RENEWABLE CARBON INITIATIVE

Key Policy Messages

Shape the Future of the Chemical and Material Industry

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What is RCI?

The Renewable Carbon Initiative is an interest group of companies that are committed to and pioneering an accelerated shift from fossil carbon towards renewable carbon sources as feedstock for chemicals and materials. RCI and its member companies want to make an important contribution to achieving net-zero emissions by 2050.

Biomass, CO_2 & Recycling
Carbon from above the ground

Crude Oil, Natural Gas & Coal
Carbon from below the ground

What is Renewable Carbon?

Renewable carbon entails all carbon sources that avoid or substitute the use of any additional fossil carbon from the geosphere. Renewable carbon can come from the atmosphere, biosphere or technosphere ("from above the ground") – but not from the geosphere ("from below the ground").

This means that biomass, carbon capture and utilisation (CCU) and recycling are the only available sources for renewable carbon. They can circulate between biosphere, atmosphere or technosphere, creating sustainable carbon cycles.

RCI Key Policy Messages

1

Renewable carbon and comprehensive carbon management need to become integral guiding principles of policies to achieve truly sustainable carbon cycles.

- → Feedstock base of chemicals and materials and carbon embedded in their molecules should be considered by relevant policies.
- → Create a level playing field for chemicals and materials to other climate relevant policy sectors, such as energy and storage.
- → A "Carbon Management Regulation" should be considered as a tool to accelerate the phasing out of fossil carbon in the chemical and materials industry.

2

Adopt a precise definition of "non-fossil, sustainable" carbon as described in the Sustainable Carbon Cycles Communication with the available renewable carbon sources in mind.

Then **adopt a legally binding target for 20 % sustainable, non-virgin-fossil carbon content** in chemicals and plastics which is outlined in the Communication.

3

To support this overall goal of 20 %, several measures would be suitable:

- → Material- and product focused policies (e.g. PPWR, Ecodesign) should promote **all three renewable carbon sources** as alternatives to virgin fossil feedstock. This should also be reflected in the revision of the Waste Framework Directive.
- → CCU should receive – at least – the same support as CCS and should be deployed as a key strategic net-zero technology.
- → Recognise and promote chemical recycling technologies to increase the amount of recycled materials from hard-to-recycle waste streams.

4

Support the transformation of existing chemical infrastructure from fossil to renewable carbon and support the transformation of biofuels plants into chemical suppliers, without discriminating against existing productions from renewable feedstocks.

5

Support the massive expansion of renewable energies from solar and wind power to produce green hydrogen for CCU and optimised biomass utilisation.

6

Develop standards, certificates and labels for renewable carbon in products in order to create transparency and trust for the transition.

7

Phase out financial support, tax advantages and tax exemptions for fossil feedstocks.

Why is Renewable Carbon important?

Using fossil resources is the main reason for global warming. Approximately 70 % of all human made greenhouse gas (GHG) emissions stem from fossil carbon from the ground.[1] This means that a drastic shift away from fossil carbon is a core element of any strategy seriously aiming to reduce climate change to a minimum and stay within the 1.5° goal of the Paris agreement. The EU has set itself an ambitious net-zero goal by 2050.

While electrification and hydrogen can lead to an almost complete decarbonisation in the energy sector, this is not possible for the chemical and material industries that need carbon in their molecules. This embedded carbon is usually emitted into the atmosphere at products' end of life if not collected and recycled. Such emissions contribute between 50 % and 90 % of the overall emissions of given products.

Therefore, to achieve true net-zero, material-related emissions need to be urgently addressed. Here, a shift to renewable carbon sources from biomass, direct CO_2 utilisation or recycling is the corresponding strategy – as acknowledged in the Commission's Communication on Sustainable Carbon Cycles (2021)[2] . Renewable energies and renewable carbon will enable the defossilisation of our economic system.

To which specific EU policy objectives does Renewable Carbon contribute?

Objectives laid out in the European Green Deal[3], the NextGenerationEU[4] plan and the Transition Pathway for the Chemical Industry[5]:

- **Climate change mitigation,** achieving the 1.5°C target, by addressing the "invisible carbon footprint" of embedded carbon in chemicals and materials. To achieve true net-zero by 2050, we need to address (Scope 3) emissions at end of life, which can only be achieved by changing the carbon source for materials and products from fossil to renewable carbon.
- **Independence from fossil feedstock imports**
- **Competitiveness and innovation** of the European industry
- **Circular economy and zero-pollution** ambition for a toxic-free environment – using waste, wastewater and industrial off-gases as valuable resources
- **Rural development** – farmers can become chemical feedstock providers

Renewable carbon enables truly sustainable carbon cycles, follows the waste hierarchy, considers the cascading use principle and keeps materials in use.

1 IPCC (2021): Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. https://www.ipcc.ch/report/ar6/wg1/

2 European Commission 2021: Communication from the Commission to the European Parliament and the Council. Sustainable Carbon Cycles. Brussels, 15.12.2021. https://climate.ec.europa.eu/system/files/2021-12/com_2021_800_en_0.pdf

3 European Commission 2019: Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions. The European Green Deal. Brussels, 11.12.2019. https://eur-lex.europa.eu/resource.html?uri=cellar:b828d165-1c22-11ea-8c1f-01aa75ed71a1.0002.02/DOC_1&format=PDF

4 European Commission 2020: Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions. Europe's moment: Repair and prepare for the Next Generation. Brussels, 27.05.2020. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020DC0456&from=EN

5 European Commission 2023: Transition Pathway for the Chemical Industry. Brussels, January 2023. https://ec.europa.eu/docsroom/documents/54595