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Amazon joins GranBioâ??s Mission to turn discarded wood into renewable jet fuel

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Clean energy collaboration targets Americaâ??s unused biomass resources to accelerate SAF production and decarbonise hard-to-abate transport sectors

Amazon has joined forces with clean energy company GranBio to support the development of advanced technologies that convert discarded wood waste into sustainable aviation fuel (SAF) and other low-carbon transportation fuels, marking a significant step towards unlocking new pathways for industrial decarbonisation. The partnership aims to transform one of the United States' most underutilised resources — waste wood from logging operations, agricultural activities and construction — into renewable fuels capable of reducing emissions across aviation, freight and other transport sectors where conventional electrification remains challenging.

For decades, large volumes of residual wood material have been sent to landfills, burned or left unmanaged, contributing to resource loss and increasing wildfire risks in vulnerable regions. GranBio's technology seeks to turn this overlooked biomass into a valuable feedstock for the clean energy transition.

Amazon's investment will support GranBio's efforts to scale its biomass conversion technology and accelerate the development of commercially viable renewable fuels.

Unlocking Waste Wood as a New Energy Resource

The global aviation and logistics industries are facing growing pressure to reduce carbon emissions, but sectors such as long-distance air travel and heavy-duty freight remain difficult to decarbonise through conventional solutions. Sustainable aviation fuel has emerged as one of the most promising near-term alternatives, offering the potential to significantly reduce lifecycle emissions while using existing aircraft and fuel infrastructure. However, limited supply availability and high production costs remain major barriers to widespread adoption.

GranBio's approach addresses both challenges by using abundant waste materials rather than purpose-grown crops as the foundation for renewable fuel production. The company's technology converts woody biomass by breaking down plant fibres and extracting stored carbon. This carbon is then transformed into fuel molecules that are chemically similar to those found in conventional petroleum-based fuels.

The process enables the production of renewable diesel, renewable petrol and sustainable aviation fuel, creating a flexible platform for multiple transportation applications.

Drop-In Fuels Could Accelerate Decarbonisation

One of the key advantages of GranBio's technology is that the resulting fuels are designed to be "drop-in" compatible, meaning they can be used within existing engines, aircraft systems and fuel distribution infrastructure without requiring major modifications. For airlines, shipping companies and long-haul trucking operators, this compatibility could help accelerate adoption by reducing transition costs and eliminating the need for completely new equipment.

The technology could provide a practical pathway for industries seeking immediate emissions reductions while longer-term zero-carbon solutions continue to develop.

Improving Efficiency Through Circular Energy Systems

Beyond producing renewable fuels, GranBio's integrated approach also focuses on improving overall process efficiency. A valuable by-product generated during production can be used to provide heat for the facility, reducing reliance on external energy sources and improving the sustainability profile of the operation.

This circular approach strengthens the environmental benefits of the technology by maximising resource utilisation and reducing waste throughout the production process.

Amazon Strengthens Clean Energy Investment Strategy

The partnership aligns with Amazon's broader efforts to support technologies capable of reducing emissions across its operations and supply chains. As one of the world's largest logistics companies, Amazon has identified sustainable fuels as an important component of future transportation decarbonisation strategies, particularly for sectors where direct electrification is currently limited. By supporting advanced biofuel technologies, the company aims to help accelerate the development of scalable solutions that can contribute to a lower-carbon transportation ecosystem.

Building a New Future for Biomass-Based Fuels

The GranBio-Amazon collaboration reflects a broader shift in the global energy landscape, where agricultural residues, forestry waste and other renewable resources are increasingly being recognised as strategic inputs for clean fuel production. As governments and industries pursue ambitious climate goals, technologies that convert waste streams into commercially viable fuels could play a critical role in reducing dependence on fossil resources.

By transforming discarded wood into sustainable aviation fuel and renewable transportation products, GranBio's technology demonstrates how circular economy principles can create new opportunities at the intersection of waste management, agriculture, energy and industrial innovation. The partnership represents a major step towards building a more resilient renewable fuel supply chain and advancing solutions for some of the world's most challenging emissions sectors.