

Siemens and BASF collaborate on driving circular economy

- **Siemens circuit breaker is the first electrical safety product to use plastic components where fossil raw materials have been replaced by biomethane derived from recycled biowaste**
- **The material changeover in the SIRIUS 3RV2 circuit breaker production will reduce the emission of carbon dioxide equivalents by ~270 tons per year¹**
- **SIRIUS 3RV2 is one of the first products covered by the recently launched Siemens EcoTech label**

Siemens Smart Infrastructure and BASF have today announced the first electrical safety product to include components made from biomass-balanced plastics. Used across industrial and infrastructure applications, Siemens SIRIUS 3RV2 circuit breaker is now being manufactured using Ultramid® BMBcert™ and Ultradur® BMBcert™ from BASF, where fossil feedstock at the beginning of the value chain is replaced by biomethane derived from renewable sources such as agricultural waste. Both materials offer the same quality and performance as conventional plastics. The material changeover in the SIRIUS 3RV2 circuit breaker production will reduce the emission of carbon dioxide equivalents by ~270 tons per year¹. Customers using these products contribute to a circular economy towards a more sustainable future.

The move supports Siemens' sustainability goals in the areas of decarbonization and resource efficiency, outlined within its DEGREE framework, with the company following a 1.5°C science-based decarbonization target, including a 90 percent

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reduction target for scope 1 and 2 until 2030, and the application of a Robust Eco Design for 100 percent of relevant product families by 2030.

In the coming months, Siemens plans to expand the use of sustainable materials across the broader SIRIUS industrial controls portfolio. In addition to product design and features, as well as manufacturing and supply processes, the choice of materials plays a major role in further reducing carbon emissions and conserving natural resources. The SIRIUS 3RV2 circuit breaker meets the strict criteria of the recently introduced Siemens EcoTech label, designed to give customers a comprehensive insight into product performance across selected environmental criteria. In addition to most of the product housing and functional parts being made from biomass-balanced plastic, the product also offers lower power consumption over its lifetime compared to its predecessor.

“With our products, we help customers to improve asset performance, availability, and reliability, through resource-efficient and circular products which optimize energy use, production, and supply chains throughout their entire lifecycle. In BASF, we have found a strong partner that supports us with its innovations in the field of sustainable plastics,” said Andreas Matthé, CEO of Electrical Products at Siemens Smart Infrastructure.

By increasingly relying on renewable and recycled raw materials for the manufacture of its products, BASF is committed to make its contribution to the circular economy and de-fossilization. This is achieved through a process that gradually replaces fossil raw materials with bio-based and recycled feedstock. According to the mass balance approach, renewable or recycled raw materials are introduced into production at the beginning of the complex BASF value chains. If customers decide in favor of a certified product from such a value chain, BASF feeds sustainable raw materials into ongoing BASF Verbund production.

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"The mass balance approach is a game-changing solution that enables the gradual replacement of fossil raw materials in sometimes complex production processes. The advantages of this approach are obvious, and the greater the demand for alternative products, the higher the proportion of alternative raw materials in the production network. This aligns with our goal of achieving a circular economy and net zero operations as soon as possible," explains Martin Jung, President BASF Performance Materials. "In addition, the special thing about this project is that the SIRIUS 3RV2 circuit breaker is also used in our BASF production plants. This circuit breaker not only protects the motors but also increases their efficiency and reliability, making a double contribution to our sustainability objectives."

With the mass balance approach, various alternative raw materials, such as biomethane, bio-naphtha or pyrolysis oil, can be integrated into the value chain. The bio-naphtha and biomethane used by BASF are certified as sustainable according to established systems such as ISCC PLUS and REDcert. The SIRIUS 3RV2 circuit breaker is a proof for resource-efficient plastics production and a milestone on BASF's #ourplasticsjourney.

"The use of such an innovative material in an important safety component, without compromising its safety functionality and performance, is a unique achievement for Siemens," underlines Andreas Matthé.

Circuit breakers are used in factories and buildings around the world and protect machines or electrical cables in the event of faults such as short circuits. They help prevent major damage, for example from fires. The SIRIUS 3RV2 circuit breaker, using sustainable plastic components, will be presented for the first time on Booth E3, Hall 11 at the AACHEMA trade fair in Frankfurt, June 10-14, 2024. Here, you can also find out more about Siemens EcoTech.

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1) The calculation of Product Carbon Footprint of materials is according to TfS Methodology and compares the CO2 reduction of the BASF Biomass Balanced product vs the conventional BASF product.

This press release as well as press pictures are available at <https://sie.ag/7EjiUR>

For more information on the project, please see:

<https://www.siemens.com/global/en/products/energy/low-voltage/solution-concepts/sustainability/basf-cooperation.html>

Further information on Siemens EcoTech is available at

<http://www.siemens.com/SiemensEcoTech>

For more information on Siemens Smart Infrastructure, please see:

[Siemens Smart Infrastructure](#)

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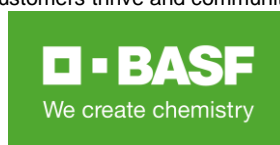
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Siemens Smart Infrastructure (SI) is shaping the market for intelligent, adaptive infrastructure for today and the future. It addresses the pressing challenges of urbanization and climate change by connecting energy systems, buildings, and industries. SI provides customers with a comprehensive end-to-end portfolio from a single source – with products, systems, solutions, and services from the point of power generation all the way to consumption. With an increasingly digitalized ecosystem, it helps customers thrive and communities progress while contributing toward

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protecting the planet. Siemens Smart Infrastructure has its global headquarters in Zug, Switzerland. As of September 30, 2023, the business had around 75,000 employees worldwide.

Siemens AG (Berlin and Munich) is a leading technology company focused on industry, infrastructure, transport, and healthcare. From more resource-efficient factories, resilient supply chains, and smarter buildings and grids, to cleaner and more comfortable transportation as well as advanced healthcare, the company creates technology with purpose adding real value for customers. By combining the real and the digital worlds, Siemens empowers its customers to transform their industries and markets, helping them to transform the everyday for billions of people. Siemens also owns a majority stake in the publicly listed company Siemens Healthineers, a globally leading medical technology provider shaping the future of healthcare.

In fiscal 2023, which ended on September 30, 2023, the Siemens Group generated revenue of €77.8 billion and net income of €8.5 billion. As of September 30, 2023, the company employed around 320,000 people worldwide. Further information is available on the Internet at www.siemens.com.

About BASF

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. Around 112,000 employees in the BASF Group contribute to the success of our customers in nearly all sectors and almost every country in the world. Our portfolio comprises six segments: Chemicals, Materials, Industrial Solutions, Surface Technologies, Nutrition & Care and Agricultural Solutions. BASF generated sales of €68.9 billion in 2023. BASF shares are traded on the stock exchange in Frankfurt (BAS) and as American Depositary Receipts (BASFY) in the United States. Further information at www.basf.com.

About BASF's Performance Materials division

BASF's Performance Materials division is at the forefront of the much-needed sustainability transformation in plastics. Our products are co-created with customers around the globe to bring innovations to major industry sectors such as transportation, consumer goods, industrial applications, and construction. Our R&D focuses on all stages of the plastics journey: Make, Use and Recycle. The MAKE phase is about improving how plastics are made, from product design to the choice of raw materials and the manufacturing process itself. The USE phase enhances plastics' strengths such as light weight, robustness, and thermal resistance. At the end of the product lifecycle, the RECYCLE phase looks at how to close the loop to achieve a circular economy. In 2023, the Performance Materials division achieved global sales of €7.2 billion. Join #ourplasticsjourney at: <https://www.performance-materials.basf.com>

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