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## **The U.S. Department of Energy's (DOE) Argonne National Laboratory Team Up with Gevo to Apply Argonne's GREET Model to its Net-Zero Project**

**ENGLEWOOD, Colo., September 20, 2021** -- Gevo, Inc. (NASDAQ: GEVO) The U.S. Department of Energy's (DOE) Argonne National Laboratory recently partnered with Gevo, Inc., a Colorado-based producer of energy-dense liquid hydrocarbons such as sustainable aviation fuel (SAF) and renewable premium gasoline, to perform a critical lifecycle analysis of its next-generation technology.

Using data provided by Gevo, Argonne's Greenhouse gases, Regulated Emissions, and Energy use in Technologies (GREET) Model is expected to yield results regarding carbon footprints of these fuels within a few months. The effort is funded by the DOE's Bioenergy Technologies Office, which is part of the Office of Energy Efficiency and Renewable Energy (EERE).

"I am thrilled by this partnership and by the DOE's investment in this project," said Michael Wang, an Argonne Distinguished Fellow, Senior Scientist, and the Director of the Systems Assessment Center of the Energy Systems division at the laboratory. "This is the type of real-world application GREET was made for."

GREET's pioneering lifecycle analysis considers a host of different fuel production pathways. Results include energy use, emissions of greenhouse gases and air pollutants, and water consumption related to the production processes. The analysis also includes results across the whole of the fuel pathway system, from capturing carbon via photosynthesis to the final burning of the fuel.

Uisung Lee, an energy systems analyst in the Systems Assessment Center of the Energy Systems Division at Argonne, said that "Gevo's commitment to reach net-zero carbon emissions with advanced renewable hydrocarbon fuels, including SAF and renewable premium gasoline made from field corn—not only in relation to the final product but in every stage of the production along the entire supply chain—will show how deep decarbonization of biofuels can be achieved holistically."

"Biofuels are low carbon already," Lee said. "But Gevo wants it to be net-zero carbon.



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That’s an ambitious goal and one that would be a game-changer in the biofuel industry.”

Argonne will examine emissions at every stage of the supply chain: This “field to aircraft wake” analysis will include each possible step from production to combustion. “While it might be impossible to reach zero carbon emissions at every stage, sustainable farming practices and carbon capture from biofuel plants and re-use might help the company reach its goal when measured across the whole biofuel supply chain system,” Wang said. GREET is unique; it is based on well-developed science and it allows for adaptation, and, in this way, can accommodate changes and incorporate new ideas, including those arising in agriculture and forestry, which are so important to innovation.

“We believe in radical transparency when it comes to sustainability. It’s incredibly important to have good data, good models, and use them for decision making, especially when making choices about technologies across the business system. When we find a process where we can reduce our carbon intensity, we have to analyze it, and if it moves us further down the path to our goals, we try to implement it,” says Dr. Patrick Gruber, Chief Executive Officer of Gevo, Inc. “The tools that the GREET model provides are key to our business model. We have used the GREET model as a guidepost for our process because those benefits are realized in the resulting analysis. It’s why our plants are expected to operate on renewable energy, including wind turbines, and why we chose to integrate renewable biogas into our production system. I expect that, as we work through the analysis with Argonne’s team, we will come up with additional great ideas to get our carbon footprint down even further.”

GREET is constantly being improved: The GREET software provides users with a ready-use life cycle analysis tool to perform simulations of alternative transportation fuels and vehicle technologies in just a few minutes. At present, there are more than 48,000 registered GREET users worldwide.

Wang said that Argonne plans on releasing its findings from this collaboration soon.

[\*\*The Office of Energy Efficiency and Renewable Energy\*\*](#) supports early-stage research and development of energy efficiency and renewable energy technologies to strengthen U.S. economic growth, energy security, and environmental quality.



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## 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.

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)

**Argonne National Laboratory** seeks solutions to pressing national problems in science and technology. The nation's first national laboratory, Argonne conducts leading-edge basic and applied scientific research in virtually every scientific discipline. Argonne researchers work closely with researchers from hundreds of companies, universities, and federal, state and municipal agencies to help them solve their specific problems, advance America's scientific leadership and prepare the nation for a better future. With employees from more than 60 nations, Argonne is managed by [UChicago Argonne, LLC](#) for the [U.S. Department of Energy's Office of Science](#).

**The U.S. Department of Energy's Office of Science** is the single largest supporter of basic research in the physical sciences in the United States and is working to address some



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of the most pressing challenges of our time. For more information, visit <https://energy.gov/science>.

## **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, without limitation, including Gevo’s technology, the Department of Energy’s Argonne GREET model, the production of SAF, the attributes of Gevo’s products, Gevo’s Net-Zero Project 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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