T&E's response to roadmap consultation on the inception impact assessment for the Revision of Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources.

T&E is the leading clean transport organisation in Europe. Supported by more than 60 organisations, T&E focuses advocacy efforts on clean vehicles, decarbonisation of shipping and aviation and clean energy for the transport sector.

In the context of the EU Green Deal, we welcome the Commission's intention to revise the Renewable Energy Directive and, in particular, its transport aspects. While we acknowledge that the adopted REDII is a step in the right direction concerning renewable transport fuels, we consider there are risky loopholes and lack of ambition in several aspects, for instance, the fact that food and feed based biofuels can still be used and counted towards the targets.

For the upcoming RED revision, we propose the Commission focuses on the following elements:

- **RES-T target**

The level and design of the RES-T target is crucial. T&E has been and remains supportive of carbon intensity based targets (like in the Fuel Quality Directive, FQD), compared to a volume mandate as structured in the RED.

The RED target for transport has driven mainly the cheapest and least environmentally friendly options (food-based biofuels, including palm oil). A policy for clean transport fuels needs to be based on their environmental and climate performance, not just on whether they are labelled 'renewable' or not. If designed on the basis of robust GHG accounting which includes indirect emissions, a GHG target is expected to deliver higher shares of the most sustainable fuels and a greater reduction in GHG emissions compared to an energy mandate[1]. It offers a performance-based differentiation and a competition for best performing technologies while giving clear market signals and incentives for clean fuel investments in the EU[2]. The FQD target is currently under evaluation but an option to focus on a carbon intensity target for advanced renewable fuels (even within the RED) should be analysed.

A target needs to be set at a realistic level, following an impact assessment of the sustainable amounts of advanced fuels that could be used by the sector. Based on this, T&E expresses its concern regarding the reference to a 24% target for renewables in transport in the recently published Climate Target Plan[3]. Despite existing limits on food-based biofuels, such a high target will maintain the EU's heavy reliance on crop based biofuels. If a new RES-T target is suggested, it

[1] https://theicct.org/sites/default/files/publications/RED-II-Analysis_ICCT_Working-Paper_05052017_vF.pdf

[2] https://www.transportenvironment.org/sites/te/files/publications/28%2010%202016%20NGO%20letter%20low%20carbon%20fuels%202030.pdf

[3] https://ec.europa.eu/clima/sites/clima/files/eu-climate-action/docs/com_2030_ctp_en.pdf

should be based on realistic and sustainable availability of advanced renewable fuels for transport. Failing to do so, and without robust sustainability criteria that ensures GHG savings and protection of biodiversity, a high target would drive the use of unsustainable fuels that perform well "on paper" but not "in practice" - because the current RED framework doesn't include indirect displacement effects and competing uses for certain fuel feedstocks . This could be the case for instance for unsustainable feedstocks for advanced biofuels (more on that point below).

The target, in its design, should be clearly excluding food-based biofuels and rather focus on advanced fuels. It is de facto already the case in the RED II - since only a 7% share of advanced fuels is binding out of the agreed 14% target. But the law should be revised to make clear that only advanced fuels should be incentivized.

Eventually, there needs to be a very close coordination between the RED review and ongoing ReFuel EU Aviation and FuelEU Maritime, to avoid driving unsustainable levels of alternative fuels.

For the reasons specified above, we recommend the Commission not to propose a 24% target at that stage and to take a very cautious approach in setting any RES-T targets. Any target should be set following a thorough impact assessment on the availability and sustainability of the fuels that would count towards the RES-T targets, coupled with a strengthening of the sustainability standards for biofuels and bioenergy in general.

- **Which fuels are eligible to comply with the RES-T and which are not? Reasoning and evidence.**

Specifically, we recommend the following for the different types of fuels:

  - **Food and feed based biofuels, including high-ILUC risk.**

T&E strongly recommends against the use and promotion of crop based biofuels under the Renewable Energy Directive. The reason for this is that these biofuels are based on agricultural crops grown on productive agricultural lands. The use of these lands for biofuels creates an extra demand for land to grow crops for food and/or feed, in consequence, extending the agricultural frontier. This expansion might:

- Occur at the expense of carbon rich areas - direct land use change, or:
- Occur as a result of indirect displacements in the global market. For example: if rapeseed oil is moved from the food industry to the energy industry, it leaves a gap in the food market that must be filled up with a vegetable oil replacement. So more land needs to be used to grow crops to meet that new, additional demand. This effect is known as Indirect Land Use Change (ILUC).

Direct land use change leading to deforestation (or destruction of other high carbon stock areas) is not allowed under RED. However, indirect deforestation (or destruction of other high carbon stock areas) is not accounted for in the RED. Therefore, a big portion of the negative environmental and climate impacts of the use of crop biofuels goes unaccounted for, making these biofuels look like they have a good environmental and climate performance. Based on a study done for DG Energy[4], when considering the indirect emissions, **all** vegetable oil biodiesel feedstocks lead to more GHG emissions than fossil fuel, being palm oil the worst performer,

[4] https://ec.europa.eu/energy/sites/ener/files/documents/Final%20Report_GLOBIOM_publication.pdf

followed closely by soy oil. In the case of crop-based bioethanol, while some present some savings in relation to the fossil fuel comparator, these savings would not be enough to comply with the RED GHG savings requirements, when using the RED default values[5]. The ILUC reform of 2015 was an attempt to limit the share of food-based biofuels but it didn't prevent the increase in unsustainable biofuels, for example levels of palm oil used in EU transport fuels since 2015[6].
We thus recommend a full phase-out of crop biofuels by 2030, i.e. making them not eligible to count for any targets under RED or any other energy and/or climate policy instrument.

- **High and low ILUC risk biofuels.** In an attempt to disincentivize the use of the highest emitting biofuels, the RED includes a provision to gradually phase out high ILUC risk biofuels by 2030. Based on Commission research on agricultural expansion data, palm oil is currently the only feedstock considered high ILUC risk. However there are certain ways to "escape" the phase-out if the palm oil volumes can be certified as "low ILUC risk" (if grown in severely degraded lands and/or if grown in small plots of land by smallholders). This however is rather weak or the following reasons:
    - 2030 is too late.
    - Despite the evidence on deforestation linked to soy production, this is not considered a high ILUC risk feedstock[7].
    - The low-ILUC risk category is very difficult to verify and certify and it is likely to lead to the same amount of palm oil for biodiesel, and to fraud.

For these reasons, in the context of the RED review, we recommend that the high ILUC risk biofuels are phased-out already by 2021; the low ILUC risk category is eliminated altogether; and that the methodology to identify high ILUC risk biofuels is revised in order to include soy as a high ILUC risk biofuel feedstock.

- **Advanced biofuels.**

The EU RED foresees a role for advanced biofuels in the decarbonisation of transport and thus sets a target for the use of these biofuels of 3.5% of the total renewable energy used in transport by 2030. The list of feedstocks for biofuels eligible to count as advanced are those listed under the annex IX of the REDII, and can be double-counted (i.e. one unit of advanced biofuel can be counted twice towards the target).
While T&E acknowledges that advanced biofuels can play a role in decarbonising the transport sector, some elements need further refining in order to avoid negative effects[8]. For instance:

- Sustainability criteria for advanced biofuels must be improved in order to reflect and acknowledge the potential competing uses of the feedstocks in other industries; the principle of cascading and also to ensure the use of feedstocks in the biofuels industry respects the waste hierarchy.

[5] https://www.transportenvironment.org/publications/globiom-basis-biofuel-policy-post-2020
[6] https://www.transportenvironment.org/publications/more-palm-oil-and-rapeseed-oil-our-tanks-our-plates
[7] https://www.transportenvironment.org/sites/te/files/2019_01_Cerulogy_Risk_management_study.pdf
[8] https://www.transportenvironment.org/sites/te/files/publications/2020_05_REDII_and_advanced_biofuels_briefing.pdf

- The list of feedstocks that are considered advanced biofuels contains materials that are unsustainable and could lead to deforestation and other negative environmental and climate impacts. Thus, we recommend that the list of feedstocks for advanced biofuels is updated, especially for removing problematic feedstocks based on the best available science on their environmental and climate performance.
- Include additional sustainability safeguards for the use and promotion of advanced biofuels, such as sustainable removal rates for agricultural and forestry residues that would guarantee soil fertility. Moreover, the Commission should make sure round wood is excluded as an eligible feedstock and should furthermore revise the role of biomass for energy as a renewable energy source, provided the negative environmental and climate impacts of promoting the use of wood for energy.
- The Commission must ensure robust verification and monitoring systems for the use of advanced biofuels and feedstock trading, that could ensure a robust, verifiable and traceable chain of custody to avoid unsustainable feedstocks to be used and sold as "advanced".

More information on advanced biofuels, in a dedicated briefing available here.

- Energy crops

T&E expresses its concern regarding the promotion of the so-called energy crops as a sustainable source of renewable energy for transport, which fall under the categories p) and q) of the annex IX of the REDII. Energy crops do not compete with food *in the food market*; however, they do compete with food crops for the use of land. Land is a scarce resource and putting pressure on it could push the agricultural frontier onto natural areas rich in carbon stocks - similar to what happens with food and feed crops for biofuels. Furthermore, the promotion of energy crops promotes at the same time agricultural schemes based on monocultures that can negatively affect biodiversity. Due to the above mentioned concerns, we recommend that energy crops grown on agricultural land are subject to the limitation set out in the RED for food and feed based biofuels.

Energy crops should only be eligible if evidence is provided that these are grown in abandoned or marginal lands. T&E thus recommends that the promotion and production of energy crops meets strict and robust sustainability criteria, ensuring that these crops are really growing in lands that do not serve any other purpose or ecosystem service, ensuring there are no impacts on biodiversity, water, soil quality and land use. Therefore, the cultivation of energy crops must prove that they present clear ecosystems and carbon benefits compared to natural vegetation/carbon sinks. The criteria for energy crops must also take into account what is the most efficient use of the land.

On a separate note, T&E welcomed the provisions on transparency adopted in the REDII. Fuel suppliers, operators or national authorities will be obliged to publish information on the type of biofuel supplied by each fuel supplier on an annual basis. This information should contain at least the type of feedstock and their origin and should be made available to the public.

In this regard and for the upcoming review, T&E recommends to strengthen this system by centralising the way the information is published, e.g. on national administrations' official

websites. We also recommend that the information includes the carbon intensity of the fuels supplied.

- **Renewable electricity**

The RED II already obliges Member States to take into account the "renewable electricity supplied to the road and rail transport sectors" when reporting on their obligations to reach the binding 7% target for advanced renewable transport fuels. A multiplier of four for the renewable electricity supplied to road vehicles is a key tool to incentivize Member States to take renewable electricity into account as a transport fuel, when they report to the Commission on reaching the RED II targets.

Because renewable electricity is not a drop-in fuel that can be blended, some member states like the Netherlands and Germany have developed a credit mechanism to be able to also count renewable electricity towards meeting their renewable transport fuel targets. Such a credit mechanism is a move away from the biofuel blending mandates that most Member States have used to meet their obligations under the RED, sometimes combined with sub-targets for advanced biofuels. Under such a credit mechanism, fuel suppliers are offered a wide range of compliance options to meet a minimum share of advanced renewable transport fuels. These options include the direct use of electricity, hydrogen in fuel cell electric vehicles and even synthetic hydrocarbons like e-diesel. The RED should make such credit mechanisms mandatory, while leaving room to Member States to adapt their biofuels-focused policies to also credit renewable electricity charged in Electric Vehicles.

Imposing 'biofuels only' blending mandates on fuel suppliers may have made sense when Electric Vehicles were out of reach for most consumers. This situation has changed dramatically over the last few years, since the proposal of the RED II was developed. Electric Vehicles - Battery Electric Vehicles in particular - are growing their share of new sales and will account for a significant portion of national fleets by 2030, around 15-20% in some EU Member States. In that context, a revision of the RED II must include an obligation for all member states to implement a credit mechanism. The RED II should no longer allow mandates relying exclusively on biofuel blending. This entails that fuel suppliers in all member states must be able to purchase credits for renewable electricity to meet their obligations. This would ensure that renewable electricity charged in electric vehicles is treated on par with other advanced renewable fuels. The revision of the RED must also explore how the crediting of 100% renewable electricity rather than on the basis of the national renewable share can be enabled, ensuring strict criteria for eligibility are respected. The current RED II only allows the crediting of 100% renewable electricity, when there is a direct connection. This option is too restrictive and unlikely to be workable in practice. Other ways to count 100% renewable electricity should be explored. Discussions on a framework on additionality in the transport sector - as part of the implementation of the RED II - should provide proposals on how to move beyond the direction connection.

We recommend for the RED to include an obligation for all member states to implement a mechanism that ensures fuel suppliers can purchase renewable electricity credits to meet their obligations and to keep existing multipliers for renewable electricity..

- **RFNBOs**

The core task of RED II is to establish stringent sustainability criteria for RFNBOs, ensuring that RFNBOs deliver significant greenhouse gas savings and help deploy and finance additional renewables. There are two ongoing initiatives ReFuelEU for the aviation industry and FuelEU for the maritime industry that are addressing how aviation and shipping will be decarbonised, including through the use of RFNBOs in the form of hydrogen, ammonia or synthetic kerosene. There should be consistency across the different initiatives to ensure the highest level of sustainability standards. The targets of the RED II should remain focused on the "energy content of road- and rail- transport fuels", as is currently stipulated in Article 27, paragraph 1 (a). In other words, the denominator of the formula to calculate the renewable share of transport fuels should remain unchanged.

Any discussion on increasing the RED II targets for renewable transport fuels for road- and rail-transport must be closely linked to the ReFuelEU and FuelEU initiatives: Increasing renewable fuel targets for one transport mode will have impacts on the possibility for other targets to achieve their targets. An example to illustrate this point: If advanced waste-based biofuels will be used to meet a sustainable aviation fuel mandate (before significant qualities of e-kerosene become available), this will make it more difficult for fuel suppliers in the road transport sector to meet a short-term, sharp increase in their targets due to the limited availability of feedstocks for advanced waste-based biofuels. Conversely, the level of ambition for renewable fuels in aviation and shipping must take into account the sustainability criteria of RED II and their implications for the availability of the relevant feedstocks between now and 2030. A close coordination is needed to avoid the RED, ReFuelAviation and Fuel EU maritime to drive unsustainable volumes of alternative fuels.

For more information on our vision for alternative fuels in aviation, see here and here for shipping.

- **Others**

Besides the types of fuels described above, other sources of energy for transport should be carefully assessed by the EU Commission.

- **Recycled Carbon Fuels:** T&E insists that Recycled Carbon Fuels meet the same stringent carbon savings requirements as RFNBOs, namey 70%. The assessment of their carbon savings must be based on measuring absolute reductions of emissions. Plastic waste cannot be used to produce these Recycled Carbon Fuels, as the EU Waste Framework Directive excludes "reprocessing into materials that are to be used as fuels" from the definition of recycling.
- **Biogas**[9]**.** T&E recommends against the promotion of biogas as a fuel for transport. The reasons are various.
    - The feedstocks for biogas would be the same as for biofuels. From the experience of the biofuels debate, the sustainable availability of feedstocks for (advanced)

[9] https://www.transportenvironment.org/newsroom/blog/renewable-gas-another-biofuels-disaster-waiting-happen

biogas is limited and their promotion could lead to displacement effects and deforestation.

- Due to the limited availability, promoting biogas means promoting fossil gas in transport. It is very likely that gas vehicles will end up using more than 90% gas and only a small fraction of biogas.
- Biogas could help in local applications, such as energy needs in farms, small local bus fleets, etc. Scaling it up would lead to monoculture agriculture, being a threat for biodiversity and promoting unsustainable farming practices.
- The small potential for biogas should be used in sectors already using gas as fuel, rather than promoting it in the transport sector in which a big deployment of gas fuelling infrastructure - as well as an update of the vehicles fleet - would be needed.

- **How to comply with the RES-T: credit mechanism**

The review of the RED must ensure that Member States move beyond biofuel blending mandates for fuel suppliers to comply with their national renewable transport fuel targets. All Member States should give fuel suppliers access to a mechanism that offers a level-playing field for all advanced fuels to contribute to meeting national renewable transport fuel targets. Such a system is compatible with the existing sub-targets for e.g. advanced biofuels. Given the rapid growth of electromobility, such a credit mechanism will be indispensable for counting renewable electricity towards the RED's increased target for advanced renewable transport fuels . More details on this last point below.

- **Sustainability criteria and GHG savings**

There should be a uniform requirement for all alternative fuels to deliver at least 70% GHG savings compared to the fossil comparator. This should apply across the board, to any fuel that contributes to the RED targets.

Sustainability criteria for biofuels should be reviewed to include the elements mentioned above, as well as social criteria - currently missing from the EU framework. In addition, a review should also exclude from eligibility several high risk feedstocks derived from forest biomass - for example whole trees. Additional sustainability criteria will also be needed for hydrogen and electrofuels, discussions are currently ongoing at EU level about this.

- **Other considerations - shipping and aviation**

Several EU-level initiatives are currently underway to promote greater efficiency and the use of renewable fuels in the shipping and aviation sector in an effort to curb their growing emissions. To get the shipping and aviation sector onto a pathway to full decarbonisation, renewable fuels will play an important role, in particular for ships and planes where direct electrification is not an option.

For shipping, T&E has proposed a Carbon and Energy Intensity Standard. Such a standard imposed on ship owners/operators shall adopt a full life-cycle approach, incorporating all GHG, including CO_2, CH_4 and N_2O and apply the REDII sustainability criterion of at least 70% reduction

threshold for qualifying as sustainable advanced fuels. Alternative fuels that do not meet this threshold should not be allowed for regulatory compliance. In addition, we recommend all food/feed-based biofuels to be automatically excluded from the list of compliant fuels and cap the contribution of advanced (i.e. agricultural residue-based) biofuels at 1% of the onboard energy use by mass. Lastly, we recommend implementing a robust enforcement regime, including fuel certification based on the sustainability criterion of REDII and dissuasive penalties.
For aviation, T&E advocates an EU-level regulation on fuel suppliers to the aviation sector. This regulation should recognise that efuels have the greater potential to be scaled up to meet aviation fuel demands, and therefore prioritise their development over the development of advanced biofuels. Our analysis shows that a mandate for e-fuels of between 1 and 2% by 2030 is feasible. In practice, this recommendation means that it may include a role for advanced biofuels, but recognises that ultimately this role will be limited. This would involve an impact assessment to be conducted before any target is set. Crop biofuels should be excluded from the scope of the proposal. A carbon intensity target for advanced fuels (waste & residues and efuels) in the aviation sector should be introduced, amending the REDII, reflecting 1) increased direct electrification of this sector and 2) the need to ensure a 'fair share' of advanced fuels for the aviation sector, which does not currently have direct electrification as an option.

For these sectors, the Commission must ensure that there is harmonisation and strong cross-compliance safeguards among the measures that promote the use of renewable fuels in transport (i.e. RED, FQD, and the ReFuel initiatives on shipping and aviation). Such cross-compliance should be in place to ensure that there is no double-counting of fuels in different policy mechanisms and also that there is no over demand of certain types of fuels that could lead to an unsustainable supply. Specific policies for aviation and shipping should not result in demand for advanced biofuel feedstocks beyond the existing targets that were deemed sustainable in the RED recast.

Conclusions

We consider the review of the RED in the context of the EU Green Deal a new opportunity to lay the groundwork for the promotion of advanced renewable energy for transport. Based on the above, we recommend:

- Ensure that a target for advanced renewable fuels in transport is based on a robust impact assessment of the availability of sustainable fuels.
- Phase-out food and feed based biofuels as soon as possible. Phase-out high ILUC risk biofuels (including soy) by 2021 and eliminate loopholes such as the low ILUC risk category.
- Ensure more robust sustainability criteria for advanced biofuels that takes into account competing uses and other key principles such as cascading and sustainable residues removal rates. Revise Annex IX to remove problematic feedstocks.
- Ensure a harmonised GHG savings requirement for all fuels, of at least 70%.
- Ensure proper chain of custody for advanced biofuel feedstocks - and other alternative fuels -that ensures traceability.

- Include a credit mechanism that offers a level-playing field for all advanced fuels in all EU member states, to enable fuel suppliers to use renewable electricity to meet their obligations.
- Adopt stringent sustainability safeguards for Renewable Fuels of Non-Biological Origin, making the RED the sustainability framework for their use in all transport modes, including aviation and shipping.
- Decarbonisation targets for the aviation and shipping industries - where direct use of renewable electricity is not feasible - must be closely coordinated and harmonised with the RED targets to avoid driving unsustainable volumes of alternative fuels. The RED targets should remain focused on road and rail transport.

For more information, please contact:
Geert De Cock
Manager, electricity and energy
geert.dc@transportenvironment.org

Cristina Mestre
Manager, biofuels
Cristina.mestre@transportenvironment.org