

ETIP Bioenergy position on the European Commission proposal for a revised Renewable Energy Directive (RED II)

27 October 2017

Key recommendation points:

1. **ETIP Bioenergy believes that sustainable bioenergy has a key role to play to reduce GHG emissions in the EU energy mix**, as required by the Paris Climate Agreement, and to decrease our fossil fuel dependence. The promotion of bioenergy in the EU should be based on sound sustainability criteria, including a high GHG emission reduction performance. As for the use of biofuels in transport, attention should be given to the need for high quality biofuels so that they can be successfully introduced and gain high market shares.
2. **ETIP Bioenergy welcomes the new binding obligation for low emission and renewable fuels** including a separate share for certain biofuels (Annex IX, part A). It, however,
 - i) **questions the relatively low level of ambition for renewables and low emission fuels** (6.8% by 2030). This objective seems incompatible with the need to strongly decarbonise the transport sector up to 2050 and should be set significantly higher;
 - ii) **supports that a specific minimum sub target for advanced biofuels produced from Annex IX Part A feedstocks (distinct from Annex IX Part B) should be defined**. However, as Part A also contains feedstocks that can be converted by conventional technologies into biofuels with application potential, we are concerned that this waters down the incentive for advanced technologies. Furthermore, specific measures will be required to ensure a sufficiently stable market for a sustainable deployment of advanced biofuels based on lignocellulosic feedstocks, taking into consideration their higher market and technology risks. Moreover, EU biofuel policy U-turns in the past decade have effectively stalled investments and should not be repeated;
 - iii) **is concerned by the proposed gradual phase out of crop-based biofuels**: it does not take into account that many crops-based biofuels have good actual GHG performances, including low ILUC. We call for more refined regulations for crop based biofuels, with specific incentives and disincentives: to allow for further development of sustainable crop-based biofuels with low risk and improved performance, and to eliminate unsustainable practices. There is significant existing capacity of EU crop-based biofuels which can contribute to 2030 climate goals without bringing the adverse side effects that led to the phase-out policy, and this volume can be further increased with the appropriate incentives in place.
3. The RED II also covers synthetic fuels from renewable hydrogen and fossil CO₂. While in principle, this route could provide new opportunities, there is a **clear risk of 'CO₂ leakage' effects and improper administration of emissions**. It is pivotal that a **scientifically sound method for estimating GHG merits is developed and agreed upon**. While the hydrogen could be produced by renewable electricity, when mixed with CO₂ such fuels should not be termed

‘renewable’ unless the carbon content is of non-fossil origin (e.g. from biomass or air capture), in which case they may be treated equally with biofuels. For all such fuels, the same minimum requirements for CO₂ reduction should apply (as compared with conventional fossil fuels) as will apply to biofuels.

Introduction

The European Technology and Innovation Platform (ETIP) Bioenergy aims to contribute to the development of sustainable, cost-competitive world-class bioenergy value chains and the creation of a healthy bioenergy industry in the European Union, through a process of guidance, prioritisation and promotion of research, technology development and demonstration.

Bioenergy encompasses a wide range of value chains, from many feedstock types and conversion technologies to essentially all possible energy carriers. Technological and commercial maturity differs between these chains, which mean that effective policy instruments will need to take account of these differences. For example, new innovative technologies for biofuels (biofuels made from feedstocks specified in RED Annex IX, part A) will require a different type of support than technologies commercially available at scale for e.g. biofuels made from Annex IX, part B. This will be a key challenge for the RED II and its implementation in member states.

In various responses from a broad range of parties, much has already been said and discussed about the RED II proposal, part of the European Commission’s Winter Package published in November 2016. In our response, we focus on the key elements on which ETIP bioenergy has a specific position, which is in innovation and technology development for sustainable energy applications of biomass.

In the remainder of this document, we further detail our position.

Ambition levels consistent with Europe’s general energy and climate ambitions

In general, the overall 6.8% objective should be set higher. PRIMES-model results for the 2011 *Energy Package*¹ already suggested that Europe will require more than 30% biofuels in its domestic transport energy mix by 2050 in order to bring the sector into line with overall EU climate goals, and it will also need to play a significant role in international aviation and shipping. This has been reconfirmed in the *IEA Energy Technology Perspectives 2017*², in which biofuels provide for about one third of GHG emission reductions in transport, required for a ‘below 2 degrees’ scenario. As most significant technology breakthroughs should come from new technologies based on lignocellulosic feedstock, particularly these technologies should be focus of attention, both with a separate sub target and with additional measures to create a sufficiently stable market.

Annex IX A and B

We have several points to make on the way Annex IX A and B are used in this proposal:

¹: https://ec.europa.eu/energy/sites/ener/files/documents/sec_2011_1565_part2.pdf

²: <https://www.iea.org/etp2017/>

- *First of all*, it is elemental to differentiate between Annexes IX A and B as there are essential differences in terms of required policy support and R&I funding between lipid residues (Part B) and lignocellulosic feedstocks, residues and wastes (Part A). Therefore, these annexes should not be merged;
- *Secondly*, we realise that Annex IX A is already the result of long-lasting discussions, not to be repeated. However, the Annex contains several feedstocks, such as animal manure, that use standard technologies like anaerobic digestion to be converted into a biofuel potentially applicable in transport. This could water down the incentive of the 3.6% target for advanced conversion technologies and therefore is a point for concern;
- Generally, such listing of specific feedstocks seems suboptimal as it leads to continuous discussions. It would be preferable to develop a set of clear and objective criteria for feedstocks to be eligible for the various (sub)targets and the two Annexes.

Stimulating innovative biofuels technologies

In order for the sub-mandate for advanced biofuels to be effective, attention should be paid on providing a sufficiently stable incentive to investors. This because *firstly*, CAPEX costs for advanced technologies are high compared to e.g. conventional biorefineries, which means that the investment risks are also considered higher.

Secondly, advanced technologies are in earlier stages of development (first wave of flagship projects have been built or have to be built), and the related technology risk is higher than for conventional technologies.

And *thirdly*, logistical systems for the related biomass feedstocks are not yet fully organized to deliver large quantities at competitive cost. A sub-mandate alone may not suffice here, because the price signal it provides for investors can still be very uncertain. The fact that the mandates may be reviewed in 2025, while investments are typically done with a horizon beyond 15 years, is also a considerable disincentive in this context.

Finally, industry requires long-term stability and visibility: the reference to the generic gradual phase out of all crop-based biofuels and replacement by more advanced biofuels can be counterproductive to investments in advanced biofuels. Both technologies and investments are intertwined. Signalling the gradual phase out of conventional biofuels with high GHG emissions savings performance could effectively discourage investments in advanced biofuels because such an arbitrary approach could be replicated. The proposal to review the REDII by 2025 (Art. 25 §7) indicates that a policy U-turn will be possible within a short timeframe, discouraging investors. This can be very detrimental to the advanced biofuels sector, at least it should be made clear that the ambitions set out for these biofuels will last beyond 2030.

Safeguarding sustainability of crop-based biofuels

The proposed reduction of the cap on crop-based biofuels from 7% to 3.8% in 2030 can be considered a follow-up to the introduction of the cap of 7% in the 2015 ILUC directive. This cap was introduced as a simplistic political compromise to pacify a very complex discussion, viz. on ILUC, food-fuel issues

and overall sustainability. However, the longer-term perspective for these types of biofuels would deserve a more refined approach than a simple cap reduction, at least for *three reasons*:

- Several studies have already shown that the key issue in (direct and indirect) land use change is the establishment of palm oil plantations on drained peatlands in Southeast Asia. The CO₂ impact of such land use change is so dramatic that a modest share of biodiesel from this resource in the biofuels mix overturns the climate benefits of the sustainable biofuels in the mix. This alone should be sufficiently solid ground to simply exclude specific biofuels from policy, just as the USA did by excluding palm-based biofuels. Generally, both the industry and policy makers should be challenged to come up with innovative approaches (technical and non-technical) that address this issue in a more sophisticated manner than by a cap reduction that affects all crop-based biofuels;
- On general sustainability concerns, including competition with food, crop-based biofuels generally perform better than what they have been accused of in past years. Innovation towards ongoing improvements should be incentivized, and various innovative approaches have been proposed for this (in terms of GHG performance monitoring as well as in terms of closer monitoring potential food-fuel synergy, ILUC and competition effects). Placing emphasis on low ILUC conventional biofuels resulting from sustainable yield increases and/ or exploitation of currently unused or marginal land can stimulate significant improvements within the already operating industry, minimise competition with food, sustain jobs and income opportunities in rural areas. It is important to develop policies and respective instrument to foster such developments instead of the currently proposed generic phase-out;
- There is existing capacity of EU crop-based biofuels amounting to approximately 15Mt p.a. which can contribute to 2030 climate goals without bringing the adverse side effects that led to the phase-out policy. This volume of safe crop-based biofuels could be increased under suitable regulatory conditions, lowering the overall average cost of displacing fossil fuel and helping clear blend wall barriers for advanced alternative fuels.

A more sophisticated policy strategy for conventional biofuels will not be simple, but there are promising new approaches. For example, the Commission has recently commissioned the development a method³ for identifying and certifying crop-based fuels which present low or no risks of adverse land use change effects. But it would be a wasted opportunity to let innovation in crop-based biofuels stagnate from now to 2030 by the tightening of a cap measure that was only introduced as a suboptimal solution, preferably to be temporary. This is not only important for the further development of crop-based biofuels, but also for advanced biofuels: a responsible strategy for dealing with the former will generally improve investment climate, market, infrastructure, standards and public awareness for all biofuels.

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https://ec.europa.eu/energy/sites/ener/files/documents/ecofys_methodologies_for_low_iluc_risk_biofuels_for_publication.pdf

‘Renewable’ fuels from renewable hydrogen and fossil CO₂

On the crossroads of CCS and Power-to-X, production of alternative fuels from renewable hydrogen and biogenic or fossil CO₂ has received increasing attention. As such, this option could play a role in a future integrated energy system, and it opens the road for an array of new energy carriers and technologies.

However, the methods for assessing energy and climate benefits of these fuels have not been established yet. Given the status of discussion and the 19th January 2017 European Court of Justice ruling (C-460/15) on the [Schäfer Kalk case](#) in Germany, there moreover seems to be a risk of double counting of climate benefits, namely if a fossil CO₂ emitter is waived the obligation to buy EUAs under the ETS if the CO₂ is captured in a fuel, *and* the produced fuel using this CO₂ is considered low-carbon. This double counting risk, as well as the question of actual climate benefit, should be solved by developing a coherent cradle-to-grave LCA method for these fuels, and by creating clear calculation rules for cases in which CO₂ is transferred from one sector to another. Finally, as mentioned above, such fuels should be submitted to the same minimum requirements for CO₂ reductions as will apply to biofuels in the EU.