

JM award-winning ethyl acetate technology to help CropEnergies AG reduce fossil carbon footprint of products

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Johnson Matthey and CropEnergies AG, a specialist in biomass-based sustainable chemicals and a leading European producer of ethanol, have entered into an engineering, license and technical services agreement for a plant to allow CropEnergies AG to produce renewable ethyl acetate from sustainable ethanol.

Johnson Matthey's award-winning commercial ethyl acetate technology has a proven track record for process improvement, engineering expertise and licensee support. Johnson Matthey's green technology minimises carbon emissions and produces ethyl acetate widely regarded as having the highest product quality on the market.

Ethyl acetate is widely used in the production of cosmetics, flexible packaging and coatings, paints and adhesives, as well as in food, beverage and pharmaceutical applications. Using Johnson Matthey technology, the renewable ethyl acetate produced by CropEnergies will reduce the fossil carbon footprint of these everyday products and will offer CropEnergies' customers the opportunity to source locally in Europe, providing greater security of sustainable supply.

The plant will be designed to produce 50,000 tonnes per year of renewable ethyl acetate from renewable ethanol feedstock using renewable energy to drive the process. The plant will also generate renewable hydrogen as a co-product that, together with biogenic CO₂ from the CropEnergies fermentation process, will be the basis for further conversion of renewable energy into PtX (power-to-X) downstream routes, to produce e.g. e-fuels.

Johnson Matthey will prepare the process design package scheduled for completion mid-2022 after which Crop Energies will make the final investment decision.

Alberto Gionvanzana, Managing Director for Johnson Matthey, commented: "JM's vision is for a world that's cleaner and healthier today and for future generations and we are proud that CropEnergies has chosen our DAVY™ ethyl acetate process technology for their innovative renewable chemicals plant in Zeitz, Germany."

"Our process is ideally suited for use with bio-based ethanol feeds and offers an ethyl acetate route that is almost 100% carbon neutral while providing a valuable hydrogen co-product stream. We are committed to helping the chemical industries manage the

transitions needed to decarbonise and are looking forward to supporting CropEnergies through the engineering and beyond for this ground-breaking project.”

Dr Stephan Meeder, CEO of CropEnergies AG: “If we want to live in a climate friendly world, we have to change the materials we use. Our goal is to provide to our customers innovative, sustainable products made out of biomass. As a sustainable alternative to fossil products, renewable ethyl acetate significantly saves greenhouse gas emissions. We are convinced that the results of the project evaluation will be favourable and are excited to start this project with our partner, Johnson Matthey.”

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Johnson Matthey

Johnson Matthey is a global leader in sustainable technologies that enable a cleaner and healthier world. With over 200 years of sustained commitment to innovation and technological breakthroughs, we improve the performance, function and safety of our customers’ products. Our science has a global impact in areas such as low emission transport, pharmaceuticals, chemical processing and making the most efficient use of the planet’s natural resources. Today about 15,000 Johnson Matthey professionals collaborate with our network of customers and partners to make a real difference to the world around us. For more information, visit www.matthey.com

Inspiring science, enhancing life

CropEnergies AG

Sustainable, renewable products made from biomass – that is what CropEnergies stands for. Our products contribute to a climate-friendly world and ensure that fossil carbons remain in the ground permanently and do not continue to drive climate change. Founded in Mannheim in 2006, the member of the Südzucker Group is the leading European producer of renewable ethanol. With a production capacity of 1.3 million m³ of ethanol per year, CropEnergies produces neutral alcohol as well as technical alcohol (ethanol) for a wide range of applications at locations in Germany, Belgium, the UK, and France: Sustainably produced ethanol as a petrol substitute is an answer to the future challenges of climate-friendly energy supply in the transport sector. Thanks to highly efficient production plants, our ethanol reduces CO₂ emissions by an average of more than 70% across the entire value chain compared to fossil fuel. Our high-quality alcohol is also used in beverage production, cosmetics, pharmaceutical applications, for example as a basis for disinfectants, or as a raw material for innovative biochemicals. Equally important are the resulting protein food and animal feed products as a sustainable regional alternative to emission-intensive protein imports from overseas, as well as biogenic carbon dioxide. It is used in beverage production, among other things, and will be a valuable raw material for a wide range of applications in transport and industry in the future. Thus, all raw material components are utilised in our circular economy.

For further information

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