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Isobutene produced from straw

Global Bioenergies announced the signature of a grant agreement aiming at demonstrating a new value chain combining its Isobutene process with technologies developed by Clariant and INEOS. The aim is to convert residual wheat straw into isobutene for subsequent conversion into oligomers usable in the lubricants, rubbers, solvents, plastics, or fuels. The R&D cooperation for the next 48 months starts on June 1st 2017.

The agreement signed recently between the Bio-Based Industries Joint Undertaking (BBI-JU) and the project partners focuses on the demonstration of a new value chain, based on the combination of the technologies and know-how of the participants from four EU member states:

Conversion of straw into glucose- and xylose-rich hydrolysates by Clariant Sunliquid® technology (Germany),

Fermentation of the straw hydrolysates into bio-isobutene by Global Bioenergies (France and Germany),

Conversion of bio-isobutene to oligomers by INEOS (Belgium and France),

Preliminary engineering of an hydrolysate-to-isobutene plant and overall integration with a straw-to-hydrolysate plant, by TechnipFMC and IPSB (France),

Assessment of the sustainability and environmental benefits by the Energy Institute at the University of Linz (Austria).

The BBI-JU, a public-private partnership between the European Union and the Bio-Industries Consortium (BIC), is dedicated to realizing the European bio-economy potential, turning biological residues and wastes into products through innovative technologies and bio-refineries. The BBI-JU selected this project under the name OPTISOCHEM (NÂ°744330), in the frame of the European HORIZON 2020 programme for research and innovation, following a very selective and competitive process led by independent experts.

The programme covers a total budget of €16.4 million. €9.8 million will be provided by the BBI-JU, with the remainder being contributed by the participants. Global Bioenergies will receive funding amounting to €4.4 million for its R&D activities at its Evry site, its pilot plant in Pomacle (France), and its demo plant in Leuna (Germany).

Markus Rarbach, Head of Biofuels & Derivatives of Clariant declares: "This project will demonstrate a key value chain within the bio-economy: advanced bio-refineries based on agricultural residues. We will deliver from our pre-commercial plant in Straubing (Germany) second generation sugars to Global Bioenergies' facilities for conversion to bio-isobutene, having already demonstrated in 2016 the perfect technology fit between our Sunliquid® platform and Global Bioenergies' Isobutene process. The larger scale demonstration will now prove technological and economic feasibility for commercial production in the future."

Source: Global Bioenergies

Read more: http://www.global-bioenergies.com/wp-content/uploads/2017/05/20170509_pr_en.pdf