

Biofuels towards 2030: An essential decarbonisation option requiring a clear EU policy framework

For a healthy development of the biofuels sector after 2020, a clear and stimulating EU policy framework for advanced biofuels and the decarbonisation of transport towards 2030 is essential. On the basis of a review of current national thinking on the future of the transport sector, the EU Biofuels Technology platform concludes that clear direction at EU level is needed so that Member States can establish well-elaborated and coherent national decarbonisation strategies for the transport sector.

- **Such EU direction must aim at providing a sufficiently stable and predictable climate for the development and introduction of advanced biofuels, as they are an essential element for decarbonising transport. A clear EU obligation for advanced biofuels, which can be defined in several ways, is the most effective policy option for this.**
- **The EU needs to provide clear rules and regulations to ensure a healthy R&D climate, as innovation will be essential, creating new economic opportunities, job creation and other co-benefits.**
- **A fully working EU internal fuel market will need to be maintained, also for biofuels.**
- **Finally, accounting rules should be kept simple and straightforward, and sustainability should be dealt with in a responsible manner.**

The scene for the transport sector towards 2030

With the adoption of the 'ILUC' amendments to the renewable energy directive, the short-term EU framework for biofuels is clarified. For the 2030 horizon, however, only the generic EU greenhouse gas emission reduction target of -40% has been set so far, and the supporting 'legally binding' overall share of 27% renewables, without further specification of national or sectoral targets. For the transport sector, no concrete 2030 objectives have been defined yet, but some robust elements are clear. While new (electric) drivetrains will need to grow fast in order to play their part in transport decarbonisation, it is widely recognised that liquid transportation fuels will remain important; by 2030 they will still be the major part of the fuel mix across major subsectors of transport, and on the longer term, they will be indispensable for several subsectors, such as marine, aviation and heavy duty transport.

For the further growth of the various renewable and low-carbon options for transport, a clear ambition and development pathway towards 2030 is essential, and we are convinced that biofuels are an essential option in such a pathway. Both at EU and national level, frameworks should be in place well before 2020 to allow for continuous development of essential low-carbon fuel and vehicle technologies. In support of this process towards clear goals for transport towards 2030, the Biofuels Technology Platform has reviewed current national ambitions in that field, and has formulated recommendations for an EU policy framework on biofuels and transport in general.

A biofuels policy framework towards 2030

On the basis of this review, we have the following recommendations:

1. The European Commission should set a decarbonisation of transport objective at EU level and require Member States to develop national decarbonisation strategies for transport to achieve this objective, including:
 - a. GHG reduction level target for the sector, consistent with the overall EU objective;
 - b. A review of options to reach this target, including biofuels;
 - c. An analysis of macro-economically optimal mix of options, taking into account specific national assets and other benefits of decarbonizing transport, in e.g. air quality and green growth¹.
2. The role of biofuels in a national transport decarbonisation strategy may differ between Member States. But for advanced biofuels' successful development and introduction, a stable and supportive climate is essential: for related RD&D, innovation *and* for the investments needed for further roll-out. Next to RD&D and innovation support, a clear EU obligation for advanced biofuels will be most effective for this. Such an obligation should be gradually increased in the period from 2021 to 2030. The obligation can be defined as an absolute amount e.g. in terms of energy or greenhouse gas reduction, or as a relative share of biofuels in transport energy demand or liquid/gaseous transport fuels demand, and it can be applied to Member States or to fuel blenders. If no agreement can be reached on such an obligation, the EU should at least safeguard that the total of national targets guarantees sufficient market pull for advanced biofuels, and/or facilitate a coalition of most active Member States on advanced biofuels in order to demonstrate their benefits.
3. In concrete policies at EU and national level, clear and binding objectives for advanced biofuels should be set, and artificial counting rules such as those that were introduced in the RED should be avoided. Such rules have so far had mostly disturbing effects on sound development and have introduced additional uncertainties. Advanced biofuels development requires specific incentives, but there are better options than the current double counting.
4. Standardization and quality regulation of biofuels remains a pivotal condition for (advanced) biofuel commercialisation; this is a subject on which the European Commission and its Member States should come to an agreement in order not to delay the process of market uptake.
5. As for biofuels and sustainability:
 - a. This topic should be part of a broader development towards better sustainability of biomass for all applications, including food, feed and energy.
 - b. The sustainability characteristics of advanced biofuel feedstocks are significantly better than that of fuels from fossil oil, but still needs to be taken into account carefully. Therefore, insights on sustainability matters need to be further improved along with the creation of a global biomass market and the implementation of advanced biofuel technologies.
 - c. The 7% cap on food-based conventional biofuels is a given up to 2020. But when additional systems for the safeguarding of broad sustainability of biofuels based on food crops have been further developed and implemented, this cap should be re-assessed.
 - d. Next to current tank-to-wheel approaches for decarbonisation of transport, attention should also be paid to well-to-wheel emissions and emission reduction potentials when reviewing the various powertrains and fuel technologies to decarbonise the transport sector.

¹ : In the currently available national transport decarbonisation strategies, we already see some diversification in the role of biofuels, specific to countries' assets and circumstances. For example, Finland has formulated high target shares for advanced biofuels in general, as its biomass resources are an excellent basis for this. The Netherlands has formulated strong ambitions for biofuels in aviation and shipping, as it currently serves as an international fuel hub for these sectors.

Background: a review of current Member State activities on decarbonisation of the transport sector

A full review of current Member State plans in the transport sector can be found in the report '[Post-2020 Visions and National Plans for Sustainable Transport](#)' (ECN, 2015).

1. Plans vary greatly in the degree of concreteness and implementation into policy. Finland seems to have the most concrete ambitions, particularly for biofuels. This country has also applied a best practice methodology for macro-economic exploration of most attractive options for the country to decarbonize its transport sector.
2. Biofuels will be part of the low-carbon pathway for transport in all countries; only their relative shares and applications may vary between Member States.
3. Biofuels seem to come higher on the agenda when they fit well in a country's setting, such as:
 - Domestic feedstock availability
 - Presence of an (advanced) biofuel industry, including sufficiently strong players to foster the option.
 - Limited opportunities for alternative CO₂ mitigation options in transport (EVs, gas, etc)
4. The mismatch in the gasoline-diesel splits of EU refineries and final demand remains a point of attention. With expected decarbonisation ambitions for aviation, shipping and long-distance heavy transport, further investments in RD&D on biobased substitutes for these sectors seems logical, but not on account of other biofuel applications.
5. Natural gas as a transport fuel is under discussion in many countries. It is however uncertain to what extent this will be a precursor for a significant use of biogas in transport. Demand for natural gas in other sectors will remain more than sufficient to absorb the full potential of biobased methane substitutes.
6. To avoid a patchwork of inconsistent/ incompatible national policies, there is a need for harmonisation and clear guiding principles established at EU level, to achieve targets on decarbonisation of the transport sector.

EBTP background and contacts

The mission of the European Biofuels Technology Platform (EBTP) is to contribute to the development of cost-competitive, world-class biofuels technologies, to the creation of a healthy biofuels industry and to accelerate the deployment of sustainable biofuels in the European Union through a process of guidance, prioritisation and promotion of research, technology development and industrial demonstration.

The European Biofuels Technology Platform brings together a wide range of stakeholders from industry, academia, research and civil society, and is supervised by a Steering Committee. The activities are carried out by the members of four Working Groups, with this document being prepared by members of WG4 on Policy and Sustainability. Member State representation is provided through the EC Steering Group for Strategic Energy Technologies, and liaison with national biofuels platforms and bioenergy associations. The EBTP is supported by a Secretariat that received partial financial support from the European Commission under FP7 Grant Agreement Number 241269 (until end of March 2013). For further information, please contact secretariat@biofuelstp.eu or refer to the EBTP website www.biofuelstp.eu