

The massbalance calculation method in chemical recycling should support the economic transformation of refineries

The European Commission (DG ENV) is developing the method for how to calculate the amount of recycled content in plastics from chemical recycling via 'mass balance' under the EU's single-use plastics directive implementing act (SUPD IA). Mass balance is a 'chain-of-custody' accounting system already used in other sectors, such as for biofuels, forestry, textiles, fair trade cacao and coffee etc. Chemical recycling is an umbrella term covering a number of technologies which transform plastics waste into molecular building blocks for new chemicals and plastics.

DG ENV has decided to take forward a new regulation on recycled content calculation rules that could effectively exclude refineries from the EU's future chemical recycling value-chains for regulated markets. Refineries are facing a decline in traditional fossil fuel markets. The reuse of refinery infrastructure and workers' skills for chemical recycling is an opportunity to transition away from linear fossil value chains to circularity. This is at risk with DG ENV's approach.

It is a political decision on whether to promote or to hinder industrial transformation in the EU. DG ENV's approach appears to go against the EU and Finland's targets for climate, competitiveness and circularity.

Finnish Chemical Industry views:

- Finland's chemical industry is at the forefront of providing non-fossil raw materials (recycled & biobased) that are needed to reach net-zero chemicals and plastics by 2050.
- The chemicals and plastics industry is facing a huge "feedstock transformation" as 90 % of plastics are today made from virgin fossil raw materials (oil).
- A part of the solution is to increase circularity. Scale-up of chemical recycling is expected to significantly increase recycling thereby helping to replace virgin fossil raw materials.
- Kemianteollisuus supports a mass balance accounting method aligned with excluding fuel production from being called "recycling". This method requires looking at how much of output is produced from the waste-based inputs and verifying non-fuel use. If there is no evidence of non-fuel use for the outputs, then the waste-based inputs will be accounted as fully lost to fuels and not recycled.
- The benefits of this approach is that as the amount of waste-based inputs increases, it is necessary to increase the output to materials to avoid significant economic losses. This both creates a transition pathway for refineries and directly incentivises transformation.

Timeline

Spring 2025.

More information

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