

Feedback to the draft of the German National Circular Economy Strategy (NKWS)

July 2024

We warmly welcome:

- The term "defossilisation" of the plastics sector is included - the goal is to defossilise the plastics industry with the aim of achieving climate neutrality by 2045.
- The dependence - especially of the chemical industry - on carbon as a raw material for products is mentioned in the context of decarbonisation.
- In addition to the focus on recycle, the use of biomass and CCU is recognised in the medium term.
- The digital product passport is promoted as a key tool to be embedded in all major EU product legislation by 2030 -> reinforces the idea that we should try to include renewable carbon in this.
- Similar to current developments at EU level: potential and limitations of biopolymers to be further explored in research
- Policy harmonisation: Cross-reference to the Carbon Management Strategy, which is to explore the role of CCS and CCU - also for the circular economy

Further suggestions for improvement:

NKWS, p.96: Due to its energy intensity, the NKWS currently provides for chemical recycling to be used as a supplement only when there is no possibility of mechanical recycling.

- **RCI input:** Chemical recycling should not be seen as a competitor to mechanical recycling, but as a complementary process that enhances our overall waste management capabilities. Rather than seeing chemical recycling as a last resort, we should adopt a proactive mindset: "What additional waste can we recycle in this way?" This approach allows us to maximise recycling potential and develop new waste streams, ultimately contributing to a more sustainable, efficient recycling system and the achievement of recycling targets. In addition, chemical recycling may also be the only valuable recycling option to remove substances of concern in old polymers, to provide recycled feedstock for contact sensitive applications (food, cosmetics) and to broaden the range of recycled materials (e.g. not only plastic to plastic but also to polymer, monomer, etc.).

NKWS, p.96: Biomass and CCU are described as having limited availability and CCU as being available only in the medium term.

- **RCI input:** We would like to emphasise that in terms of sustainable carbon cycles, both raw material sources are essential to achieve defossilisation - recycling alone is not sufficient. The use of biomass (both 1st and 2nd generation) for materials does not necessarily compete with food, but can even increase food security (see also our paper on this topic). Therefore, to achieve a truly circular economy, better management of

available biomass and CCU is needed, especially when considering other defossilisation needs such as for Sustainable Aviation Fuels (SAF).

NKWS, p.98: The German government wants to review and gradually introduce and increase further EU recycled content quotas for plastic products (in addition to packaging and single-use plastics).

- **RCI input:** It would be prudent to supplement and expand such quotas to include biomass and CCU, especially considering carbon as a feedstock, based on the overall understanding of a broader circular carbon economy that also addresses the need for fresh, non-fossil feedstocks. Such considerations must of course be placed in the context of sustainability, availability, cost, etc., but it must also be considered that not enabling these feedstocks means remaining dependent on fossil feedstocks, which can never be truly sustainable. Inclusion of all non-fossil feedstocks supports sustainable carbon cycles and enhances overall environmental sustainability efforts. In this context, there is a strong alignment with EU frameworks and developments, such as the Ecodesign for Sustainable Products Regulation (ESPR) and its roadmaps, which are increasingly starting to include carbon as a feedstock.

NKWS, p.99: Polymer-specific recyclate quotas are being considered (PET, PP, PVC, PS...) and material diversity should be voluntarily limited in order to maintain recyclability. New plastic variants should only be introduced to the market if they make an additional contribution to sustainability.

- **RCI input:** We consider it highly risky to limit material diversity as it stifles innovation. It is crucial to consider how innovative (and potentially superior) polymers such as PEF are not excluded by such quotas and how innovative solutions can be integrated into the recycling sector, as this is currently a significant barrier in Germany. In addition, if new variants are required to contribute to sustainability, there should be clear guidelines on how new variants can demonstrate their contribution to sustainability without creating significant new burdens. For example, PEF already has a favourable life cycle assessment. Specific recyclate quotas could also act as a strong barrier for lower volume chemicals and derived polymers (speciality chemicals, fine chemicals, etc.), where economic considerations make it already more difficult to establish proper collection and recycling. Finally, any additional restrictions or limitations on polymers should be discussed and coordinated at EU level to ensure harmonisation and avoid creating additional barriers.

About RCI

The Renewable Carbon Initiative (RCI) is a global network of more than 60 prominent companies dedicated to supporting and accelerating the transition from fossil carbon to renewable carbon for all organic chemicals and materials.

The overall mission of the Renewable Carbon Initiative (RCI) is to fully replace fossil carbon with renewable carbon sources, including biomass, CO₂ and recycling. This is the only way for chemicals and materials to become net zero and part of the circular economy – part of a sustainable future! RCI is led and supported by a wide range of different stakeholders in the chemicals and materials industry. These include brands, major suppliers, large manufacturers, SMEs, start-ups and research institutes. RCI has established a unique approach supported by a broad alliance of stakeholders from different sectors.

Disclaimer: RCI members are a diverse group of companies addressing the challenges of the transition to renewable carbon with different approaches. The opinions expressed in these publications may not reflect the exact individual policies and views of all RCI members.