Press release

Avantium and EPC Engineering & Technologies Collaborate to Commercialize Continuous PEF Production Technology

AMSTERDAM, 5 February 2025, 07:00 hrs CET – Avantium N.V., a leader in renewable and circular polymer materials, has signed a collaboration with EPC Engineering & Technologies GmbH, an international technology provider as well as an engineering and plant construction company. This partnership aims to advance the continuous PEF polyester production technology, targeting plant capacities of 100 kilotonnes per annum and beyond. The collaboration will combine the expertise of both companies to commercialize continuous polymerization of PEF ("PEF cPol Technology"). Avantium and EPC will integrate their respective technologies and processes, together with the solid state polymerization (SSP) of POLYMETRIX AG. The PEF cPol Technology will be included in Avantium's YXY® Technology license package. EPC will provide engineering, plant construction services and key equipment, including the SSP equipment from POLYMETRIX, to Avantium's future licensees.

Avantium has developed its proprietary YXY® Technology to produce FDCA (furandicarboxylic acid), the essential component for the fully plant-based and circular polymer PEF (polyethylene furanoate). PEF is branded by Avantium as releaf®. Avantium is currently in the process of starting up the world's first commercial FDCA plant in Delfzijl, the Netherlands. This FDCA Flagship Plant will play a crucial role in Avantium's commercialization and licensing strategy. The commercial FDCA plant allows Avantium to sell FDCA and releaf® directly to offtake partners, while also offering technology licenses at full scale to industrial partners worldwide. Under such a technology license, industrial partners can produce FDCA and PEF in large-scale production facilities using Avantium's proprietary YXY® Technology.

Avantium and EPC Engineering & Technologies already worked together in 2017, when EPC developed a conceptual design for a 25 kilotonnes per annum PEF continuous polymerization plant using melt state polymerization. This conceptual design served as the starting point for the Joint Development Agreement to further scale the polymerization technology to 100 kilotonnes per annum and beyond. POLYMETRIX will contribute with its continuous solid state polymerization know-how. With this collaboration, Avantium is able to extend its YXY® Technology license package to the full continuous PEF production process including performance guarantees at industrial scale, whether greenfield, brownfield or retrofit plant.

Karol Kerrane, Managing Director at EPC Engineering & Technologies, comments: "EPC continuously strives to find technical solutions to overcome global environmental challenges. Through this international collaboration with Avantium, we are fully confident to jointly achieve great success by offering world's best practice for continuous PEF production."

Bart Langius, Director Licensing at Avantium, adds: "This collaboration with EPC and POLYMETRIX marks a step forward in our mission to add our renewable and circular polymer PEF in the polyester industry. By combining our expertise with EPC and POLYMETRIX, we are confident that we can offer our potential licensing partners a comprehensive license package that integrates Avantium's YXY® Technology with continuous PEF polymerization technology, providing a high performance alternative to fossil-based plastics."

About Avantium
Avantium is a pioneering commercial-stage company focused on renewable & circular polymer materials. Avantium develops and commercializes innovative technologies for the production of materials based on sustainable carbon feedstocks, i.e. carbon from biomass or carbon from the air (CO_2). The most advanced technology is the YXY® Technology that catalytically converts plant-based sugars into FDCA (furandicarboxylic acid), the key building block for the sustainable plastic PEF (polyethylene furanoate). PEF is known under the brand name Releaf®, an EU registered trademark of Avantium. Avantium has successfully demonstrated the YXY® Technology at its pilot plant in Geleen, the Netherlands, and is in the process of starting the world's first commercial plant for FDCA in Delfzijl, the Netherlands. Avantium works in partnership with like-minded companies around the globe to create revolutionary renewable chemistry solutions from invention to commercial scale.

Avantium's shares are listed on Euronext Amsterdam and Euronext Brussels (symbol: AVTX). Avantium is incorporated in the Euronext Amsterdam SmallCap Index (AScX). Its offices and headquarters are in Amsterdam, the Netherlands.

About EPC Engineering & Technology GmbH
EPC Engineering & Technologies, as a member of the EPC Group, is a German-based, international technology provider as well as an engineering and turnkey plant construction company. The focus of its business is the licensing of technologies as well as the design and realization of industrial plants and infrastructural projects. It is the combination of experience and continuous development that makes sustained innovation possible. EPC is internationally active, building economically viable turnkey industrial plants that correspond to the highest technological and environmental standards.

About Polymetrix
Polymetrix AG designs, supplies, and installs complete industrial plants for the thermal treatment of bulk materials. They specialize in upgrading virgin PET, recycled PET, polyamide, PBT, and other polymers. With over 40 years of process development experience, Polymetrix sets the global standard for productivity and energy efficiency in polymer treatment plants. Their technologies are used in various applications, including PET bottles, seatbelts, tires, hot air balloons, and high-performance sports clothing.

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