U.S. Grants Gevo a Patent for Breakthrough Ethanol-to-Olefin Process

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Next Generation Process with Potential to Lower Capital and Operating Costs for Producing Chemicals, SAF and Other Fuels

ENGLEWOOD, Colo., Sept. 16, 2024 (GLOBE NEWSWIRE) -- Gevo, Inc. (NASDAQ: GEVO) is proud to announce the U.S. Patent and Trademark Office has granted to Gevo, a patent for its ethanol to olefins ("ETO") process. This patent further cements Gevo's position as a leader in intellectual property ("IP") surrounding bio-based renewable fuel and chemical production from alcohols.

Gevo has been awarded U.S. Patent No. 12,043,587 B2 covering the ETO process. This patent protects the process of using certain proprietary catalyst combinations for converting ethanol into olefins. This process is designed to give best-in-class cost and yields of olefins from ethanol, with improved energy efficiency, which is intended to help to reduce the cost of biofuels and biochemicals.

Olefins with three or four carbon atoms are key building blocks to produce fuels or chemicals. Existing technology makes ethylene, a 2-carbon olefin, from ethanol, and then additional steps are needed to produce the larger and more useful olefins, such as three or four carbon olefins (*e.g.*, propylene and butenes). This patent protects Gevo's ETO process, which makes three and/or four carbon olefins in addition to ethylene from ethanol in a single step with a high degree of selectivity and control, which is critical for success. The ETO process is expected to reduce energy and capital cost because of the fewer unit operations involved; and reduce complexity of the process design. The ETO process technology can be optimized to produce fuels and/or chemicals, the latter of which has been licensed to LG Chem, Ltd. ("LG Chem") under the previously disclosed joint development agreement. Together Gevo and LG Chem are working to scale up the process for chemicals.

"We've been pursuing simplified alcohol to olefin technology since 2007, understanding that low cost, robust processes to make the right olefins is the critical step to make jet fuel, gasoline, and plastics. It's our mission to make the transition practical from fossil-based to renewable fuels and chemicals," says Dr. Pat Gruber, CEO of Gevo. "Key to making the transition are low-cost, drop-in products. The ETO process technology covered by this patent is expected to be a step-change improvement in capital cost and energy efficiency to produce biofuels, such as sustainable aviation fuel ("SAF"), or chemicals, such as propylene, from ethanol."

About Gevo
Gevo's mission is to convert renewable energy and biogenic carbon into sustainable fuels and chemicals with a net-zero or better carbon footprint. Gevo's innovative technology can be used to make a variety of products, including SAF, motor fuels, chemicals, and other materials. Gevo's business model includes developing, financing, and operating production facilities for these renewable fuels and other products. It currently runs one of the largest dairy-based renewable natural gas ("RNG") facilities in the United States. It also owns the world's first production facility for specialty alcohol-to-jet ("ATJ") fuels and chemicals. Gevo emphasizes the importance of sustainability by tracking and verifying the carbon footprint of their business systems through its Verity subsidiary.

For more information, see **www.gevo.com**.

Forward Looking Statements
Certain statements in this press release may constitute "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements relate to a variety of matters, including, without limitation, Gevo's ETO technology, the agreement with LG Chem, Ltd., whether the ETO technology will be commercialized, the benefits that might accrue as a result of the granted patent, and other statements that are not purely statements of historical fact. These forward-looking statements are made based on the current beliefs, expectations and assumptions of the management of Gevo and are subject to significant risks and uncertainty. Investors are cautioned not to place undue reliance on any such forward-looking statements. All such forward-looking statements speak only as of the date they are made, and Gevo undertakes no obligation to update or revise these statements, whether because of new information, future events or otherwise. Although Gevo believes that the expectations reflected in these forward-looking statements are reasonable, these statements involve many risks and uncertainties that may cause actual results to differ materially from what may be expressed or implied in these forward-looking statements. For a further discussion of risks and uncertainties that could cause actual results to differ from those expressed in these forward-looking statements, as well as risks relating to the business of Gevo in general, see the risk disclosures in the Annual Report on Form 10-K of Gevo for the year ended December 31, 2023, and in subsequent reports on Forms 10-Q and 8-K and other filings made with the U.S. Securities and Exchange Commission by Gevo.

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