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PRESS RELEASE

Summer Special 2025 – 20% Discount on all Market and Trend Reports all Around Renewable Carbon until 31 August 2025

From advanced recycling technologies, over bio- and CO_2-based chemicals, building blocks, and polymers to specific insights on regions and renewable building blocks like alternative naphtha: The latest nova-Institute reports around renewable carbon markets are available for a special price.

Hürth, 12 June 2025: The portfolio of nova-Institute's market reports covers all relevant topics on renewable carbon. The reports dive deep into feedstocks for the chemical industry from biomass over CO_2 to chemical recycling. They provide a comprehensive overview of bio- and CO_2-based building blocks and polymers, the advanced recycling landscape, as well as specific renewable building blocks as naphtha, comprehensive analyses of the Chinese bio-based and biodegradability landscape, as well as guidelines, standards and labels for bio-based products. nova-Institute also offers reports on technology, policy, key players and the latest market data available.

The market and trend reports were compiled by nova scientists together with leading international experts and are among the most reliable and recognised sources on the market.

For an overview of the topics, and other insights in economic and technological topics, the nova-Institute offered a free nova session on 28 November 2024. In this session, nova experts presented key findings on alternative naphtha, bio-based polymers, advanced recycling and China's biodegradable plastics market.

Find a full recording of the free nova session here: https://www.youtube.com/watch?v=WqnW5tB-gK4

With the allowance code **Summer2025** you get a 20% discount on 30 market reports. All reports are available at https://renewable-carbon.eu/commercial-reports.

The offer includes, but is not limited to, the following comprehensive overview reports:

NEW: "Bio-based Building Blocks and Polymers – Global Capacities, Production and Trends 2024-2029"

2024 was a respectable year for bio-based polymers, with an overall expected CAGR of 13 % to 2029. Overall, bio-based biodegradable polymers have large installed capacities with an expected CAGR of 17 % to 2029, but the current average capacity utilisation is moderate at 65 %. In contrast, bio-based non-biodegradable polymers have a much higher utilisation rate of 90 %, but will only grow by 10 % to 2029.

Epoxy resin and PUR production is growing moderately at 9 and 8 %, respectively, while PP and cyclic APC capacities are increasing by 30 %. Despite a decline in production of biodegradables, especially for PLA in Asia, capacities have increased by 40 %. The same applies to PHA capacities. Commercial newcomers such as casein polymers and PEF recorded a rise in production capacity and are expected to continue to grow significantly until 2029.

https://renewable-carbon.eu/publications/product/bio-based-building-blocks-and-polymers-global-capacities-production-and-trends-2024-2029-pdf/

"Alternative Naphtha – Replacing Fossil-Based Feedstocks in Refineries and Naphtha Crackers: Technologies and Market, Status and Outlook"

For the defossilisation of the chemical industry, it is crucial to find alternatives to fossil-based naphtha. The "alternative naphtha" concept makes use of existing refinery, steam cracking and chemical industry infrastructure where a proportion of fossil-based feedstocks – crude oil or fossil-based naphthas can be replaced by renewable carbon alternatives derived from the three sources of renewable carbon: CO_2, biomass and recycling.

This new report by nova-Institute presents an analysis of the routes, associated technologies, market players and volumes by which renewable carbon can be introduced to refinery and steam cracking operations as replacement for fossil-based feedstocks.

https://renewable-carbon.eu/publications/product/alternative-naphtha-technologies-and-market-status-and-outlook-pdf/

"Bio-based and Biodegradable Plastics Industries in China – Policy Framework, Market Trends, Technologies and Outlook for PLA, PA, PHA and PBAT"

The new report by nova-Institute presents a timely market analysis of China's bio-based and biodegradable plastics industries and markets in 2024. The report provides an in-depth overview of the key products that dominate the Chinese market. It examines key market trends, policy dynamics, technological advances, key market players and growth opportunities. The aim is to provide chemical companies with actionable insights to navigate the Chinese market effectively and make informed decisions about market expansion or potential partnerships in China. In particular, the report highlights all relevant critical policies in the bio-based and biodegradable plastics markets since 2021 and in the future. It also provides first-hand market insights from Chinese entrepreneurs through in-depth face-to-face interviews with eight Chinese companies.

China's bio-based plastics industry is experiencing rapid growth despite being in its early stages. This is largely driven by policy incentives. The industry is expected to expand significantly from 765,631 tonnes in 2023 to 2.53 million tonnes in 2026, representing a significant CAGR of approximately 49%.

https://renewable-carbon.eu/publications/product/bio-based-and-biodegradable-plastics-industries-in-china-pdf/

"Mapping of Advanced Plastic Waste Recycling Technologies and Their Global Capacities – Providers, Technologies, Partnerships, Status and Outlook"

Advanced recycling technologies are developing at a fast pace, with new players constantly appearing on the market, from start-ups to giants and everything in between – new plants are being built, new capacities are being achieved, and new partnerships are established. Due to these developments, it is difficult to keep track of everything. The report "Mapping of advanced plastic waste recycling technologies and their global capacities" aims to clear up this jungle of information providing a structured, in-depth overview and insight. It has an exclusive focus on profiling available technologies and providers of advanced recycling including the addition of new technologies and updated/revised profiles. Furthermore, for the first time a comprehensive evaluation of the global input and output capacities was carried out for which more than 340 planned as well as installed and operating plants including their specific product yields were mapped.

https://renewable-carbon.eu/publications/product/mapping-of-advanced-plastic-waste-recycling-technologies-and-their-global-capacities/

The old report "Chemical Recycling - Status, Trends and Challenges" is suitable for interested readers who have not yet dealt with advanced recycling and are searching for an introduction into the topic while an up-to-date overview of all identified providers is less important. The report includes an extensive introductory part on polymer types, demand of different polymer types, waste fractions, political framework, position papers, technologies, LCAs, associations and waste management companies. Additionally, over 70 technologies and providers as well as respective profiles with updated information of 2020 are shown.

https://renewable-carbon.eu/publications/product/chemical-recycling-status-trends-and-challenges-technologies-sustainability-policy-and-key-players/

"Carbon Dioxide (CO_2) as Feedstock for Chemicals, Advanced Fuels, Polymers, Proteins and Minerals"

Report on the use of CO_2 for chemicals, advanced fuels, polymers, proteins and minerals by nova-Institute – A deep and comprehensive insight into the evolving technologies, trends and the dynamically growing market of CO_2 transformation and utilisation.

Several successfully implemented technologies are now in commercial use, and many more are at the laboratory and pilot stage. A current total production capacity of novel CO_2-based products of about 1.3 Mt/a in 2022 is observed. The production capacity in 2022 is dominated by the production of CO_2-based aromatic polycarbonates, ethanol from captured CO/CO_2, aliphatic polycarbonate and methanol. By 2030, the capacity outlook for CO_2-based products is expected to exceed 6 Mt/a of CO_2-based products. High dynamic growth is observed for methanol projects, methane plants, ethanol and hydrocarbons – the latter especially for the aviation sector. The potential of CCU has been recognised by several global brands which are already expanding their feedstock portfolio. However, in Europe, investments and prospects for CO_2 utilisation are largely undermined by a lack of political support. In contrast, we see supportive policies in China as well as in the US with the Inflation Reduction Act. Such smart policies are needed to bridge the gap between now and 2050 for companies to remain competitive in the sustainable transformation.

https://renewable-carbon.eu/publications/product/carbon-dioxide-co2-as-feedstock-for-chemicals-advanced-fuels-polymers-proteins-and-minerals-pdf/

All publications from the nova-Institute can be found here: https://renewable-carbon.eu/publications/

Find all nova press releases, images and more free-for-press material at https://nova-institute.eu/news/pr/

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nova-Institut GmbH has been working in the field of sustainability since the mid-1990s and focuses today primarily on the topic of renewable carbon cycles (recycling, bioeconomy and CO_2 utilisation/ CCU).

As an independent research institute, **nova** supports in particular customers in chemical, plastics and materials industries with the transformation from fossil to renewable carbon from biomass, direct CO_2 utilisation and recycling.

Both in the accompanying research of international innovation projects and in individual, scientifically based management consulting, a multidisciplinary team of scientists at **nova** deals with the entire range of topics from renewable raw materials, technologies and markets, economics, political framework conditions, life cycle assessments and sustainability to communication, target groups and strategy development.

50 experts from various disciplines are working together on the defossilisation of the industry and for a climate neutral future. More information at: nova-institute.eu – renewable-carbon.eu

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