

Press release

Verbio makes the chemical industry green – construction of a new plant at the Bitterfeld location for manufacturing bio-based speciality chemicals begins

- Ground-breaking ceremony for the world's first ethenolysis plant to manufacture renewable chemicals based on rapeseed oil methyl ester
- Unique processing engineering: implementing Nobel prize-winning technology
- Investment volume in the range of EUR 80 million to EUR 100 million

Leipzig, May 14, 2024 – Verbio commences construction of the world's first large-scale ethenolysis plant using rapeseed oil methyl ester at its Bitterfeld location. This plant will be able to manufacture large quantities of bio-based speciality chemicals for use in detergents and cleaning agents, high-performance lubricants for engines, or plastics. In doing so Verbio is helping the chemical industry make the transfer from fossil-based to renewable raw materials.

Today's ground-breaking ceremony at Verbio's Bitterfeld location was attended by politicians as well as representatives of the Company and its business partners. Among those present was Sven Schulze, Saxony-Anhalt's Minister for Economic Affairs, and Armin Schenk, Mayor of the City of Bitterfeld-Wolfen.

Sven Schulze explained, "Since Verbio made its decision to locate here in Saxony-Anhalt more than 20 years ago, it has grown to become an important company for our region. Verbio is again creating jobs here with the new ethenolysis plant. In turn, the chemical industry will be supplied with renewable raw materials which will enable it to reduce its use of fossil-based raw materials. In doing so Verbio is making a contribution to helping Saxony-Anhalt's economy speed up its transition to climate-neutrality. We are pleased that we are able to support the investment here in this location with funds from the regional government."

To finance the plant, Verbio is receiving funding from the joint Federal Government/Länder regional development scheme (Gemeinschaftsaufgabe regionale Wirtschaftsförderung – GRW) for particularly environmentally friendly and innovative technologies. Theodor Niesmann, Chief Technology Officer of Verbio SE, expressed his thanks for this: "In total Verbio is investing in the range of EUR 80 million to EUR 100 million in the new ethenolysis plant here in the Bitterfeld location. We are pleased that Saxony-Anhalt recognises the value of the project with its support

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Green solutions for chemicals

“The living standards that we enjoy today would not be possible without the chemical industry. We see it as our responsibility to shape social and industrial change towards climate neutrality and ecological production with innovative technologies and green solutions. We are investing in research and development on an ongoing basis – and with great success, since we are now able to supply the chemical industry with renewable, bio-based molecules,” explained Theodor Niesmann. He continued, “There are a range of applications, ranging from renewable plastics to environmentally-friendly detergents and lubricants.”

Due to its energy-intensive production processes and dependence on fossil resources, the chemical industry is particularly confronted with the challenges of achieving the Paris climate targets. However, the chemical industry is an integral part of many value-added chains due to its close integration with other sectors, for example the automobile industry.

Verbio’s innovative bio-based speciality chemicals enable chemical processing companies to make a quick switch to renewable raw materials generated from sustainable regional biomass. With the construction of the ethenolysis plant Verbio is reacting to the high level of demand from the industry. At the same time it is making an important contribution to CO₂ reduction and accelerating the defossilisation of the chemical industry.

Implementing Nobel prize-winning technology

The ethenolysis plant is the first of its kind and will make use of unique process engineering. The feedstock used in the production process is certified sustainably produced rapeseed oil from regional agriculture. The rapeseed oil is initially converted to biodiesel (rapeseed oil methyl ester) in Verbio’s biorefinery. Then, using the innovative catalyst systems developed by XiMo Hungary Kft., a wholly-owned Verbio subsidiary, this biodiesel is converted to green molecules which are used as renewable raw materials in speciality chemicals.

In parallel, XiMo is constructing a production plant to manufacture metathesis catalysts on a multi-tonne scale. These will be used in the ethenolysis process to meet Verbio’s internal needs and, in addition, to supply external customers utilising similar applications. The technology is based on the metathesis process. Prof. Dr. Richard Schrock, one of the former founders of XiMo, was

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awarded the Nobel Prize in Chemistry in 2005 for his discoveries in the field of metathesis in organic chemistry ([Richard R. Schrock – Facts \(nobelprize.org\)](#)).

In many years of research, Prof. Dr. Schrock and his colleagues laid the foundations for molybdenum- and tungsten-based olefin metathesis catalysts. Following the takeover of XiMo by Verbio SE, the team led by the current Managing Director, Dr. Levente Ondi, succeeded in further developing the process for industrial application.

Bio-based speciality chemicals from Verbio

With ethenolysis, Verbio provides the market with the bio-based speciality chemicals methyl 9-decenoate (9-DAME) and 1-decene, which are used as key components in a wide range of applications. 9-DAME is a component of detergents and cleaning agents and serves as a raw material for lubricants and polymers. 1-decene is an important basis for products in the field of high-performance lubricants used in modern engines, gearboxes and wind turbines. "In the long term we are planning to expand our range of bio-based speciality chemicals, for example with C18 diacids, which can be used in polymers, coatings, pharmaceutical products or cosmetics," explained Theodor Niesmann.

The Bitterfeld plant will have a nominal annual capacity of 32,000 tonnes of 9-DAME and 17,000 tonnes of 1-decene. The objective is to manufacture 60,000 tonnes of renewable products for the chemical industry annually. Verbio plans to commission the plant in 2025 and commence regular production in 2026.

Strengthening the regional economy

For Verbio, the construction of the plant is an important milestone in its corporate history and its international growth strategy. Armin Schenk, Mayor of the City of Bitterfeld-Wolfen, praised the Company's achievements: "This pioneering project marks a significant step towards a green future and demonstrates Verbio SE's ongoing commitment to innovation, sustainability and environmental protection." Verbio is creating around 50 new jobs with the construction of the plant, and in doing so is making a contribution to regional value creation in industry and agriculture.

Verbio has been driving the decarbonisation of transport for two decades and is now tapping into a new market segment with the chemical industry. "The investment in our ethenolysis plant is an important component of our growth strategy. By diversifying our products and markets, we are

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widening our business model and expanding our business beyond the biofuels market,” explained Theodor Niesmann.

EcoVadis gold medal award for sustainability management

Verbio has been awarded the EcoVadis gold medal status for its sustainability management, placing it in the top 5 percent of all companies assessed in the “Manufacture of other chemical products n.e.c.” category. The EcoVadis assessment is based on 21 criteria in four themes: Environment, Labour and Human Rights, Ethics, and Sustainable Procurement. All criteria used are based on international sustainability standards. This award underlines the ongoing sustainability efforts made by Verbio.

About Verbio

At Verbio we make more from biomass. In our biorefineries we convert raw materials and residues from regional agriculture into climate-friendly fuels, green energy and renewable products for chemicals and agriculture. In addition, we create high-value components from sustainably-generated biomass for the animal feed and food industries. We employ more than 1,000 people at our locations in Europe, Asia and North America. Our motto “Pioneering green solutions” sums up what drives our international team; with innovative technologies and green solutions, we are shaping the social and industrial transformation toward climate neutrality and ecological production. We contribute to preserving natural resources and to leaving the Earth in a habitable state for the generations that will follow us. In doing so we combine global growth with economic success, social responsibility and security of supply. Verbio shares (ISIN DE000A0JL9W6/WKN A0JL9W) have been listed in the prime standard segment of the Frankfurt Stock Exchange since October 2006. Our headquarters are in Zörbig, Germany.

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