	Two tiers of advanced fuels. Fuels produced from cellulosic wastes and residues or algae to be counted four times. Fuels from energy crops to be counted twice.	Fuels produced from cellulosic wastes and residues, algae or one of three other feedstocks[2]. Biofuels from land using energy crops to be placed under the cap.	Fuels produced from a defined list of feedstocks and feedstock categories, including cellulosic energy crops, algae, and cellulosic wastes and residues
Post-2020 support for conventional biofuels	Only advanced biofuels with low estimated indirect land use change impacts and high overall greenhouse gas savings should be supported	Only advanced biofuels with low estimated indirect land use change impacts and high overall greenhouse gas savings should be supported	No statement of intention for the post-2020 regime
Low ILUC conventional fuels	N/A	N/A	Biofuels from schemes that achieve productivity increases beyond business-as-usual may be considered low-ILUC risk, but do not receive enhanced incentives

2 Bacteria, renewable liquids and gaseous fuels of non-biological origin and carbon capture and utilization for transport purposes.

DEFINING ADVANCED BIOFUELS

Throughout these negotiations, targets for advanced biofuels have been a major point of discussion, and there have been some changes proposed that are subtle but still important. Firstly, it's important to understand precisely what advanced means in this context. The priority in all three versions is to incentivize fuels that have a low ILUC risk and that would require novel processing technologies. That means that novel technologies used on food crops, such as vegetable oil hydrogenation, and old technologies used on non-food feedstocks, such as used cooking oil biodiesel, are not included. All versions have a central role for biofuels from cellulosic wastes and residues, but the treatment of other categories of advanced fuel, such as fuel from energy crops and algae, has varied. Some additional categories of feedstock (bacteria, renewable liquids and gaseous fuels of non-biological origin and carbon capture and utilization for transport purposes) not included in the Commission proposal were offered the largest incentives by the Parliament. However, while the Council has kept renewable liquids and gaseous fuels of non-biological origin, bacteria and carbon capture have gone again.

The original Commission proposal aimed to incentivize in particular the production of biofuel from: cellulosic wastes and residues; algae; the biomass fraction of municipal solid waste; several agricultural residues; and on the forestry side bark, branches, leaves and saw dust. A new annex was proposed listing various feedstocks, including algae, and various wastes and residues. Any biofuel produced from these feedstocks would have been counted four times towards the 10% RED target for renewable energy in transport. Biofuels from tallow, used cooking oil and cellulosic energy crops would have continued to be double counted as they are at the moment. No food or feed based biofuels would have qualified for this multiple counting.

The Parliament's version would have broadly followed this hierarchy – an ambitious 2.5% sub-target for biofuels from cellulosic wastes and residues would have replaced quadruple counting. Also contributing to the 2.5% sub-target would have been fuels from algae, fuels synthesized from non-biological waste gases, and as an extra boost to the value of these fuels they would count 4 times towards the overall 10% target. A significant change in the Parliamentary version was to include biofuels from energy crops under the 'cap', which would have applied to all land based crops, not only food and feed crops. While the Parliamentary text maintained the double counting for fuels from energy crops, forcing them to compete with food-based fuels under the cap would have likely been a major barrier to investment in those fuels.

By taking energy crops back out of the cap and putting them into any sub-target, the Council position would give them the same priority as biofuels from cellulosic wastes and residues or algae. The Council text does however leave room for Member States to have regard to the waste hierarchy in the way that they incentivize advanced biofuel production. In the list of feedstocks, the Council's position reinstates 'palm oil mill effluent and empty fruit bunches' as a feedstock for advanced biofuels, adds bio-waste from households and renewable liquids and gaseous fuels of non-biological origin, and extends the set of forestry residues that can be used as feedstocks. It also introduces 'other' categories of non-food cellulosic material and ligno-cellulosic material, and allows states to count towards the sub-target, "biofuels made from feedstocks not listed in Annex IX that were determined to be wastes, residues, non-food cellulosic material or ligno- cellulosic material by the competent national authorities and are used in existing installations prior to the adoption of this Directive." These additions give Member States

substantially more leeway to credit feedstocks not included in the list than would have been possible under the Commission or Parliamentary versions.

BINDING OR NON BINDING SUPPORT?

One of the sticking points in the Council deliberations has been the question of whether Member States should face a mandatory target for advanced biofuels. The Parliamentary proposal would have put a legally binding requirement on Member States to achieve the 2.5% sub-target for advanced biofuels, with states being potentially subject to infringement proceedings if the target was not achieved at the national level. The Council position takes the heat off the Member States somewhat by allowing each state to decide its own level of sub-target, and making these indicative at national level. The guideline target would be 0.5%, and Member States would have to justify to the commission the choice of a lower value, but there would be much less risk of any infringement action being taken. The draft directive now states:

> *"Member States should promote the consumption of [low-ILUC advanced] biofuels, through setting non-legally binding sub-targets at national level within the obligation to ensure that the share of energy from renewable energy sources in all forms of transport in 2020 is at least 10% of their final energy consumption."*

Note that the language about sub-targets being 'non-legally binding" is interpreted to mean that they would be non-legally binding at the national level. Member States are understood to have the right to make any measures to achieve the sub-target legally binding on economic operators – although a given Member State would presumably also be permitted to attempt to achieve its sub-target through non-binding measures.

DOUBLE COUNTING FOR ADVANCED BIOFUELS

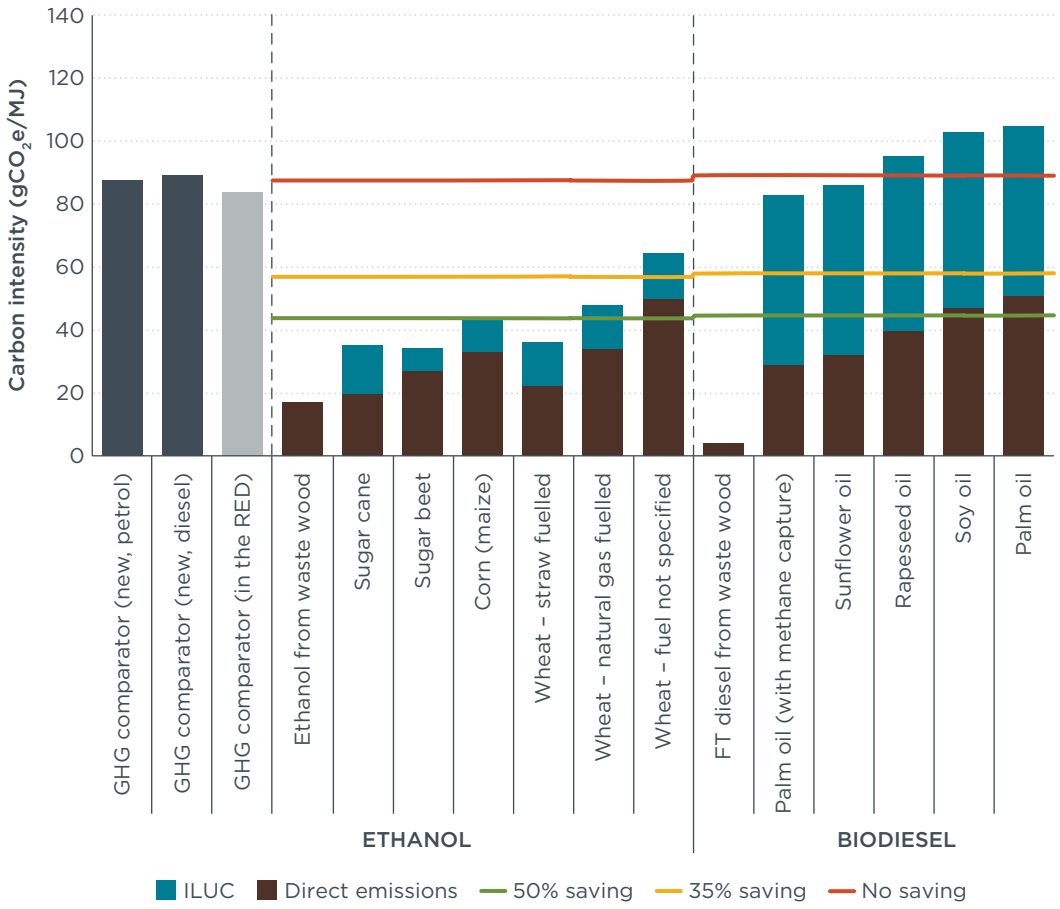
Each version of the proposal has included some form of multiple counting for some fuels towards some targets. The Council position includes double counting for fuels from wastes, residues, energy crops, algae etc. towards the 10% RED target for the use of renewable energy in transport *and* the overall 20% renewable energy target for the European Union. This last point is different to the earlier proposals, and could make advanced biofuels more attractive for Member States struggling to reach their overall renewable energy obligations.

The double counting of these advanced biofuels means that meeting the 0.5% sub-target would result in a 1% contribution towards the overall renewable energy targets. If met the target would require over 2 billion liters of ethanol equivalent fuel. That is equivalent to the output of over 30 cellulosic ethanol plants the size of the existing Beta Renewables facility at Crescentino in Italy.

ROLE OF ILUC IN BIOFUEL REPORTING AND ACCOUNTING

The Parliament's version of the draft directive would have introduced ILUC factors for the regulatory calculation of the contribution of biofuels to meeting economic operators' carbon intensity reduction targets under the FQD. The Council, however, has reduced the role of ILUC factors. Under the Council version, ILUC would be reported

by the Commission based on ranges taken from studies by IFPRI. This reporting-only approach would distinguish Europe from the US, where ILUC emissions have been included in regulatory accounting of biofuel carbon intensities for several years under the Renewable Fuel Standard and Low Carbon Fuel Standard. The lack of a direct regulatory role of ILUC factors represents a setback for the ethanol industry, as despite having been shown to have lower ILUC emissions than first generation biodiesel ethanol would have to compete against biodiesel within the cap on food and feed based fuels. Modeling has shown that biodiesel probably delivers no carbon benefit once ILUC is taken into account.



When ILUC emissions are accounted for, biodiesel does not offer carbon emissions reductions

MINIMUM EMISSIONS REDUCTIONS

The original text of the RED/FQD requires biofuels from new installations starting production from 2017 onwards to meet a 60% emissions reduction. The Council position would bring forward this measure so that any new installations becoming operational after the amending directive goes into force would be required to achieve 60% emissions reductions.

LOW ILUC-RISK BIOFUELS

The Council draft introduces the concept of 'low ILUC-risk' biofuels produced from food or feed crops. The key criterion for a low ILUC-risk biofuel from food is that it should be "produced within schemes which reduce the displacement of production for purposes other than for making biofuels." The focus is on increasing productivity beyond business as usual, "Displacement of production for purposes other than for making biofuels can be reduced if the scheme achieves productivity increases within the area it covers beyond levels which would have prevailed in the absence of these productivity-promoting schemes." This clause echoes ideas within the 'Responsible Cultivation Areas' methodology developed by Ecofys. The clause allows such schemes to be applied at the local level, but also at the regional or national level. This suggests that a country engaged in a program of agricultural investment to boost yields might be able to claim that the fraction of additional production achieved by above BAU productivity growth was low ILUC risk. It is unclear whether such productivity improvement schemes would need to be directly linked to biofuel production, or whether productivity improvement schemes happening anyway would be considered. In the latter case, it could be argued that the productivity improvement scheme itself is part of the baseline, and thus that there would in fact be no ILUC-risk reduction.

However the details of low ILUC-risk get interpreted, the concept has limited regulatory importance in the proposal. The Commission is required to "set out criteria for the identification and certification of low ILUC-risk biofuels and bioliquids", but it is not suggested that such fuels would be eligible for the advanced biofuels sub-target, or eligible for double counting, so low-ILUC designation may have limited financial value.

ALSO IN THE DRAFT: JOINT REPORTING AND VOLUNTARY SUSTAINABILITY SCHEMES

The Fuel Quality Directive includes a requirement on Member States to allow 'joint compliance' by economic operators with the GHG intensity reduction target. For example, if an oil company had subsidiaries supplying transport fuels in both France and Germany, then the Directive would allow the German subsidiary to deliver extra emissions reductions in Germany to cover the French subsidiary's obligation. It has however been unclear how this will work in practice, and the Council's amended draft directive would require the Commission to put forward in an implementing measure "rules to ensure as uniform an approach as possible to Member States' implementation" of this joint reporting option.

The Council position also asks the Commission to place additional obligations on voluntary sustainability schemes used to show compliance with the RED/FQD sustainability criteria. In particular, it empowers the Commission to set a standard for independent audit of sustainability claims and impose it on voluntary schemes. It also introduces a set of annual reporting requirements on voluntary schemes.

NEXT STEPS

The draft directive still has to be ratified by the full European Council, but it is generally anticipated that there will be no further changes before it is sent back to the Parliament. When it is returned to Parliament it will go through a 'second reading', four months

during which Parliament will consider it, potentially resulting in a new round of proposed amendments. The Parliament will be under pressure from many stakeholders to accept the proposal as-is so that it can be adopted as soon as possible and the industry can be given a degree of investment certainty. On the other hand, the Council's proposal contains some major differences from the Parliament's first reading position, and it's likely that some stakeholders with a focus on environmental and social concerns will be calling for some elements of the first reading position to be restored to a new amended draft. In the event that the Parliament does indeed ask for further amendments, these will be sent back to the Council for a second reading and vote. If the Council wants to change the proposal back, or make new amendments, the proposal will then go to 'conciliation', a panel of parliamentarians and Council representatives. The final text from this process would then have to be approved by both Council and Parliament in order for the directive to come into effect. The process is illustrated in a graphic from the European parliament available here.

POSTSCRIPT ON METHYLCYCLOPENTADIENYL MANGANESE TRICARBONYL (MMT)

As a footnote to the ILUC discussion, buried in the original Commission draft directive was language that would have delegated power to the Commission to revise limits on the use of MMT as an octane enhancer, based on results of an assessment of the risk to health (the ICCT has argued in the past that the negative health impacts of MMT outweigh the benefits). The Council's proposed amendments would require the Commission to make a legislative proposal and for any such revision to be approved by the Council and the Parliament.