



Allotrope Partners LLC, Axens North America and Sumitomo Corporation of Americas to Study Commercial Production of Low Carbon Biofuel Using Woody Biomass from Forest Thinning in California

FOR IMMEDIATE RELEASE

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New York, NY – July 25, 2023 -- Allotrope Partners LLC (“Allotrope”), Axens North America (“Axens”), and Sumitomo Corporation of Americas (“SCOA”) announced the signing of an agreement to develop a Joint Study for a commercial plant producing cellulosic bioethanol, utilizing the Axens Futuro!™ process, produced from woody biomass through Allotrope Cellulosic Development Company LLC (“ACDC”), a project development company based in the State of California.

The project will use feedstock based on local Californian forest thinning materials and agricultural residues. These feedstocks in part come from the waste generated in large forest fire prevention activities to reduce risk of wildfires that have become a critical challenge in California in recent years. This project will produce a commercial grade bioethanol, while at the same time contributing to the reduction of carbon released into the atmosphere from the massive wildfires that have severely impacted the environment and residents in California,

The parties are committed to develop a first project then continue to expand their cellulosic ethanol footprint within California and to other locations all around North America, utilizing local woody biomass materials to supply low-carbon biofuels into the North American market.

“Allotrope is excited to continue its efforts to develop a series of advanced biofuels projects in California in partnership with Sumitomo and Axens,” noted Marc Stuart, CEO of Allotrope Partners LLC. “Axen's Futuro!™ technology is ready for commercial scale roll out and Sumitomo will be a valuable partner across the entire project development process, from feedstock sourcing to the sale of final products into the markets.”

Bioethanol is currently attracting attention in countries worldwide striving for carbon-neutral societies as a renewable energy source and as a feedstock for biofuels such as SAF^{*1} and bio-chemicals. Cellulosic bioethanol made from woody biomass is classified as “Advanced Bioethanol^{*2}” by the EU Renewable Energy Directive (RED) program and “Cellulosic Fuel” by the US EPA Renewable Fuel Standard, which has the potential to scale sustainably, and with low Carbon Intensity when compared to other fuels and blending components available on the market today.

“The commitment from the Allotrope and Sumitomo teams to deploy Axens Futuro!™ technology at multiple US plants and to utilize a wide variety of woody biomass feedstocks is another great example that the low carbon marketplace values both the flexibility of the

Futuro!™ technology and Axens' significant technology de-risking achievements. We believe each organization brings complementary strengths to this relationship, and, together, we can make meaningful contributions to reduce the Carbon Intensity of the transportation sector, utilizing ethanol as a renewable energy carrier for gasoline blending and potentially SAF and bio-chemicals production," said Frédéric Balligand, Vice President, Axens Renewables Product Line.

Accordingly, the three companies will be studying the possibility of an initial plant to produce about 60,000 tons of bioethanol derived from local feedstocks. The project shall consider carbon recycling initiatives that contribute to the realization of a decarbonized society, such as CCU*² using carbon-neutral, biogenic CO₂ generated naturally during bioethanol production, internal energy production, and effective utilization of residues from the fermentation process including Renewable Natural Gas (RNG) production.

"SCOA is pleased to partner with Axens and Allotrope in this landmark project and will contribute to this study by consolidating and applying the knowledge and skills of the Sumitomo Corporation Group acquired through various businesses. This includes the development and deployment of carbon-free energy using hydrogen, ammonia, and next-generation biomass, raw fuel gas, and by promoting the use of green chemicals to construct a circular economy," said Sandro Hasegawa, General Manager, SCOA EIIA.

About Allotrope Partners LLC

Allotrope Partners LLC invests in projects and companies engaged in the clean economy transition. The company has had an active local presence in the Northern California biomass community for over a decade, engaging with foresters, farming organizations, lumber production and biomass power producers. Through its partnership with Axens, the Company has identified a pipeline of bioethanol plants in proximity to local woody materials.

For more information contact: info@allotropepartners.com

About Axens Group

Axens group provides a complete range of solutions for the conversion of oil and biomass to cleaner fuels, the production and purification of major petrochemical intermediates, the chemical recycling of plastics, all natural gas treatment and conversion options along with water treatment and carbon capture. The offer includes technologies, equipment, furnaces, modular units, catalysts, adsorbents and related services. Axens is ideally positioned to cover the entire value chain, from feasibility study to unit start-up and follow-up throughout the entire unit life cycle. This unique position ensures the highest level of performance with a reduced environmental footprint. Axens global offer is based on highly trained human resources, modern production facilities and an extended global network for industrial, technical supports & commercial services. Axens is an IFP Group company.

For more information contact: press@axens.net

About Sumitomo Corporation of Americas

The company, established in 1952, is a wholly-owned subsidiary of Sumitomo Corporation Japan and is headquartered in New York City with nine offices in major U.S. cities. Sumitomo Corporation is one of the world's leading traders of goods and services and as an integrated business enterprise it has emerged as a major organizer of multinational projects, an expeditor of ideas, an important international investor and financier, and a powerful force for distribution of products and global communications through a network of offices worldwide. Sumitomo Corporation is making multifaceted efforts to develop businesses that will serve as the foundation for a sustainable energy cycle in society, with the aim of making its business activities carbon-neutral by 2050. For more information, visit www.sumitomocorp.com

Notes:

1 SAF: Abbreviation for Sustainable Aviation Fuel, a sustainable aviation fuel that emits significantly less CO₂ than conventional fuels throughout its life cycle, from production and collection to manufacturing and combustion, and that can be used with existing infrastructure without modification

2 CCU: Abbreviation for Carbon dioxide Capture and Utilization, which refers to the separation and recovery of CO₂ and its effective utilization as a resource in crop production and the manufacture of chemical products