

Refinity Secures Exclusive License to PNNL Catalyst Technology to Convert Olefins into Circular Hydrocarbon Liquids for SAF Production

06.22.26

Refinity is developing an integrated pathway to convert mixed plastic waste into circular olefins and specialty hydrocarbon products, bypassing bio-based feedstock constraints

ORLANDO, Fla., June 22, 2026 (GLOBE NEWSWIRE) -- Refinity, an Innventure, Inc. (NASDAQ: INV) company focused on transforming plastic waste into valuable chemical intermediates, today announced key advances across both its commodity olefins and specialty hydrocarbons platforms, including an exclusive license from Pacific Northwest National Laboratory (PNNL) for technology designed to convert waste plastic-derived light olefins into distillate-range products for further upgrading into sustainable aviation fuel (SAF), renewable diesel (RD), or lubricants and other technical fluids.

The company's primary go-to-market strategy is to build and operate conversion plants adjacent to petrochemical steam cracker complexes, where existing infrastructure can be used to purify and utilize the resulting olefins. Through this model, Refinity aims to supply circular ethylene and propylene to petrochemical companies, enabling the production of circular polymers and other downstream products. Refinity's core fluidized bed conversion process is designed to convert polyolefin-rich mixed plastic waste into light olefin gas streams, primarily ethylene and propylene, at yields typically above 50%.

"Refinity is developing a practical and scalable pathway to convert mixed plastic waste into valuable circular hydrocarbon products," said Bill Grieco, CEO of Refinity. "Our platform is designed to serve both large commodity markets and higher-value specialty applications. By combining our olefins production technology with PNNL's catalytic upgrading capabilities, we believe we can produce customized circular hydrocarbons and unlock additional value from waste plastic while expanding feedstock options for fuels and petrochemical products."

Refinity is expanding into specialty circular hydrocarbons through newly licensed PNNL intellectual property. The exclusive license includes a granted patent and a pending patent covering the co-oligomerization of mixed light olefins, including ethylene and propylene, into distillate-range olefinic liquids suitable for further conversion into hydrocarbon fuels, particularly SAF and renewable diesel. Refinity holds the exclusive license to this technology for applications using waste plastic-derived olefins. PNNL's licensed technology uses a two-step catalytic oligomerization approach with two different catalysts to produce medium distillate-range olefins that can serve as intermediates for jet and diesel fuel production.

Refinity is currently optimizing process conditions and evaluating the licensed catalyst system for use with waste plastic-derived light olefins in collaboration with both PNNL and VTT Technical Research Centre of Finland Ltd.

By the end of 2026, Refinity expects to demonstrate an end-to-end process that converts market-sourced, polyolefin-rich mixed plastic waste into mixed light olefins and then, through catalytic oligomerization, into distillate-range hydrocarbon liquids. The resulting liquid product is expected to support downstream fuel testing and qualification work through existing ASTM pathways.

Using waste plastic as a feedstock for SAF production could help address multiple constraints facing the market. In addition to helping divert plastic waste from conventional disposal routes, the pathway would broaden the range of available feedstocks for jet fuel production and reduce reliance on conventional bio-based feedstocks that face supply, land-use and food-versus-fuel debates.

About Refinity

Refinity commercializes processes to convert mixed plastic waste into customized circular hydrocarbons. Through its fluidized bed conversion technology and exclusively licensed PNNL oligomerization IP, the company produces circular olefins for the commodity petrochemical market and SAF-ready distillate liquids for the aviation sector. Refinity is partnered with PNNL and VTT Technical Research Centre of Finland.

About Innventure

Innventure, Inc. (NASDAQ: INV), an industrial growth conglomerate, focuses on building companies with billion-dollar valuations by commercializing breakthrough technology solutions. By systematically creating and operating industrial enterprises from the ground up, Innventure participates in early-stage economics and provides industrial operating expertise designed for global scale. Innventure's approach seeks to uniquely bridge the "Valley of Death" between corporate innovation and commercialization through its distinctive combination of value-driven multinational partnerships, operational experience, and scaling expertise.

Investor Relations Contact:

Kyle Nagarkar, Solebury Strategic Communications
investorrelations@innventure.com

Media Contact:

Stephanie Knight, Solebury Strategic Communications
press@innventure.com