

Advanced Biofuels, tool to combat climate change

COP21 has just reached its midpoint and progress has been encouraging. However, concrete targets and policy measures are still to be agreed during the second half of the negotiations. Every region and nation needs to deliver in every sector, including transport. Here EU can take the lead and at the same time, increase its competitiveness. Today transport is responsible for around 25 % of the total Greenhouse Gas Emissions (GHG) in the European Union, being the second biggest source of pollution after the energy industries. Thus, there is an immediate need for long-term sustainable policy framework to tackle this huge environmental and societal challenge in order to stand a chance to keep global warming under 2 degrees.

The European Union has recognized at the highest political level the need to address transport in its 2030 Climate and Energy Framework. This has been translated in the European Council Conclusions from the fall of 2014, which call the Commission *“to further examine instruments and measures for a comprehensive and technology neutral approach for the promotion of emissions reduction and energy efficiency in transport, for electric transportation and for renewable energy sources in transport also after 2020.”*

According to the European Commission’s own impact assessment on EU 2030 Framework transport should contribute to the GHG emissions reductions with up to 20 % by 2030 to reach the overall EU decarbonisation goal of 40 %. In order to reach this ambitious objective the European Union should adopt a holistic approach to vehicles, fuels and supply infrastructure while encouraging the use of the already available and cost-effective technologies, such as **advanced biofuels**.

We, the Leaders of Sustainable Biofuels are ready to work hand in hand with the European Institutions to suggest concrete solutions for the long-term decarbonisation of our transport system, while creating additional jobs and opportunities for growth and thus leading by example for the remaining countries to follow.

WHAT THE EU CAN DO TO BRING THE BEST AVAILABLE SOLUTIONS?

- **A binding energy based blending mandate of Advanced Biofuels** or alternatively a **binding GHG abatement mandate with dedicated Advanced Biofuels quota** to be set on companies bringing transport fuels into the market.
- **The mandate level has to gradually increase during 2020-2030**, thus incentivizing fuel and energy suppliers to invest in production capacity of Advanced Biofuels. The suppliers **could independently select in which EU Member State(s)** they would fulfill its’ mandate, thus ensuring most cost efficient implementation. **In addition they could independently select the advanced biofuel product(s) and technologies** to fulfill the mandate, thus increasing significantly the level of market driven R&D.
- **Well-to-wheel approach** i.e. same calculation method to be applied for all technologies. Emissions to be calculated using a life cycle analysis in both fuels and vehicles. WTW approach also encourages car manufacturers to design gasoline engines for higher biofuel blends. This will help overcoming blend wall issues, thus securing GHG emissions reductions with all engines.
- **Financial instruments** such as technology neutral taxation on energy in transport combined with CO₂ pricing, investment support for innovation brought to market and penalties for non-compliance with mandates will all effectively contribute for an effective implementation of GHG reduction measures in transport.
- **Predictable business environment:** Long-term, reliable policy that promotes advanced technologies, without stranding investments already made.

WHAT CAN ADVANCED BIOFUELS OFFER TO THE EU?

- **Growth and jobs**

- EU is a world leader in advanced biofuels technologies today.
- In the scenario outlined by the “Wasted” report, advanced biofuels will bring 15 bill € revenues to rural economy and up to 300,000 new jobs by 2030.

- **Sustainability**

- Advanced biofuels from wastes and residues can deliver between 85 % and 95 % of GHG emissions savings (RED default values).
- Significantly low ILUC risk and no competition with food and feed production.
- Wastes and residues have the potential to supply 16 % of road transport fuel in 2030.
- Advanced biofuels can enable strong emissions reduction in transport activities for which electrification is not possible (as long distance truck haulage, ships and aviation).

- **Innovation**

- EU companies are at the forefront of research in advanced biofuels technology. Most European key players in advanced biofuels technology are currently inaugurating their first of its kind flagships, as a result of years of breakthrough innovation activity.
- Innovation in new generation of bio-energy feedstock (basically lignocellulosic crops and the underutilised agricultural and forestry residues) at large scale and the build up of new value chains can bring significant advantages to the EU agricultural sector already in the 2020-2030 decade.

- **Security of supply**

- Renewables target for transport can contribute to lowering EU fuel import costs and in a context of increasing dependence on imports of fossil fuels, can improve security of supply. Today the EU still depends to 95 % on fossil fuels for transport, most of which are imported from less stable countries outside Europe. The Ukraine crisis shows once again that the EU needs to find alternatives. As regards transport, the avoided costs of imported fuels, replaced by biofuels, are estimated to amount to EUR 7.6 billion in 2010
- Wastes and lignocellulosic feedstock are cheaper than the sugar and oil crops; processing costs will decrease with technology development. According to IEA, for advanced biofuels the main factor is capital costs (35 % to 50 %), followed by feedstock (25 % to 40 %). In the longer term, reduced feedstock cost volatility will be a vital advantage for advanced biofuels that use lignocellulosic biomass sourced from energy crops, waste and residues.
- Neither technology, nor feedstock costs are prohibitive factors in adopting an advanced biofuel target. Work carried out by the IEA (technology roadmap) shows that advanced biofuels are likely to become cost-competitive with fossil fuels in the medium term. Economic parity may be achieved even faster and earlier if externalities such as GHG emissions are factored in.



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The Leaders of Sustainable Biofuels

The LSB is a group composed of Leading European advanced biofuel producers and European airlines. The initiative aims at supporting the development of second generation biofuels in Europe. The leaders of UPM, British Airways, Biochemtex, BTG, Chemrec, Clariant, Dong Energy and St1 are joining forces to ensure the market uptake of advanced sustainable biofuels by all transport sectors.

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