UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period endedSeptember 30, 2021

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES AND EXCHANGE ACT OF 1934**

For the transition period from ________________ to ________________

Commission File Number 001-35073

GEVO, INC.

(Exact name of registrant as specified in its charter)

Delaware **(State or other jurisdiction of incorporation or organization)**	**87-0747704** **(I.R.S. Employer Identification No.)**
345 Inverness Drive South, Building C, Suite 310 **Englewood, CO** **(Address of principal executive offices)**	**80112** **(Zip Code)**

(303) 858-8358
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Trading Symbol	Name of Each Exchange on Which Registered
Common Stock, par value $0.01 per share	GEVO	Nasdaq Capital Market

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,”, “smaller reporting company” and “emerging growth company” in Rule 12b-2 of the Exchange Act:

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☒
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of October 29, 2021, 201,879,978 shares of the registrant’s common stock were outstanding.

GEVO, INC.

FORM 10-Q
FOR THE QUARTERLY PERIOD ENDED SEPTEMBER 30, 2021
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PART I. FINANCIAL INFORMATION

Item 1. Financial Statements.

GEVO, INC.
CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share amounts)

	September 30, 2021	December 31, 2020
Assets		
Current assets		
Cash and cash equivalents	$ 16,201	$ 78,338
Marketable securities (current)	285,236	—
Restricted cash (current)	49,804	—
Accounts receivable, net	513	527
Inventories	2,341	2,491
Prepaid expenses and other current assets	7,243	1,914
Total current assets	361,338	83,270
Property, plant and equipment, net	102,163	66,408
Long-term marketable securities	101,003	—
Long-term restricted cash	70,168	—
Operating right-of-use assets	1,591	133
Finance right-of-use assets	27,665	176
Intangible assets, net	9,098	114
Deposits and other assets	2,329	1,998
Total assets	$ 675,355	$ 152,099
Liabilities		
Current liabilities		
Accounts payable and accrued liabilities	$ 24,582	$ 3,943
Operating lease liabilities (current)	—	172
Finance lease liabilities (current)	2,727	10
Loans payable - other (current)	165	807
Total current liabilities	27,474	4,932
2021 Bonds payable (long-term)	66,303	—
Loans payable - other (long-term)	357	447
Operating lease liabilities (long-term)	1,732	—
Finance lease liabilities (long-term)	19,598	162
Other long-term liabilities	91	179
Total liabilities	115,555	5,720
Commitments and Contingencies (See Note 12)		
Stockholders' Equity		
Common stock, $0.01 par value per share; 250,000,000 authorized; 201,879,978 and 128,138,311 shares issued and outstanding at September 30, 2021 and December 31, 2020, respectively.	2,019	1,282
Additional paid-in capital	1,098,939	643,269
Accumulated other comprehensive loss	(296)	—
Accumulated deficit	(540,862)	(498,172)
Total stockholders' equity	559,800	146,379
Total liabilities and stockholders' equity	$ 675,355	$ 152,099

See the accompanying Notes to the unaudited Consolidated Financial Statements.

GEVO, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except share and per share amounts)
(unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	**2020**	**2021**	**2020**
Revenue and cost of goods sold				
Ethanol sales and related products, net	$ 16	$ 21	$ 16	$ 3,804
Hydrocarbon revenue	104	101	463	1,085
Other revenue	22	70	178	116
Total revenues	142	192	657	5,005
Cost of goods sold	3,482	2,260	8,270	13,043
Gross loss	(3,340)	(2,068)	(7,613)	(8,038)
Operating expenses				
Research and development expense	1,541	870	4,323	2,127
Selling, general and administrative expense	9,335	2,892	18,027	8,179
Preliminary stage project costs	313	323	8,512	700
Loss on disposal of assets	183	—	5,137	38
Restructuring expenses	—	(50)	—	254
Total operating expenses	11,372	4,035	35,999	11,298
Loss from operations	(14,712)	(6,103)	(43,612)	(19,336)
Other income (expense)				
Gain on forgiveness of SBA Loans	—	—	641	—
Interest expense	(67)	(473)	(78)	(1,559)
(Loss) on modification of 2020 Notes	—	—	—	(726)
(Loss) on conversion of 2020/21 Notes to common stock	—	(543)	—	(543)
Gain (loss) from change in fair value of derivative warrant liability	6	—	(4)	8
Gain (loss) from change in fair value of 2020/21 Notes embedded derivative liability	—	247	—	(29)
Other income (expense), net	393	36	363	53
Total other income (expense), net	332	(733)	922	(2,796)
Net loss	$ (14,380)	$ (6,836)	$ (42,690)	$ (22,132)
Net loss per share - basic and diluted	$ (0.07)	$ (0.09)	$ (0.22)	$ (0.62)
Weighted-average number of common shares outstanding - basic and diluted	199,341,519	77,049,896	193,739,605	35,682,794

See the accompanying Notes to the unaudited Consolidated Financial Statements.

GEVO, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(in thousands)
(unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	**2020**	**2021**	**2020**
Net loss	$ (14,380)	$ (6,836)	$ (42,690)	$ (22,132)
Other comprehensive income (loss)				
Unrealized gain (loss) on available-for-sale securities, net of tax	45	—	(262)	—
Adjustment for net gain (loss) realized and included in net income, net of tax	(34)	—	(34)	—
Total change in unrealized gain (loss) on marketable securities	11	—	(296)	—
Comprehensive loss	$ (14,369)	$ (6,836)	$ (42,986)	$ (22,132)

See the accompanying Notes to the unaudited Consolidated Financial Statements.

GEVO, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In thousands, except share amounts)
(unaudited)

	Common Stock		Paid-In	Accumulated Other Comprehensive	Accumulated	Stockholders'
	Shares	Amount	Capital	Loss	Deficit	Equity
Balance, June 30, 2021	197,964,476	$ 1,980	$ 1,100,932	$ (307)	$ (526,482)	$ 576,123
Issuance of common stock, net of issue costs	—	—	(162)	—	—	(162)
Non-cash stock-based compensation	—	—	1,880	—	—	1,880
Issuance of common stock under stock plans, net of taxes	3,915,502	39	(3,711)	—	—	(3,672)
Other comprehensive income	—	—	—	11	—	11
Net loss	—	—	—	—	(14,380)	(14,380)
Balance, September 30, 2021	201,879,978	$ 2,019	$ 1,098,939	$ (296)	$ (540,862)	$ 559,800
Balance, December 31, 2020	128,138,311	$ 1,282	$ 643,269	$ —	$ (498,172)	$ 146,379
Issuance of common stock, net of issue costs	68,170,579	682	456,801	—	—	457,483
Issuance of common stock upon exercise of warrants	1,866,758	18	1,103	—	—	1,121
Non-cash stock-based compensation	—	—	3,300	—	—	3,300
Issuance of common stock under stock plans, net of taxes	3,704,330	37	(5,534)	—	—	(5,497)
Other comprehensive loss	—	—	—	(296)	—	(296)
Net loss	—	—	—	—	(42,690)	(42,690)
Balance, September 30, 2021	201,879,978	$ 2,019	$ 1,098,939	$ (296)	$ (540,862)	$ 559,800
Balance, June 30, 2020	15,514,098	$ 154	$ 533,015	$ —	$ (473,282)	$ 59,887
Issuance of common stock and common stock warrants, net of issue costs	42,772,687	428	61,265	—	—	61,693
Issuance of common stock upon exercise of warrants	52,953,400	530	16,117	—	—	16,647
Issuance of common stock upon conversion of 2020/21 Notes	4,169,426	42	2,441	—	—	2,483
Issuance of common stock in exchange for services rendered	101,730	1	93	—	—	94
Non-cash stock-based compensation	—	—	642	—	—	642
Issuance of common stock under stock plans, net of taxes	4,066,862	41	(62)	—	—	(21)
Net loss	—	—	—	—	(6,836)	(6,836)
Balance, September 30, 2020	119,578,203	$ 1,196	$ 613,511	$ —	$ (480,118)	$ 134,589
Balance, December 31, 2019	14,083,232	$ 141	$ 530,349	$ —	$ (457,986)	$ 72,504
Issuance of common stock and common stock warrants, net of issue costs	44,115,808	441	63,405	—	—	63,846
Issuance of common stock upon exercise of warrants	52,953,400	530	16,117	—	—	16,647
Issuance of common stock upon conversion of 2020/21 Notes	4,169,426	42	2,441	—	—	2,483
Issuance of common stock in exchange for services rendered	101,730	1	93	—	—	94
Non-cash stock-based compensation	—	—	1,475	—	—	1,475
Issuance of common stock under stock plans, net of taxes	4,154,607	41	(369)	—	—	(328)
Net loss	—	—	—	—	(22,132)	(22,132)
Balance, September 30, 2020	119,578,203	$ 1,196	$ 613,511	$ —	$ (480,118)	$ 134,589

See the accompanying Notes to the unaudited Consolidated Financial Statements.

GEVO, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)
(unaudited)

	Nine Months Ended September 30,	
	2021	**2020**
Operating Activities		
Net loss	$ (42,690)	$ (22,132)
Adjustments to reconcile net loss to net cash used in operating activities:		
Loss (gain) from change in fair value of derivative warrant liability	4	(8)
Loss (gain) from change in fair value of 2020/21 Notes and 2020 Notes embedded derivative liability	—	29
Loss on conversion of 2020/21 Notes to common stock	—	543
Loss on disposal of assets	5,137	38
(Gain) on forgiveness of SBA Loans	(641)	—
Stock-based compensation	5,823	1,347
Depreciation and amortization	3,572	4,754
Non-cash lease expense	7	45
Non-cash interest expense	65	606
Other non-cash expenses	5	—
Changes in operating assets and liabilities:		
Accounts receivable	14	765
Inventories	150	650
Prepaid expenses and other current assets, deposits and other assets	(4,463)	(613)
Accounts payable, accrued expenses and long-term liabilities	4,324	(605)
Net cash used in operating activities	(28,693)	(14,581)
Investing Activities		
Acquisitions of property, plant and equipment	(30,955)	(1,756)
Acquisition of patent portfolio	(9,000)	—
Proceeds from sale of marketable securities	34,332	—
Purchase of marketable securities	(422,362)	—
Net cash used in investing activities	(427,985)	(1,756)
Financing Activities		
Proceeds from issuance of 2021 Bonds	68,995	—
Debt and equity offering costs	(34,919)	(6,170)
Proceeds from issuance of common stock and common stock warrants	487,549	69,985
Proceeds from exercise of warrants	1,119	16,647
Net settlement of common stock under stock plans	(5,137)	(331)
Payment of loans payable - other	(98)	(481)
Payment of finance lease liabilities	(2,996)	—
Proceeds from SBA Loans	—	1,006
Net cash provided by financing activities	514,513	80,656
Net increase (decrease) in cash and cash equivalents	57,835	64,319
Cash, cash equivalents and restricted cash		
Beginning of period	78,338	16,302
End of period	$ 136,173	$ 80,621

See the accompanying Notes to the unaudited Consolidated Financial Statements.

GEVO, INC.
Consolidated Statements of Cash Flows - Continued
(in thousands)
(unaudited)

Schedule of cash, cash equivalents and restricted cash	**Nine Months Ended September 30, 2021**	**2020**
Cash and cash equivalents	$ 16,201	$ 80,621
Restricted cash (current)	49,804	—
Long-term restricted cash	70,168	—
Total cash, cash equivalents and restricted cash	$ 136,173	$ 80,621

Supplemental disclosures of cash and non-cash investing and financing transactions	**Nine Months Ended September 30, 2021**	**2020**
Cash paid for interest	$ 11	$ 953
Non-cash purchase of property, plant and equipment	$ 12,164	$ 2
Issuance of common stock upon exchange of debt and make-whole	$ —	$ 2,517
Issuance of common stock in exchange for services rendered	$ —	$ 94
Original issue discount paid with 2020/21 Notes	$ —	$ 282
Right-of-use asset purchased with financing leases	$ 28,416	$ 13
Right-of-use asset purchased with operating lease	$ 1,611	$ —

See the accompanying Notes to the unaudited Consolidated Financial Statements.

GEVO, INC.
Notes to Consolidated Financial Statements
(unaudited)

1. Nature of Business, Financial Condition and Basis of Presentation

Nature of Business. Gevo, Inc. (“Gevo” or the “Company,” which, unless otherwise indicated, refers to Gevo, Inc. and its subsidiaries), is a growth-oriented company focused on transforming renewable energy into energy dense liquid hydrocarbons that can be used as renewable fuels, such as sustainable aviation fuel (“SAF”) and renewable isooctane (which the Company refers to as “renewable premium gasoline”), with the potential to achieve a “net-zero” greenhouse gas (“GHG”) footprint and address global needs of reducing GHG emissions with sustainable alternatives to petroleum fuels. Gevo currently owns one production facility in Luverne, Minnesota (the "Luverne Facility"). Gevo plans to develop, own (in whole or in part), and operate additional production facilities that use a combination of (i) renewable energy sources such a photosynthetic energy, renewable electricity, biogas, renewable hydrogen, and (ii) renewable carbon sources such as residual carbohydrates.

As next generation renewable fuels, Gevo's hydrocarbon transportation fuels have the advantage of being “drop-in” substitutes for conventional fuels that are derived from crude oil, working seamlessly and without modification in existing fossil-fuel based engines, supply chains and storage infrastructure. In addition, with SAF, the carbon footprint of air travel can be reduced, or in the long run, eliminated, on a net carbon basis, without changes to planes or fuel systems. In addition to the potential of net-zero carbon emissions across the whole fuel life-cycle, Gevo's renewable fuels should eliminate other pollutants associated with the burning of traditional fossil fuels, such as particulates and sulfur, while delivering superior performance.

Gevo has a technology pathway that converts carbohydrates to alcohols via a fermentation process. The alcohols are then converted to hydrocarbon fuels using a catalytic chemical process. By using renewable energy across the production process, in combination with sustainable feedstocks, like low carbon non-food corn, the greenhouse gas emissions are expected to be substantially reduced or eliminated as measured across the whole of the life cycle. The processes used to convert carbohydrates to drop-in hydrocarbons using isobutanol as the intermediate alcohol is protected by a patent portfolio with more than 500 patents, as well as proprietary processes and know-how. The production technology to convert ethanol to hydrocarbons has been exclusively licensed to Gevo in the United States by Axens North America, Inc. (“Axens”), and incorporates more than 60 patents, as well as proprietary production technology and know-how.

Ultimately, the Company believes that the attainment of profitable operations is dependent upon future events, including, but not limited to (i) the successful development of the Company's initial Net-Zero Project (the "Net-Zero 1 Project") and future projects for the production of energy dense liquid hydrocarbons using renewable energy and our proprietary technology; and (ii) the achievement of a level of revenues adequate to support its cost structure.

COVID-19. The novel coronavirus ("COVID-19") pandemic has had an adverse impact on global commercial activity, including the global transportation industry and its supply chain, and has contributed to significant volatility in financial markets. It resulted in travel restrictions and extended shutdowns of businesses in various industries including, among others, the airline industry, and significantly reduced overall economic output. It is possible that that the impact of the COVID-19 pandemic on general economic activity could continue to negatively impact the Company's revenue and operating results for the remainder of 2021 and beyond. In light of the current and potential future disruption to its business operations and those of its customers, suppliers and other third parties with whom the Company does business, management considered the impact of the COVID-19 pandemic on the Company's business. The impact of the COVID-19 pandemic on the global transportation industry could continue to result in less demand for the Company's transportation fuel products, which could have a material adverse effect on the Company's business, financial condition and prospects for the foreseeable future.

During the first quarter of 2020, we suspended our ethanol production at our Luverne Facility due to COVID-19 and an unfavorable commodity environment, largely the result of greater corn costs as compared to national markets than the region has historically produced. The suspension of ethanol production and a reduction in the Company's workforce that occurred during the first quarter of 2020 due to the impact of COVID-19 had an adverse impact on the Company's financial results for the nine months ended September 30, 2021, reducing revenue by 87% compared to the nine months ended September 30, 2020. The change in revenue for the three months ended September 30, 2021 was negligible compared the three months ended September 30, 2020. The Luverne Facility re-commenced operations during July 2021 and is expected to produce isobutanol that will be used as a feedstock for us to produce SAF and renewable premium gasoline to fulfill existing sales contracts. There is a risk that COVID-19 could have a material adverse impact on the development of the Company's Net-Zero 1 Project, customer demand and cash flow, depending on the extent of our future production activities.

The Company has considered multiple scenarios, with both positive and negative inputs, as part of the significant estimates and assumptions that are inherent in its financial statements and are based on trends in customer behavior and the economic environment throughout the three and nine months ended September 30, 2021 and beyond as the COVID-19 pandemic has impacted the industries in which the Company operates. These estimates and assumptions include the collectability of billed receivables and the estimation of revenue and tangible assets. With regard to collectability, the Company believes it may face atypical delays in client payments going forward, but the Company has not experienced significant delays in collection as of September 30, 2021. In addition, management believes that the demand for certain discretionary lines of business may decrease, and that such decrease will impact its financial results in succeeding periods. Non-discretionary lines of business may also be adversely affected, for example because reduced economic activity or disruption in hydrocarbon markets could reduce demand for SAF, isooctane and isooctene.

GEVO, INC.
Notes to Consolidated Financial Statements
(unaudited)

Basis of Presentation. The unaudited consolidated financial statements of the Company (which include the accounts of its wholly-owned subsidiaries Gevo Asset, LLC, Gevo RNG Holdco, LLC, Gevo NW Iowa RNG, LLC ("Gevo RNG"), Gevo Net-Zero HoldCo, LLC, Gevo Net-Zero 1, LLC, and Agri-Energy, LLC (“Agri-Energy”)) have been prepared, without audit, pursuant to the rules and regulations of the U.S. Securities and Exchange Commission (the “SEC”). Accordingly, they do not include all information and footnotes required by accounting principles generally accepted in the United States (“GAAP”) for complete financial statements. These statements reflect all normal and recurring adjustments which, in the opinion of management, are necessary to present fairly the financial position, results of operations and cash flows of the Company as of, and for the three and nine months ended, September 30, 2021 and are not necessarily indicative of the results to be expected for the full year. These statements should be read in conjunction with the Company’s audited consolidated financial statements and notes thereto included under the heading “Financial Statements and Supplementary Data” in Part II, Item 8 of the Company’s Annual Report on Form 10-K for the year ended December 31, 2020.

Reclassifications. The Company reclassified certain prior period amounts to conform to the current period presentation, including the categorization of preliminary stage project costs on the Consolidated Statements of Operations. These reclassifications had no impact on total revenues, total cost of goods sold, total operating expenses, net loss or stockholders' equity for any period.

January 2021 Offering. On January 19, 2021, the Company completed a registered direct offering pursuant to a securities purchase agreement with certain institutional and accredited investors providing for the issuance and sale by the Company of an aggregate of 43,750,000 shares of the Company’s common stock at a price of $8.00 per share (the “January 2021 Offering”). The net proceeds to the Company from the January 2021 Offering were approximately $321.9 million, after deducting placement agent fees and other estimated offering expenses payable by the Company.

At-the-Market Offering Program. In February 2018, the Company commenced an at-the-market offering program, which allows it to sell and issue shares of its common stock from time-to-time. In September 2021, the at-the-market offering program was amended to increase the available capacity to $500 million.

During the nine months ended September 30, 2021, the Company issued 24,420,579 shares of common stock under the at-the-market offering program for total proceeds of $135.8 million, net of commissions and other offering related expenses totaling $3.6 million. There were no shares issued during the three months ended September 30, 2021.

As of September 30, 2021, the Company has remaining capacity to issue up to approximately $500 million of common stock under the at-the-market offering program.

2021 Bonds. On April 15, 2021, the Iowa Finance Authority (the “Authority”) issued an aggregate principal amount of $68,155,000 of its Solid Waste Facility Revenue Bonds (Gevo NW Iowa RNG, LLC Renewable Natural Gas Project), Series 2021 (Green Bonds) (the “2021 Bonds”) in a public offering for the benefit of Gevo RNG (as defined below), a subsidiary of Gevo, to finance the construction of the Gevo RNG project.

The 2021 Bonds are reported at their amortized cost. The 2021 Bonds were issued at a premium of $0.8 million. Debt issuance costs totaled $3.0 million. The Company will amortize the debt issuance costs and the premium as a component of interest expense over the life of the related debt instrument using the interest method. The 2021 Bonds have been recorded as a long-term liability and will become current on the earlier of (i) one year prior to the Initial Mandatory Tender Date or (ii) upon the Company’s exercise of its call option to tender or redeem the Bonds. See Note 9, Debt, for further information.

Debt Issue Costs and Debt Discounts/Premiums. Debt issue costs are costs with third parties incurred in connection with the Company’s debt financings that have been capitalized and are being amortized over the stated maturity period or estimated life of the related debt using the effective interest method. Debt issue costs are presented as a direct reduction of the carrying amount of the related debt. Debt discounts, including fees paid to lenders, and debt premiums are amortized over the life of the related debt using the effective interest method. Debt discounts and premiums are presented as a reduction and increase, respectively, in the carrying amount of the related debt. Amortization of debt issue costs, discounts, and premiums is included in interest expense.

GEVO, INC.
Notes to Consolidated Financial Statements
(unaudited)

Restricted Cash and Restricted Cash Equivalents. The Company's restricted cash and restricted cash equivalents consists of unused proceeds from the issuance of the 2021 Bonds which are restricted for the purpose of constructing the Gevo NW Iowa RNG, LLC Renewable Natural Gas Project as well as amounts pledged and assigned to Citibank, N.A., in its capacity as credit facility provider of the 2021 Bonds (the "Credit Facility Provider") as collateral for the reimbursement obligations of Gevo. As of September 30, 2021, the unused restricted bond proceeds of $48.8 million included in restricted cash is classified as current since the proceeds will be distributed within twelve months. As of September 30, 2021, the restricted collateral included in restricted cash totaled $71.2 million, $1.0 million of which secures interest payments to be made within twelve months and is classified as current. The Company is entitled to receive interest income on the restricted cash at an agreed rate of return of 0.10% but has no ability to direct the use of the restricted cash. See Note 9, Debt, for further information.

The proceeds from issuance of the 2021 Bonds are maintained by the Trustee under a Trust Indenture dated April 15, 2021 and released to the Company only to pay costs of the construction of the biogas facility operated by Gevo RNG. See Note 9, Debt, for further information on the Trust Indenture. As the proceeds of the 2021 Bonds are restricted, the amounts from bond trustee are also considered to be restricted cash. Restricted cash is included with cash and cash equivalents on the Statements of Cash Flows.

The restricted cash held by the bond trustee as of September 30, 2021 is made up of the following (in thousands):

	September 30, 2021
Bond proceeds	$ 68,995
Disbursement of funds	(20,005)
Interest paid on bonds	(216)
Interest income	10
Total restricted cash held by bond trustee	$ 48,784

Marketable Securities. The Company's marketable securities consist of marketable debt securities and have been classified and accounted for as available-for-sale. Management determines the appropriate classification of its investments at the time of purchase and reevaluates the classifications at each balance sheet date. The Company classifies its marketable securities as either short-term or long-term based on each instrument's underlying contractual maturity date. Marketable securities with maturities of 12 months or less are classified as short-term and marketable securities with maturities greater than 12 months are classified as long-term. The Company's marketable securities are carried at fair value, with unrealized gains and losses, net of taxes, reported as a component of accumulated other comprehensive income in shareholders' equity, with the exception of unrealized losses believed to be other-than-temporary, which are reported in earnings in the current period. The cost of securities sold is based upon the specific identification method. Interest receivable related to the marketable securities of $1.5 million was included within prepaid expenses and other current assets on the accompanying Consolidated Balance Sheets as of September 30, 2021.

Leases, Right-of-Use Assets and Related Liabilities. The Company enters into various arrangements which constitute a lease as defined by ASC 842, *Leases*, as part of its ongoing business activities and operations. Leases represent a contract or part of a contract that conveys the right to control the use of identified property, plant or equipment (an identified asset) for a period of time in exchange for consideration. Such contracts result in both (a) right-of-use assets, which represent the Company's right to use an underlying asset for the term of the contract; and (b) a corresponding lease liability which represents the Company's obligation to make the lease payments arising from the contract. The Company has elected not to recognize a right-of-use asset and lease liability for any lease with an original lease term of 12 months or less. Lease expense for such leases is recognized on a straight-line basis over the lease term.

A lease is classified as a finance lease when one or more of the following criteria are met: (1) the lease transfers ownership of the asset by the end of the lease term, (2) the lease contains an option to purchase the asset that is reasonably certain to be exercised, (3) the lease term is for a major part of the remaining useful life of the asset, (4) the present value of the lease payments equals or exceeds substantially all of the fair value of the asset, and (5) the asset is of such a specialized nature that it is expected to have no alternative use to the lessor at the end of the lease term. If a lease does not meet any of these criteria, the lease is classified as an operating lease.

Lease liabilities are initially measured at the lease commencement date based on the present value of lease payments over the lease term, discounted using an estimate of the Company's incremental borrowing rate for a collateralized loan with the same term and payment as the lease. Right-of-use assets are measured based on the amount of the lease liability adjusted for any lease payments made to the lessor at or before the lease commencement date less any lease incentives received. All right-of-use assets are evaluated for impairment in accordance with accounting standards applicable to long-lived assets as further described in the significant accounting policy "Impairment of Property, Plant and Equipment" in the Company's Annual Report on Form 10-K for the year ended December 31, 2020.

Renewal options are included in the calculation of our right-of-use assets and lease liabilities when the Company's determines that the option is reasonably certain of exercise based on an analysis of the relevant facts and circumstances. Certain of the Company's leases require variable lease payments that do not depend on an index or rate and such payments are excluded from the calculation of the right-of-use asset and lease liability and are recognized as variable lease cost when incurred.

The Company has elected the practical expedient to account for the lease and non-lease components as a single lease component for our dairy lease and fuel supply asset class. This results in a significantly higher right-of-use assets and lease liabilities than if the Company had not elected this practical expedient.

Lease cost for operating leases consists of the fixed lease payments recognized on a straight-line basis over the lease term plus variable lease payments as incurred. Lease cost for finance leases consists of amortization of the right-of-use assets on a straight-line basis over the lease term, interest expense on the lease liability, and variable lease payments as incurred.

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Intangible assets. Intangible assets consist primarily of patents. Costs related to patents, including legal fees, are capitalized and amortized over the estimated useful lives using the straight-line method. Amortization expense is recorded in "Research and development expense" in the Consolidated Statements of Operations. For patents purchased in an asset acquisition, the useful life is determined by valuation estimates of remaining economic life. Intangible assets are included in ""Deposits and other assets" in the Consolidated Balance Sheets.

The Company periodically evaluates the amortization period and carrying value of its patents to determine whether any events or circumstances warrant revised estimated useful life or reduction in value.

On September 21, 2021, the Company entered into an asset purchase agreement with Butamax Advanced Biofuels LLC and its affiliate, Danisco US Inc. (collectively, “Butamax”), pursuant to which the Company purchased all of Butamax’s rights, title and interests in certain U.S. and foreign patents and patent applications, subject to specified conditions and encumbrances, relating to the production, recovery and use of biobutanol that were owned by Butamax, for $9.0 million. Management evaluated the patents to determine whether the patents (i) supported current products; (ii) supported planned research and development (iii) prevent others from competing with Gevo's products. The Company used a valuation of the investment value of the patent portfolio performed in July 2021 to determine the relative fair value of the patents acquired. Based on the Company's estimated purchase price allocation, approximately $4.2 million of the purchase price was allocated to the purchase of patents to support current products and planned product research and $4.8 million for patents purchased for defensive purposes. The patents are included in the Gevo Segment.

Identifiable intangible assets as of September 30, 2021 comprised the following (in thousands):

	September 30, 2021			
	Gross Carrying Amount	Accumulated Amortization	Identifiable Intangible Assets, Net	Weighted-Average Useful Life (Years)
Finite-lived intangible assets:				
Patents	$ 4,496	$ (202)	$ 4,294	7.3
Defensive assets	4,804	—	4,804	8.4
Identifiable intangible assets	$ 9,300	$ (202)	$ 9,098	7.9

	December 31, 2020			
	Gross Carrying Amount	Accumulated Amortization	Identifiable Intangible Assets, Net	Weighted-Average Useful Life
Finite-lived intangible assets:				
Patents	$ 300	$ (186)	$ 114	5.2

The following table details the estimated net amortization of identifiable intangible assets as of September 30, 2021 (in thousands):

Year Ending December 31,	Patents	Defensive Assets	Total
2021 (remaining)	$ 147	$ 144	$ 291
2022	601	575	1,176
2023	601	575	1,176
2024	601	575	1,176
2025	601	575	1,176
2026 and thereafter	1,743	2,360	4,103
Total	$ 4,294	$ 4,804	$ 9,098

Total amortization of intangible assets was less than $0.1 million for the three and nine months ended September 30, 2021 as well as for the three and nine months ended September 30, 2020.

Capitalized Internal-Use Software Costs. Software development costs are capitalized when module development begins, it is probable that the project will be completed, and the software will be used as intended. Costs associated with preliminary project stage activities, training, maintenance and all other post implementation stage activities are expensed as incurred. Internal-use software is amortized on a straight-line basis, generally over a three to five years. We evaluate the useful lives of these assets on an annual basis and test for impairment whenever events or changes in circumstances occur that could impact the recoverability of these assets.

Borrowing Costs. The borrowing costs that are directly attributable to acquisition and construction of an asset that needs a substantially long period of time for its intended use commence to be capitalized and recorded as part of the cost of the asset when expenditures for the asset and borrowing costs have been incurred, and the activities relating to the acquisition and construction that are necessary to prepare the asset for its intended use have commenced. The capitalization of borrowing costs ceases when the asset under acquisition or construction becomes ready for its intended use and the borrowing costs incurred thereafter are recognized in profit or loss for the current period. Capitalization of borrowing costs is suspended during periods in which the acquisition or construction of an asset is interrupted abnormally and the interruption lasts for more than 3 months, until the acquisition or construction is resumed. Total interest of $0.8 million and $1.5 million was incurred during the three and nine months ended September 30, 2021, respectively. Interest of $0.4 million and $0.8 million relating to our borrowings, and interest of $0.3 million and $0.6 million relating to certain of our finance leases, was capitalized for the three and nine months ended September 30, 2021, respectively. Total interest of $0.5 million and $1.6 million was incurred and charged to expense during the three and nine months ended September 30, 2020, respectively.

Preliminary Stage Project Costs. Preliminary stage project costs consist of research and development expense in addition to selling, general and administrative expenses related to our Gevo RNG and Net-Zero projects.

Income Taxes. There is no provision for income taxes because the Company has incurred operating losses since inception.

Concentration of Business Risk. As of September 30, 2021, two customers, Oil & Octane and KLM Commodities LLC ("KLM") comprised approximately 61% and 38%, or approximately 98% in total, of the Company's outstanding trade accounts receivable, respectively. As of December 31, 2020, HCS Group GmbH ("HCS") comprised approximately 79% of the Company's outstanding trade accounts receivable.

For the three months ended September 30, 2021, HCS, New Vision, LLC ("New Vision") and KLM accounted for approximately 66%, 17% and 11%, or approximately 94% in total, of the Company's consolidated revenue, respectively. For the three months ended September 30, 2020, Coryton Advanced Fuels Ltd ("Coryton") and Total Petrochemicals & Refining USA, Inc. ("Total") accounted for approximately 52% and 39%, or approximately 91% in total, of the Company's consolidated revenue, respectively. For the nine months ended September 30, 2021, HCS, New Vision and Titan Aviation Fuel ("Titan") accounted for approximately 57%, 26% and 10%, or approximately 93% in total, of the Company's consolidated revenue, respectively. For the nine months ended September 30, 2020, Eco-Energy, LLC ("Eco-Energy"), Purina Animal Nutrition, LLV ("Purina") and HCS accounted for approximately 57%, 17% and 15%, or approximately 89% in total, of the Company's consolidated revenue, respectively.

Total, HCS, KLM, Coryton and Titan are customers of the Company's Gevo segment. Juhl, New Vision, Eco-Energy and Purina are customers of the Company's Agri-Energy segment (see Note 14).

Financial Condition. The Company has incurred consolidated net losses since inception and had a significant accumulated deficit as of September 30, 2021. The Company’s cash and cash equivalents totaled $16.2 million, restricted cash totaled $120.0 million and marketable securities totaled $386.2 million as of September 30, 2021. Gevo expects to use its cash, cash equivalents, restricted cash and marketable securities for the following purposes: (i) identification, development, acquisition and construction of new production facilities and to plan for expanded production to fulfill existing off-take agreements, including the Company's Net Zero Projects; (ii) investment in the Gevo NW Iowa RNG facility; (iii) development of the Luverne Facility; (iv) development, acquisition and operation of sustainable ethanol-to-SAF plants to produce SAF alone or with partners; (v) operating activities at the Company’s corporate headquarters in Colorado, including research and development work; (vi) exploration of strategic alternatives and additional financings, including project financing; and (vii) future debt service obligations.

The Company expects to incur future net losses as it continues to fund the development and commercialization of its product candidates. To date, the Company has financed its operations primarily with proceeds from issuance of equity and debt securities, borrowings under debt facilities and product sales. The Company's transition to profitability is dependent upon, among other things, the successful development and commercialization of its product candidates, the development, acquisition and construction of additional production facilities to support that Company's offtake agreement, the achievement of a level of revenues adequate to support the Company's cost structure, and the ability to raise capital to finance the development, acquisition and construction of additional productions facilities. Management intends to fund future operations through additional private and/or public offerings of debt or equity securities. In addition, the Company may seek additional capital through arrangements with strategic partners or from other sources, and it will continue to address its cost structure. Notwithstanding, there can be no assurance that the Company will be able to raise additional funds or achieve or sustain profitability or positive cash flows from operations on acceptable terms, or at all. Management believes it has adequate cash to fund operations for at least one year from the date the financial statements are issued.

2. Earnings Per Share

Basic earnings (loss) per share is computed by dividing the net loss for the period by the weighted-average number of common shares outstanding during the period. Diluted earnings (loss) per share ("EPS") includes the dilutive effect of common stock equivalents and is computed using the weighted-average number of common stock and common stock equivalents outstanding during the reporting period. Diluted EPS for the three and nine months ended September 30, 2021 and 2020 excluded common stock equivalents because the effect of their inclusion would be anti-dilutive or would decrease the reported loss per share.

The following table sets forth securities outstanding that could potentially dilute the calculation of diluted earnings per share:

	Three and Nine Months Ended September 30,	
	2021	2020
Warrants to purchase common stock - liability classified	7,126	52,032
Warrant to purchase common stock - equity classified	90,608	2,682,166
Conversion of 2020/21 Notes	—	5,789,209
Outstanding options to purchase common stock	4,670,279	1,552
Stock appreciation rights	67,739	67,739
Total	4,835,752	8,592,698

3. Revenues from Contracts with Customers and Other Revenues

The Company's current and historical revenues have consisted of the following: (a) hydrocarbon revenue; (b) ethanol sales and related products revenue, net; and (c) other revenue, which primarily consists of rental income.

The following table sets forth the components of the Company's revenues between those generated from contracts with customers and those generated from arrangements that do not constitute a contract with a customer (in thousands):

	Three Months Ended September 30, 2021		
Major Goods/Service Line	**Revenues from Contracts with Customers**	**Other Revenues**	**Total**
Ethanol sales and related products, net	$ 16	$ —	$ 16
Hydrocarbon revenue	104	—	104
Other revenue	—	22	22
	$ 120	$ 22	$ 142
Timing of Revenue Recognition			
Goods transferred at a point in time	$ 120	$ (3)	$ 117
Services transferred over time	—	25	25
	$ 120	$ 22	$ 142

	Three Months Ended September 30, 2020		
Major Goods/Service Line	**Revenues from Contracts with Customers**	**Other Revenues**	**Total**
Ethanol sales and related products, net	$ 21	$ —	$ 21
Hydrocarbon revenue	101	—	101
Other revenue	70	—	70
	$ 192	$ —	$ 192
Timing of Revenue Recognition			
Goods transferred at a point in time	$ 122	$ —	$ 122
Services transferred over time	70	—	70
	$ 192	$ —	$ 192

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Major Goods/Service Line	Nine Months Ended September 30, 2021 — Revenues from Contracts with Customers	Other Revenues	Total
Ethanol sales and related products, net	$ 16	$ —	$ 16
Hydrocarbon revenue	463	—	463
Other revenue	—	178	178
	$ 479	$ 178	$ 657
Timing of Revenue Recognition			
Goods transferred at a point in time	$ 479	$ —	$ 479
Services transferred over time	—	178	178
	$ 479	$ 178	$ 657

Major Goods/Service Line	Nine Months Ended September 30, 2020 — Revenues from Contracts with Customers	Other Revenues	Total
Ethanol sales and related products, net	$ 3,804	$ —	$ 3,804
Hydrocarbon revenue	1,085	—	1,085
Other revenue	116	—	116
	$ 5,005	$ —	$ 5,005
Timing of Revenue Recognition			
Goods transferred at a point in time	$ 4,889	$ —	$ 4,889
Services transferred over time	116	—	116
	$ 5,005	$ —	$ 5,005

4. Leases, Right-of-Use Assets and Related Liabilities

The Company is party to an operating lease contract for the Company’s office and research facility in Englewood, Colorado, that expires in January 2029. The lease does not contain an option to extend the lease that is reasonably certain to be exercised. All other operating leases qualified for the short-term scope exemption elected by the Company. The Company recognizes rent expense on its operating lease on a straight-line basis. The Company has elected the practical expedient to not separate lease components from non-lease components for these asset classes. As of September 30, 2021, right-of-use assets under operating leases totaling $1.6 million are included in "Operating right-of use assets," and related lease liabilities totaling $1.7 million are included in "Operating lease liabilities (long-term)” in the Consolidated Balance Sheets.

The Company also has four finance leases for land under arrangements related to Gevo RNG. Under these contracts, the Company leases land from dairy farmers on which it is building three anaerobic digesters, related equipment and pipelines to condition raw biogas from cow manure provided by the farmers. The partially conditioned biogas will be transported from the three digester sites to a central gas upgrade system located at the fourth site that will upgrade the biogas to pipeline quality natural gas for sale. These leases expire at various dates between 2031 and 2050. Certain leases provide the Company with the right to terminate the lease prior to the stated lease expiration date; however, the Company is reasonably certain not to exercise such termination right and thus periods beyond this termination right have been recognized as part of the Company’s right-of-use assets and lease liabilities. In addition, some of these leases include renewal periods that have been deemed to be reasonably certain to be exercised and as such have been recognized as part of the Company’s right-of-use assets and lease liabilities. The Company has elected the practical expedient to not separate lease components from non-lease components for this dairy lease asset class and therefore, all amounts paid to the lessor under these arrangements for cow manure and nonlease services are classified as lease payments and included in the calculation of the right-of-use assets and lease liabilities. This results in significantly higher right-of-use assets and lease liabilities than if the Company did not elect this practical expedient. As of September 30, 2021, right-of-use assets under finance leases totaling $27.7 million are included in "Finance right-of-use assets," and related lease liabilities totaling $22.3 million are included in the Consolidated Balance Sheets as follows: $2.7 million of lease liabilities included in "Finance lease liabilities (current) and $19.6 million included in "Finance lease liabilities (long-term)".

The Company leased its grain bins in Luverne, Minnesota in October 2020 through a short-term operating lease agreement which expired in July 2021. Rental income for the three and nine months ended September 30, 2021 totaled $0 and $0.2 million, respectively.

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The following table presents the (a) costs by lease category and (b) other quantitative information relating to the Company’s leases (dollars in thousands):

	Three Months Ended September 30,	
	2021	2020
Lease Cost		
Finance lease cost:		
Amortization of right-of-use assets (1)	$ 464	$ —
Interest on lease liabilities (2)	297	1
Operating lease cost	64	11
Short-Term lease cost	377	376
Variable lease cost (3)	94	36
Total lease cost	$ 1,296	$ 424

	Nine Months Ended September 30,	
	2021	2020
Lease Cost		
Finance lease cost:		
Amortization of right-of use assets (1)	$ 930	$ 1
Interest on lease liabilities (2)	627	2
Operating lease cost	192	545
Short-Term lease cost	1,003	556
Variable lease cost (3)	164	108
Total lease cost	$ 2,916	$ 1,212

(1) Amortization of right-of-use assets of \$0.4 million and \$0.9 million were capitalized as part of construction in progress during the three and nine months ended September 30, 2021, respectively, and included in "Property, plant and equipment, net" in the Consolidated Balance Sheets as the related Gevo RNG facilities are still under construction.
(2) Interest on lease liabilities of \$0.3 million and \$0.6 million were capitalized as part of construction in progress during the three and nine months ended September 30, 2021, respectively, and included in "Property, plant and equipment, net" in the Consolidated Balance Sheets as the related Gevo RNG facilities are still under construction.
(3) Represents amounts incurred in excess of minimum payments, including payments for common area expenses under our office and research facility lease, and additional amounts due under our Gevo RNG leases based on the number of cows maintained by the owners of the respective facilities.

	Nine Months Ended September 30,	
	2021	2020
Other Information		
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from finance leases	$ 627	$ 2
Operating cash flows from operating leases	192	545
Finance cash flows from finance leases	5,975	1
Right-of-use asset obtained in exchange for new finance lease liabilities	28,416	13
Right-of-use asset obtained in exchange for new operating lease liabilities	1,611	—
Weighted-average remaining lease term, finance lease (months)	225	53
Weighted-average remaining lease term, operating leases (months)	88	10
Weighted-average discount rate - finance leases (3)	5%	21%
Weighted-average discount rate - operating leases (3)	5%	12%

(3)The discount rate used for operating leases is based on our implicit borrowing rate ("IBR") at the date the Company entered into the lease. The Company estimated the IBR based collateralized borrowings for similar terms and payments.

The table below shows the future minimum payments under non-cancelable financing and operating leases at September 30, 2021 (in thousands):

Year Ending December 31,	Operating Leases	Finance Leases
2021 (remaining)	$ (241)	$ 1,950
2022	265	3,800
2023	297	1,708
2024	305	1,725
2025	315	1,738
2026 and thereafter	1,030	21,636
Total	1,971	32,557
Less: Amounts representing present value discounts	(374)	(10,232)
Total lease liabilities	1,597	22,325
Less: current portion	135	(2,727)
Long-term portion	$ 1,732	$ 19,598

5. Inventories

The following table sets forth the components of the Company’s inventory balances (in thousands):

	September 30, 2021	December 31, 2020
Raw materials		
Corn	$ 237	$ —
Enzymes and other inputs	171	133
Nutrients	1	1
Palladium	267	235
Work in process	55	5
Finished goods		
Isobutanol	36	—
SAF, Isooctane and Isooctene	211	756
Spare parts	1,363	1,361
Total inventories	$ 2,341	$ 2,491

Work in process inventory includes unfinished SAF, isooctane and isooctene inventory.

During the three months and nine months ended September 30, 2021, the Company recorded an expense for lower of cost or market of $1.2 million and $2.0 million, respectively. During the three months and nine months ended September 30, 2020, the company recorded an expense for lower of cost or market of $0.4 million and $0.4 million, respectively, as a result of restarted production of isobutanol at the Luverne Facility.

6. Property, Plant and Equipment

The following table sets forth the Company’s property, plant and equipment by classification (in thousands):

	Useful Life (in years)	September 30, 2021	December 31, 2020
Luverne retrofit asset	20	$ 70,820	$ 70,820
Plant machinery and equipment	10	17,949	17,374
Site improvements	10	7,157	7,157
Lab equipment, furniture and fixtures and vehicles	5	6,935	6,396
Demonstration plant	2	3,597	3,597
Buildings	10	2,543	2,543
Leasehold improvements, pilot plant, land and support equipment	2 to 7	2,523	2,523
Computer, office equipment and software	3 to 6	2,240	1,983
Construction in progress	—	51,033	13,132
Total property, plant and equipment		164,797	125,525
Less accumulated depreciation and amortization		(62,634)	(59,117)
Property, plant and equipment, net		$ 102,163	$ 66,408

Construction in progress includes $0.6 million for Gevo, $8.4 million for Agri-Energy, $36.0 million for Renewable Natural Gas and $6.0 for Net-Zero at September 30, 2021. Construction in progress includes $8.6 million for Agri-Energy and $4.5 million for Renewable Natural Gas (none for Gevo and Net-Zero) at December 31, 2020. Construction in progress is not subject to depreciation until the assets are placed into service.

The Company recorded depreciation and amortization expense related to property, plant and equipment as follows (in thousands):

	Three Months Ended September 30,	
	2021	2020
Cost of goods sold	$ 1,098	$ 1,418
Operating expenses	96	52
Total depreciation and amortization	$ 1,194	$ 1,470

	Nine Months Ended September 30,	
	2021	2020
Cost of goods sold	$ 3,358	$ 4,580
Operating expenses	198	158
Total depreciation and amortization	$ 3,556	$ 4,738

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7. Embedded Derivatives Liabilities

Derivative Warrant Liability

There were no warrants sold by the Company during the nine months ended September 30, 2021. On September 13, 2021, the Series I warrants expired.

The following table sets forth information pertaining to shares issued upon the exercise of warrants as of September 30, 2021:

	Issuance Date	Expiration Date	Exercise Price as of September 30, 2021	Shares Underlying Warrants on Issuance Date	Shares Issued upon Warrant Exercises as of September 30, 2021	Shares Underlying Warrants Outstanding as of September 30, 2021
Series K Warrants	2/17/2017	2/17/2022	$ 2.00	315,986	308,860	7,126
Series 2020-A Warrants (1)	7/6/2020	7/6/2025	$ 0.60	30,000,000	29,909,392	90,608
				30,315,986	30,218,252	97,734

(1) The Series 2020-A Warrants are equity-classified warrants.

During the nine months ended September 30, 2021, common stock was issued as a result of exercise of warrants as shown below (dollars in thousands):

	Common Stock Issued	Proceeds
Series K Warrants	200	$ 1
Series 2020-A Warrants	1,866,558	1,120
	1,866,758	$ 1,121

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8. Accounts Payable and Accrued Liabilities

The following table sets forth the components of the Company's accounts payable and accrued liabilities in the Consolidated Balance Sheets (in thousands):

	September 30, 2021	December 31, 2020
Accounts payable - trade	$ 10,876	$ 897
RNG accrued project costs	4,396	—
Accrued employee compensation	4,286	1,960
Net-Zero 1 accrued project costs	2,914	—
Other accrued liabilities	2,110	1,086
Total accounts payable and accrued liabilities	$ 24,582	$ 3,943

9. Debt

2021 Bond Issuance

On April 15, 2021, 2021 Bonds were issued totaling $68,155,000. The 2021 Bonds initially bear interest at the rate of 1.50% per annum during the Initial Term Rate Period (as defined in the hereinafter defined Indenture), payable semi-annually on January 1 and July 1 of each year, commencing on July 1, 2021, mature on April 1, 2042. The 2021 Bonds are callable on or after October 1, 2022, are remarketable, and are also subject to mandatory tender for purchase pursuant to the terms of the Indenture (as defined below).

The 2021 Bonds were issued under a Trust Indenture, dated as of April 1, 2021 (the “Indenture”), between the Authority and Citibank, N.A., as trustee (the “Trustee”). The principal of and the interest on the 2021 Bonds is payable solely from (i) payments to be made by Gevo RNG to the Trustee pursuant to a separate financing agreement, dated as of April 1, 2021 (the “Bond Financing Agreement”), between Gevo RNG and the Authority, (ii) all moneys received by the Authority or the Trustee in respect of payment of the loan of the proceeds of the 2021 Bonds from the Authority to Gevo RNG pursuant to the Bond Financing Agreement, (iii) all moneys and investments in the “Bond Fund” established and maintained by the Trustee pursuant to the Indenture, including without limitation moneys received by the Trustee pursuant to the Letter of Credit (as defined below), (iv) all moneys and investments in the “Project Fund” established and maintained by the Trustee pursuant to the Indenture from proceeds of the sale of the 2021 Bonds, and (v) all income and profit from the investment of the foregoing moneys, excluding any payments received by the Authority pursuant to rights of the Authority to receive certain additional payments and reimbursements of expenses as set forth in the Bond Financing Agreement. Pursuant to the Bond Financing Agreement, the proceeds of the 2021 Bonds will be loaned to Gevo RNG (1) to finance in part the construction of the biogas facility to be developed, designed, constructed, owned and operated by or on behalf of Gevo RNG, which is comprised of (A) three anaerobic digesters and related equipment situated on dairy farms located in Northwest Iowa that will produce partially conditioned raw biogas from cow manure, (B) gathering pipelines to transport biogas to a centrally located gas upgrade system, (C) a centrally located gas upgrade system located in Doon, Iowa that will upgrade biogas to pipeline quality natural gas and interconnect to Northern Natural Gas’ interstate pipeline and (D) other related improvements, (2) to capitalize a portion of the interest due on the 2021 Bonds during the Initial Term Rate Period to be used to reimburse the Credit Facility Provider (as defined below) for interest draws on the Letter of Credit during such period, and (3) to pay a portion of the costs of issuing the 2021 Bonds.

On April 15, 2021, Gevo obtained a letter of credit for $71.2 million (the “Letter of Credit”) from the Credit Facility Provider, pursuant to the terms of a letter of credit reimbursement agreement dated as of April 1, 2021 (the “Reimbursement Agreement”), between Gevo and the Credit Facility Provider. The Letter of Credit will permit the Trustee to draw thereon in accordance with its terms in amounts sufficient to pay the principal and purchase price of the 2021 Bonds and up to 203 days’ interest on the 2021 Bonds. Pursuant to the terms of the Reimbursement Agreement, Gevo is obligated to reimburse the Credit Facility Provider for amounts drawn under the Letter of Credit. It is expected that payments of the principal and interest on the 2021 Bonds, and the purchase price of 2021 Bonds that are tendered for mandatory purchase and not remarketed, will be made by draws on the Letter of Credit. Gevo has pledged and assigned restricted cash to the Credit Facility Provider as security for the reimbursement obligations of Gevo pursuant to the Reimbursement Agreement in an amount equal to the principal amount of the 2021 Bonds plus three years of interest payments on the 2021 Bonds.

Gevo anticipates remarketing the 2021 Bonds under revised terms that will include a long-term maturity date and be non-recourse to Gevo. Upon a successful remarketing, Gevo anticipates that the Letter of Credit, the Reimbursement Agreement and the associated pledge of cash will be terminated.

Loans Payable - Other

The equipment loans are secured by the related equipment.

In April 2020, the Company and Agri-Energy each entered into a loan agreement with Live Oak Banking Company, pursuant to which the Company and Agri-Energy obtained loans from the Small Business Administration's Paycheck Protection Program (“SBA PPP”) totaling $1.0 million in the aggregate (the "SBA Loans").

On April 15, 2021, the Small Business Administration forgave the entire balance of $0.5 million of the Company's and $0.1 million of Agri-Energy's loans and accrued interest obtained through the SBA PPP. The remaining SBA Loan for Agri-Energy totals $0.4 million, bears interest at 1.0% and matures in April 2025. Monthly payments of $8,000, including interest, began on June 5, 2021 and are payable through April 2025.

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The summary of the 2021 Bonds and Loans payable - other at September 30, 2021 and December 31, 2020 are as follows (in thousands):

	Interest Rate	Maturity Date	September 30, 2021	December 31, 2020
2021 Bonds	1.5%	January 2042	$ 66,303	$ —
SBA Loans	1.0%	April 2025	344	1,006
Equipment	4% to 5%	February 2022 to December 2024	178	248
Total loans payable - other			66,825	1,254
Less current portion			(165)	(807)
Long-term portion			$ 66,660	$ 447

Future principal payments for the Company's long-term debt are as follows (in thousands):

Year Ending December 31,	
2021 (remaining)	$ 44
2022	161
2023	159
2024	66,432
2025	29
	$ 66,825

Included in the 2021 Bonds above is Bond Premium of $0.7 million and Debt Issuance Costs of $2.6 million in the principal portion. During the three and nine months ended September 30, 2021, Bond Premium amortization was $0.1 million and $0.1 million, respectively, and Debt Issuance Cost amortization was $0.3 million and $0.5 million, respectively, based on the effective interest method and was included in "Interest expense" in the Consolidated Statements of Operations.

10. Equity Incentive Plans

2010 Stock Incentive Plan. In February 2011, the Company's stockholders approved the Gevo, Inc. 2010 Stock Incentive Plan (as amended and restated to date, the "2010 Plan"). The 2010 Plan provided for the grant of non-qualified stock options, incentive stock options, stock appreciation rights, restricted stock awards, restricted stock units and other equity awards to employees and directors of the Company. On June 9, 2021, with approval of stockholders at the 2021 Annual Meeting of Stockholders, the 2010 Plan was amended and restated, which increased the number of shares of common stock reserved for issuance under the 2010 Plan to a total of 22,980,074 shares.

Restricted common stock and non-qualified stock option activity during the nine months ended September 30, 2021 consisted of the following:

Period	Total Number of Restricted Shares Issued		Total Number of Non-qualified Stock Options Granted		Vesting Periods Years
January 1, 2021 to March 31, 2021	(121,499)	(1)	—		N/A
April 1, 2021 to June 30, 2021	(89,673)	(2)(3)	—		0 to 4
July 1, 2021 to September 30, 2021	3,915,502	(2)(4)(6)	4,668,727	(5)(7)	2 to 3
Total	3,704,330		4,668,727		

(1) Includes shares of common stock cancelled related to the unvested restricted stock awards of a director and an employee who resigned.
(2) Includes shares withheld from employees to cover tax withholding obligations upon the vesting of restricted stock awards.
(3) Includes restricted stock awards granted to employees April 7, 2021, May 3, 2021, and June 7, 2021.
(4) Includes restricted stock awards granted to employees and directors on August 20, 2021.
(5) Includes non-qualified stock options granted to employees and directors on August 20, 2021.
(6) Includes shares of common stock cancelled related to the unvested restricted stock awards of certain employees.
(7) Includes non-qualified stock options cancelled related to the unvested option awards granted to an employee.

At September 30, 2021, 8,857,302 shares remained available for awards under the 2010 Plan.

Employee Stock Purchase Plan. In February 2011, the Company's stockholders approved the Employee Stock Purchase Plan (the "ESPP"). The offering periods for the ESPP are from January 1 to June 30 and from July 1 to December 31 of each calendar year. The Company has reserved 190 shares of common stock for issuance under the ESPP, of which 190 shares as of September 30, 2021 are available for future issuance. The purchase price of the common stock under the ESPP is 85% of the lower of the fair market value of a share of common stock on the first or last day of the purchase period. There were no purchases of common stock under the ESPP during the nine months ended September 30, 2021 or 2020.

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11. Stock-Based Compensation

Stock-Based Compensation Expense. The Company records stock-based compensation expense during the requisite service period for share-based payment awards granted to employees and non-employees.

Our stock-based compensation is classified as either an equity award or a liability award in accordance with generally accepted accounting principles. The fair value of an equity-classified award is determined at the grant date and is amortized on a straight-line basis over the vesting life of the award. The fair-value of a liability-classified award is determined on a quarterly basis through the final vesting date and is amortized based on the current fair value of the award and the percentage of vesting period incurred to date.

The following table sets forth the Company's stock-based compensation expense (in thousands) for the periods indicated:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	**2020**	**2021**	**2020**
Equity Classified Awards				
Stock options				
Research and development	$ 188	$ —	$ 188	$ —
Selling, general and administrative	598	—	598	—
Restricted stock				
Research and development	273	142	519	353
Selling, general and administrative	821	500	1,995	1,122
Total equity classified awards	1,880	642	3,300	1,475
Liability Classified Awards				
Restricted stock				
Selling, general and administrative	2,368	—	2,368	—
Stock appreciation rights				
Research and development	(40)	16	149	(61)
Selling, general and administrative	(2)	16	6	(67)
Total liability classified awards	2,326	32	2,523	(128)
Total stock-based compensation	$ 4,206	$ 674	$ 5,823	$ 1,347

Stock Option Award Activity. Stock option activity under the Company's stock incentive plans at September 30, 2021 and changes during the nine months ended September 30, 2021 were as follows:

	Number of Options	Weighted-Average Exercise Price (1)	Weighted-Average Remaining Contractual Term (years)	Aggregate Intrinsic Value
Options outstanding at December 31, 2020	1,552	$ 556.13	5.6	$ —
Granted	4,670,324	$ 4.98		
Canceled or forfeited	(1,597)	$ 130.67		
Exercised	—	$ —		
Options outstanding at September 30, 2021	4,670,279	$ 5.12	9.9	$ 7,750,148
Options exercisable at September 30, 2021	1,515	$ 431.34	4.9	$ —
Options vested and expected to vest at September 30, 2021	4,435,359	$ 5.12	9.9	$ 7,360,181

(1) Exercise price of options outstanding range from $4.98 to $56,460 as of September 30, 2021.

The following table shows the number of stock options granted under the Company’s stock incentive plans and the assumptions used to determine the fair value of those options using a Black-Scholes option-pricing model during the nine months ended September 30, 2021:

Period Ended	Total Stock Options Granted	Weighted-Average Exercise Price	Weighted-Average Expected Term	Weighted Average Volatility	Weighted-Average Risk-Free Interest Rate	Expected Dividends	Weighted-Average Grant Date Fair Value
September 30, 2021	4,670,324	$ 4.98	5.75 years	144%	0.87%	$ 0	$ 4.57

No stock options were granted under the Company's stock incentive plans during the nine months ended September 30, 2020.

During the three and nine months ended September 30, 2021, the Company included stock-based compensation costs related to stock option awards of $0.2 million in "Research and development expense" and $0.6 million in "Selling, general and administrative expense" in the Consolidated Statements of Operations, respectively. The Company did not recognize any stock-based compensation expenses related to stock option awards during the three and nine months ended September 30, 2020.

No stock options vested during the nine months ended September 30, 2021. As of September 30, 2021, the total unrecognized compensation expense, net of estimated forfeitures, relating to stock options was $18.7 million, which is expected to be recognized over the remaining weighted-average period of approximately 2.9 years.

Restricted Stock. Non-vested restricted stock awards at September 30, 2021 and changes during the nine months ended September 30, 2021 were as follows:

	Number of Shares	Weighted-Average Grant-Date Fair Value
Non-vested at December 31, 2020	4,701,556	$ 0.79
Granted	4,807,378	$ 5.08
Vested	(2,585,547)	$ 0.99
Canceled or forfeited	(129,149)	$ 0.84
Non-vested at September 30, 2021	6,794,238	$ 3.75

The total fair value of restricted stock that vested during the nine months ended September 30, 2021 was $2.6 million. As of September 30, 2021, the total unrecognized compensation expense, net of estimated forfeitures, relating to restricted stock awards was $24.8 million, which is expected to be recognized over the remaining weighted-average period of approximately 2.7 years. As of September 30, 2021, we had recorded a liability of $0.9 million for earned and unvested liability-classified restricted stock awards based on the fair value of our common stock as of September 30, 2021.

12. Commitments and Contingencies

Legal Matters. From time to time, the Company has been, and may again become, involved in legal proceedings arising in the ordinary course of its business. The Company is not presently a party to any litigation and is not aware of any pending or threatened litigation against the Company that it believes could have a material adverse effect on its business, operating results, financial condition or cash flows.

Indemnifications. In the ordinary course of its business, the Company makes certain indemnities under which it may be required to make payments in relation to certain transactions. As of September 30, 2021, the Company did not have any liabilities associated with indemnities.

In addition, the Company, as permitted under Delaware law and in accordance with its amended and restated certificate of incorporation and amended and restated bylaws, in each case, as amended to date, indemnifies its officers and directors for certain events or occurrences, subject to certain limits, while the officer or director is or was serving at the Company’s request in such capacity. The duration of these indemnifications, commitments, and guarantees varies and, in certain cases, is indefinite. The maximum amount of potential future indemnification is unlimited; however, the Company has a director and officer insurance policy that may enable it to recover a portion of any future amounts paid. The Company accrues for losses for any known contingent liability, including those that may arise from indemnification provisions, when future payment is probable. No such losses have been recorded to date.

Environmental Liabilities. The Company’s operations are subject to environmental laws and regulations adopted by various governmental authorities in the jurisdictions in which it operates. These laws require the Company to investigate and remediate the effects of the release or disposal of materials at its locations. Accordingly, the Company has adopted policies, practices and procedures in the areas of pollution control, occupational health and the production, handling, storage and use of hazardous materials to prevent material environmental or other damage, and to limit the financial liability which could result from such events. Environmental liabilities are recorded when the Company’s liability is probable, and the costs can be reasonably estimated. No environmental liabilities have been recorded as of September 30, 2021.

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13. Fair Value Measurements

Accounting standards define fair value, outline a framework for measuring fair value, and detail the required disclosures about fair value measurements. Under these standards, fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date in the principal or most advantageous market. Standards establish a hierarchy in determining the fair market value of an asset or liability. The fair value hierarchy has three levels of inputs, both observable and unobservable. Standards require the utilization of the highest possible level of input to determine fair value.

Level 1 – inputs include quoted market prices in an active market for identical assets or liabilities.

Level 2 – inputs are market data, other than Level 1, that are observable either directly or indirectly. Level 2 inputs include quoted market prices for similar assets or liabilities, quoted market prices in an inactive market, and other observable information that can be corroborated by market data.

Level 3 – inputs are unobservable and corroborated by little or no market data.

The carrying value and fair value, by fair value hierarchy, of the Company's financial instruments at September 30, 2021 and December 31, 2020, respectively, are as follows (in thousands):

		Fair Value Measurements at September 30, 2021 (In thousands)		
	Fair Value at September 30, 2021	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Recurring				
Marketable securities				
U.S. Treasury notes	$ 266,892	$ 266,892	$ —	$ —
U.S. Government-sponsored enterprise securities	119,347	119,347	—	—
Other				
Liability-classified restricted stock awards	(904)	(904)	—	—
Derivative warrant liability	(35)	—	—	(35)
Total	$ 385,300	$ 385,335	$ —	$ (35)
Nonrecurring				
Corn and palladium	$ 504	$ 504	$ —	$ —

		Fair Value Measurements at December 31, 2020 (In thousands)		
	Fair Value at December 31, 2020	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Recurring				
Derivative Warrant Liability	$ 31	$ —	$ —	$ 31
Nonrecurring				
Corn and palladium and finished goods inventory	$ 866	$ 235	$ 631	$ —

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The following table provides changes to those fair value measurements using Level 3 inputs for the nine months ended September 30, 2021 (in thousands):

	Fair Value Measurements Using Significant Unobservable Inputs (Level 3)
	Derivative Warrant Liability
Balance, December 31, 2020	$ 31
Total loss included in earnings	4
Balance, September 30, 2021	$ 35

There were no transfers to or from Level 3 in the nine months ended September 30, 2021.

The Company's investment in marketable securities and liability-classified restricted stock awards are recorded at fair value based on quoted market prices. The Company believes that the carrying value of its cash and cash equivalents, restricted cash, accounts receivable, accounts payable and accrued liabilities and loans payable - other approximate fair value due to their short maturities.

During the nine months ended September 30, 2021, the Company recorded the following realized (loss) from the sale of available-for-sale marketable securities:

Sales proceeds	$ 34,332
Amortized cost	(34,365)
Realized (loss)	$ (34)

For the 2021 Bonds, the fair values are estimated using the Black-Derman-Toy interest rate lattice framework. The carrying values and estimated fair values of the 2021 bonds as of September 30, 2021 are summarized as follows:

	September 30, 2021	
	Carrying Value	Estimated Fair Value
2021 Bonds	$ 68,155	$ 69,075

Inventories. The Company records its corn and palladium inventory at fair value only when the Company’s cost of corn and palladium purchased exceeds the market value for corn and palladium. The Company determines the market value of corn and palladium based upon Level 1 inputs using quoted market prices.

Derivative Warrant Liability. The Company valued the Series K Warrants using a Monte-Carlo model (Level 3) and other warrants using Black-Scholes models comprised of some inputs requiring the use of Monte-Carlo models (Level 3).

The Company has not elected the fair value option for any of its instruments.

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The Company's investments in marketable securities are stated at fair value and are available-for-sale. The Company had no investments in marketable securities at December 31, 2020. The following table summarizes the Company's investments in marketable securities (in thousands):

		Available-for-Sale Securities at September 30, 2021		
	Maturity	Amortized Cost Basis	Gross Unrealized Losses	Fair Value
Short-term marketable securities				
U.S. Treasury notes	Within one year	$ 233,552	$ (178)	$ 233,374
U.S. Government-sponsored enterprise securities	Within one year	51,911	(49)	51,862
Total		$ 285,463	$ (227)	$ 285,236
Long-term marketable securities				
U.S Treasury notes	Within two years	$ 33,532	$ (15)	$ 33,517
U.S. Government-sponsored enterprise securities	Within two years	67,540	(54)	67,486
Total		$ 101,072	$ (69)	$ 101,003

14. Segments

The Company's chief operating decision maker is provided with and reviews a monthly executive package which separately identifies its business segments based on the nature of the products and services offered through each of its consolidated legal entities. In January 2021, the Company began to separately identify the Renewal Natural Gas Segment and Net-Zero Segment in the monthly executive package. As such, the Company has determined that it has four operating segments: (i) Gevo segment; (ii) Agri-Energy segment; (iii) Renewable Natural Gas segment; and (iv) Net-Zero segment. Transactions between segments are eliminated in consolidation.

Gevo Segment. The Gevo segment is responsible for all research and development activities related to the future production of isobutanol, including the development of our proprietary biocatalysts, the production and sale of bio jet fuel, the Company’s retrofit process and the next generation of chemicals and biofuels that will be based on the Company’s isobutanol technology. The Gevo segment also develops, maintains and protects its intellectual property portfolio, develops future markets for its isobutanol and provides corporate oversight services.

Agri-Energy Segment. The Agri-Energy segment is currently responsible for the operation of the Company’s Luverne Facility and the production of isobutanol, ethanol and related products.

Renewable Natural Gas Segment. The Renewable Natural Gas segment produces low-carbon methane from the manure of cows and pigs for the production of energy.

Net-Zero Segment. The Net-Zero segment is responsible for the production of energy dense liquid hydrocarbons using renewable energy and our proprietary technology. The concept of a Net-Zero Project is to convert renewable energy (photosynthetic, wind, renewable natural gas, biogas) into energy dense liquid hydrocarbons.

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The Company's chief operating decision maker is provided with and reviews the financial results of each of the Company's consolidated legal entities, Gevo, Inc. and Agri-Energy, LLC, as well as its Renewable Natural Gas and Net-Zero projects. The Company organizes its business segments based on the nature of the products and services offered through each of its consolidated legal entities. Substantially all revenue is earned, and all assets are held, in the U.S.

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	**2020**	**2021**	**2020**
Revenues:				
Gevo	$ 104	$ 176	$ 465	$ 1,198
Agri-Energy	38	16	192	3,807
Renewable Natural Gas	—	—	—	—
Net-Zero	—	—	—	—
Consolidated	$ 142	$ 192	$ 657	$ 5,005
Loss from operations:				
Gevo	$ (10,968)	$ (3,508)	$ (22,471)	$ (9,197)
Agri-Energy	(3,473)	(2,272)	(12,629)	(9,440)
Renewable Natural Gas	(218)	(323)	(286)	(699)
Net-Zero	(53)	—	(8,226)	—
Consolidated	$ (14,712)	$ (6,103)	$ (43,612)	$ (19,336)
Interest expense:				
Gevo	$ 67	$ 465	$ 67	$ 1,546
Agri-Energy	—	8	6	13
Renewable Natural Gas	—	—	5	—
Net-Zero	—	—	—	—
Consolidated	$ 67	$ 473	$ 78	$ 1,559
Depreciation and amortization expense:				
Gevo	$ 112	$ 53	$ 214	$ 159
Agri-Energy	1,088	1,423	3,358	4,595
Renewable Natural Gas	—	—	—	—
Net-Zero	—	—	—	—
Consolidated	$ 1,200	$ 1,476	$ 3,572	$ 4,754
Acquisitions of patents, plant, property and equipment:				
Gevo	$ 9,536	$ —	$ 10,377	$ 79
Agri-Energy	3,154	106	5,062	1,325
Renewable Natural Gas	14,450	—	31,551	—
Net-Zero	5,975	—	5,975	—
Consolidated	$ 33,115	$ 106	$ 52,965	$ 1,404
Revenue by geographic area				
United States	$ 49	$ 12	$ 282	$ 3,853
Other	93	180	375	1,152
Consolidated	$ 142	$ 192	$ 657	$ 5,005

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	September 30, 2021	December 31, 2020
Total assets		
Gevo	$ 574,179	$ 152,177
Agri-Energy	144,552	131,893
Renewable Natural Gas	112,594	—
Net-Zero	6,944	—
Intercompany eliminations (1)	(162,914)	(131,971)
Consolidated (2)	$ 675,355	$ 152,099

(1) Intercompany sales of hydrocarbon during the nine months ended September 30, 2021 and for the year ended December 31, 2020 was $0 and $0.1 million, respectively.
(2) All other significant non-cash items relate to the activities of Gevo.

Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations.

Forward-Looking Statements

This Quarterly Report on Form 10-Q (this “Report”) contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). When used anywhere in this Report, the words “expect,” “believe,” “anticipate,” “estimate,” “intend,” “plan” and similar expressions are intended to identify forward-looking statements. These statements relate to future events or our future financial or operational performance and involve known and unknown risks, uncertainties and other factors that could cause our actual results, levels of activity, performance or achievements to differ materially from those expressed or implied by these forward-looking statements. These statements reflect our current views with respect to future events and are based on assumptions and subject to risks and uncertainties. These forward-looking statements include, among other things, statements about: the impact of the novel coronavirus ("COVID-19") pandemic on our business, our financial condition, our results of operation and liquidity, our ability to finance and construct our Net-Zero 1 Project (as defined below), our ability to produce our products at our production facility in Luverne, Minnesota (the “Luverne Facility”) or elsewhere, our ability to meet production, financial and operational guidance, our strategy to pursue low-carbon or "net-zero" carbon renewable fuels for sale into California and elsewhere, our ability to replace our fossil-based energy sources with renewable energy sources at our Net-Zero 1 Project, our Luverne Facility and elsewhere, our ability and plans to construct a greenfield commercial hydrocarbon facility to produce sustainable aviation fuel ("SAF") and renewable premium gasoline/isooctane, our ability to raise additional funds to finance our business, our ability to perform under our existing offtake agreements and other supply agreements we may enter into in the future, our ability to successfully construct and operate our renewable natural gas ("RNG") project in Iowa, our ability to produce isobutanol and renewable hydrocarbon products at a commercial level and at a profit, achievement of advances in our technology platform, the availability of suitable and cost-competitive feedstocks, our ability to gain market acceptance for our products, the expected cost-competitiveness and relative performance attributes of our products, our strategy to pursue ethanol-to-SAF, additional competition and changes in economic conditions and the future price and volatility of petroleum and products derived from petroleum. Important factors could cause actual results to differ materially from those indicated or implied by forward-looking statements such as those contained in documents we have filed with the U.S. Securities and Exchange Commission (the “SEC”), including this Report in Item 7. “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” our Annual Report on Form 10-K for the year ended December 31, 2020 (our “Annual Report”), including Item 1A. "Risk Factors" of our Annual Report and subsequent reports on Form 10-Q. All forward-looking statements in this Report are qualified entirely by the cautionary statements included in this Report and such other filings. These risks and uncertainties or other important factors could cause actual results to differ materially from results expressed or implied by forward-looking statements contained in this Report. These forward-looking statements speak only as of the date of this Report. We undertake no intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, and readers should not rely on the forward-looking statements as representing the Company’s views as of any date subsequent to the date of the filing of this Report.

Unless the context requires otherwise, in this Report the terms “we,” “us,” “our” and the “Company” refer to Gevo, Inc. and its subsidiaries.

The following discussion should be read in conjunction with our unaudited consolidated financial statements and the related notes and other financial information appearing elsewhere in this Report. Readers are also urged to carefully review and consider the various disclosures made by us which attempt to advise interested parties of the factors which affect our business, including, without limitation, the disclosures in our Annual Report.

Company Overview

We are a growth-oriented company focused on transforming renewable energy into energy dense liquid hydrocarbons that can be used as renewable fuels, such as sustainable aviation fuel and renewable isooctane (which we refer to as “renewable premium gasoline”), with the potential to achieve a “net zero” greenhouse gas ("GHG") footprint and address global needs of reducing GHG emissions with sustainable alternatives to petroleum fuels. We currently own one production facility, the Luverne Facility. We plan to develop, own (in whole or in part), and operate additional production facilities that use a combination of (i) renewable energy sources such a photosynthetic energy, renewable electricity, biogas, renewable hydrogen, and (ii) renewable carbon sources such as residual carbohydrates. The residual carbohydrates we are initially focused on are those from sustainably grown field corn because of amount of protein that can be captured and delivered to the food chain. We also have the potential to use residual carbohydrates from woody biomass, municipal solid waste, molasses, sugar, agriculture residues and the like. The choice of feedstock depends upon the sustainability profile of the carbohydrate, its cost and the reliability of the supply chain for that feedstock.

As next generation renewable fuels, our hydrocarbon transportation fuels have the advantage of being “drop-in” substitutes for conventional fuels that are derived from crude oil, working seamlessly and without modification in existing fossil-fuel based engines, supply chains and storage infrastructure. In addition, with SAF, the carbon footprint of air travel can be reduced, or in the long run, eliminated on a net carbon basis, without changes to planes or fuel systems. In addition to the potential of net-zero carbon emissions across the whole fuel life-cycle, our renewable fuels should eliminate other pollutants associated with the burning of traditional fossil fuels such as particulates and sulfur, while delivering superior performance. We believe that the world is substantially under-supplied with low-carbon, drop-in renewable fuels that can be immediately used in existing transportation engines and infrastructure, and we are uniquely positioned to grow in serving that demand. We call this approach our “Net-Zero Business Model,” in reference to the reduction and elimination of fossil-based emissions on a net carbon basis across the whole of the life cycle.

We have a strong proprietary technology position. Our technology pathway converts carbohydrates to alcohols via a fermentation process. The alcohols are then converted to hydrocarbon fuels using a catalytic chemical process. By using renewable energy across the production process, in combination with sustainable feedstocks, like low carbon non-food corn, the greenhouse gas emissions can be substantially reduced or eliminated as measured across the whole of the life cycle. The processes used to convert carbohydrates to drop-in hydrocarbons using isobutanol as the intermediate alcohol is protected by a patent portfolio with more than 500 patents, as well as proprietary processes and know-how. The production technology to convert ethanol to hydrocarbons has been exclusively licensed to Gevo in the United States by Axens North America, Inc. (“Axens”), and incorporates more than 60 patents, as well as proprietary production technology and know-how.

Net-Zero Projects

In early 2021, we announced the concept of “Net-Zero Projects” as a series of planned facilities to produce energy dense liquid hydrocarbons using renewable energy and our proprietary technology. The concept of a Net-Zero Project is to convert renewable energy (photosynthetic, wind, renewable natural gas, biogas) from a variety of sources into energy dense liquid hydrocarbons that when burned in traditional engines, have the potential to achieve net-zero GHG emissions across the whole lifecycle of the liquid fuel: from the way carbon is captured from the atmosphere, processed to make liquid fuel products, and including the end use (burning as a fuel for cars, planes, trucks and ships). We announced that our initial Net-Zero project (“Net-Zero 1 Project") is currently planned to be constructed at Lake Preston, South Dakota. We expect that the Net-Zero 1 Project will have the capability to produce liquid hydrocarbons that when burned have a “net-zero” greenhouse gas footprint. We currently expect the Net-Zero 1 Project to have a capacity of approximately 46 MGPY of hydrocarbons (for renewable premium gasoline and SAF, backed by our current portfolio of take-or-pay contracts), to produce more than 340,000,000 pounds per year of high-value nutritional products for use in the food chain, to produce more than 30,000,000 pounds per year of corn oil and to produce smaller volumes of excess isobutanol for sale in the market.

Ethanol-to-SAF Strategy

On October 12, 2021, we announced that we entered into an agreement with Axens that establishes a strategic alliance aimed at accelerating the commercialization of sustainable ethanol-to-SAF ("ETSAF") projects in the United States. As part of the alliance, Axens brings technologies with over 60 related patents, engineering packages, proprietary catalysts and certain proprietary equipment required to convert ethanol into SAF. Axens would also provide process guarantees to us for commercial ETSAF projects. We plan to develop, own and operate ETSAF plants to produce SAF alone or with partners, applying the principles of our Net-Zero Business Model.

Renewable Natural Gas Projects

In 2019, we began developing RNG projects. Animal manure can be digested anaerobically to produce RNG. RNG has value in markets such as California as well as in Gevo’s hydrocarbon production process by helping us achieve carbon negative GHG emissions on our renewable hydrocarbon products. The end products resulting from such a decarbonization process have lower carbon intensity scores and increased market value, in addition to having a more positive impact on the environment. We developed Gevo's initial RNG project, Gevo NW Iowa RNG, LLC (“Gevo RNG”), to generate RNG captured from dairy cow manure which will be supplied by three dairies located in Northwest Iowa totaling over 20,000 milking cows. When fully operational, the Gevo RNG project is expected to generate approximately 355,000 MMBtu of RNG per year. During the third quarter of 2021, Gevo entered into agreements with BP Canada Energy Marketing Corp. and BP Products North America Inc. (collectively, “bp”) for the sale of Gevo RNG. The RNG is expected to be sold into the California market under dispensing agreements bp has in place with Clean Energy Fuels Corp., the largest fueling infrastructure in the U.S. for RNG. We expect RNG sale revenues will benefit from California’s Low Carbon Fuel Standard program and the U.S. Environmental Protection Agency’s Renewable Identification Number program. We financed the construction of the Gevo RNG project in April 2021 with the $68,155,000 of Solid Waste Facility Revenue Bonds (Gevo NW Iowa RNG, LLC Renewable Natural Gas Project), Series 2021 (Green Bonds) (the “2021 Bonds”) issued by the Iowa Finance Authority in a public offering for the benefit of Gevo RNG and we commenced its construction in April 2021. The Gevo RNG project is expected to begin producing RNG in 2022.

Recent Developments

Butamax Patent Estate. On September 21, 2021, we and Butamax Advanced Biofuels LLC and its affiliate, Danisco US Inc. (collectively, “Butamax”), entered into an Asset Purchase Agreement (the "Purchase Agreement"), pursuant to which we purchased all of Butamax’s rights, title and interests in certain U.S. and foreign patents and patent applications, subject to specified conditions and encumbrances, relating to the production, recovery and use of biobutanol that were owned by Butamax (the “Purchased Assets”). The Purchased Assets were previously subject to the terms and conditions of the Patent Cross-License Agreement, effective August 22, 2015, by and between us and Butamax. Except with respect to certain existing licenses granted by Butamax pursuant to the PCLA and other terms set forth in the Purchase Agreement, the PCLA was terminated as of the effective date of the Purchase Agreement.

At-the-Market Offering Program. During the nine months ended September 30, 2021, we issued 24,420,579 shares of common stock under the at-the-market offering program for total proceeds of $135.8 million, net of commissions and other offering related expenses of $3.6 million. There were no shares issued during the three months ended September 30, 2021. Additionally, On September 9, 2021, we amended the at-the-market offering program to expand the availability up to $500 million of shares of the Company’s common stock. See Note 1, *Nature of Business, Financial Condition and Basis of Presentation*, to our consolidated financial statements included herein for further discussion.

COVID-19

The COVID-19 pandemic has had an adverse impact on global commercial activity, including the global transportation industry and its supply chain, and has contributed to significant volatility in financial markets. It resulted in travel restrictions and extended shutdowns of businesses in various industries including, among others, the airline industry, and significantly reduced overall economic output. It is possible that that the impact of the COVID-19 pandemic on general economic activity could continue to negatively impact our revenue and operating results for 2021 and beyond. In light of the current and potential future disruption to our business operations and those of its customers, suppliers and other third parties with whom we do business, we considered the impact of the COVID-19 pandemic on our business. The impact of the COVID-19 pandemic on the global transportation industry could continue to result in less demand for our transportation fuel products, which could have a material adverse effect on our business, financial condition and our prospects for the foreseeable future.

During the first quarter of 2020, we suspended our ethanol production at the Luverne Facility due to COVID-19 and an unfavorable commodity environment, largely the result of greater corn costs as compared to national markets than the region has historically produced. The suspension of ethanol production and a reduction in our workforce that occurred during the first quarter of 2020 due to the impact of COVID-19 had an adverse impact on our financial results for the nine months ended September 30, 2021, reducing revenue by 87% compared to the nine months ended September 30, 2020. The change in revenue for the three months ended September 30, 2021 was negligible compared the three months ended September 30, 2020. There is also a risk that COVID-19 could have a material adverse impact on the development of our Net-Zero 1 Project, customer demand and cash flow, depending on the extent of our future production activities.

Financial Condition

We have incurred consolidated net losses since inception and we had a significant accumulated deficit as of September 30, 2021. Our cash, cash equivalents and restricted cash at September 30, 2021 totaled $136.2 million and marketable debt securities totaled $386.2 million, which is primarily being used for the following: (i) identification, development, acquisition and construction of new production facilities and to plan for expanded production to fulfill existing off-take agreements, including the Company's Net Zero Projects; (ii) investment in the Gevo NW Iowa RNG facility; (iii) development of the Luverne Facility; (iv) development, acquisition and operation of sustainable ETSAF plants to produce SAF alone or with partners; (v) operating activities at our corporate headquarters in Colorado, including research and development work; (vi) exploration of strategic alternatives and additional financings, including project financing; and (vii) future debt service obligations.

The continued operation of our business is dependent upon raising additional capital through future public and private equity offerings, debt financings or through other alternative financing arrangements. In addition, successful completion of our research and development programs and the attainment of profitable operations are dependent upon future events, including our ability to raise sufficient capital to develop, construct and finance our Net-Zero 1 Project, completion of our development activities resulting in sales of isobutanol or isobutanol-derived products and/or technology, achieving market acceptance and demand for our products and services and attracting and retaining qualified personnel.

We expect to incur future net losses as we continue to fund the development and commercialization of our products and product candidates. We have primarily relied on raising capital to fund our operations and debt service obligations by issuing common stock and warrants in public offerings. Those issuances have caused significant dilution to our existing stockholders. While we have sought, and will continue to seek, other, less dilutive forms of financing to fund our operations and debt service obligations, there is no assurance that we will be successful in doing so.

Our transition to profitability is dependent upon, among other things, the successful development and commercialization of our product candidates, construction of our Net-Zero 1 Project and additional production facilities to support our offtake agreements, the achievement of a level of revenues adequate to support our cost structure, and the ability to raise capital to complete the construction of our Net-Zero 1 Project and additional production facilities. We intend to fund future operations through additional private and/or public offerings of debt or equity securities. In addition, we may seek additional capital through arrangements with strategic partners or from other sources. Notwithstanding, there can be no assurance that we will be able to raise additional funds or achieve or sustain profitability or positive cash flows from operations on acceptable terms, or at all. We believe we have adequate cash to fund operations for at least one year from the date the financial statements are issued.

Results of Operations

Comparison of the Three Months Ended September 30, 2021 and 2020

(in thousands)	Three Months Ended September 30, 2021	2020	Change
Revenue and cost of goods sold			
Ethanol sales and related products, net	$ 16	$ 21	$ (5)
Hydrocarbon revenue	104	101	3
Grant and other revenue	22	70	(48)
Total revenues	142	192	(50)
Cost of goods sold	3,482	2,260	1,222
Gross loss	(3,340)	(2,068)	(1,272)
Operating expenses			
Research and development expense	1,541	870	671
Selling, general and administrative expense	9,335	2,892	6,443
Preliminary stage project costs	313	323	(10)
Loss on disposal of assets	183	—	183
Restructuring expenses	—	(50)	50
Total operating expenses	11,372	4,035	7,337
Loss from operations	(14,712)	(6,103)	(8,609)
Other income (expense)			
Interest expense	(67)	(473)	406
(Loss) on conversion of 2020/21 Notes to common stock	—	(543)	543
Gain from change in fair value of derivative warrant liability	6	—	6
Gain from change in fair value of 2020/21 Notes embedded derivative liability	—	247	(247)
Other income (expense), net	393	36	357
Total other income (expense), net	332	(733)	1,065
Net loss	$ (14,380)	$ (6,836)	$ (7,544)

The Luverne Facility re-commenced operations during July 2021. The Luverne Facility began producing isobutanol that will be used as a feedstock for us to produce SAF and renewable premium gasoline to fulfill existing sales contracts. These renewable hydrocarbons will be produced at the South Hampton Resources, Inc. facility near Houston, Texas (the "South Hampton Facility"). We also expect to utilize some of the isobutanol produced to develop certain isobutanol specialty markets and for testing and development. The production operations at the Luverne Facility will allow also us to test and evaluate certain potential unit operations that may be incorporated into the Net-Zero 1 Project. Additionally, if there is a positive change in market conditions for ethanol, we may consider restarting the production of ethanol at the Luverne Facility. In September 2021, we announced our plans to deploy a hydrocarbon pilot unit at the Luverne Facility to produce market development quantities of SAF, renewable premium gasoline, other renewable fuel products, as well as provide capability to supply market development quantities of chemical products. The installation is estimated to begin in the third quarter 2022 with startup demonstration production expected in the fourth quarter 2022. Installation of the pilot unit at the Luverne Facility is part of the plan to use the facility as a technology development and piloting site. We intend to utilize the fermentation and hydrocarbon processing units at the Luverne Facility to provide critical, hands-on training for staff at our Net-Zero 1 and other future projects. We do not expect to generate significant revenue from the operation of the Luverne Facility.

Revenue. As a result of COVID-19 and in response to an unfavorable commodity environment, we suspended ethanol and distiller's grains production at the Luverne Facility in March 2020. Revenue from the sale of ethanol, isobutanol and related products for the three months ended September 30, 2021 and 2020 was nil. Currently, our demonstration plant located at the South Hampton Facility is not producing renewable premium gasoline or SAF.

Hydrocarbon revenues are comprised of SAF, isooctane and isooctene sales.

Cost of goods sold. Cost of goods sold was $3.5 million during the three months ended September 30, 2021, compared with $2.3 million during the three months ended September 30, 2020, an increase of approximately $1.2 million. We began producing isobutanol at the Luverne Facility during the three months ended September 30, 2021 resulting in higher production costs. Cost of goods sold included approximately $2.4 million associated with production of isobutanol and maintenance of the Luverne Facility, including inventory write down to net realizable value of $1.2 million, and approximately $1.1 million in depreciation expense during the three months ended September 30, 2021.

Research and development expense. Research and development expense increased by approximately $0.7 million during the three months ended September 30, 2021, compared with the three months ended September 30, 2020, due primarily to an increase in personnel costs related to increased headcount and stock-based compensation and consulting expenses as we work to improve our process for growing and fermenting yeast strains.

Selling, general and administrative expense. Selling, general and administrative expense increased by approximately $6.4 million during the three months ended September 30, 2021, compared with the three months ended September 30, 2020, due primarily to increases in personnel costs related to increased headcount and stock-based compensation, professional fees related to new contracts and higher costs for insurance, and increased consulting fees related to documenting our compliance with Section 404(b) of the Sarbanes-Oxley Act ("SOX").

Preliminary stage project costs. Preliminary stage project costs are related to our Gevo RNG and Net-Zero projects. During the three months ended September 30, 2021, preliminary stage project costs were approximately the same as the three months ended September 30, 2020. During the three months ended September 30, 2021, the preliminary stage project costs were primarily related to consulting for preliminary engineering costs and for personnel expenses to support the growth in business activity at our Net-Zero projects. During the three months ended September 30, 2020, the preliminary project costs related primarily to consulting for preliminary engineering costs and personnel expenses to support the growth in business activity at our Gevo RNG project. During the three months ended September 30, 2021, we began capitalizing our Net-Zero 1 project costs after completing certain front-end engineering studies and determining it was probable that we would build Net-Zero 1 in Lake Preston, SD.

Loss on disposal of assets. A s a result of suspending the production of ethanol at the Luverne Facility, we wrote-off $0.2 million of costs related to the removal of the fractionation equipment returned to the manufacturer during the three months ended September 30, 2021.

Interest expense . Interest expense during the three months ended September 30, 2021 decreased by $0.4 million compared to the three months ended September 30, 2020 , due to the conversion of all of our then-outstanding 12% convertible senior secured notes due 2020/2021 (the "2020/21 Notes") to common stock during 2020.

(Loss) on conversion of 2020/21 Notes to common stock. During the three months ended September 30, 2020, we incurred a $0.5 million loss related to the conversion of $2.0 million of 2020/21 Notes into common stock during July 2020.

(Loss) from change in fair value of the 2020/21 Notes embedded derivative liability. We incurred no gain (loss) from the change in fair value of the 2020/21 Notes in the three months ended September 30, 2021 since the 2020/21 Notes were converted to common stock in 2020.

Other (expense) income. Other income during the three months ended September 30, 2021 was $0.4 million, an increase of $0.4 million compared to the three months ended September 30, 2020, primarily due to income earned on marketable securities and restricted cash.

Comparison of the Nine Months Ended September 30, 2021 and 2020

	Nine Months Ended September 30,		
(in thousands)	**2021**	**2020**	**Change**
Revenue and cost of goods sold			
Ethanol sales and related products, net	$ 16	$ 3,804	$ (3,788)
Hydrocarbon revenue	463	1,085	(622)
Grant and other revenue	178	116	62
Total revenues	657	5,005	(4,348)
Cost of goods sold	8,270	13,043	(4,773)
Gross loss	(7,613)	(8,038)	425
Operating expenses			
Research and development expense	4,323	2,127	2,196
Selling, general and administrative expense	18,027	8,179	9,848
Preliminary stage project costs	8,512	700	7,812
Loss on disposal of assets	5,137	38	5,099
Restructuring expenses	—	254	(254)
Total operating expenses	35,999	11,298	24,701
Loss from operations	(43,612)	(19,336)	(24,276)
Other income (expense)			
Gain on forgiveness of SBA loans	641	—	641
Interest expense	(78)	(1,559)	1,481
(Loss) from modification of 2020 Notes	—	(726)	726
(Loss) on conversion of 2020/21 Notes to common stock	—	(543)	543
(Loss) gain from change in fair value of derivative warrant liability	(4)	8	(12)
(Loss) from change in fair value of 2020/21 Notes embedded derivative liability	—	(29)	29
Other income (expense), net	363	53	310
Total other income (expense), net	922	(2,796)	3,718
Net loss	$ (42,690)	$ (22,132)	$ (20,558)

The Luverne Facility re-commenced operations during July 2021. The Luverne Facility began producing isobutanol that will be used as a feedstock for us to produce SAF and renewable premium gasoline to fulfill existing sales contracts. These renewable hydrocarbons will be produced at the South Hampton Facility. We also expect to utilize some of the isobutanol produced to develop certain isobutanol specialty markets and for testing and development. The production operations at the Luverne Facility will also allow us to test and evaluate certain potential unit operations that may be incorporated into the Net-Zero 1 Project. Additionally, if there is a positive change in market conditions for ethanol, we may consider restarting the production of ethanol at the Luverne Facility. In September 2020, we announced our plans to deploy a hydrocarbon pilot unit at the Luverne Facility to produce market development quantities of SAF, renewable premium gasoline, other renewable fuel products, as well as provide capability to supply market development quantities of chemical products. The installation is estimated to begin in Q3 2022 with startup demonstration production expected in Q4 2022. Installation of the pilot unit at the Luverne Facility is part of the plan to use the facility as a technology development and piloting site. We intend to utilize the fermentation and hydrocarbon processing units at the Luverne Facility to provide critical, hands-on training for staff at our Net-Zero 1 and other future projects. We do not expect to generate significant revenue from the operation of the Luverne Facility.

Revenue. As a result of COVID-19 and in response to an unfavorable commodity environment, we suspended ethanol and distiller's grains production at the Luverne Facility in March 2020. Revenue from the sale of ethanol, isobutanol and related products for the nine months ended September 30, 2021 was negligible, a decrease of $3.8 million compared to the nine months ended September 30, 2020. During the nine months ended September 30, 2021, we did not sell any ethanol compared to 2.4 million gallons of ethanol sold in the nine months ended September 30, 2020. Currently, the South Hampton Facility is not producing renewable premium gasoline or SAF. We expect to produce isobutanol during 2021 to supply the South Hampton Facility so that renewable premium gasoline or SAF can be produced in 2021.

Hydrocarbon revenues are comprised of SAF, isooctane and isooctene sales. Hydrocarbon sales decreased by $0.6 million during the nine months ended September 30, 2021 as a result of lower production volumes at the South Hampton Facility.

Cost of goods sold. Cost of goods sold was $8.3 million during the nine months ended September 30, 2021, compared with $13.0 million during the nine months ended September 30, 2020, a decrease of approximately $4.7 million, primarily the result of suspending ethanol production in March 2020 as a result of COVID-19 and in response to an unfavorable commodity environment. We began producing isobutanol at the Luverne Facility during the three months ended September 31, 2021 resulting in higher production costs. Cost of goods sold included approximately $4.9 million associated with production of isobutanol and maintenance of the Luverne Facility, including inventory write down to net realizable value of $2.0 million, and approximately $3.4 million in depreciation expense during the nine months ended September 30, 2021.

Prior to the Luverne Facility restarting production, cost of goods sold was primarily comprised of costs to process SAF, isooctane and isooctene at our South Hampton Facility as well as costs to maintain the Luverne Facility.

Research and development expense. Research and development expense increased by approximately $2.2 million during the nine months ended September 30, 2021, compared with the nine months ended September 30, 2020, due primarily to personnel costs from increased headcount and stock-based compensation and consulting expenses as we work to improve our process for growing and fermenting yeast strains.

Selling, general and administrative expense. Selling, general and administrative expense increased by approximately $9.8 million during the nine months ended September 30, 2021, compared with the nine months ended September 30, 2020, due primarily to increases in personnel costs related to increased headcount, recruiting costs and stock-based compensation, professional fees related to new contracts and extensive shareholder outreach for the annual stockholder meeting, higher costs for insurance and increased consulting fees related to documenting our compliance with Section 404(b) of SOX.

Preliminary stage project costs. Preliminary stage project costs increased by approximately $7.8 million during the nine months ended September 30, 2021, compared with the nine months ended September 30, 2020, due primarily to increased consulting and research and development expenses related to our Gevo RNG and Net-Zero projects. During the nine months ended September 30, 2021, the preliminary stage project costs were primarily related to consulting for preliminary engineering costs and for personnel expenses to support the growth in business activity for our Renewable Natural Gas and Net-Zero projects. During the nine months ended September 30, 2020, the preliminary stage project costs were primarily related to consulting for preliminary engineering costs and for personnel expenses to support the growth in business activity at our Gevo RNG project. During the three months ended June 30, 2021, we began capitalizing the Gevo RNG project costs after completing certain front-end engineering studies and determining it was probable that we would build the Gevo RNG project. During the three months ended September 30, 2021, we began capitalizing our Net-Zero 1 project costs after completing certain front-end engineering studies and determining it was probable that we would build Net-Zero 1 in Lake Preston, SD.

Loss on disposal of assets. A s a result of suspending the production of ethanol at the Luverne Facility, we wrote-off $5.1 million of costs related to the installation of the fractionation equipment returned to the manufacturer during the nine months ended September 30, 2021.

Gain on forgiveness of SBA Loans. During the nine months ended September 30, 2021, the Small Business Administration forgave the entire balance of $0.6 million of the Company's SBA Loans and accrued interest.

Interest expense. Interest expense during the nine months ended September 30, 2021 decreased by $1.5 million compared to the nine months ended September 30, 2020, due to the conversion the 2020/21 Notes to common stock during 2020.

(Loss) from modification of 2020 Notes. During the nine months ended September 30, 2020, we incurred $0.7 million of legal and professional fees to modify the 2020 Notes into the 2020/21 Notes.

(Loss) on conversion of 2020/21 Notes to common stock. During the three months ended September 30, 2020, we incurred a $0.5 million loss related to the conversion of $2.0 million of 2020/21 Notes into common stock during July 2020.

(Loss) gain from change in fair value of the 2020/21 Notes embedded derivative liability. We incurred no gain (loss) from the change in fair value of the 2020/21 Notes during the nine months ended September 30, 2021 since the 2020/21 Notes were converted to common stock in 2020.

Other (expense) income. Other income during the nine months ended September 30, 2021 increased $0.3 million compared to the nine months ended September 30, 2020, primarily due to income earned on marketable securities and restricted cash.

Sources of Our Revenues

Our revenues are primarily derived from: (i) the sale of isobutanol and related products; (ii) hydrocarbon sales consisting primarily of the sale of SAF and isooctane derived from our isobutanol for purposes of certification and testing; and (iii) government grants and research and development programs.

Liquidity and Capital Resources

As of September 30, 2021, we had cash and cash equivalents totaling $16.2 million, short and long-term restricted cash totaling $120.0 million and short and long-term marketable securities totaling $386.2 million. The marketable securities are highly liquid and can be converted to cash when it is needed for operations.

Since our inception in 2005, we have devoted most of our cash resources to manufacturing ethanol, isobutanol and related products, research and development and selling, general and administrative activities related to the commercialization of isobutanol and related products from renewable feedstocks. We have incurred losses since inception and expect to incur losses for the foreseeable future. We have financed our operations primarily with proceeds from multiple sales of equity and debt securities, borrowings under debt facilities and product sales.

The continued operation of our business is dependent upon raising additional capital through future public and private equity offerings, debt financings or through other alternative financing arrangements. In addition, successful completion of our research and development programs and the attainment of profitable operations are dependent upon future events, including our ability to raise sufficient capital to expand our commercial production capabilities, completion of our development activities resulting in sales of isobutanol or isobutanol-derived products and/or technology, achieving market acceptance and demand for our products and services and attracting and retaining qualified personnel.

Our transition to profitability is dependent upon, among other things, the successful development and commercialization of our product candidates, the development, acquisition and construction of additional production facilities to support our offtake agreements, the achievement of a level of revenues adequate to support our cost structure and the ability to raise capital to finance the development, acquisition and construction of additional productions facilities. We intend to fund future operations through additional private and/or public offerings of debt or equity securities. In addition, we may seek additional capital through arrangements with strategic partners or from other sources, and it will continue to address its cost structure. Notwithstanding, there can be no assurance that we will be able to raise additional funds or achieve or sustain profitability or positive cash flows from operations on acceptable terms, or at all.

The following table sets forth the major sources and uses of cash for each of the periods set forth below (in thousands):

	Nine Months Ended September 30, 2021	2020
Net cash used in operating activities	$ (28,693)	$ (14,581)
Net cash used in investing activities	$ (427,985)	$ (1,756)
Net cash provided by financing activities	$ 514,513	$ 80,656

Operating Activities

Our primary uses of cash from operating activities are personnel related expenses, research and development-related expenses including costs incurred under development agreements, costs of licensing of technology, legal-related costs, expenses for production of isobutanol, ethanol and related products, logistics, manufacturing of isobutanol at the Luverne Facility and further processing of isobutanol at our South Hampton Facility.

During the nine months ended September 30, 2021, net cash used for operating activities was $28.7 million compared to $14.6 million for the nine months ended September 30, 2020. The $14.1 million decrease in operating cash flows was primarily due to increased cost of goods sold associated with beginning production of isobutanol during the third quarter 2021 and maintenance of the Luverne Facility, increased engineering and development fees on our Gevo RNG and Net-Zero 1 projects, increases in personnel expenses to support the growth in business activity, professional fees related to new contracts and extensive shareholder outreach for the annual stockholder meeting and consulting to support the preparation of our first ESG report and compliance with Section 404(b) of SOX.

Investing Activities

During the nine months ended September 30, 2021, we used $428.0 million in cash for investing activities, of which $422.4 million related to purchasing marketable securities and $31.0 million primarily related to construction in process attributable to the Gevo RNG project and to a lesser extent, the purchase of a Hydrocarbon-Process Pilot Unit for our Luverne Facility and Net-Zero 1 project, and $9 million for the purchase of patents, which was partially offset by proceeds of $34.3 million from the sale of marketable securities.

We are currently constructing the Gevo RNG project and expect to invest an additional $32 million in the aggregate to complete the Gevo RNG project in the remainder of 2021 and into 2022 for completion of the project. We currently plan to spend approximately $337 million for engineering, development, long-lead equipment deposits, debt financing costs, and project construction equity investment commitments over the next 12 months for the Net-Zero 1 Project.

Financing Activities

During the nine months ended September 30, 2021, we generated $514.5 million in cash from financing activities, which primarily consisted of $321.9 million from the sale of common stock and warrants in the January 2021 Offering, $135.8 million of net proceeds under our "at-the-market" offering program and $69.0 million from the 2021 Bonds proceeds offset by $5.1 million net settlement of common stock for taxes under our stock plans and $3.0 million of payments on finance lease liabilities.

During the nine months ended September 30, 2021, we received notices of exercise from holders of our Series 2020-A Warrants to issue an aggregate of 1,866,558 shares of common stock for total gross proceeds of approximately $1.1 million. Following these exercises, Series 2020-A Warrants to purchase 90,608 shares of our common stock remain outstanding at an exercise price of $0.60 per share.

At-the-Market Offering Program. In September 2021, the at-the-market offering program was amended to provide available capacity of $500 million.

No shares of common stock were issued under the at-the-market offering program during the three months ended September 30, 2021. During the nine months ended September 30, 2021, we issued 24,420,579 shares of common stock under the at-the-market offering program for total proceeds of $135.8 million, net of commissions and other offering related expenses of $3.6 million. As of September 30, 2021, we have remaining capacity to issue up to approximately $500 million of common stock under the at-the-market offering program.

Finance Leases. The Company has four finance leases for land under arrangements related to Gevo RNG. Under these contracts, the Company leases land from dairy farmers on which it is building three anaerobic digesters, related equipment and pipelines to condition raw biogas from cow manure provided by the farmers. The partially conditioned biogas will be transported from the three digester sites to a central gas upgrade system located at the fourth site that will upgrade the biogas to pipeline quality natural gas for sale. The Company also has one finance lease for office equipment. The finance leases pay interest between 5% and 21%, have total annual payments ranging from $4,000 to $4.8 million and mature at various dates through December 2050.

2021 Bonds. On April 15, 2021, the Company closed the 2021 Bonds offering totaling $68,155,000 to finance the construction of the Gevo RNG project. The proceeds of the 2021 Bonds, combined with Gevo equity, will be used to finance (1) the construction of the Gevo RNG project which is comprised of (A) three anaerobic digesters and related equipment situated on dairy farms located in Northwest Iowa that will produce partially conditioned raw biogas from cow manure, (B) gathering pipelines to transport biogas to a centrally located gas upgrade system, (C) a centrally located gas upgrade system located in Doon, Iowa that will upgrade biogas to pipeline quality RNG and interconnect to Northern Natural Gas’ interstate pipeline, and (D) other related improvements; (2) to capitalize a portion of the interest due on the 2021 Bonds during the construction period; and (3) to pay a portion of the costs of issuing the 2021 Bonds. The draw down on the receivable from bond trustee funds were used to offset the investing activities above related to construction in process attributable to the Gevo RNG project.

Loans Payable - Other. The equipment notes pay interest between 4% and 5%, have total annual payments of $0.1 million and mature at various dates through December 2024. The equipment loans are secured by the related equipment.

In April 2020, the Company and Agri-Energy each entered into a loan agreement with Live Oak Banking Company, pursuant to which the Company and Agri-Energy obtained loans from the SBA PPP totaling $1.0 million in the aggregate.

On April 15, 2021, the Small Business Administration forgave the entire balance of $0.5 million of the Company's and $0.1 million of Agri-Energy's loans and accrued interest obtained through the SBA PPP. The remaining SBA Loan for Agri-Energy totals $0.4 million, bears interest at 1.0% and matures in April 2025. Monthly payments of $8,000 began on June 5, 2021 and are payable through April 2025.

See Note 9, *Debt*, to our consolidated financial statements included herein for further discussion.

Critical Accounting Policies and Estimates

Leases, Right-of-Use Assets and Related Liabilities. We enter into various arrangements which constitute a lease as defined by ASC 842, *Leases*, as part of its ongoing business activities and operations. Leases represent a contract or part of a contract that conveys the right to control the use of identified property, plant or equipment (an identified asset) for a period of time in exchange for consideration. Such contracts result in both (a) right-of-use assets, which represent our right to use an underlying asset for the term of the contract; and (b) a corresponding lease liability which represents our obligation to make the lease payments arising from the contract. The Company has elected not to recognize a right-of-use asset and lease liability for any lease with an original lease term of 12 months or less. Lease expense for such leases is recognized on a straight-line basis over the lease term.

A lease is classified as a finance lease when one or more of the following criteria are met: (1) the lease transfers ownership of the asset by the end of the lease term, (2) the lease contains an option to purchase the asset that is reasonably certain to be exercised, (3) the lease term is for a major part of the remaining useful life of the asset, (4) the present value of the lease payments equals or exceeds substantially all of the fair value of the asset, and (5) the asset is of such a specialized nature that it is expected to have no alternative use to the lessor at the end of the lease term. If a lease does not meet any of these criteria, the lease is classified as an operating lease.

Lease liabilities are initially measured at the lease commencement date based on the present value of lease payments over the lease term, discounted using an estimate of our incremental borrowing rate for a collateralized loan with the same term and payment as the lease. Right-of-use assets are measured based on the amount of the lease liability adjusted for any lease payments made to the lessor at or before the lease commencement date less any lease incentives received. All right-of-use assets are evaluated for impairment in accordance with accounting standards applicable to long-lived assets as further described in the significant accounting policy “Impairment of Property, Plant and Equipment” in our Annual Report on Form 10-K for the year ended December 31, 2020.

Renewal options are included in the calculation of our right-of-use assets and lease liabilities when we determine that the option is reasonably certain of exercise based on an analysis of the relevant facts and circumstances. Certain of our leases require variable lease payments that do not depend on an index or rate and such payments are excluded from the calculation of the right-of-use asset and lease liability and are recognized as variable lease cost when incurred.

We have elected the practical expedient to account for the lease and non-lease components as a single lease component for our dairy lease and fuel supply asset class. This results in a significantly higher ROU assets and lease liabilities than if the Company had not elected this practical expedient.

Lease cost for operating leases consists of the fixed lease payments recognized on a straight-line basis over the lease term plus variable lease payments as incurred. Lease cost for finance leases consists of amortization of the right-of-use assets on a straight-line basis over the lease term, interest expense on the lease liability and variable lease payments as incurred.

For a description of our other critical accounting policies and estimates that affect our significant judgments and estimates used in the preparation of our consolidated financial statements, refer to our Annual Report.

Off-Balance Sheet Arrangements

As of September 30, 2021, we did not have any material off-balance sheet arrangements.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

We are a smaller reporting company as defined by Rule 12b-2 of the Exchange Act and are not required to provide information under this item.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures, as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, that are designed to provide reasonable assurance that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required financial disclosures.

Management, including the participation of our Chief Executive Officer and our Chief Financial Officer, conducted an evaluation (pursuant to Rule 13a-15(b) of the Exchange Act) of the effectiveness of our disclosure controls and procedures as of the end of the period covered by this Report. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of September 30, 2021. In designing and evaluating our disclosure controls and procedures, management recognized that disclosure controls and procedures, no matter how well conceived and operated, can provide only reasonable but not absolute assurance that the objectives of the disclosure controls and procedures are met. The design of any disclosure control and procedure also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions.

Changes in Internal Control Over Financial Reporting

There was no change in our internal control over financial reporting during the quarter ended September 30, 2021 that materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings.

From time to time, we have been and may again become involved in legal proceedings arising in the ordinary course of our business. We are not presently a party to any litigation and we are not aware of any pending or threatened litigation against us that we believe could have a material adverse effect on our business, operating results, financial condition or cash flows.

Item 1A. Risk Factors.

You should carefully consider the risk factors discussed in Part I, Item 1A. "Risk Factors" in our Annual Report, which could materially affect our business, financial condition, cash flows or future results. There have been no material changes in our risk factors included in our Annual Report. The risk factors in our Annual Report are not the only risks facing our company. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial condition or future results.

We will be unable to issue sufficient additional shares for future capital raising transactions or strategic transactions unless we obtain stockholder approval to amend our certificate of incorporation to increase the number of authorized shares of our common stock available for issuance.

We have 250,000,000 authorized shares of common stock. As of October 29, 2021, we had 201,879,978 shares of common stock outstanding and 13,693,244 shares of common stock reserved for future issuance related to the Gevo, Inc. 2010 Stock Incentive Plan and warrants. As a result, as of October 29, 2021, we had approximately 34,426,778 shares of authorized shares of common stock available for future issuance. We operate in a capital-intensive industry and we do not believe we have sufficient unissued shares of common stock for future issuances to raise funds to execute on our business plans. Having additional authorized common stock available is critical to our continued efforts to pursue our strategic goals and we will be limited by the number of shares available for future capital raising transactions or business development transactions unless we obtain stockholder approval of an amendment to our certificate of incorporation to increase the number of authorized shares of common stock. We plan to solicit the approval of our stockholders to amend our certificate of incorporation to increase the number of authorized shares of common stock, but we cannot be certain that our stockholders will approve the amendment, particularly since we have a large retail stockholder base as of October 29, 2021. A delay in securing, or a failure to secure, stockholder approval to amend our certificate of incorporation could cause a delay in our future capital raising, collaboration, partnership or other strategic transactions, and may have a material adverse effect on our business and financial condition.

We will require substantial additional financings to achieve our goals, and a failure to obtain this capital when needed or on acceptable terms could force us to delay, limit, reduce or terminate our development and commercialization efforts.

We operate in a capital-intensive industry and will need substantial amount of capital to execute on our business plans. We believe that we will continue to expend substantial resources for the foreseeable future on further developing our business, including developing, constructing, financing and acquiring facilities necessary for the production of our products on a commercial scale. These expenditures will include costs associated with our Net-Zero Projects, research and development, modifying and expanding the Luverne Facility to produce our products, developing biogas processing projects and wind projects, obtaining government and regulatory approvals, acquiring or constructing storage facilities and negotiating supply agreements for the products we produce. In addition, other unanticipated costs may arise. Because the costs of developing our technology at a commercial scale are highly uncertain, we cannot reasonably estimate the amounts necessary to successfully commercialize our production.

To date, we have funded our operations primarily through equity offerings, issuances of debt and revenues earned primarily from the sale of ethanol and related products. Based on our current plans and expectations, we will require additional funding to achieve our goals. In addition, the cost of preparing, filing, prosecuting, maintaining and enforcing patent, trademark and other intellectual property rights and defending against claims by others that we may be violating their intellectual property rights may be significant. Moreover, our plans and expectations may change as a result of factors currently unknown to us, and we may need additional funds sooner than planned and may seek to raise additional funds through public or private debt or equity financings in the near future. We may also choose to seek additional capital sooner than required due to favorable market conditions or strategic considerations.

Our future capital requirements will depend on many factors, including:

- the timing of and costs involved in financing and constructing our Net-Zero Project, including our Net-Zero 1 Project;
- the timing of and costs involved in obtaining permits;
- the ability for us to deploy strains of yeast with improved performance that help to lower capital cost;
- the timing and costs associated with constructing our RNG project;
- the costs involved in making changes to our operations at the Luverne Facility;
- the timing of and the costs involved in developing adequate storage facilities for the products we produce;
- our ability to gain market acceptance for isobutanol as a raw material for the production of renewable hydrocarbons and as a specialty chemical and gasoline blendstock;
- our ability to negotiate additional supply agreements for the products we produce, and the timing and terms of those agreements, including terms related to sales price;
- our ability to negotiate sales of our products and the timing and terms of those sales, including terms related to sales price;
- our ability to sell the iDGs left as a co-product of fermenting isobutanol from corn as animal feedstock;
- our ability to establish and maintain strategic partnerships, licensing or other arrangements and the timing and terms of those arrangements; and
- the cost of preparing, filing, prosecuting, maintaining, defending and enforcing patent, trademark and other intellectual property claims, including litigation costs and the outcome of such litigation.

Additional funds may not be available when we need them, on terms that are acceptable to us, or at all. If needed funds are not available to us on a timely basis, we may be required to delay, limit, reduce or terminate:

- our Net-Zero Projects, including the Net-Zero 1 Project;
- our plans to enter into agreements with strategic partners;
- our production of products at the Luverne Facility;
- our development of RNG products;
- our production of renewable hydrocarbons at the South Hampton Facility, or any other future facilities;
- our efforts to prepare, file, prosecute, maintain and enforce patent, trademark and other intellectual property rights and defend against claims by others that we may be violating their intellectual property rights; and/or
- our activities in developing storage capacity and negotiating and performing under supply agreements that may be necessary for the commercialization of our products.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

Issuer Purchases of Equity Securities

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number of Shares That May Yet Be Purchased Under the Plans or Programs
July 1, 2021 - July 31, 2021 (1)	749,890	$ 6.85	—	—
August 1, 2021 - August 31, 2021	—	$ —	—	—
September 1, 2021 - September 30, 2021	—	$ —	—	—
Total	749,890	$ 6.85	—	—

(1) Represents shares withheld from employees to cover tax withholding obligations upon the vesting of restricted stock awards. The average prices listed in the above table are averages of the fair market prices at which we valued shares withheld for purposes of calculating the number of shares to be withheld.

Item 3. Defaults Upon Senior Securities.

None.

Item 4. Mine Safety Disclosures.

Not Applicable.

Item 5. Other Information.

None.

Table of Contents

Item 6. Exhibits.

The exhibits listed below are filed or furnished as part of this report.

Exhibit Number	Description	Previously Filed				Filed Herewith
		Form	File No.	Filing Date	Exhibit	
3.1	Amended and Restated Certificate of Incorporation of Gevo, Inc.	10-K	001-35073	March 29, 2011	3.1	
3.2	Certificate of Amendment to Amended and Restated Certificate of Incorporation of Gevo, Inc.	8-K	001-35073	June 10, 2013	3.1	
3.3	Certificate of Amendment to Amended and Restated Certificate of Incorporation of Gevo, Inc.	8-K	001-35073	July 9, 2014	3.1	
3.4	Certificate of Amendment to Amended and Restated Certificate of Incorporation of Gevo, Inc.	8-K	001-35073	April 22, 2015	3.1	
3.5	Certificate of Amendment to Amended and Restated Certificate of Incorporation of Gevo, Inc.	8-K	001-35073	January 6, 2017	3.1	
3.6	Certificate of Amendment to Amended and Restated Certificate of Incorporation of Gevo, Inc.	8-K	001-35073	June 4, 2018	3.1	
3.7	Amended and Restated Bylaws of Gevo, Inc.	10-K	001-35073	March 29, 2011	3.2	
4.1	Form of Gevo, Inc. Common Stock Certificate.	S-1	333-168792	January 19, 2011	4.1	

Exhibit Number	Description	Previously Filed				Filed Herewith
		Form	File No.	Filing Date	Exhibit	
4.2	Form of Series K Warrant to Purchase Common Stock	8-K	001-35073	February 22, 2017	4.1	
4.3	Form of Series 2020-A Warrant to Purchase Common Stock.	8-K	001-35073	July 8, 2020	4.1	
10.1+	Base Contract for Sale and Purchase of Natural Gas, dated July 22, 2021, by and between Gevo NW Iowa RNG, LLC, BP Canada Energy Marketing Corp. and BP Products North America Inc.	8-K	001-35073	August 9, 2021	10.1	
10.2+	Special Provisions Attached to and Forming Part of the Base Contract for Sale and Purchase of Natural Gas dated July 22, 2021, by and between Gevo NW Iowa RNG, LLC, BP Canada Energy Marketing Corp. and BP Products North America Inc.	8-K	001-35073	August 9, 2021	10.2	
10.3+	Biogas Supply Addendum – Vehicle Fuel Segment-Supply Side, dated July 22, 2021, by and between Gevo NW Iowa RNG, LLC, BP Canada Energy Marketing Corp. and BP Products North America Inc.	8-K	001-35073	August 9, 2021	10.3	
10.4+	Transaction Confirmation relating to the Base Contract, by and between Gevo NW Iowa RNG, LLC and BP Canada Energy Marketing Corp.	8-K	001-35073	August 9, 2021	10.4	
10.5	Amendment to At-The-Market Offering Agreement, dated September 9, 2021, between Gevo, Inc. and H.C. Wainwright & Co., LLC.	8-K	001-35073	September 9, 2021	10.1	
10.6+	Asset Purchase Agreement, date September 21, 2021, between Butamax Advanced Biofuels LLC and Danisco US Inc., and Gevo, Inc.	8-K	001-35073	September 23, 2021	10.1	
31.1	Section 302 Certification of the Principal Executive Officer.					X
31.2	Section 302 Certification of the Principal Financial Officer.					X
32.1	Section 906 Certification of the Principal Executive Officer and Principal Financial Officer.**					X**
101	Financial statements from the Quarterly Report on Form 10-Q of Gevo, Inc. for the quarterly period ended September 30, 2021, formatted in Inline XBRL: (i) the Consolidated Balance Sheets, (ii) the Consolidated Statements of Operations, (iii) the Consolidated Statements of Cash Flows, and (iv) Notes to the Consolidated Financial Statements.					X
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)					

\+ Certain portions of the exhibit have been omitted pursuant to Rule 601(b)(10) of Regulation S-K. The omitted information is (i) not material and (ii) would likely cause competitive harm to the Company if publicly disclosed.

** Furnished herewith.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Gevo, Inc.
(REGISTRANT)

By: /s/ Carolyn M. Romero
Carolyn M. Romero, CPA
Chief Accounting Officer
(Principal Accounting Officer)

Date: November 10, 2021

Exhibit 31.1

CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Patrick R. Gruber, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Gevo, Inc. (the "Registrant");

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Registrant as of, and for, the periods presented in this report;

4. The Registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent fiscal quarter (the Registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting; and

5. The Registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant's auditors and the audit committee of the Registrant's board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial reporting.

Date: November 10, 2021

/s/ Patrick R. Gruber

Patrick R. Gruber
Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, L. Lynn Smull, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Gevo, Inc. (the “Registrant”);

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Registrant as of, and for, the periods presented in this report;

4. The Registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Registrant and have:

    a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c) Evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d) Disclosed in this report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent fiscal quarter (the Registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting; and

5. The Registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant's auditors and the audit committee of the Registrant's board of directors (or persons performing the equivalent functions):

    a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial information; and

    b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial reporting.

Date: November 10, 2021

/s/ L. Lynn Smull

L. Lynn Smull
Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

CERTIFICATIONS PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002
(18 U.S.C. SECTION 1350)

I, Patrick R. Gruber, Chief Executive Officer of Gevo, Inc. (the "Registrant"), and I, L. Lynn Smull, Chief Financial Officer of the Registrant, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Quarterly Report on Form 10-Q of the Registrant for the quarter ended September 30, 2021 (the "Report"), fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Registrant for the period covered by the Report.

Date: November 10, 2021

/s/ Patrick R. Gruber
Patrick R. Gruber
Chief Executive Officer
(Principal Executive Officer)

/s/ L. Lynn Smull
L. Lynn Smull
Chief Financial Officer
(Principal Financial Officer)