FEAD
European Waste Management Association

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# Polymers-only allocation method is the best compromise for a sustainable and innovative plastic recycling sector.

In the upcoming weeks, the EU's Technical Advisory Committee (TAC) on Waste, consisting of experts from Member States, will deliberate on rules for calculating recycled content in plastics through a mass balance approach under the Single Use Plastics Directive.

This legislation is pivotal in influencing market dynamics and shaping the industry's trajectory for decades. It will determine the fate of technologies and solutions, either thriving or becoming obsolete. As the inaugural regulation on calculating recycled content from chemical recycling at the European level, this implementing act is poised to serve as a blueprint for future regulations in Europe, including PPWR and ESPR.

**FEAD, the European Waste Management Association**, representing the private waste and resource management industry across Europe, **believes that the rules drafted by the European Commission, suggesting a "polymers only" mass balance allocation method, are the best compromise from a sustainable and innovative point of view**.

A **polymers-only** mass balance allocation model would:

- **Allow the necessary investment** to develop all the different chemical recycling technologies, creating the right conditions for a neutral technology approach;
- Promote investment for **research and technology development** to increase the recycled/virgin ratios these plants can handle (that today is still very low)
- **Create a level playing field** among the different recycling technologies (also for those manufactures and recyclers who already use 100% plastic waste as feedstock)
- **Fairy distribute recycled content** among the different outputs (polymers, chemicals, fuels and energy), creating the circular economy market conditions for each of them (also for non-plastic output streams of a steam cracker)

**This aligns with the Waste Framework Directive's definition of recycling and enables the distribution of recycled content across all macro-outputs of the chemical process**.

On the contrary, **FEAD rejects the fuel-use exempt allocation model as it cannot be universally applied to all technologies and presents several drawbacks**:

- It distorts the actual recycled content, contradicting the growing demand for transparency in the consumer market as advocated by public sentiment and government policies. This model would enable companies to claim recycled plastic credits (and content) even if a significant part of the production process is made up of other, non-plastic materials.
- Risk of greenwashing accusations, triggering public backlash against the entire recycling sector.
- The model allows manufacturers to maximize profits from existing operations designed for processing fossil fuels, limiting their capacity to accept higher amounts of recycled feedstock. The petrochemical industry achieves high recycled content with minimal plastic waste-

derived pyrolysis oil, hindering its transition away from fossil based plastic.

- It creates an uneven playing field for manufacturers and recyclers already utilizing 100% plastic waste as feedstock, allowing claims of green premium and cost advantage.
- Foreseeable diversion of mechanical recyclable waste feedstock to chemical recycling, that needs larger volumes of high-quality input materials.

As stated by the European Commission, each plastic waste stream should be processed by that recycling technology that is preferable from an environmental perspective, taking into account the required quality of the recyclate and the economic viability of the different technologies. In this context, **mechanical recycling technologies are preferable to chemical recycling technologies, therefore waste that can be recycled mechanically should not enter into chemical recycling**.

The $CO_2$ emissions of the most common chemical recycling method, the pyrolysis process, are many times higher than the $CO_2$ emissions associated with the mechanical processing of plastic waste into new plastic granulate[1]. In addition, chemical recycling has a significantly lower output in relation to the input than mechanical recycling.

Until today, mechanical recycling has led to the creation of 30.000 permanent jobs evenly distributed throughout the European Union[2]. The diversion of plastic waste to a few chemical recycling plants would lead to a sharp decrease in jobs and would endanger all the small and medium-sized enterprises currently operating in the sector, resulting into an oligopoly dominated by a limited number of major petrochemical companies.

**Therefore, the polymer-only allocation method emerges as the best compromise, assigning outputs the same recycled content ratio as the ratio of recycled to virgin inputs.** This method ensures consistency, especially when utilizing pyrolysis oil mixed with virgin oil to produce plastic, fuel, or petrochemical products, maintaining the original mixture's recycled/virgin ratio.

Finally, legislation must set clear boundaries for mass balance accounting:

- the conversion factor shall be based on **representative site-specific operational data** and shall reflect the production during the respective mass balance period.
- the maximum **mass balancing period shall be three months**.
- a negative account of credits shall not be permitted at any time.
- **no transfer of credits** between different sites of a company or between different companies.
- data concerning calculations shall be **independently verified for certification by an auditor**.
- a revision clause shall be included.

***FEAD is the European Waste Management Association, representing the private waste and resource management industry across Europe**, including 19 national waste management federations and 3,000 waste management companies. Private waste management companies operate in 60% of municipal waste markets in Europe and in 75% of industrial and commercial waste. This means more than 320,000 local jobs, fuelling €5 billion of investments into the economy every year.*

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[1] *Öko-Institut, Climate impact of pyrolysis of waste plastic packaging in comparison with reuse and mechanical recycling, 2022, page 13 (based on studies by Sphera Solutions GmbH, inter alia for BASF, 2022 and 2020)*

[2] *The latest report by Plastic Recyclers Europe mentions 30,000 jobs and 850 companies in Europe.*