LanzaTech

Bridgestone Partners with LanzaTech to Pursue End-of-Life Tire Recycling Technologies

April 13, 2022

Bridgestone Americas (Bridgestone), a global leader in tires and sustainable mobility solutions, today announced an exclusive partnership with Carbon Capture and Transformation (CCT) company, LanzaTech NZ, Inc. (LanzaTech) to address end-of-life tire waste. The two companies will co-develop the first dedicated end-of-life tire recycling process leveraging LanzaTech's proprietary CCT technology, creating a pathway toward tire material circularity and the decarbonization of new tire production.

According to the Tire Industry Project operating under the umbrella of the World Business Council for Sustainable Development (WBCSD), more than one billion tires globally reach the end of their useful service life each year. Bridgestone and LanzaTech will work to address this issue by converting end-of-life tires into new materials, including exploring processes to create sustainable synthetic rubber that does not rely on petrochemicals.

"We are excited to join forces with LanzaTech to co-create a more sustainable pathway for end-of-life tires," said Paolo Ferrari, President & CEO, Bridgestone Americas. "The steps we take today are determining the health of our planet for future generations. We are determined to meet the moment with sustainable innovation that transforms the way tires are made and promotes end-to-end material circularity."

"LanzaTech and Bridgestone are working together to find solutions to some of our world's greatest challenges," said Dr. Jennifer Holmgren, Chief Executive Officer, LanzaTech. "We have already proven that we can convert unrecyclable, unsorted municipal solid waste to ethanol and then make products we use in our daily lives. With our partnership with Bridgestone, we are developing a circular pathway to use tires to make tires. This partnership exemplifies what we call a Post Pollution Future."

Bridgestone and LanzaTech seek to develop a new business model that will create a post-consumer waste management strategy for end-of-life tires, while also driving increased adoption of sustainably sourced chemicals for commercial applications. Applying LanzaTech's carbon capture and gas fermentation process to end-of-life tires yields sustainably produced chemicals such as ethanol that can be converted to materials such as PET for packaging, polyester yarn and surfactants used in consumer home goods like laundry detergent. In addition, Bridgestone and LanzaTech will jointly explore opportunities to co-develop proprietary microbe technology to produce more efficient pathways to produce butadiene, a key ingredient in new tire production, realizing true circularity for end-of-life tires.

Headquartered in Skokie, Ill., LanzaTech transforms waste carbon into materials such as sustainable fuels, fabrics, packaging, and other products. Using a variety of waste feedstocks, LanzaTech's technology platform highlights a future where consumers are not dependent on virgin fossil feedstocks for everything in their daily lives. LanzaTech's goal is to challenge and change the way the world uses carbon, enabling a new circular carbon economy where carbon is reused rather than wasted, skies and oceans are kept clean, and pollution becomes a thing of the past.

Bridgestone is aiming to achieve carbon neutrality and make tires from 100% renewable materials by 2050. The company is actively researching a range of solutions to support the recycling of materials from end-of-life tires and promote the replacement of non-renewable materials such as oil, silica and virgin carbon black in new tires.

"Our partnership with LanzaTech is a clear commitment by Bridgestone to advancing sustainable tire technologies and solutions that preserve the environment for future generations and contribute to the realization of to a carbon neutral mobility society," said Nizar Trigui, Chief Technology Officer and Group President, Solutions Businesses, Bridgestone Americas.

Bridgestone's partnership with LanzaTech aligns with the Bridgestone E8 Commitment that serves as the axis to drive management while earning the trust of future generations. The Bridgestone E8 Commitment consists of 8 Bridgestone-like values starting with the letter "E" (Energy, Ecology, Efficiency, Extension, Economy, Emotion, Ease, and Empowerment) that Bridgestone will commit to creating together with employees, society, partners and customers to realize a sustainable society. This partnership aligns with "Ecology: Committed to advancing sustainable tire technologies and solutions that preserve the environment for future generations" and "Energy: Committed to the realization of a carbon neutral mobility society."