

AmCham position paper on the Mass Balance approach

There is an ongoing debate on a matter related to the EU Single-Use Plastics Directive. This Directive sets out the measurement of recycled content targets and requirements for the calculation of chemical recycling and recycled content in the mass balance and is of particular importance to our member companies engaged in chemical activities.

In order for the European plastics industry to meet the requirements of the transition to a net zero circular economy, chemical recycling technologies are essential alongside mechanical recycling, especially for plastics that are difficult to recycle. Many chemical recycling technologies can only be integrated into plastic and chemical production processes in EU Member States if they can be subject to a mass balance approach. The detailed rules on EU legislation on chemical recycling (mass balance) to measure recycled content in plastic products have not yet been finalized. The resulting uncertainty continues to significantly hamper the activities of European and Croatian chemical companies, as under the current circumstances companies cannot calculate the level of output material that can be sold as recycled content from the recycling operation – and therefore its yield. This can also negatively impact potential future investment decisions.

Last December, EU Member States and the European Commission met to discuss the adoption of mass balance as a calculation method, with a final decision expected in March 2024. In order to meet the recycling and recycled content targets for 2030, legal certainty on the calculation methodology is necessary. It is equally important that companies have sufficient time to plan, raise funding, obtain permits and build recycling units and related infrastructure. Completing any of these tasks can take years.

Plastics Europe has asked the European Commission and Member States to adopt harmonized EU rules allowing a combination of the mass balance method and the fuel-use exempt credit model to be used when calculating the recycled content of plastic products. AmCham believes that this is a regulatory-sound proposal that balances the production and use of recycled plastics at acceptable social costs, and helps the development and rapid spread of optimal chemical use methods both in Europe and Croatia.

In our view, establishing a clear legislative situation and adopting a fuel-use exempt credit system would also make it possible to increase the level of chemical recycling, lead to new investments in technology and infrastructure, and also ensure that these investments remain within Europe in the future. All this would greatly help to achieve the EU's 2030 targets for recycling and recycled content, in respect of which significant efforts will still be needed in Croatia.

Conversely, a stricter regulatory regime would severely hamper progress in chemical recycling by reducing the amount of recycled plastics available, increasing processing costs, while not delivering environmental benefits in terms of carbon footprint, processed plastic waste, and substituted fossil raw materials. Overall, stricter rules would further reduce the competitiveness of European industry compared to the rest of the world and make it harder to meet future EU targets for recycled content.

About the topic

The mass balance approach is a chain-of-custody model that can be used to ensure traceability in complex supply chains and production processes where it is not possible to physically segregate materials. It is used by several established programs related to sustainable or responsible sourcing, such as fair-trade schemes, the Forest Stewardship Council (FSC), as well as in the chemical industry. The approach is based on the principle that the mass of inputs into a production network or site balances the mass of outputs in the form of products, emissions and waste. The volume of certified material entering the system is controlled and equal to the amounts of certified products based on certification standards and third-party audits. The mass balance approach is a recognized chain-of-custody model under international standard ISO 22095:2020.

Our position

AmCham believes that the mass balance approach supports the transition to a carbon-neutral, circular (bio-)economy: As a trustworthy chain of custody model, it can support the substitution of fossil raw materials. The approach provides the necessary transparency about the use of circular feedstocks, so that consumers can make informed purchasing decisions. Manufacturers can thus continuously increase the availability of products with an improved environmental footprint in response to rising market demand.

The mass balance approach can be used to gradually substitute fossil feedstock with renewable or recycled alternatives in existing, highly efficient chemical production facilities. This reduces fossil fuel consumption and CO₂ emissions. The transition is faster because existing production infrastructure can be used, there is no environmental footprint from building new plants for segregated production, and the investment hurdles are lower.

To encourage the wider use of recycled and renewable feedstock via mass balance models, AmCham calls that the future regulatory framework should:

1. Acknowledge the mass balance approach in all regulations, directives and incentive schemes to drive uptake of recycled plastic and biomass.
2. Allow flexible rules within mass balance approaches in legislation to allow low-hurdle market entry for all players.
3. Include mass balance approaches in calculations of life cycle assessments (LCAs) and product environmental footprints (PEFs).



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