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## **Gevo Awarded Patent for Process to Upgrade or Convert Ethanol and Bio-based Alcohols to Drop-In Hydrocarbon Fuels**

**ENGLEWOOD, Colo., September 27, 2021** -- Gevo, Inc. (NASDAQ: GEVO), announced that it has received a patent from the United States Patent and Trademark Office ("USPTO") for a process that encompasses upgrading ethanol and bio-based alcohols into drop-in, bio-based diesel and jet-fuel products.

The USPTO has awarded Gevo U.S. Patent No. 11,078,433 titled "Conversion of Mixtures of C<sub>2</sub>-C<sub>8</sub> Olefins to Jet Fuel and/or Diesel Fuel in High Yield from Bio-Based Alcohols." The patented process establishes a new technology and route to hydrocarbons that did not previously exist. This creates an opportunity for Gevo to diversify ethanol production to help meet increasing demand for renewable diesel and jet fuel.

Securing the patent falls in line with Gevo's business model to develop, apply, and scale technology that can be used to produce drop-in hydrocarbon fuels. These fuels, when coupled with Gevo's integrated-systems approach that includes regenerative agriculture and non-fossil-based renewable energy, could produce net-zero greenhouse gas (GHG) emissions over the lifecycle of the product.

"We have been working on the conversion of alcohols into hydrocarbons for many years. Ethanol, when produced using renewable energy in combination with other sustainable practices, could be a good feedstock. The technology in this patent is different from what others have done in that it provides high yields of quality diesel fuel, and can also produce SAF if we want," says Dr. Patrick Gruber, Chief Executive Officer of Gevo. "We are believers in the 'net-zero' approach. We need to account for carbon and related emissions across the whole of the business system. We must pay attention to the source of renewable carbon and the energy involved with manufacturing fuel products. But that alone isn't enough. We also have to pay attention to additional key sustainability attributes in the business system, like agricultural practices, land use, protein production, water, and all the rest. From our work on Net-Zero 1, we have a deep conviction that net-zero hydrocarbons are possible and commercially viable. We need to work to further decarbonize ethanol."



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“This patent covers technology that has the flexibility to make quality renewable diesel fuel or jet fuel from ethanol in a simple catalytic process. Producing renewable diesel makes sense in some regions of the world, whereas in others, producing high levels of jet fuel might be the right economic answer. There is a lot of overlap in the production technology used for the conversion of ethanol or isobutanol to hydrocarbons, so it shouldn’t surprise anyone that we would broaden our scope,” commented Dr. Paul Bloom, Chief Carbon and Innovation Officer of Gevo. “The combination of using decarbonized, plant-based alcohols, with our proprietary innovations to processing techniques known in the chemical industry can be a very powerful approach to dial-in the desired renewable hydrocarbon fuel product mix.

Gevo believes the grant of this patent adds additional value to the company’s intellectual property portfolio, which has previously been valued at greater than \$400 million by Peak Value IP LLC in 2020.

## **About Gevo**

Gevo’s mission is to transform renewable energy and carbon into energy-dense liquid hydrocarbons. These liquid hydrocarbons can be used for drop-in transportation fuels such as gasoline, jet fuel and diesel fuel, that when burned have potential to yield net-zero greenhouse gas emissions when measured across the full life cycle of the products. Gevo uses low-carbon renewable resource-based carbohydrates as raw materials, and is in an advanced state of developing renewable electricity and renewable natural gas for use in production processes, resulting in low-carbon fuels with substantially reduced carbon intensity (the level of greenhouse gas emissions compared to standard petroleum fossil-based fuels across their life cycle). Gevo’s products perform as well or better than traditional fossil-based fuels in infrastructure and engines, but with substantially reduced greenhouse gas emissions. In addition to addressing the problems of fuels, Gevo’s technology also enables certain plastics, such as polyester, to be made with more sustainable ingredients. Gevo’s ability to penetrate the growing low-carbon fuels market depends on the price of oil and the value of abating carbon emissions that would otherwise increase greenhouse gas emissions. Gevo believes that its proven, patented technology enabling the use of a variety of low-carbon sustainable feedstocks to produce price-competitive low-carbon products such as gasoline components, jet fuel and diesel fuel yields the potential to generate project and corporate returns that justify the build-out of a multi-billion-dollar business.



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Gevo believes that the Argonne National Laboratory GREET model is the best available standard of scientific-based measurement for life cycle inventory or LCI.

Learn more at Gevo's website: [www.gevo.com](http://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 patent awards, Gevo's patent portfolio, Gevo's technology, Gevo's products, the value of Gevo's patents, Gevo's ability to produce products with a "net-zero" greenhouse gas footprint, Gevo's plans and strategy, and other statements that are not purely statements of historical fact. These forward-looking statements are made on the basis of 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 as a result 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, 2020, 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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