

Advancing Biofuel Innovation: The Solariant and Sumitomo Partnership

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Solariant Capital Co., Ltd. (Tokyo, Minato Prefecture) and Sumitomo Corporation (Tokyo, Chiyoda Prefecture) announced a business cooperation agreement signed on December 7, 2023. The partnership focuses on developing a new biomass fuel manufacturing facility, catering to Sumitomo's supply chain customers to advance carbon neutrality, promote biomass fuel usage, and rejuvenate local communities.



Left : Daniel Kim, Managing Director, Solariant Capital.

Right : Yutaka Takamura, General Manager at Green Chemical Business Development , Sumitomo Cop.

The new biofuel, Bio-Oil Mixture ("BOM"), combines torrefied biomass from thermal decomposition with heavy oil. Successful tests have been conducted with a BOM mix containing 30% biomass. Future efforts aim to increase this biomass ratio through ongoing research and testing.

Solariant aims to build a pilot biofuel plant in Tanegashima Island, Kagoshima Prefecture by 2024's end. From 2025, Sumitomo Corporation will supply the newly produced biofuel to end-users. Following the pilot, the companies plan to establish commercial plants, starting full-scale BOM production and sales in fiscal year 2027 (April 2027 onwards).

Pilot Plant Overview

- Location: Tanegashima, Kagoshima Prefecture.
- Facilities: Thermal decomposition and pulverization/mixing facilities.
- BOM Production Capacity: 250 liters/hour.
- Raw Materials: Cedar and bagasse (sugarcane residue from a local Tanegashima sugar factory).

Timeline

- 2024: Construction of demonstration facilities.
- 2025: Demonstration tests and BOM sample distribution.

Collaborating Institutions

Both companies are participating in a collaborative creation program supported by Japan Science and Technology Agency (JST), a national research and development organization promoting scientific and technological advancements. Specifically, they are involved in the 'Co-JUNKAN' platform research initiative at the Institute for Future Initiatives, the University of Tokyo. This project aims to go 'Beyond Zero Carbon', referring to an initiative that goes beyond simply achieving net-zero carbon emissions and focuses on demonstrating and implementing Green Transformation (GX) technologies that enhance food production and ecosystem conservation.

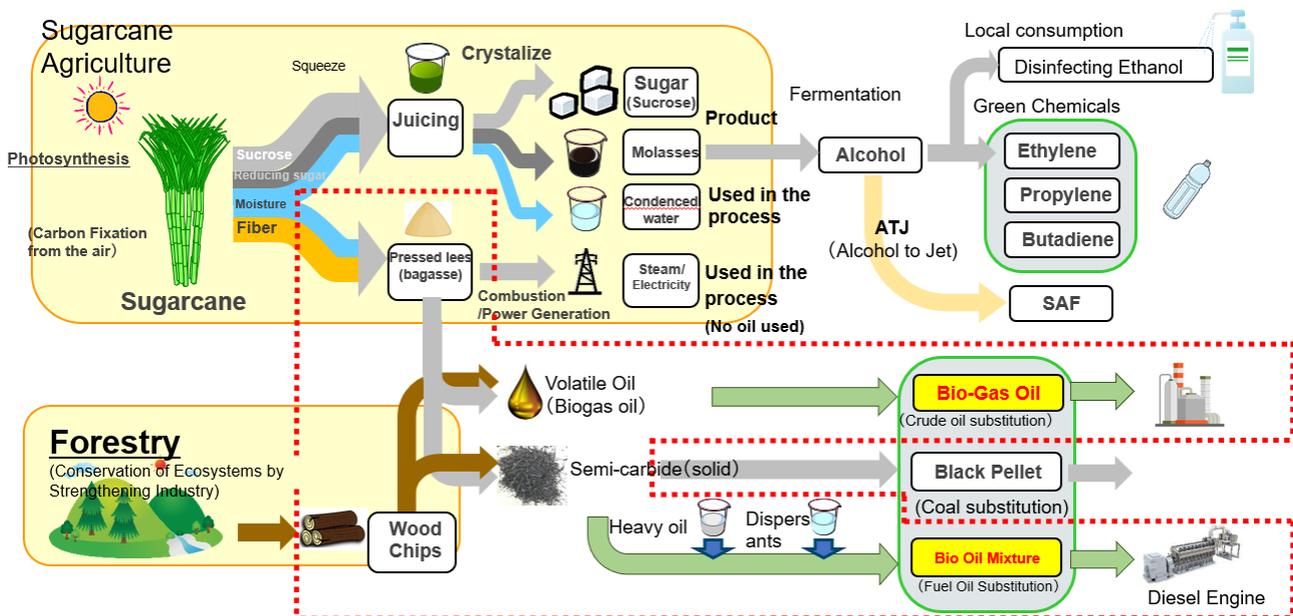
Key Advantages of BOM Technology

1. **Compatibility:** BOM seamlessly integrates with existing diesel engines and boilers without major modifications.
2. **Innovative Recovery:** This technology efficiently recovers and cools dry distillation gas emitted during char production, producing Bio Gas Oil (BGO), an effective alternative to crude oil.
3. **Value Enhancement:** By increasing fuel value, BOM extends the use of woody biomass beyond conventional power generation fuels, such as pellets or chips, and augments the profitability of the sugarcane industry by effectively utilizing bagasse, typically considered a waste byproduct.



R&D Subject: Demonstration and social implementation of GX technology to strengthen agriculture, forestry, and food production

Demonstration Project in Tanegashima



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