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

FORM 10-Q

(Mark One)

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

For the quarterly period ended September 30, 2023

or

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

For the transition period from to

Commission File Number: 001-39919

MONTAUK RENEWABLES, INC.
(Exact name of registrant as specified in its charter)

Delaware	**85-3189583**
(State or Other Jurisdiction of Incorporation or Organization)	**(IRS Employer Identification No.)**
5313 Campbells Run Road, Suite 200 Pittsburgh, Pennsylvania	**15205**
(Address of Principal Executive Offices)	**(Zip Code)**

(412) 747-8700
(Registrant's Telephone Number, Including Area Code)

N/A
(Former name, former address and former fiscal year, if changed since last report)

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

Title of each class	Trading symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.01 per share	**MNTK**	**The 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, a 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 ☒

The number of outstanding shares of the registrant's common stock on November 2, 2023 was 143,661,719 shares.

TABLE OF CONTENTS

Glossary of Key Terms

This Quarterly Report on Form 10-Q uses several terms of art that are specific to our industry and business. For the convenience of the reader, a glossary of such terms is provided here. Unless we otherwise indicate, or unless the context requires otherwise, any references in this Quarterly Report on Form 10-Q to:

- "*ADG*" refers to anaerobic digested gas.
- "*CARB*" refers to the California Air Resource Board.
- "*CNG*" refers to compressed natural gas.
- "*CI*" refers to carbon intensity.
- "*D3*" refers to cellulosic biofuel with a 60% GHG reduction requirement.
- "*EPA*" refers to the U.S. Environmental Protection Agency.
- "*Environmental Attributes*" refer to federal, state and local government incentives in the United States, provided in the form of RINs, RECs, LCFS credits, rebates, tax credits and other incentives to end users, distributors, system integrators and manufacturers of renewable energy projects, that promote the use of renewable energy.
- "*FERC*" refers to the U.S. Federal Energy Regulatory Commission.
- "*GHG*" refers to greenhouse gases.
- "*JSE*" refers to the Johannesburg Stock Exchange.
- "*LCFS*" refers to Low Carbon Fuel Standard.
- "*LFG*" refers to landfill gas.
- "MMBtu" refers to Metric Million British Thermal Unit.
- "*PPAs*" refers to power purchase agreements.
- "*RECs*" refers to Renewable Energy Credits.
- "*Renewable Electricity*" refers to electricity generated from renewable sources.
- "*RFS*" refers to the EPA's Renewable Fuel Standard.
- "*RINs*" refers to Renewable Identification Numbers.
- "*RNG*" refers to renewable natural gas.
- "*RVOs*" refers to renewable volume obligations.

Cautionary Note Regarding Forward-Looking Statements

This Quarterly Report on Form 10-Q contains “forward-looking statements” within the meaning of U.S. federal securities laws that involve substantial risks and uncertainties. All statements other than statements of historical or current fact included in this report are forward-looking statements. Forward-looking statements refer to our current expectations and projections relating to our financial condition, results of operations, plans, objectives, strategies, future performance, and business. Forward-looking statements may include words such as “anticipate,” “assume,” “believe,” “can have,” “contemplate,” “continue,” “strive,” “aim,” “could,” “design,” “due,” “estimate,” “expect,” “forecast,” “goal,” “intend,” “likely,” “may,” “might,” “objective,” “plan,” “predict,” “project,” “potential,” “seek,” “should,” “target,” “will,” “would,” and other words and terms of similar meaning in connection with any discussion of the timing or nature of future operational performance or other events. For example, all statements we make relating to future results of operations, financial condition, estimated and projected costs, and plans and objectives for future operations, growth, strategies or initiatives, including the Pico feedstock amendment, the Montauk Ag project in North Carolina, the Raeger capital improvement project, the Second Apex RNG Facility project, the Blue Granite RNG project, the Bowerman RNG project, the delivery of biogenic carbon dioxide volumes to European Energy, the resolution of gas collection issues at the McCarty facility, and the mitigation of wellfield extraction environmental factors at the Rumpke facility, are forward-looking statements. All forward-looking statements are subject to risks and uncertainties that may cause actual results to differ materially from those that we expect and, therefore, you should not unduly rely on such statements. The risks and uncertainties that could cause those actual results to differ materially from those expressed or implied by these forward-looking statements include but are not limited to:

- our ability to develop and operate new renewable energy projects, including with livestock farms, and related challenges associated with new projects, such as identifying suitable locations and potential delays in acquisition financing, construction, and development;
- reduction or elimination of government economic incentives to the renewable energy market;
- the inability to complete strategic development opportunities;
- widespread manmade, natural and other disasters (including severe weather events), health emergencies, dislocations, geopolitical instabilities or events, terrorist activities, international hostilities, government shutdowns, political elections, security breaches, cyberattacks or other extraordinary events that impact general economic conditions, financial markets and/or our business and operating results;
- continued inflation could raise our operating costs or increase the construction costs of our existing or new projects;
- rising interest rates could increase the borrowing costs of future indebtedness;
- the potential failure to retain and attract qualified personnel of the Company or a possible increased reliance on third-party contractors as a result;
- the length of development and optimization cycles for new projects, including the design and construction processes for our renewable energy projects;
- dependence on third parties for the manufacture of products and services and our landfill operations;
- the quantity, quality and consistency of our feedstock volumes from both landfill and livestock farm operations;
- reliance on interconnections to distribution and transmission products for our Renewable Natural Gas and Renewable Electricity Generation segments;
- our projects not producing expected levels of output;
- potential benefits associated with the combustion-based oxygen removal condensate neutralization technology;
- concentration of revenues from a small number of customers and projects;
- our outstanding indebtedness and restrictions under our credit facility;
- our ability to extend our fuel supply agreements prior to expiration;
- our ability to meet milestone requirements under our PPAs;
- existing regulations and changes to regulations and policies that effect our operations;
- expected benefits from the extension of the Production Tax Credit and Investment Tax Credit under the Inflation Reduction Act of 2022;
- decline in public acceptance and support of renewable energy development and projects, or our inability to appropriately address environmental, social and governance targets, goals, commitments or concerns;

- our expectations regarding Environmental Attribute volume requirements and prices and commodity prices;
- our expectations regarding the period during which we qualify as an emerging growth company under the Jumpstart Our Business Startups Act ("JOBS Act");
- our expectations regarding future capital expenditures, including for the maintenance of facilities;
- our expectations regarding the use of net operating losses before expiration;
- our expectations regarding more attractive CI scores by regulatory agencies for our livestock farm projects;
- market volatility and fluctuations in commodity prices and the market prices of Environmental Attributes and the impact of any related hedging activity;
- regulatory changes in federal, state and international environmental attribute programs and the need to obtain and maintain regulatory permits, approvals, and consents;
- profitability of our planned livestock farm projects;
- sustained demand for renewable energy;
- potential liabilities from contamination and environmental conditions;
- potential exposure to costs and liabilities due to extensive environmental, health and safety laws;
- impacts of climate change, changing weather patterns and conditions;
- failure of our information technology and data security systems;
- increased competition in our markets;
- continuing to keep up with technology innovations;
- concentrated stock ownership by a few stockholders and related control over the outcome of all matters subject to a stockholder vote; and
- other risks and uncertainties detailed in the section titled "Risk Factors" in our latest Annual Report on Form 10-K and as otherwise disclosed in our filings with the SEC.

We make many of our forward-looking statements based on our operating budgets and forecasts, which are based upon detailed assumptions. While we believe that our assumptions are reasonable, we caution that it is very difficult to predict the impact of known factors, and it is impossible for us to anticipate all factors that could affect our actual results.

All forward-looking statements attributable to us are expressly qualified in their entirety by these cautionary statements as well as others made in our other Securities and Exchange Commission ("SEC") filings and public communications. You should evaluate all forward-looking statements made by us in the context of these risks and uncertainties. See the "Risk Factors" section in our latest Annual Report on Form 10-K and our other filings with the SEC.

We caution you that the risks and uncertainties identified by us may not be all of the factors that are important to you. Furthermore, the forward-looking statements included in this report are made only as of the date hereof. We undertake no obligation to publicly update or revise any forward-looking statement as a result of new information, future events, or otherwise, except as required by law.

PART I FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

MONTAUK RENEWABLES, INC.

CONDENSED CONSOLIDATED BALANCE SHEETS
(Unaudited)

(in thousands, except share data):

ASSETS	As of September 30, 2023	As of December 31, 2022
Current assets:		
Cash and cash equivalents	$ 73,304	$ 105,177
Accounts and other receivables	18,102	7,222
Current restricted cash	22	22
Related party receivable	10,128	9,000
Current portion of derivative instruments	991	879
Prepaid expenses and other current assets	4,841	2,568
Total current assets	$ 107,388	$ 124,868
Non-current restricted cash	$ 409	$ 407
Property, plant and equipment, net	205,528	175,946
Goodwill and intangible assets, net	15,026	15,755
Deferred tax assets	2,166	3,952
Non-current portion of derivative instruments	984	936
Operating lease right-of-use assets	4,420	4,742
Finance lease right-of-use assets	44	96
Other assets	9,646	5,614
Total assets	**$ 345,611**	**$ 332,316**
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 6,115	$ 4,559
Accrued liabilities	15,225	15,090
Income tax payable	551	402
Current portion of operating lease liability	416	410
Current portion of finance lease liability	44	71
Current portion of long-term debt	7,884	7,870
Total current liabilities	$ 30,235	$ 28,402
Long-term debt, less current portion	$ 57,586	$ 63,505
Non-current portion of operating lease liability	4,230	4,341
Non-current portion of finance lease liability	—	25
Asset retirement obligations	5,797	5,493
Other liabilities	4,528	3,459
Total liabilities	$ 102,376	$ 105,225
STOCKHOLDERS' EQUITY		
Common stock, $0.01 par value, authorized 690,000,000 shares; 143,682,811 shares issued at September 30, 2023 and December 31, 2022, respectively; 141,848,582 and 141,633,417 shares outstanding at September 30, 2023 and December 31, 2022, respectively	1,416	1,416
Treasury stock, at cost, 971,306 shares September 30, 2023 and December 31, 2022, respectively	(11,051)	(11,051)
Additional paid-in capital	212,055	206,060
Retained earnings	40,815	30,666
Total stockholders' equity	243,235	227,091
Total liabilities and stockholders' equity	**$ 345,611**	**$ 332,316**

The accompanying notes to the unaudited condensed consolidated financial statements are an integral part of these statements.

MONTAUK RENEWABLES, INC.

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited)

(in thousands, except for share and per share data):

	For the Three Months Ended September 30, 2023	For the Three Months Ended September 30, 2022	For the Nine Months Ended September 30, 2023	For the Nine Months Ended September 30, 2022
Total operating revenues	$ 55,688	$ 55,860	$ 128,097	$ 155,916
Operating expenses:				
Operating and maintenance expenses	14,212	14,134	43,614	42,205
General and administrative expenses	7,848	8,466	26,069	25,715
Royalties, transportation, gathering and production fuel	11,450	12,188	25,588	34,484
Depreciation, depletion and amortization	5,346	5,167	15,792	15,453
Gain on insurance proceeds	—	—	—	(313)
Impairment loss	51	2,273	777	2,393
Transaction costs	—	—	86	32
Total operating expenses	$ 38,907	$ 42,228	$ 111,926	$ 119,969
Operating income	$ 16,781	$ 13,632	$ 16,171	$ 35,947
Other expenses (income):				
Interest expense	$ 1,295	$ 36	$ 3,681	$ 339
Other (income)	(256)	(131)	(340)	(463)
Total other expense (income)	$ 1,039	$ (95)	$ 3,341	$ (124)
Income before income taxes	$ 15,742	$ 13,727	$ 12,830	$ 36,071
Income tax expense	2,808	2,540	2,681	6,847
Net income	$ 12,934	$ 11,187	$ 10,149	$ 29,224
Income per share:				
Basic	$ 0.09	$ 0.08	$ 0.07	$ 0.21
Diluted	$ 0.09	$ 0.08	$ 0.07	$ 0.20
Weighted-average common shares outstanding:				
Basic	141,717,612	141,290,748	141,661,790	141,156,126
Diluted	142,299,875	142,722,396	142,000,827	142,627,711

The accompanying notes to the unaudited condensed consolidated financial statements are an integral part of these statements.

MONTAUK RENEWABLES, INC.

CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(Unaudited)

(in thousands, except share data):

	Common Stock		Treasury Stock				
	Shares	Amount	Shares	Amount	Additional Paid-in Capital	Retained Earnings (Deficit)	Total Equity
Balance at June 30, 2023	**141,633,417**	**$ 1,416**	**971,306**	**$ (11,051)**	**$ 209,555**	**$ 27,881**	**$ 227,801**
Vesting of stock awards	215,165	—	—	—	—	—	—
Net income	—	—	—	—	—	12,934	12,934
Stock-based compensation	—	—	—	—	2,500	—	2,500
Balance at September 30, 2023	**141,848,582**	**$ 1,416**	**971,306**	**$ (11,051)**	**$ 212,055**	**$ 40,815**	**$ 243,235**
Balance at June 30, 2022	**141,290,748**	**$ 1,410**	**959,344**	**$ (10,904)**	**$ 200,855**	**$ 13,509**	**$ 204,870**
Net income	—	—	—	—	—	11,187	11,187
Stock-based compensation	—	—	—	—	2,751	—	2,751
Balance at September 30, 2022	**141,290,748**	**$ 1,410**	**959,344**	**$ (10,904)**	**$ 203,606**	**$ 24,696**	**$ 218,808**
Balance at December 31, 2022	**141,633,417**	**$ 1,416**	**971,306**	**$ (11,051)**	**$ 206,060**	**$ 30,666**	**$ 227,091**
Vesting of stock awards	215,165	—	—	—	—	—	—
Net income	—	—	—	—	—	10,149	10,149
Stock-based compensation	—	—	—	—	5,995	—	5,995
Balance at September 30, 2023	**141,848,582**	**$ 1,416**	**971,306**	**$ (11,051)**	**$ 212,055**	**$ 40,815**	**$ 243,235**
Balance at December 31, 2021	**141,015,213**	**$ 1,410**	**950,214**	**$ (10,813)**	**$ 196,224**	**$ (4,528)**	**$ 182,293**
Vesting of stock awards	275,535	—	—	—	—	—	—
Treasury stock	—	—	9,130	(91)	—	—	(91)
Net income	—	—	—	—	—	29,224	29,224
Stock-based compensation	—	—	—	—	7,382	—	7,382
Balance at September 30, 2022	**141,290,748**	**$ 1,410**	**959,344**	**$ (10,904)**	**$ 203,606**	**$ 24,696**	**$ 218,808**

The accompanying notes to the unaudited condensed consolidated financial statements are an integral part of these statements.

MONTAUK RENEWABLES, INC.

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)

(in thousands):

	Nine Months Ended September 30,	
	2023	**2022**
Cash flows from operating activities:		
Net income	$ 10,149	$ 29,224
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation, depletion and amortization	15,792	15,453
Provision for deferred income taxes	1,786	6,002
Stock-based compensation	5,995	7,382
Derivative mark-to-market adjustments and settlements	(160)	(1,359)
Gain on property insurance proceeds	—	(313)
Increase in earn-out liability	959	1,122
Net loss (gain) on sale of assets	37	(250)
Accretion of asset retirement obligations	304	174
Amortization of debt issuance costs	276	314
Impairment loss	777	2,393
Changes in operating assets and liabilities:		
Accounts and other receivables and other current assets	(18,123)	(5,252)
Accounts payable and other accrued expenses	1,795	4,919
Net cash provided by operating activities	$ 19,587	$ 59,809
Cash flows from investing activities:		
Capital expenditures	$ (45,406)	$ (12,750)
Proceeds from insurance recovery	—	313
Proceeds from sale of assets	—	1,088
Cash collateral deposits, net	2	79
Net cash used in investing activities	$ (45,404)	$ (11,270)
Cash flows from financing activities:		
Repayments of long-term debt	$ (6,000)	$ (6,000)
Treasury stock purchase	—	(91)
Finance lease payments	(54)	(15)
Net cash used in financing activities	$ (6,054)	$ (6,106)
Net (decrease) increase in cash and cash equivalents and restricted cash	$ (31,871)	$ 42,433
Cash and cash equivalents and restricted cash at beginning of period	$ 105,606	$ 53,612
Cash and cash equivalents and restricted cash at end of period	**$ 73,735**	**$ 96,045**
Reconciliation of cash, cash equivalents, and restricted cash at end of period:		
Cash and cash equivalents	$ 73,304	$ 95,619
Restricted cash and cash equivalents - current	22	19
Restricted cash and cash equivalents - non-current	409	407
	$ 73,735	**$ 96,045**
Supplemental cash flow information:		
Cash paid for interest	$ 3,713	$ 2,362
Cash paid for income taxes	1,034	225
Accrual for purchase of property, plant and equipment included in accounts payable and accrued liabilities	2,595	1,436

The accompanying notes to the unaudited condensed consolidated financial statements are an integral part of these statements.

MONTAUK RENEWABLES, INC.

NOTES TO CONDENSED UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS
(dollars in thousands, except per-share amounts)

NOTE 1 – DESCRIPTION OF BUSINESS

Operations and organization

Montauk Renewables' Business

Montauk Renewables, Inc. (the "Company" or "Montauk Renewables") is a renewable energy company specializing in the management, recovery and conversion of biogas into Renewable Natural Gas ("RNG"). The Company captures methane, preventing it from being released into the atmosphere, and converts it into either RNG or electrical power for the electrical grid ("Renewable Electricity"). The Company, headquartered in Pittsburgh, Pennsylvania, has more than 30 years of experience in the development, operation and management of landfill methane-fueled renewable energy projects. The Company has current operations at 15 operating projects located in California, Idaho, Ohio, Oklahoma, Pennsylvania, North Carolina, South Carolina and Texas. The Company sells RNG and Renewable Electricity, taking advantage of Environmental Attribute premiums available under federal and state policies that incentivize their use.

Two of the Company's key revenue drivers are sales of captured gas and sales of Renewable Identification Numbers ("RINs") to fuel blenders. The Renewable Fuel Standard ("RFS") is an Environmental Protection Agency ("EPA") administered federal law that requires transportation fuel to contain a minimum volume of renewable fuel. RNG derived from landfill methane, agricultural digesters and wastewater treatment facilities used as a vehicle fuel qualifies as a D3 (cellulosic biofuel with a 60% greenhouse gas reduction requirement) RIN. The RINs are compliance units for fuel blenders that were created by the RFS program in order to reduce greenhouse gases and imported petroleum into the United States.

An additional program utilized by the Company is the Low Carbon Fuel Standard ("LCFS"). This is state specific and is designed to stimulate the use of low-carbon fuels. To the extent that RNG from the Company's facilities is used as a transportation fuel in states that have adopted an LCFS program, it is eligible to receive an Environmental Attribute additional to the RIN value under the federal RFS.

Another key revenue driver is the sale of captured electricity and the associated environmental premiums related to renewable sales. The Company's electric facilities are designed to conform to and monetize various state renewable portfolio standards requiring a percentage of the electricity produced in that state to come from a renewable resource. Such premiums are in the form of Renewable Energy Credits ("RECs"). The Company's largest electric facility, located in California, receives revenue for the monetization of RECs as a part of a purchase power agreement.

Collectively, the Company benefits from federal and state government incentives in the United States, provided in the form of RINs, RECs, LCFS credits, tax credits and other incentives to end users, distributors, system integrators and manufacturers of renewable energy projects, that promote the use of renewable energy, as Environmental Attributes.

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of presentation

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States ("GAAP") for interim financial information and with the instructions of the SEC on Form 10-Q and Rule 10-01 of Regulation S-X. Accordingly, they do not include all of the information and disclosures required by GAAP for complete financial statements. In the opinion of management, the unaudited condensed consolidated financial statements include all adjustments necessary, which are of a normal and recurring nature, for the fair presentation of the Company's financial position and of the results of operations and cash flows for the periods presented. These financial statements should be read in conjunction with the audited consolidated financial statements and notes thereto for the year ended December 31, 2022 included in the Company's Annual Report on Form 10-K filed with the SEC on March 16, 2023 (the "2022 Annual Report"). The results of operations for the three months and nine months ended September 30, 2023 in this report are not necessarily indicative of the results that may be expected for any other interim period or for the full year. The balance sheet at December 31, 2022, has been derived from the audited financial statements as of that date. For further information, refer to the Company's audited financial statements and notes thereto included for the year ended December 31, 2022 in the 2022 Annual Report.

Reclassifications

Certain prior period amounts have been reclassified to conform to the current period financial statement presentation. These reclassifications had no effect on the previously reported total assets, total liabilities, stockholders' equity, results of operations or cash flows.

Segment Reporting

The Company reports segment information in three segments: RNG, Renewable Electricity Generation and Corporate. This is consistent with the internal reporting provided to the chief operating decision maker who evaluates operating results and performance. The aforementioned business services and offerings described in Note 1 are grouped and defined by management as two distinct operating segments: RNG and Renewable Electricity Generation. Below is a description of the Company's operating segments and other activities.

The RNG segment represents the sale of gas sold at fixed-price contracts, counterparty share RNG volumes and applicable Environmental Attributes. This business unit represents the majority of the revenues generated by the Company.

The Renewable Electricity Generation segment represents the sale of captured electricity and applicable Environmental Attributes. Corporate relates to additional discrete financial information for the corporate function. It is primarily used as a shared service center for maintaining functions such as executive, accounting, treasury, legal, human resources, tax, environmental, engineering and other operations functions not otherwise allocated to a segment. As such, the corporate entity is not determined to be an operating segment but is discretely disclosed for purposes of reconciliation to the Company's consolidated financial statements.

Use of Estimates

The preparation of financial statements, in conformity with accounting principles generally accepted in the United States ("GAAP"), requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Recently Adopted Accounting Standards

In June 2016, the FASB issued Accounting Standards Update 2016-13, Measurement of Credit Losses on Financial Instruments ("ASU 2016-13"). This ASU and subsequent amendments are codified as Accounting Standards Codification Topic 326, Financial Instruments—Credit Losses ("ASC 326"). Application of ASC 326 was effective for SEC Issuers (excluding smaller reporting companies) for fiscal years beginning after December 15, 2019. Adoption for smaller reporting companies, emerging growth companies and nonpublic entities was deferred due to the COVID-19 pandemic and was required for fiscal years beginning after December 15, 2022. The ASU did not have a material impact on the Company's consolidated financial statements or related financial statement disclosures.

Recently Issued Accounting Standards

In March 2020, the FASB issued ASU No. 2020-04, Reference Rate Reform (Topic 848), which provides optional expedients and exceptions to the current guidance on contract modifications and hedging relationships to ease the financial reporting burdens of the expected market transition from London Interbank Offered Rate ("LIBOR") and other interbank offered rates to alternative reference rates. The guidance was effective upon issuance and may be applied prospectively to contract modifications made and hedging relationships entered into or evaluated on or before December 31, 2022. The FASB included a sunset provision within Topic 848 based on expectations of when the LIBOR would cease being published. The sunset provision has been amended from December 31, 2022, to December 31, 2024, after which entities will no longer be permitted to apply the relief in Topic 848. The Company's current debt agreement bears interest at the Bloomberg Short-Term Bank Yield Index Rate plus an applicable margin. LIBOR is no longer utilized as a reference rate.

NOTE 3 – ASSET IMPAIRMENT

The Company recorded an impairment loss of $51 and $2,273 for the three months ended September 30, 2023 and 2022, respectively. Impairment losses of $777 and $2,393 were recorded for the nine months ended September 30, 2023 and 2022, respectively. The 2023 impairments were for specifically identified RNG machinery and feedstock processing equipment that were no longer in operational use and recorded in the Company's RNG segment. The 2022 impairment primarily related to a REG site ($2,133) wherein the forecasted future cash flows did not exceed the carrying value of the site's long lived assets. Additional impairments were recorded for computer software and hardware no longer being utilized ($191), an amended customer contract ($27) and miscellaneous capital assets no longer in use under current operations ($42).

NOTE 4 – REVENUES FROM CONTRACTS WITH CUSTOMERS

Revenues are comprised of renewable energy and the related Environmental Attribute sales provided under a variety of short-term and medium-term agreements with customers. All revenue is recognized when the Company satisfies its performance obligation(s) under the contract (either implicit or explicit) by transferring the promised product to the customer either when (or as) the customer obtains control of the product. A performance obligation is a promise in a contract to transfer a distinct product or service to a customer. A contract's transaction price is allocated to each distinct performance obligation. The Company allocates the contract's transaction price to each performance obligation using the product's observable market standalone selling price for each distinct product in the contract.

Revenue is measured as the amount of consideration the Company expects to receive in exchange for transferring product. As such, revenue is recorded net of allowances and customer discounts as well as net of transportation and gathering costs incurred. To the extent applicable, sales, value add, and other taxes collected from customers and remitted to governmental authorities are accounted for on a net (excluded from revenues) basis. The Company's performance obligations related to the sale of renewable energy (i.e. RNG and Renewable Electricity) are generally satisfied over time. Revenue related to the sale of renewable energy is generally recognized over time using an output based upon the product quantity delivered to the customer. This measure is used to best depict the Company's performance to date under the terms of the contract.

The nature of the Company's contracts may give rise to several types of variable consideration, such as periodic price increases. This variable consideration is outside of the Company's influence as the variable consideration is dictated by the market. Therefore, the variable consideration associated with the long-term contracts is considered fully constrained.

The following tables display the Company's disaggregated revenue by major source, excluding realized and unrealized gains or losses under the Company's gas hedge program, based on product type and timing of transfer of goods and services for the three and nine months ended September 30, 2023 and 2022:

	Three months ended September 30, 2023		
	Goods transferred at a point in time	Goods transferred over time	Total
Major goods/Service line:			
Natural gas commodity	$ 232	$ 7,060	$ 7,292
Natural gas environmental attributes	43,612	—	43,612
Electric commodity	—	2,821	2,821
Electric environmental attributes	1,963	—	1,963
	$ 45,807	$ 9,881	$ 55,688
Operating segment:			
RNG	$ 43,844	$ 7,060	$ 50,904
REG	1,963	2,821	4,784
	$ 45,807	$ 9,881	$ 55,688

	Three months ended September 30, 2022		
	Goods transferred at a point in time	Goods transferred over time	Total
Major goods/Service line:			
Natural gas commodity	$ 197	$ 15,770	$ 15,967
Natural gas environmental attributes	38,264	—	38,264
Electric commodity	—	2,736	2,736
Electric environmental attributes	1,727	—	1,727
	$ 40,188	$ 18,506	$ 58,694
Operating segment:			
RNG	$ 38,461	$ 15,770	$ 54,231
REG	1,727	2,736	4,463
	$ 40,188	$ 18,506	$ 58,694

	Nine months ended September 30, 2023		
	Goods transferred at a point in time	Goods transferred over time	Total
Major goods/Service line:			
Natural gas commodity	$ 638	$ 21,931	$ 22,569
Natural gas environmental attributes	91,630	—	91,630
Electric commodity	—	8,244	8,244
Electric environmental attributes	5,654	—	5,654
	$ 97,922	$ 30,175	$ 128,097
Operating segment:			
RNG	$ 92,268	$ 21,931	$ 114,199
REG	5,654	8,244	13,898
	$ 97,922	$ 30,175	$ 128,097

	Nine months ended September 30, 2022		
	Goods transferred at a point in time	Goods transferred over time	Total
Major goods/Service line:			
Natural gas commodity	$ 1,852	$ 39,896	$ 41,748
Natural gas environmental attributes	109,620	—	109,620
Electric commodity	—	7,768	7,768
Electric environmental attributes	5,092	—	5,092
	$ 116,564	$ 47,664	$ 164,228
Operating segment:			
RNG	$ 111,472	$ 39,896	$ 151,368
REG	5,092	7,768	12,860
	$ 116,564	$ 47,664	$ 164,228

NOTE 5 – ACCOUNTS AND OTHER RECEIVABLES

The Company extends credit based upon an evaluation of the customer’s financial condition and, while collateral is not required, the Company periodically receives surety bonds that guarantee payment. Credit terms are consistent with industry standards and practices. Reserves for uncollectible accounts, if any, are recorded as part of general and administrative expenses in the condensed consolidated statements of operations. No reserve expense was recorded for the three and nine months ended September 30, 2023 and 2022.

Accounts and other receivables consist of the following as of September 30, 2023 and December 31, 2022:

	September 30, 2023	December 31, 2022
Accounts receivables	$ 17,990	$ 7,148
Other receivables	88	57
Reimbursable expenses	24	17
Accounts and other receivables, net	$ 18,102	$ 7,222

NOTE 6 – PROPERTY, PLANT AND EQUIPMENT, NET

Property, plant and equipment consists of the following as of September 30, 2023 and December 31, 2022:

	September 30, 2023	December 31, 2022
Land	$ 596	$ 595
Buildings and improvements	30,125	29,268
Machinery and equipment	249,735	247,631
Gas mineral rights	35,526	34,526
Construction work in progress	60,547	20,745
Total	$ 376,529	$ 332,765
Less: Accumulated depreciation and amortization	(171,001)	(156,819)
Property, plant & equipment, net	$ 205,528	$ 175,946

Depreciation expense for property plant and equipment was $4,956 and $4,808 for the three months ended September 30, 2023 and 2022, respectively, and $14,624 and $14,407 for the nine months ended September 30, 2023 and 2022, respectively. Amortization expense for gas mineral rights was $129 for the three months ended September 30, 2023 and 2022, respectively, and $385 for the nine months ended September 30, 2023 and 2022, respectively.

NOTE 7 – GOODWILL AND INTANGIBLE ASSETS, NET

Goodwill and intangible assets consist of the following as of September 30, 2023 and December 31, 2022:

	September 30, 2023	December 31, 2022
Goodwill	$ 60	$ 60
Intangible assets with indefinite lives:		
Land use rights	329	329
Total intangible assets with indefinite lives:	$ 329	$ 329
Intangible assets with finite lives:		
Interconnection, net of accumulated amortization of $3,662 and $3,107	$ 11,131	$ 11,686
Customer contracts, net of accumulated amortization of $17,196 and $17,022	3,506	3,680
Total intangible assets with finite lives:	$ 14,637	$ 15,366
Total Goodwill and Intangible assets	**$ 15,026**	**$ 15,755**

As of September 30, 2023, the weighted average remaining useful life for both customer contracts and interconnections were 15 years, respectively. Amortization expense was $243 and $230 for the three months ended September 30, 2023 and 2022, respectively, and $729 and $661 for the nine months ended September 30, 2023 and 2022.

NOTE 8 – ASSET RETIREMENT OBLIGATIONS

The Company accounts for asset retirement obligations by recording the fair value of the liability in the period in which it is incurred. The Company estimates the fair value of asset retirement obligations by calculating the estimated present value of the cost to retire the asset. Factors that are considered when determining the present value of the cost to retire the asset include future inflation and discount rates, along with estimates date(s) of retiring the asset. Additionally, changes in legal, regulatory, environmental, and political environments can affect the fair value of the obligations. As such, asset retirement obligations are considered a level 3 financial instrument. The following table summarizes the activity associated with asset retirement obligations of the Company as of September 30, 2023 and December 31, 2022:

	Nine months ended September 30, 2023	Year Ended December 31, 2022
Asset retirement obligations—beginning of period	$ 5,493	$ 5,301
Accretion expense	304	296
Decommissioning	—	(104)
Asset retirement obligations—end of period	$ 5,797	$ 5,493

NOTE 9 – DERIVATIVE INSTRUMENTS

To mitigate market risk associated with fluctuations in energy commodity prices (natural gas) and interest rates, the Company utilizes various derivative contracts to secure energy commodity pricing and interest rates under a board-approved program. The Company does not apply hedge accounting to any of its derivative instruments, and all realized and unrealized gains and losses from changes in derivative values are recognized in earnings each period. As a result of the economic hedging strategies employed, the Company had the following realized and unrealized gains and losses in the condensed consolidated statements of operations for the three and nine months ended September 30, 2023 and 2022:

Derivative Instrument	Location	Three months ended September 30, 2023	Three months ended September 30, 2022
Commodity contracts:			
Cash paid on derivatives	Operating revenue	$ —	$ (3,201)
Non cash gain on derivatives	Operating revenue	—	367
Interest rate swaps	Interest expense	41	1,149
Net gain (loss)		$ 41	$ (1,685)

Derivative Instrument	Location	Nine months ended September 30, 2023	Nine months ended September 30, 2022
Commodity contracts:			
Cash paid on derivatives	Operating revenue	$ —	$ (6,872)
Non cash loss on derivatives	Operating revenue	—	(1,440)
Interest rate swaps	Interest expense	160	2,799
Net gain (loss)		$ 160	$ (5,513)

NOTE 10 – FAIR VALUE OF FINANCIAL INSTRUMENTS

The Company's assets and liabilities that are measured at fair value on a recurring basis include the following as of September 30, 2023 and December 31, 2022, set forth by level, within the fair value hierarchy:

	September 30, 2023			
	Level 1	Level 2	Level 3	Total
Interest rate swap derivative asset	$ —	$ 1,975	$ —	$ 1,975
Asset retirement obligations	—	—	(5,797)	(5,797)
Pico earn-out liability	—	—	(4,802)	(4,802)
	$ —	$ 1,975	$ (10,599)	$ (8,624)

	December 31, 2022			
	Level 1	Level 2	Level 3	Total
Interest rate swap derivative asset	$ —	$ 1,815	$ —	$ 1,815
Asset retirement obligations	—	—	(5,493)	(5,493)
Pico earn-out liability	—	—	(3,843)	(3,843)
	$ —	$ 1,815	$ (9,336)	$ (7,521)

The three levels of the fair value hierarchy under authoritative guidance are described as follows:

Level 1: Observable inputs that reflect unadjusted quoted market prices in active markets 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 for similar assets or liabilities in inactive markets and other observable information that can be corroborated by market data.

Level 3: Unobservable inputs that are not corroborated by market data, but significant to the fair value measurement.

A summary of change in the fair value of the Company's Level 3 instrument, attributable to asset retirement obligations, for the nine months ended September 30, 2023 and the year ended December 31, 2022 is included in Note 8. The Company's earn-out fair value liability at its Idaho digester site is determined by calculating the estimated present value of the future obligation. The present value is assessed quarterly and is based on macro-economic factors such as inflation and risk free US Treasury rates. Company specific estimates utilized include current and future interest rates, digester inlet gas flow, and projected EBITDA. The earn-out is classified as a Level 3 financial instrument. Interest rate swap derivatives are classified as Level 2 financial instruments and are valued utilizing quoted forward Bloomberg Short-Term Bank Yield Index Rates. In addition, certain assets are measured at fair value on a non-recurring basis when an indicator of impairment is identified and the assets' fair values are determined to be less than its carrying value. See Note 3 for additional information.

NOTE 11 – ACCRUED LIABILITIES

The Company's accrued liabilities consists of the following as of September 30, 2023 and December 31, 2022:

	September 30, 2023	December 31, 2022
Accrued expenses	$ 4,593	$ 3,221
Payroll and related benefits	2,041	1,561
Royalty	4,568	7,836
Utility	1,568	1,605
Deferred income	1,500	—
Accrued interest	842	794
Other	113	73
Accrued liabilities	$ 15,225	$ 15,090

NOTE 12 – DEBT

The Company's debt consists of the following as of September 30, 2023 and December 31, 2022:

	September 30, 2023	December 31, 2022
Term loans	$ 66,000	$ 72,000
Less: current principal maturities	(8,000)	(8,000)
Less: debt issuance costs (on long-term debt)	(414)	(495)
Long-term debt	$ 57,586	$ 63,505
Current portion of long-term debt	7,884	7,870
Total debt	$ 65,470	$ 71,375

Amended Credit Agreement

On December 12, 2018, Montauk Energy Holdings LLC ("MEH"), a wholly owned subsidiary of the Company, entered into the Second Amended and Restated Revolving Credit and Term Loan Agreement (as amended, "Credit Agreement"), by and among MEH, the financial institutions from time to time party thereto as lenders and Comerica Bank, as the administrative agent, sole lead arranger and sole bookrunner ("Comerica"). The Credit Agreement (i) amended and restated in its entirety MEH's prior revolving credit and term loan facility, dated as of August 4, 2017, as amended, with Comerica and certain other financial institutions and (ii) replaced in its entirety the prior credit agreement, dated as of August 4, 2017, as amended, between Comerica and Bowerman Power LFG, LLC, a wholly-owned subsidiary of MEH.

On March 21, 2019, MEH entered into the first amendment to the Credit Agreement (the "First Amendment"), which clarified a variety of terms, definitions and calculations in the Credit Agreement. The Credit Agreement requires the Company to maintain customary affirmative and negative covenants, including certain financial covenants, which are measured at the end of each fiscal quarter. On September 12, 2019, the Company entered into the second amendment to the Credit Agreement (the "Second Amendment"). Among other matters, the Second Amendment redefined the Fixed Charge Coverage Ratio (as defined in the Credit Agreement), reduced the commitments under the revolving credit facility to $80,000, redefined the Total Leverage Ratio (as defined in the Credit Agreement) and eliminated the RIN Floor (as defined in the Second Amendment) as an Event of Default. In connection with the Second Amendment, the Company paid down the outstanding term loan by $38,250 and the resulting quarterly principal installments were reduced to $2,500.

On January 4, 2021, the Company, Montauk Holdings Limited ("MNK") and Montauk Holdings USA, LLC (a direct wholly-owned subsidiary of MNK at the time, "Montauk USA") entered into a series of transactions, including an equity exchange and a distribution collectively referred to as the "Reorganization Transactions," that resulted in the Company owning all of the assets and entities (other than Montauk USA) previously owned by Montauk USA, and Montauk Renewables became a direct wholly-owned subsidiary of MNK. In connection with the completion of the Reorganization Transactions and the IPO, the Company entered into the third amendment to the Credit Agreement (the “Third Amendment”). This amendment permitted the Change of Control provisions, as defined in the underlying agreement, to permit the Reorganization Transactions and the IPO to be completed.

On December 21, 2021, MEH entered into the fourth amendment to the Second Amended and Restated Revolving Credit and Term Loan Agreement ("the Fourth Amendment"). The current credit agreement, which is secured by a lien on substantially all assets of the Company and certain of its subsidiaries, provides for a $80,000 term loan, a $120,000 revolving credit facility, and includes a $75,000 accordion feature. The term loan amortizes in quarterly installments of $2,000 through 2024, then increases to $3,000 from 2025 to 2026, with a final payment of $32,000 in late 2026.

The Company accounted for the Fourth Amendment as both a debt modification and debt extinguishment in accordance with ASC 470, Debt (“ASC 470”). In connection with the Credit Agreement, the Company paid $2,027 in fees. Of this amount, $326 was expensed and $1,701 was capitalized and will be amortized over the life of the Credit Agreement. Amortized debt issuance expense was $92 and $102 for the three months ended September 30, 2023 and 2022, respectively, and $276 and $314 for the nine months ended September 30, 2023 and 2022, respectively, and was recorded within interest expense on the condensed consolidated statement of operations.

As of September 30, 2023, $66,000 was outstanding under the term loan. In addition, the Company had $2,505 of outstanding letters of credit as of September 30, 2023. Amounts available under the revolving credit facility are reduced by any amounts outstanding under letters of credit. As of September 30, 2023, the Company’s capacity available for borrowing under the revolving credit facility was $117,495. Borrowings of the term loans and revolving credit facility bear interest at the Bloomberg Short-Term Bank Yield Index Rate plus an applicable margin. Interest rates as of September 30, 2023 and December 31, 2022 were 6.38% and 4.12%, respectively.

As of September 30, 2023, the Company was in compliance with all applicable financial covenants under the Credit Agreement.

NOTE 13 – INCOME TAXES

The Company’s provision for income taxes in interim periods is typically computed by applying the estimated annual effective tax rates to income or loss before income taxes for the period. In addition, non-recurring or discrete items are recorded during the period in which they occur. For the three and nine months ended September 30, 2023, the Company utilized an estimated effective tax rate.

	Three months ended	
	September 30, 2023	September 30, 2022
Expense provision for income taxes	$ 2,808	$ 2,540
Effective tax rate	18 %	19 %

	Nine Months Ended	
	September 30, 2023	September 30, 2022
Expense provision for income taxes	$ 2,681	$ 6,847
Effective tax rate	21 %	19 %

The effective tax rate of 18% for the three months ended September 30, 2023 was lower than the rate for the three months ended September 30, 2022 of 19% primarily due to the increase in forecasted income in 2023 with respect to the annual estimated tax credit benefit.

The effective tax rate of 21% for the nine months ended September 30, 2023 was higher than the rate for the nine months ended September 30, 2022 of 19% primarily due to discrete tax expense recorded in 2023.

Income tax expense for the three and nine months ended September 30, 2023 was calculated using an estimated effective tax rate which differs from the U.S. federal statutory rate of 21% primarily due to benefits from production tax credits.

NOTE 14 – SHARE-BASED COMPENSATION

The board of directors of Montauk Renewables adopted the Montauk Renewables, Inc. Equity and Incentive Compensation Plan (“MRI EICP”) in January 2021. Following the closing of the IPO, the board of directors of Montauk Renewables approved the grant of non-qualified stock options, restricted stock units and restricted share awards to the employees of Montauk Renewables and its subsidiaries in January 2021. In connection with the restricted share awards, the officers of the Company made elections under Section

83(b) of the Code. Pursuant to such elections, the Company withheld 950,214 shares of common stock from such awards at a price of $11.38 per share from such awards. The Company records and reports restricted shares and restricted stock units when vested and in the case of options, when such awards are settled in the Company's common stock. Stock compensation expense related to these awards was $685 and $1,524 for the three months ended September 30, 2023 and September 30, 2022, respectively and $1,279 and $5,746 for the nine months ended September 30, 2023, and September 30, 2022 respectively.

In connection with a May 2021 asset acquisition, 1,250,000 restricted share awards ("RS Awards") were granted to two employees that were hired by the Company in connection with such acquisition. The RS Awards were to vest over a five-year period and subject to the achievement of time and performance-based vesting criteria over such period. In May 2022, the RS Awards were amended to remove the performance-based vesting criteria and will only be subject to time-based vesting requirements over a five-year period. The awards were revalued at $15,500. Stock compensation expense related to the two awards was $1,227 for the three months ended September 30, 2023 and 2022, respectively and $3,681 and $1,636 for the nine months ended September 30, 2023 and 2022 respectively.

In April 2023, the board of directors of the Company approved the grant of non-qualified stock options to the executive officers of the Company, which vest ratably over a period of three to five years. In September 2023, the board of directors approved the grant of non-qualified stock options to a new executive officer of the Company, which vest ratably over a period of three to five years. Stock compensation expense related to these awards was $588 and $1,035 for the three months and nine months ended September 30, 2023, respectively.

The restricted shares, restricted stock units and option awards are subject to vesting schedules and are subject to the terms and conditions of the MRI EICP and related award agreements including, in the case of the restricted share awards, each officer having made an election under Section 83(b) of the Code.

Options granted under the MRI EICP allow the recipient to receive the Company's common stock equal to the appreciation in the fair market value of the Company's common stock between the grant date and the exercise and settlement of options into shares as of the exercise dates. The fair value of the MRI EICP options was estimated using the Black-Scholes option pricing model. Three blocks of options have been awarded since inception of the plan with the following weighted-average assumptions (no dividends were expected):

	September 2023 Awards
Options awarded	225,000
Risk-free interest rate	4.44%-4.65%
Expected volatility	71%-73%
Expected option life (in years)	3.5-5.5
Grant-date fair value	$ 5.72

	April 2023 Awards
Options awarded	2,100,000
Risk-free interest rate	3.71%-3.97%
Expected volatility	78%-80%
Expected option life (in years)	3.5-5.5
Grant-date fair value	$ 4.25

	January 2021 Awards
Options awarded	950,214
Risk-free interest rate	0.5 %
Expected volatility	32 %
Expected option life (in years)	5.5
Grant-date fair value	$ 3.44

The following table summarizes the restricted shares, restricted stock units and options outstanding under the MRI EICP as of September 30, 2023 and September 30, 2022, respectively:

	Restricted Shares		Restricted Stock Units		Options	
	Number of shares	Weighted Average Grant Date Fair Value	Number of shares	Weighted Average Grant Date Fair Value	Number of shares	Weighted Average Exercise Price
End of period - December 31, 2022	**2,028,301**	**$ 11.80**	**280,000**	**$ 10.13**	**—**	**$ —**
Beginning of period - January 1, 2023	2,028,301	$ 11.80	280,000	$ 10.13	—	$ —
Granted	—	—	—	—	2,325,000	4.39
Vested	(215,165)	11.38	—	—	—	—
Forfeited	(73,395)	11.38	(80,000)	10.23	—	—
End of period - September 30, 2023	**1,739,741**	**$ 11.87**	**200,000**	**$ 10.09**	**2,325,000**	**$ 4.39**

	Restricted Shares		Restricted Stock Units		Options	
	Number of shares	Weighted Average Grant Date Fair Value	Number of shares	Weighted Average Grant Date Fair Value	Number of shares	Weighted Average Exercise Price
End of period - December 31, 2021	**2,569,613**	**$ 10.08**	**377,984**	**$ 10.23**	**950,214**	**$ 11.38**
Beginning of period - January 1, 2022	2,569,613	$ 10.08	377,984	$ 10.23	950,214	$ 11.38
Granted	1,250,000	12.40	—	—	—	—
Vested	(256,681)	11.38	(27,984)	11.38	(950,214)	11.38
Forfeited	(1,250,000)	9.04	—	—	—	—
End of period - September 30, 2022	**2,312,932**	**$ 11.75**	**350,000**	**$ 10.13**	**—**	**$ —**

As of September 30, 2023 none of the 950,214 vested options have been exercised. Unrecognized MRI EICP compensation expense for awards the Company expects to vest as of September 30, 2023, was $20,486 and will be recognized over approximately 5 years.

NOTE 15 – DEFINED CONTRIBUTION PLAN

The Company maintains a 401(k) defined contribution plan for eligible employees. The Company matches 50% of an employee's deferrals up to 4%. The Company also contributes 3% of eligible employee's compensation expense as a safe harbor contribution. The matching contributions vest ratably over four years of service, while the safe harbor contributions vest immediately. Incurred expense related to the 401(k) plan was $166 for the three months ended September 30, 2023 and 2022, respectively, and $496 and $519 for the nine months ended September 30, 2023 and 2022, respectively.

NOTE 16 – RELATED PARTY TRANSACTIONS

On January 26, 2021, the Company entered into a Loan Agreement and Secured Promissory Note (the "Initial Promissory Note") with Montauk Holdings Limited ("MNK"). MNK is currently an affiliate of the Company and certain of the Company's directors and executive officers are also directors and executive officers of MNK. Pursuant to the Initial Promissory Note, the Company advanced a cash loan of $5,000 to MNK for MNK to pay its dividend's tax liability arising from the Reorganization Transactions under the South African Income Tax Act, 1962 (Act No. 58 of 1962), as amended (the "South African Income Tax Act"). On February 22, 2021, the Company and MNK entered into an Amended and Restated Promissory Note (the "Amended Promissory Note") to increase the principal amount of the loan to a total of $7,140, in the aggregate, on December 22, 2021 entered into the Second Amended and Restated Loan Agreement and Secured Promissory Note (the "Second Amended Promissory Note") to increase the principal amount of the loan to a total of $8,940, in the aggregate, and on December 22, 2022 entered into the First Amendment of the Second Amended and Restated Loan Agreement and Secured Promissory Note (the "First Amendment of Second Amended Promissory Note") to amend the maturity date to June 30, 2023, and on June 21, 2023 entered into the Third Amended and Restated Loan Agreement and Secured Promissory Note (the "Third Amended and Restated Loan Agreement and Secured Promissory Note") to increase the principal amount of the loan to a total of $10,040, in the aggregate and extend the maturity date of the loan to December 31, 2023 each in accordance with the Company's obligations set forth in the transaction implementation agreement entered into by and among the Company, MNK and the other party thereto, dated November 6, 2020, and amended on January 14, 2021. The "Third Amended and Restated Loan Agreement and Secured Promissory Note" increased the security interest of the Company from 800,000 shares of the common stock of the Company owned by MNK to 976,623 shares of the Company. MNK is required to use the proceeds of any such sale of the shares to repay the note. The Amended Promissory Note has default provisions where MNK will deliver any unsold shares of the Company back to the Company to satisfy repayment of the note.

Under applicable guidance for variable interest entities in ASC 810, Consolidation, the Company determined that MNK is a variable interest entity. The Company concluded that it is not the primary beneficiary of the variable interest entity, as the Company does not have a controlling financial interest and does not have the power to direct the activities that most significantly impact the economic performance of MNK. Accordingly, the Company concluded that presentation of the Amended Promissory Note as a related party receivable remains appropriate. The maximum exposure to loss is limited to the Promissory Note principal and accrued interest, which totaled $10,128 and $8,990 as of September 30, 2023 and 2022, respectively.

MNK was delisted from the JSE on January 26, 2021. The MNK Board of Directors and Shareholders held its annual general meeting in March 2023 and voted to take MNK private.

Related Party Reimbursements

Periodically the Company will reimburse MNK and HCI Managerial Services Proprietary Limited, the administrator for the Company's secondarily listed Johannesburg Stock Exchange trading symbol, for expenses incurred on behalf of the Company. Amounts reimbursed were $4 for the three months ended September 30, 2023 and 2022, respectively, and $106 and $12 for the nine months ended September 30, 2023 and 2022, respectively. $49 and $26 were owed as of September 30, 2023 and December 31, 2022, respectively.

NOTE 17 – SEGMENT INFORMATION

The Company's reportable segments for the three and nine months ended September 30, 2023 and 2022 are Renewable Natural Gas and Renewable Electricity Generation. Renewable Natural Gas includes the production of RNG. Renewable Electricity Generation includes generation of electricity at biogas-to-electricity plants. The corporate entity is not determined to be an operating segment but is discretely disclosed for purposes of reconciliation of the Company's condensed consolidated financial statements. The following tables are consistent with the manner in which the chief operating decision maker evaluates the performance of each segment and allocates the Company's resources. In the following tables, "RNG" refers to Renewable Natural Gas and "REG" refer to Renewable Electricity Generation.

	Three months ended September 30, 2023			
	RNG	REG	Corporate	Total
Total revenue	$ 50,935	$ 4,753	$ —	$ 55,688
Net income (loss)	24,159	704	(11,929)	12,934
EBITDA	28,143	2,005	(7,765)	22,383
Adjusted EBITDA (1)	28,194	2,005	(7,765)	22,434
Total assets	172,888	65,048	107,675	345,611
Capital expenditures	8,673	7,105	41	15,819

(1) Third quarter of 2023 EBITDA Reconciliation

The following table is a reconciliation of the Company's reportable segments' net income (loss) from continuing operations to Adjusted EBITDA for the three months ended September 30, 2023:

	Three months ended September 30, 2023			
	RNG	REG	Corporate	Total
Net income (loss)	$ 24,159	$ 704	$ (11,929)	$ 12,934
Depreciation, depletion and amortization	3,984	1,301	61	5,346
Interest expense	—	—	1,295	1,295
Income tax expense	—	—	2,808	2,808
EBITDA	$ 28,143	$ 2,005	$ (7,765)	$ 22,383
Impairment loss	51	—	—	51
Adjusted EBITDA	$ 28,194	$ 2,005	$ (7,765)	$ 22,434

	Three months ended September 30, 2022			
	RNG	REG	Corporate	Total
Total revenue	$ 54,343	$ 4,351	$ (2,834)	$ 55,860
Net income (loss)	26,841	(1,689)	(13,965)	11,187
EBITDA	30,572	(326)	(11,316)	18,930
Adjusted EBITDA (1)	30,615	1,807	(11,543)	20,879
Total assets	152,113	53,303	118,527	323,943
Capital expenditures	6,225	1,061	315	7,601

(1) Third quarter of 2022 EBITDA Reconciliation

The following table is a reconciliation of the Company's reportable segments' net income from continuing operations to Adjusted EBITDA for the three months ended September 30, 2022:

	Three months ended September 30, 2022			
	RNG	REG	Corporate	Total
Net income (loss)	$ 26,841	$ (1,689)	$ (13,965)	$ 11,187
Depreciation, depletion and amortization	3,731	1,363	73	5,167
Interest expense	—	—	36	36
Income tax expense	—	—	2,540	2,540
EBITDA	$ 30,572	$ (326)	$ (11,316)	$ 18,930
Net loss on sale of assets	43	—	—	43
Impairment loss	—	2,133	140	2,273
Unrealized gains on hedging activities	—	—	(367)	(367)
Adjusted EBITDA	$ 30,615	$ 1,807	$ (11,543)	$ 20,879

For the three months ended September 30, 2023 and 2022, four and two customers, respectively, made up greater than 10% of total revenues.

	Three months ended September 30, 2023			
	RNG	REG	Corporate	Total
Customer A	21.9 %	—	—	21.9 %
Customer B	19.0 %	—	—	19.0 %
Customer C	13.8 %	—	—	13.8 %
Customer D	10.9 %	—	—	10.9 %

	Three months ended September 30, 2022			
	RNG	REG	Corporate	Total
Customer A	43.9 %	—	—	43.9 %
Customer B	12.4 %	—	—	12.4 %

The Company's reportable segments for the nine months ended September 30, 2023 and 2022 are Renewable Natural Gas and Renewable Electricity Generation.

	Nine months ended September 30, 2023			
	RNG	REG	Corporate	Total
Total revenue	$ 114,328	$ 13,769	$ -	$ 128,097
Net income (loss)	42,847	(97)	(32,601)	10,149
EBITDA	54,570	3,788	(26,055)	32,303
Adjusted EBITDA (1)	55,384	3,788	(25,969)	33,203
Total assets	172,888	65,048	107,675	345,611
Capital expenditures	33,863	11,498	45	45,406

(1) First nine months of 2023 EBITDA and Adjusted EBITDA Reconciliations

The following table is a reconciliation of the Company's reportable segments' net income (loss) from continuing operations to Adjusted EBITDA for the nine months ended September 30, 2023:

	Nine months ended September 30, 2023			
	RNG	REG	Corporate	Total
Net income (loss)	$ 42,847	$ (97)	$ (32,601)	$ 10,149
Depreciation, depletion and amortization	11,723	3,885	184	15,792
Interest expense	—	—	3,681	3,681
Income tax expense	—	—	2,681	2,681
EBITDA	$ 54,570	$ 3,788	$ (26,055)	$ 32,303
Impairment loss	777	—	—	777
Net loss on sale of assets	37	—	—	37
Transaction costs	—	—	86	86
Adjusted EBITDA	$ 55,384	$ 3,788	$ (25,969)	$ 33,203

	Nine months ended September 30, 2022			
	RNG	REG	Corporate	Total
Total revenue	$ 151,577	$ 12,651	$ (8,312)	$ 155,916
Net income (loss)	75,021	(4,284)	(41,513)	29,224
EBITDA	86,109	(126)	(34,120)	51,863
Adjusted EBITDA (1)	86,197	1,738	(32,457)	55,478
Total assets	152,113	53,303	118,527	323,943
Capital expenditures	10,039	2,390	321	12,750

(1) First nine months of 2022 EBITDA and Adjusted EBITDA Reconciliations

The following table is a reconciliation of the Company's reportable segments' net income (loss) from continuing operations to Adjusted EBITDA for the nine months ended September 30, 2022:

	Nine months ended September 30, 2022			
	RNG	REG	Corporate	Total
Net income (loss)	$ 75,021	$ (4,284)	$ (41,513)	$ 29,224
Depreciation, depletion and amortization	11,088	4,158	207	15,453
Interest expense	—	—	339	339
Income tax expense	—	—	6,847	6,847
EBITDA	$ 86,109	$ (126)	$ (34,120)	$ 51,863
Net loss (gain) on sale of assets	61	(311)	—	(250)
Impairment loss	27	2,175	191	2,393
Unrealized losses on hedging activities	—	—	1,440	1,440
Transaction costs	—	—	32	32
Adjusted EBITDA	$ 86,197	$ 1,738	$ (32,457)	$ 55,478

For the nine months ended September 30, 2023 and 2022, four and two customers, respectively, made up greater than 10% of total revenues.

	Nine months ended September 30, 2023			
	RNG	REG	Corporate	Total
Customer A	21.1 %	—	—	21.1 %
Customer B	13.0 %	—	—	13.0 %
Customer C	12.0 %	—	—	12.0 %
Customer D	10.9 %	—	—	10.9 %

	Nine months ended September 30, 2022			
	RNG	REG	Corporate	Total
Customer A	31.6 %	—	—	31.6 %
Customer B	13.2 %	—	—	13.2 %

NOTE 18 – LEASES

The Company leases office space and other office equipment under operating lease arrangements (with initial terms greater than twelve months), expiring in various years through 2033. These leases have been entered into to better enable the Company to conduct business operations. Office space is leased to provide adequate workspace for all employees in Pittsburgh, Pennsylvania and Houston, Texas. Office space and office equipment agreements that exceed 12 months are accounted for as operating leases in accordance with ASC 842, Leases.

The Company also leases safety equipment for the various operational sites in the United States. The term of certain equipment exceeds twelve months and is accordingly classified as a finance lease under ASC 842. The finance leases expire in 2024 and were entered into in order to provide a safe work environment for operational employees.

The Company determines if an arrangement is, or contains, a lease at inception based on whether that contract conveys the right to control the use of an identified asset in exchange for consideration for a period of time. For all operating and finance lease arrangements, the Company presents at the commencement date: a lease liability, which is a lessee's obligation to make lease payments arising from a lease, measured on a discounted basis; and a right-of-use asset, which is an asset that represents the lessee's right to use, or control the use of, a specified asset for the lease term.

The Company has elected, as a practical expedient, not to separate non-lease components from lease components, and instead account for each separate component as a single lease component for all lease arrangements, as lessee. In addition, the Company has elected, as a practical expedient, not to apply lease recognition requirements to leases with a term of one year or less. In determination of the lease term, the Company considers the likelihood of lease renewal options and lease termination provisions.

The Company uses its incremental borrowing rate, as the basis to calculate the present value of future lease payments, at lease commencement. The incremental borrowing rate represents the rate that would approximate the rate to borrow funds on a collateralized basis over a similar term and in a similar economic environment.

Supplemental information related to operating lease arrangements was as follows:

	Three Months Ended September 30,	
	2023	2022
Cash paid for amounts included in the measurement of operating lease liabilities	$ 108	$ 83
Weighted average remaining lease term (in years)	6.08	1.50
Weighted average discount rate	5.00 %	5.00 %

	Nine Months Ended September 30,	
	2023	2022
Cash paid for amounts included in the measurement of operating lease liabilities	$ 280	$ 282
Weighted average remaining lease term (in years)	6.08	1.50
Weighted average discount rate	5.00 %	5.00 %

Future minimum operating lease payments are as follows:

Year Ending		
Remainder of 2023	$	150
2024		611
2025		623
2026		573
2027		583
Thereafter		3,308
Imputed interest		(1,202)
Total	$	4,646

Supplemental information related to finance lease arrangements was as follows:

	Three Months Ended September 30,			
	2023		2022	
Cash paid for amounts included in the measurement of financing lease liabilities	$	19	$	12
Weighted average remaining lease term (in years)		0.40		1.58
Weighted average discount rate		5.00%		5.00%

	Nine Months Ended September 30,			
	2023		2022	
Cash paid for amounts included in the measurement of financing lease liabilities	$	57	$	18
Weighted average remaining lease term (in years)		0.40		1.58
Weighted average discount rate		5.00%		5.00%

Future minimum finance lease payments are as follows:

Year Ending		
Remainder of 2023	$	19
2024		26
Imputed interest		(1)
Total	$	44

NOTE 19 – INCOME PER SHARE

Basic and diluted income per share was computed using the following common share data for the three and nine months ended September 30, 2023 and 2022, respectively:

	Three months ended September 30, 2023		Three months ended September 30, 2022	
Net income	$	12,934	$	11,187
Basic weighted-average shares outstanding		141,717,612		141,290,748
Dilutive effect of share-based awards		582,263		1,431,648
Diluted weighted-average shares outstanding		142,299,875		142,722,396
Basic income per share	$	0.09	$	0.08
Diluted income per share	$	0.09	$	0.08

	Nine months ended September 30, 2023	Nine months ended September 30, 2022
Net income	$ 10,149	$ 29,224
Basic weighted-average shares outstanding	141,661,790	141,156,126
Dilutive effect of share-based awards	339,037	1,471,585
Diluted weighted-average shares outstanding	142,000,827	142,627,711
Basic income per share	$ 0.07	$ 0.21
Diluted income per share	$ 0.07	$ 0.20

NOTE 20 – COMMITMENTS AND CONTINGENCIES

Environmental

The Company is subject to a variety of environmental laws and regulations governing discharges to the air and water, as well as the handling, storage and disposing of hazardous or waste materials. The Company believes its operations currently comply in all material respects with all environmental laws and regulations applicable to its business. However, there can be no assurance that environmental requirements will not change in the future or that the Company will not incur significant costs to comply with such requirements.

Contingencies

The Company, from time to time, may be involved in litigation. At September 30, 2023, management does not believe there are any matters outstanding that would have a material adverse effect on the Company's financial position or results of operations.

NOTE 21 – SUBSEQUENT EVENTS

The Company evaluated its September 30, 2023 condensed consolidated financial statements through the date the financial statements were issued. The Company is not aware of any subsequent events which would require recognition or disclosure in the consolidated financial statements.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our financial statements and the related notes to those statements included elsewhere in this Quarterly Report on Form 10-Q. Throughout this section, dollar amounts are expressed in thousands, except for per share amounts, MMBtu, MWh, and RIN pricing amounts and unless otherwise indicated.

In addition to historical financial information, the following discussion and analysis contains forward-looking statements that involve risks, uncertainties, and assumptions. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of many factors, including those discussed under "Cautionary Note Regarding Forward-Looking Statements," "Item 1A.–Risk Factors" of our 2022 Annual Report and elsewhere in this report.

Overview

Montauk Renewables is a renewable energy company specializing in the recovery and processing of biogas from landfills and other non-fossil fuel sources for beneficial use as a replacement to fossil fuels. We develop, own, and operate RNG projects, using proven technologies that supply RNG into the transportation industry and use RNG to produce Renewable Electricity. We are one of the largest U.S. producers of RNG, having participated in the industry for over 30 years. We established our operating portfolio of 12 RNG and three Renewable Electricity projects through self-development, partnerships, and acquisitions that span eight states.

Biogas is produced by microbes as they break down organic matter in the absence of oxygen (during a process called anaerobic digestion). Our two current sources of commercial scale biogas are LFG or ADG. We typically secure our biogas feedstock through long-term fuel supply agreements and property lease agreements with biogas site hosts. Once we secure long-term fuel supply rights, we design, build, own, and operate facilities that convert the biogas into RNG or use the processed biogas to produce Renewable Electricity. We sell the RNG and Renewable Electricity through a variety of term length agreements. Because we are capturing waste methane and making use of a renewable source of energy, our RNG and Renewable Electricity generate valuable Environmental Attributes which we are able to monetize under federal and state renewable initiatives.

Our current operating projects produce either RNG or Renewable Electricity by processing biogas from landfill sites or agricultural waste from livestock farms. We view agricultural waste from livestock farms as a significant opportunity for us to expand our RNG business, and we continue to evaluate other agricultural feedstock opportunities. We believe that our business model and technology are highly scalable given availability of biogas from agriculturally derived sources, which will allow us to continue to grow through prudent development and complimentary acquisitions.

Recent Developments

RIN Generation

During the third quarter of 2023, D3 RIN generation decreased approximately 8.0% when comparing RIN generation in July 2023 to September 2023, as reported by the US EPA. This compares to an approximate 6.6% increase in RIN generation between July 2022 to September 2022. We believe contributing factors to this third quarter of 2023 reduction of D3 RIN generation could include drought weather anomalies of lower than average rainfall and higher than average temperatures. As some of our production facilities experienced these weather anomalies, our production during the third quarter of 2023 was impacted.

Capital Development Summary

The following summarizes our ongoing development growth plans expected volume contribution, anticipated commencement of operations, and capital expenditure estimate, respectively:

Development Opportunity	Estimated Volume Contribution (MMBtu/day)	Anticipated Commencement Date	Estimated Capital Expenditure
Pico Digestion Capacity Increase	300	2023 fourth quarter	Up to $18,000
Second Apex RNG Facility	2,100	Second half of 2024	$25,000-$35,000
Blue Granite RNG Facility	900	2025	$25,000-$35,000
Bowerman RNG Facility	3,600	2026	$85,000-$95,000

Pico Digestion Capacity Increase

During the third quarter of 2023, we commissioned additional digestion capacity and our new reception pit. We have begun utilizing the increased reception pit capacity and have been working to increase feedstock gas availability through the additional digestion capacity. We expect to commission the last expansion of our digestion capacity increase during the fourth quarter of 2023 that will be necessary to process the final tranche of increased feedstock in 2025.

Related to our Pico feedstock amendment, which increased the amount of feedstock supplied to the facility for processing over a one to three-year period (the "Pico Feedstock Amendment"), the dairy began delivering the first and second increases in feedstock during the third quarter of 2022 and we have made three payments to the dairy as required in the Pico Feedstock Agreement. The improved efficiencies of our existing digestion process and the water management improvements have enabled us to process the increased feedstock volumes which we currently expect to increase by five to ten percent once all increased feedstock deliveries have been received from the dairy. We completed the design of the digestion capacity project in the third quarter of 2022 and continue to incur capital expenditures related to the final construction phase of the project. Our dairy host informed us that they expect to deliver the final increase in feedstock volumes in 2025, at which point we will make the final contractual payment to the dairy.

Blue Granite RNG Project

In the first quarter of 2023, we announced the planned entrance into South Carolina with the development of a new landfill gas-to-RNG facility. The planned project is expected to contribute approximately 900 MMBtu per day of production capacity upon commissioning. We continue to design and plan for the development and location of the facility as we continue to incur capital expenditures. We are currently reviewing various alternatives related to interconnection opportunities as part of our considerations for offtake options with the understanding those alternatives may differ from initial development project assumptions. We expect the project to be complete and become commercially operational in 2025.

Montauk Ag Asset Acquisition

In 2021, through a wholly-owned subsidiary Montauk Ag Renewables, we completed an asset purchase related to developing technology to recover residual natural resources from the waste streams of modern agriculture and to refine and recycle such waste products through proprietary and other processes in order to produce high quality renewable natural gas and biochar (the "Montauk Ag Renewables Acquisition").

In connection with the July 2023 REC agreement with Duke Energy ("Duke"), in September 2023 our Board of Directors approved funding for the first phase of the North Carolina development project. Once construction has been completed on the first phase and the facility has been fully commissioned, the project will provide sufficient capacity to satisfy the Duke REC agreement through the deployment of up to eight operational processing lines at the Turkey Creek facility. Including the original equipment acquired in the Montauk Ag Renewables Acquisition, the Turkey, NC asset acquisition, and the relocation of the Magnolia, NC site reactor to Turkey, NC, we currently expect the first phase capital investment to range between $140,000 and $160,000.

We currently expect to have the first of the eight processing lines operational in the first half of 2024, we are currently planning for a rolling commissioning schedule for the remaining processing lines beginning in the second half of 2024 through the second half of 2025. We expect to begin generating revenues in 2025 and we expect to have sufficient capacity to satisfy the Duke REC agreement upon final commissioning during the second half of 2025. At full first phase capacity, we anticipate the ability to process feedstock from over 120 thousand hog spaces per day, which equates to over 200 tons of daily waste collection. We currently estimate the first phase of the project will annually produce approximately 45 to 50 thousand MWh equivalents through the combination of 190 to 200 thousand MMBtu and 25 to 30 thousand MWh. We also estimate that at full processing capabilities, we expect the first phase of the project will additionally produce annually 17 to 20 thousand tons of char soil enhancement.

We continue to develop the opportunities with Montauk Ag Renewables and can give no assurances that our plans related to this acquisition will meet our expectations. Utility interconnection, both inbound to and outbound from our centralized Turkey, NC processing facility is dependent on factors outside of our control. Our current construction timeline and costs are subject to delays or costs increases, respectively. We continue to design and plan for the development of the Turkey, NC facility to be used for commercial production. We expect the Magnolia, NC location to be used for various feedstock processing needs. Based on our current development timeline expectations, we do not expect to commence significant revenue generating activities until 2025. We intend to contract with additional farms to secure feedstock sources for future production processes.

Key Trends

Market Trends Affecting the Renewable Fuel Market

We believe demand for RNG produced from biogas remains strong due to increasing public policy initiatives focused on reducing greenhouse gas emissions, including methane, as well as continued public and private sector interest in the development of additional renewable energy sources to offset traditional fossil fuel energy sources.

Key drivers for the long-term growth of RNG include the following factors:

- Regulatory or policy initiatives, including the federal RFS program and state or national-level low-carbon fuel programs in states such as California and Oregon or Canada, that drive demand for RNG and its derivative Environmental Attributes (as further described below).
- Efficiency, mobility and capital cost flexibility in RNG operations enable them to compete successfully in multiple markets. Our operating model is nimble, as we commonly use modular equipment; our RNG processing equipment is more efficient than its fossil-fuel counterparts.
- Demand for compressed natural gas ("CNG") from natural gas-fueled vehicles. The RNG we create is pipeline quality and can be used for transportation fuel when converted to CNG. CNG is commonly used by medium-duty fleets that are close to fueling stations, such as city fleets, local delivery trucks and waste haulers.
- Regulatory requirements, market pressure and public relations challenges increase the time, cost and difficulty of permitting new fossil fuel-fired facilities.

Factors Affecting Our Future Operating Results:

Conversion of Electricity Projects to RNG Projects:

We periodically evaluate opportunities to convert existing facilities from Renewable Electricity to RNG production. These opportunities tend to be most attractive for any merchant electricity facilities given the favorable economics for the sale of RNG plus RINs relative to the sale of market rate electricity plus RECs. This strategy has been an increasingly attractive avenue for growth since 2014 when RNG from landfills became eligible for D3 RINs. However, during the conversion of a project, there is a gap in production while the electricity project is offline until it commences operation as an RNG facility, which can adversely affect us. This timing effect may adversely affect our operating results as a result of our potential conversion of Renewable Electricity projects. Upon completion of a conversion, we expect that the increase in revenue upon commencement of RNG production will more than offset the loss of revenue from Renewable Electricity production. Historically, we have taken advantage of these opportunities on a gradual basis at our merchant electricity facilities, such as Atascocita and Coastal Plains. We are not currently considering any conversion of electricity projects.

Acquisition and Development Pipeline

The timing and extent of our development pipeline affects our operating results due to:

- Impact of Higher Selling, General and Administrative Expenses Prior to the Commencement of a Project's Operation: We incur significant expenses in the development of new RNG projects. Further, the receipt of RINs is delayed, and typically does not commence for a period of four to six months after the commencement of injecting RNG into a pipeline, pending final registration approval of the project by the EPA and then the subsequent completion of a third-party quality assurance plan certification. During such time, the RNG is either physically or theoretically stored and later withdrawn from storage to allow for the generation of RINs, subject to future EPA biogas regulatory reform.
- Shifts in Revenue Composition for Projects from New Fuel Sources: As we expand into livestock farm projects, our revenue composition from Environmental Attributes will change. We believe that livestock farms offer us a lucrative opportunity, as the value of LCFS credits for dairy farm projects, for example, are a multiple of those realized from landfill projects due to the significantly more attractive CI score of livestock farms.
- Incurrence of Expenses Associated with Pursuing Prospective Projects That Do Not Come to Fruition: We incur expenses to pursue prospective projects with the goal of a site host accepting our proposal or being awarded a project in a competitive bidding process. Historically, we have evaluated opportunities which we decided not to pursue further due to the prospective project not meeting our internal investment thresholds or a lack of success in a competitive bidding process. To the extent we seek to pursue a greater number of projects or bidding for projects becomes more competitive, our expenses may increase.

Regulatory, Environmental and Social Trends

Regulatory, environmental and social factors are key drivers that incentivize the development of RNG and Renewable Electricity projects and influence the economics of these projects. We are subject to the possibility of legislative and regulatory changes to certain incentives, such as RINs, RECs and GHG initiatives. On July 12, 2023, the EPA issued final rules in the Federal Register for the RFS volume requirements for 2023-2025. Final volumes for cellulosic biofuel were set at 838, 1,090 and 1,376 million RINs for the three years 2023, 2024 and 2025, respectively. The EPA did not finalize the eRIN program in this ruling, however, it indicated that it will continue to work on potential paths forward for the eRIN program. However, the EPA did not set a new date for a revised eRIN program. The cellulosic biofuel volumes in the final rule for 2024 and 2025 are lower than the proposed volume as they do not include cellulosic biofuel from eRINs. The final rule also included significant changes to the existing RFS program, referred to as biogas regulatory reform, that will require the RNG industry to modify how all RINs are generated. New RFS participating facilities that register July 1, 2024 or after will have to meet the biogas regulatory reform provisions beginning July 1, 2024. Existing RFS participating facilities which registered prior to July 1, 2024 will have until January 1, 2025 to come into compliance with biogas regulatory reforms. For existing registrants, registration updates must be submitted by October 1, 2024. On January 1, 2025, all RFS participants must comply with biogas regulatory reform provisions. The EPA finalized a limitation that biogas from one facility has a single use under the RFS as proposed (i.e., biointermediate, RNG or CNG/LNG via biogas closed distribution system). The EPA clarified that this does not preclude non-RFS uses at same facility.

In September 2023, CARB posted the Standardized Regulatory Impact Assessment ("SRIA") for the California LCFS program which provides an initial economic evaluation of potential changes to the LCFS program. The submittal of the SRIA is one of many steps CARB must take prior to updating the regulations. CARB anticipates releasing draft regulatory language for the California LCFS program for a formal 45-day public comment during the fourth quarter of 2023. The SRIA will increase the stringency of CI reduction targets from 20% to 30% in 2030. This reduction would have the potential impact of reducing the number of net credits in the program, however, the industry may see pricing volatility including potential increase to LCFS credit prices. Also proposed in the SRIA is a phase out of avoided methane crediting for dairy and swine manure pathways by 2040. The proposed amendments would allow at least one 10-year crediting period inclusive of avoided methane for applications certified through December 31, 2029 and allow a five-year crediting period for re-certified pathways between January 1, 2030 and December 31, 2034.

Changes to the LCFS program require annual verification of the CI score assigned to a project. Annual verification could significantly affect the profitability of a project, particularly in the case of a livestock farm project.

Factors Affecting Revenue

Our total operating revenues include renewable energy and related sales of Environmental Attributes. Renewable energy sales primarily consist of the sale of biogas, including LFG and ADG, which is either sold or converted to Renewable Electricity. Environmental Attributes are generated and monetized from the renewable energy.

We report revenues from two operating segments: Renewable Natural Gas and Renewable Electricity Generation. Corporate relates to additional discrete financial information for the corporate function; primarily used as a shared service center for maintaining functions such as executive, accounting, treasury, legal, human resources, tax, environmental, engineering, and other operations functions not otherwise allocated to a segment. As such, the corporate entity is not determined to be an operating segment but is discretely disclosed for purposes of reconciliation to the Company's consolidated financial statements.

- *Renewable Natural Gas Revenues*: We record revenues from the production and sale of RNG and the generation and sale of the Environmental Attributes derived from RNG, such as RINs and LCFS credits. Our RNG revenues from Environmental Attributes are recorded net of a portion of Environmental Attributes shared with off-take counterparties as consideration for such counterparties using the RNG as a transportation fuel. We monetize a portion of our RNG production under fixed-price agreements which provide floor prices in excess of commodity indices. A decision to commit to sell an increased amount of RNG volumes into the voluntary market and not generate and sell separately Environmental Attributes could impact our future profitability.
- *Renewable Electricity Generation Revenues:* We record revenues from the production and sale of Renewable Electricity and the generation and sale of the Environmental Attributes, such as RECs, derived from Renewable Electricity. All of our Renewable Electricity production is monetized under fixed-price PPAs from our existing operating projects.
- *Corporate Revenues:* Corporate reports realized and unrealized gains or losses under our gas hedge programs. The Company does not have any active gas hedge programs. Corporate also relates to additional discrete financial information for the corporate function; primarily used as a shared service center for maintaining

functions such as executive, accounting, treasury, legal, human resources, tax, environmental, engineering and other operations functions not otherwise allocated to a segment.

Our operating revenues are priced based on published index prices which can be influenced by factors outside our control, such as market impacts on commodity pricing and regulatory developments. Strategic decisions to not monetize RINs available to be transferred will have an impact on our operating revenues and operating profit. As we self market a significant portion of our RINs and as the RFS is based on annual compliance, any strategic decision to not monetize available RINs in a quarter could impact the timing of operating revenues recognized during a fiscal year. With our royalty payments structured as a percentage of revenue, royalty payments fluctuate with changes in revenues. Due to these factors, we place a primary focus on managing production volumes and operating and maintenance expenses as these factors are more controllable by us.

RNG Production

Our RNG production levels are subject to fluctuations based on numerous factors, including:

Disruptions to Production: Disruptions to waste placement operations at our active landfill sites, severe weather events, failure or degradation of our or a landfill operator's equipment, our inability to fill open or newly created positions, or interconnection or transmission problems could result in a reduction of our RNG production. We strive to proactively address any issues that may arise through preventative maintenance, process improvement and flexible redeployment of equipment to maximize production and useful life.

- Many of our operating locations are in areas experiencing lower than historical rainfall, higher than average temperatures, or both, during the third and fourth quarter of 2023. This has negatively impacted our production and ability to generate and sell RINs.
- Though we collaborate with the landfill host at our Rumpke facility on our gas collection efforts, in addition to drought weather anomalies, other wellfield extraction environmental factors have temporarily impacted gas extraction at the site. While the site continues to expand their waste intake and we continue to expand wellfield collection, our volumes could be impacted into 2024. Mitigation efforts related to wellfield environmental factors could continue into 2024.
- The landfill host at our McCarty facility recently changed its wellfield collection system which has contributed to elevated nitrogen in the feedstock received by our facility. Additionally, the landfill host modified the wellfield bifurcation approach which has impacted the quantity of feedstock received at the facility. We are working with the landfill host but have currently experienced lower volumes of feedstock available to be processed at the McCarty facility. We currently expect lower than historical volumes through the end of 2023.
- Our processing of increased Pico feedstock during 2023 may be impacted while we expand the receiving capacity associated with the Pico digestion capacity increase.
- *Quality of Biogas:* We are reliant upon the quality and availability of biogas from our site partners. The quality of the waste at our landfill project sites is subject to change based on the volume and type of waste accepted. Variations in the quality of the biogas could affect our RNG production levels. At three of our projects, we operate the wellfield collection system, which allows greater control over the quality and consistency of the collected biogas. At two of our projects, we have operating and management agreements by which we earn revenue for managing the wellfield collection systems. Additionally, our dairy farm project benefits from the consistency of feedstock and controlled environment of collection of waste to improve biogas quality.
- *RNG Production from Our Growth Projects:* We anticipate increased production at certain of our existing projects as open landfills continue to take in additional waste and the amount of gas available for collection increases. Delays in commencement of production or extended commissioning issues at a new project or a conversion project would delay any realization of production from that project.

Pricing

Our Renewable Natural Gas and Renewable Electricity Generation segments' revenues are primarily driven by the prices under our off-take agreements and PPAs and the amount of RNG and Renewable Electricity that we produce. We sell the RNG produced from our projects under a variety of termed agreements to counterparties, with contract terms varying from three years to five years. Our contracts with counterparties are typically structured to be based on varying natural gas price indices for the RNG produced. All of the Renewable Electricity produced at our biogas-to-electricity projects is sold under long-term contracts to creditworthy counterparties, typically under a fixed price arrangement with escalators.

The pricing of Environmental Attributes, which accounts for a substantial portion of our revenues, is subject to volatility based on a variety of factors, including regulatory and administrative actions and commodity pricing.

During the first quarter of 2023, our Pico dairy farm project was awarded a more attractive CI by CARB, thereby generating LCFS credits at a multiple of those generated by our landfill projects.

The sale of RINs, which is subject to market price fluctuations, accounts for a substantial portion of our revenues. We manage against the risk of these fluctuations through forward sales of RINs, although currently we only sell RINs in the calendar year they are generated. We have not entered into significant forward sell commitments beyond the fourth quarter of 2023. Realized prices for Environmental Attributes monetized in a year may not correspond directly to index prices due to the forward selling of commitments. We have entered into commitments to monetize all RINs expected to be generated at an average realized price of $3.09.

Factors Affecting Operating Expenses

Our operating expenses include royalties, transportation, gathering and production fuel expenses, project operating and maintenance expenses, general and administrative expenses, depreciation and amortization, net loss (gain) on sale of assets, impairment loss and transaction costs. Our operating expenses can be subject to inflationary cost increases that are largely out of our control.

- *Project Operating and Maintenance Expenses*: Operating and maintenance expenses primarily consist of expenses related to the collection and processing of biogas, including biogas collection system operating and maintenance expenses, biogas processing, operating and maintenance expenses, and related labor and overhead expenses. At the project level, this includes all labor and benefit costs, ongoing corrective and proactive maintenance, project level utility charges, rent, health and safety, employee communication, and other general project level expenses. Unanticipated feedstock processing or gas conditioning equipment failures occurring outside our planned preventative maintenance program can increase project operating and maintenance expenses and reduce production volumes.
- *Royalties, Transportation, Gathering and Production Fuel Expenses:* Royalties represent payments made to our facility hosts, typically structured as a percentage of revenue. Transportation and gathering expenses include capacity and metering expenses representing the costs of delivering our RNG and Renewable Electricity production to our customers. These expenses include payments to pipeline operators and other agencies that allow for the transmission of our gas and electricity commodities to end users. Production fuel expenses generally represent alternative royalty payments based on quantity usage of biogas feedstock.
- *General and Administrative Expenses:* General and administrative expenses primarily consist of corporate expenses and unallocated support functions for our operating facilities, including personnel costs for executive, finance, accounting, investor relations, legal, human resources, operations, engineering, environmental registration and reporting, health and safety, IT and other administrative personnel and professional fees and general corporate expenses. We expect increased general and administrative expenses associated with our ongoing development of Montauk Ag Renewables in 2023. We also expect increased general and administrative expenses associated with share-based compensation related to the board of directors approval of grants of stock options to the executives of the Company in April 2023. The Company accounts for share-based compensation related to grants made through its equity and incentive compensation plan under FASB ASC 718. For more information, see Note 14 to our unaudited condensed consolidated financial statements related to share-based compensation.
- *Depreciation and Amortization:* Expenses related to the recognition of the useful lives of our intangible and fixed assets. We spend significant capital to build and own our facilities. In addition to development capital, we annually reinvest to maintain these facilities.
- *Impairment Loss:* Expenses related to reductions in the carrying value(s) of fixed and/or intangible assets based on periodic evaluations whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable.
- *Transaction Costs:* Transaction costs primarily consist of expenses incurred for due diligence and other activities related to potential acquisitions and other strategic transactions.

Key Operating Metrics

Total operating revenues reflect both sales of renewable energy and sales of related Environmental Attributes. As a result, our revenues are primarily affected by unit production of RNG and Renewable Electricity, production of Environmental Attributes, and the prices at which we monetize such production. Set forth below is an overview of these key metrics:

- *Production volumes:* We review performance by site based on unit of production calculations for RNG and Renewable Electricity, measured in terms of MMBtu and MWh, respectively. While unit of production measurements can be influenced by schedule facility maintenance schedules, the metric is used to measure the efficiency of operations and the impact of optimization improvement initiatives. We monetize a majority of our RNG commodity production under variable-price agreements, based on indices. A portion of our Renewable Natural Gas segment commodity production is monetized under fixed-priced contracts. Our Renewable Electricity Generation segment commodity production is primarily monetized under fixed-priced PPAs.
- *Production of Environmental Attributes:* We monetize Environmental Attributes derived from our production of RNG and Renewable Electricity. We carry-over a portion of the RINs generated from RNG production to the following year and monetize the carried over RINs in such following calendar year. A majority of our Renewable Natural Gas segment Environmental Attributes are self-monetized. A majority of our Renewable Electricity Generation segment Environmental Attributes are monetized as a component of our fixed-price PPAs.
- *Average realized price per unit of production:* Our profitability is highly dependent on the commodity prices for natural gas and electricity, and the Environmental Attribute prices for RINs, LCFS credits, and RECs. Realized prices for Environmental Attributes monetized in a year may not correspond directly with that year’s production as attributes may be carried over and subsequently monetized. Realized prices for Environmental Attributes monetized in a year may not correspond directly to index prices due to the forward selling of commitments.

Comparison of Three Months Ended September 30, 2023 and 2022

The following table summarizes the key operating metrics described above, which metrics we use to measure performance.

	Three Months Ended September 30,			
(in thousands, unless otherwise indicated)	2023	2022	Change	Change %
Revenues				
Renewable Natural Gas Total Revenues	$ 50,935	$ 54,343	$ (3,408)	(6.3%)
Renewable Electricity Generation Total Revenues	$ 4,753	$ 4,351	$ 402	9.2%
RNG Metrics				
CY RNG production volumes (MMBtu)	1,380	1,437	(57)	(4.0%)
Less: Current period RNG volumes under fixed/floor-price contracts	(327)	(333)	6	(1.8%)
Plus: Prior period RNG volumes dispensed in current period	367	367	—	0.0%
Less: Current period RNG production volumes not dispensed	(320)	(439)	119	(27.1%)
Total RNG volumes available for RIN generation (1)	1,100	1,032	68	6.6%
RIN Metrics				
Current RIN generation (x 11.727) (2)	12,898	12,100	798	6.6%
Less: Counterparty share (RINs)	(1,351)	(1,399)	48	(3.4%)
Plus: Prior period RINs carried into current period	2,967	1,547	1,420	91.8%
Less: CY RINs carried into next CY	—	—	—	—
Total RINs available for sale (3)	14,514	12,248	2,266	18.5%
Less: RINs sold	(13,750)	(10,850)	(2,900)	26.7%
RIN Inventory	764	1,398	(634)	(45.4%)
RNG Inventory (volumes not dispensed for RINs) (4)	320	439	(119)	(27.1%)
Average Realized RIN price	$ 3.05	$ 3.49	$ (0.44)	(12.6%)
Operating Expenses				
Renewable Natural Gas Operating Expenses	$ 22,837	$ 23,785	$ (948)	(4.0%)
Operating Expenses per MMBtu (actual)	$ 16.55	$ 16.55	$ —	0.0%
REG Operating Expenses	$ 2,753	$ 2,525	$ 228	9.0%
$/MWh (actual)	$ 57.35	$ 51.53	$ 5.82	11.3%
Other Metrics				
Renewable Electricity Generation Volumes Produced (MWh)	48	49	(1)	(2.0%)
Average Realized Price $/MWh (actual)	$ 99.02	$ 88.80	$ 10.22	11.5%

(1) RINs are generated in the month that the gas is dispensed to generate RINs, which occurs the month after the gas is produced. Volumes under fixed/floor-price arrangements generate RINs which we do not self-market.

(2) One MMBtu of RNG has the same energy content as 11.727 gallons of ethanol, and thus may generate 11.727 RINs under the RFS program.

(3) Represents RINs available to be self-marketed by us during the reporting period.

(4) Represents gas production which has not been dispensed to generate RINs.

The following table summarizes our revenues, expenses and net income for the periods set forth below:

	Three Months Ended September 30, 2023	Three Months Ended September 30, 2022	Change	Change %
Total operating revenues	$ 55,688	$ 55,860	$ (172)	(0.3)%
Operating expenses:				
Operating and maintenance expenses	14,212	14,134	78	0.6%
General and administrative expenses	7,848	8,466	(618)	(7.3)%
Royalties, transportation, gathering and production fuel	11,450	12,188	(738)	(6.1)%
Depreciation, depletion and amortization	5,346	5,167	179	3.5%
Impairment loss	51	2,273	(2,222)	(97.8)%
Total operating expenses	38,907	42,228	(3,321)	(7.9)%
Operating income	$ 16,781	$ 13,632	$ 3,149	23.1%
Other expenses (income):	1,039	(95)	1,134	(1,193.7)%
Income tax expense	2,808	2,540	268	10.6%
Net income	$ 12,934	$ 11,187	$ 1,747	15.6%

Revenues for the Three Months Ended September 30, 2023 and 2022

Total revenues in the third quarter of 2023 were $55,688 a decrease of $172 (0.3%) compared to $55,860 in the third quarter of 2022. The decrease is primarily related to a decrease in gas commodity indices. Gas commodity indices decreased 68.9% during the third quarter of 2023 compared to the third quarter of 2022. Realized RIN pricing decreased 12.6% during the third quarter of 2023 compared to the third quarter of 2022. Also contributing to the decrease are gains recognized in the third quarter of 2022 of $367 which were related to a gas commodity hedge program that has since expired. Offsetting the decrease, was an increase of 26.7% of RINs sold in the third quarter of 2023 compared to the third quarter of 2022.

Renewable Natural Gas Revenues

We produced 1,380 MMBtu of RNG during the third quarter of 2023, a decrease of 57 MMBtu (4.0%) over the 1,437 MMBtu produced in the third quarter of 2022, primarily driven by dry weather conditions impacting gas feedstock availability and previously disclosed process equipment failures in the second quarter of 2023 that have since been repaired.

Revenues from the Renewable Natural Gas segment in the third quarter of 2023 were $50,935, a decrease of $3,408 (6.3%) compared to $54,343 in the third quarter of 2022. Average commodity pricing for natural gas for the third quarter of 2023 was $2.55 per MMBtu, 68.9% lower than the third quarter of 2022. During the third quarter of 2023, we self-monetized 13,750 RINs, representing a 2,900 increase (26.7%) compared to 10,850 in the third quarter of 2022. Average pricing realized on RIN sales during the third quarter of 2023 was $3.05 as compared to $3.49 in the third quarter of 2022, a decrease of 12.6%. This compares to the average D3 RIN index price for the third quarter of 2023 of $3.01 as compared to $2.83 in the third quarter of 2022, an increase of approximately 6.4%. At September 30, 2023, we had approximately 320 MMBtu available for RIN generation and we had approximately 764 RINs generated and unsold. Of the RINs generated and unsold at September 30, 2023, approximately $1,500 in revenues will be recognized during the fourth quarter of 2023 as the transfer of ownership was not completed until after September 30, 2023. At September 30, 2022, we had approximately 439 MMBtu available for RIN generation and 1,398 RINs generated and unsold.

Renewable Electricity Generation Revenues

We produced approximately 48 MWh in Renewable Electricity in the third quarter of 2023, a decrease of 1 MWh (2.0%) from 49 MWh in the third quarter of 2022. Our Bowerman facility produced 3 MWh less in the third quarter of 2023 compared to the third quarter of 2022 as a result of higher ambient temperatures in the third quarter of 2023. Our Security facility produced approximately 2 MWh more in the third quarter of 2023 compared to the third quarter of 2022 due to engine maintenance completed in 2022.

Revenues from Renewable Electricity facilities in the third quarter of 2023 were $4,753, an increase of $402 (9.2%) compared to $4,351 in the third quarter of 2022. The increase is primarily driven by the increase in our Security facility production volumes and the timing of the generation and monetization of RECs at our Bowerman facility.

In the third quarter of 2023, 100.0% of Renewable Electricity Generation segment revenues were derived from the monetization of Renewable Electricity at fixed prices associated with underlying PPAs, as compared to 99.6% in the third quarter of 2022. This provides us with certainty of price resulting from our Renewable Electricity sites.

Corporate Analysis

While we did not have any gas commodity hedge programs in the third quarter of 2023, our gas commodity hedge program during the third quarter of 2022 was priced at rates below actual index prices. However, we did recognize a gain of $367 in the third quarter of 2022 as a result of favorable index price movements under our gas commodity hedge activities.

Expenses for the Three Months Ended September 30, 2023 and 2022

General and Administrative Expenses

Total general and administrative expenses were $7,848 for the third quarter of 2023, a decrease of $618 (7.3%) compared to $8,466 for the third quarter of 2022. Employee related costs, including stock-based compensation costs were $4,521 in the third quarter of 2023, a decrease of $729 (13.9%) compared to $5,250 in the third quarter of 2022. Our board of directors approved the payments of cash fees to non-employee directors resulting in increased fees of approximately $125 in the third quarter of 2023 compared to no payments in the third quarter of 2022. Finally, our rent expense for the third quarter of 2023 was $186, an increase $89 (91.8%) compared to $97 for the third quarter of 2022 associated with our new headquarters lease.

Renewable Natural Gas Expenses

Operating and maintenance expenses for our RNG facilities in the third quarter of 2023 were $11,919, a decrease of $133 (1.1%) as compared to $12,052 in the third quarter of 2022. Our total RNG facilities reported reduced utility expenses of approximately $1,453 in the third quarter of 2023 as compared to the third quarter of 2022. Our Rumpke facility operating and maintenance expenses increased approximately $714 as a result of timing of preventative maintenance and repair expenses in the third quarter of 2023 as compared to third quarter of 2022. Our Atascocita facility operating maintenance expenses increased approximately $251 as a result of timing of preventative maintenance and wellfield operational enhancements in the third quarter of 2023 as compared to the third quarter of 2022. Our Coastal facility operating and maintenance expenses increased approximately $162 as a result of wellfield operational enhancements as compared to the third quarter of 2022.

Royalties, transportation, gathering and production fuel expenses for the Company’s RNG facilities for the third quarter of 2023 were $10,917, a decrease of $816 (7.0%) compared to $11,733 in the third quarter of 2022. Royalties, transportation, gathering and production fuel expenses decreased as a percentage of RNG revenues to 21.4% for the third quarter of 2023 from 21.6% in the third quarter of 2022.

Renewable Electricity Expenses

Operating and maintenance expenses for our Renewable Electricity facilities in the third quarter of 2023 were $2,220, an increase of $150 (7.2%) compared to $2,070 in the third quarter of 2022. Our Turkey Creek facility operating and maintenance expenses increased approximately $186 as a result of non-capitalizable costs. Our Tulsa facility operating and maintenance expenses increased approximately $316 as a result of scheduled engine preventative maintenance and wellfield operational maintenance. The increase was offset by a decrease of approximately $270 at our Bowerman facility as a result of a property tax refund received in the third quarter of 2023.

Royalties, transportation, gathering and production fuel expenses for our Renewable Electricity facilities for the third quarter of 2023 were $533, an increase of $78 (17.1%) compared to $455 in the third quarter of 2022. As a percentage of Renewable Electricity Generation segment revenues, royalties, transportation, gathering and production fuel expenses increased to 11.2% from 10.5%.

Royalty Payments

Royalties, transportation, gathering, and production fuel expenses in the third quarter of 2023 were $11,450, a decrease of $738 (6.1%) compared to $12,188 in the third quarter of 2022. We make royalty payments to our fuel supply site partners on the commodities we produce and the associated Environmental Attributes. These royalty payments are typically structured as a percentage of revenue subject to a cap, with fixed minimum payments when Environmental Attribute prices fall below a defined threshold. To the extent commodity and Environmental Attributes’ prices fluctuate, our royalty payments may fluctuate upon renewal or extension of a fuel supply agreement or in connection with new projects. Our fuel supply agreements are typically structured as 20-year contracts, providing long-term visibility into the margin impact of future royalty payments.

Depreciation

Depreciation and amortization in the third quarter of 2023 was $5,346, an increase of $179 (3.5%) compared to $5,167 in the third quarter of 2022. The increase is associated with timing of wellfield capital investment placed into service in the third quarter of 2023 compared to the third quarter of 2022.

Impairment loss

We calculated and recorded an impairment losses of $51 in the third quarter of 2023, a decrease of $2,222 (97.8%) compared to $2,273 in the third quarter of 2022. The impairment losses in the third quarter of 2023 were for specifically identified RNG machinery and feedstock processing equipment that were no longer in operational use. The impairment losses of $2,273 recorded in the third quarter of 2022 relate to a REG site wherein the forecasted future cash flows did not exceed the carrying value of the site's long lived assets. Additional impairments were recorded for computer software and hardware no longer being utilized, an amended customer contract and miscellaneous capital assets no longer in use under current operations.

Other Expenses (Income)

Other expenses in the third quarter of 2023 was $1,039, an increase of $1,134 (1,193.7%) compared to other income of $95 in the third quarter of 2022. The increase is primarily related to an increase in interest expense of $1,259 from the third quarter of 2023 compared to the third quarter of 2022 as a result of rising interest rates.

Income Tax Expense

Income tax expense for the three months ended September 30,2023 was calculated using an estimated effective tax rate which differs from the U.S. federal statutory rate of 21% primarily due to the benefit from production tax credits.

The effective tax rate of 17.8% for the three months ended September 30, 2023 was lower than the rate for the three months ended September 30, 2022 of 18.5% primarily due to the increase in forecasted income in 2023 with respect to the annual estimated tax credit benefit.

Operating Income for the Three Months Ended September 30, 2023 and 2022

Operating income in the third quarter of 2023 was $16,781, an increase of $3,149 (23.1%) compared to $13,632 in the third quarter of 2022. RNG operating income for the third quarter of 2023 was $24,063, a decrease of $2,765 (10.3%) compared to $26,828 in the third quarter of 2022. Renewable Electricity Generation operating income for the third quarter of 2023 was $700, an increase of $2,370 (141.9%) compared to an operating loss of $1,670 for the third quarter of 2022.

Comparison of Nine Months Ended September 30, 2023 and 2022

The following table summarizes the key operating metrics described above, which metrics we use to measure performance.

	Nine Months Ended September 30,			
	2023	2022	Change	Change %
(in thousands, unless otherwise indicated)				
Revenues				
Renewable Natural Gas Total Revenues	$ 114,328	$ 151,577	$ (37,249)	(24.6%)
Renewable Electricity Generation Total Revenues	$ 13,769	$ 12,652	$ 1,117	8.8%
RNG Metrics				
CY RNG production volumes (MMBtu)	4,163	4,275	(112)	(2.6%)
Less: Current period RNG volumes under fixed/floor-price contracts	(957)	(972)	15	(1.5%)
Plus: Prior period RNG volumes dispensed in current period	368	372	(4)	(1.1%)
Less: Current period RNG production volumes not dispensed	(320)	(439)	119	(27.1%)
Total RNG volumes available for RIN generation (1)	3,254	3,236	18	0.6%
RIN Metrics				
Current RIN generation (x 11.727) (2)	38,167	37,951	216	0.6%
Less: Counterparty share (RINs)	(4,002)	(3,961)	(41)	1.0%
Plus: Prior period RINs carried into current period	739	140	599	427.9%
Less: CY RINs carried into next CY	—	—	—	—
Total RINs available for sale (3)	34,904	34,130	774	2.3%
Less: RINs sold	(34,140)	(31,773)	(2,367)	7.4%
RIN Inventory	764	2,357	(1,593)	(67.6%)
RNG Inventory (volumes not dispensed for RINs) (4)	320	439	(119)	(27.1%)
Average Realized RIN price	$ 2.59	$ 3.43	$ (0.84)	(24.5%)
Operating Expenses				
Renewable Natural Gas Operating Expenses	$ 59,057	$ 65,735	$ (6,678)	(10.2%)
Operating Expenses per MMBtu (actual)	$ 14.19	$ 15.38	$ (1.19)	(7.7%)
REG Operating Expenses	$ 10,008	$ 10,546	$ (538)	(5.1%)
$/MWh (actual)	$ 69.99	$ 74.79	$ (4.80)	(6.4%)
Other Metrics				
Renewable Electricity Generation Volumes Produced (MWh)	143	141	2	1.4%
Average Realized Price $/MWh (actual)	$ 96.29	$ 89.73	$ 6.56	7.3%

(1) RINs are generated in the month that the gas is dispensed to generate RINs, which occurs the month after the gas is produced. Volumes under fixed/floor-price arrangements generate RINs which we do not self-market.

(2) One MMBtu of RNG has the same energy content as 11.727 gallons of ethanol, and thus may generate 11.727 RINs under the RFS program.

(3) Represents RINs available to be self-marketed by us during the reporting period.

(4) Represents gas production which has not been dispensed to generate RINs.

The following table summarizes our revenues, expenses and net income for the periods set forth below:

	Nine Months Ended September 30, 2023	Nine Months Ended September 30, 2022	Change	Change %
Total operating revenues	$ 128,097	$ 155,916	$ (27,819)	(17.8)%
Operating expenses:				
Operating and maintenance expenses	43,614	42,205	1,409	3.3%
General and administrative expenses	26,069	25,715	354	1.4%
Royalties, transportation, gathering and production fuel	25,588	34,484	(8,896)	(25.8)%
Depreciation, depletion and amortization	15,792	15,453	339	2.2%
Gain on insurance proceeds	—	(313)	313	(100.0)%
Impairment loss	777	2,393	(1,616)	(67.5)%
Transaction costs	86	32	54	168.8%
Total operating expenses	111,926	119,969	(8,043)	(6.7)%
Operating income	$ 16,171	$ 35,947	$ (19,776)	(55.0)%
Other expenses (income):	3,341	(124)	3,465	(2,794.4)%
Income tax expense	2,681	6,847	(4,166)	(60.8)%
Net income	$ 10,149	$ 29,224	$ (19,075)	(65.3)%

Revenues for the Nine Months Ended September 30, 2023 and 2022

Total revenues in the first nine months of 2023 were $128,097 a decrease of $27,819 (17.8%) compared to $155,916 in the first nine months of 2022. The decrease is primarily related to a decrease in gas commodity indices and average realized RIN pricing in the first nine months of 2023 compared to the first nine months of 2022. Gas commodity indices decreased 60.3% during the first nine months of 2023 compared to the first nine months of 2022. Realized RIN pricing decreased 24.5% during the first nine months of 2023 compared to the first nine months of 2022.

Renewable Natural Gas Revenues

We produced 4,163 MMBtu of RNG during the first nine months of 2023, a decrease of 112 MMBtu (2.6%) over the 4,275 MMBtu produced in the first nine months of 2022. Our Rumpke facility produced 77 fewer MMBtu in the first nine months of 2023 compared to the first nine months of 2022 primarily driven by the second quarter of 2023 process equipment failure as well as wellfield quality issues due to weather anomalies in 2023. Also contributing to the decrease is our Pico facility which produced 45 fewer MMBtu in the first nine months of 2023 compared to the first nine months of 2022 as a result of operational feedstock processing challenges in the first nine months of 2023.

Revenues from the Renewable Natural Gas segment in the first nine months of 2023 were $114,328, a decrease of $37,249 (24.6%) compared to $151,577 in the first nine months of 2022. Average commodity pricing for natural gas for the first nine months of 2023 was $2.69 per MMBtu, 60.3% lower than the first nine months of 2022. During the first nine months of 2023, we self-monetized 34,140 RINs, representing a 2,367 increase (7.4%) compared to 31,773 in the first nine months of 2022. Average pricing realized on RIN sales during the first nine months of 2023 was $2.59 as compared to $3.43 in the first nine months of 2022, a decrease of 24.5%. This compares to the average D3 RIN index price for the first nine months of 2023 of 2.40 being approximately 22.5% lower than the average D3 RIN index price in the first nine months of 2022. At September 30, 2023, we had approximately 320 MMBtu available for RIN generation and we had approximately 764 RINs generated and unsold. Of the RINs generated and unsold at September 30, 2023, approximately $1,500 in revenues will be recognized during the fourth quarter of 2023 as the transfer of ownership was not completed by September 30, 2023. At September 30, 2022, we had approximately 439 MMBtu available for RIN generation and 2,357 RINs generated and unsold.

Renewable Electricity Generation Revenues

We produced approximately 143 MWh in Renewable Electricity in the first nine months of 2023, an increase of 2 MWh (1.4%) from 141 MWh in the first nine months of 2022. Our Security facility produced 4 MWh more in the first nine months of 2023 compared to the first nine months of 2022 as a result of engine maintenance performed during the first nine months of 2022.

Revenues from Renewable Electricity facilities in the first nine months of 2023 were $13,769, an increase of $1,117 (8.8%) compared to $12,652 in the first nine months of 2022. The increase is primarily driven by the increase in our Security facility production volumes and the timing of the generation and monetization of RECs at our Bowerman facility.

In the first nine months of 2023, 99.9% of Renewable Electricity Generation segment revenues were derived from the monetization of Renewable Electricity at fixed prices associated with underlying PPAs, as compared to 99.5% in the first nine months of 2022. This provides us with certainty of price resulting from our Renewable Electricity sites.

Corporate Analysis

While we did not have any gas commodity hedge programs in the first nine months of 2023, our gas commodity hedge program during the first nine months of 2022 was priced at rates below actual index prices resulting in realized losses of $1,440.

Expenses for the Nine Months Ended September 30, 2023 and 2022

General and Administrative Expenses

Total general and administrative expenses were $26,069 for the first nine months of 2023, an increase of $354 (1.4%) compared to $25,715 for the first nine months of 2022. Our general and administrative expenses for the first nine months of 2023 increased approximately $2,225 compared to the first nine months of 2022 associated with the Montauk Ag Renewables. The increase was primarily driven by stock-based compensation expense as a result of the 2022 amendments to restricted share awards issued in the Montauk Ag Renewables acquisition and professional fees. Partially offsetting this increase is a reversal of approximately $1,024 stock based compensation expense related to forfeited stock awards. Excluding Montauk Ag Renewables, our legal fee expense was $1,683 for the first nine months of 2023, an increase of $269 (19.0%) compared to $1,414 for the first nine months of 2022. Finally, our rent expense was $535 for the first nine months of 2023, an increase of $257 (92.4%) compared to $278 for the first nine months 2022.

Renewable Natural Gas Expenses

Operating and maintenance expenses for our RNG facilities in the first nine months of 2023 were $34,960, an increase of $2,368 (7.3%) as compared to $32,592 in the first nine months of 2022. Total RNG facilities utility costs decreased $1,536 during the first nine months of 2023 as compared to the first nine months of 2022. Our Rumpke facility operating and maintenance expenses increased approximately $838 as a result of timing of preventative maintenance and process equipment failure repair costs in the first nine months of 2023 as compared to the first nine months of 2022. Our Atascocita, Galveston, McCarty facilities operating and maintenance expenses increased approximately $467, $435, and $364, respectively, as a result of timing of preventative maintenance and wellfield operational enhancement costs in the first nine months of 2023 as compared to the first nine months of 2022. Our Coastal facility operating and maintenance expenses increased approximately $419 as a result of wellfield operational enhancement costs in the first nine months of 2023 as compared to the first nine months of 2022. Our Apex facility operating and maintenance expenses increased approximately $396 as a result of timing of preventative maintenance and waste disposal costs in the first nine months of 2023 as compared to the first nine months of 2022. Our Pico facility operating and maintenance expenses increased approximately $204 the first nine months of 2023 as compared to the first nine months of 2022 as a result of non-capitalizable costs associated to the Pico Digestion Capacity Increase project.

Royalties, transportation, gathering and production fuel expenses for our RNG facilities for the first nine months of 2023 were $24,097, a decrease of $9,045 (27.3%) compared to $33,142 in the first nine months of 2022. Royalties, transportation, gathering and production fuel expenses decreased as a percentage of RNG revenues to 21.1% for the first nine months of 2023 from 21.9% in the first nine months of 2022.

Renewable Electricity Expenses

Operating and maintenance expenses for our Renewable Electricity facilities in the first nine months of 2023 were $8,517, a decrease of $687 (7.5%) compared to $9,204 in the first nine months of 2022. The decrease is primarily related to scheduled preventative maintenance at our Bowerman facility, which was approximately $1,870 higher in the first nine months of 2022 compared to the first nine months of 2023. Our Tulsa facility operating and maintenance expenses increased approximately $635 in the first nine months of 2023 compared to the first nine months of 2022 as a result of scheduled preventative maintenance and wellfield operational maintenance. Our Turkey Creek facility operating and maintenance expenses increased approximately $448 in the first nine months of 2023 compared to the first nine months of 2022 as a result of the non-capitalizable costs of Montauk Ag Renewables.

Royalties, transportation, gathering and production fuel expenses for our Renewable Electricity facilities for the first nine months of 2023 were $1,491, an increase of $149 (11.1%) compared to $1,342 in the first nine months of 2022. As a percentage of Renewable Electricity Generation segment revenues, royalties, transportation, gathering and production fuel expenses increased to 10.8% from 10.6%.

Royalty Payments

Royalties, transportation, gathering, and production fuel expenses in the first nine months of 2023 were $25,588, a decrease of $8,896 (25.8%) compared to $34,484 in the first nine months of 2022. We make royalty payments to our fuel supply site partners on the commodities we produce and the associated Environmental Attributes. These royalty payments are typically structured as a percentage of revenue subject to a cap, with fixed minimum payments when Environmental Attribute prices fall below a defined threshold. To the extent commodity and Environmental Attributes' prices fluctuate, our royalty payments may fluctuate upon renewal or extension of a fuel supply agreement or in connection with new projects. Our fuel supply agreements are typically structured as 20-year contracts, providing long-term visibility into the margin impact of future royalty payments.

Depreciation

Depreciation and amortization in the first nine months of 2023 was $15,792, an increase of $339 (2.2%) compared to $15,453 in the first nine months of 2022. The increase is associated with timing of capital investment placed into service in the first nine months of 2023 compared to the first nine months of 2022.

Impairment loss

We calculated and recorded an impairment loss of $777 in the first nine months of 2023, a decrease of $1,616 (67.5%) compared to $2,393 in the first nine months of 2022. The 2023 impairments were for specifically identified RNG machinery and feedstock processing equipment that were no longer in operational use. The 2022 impairment primarily related to a REG site ($2,133) wherein the forecasted future cash flows did not exceed the carrying value of the site's long lived assets. Additional impairments were recorded for computer software and hardware no longer being utilized ($191), an amended customer contract ($27) and miscellaneous capital assets no longer in use under current operations ($42).

Other Expense (Income)

Other expense in the first nine months of 2023 was $3,341, an increase of $3,465 (2794.4%) compared to other income of $124 in the first nine months of 2022. The increase is primarily related to an increase in interest expense of $3,342 from the first nine months of 2023 compared to the first nine months of 2022 as a result of rising interest rates.

Income Tax Expense

Income tax expense for the nine months ended September 30, 2023 was calculated using an estimated effective tax rate which differs from the U.S. federal statutory rate of 21% primarily due to the benefit from production tax credits.

The effective tax rate of 20.9% for the nine months ended September 30, 2023 was higher than the rate for the nine months ended September 30, 2022 of 19.0% primarily due to discrete tax expense recorded in 2023. The September 30, 2023 rate also includes utilization of production tax credits.

Operating Income for the Nine Months Ended September 30, 2023 and 2022

Operating income in the first nine months of 2023 was $16,171, a decrease of $19,776 (55.0%) compared to $35,947 in the first nine months of 2022. RNG operating income for the first nine months of 2023 was $42,807, a decrease of $32,233 (43.0%) compared to $75,040 in the first nine months of 2022. Renewable Electricity Generation operating loss for the first nine months of 2023 was $124, a decrease of $4,102 (97.1%) compared $4,226 for the first nine months of 2022.

Non-GAAP Financial Measures:

The following table presents EBITDA and Adjusted EBITDA, non-GAAP financial measures for each of the periods presented below. We present EBITDA and Adjusted EBITDA because we believe the measures assist investors in analyzing our performance across reporting periods on a consistent basis by excluding items that we do not believe are indicative of our core operating performance. In addition, EBITDA and Adjusted EBITDA are financial measurements of performance that management and the board of directors use in their financial and operational decision-making and in the determination of certain compensation programs. EBITDA and Adjusted EBITDA are supplemental performance measures that are not required by or presented in accordance with GAAP. EBITDA and Adjusted EBITDA should not be considered alternatives to net income (loss) or any other performance measure derived in accordance with GAAP, or as an alternative to cash flows from operating activities or a measure of our liquidity or profitability.

The following table provides our EBITDA and Adjusted EBITDA for the periods presented, as well as a reconciliation to net income, which is the most directly comparable GAAP measure, for the three months ended September 30, 2023 and 2022:

	Three Months Ended September 30,	
	2023	2022
Net income	$ 12,934	$ 11,187
Depreciation, depletion and amortization	5,346	5,167
Interest expense	1,295	36
Income tax expense	2,808	2,540
Consolidated EBITDA	22,383	18,930
Impairment loss (1)	51	2,273
Non-cash hedging charges	—	(367)
Net loss on sale of assets	—	43
Adjusted EBITDA	**$ 22,434**	**$ 20,879**

(1) During the three months ended September 30, 2023, we recorded an impairment loss of $51 for specifically identified RNG machinery and feedstock processing equipment that were no longer in operational use. During the three months ended September 30, 2022, we recorded an impairment loss of $2,273 related to an REG site wherein the forecasted future cash flows did not exceed the carrying value of the site's long lived assets. Additional impairments were recorded for computer software and hardware no longer being utilized, an amended customer contract, and miscellaneous capital assets no longer in use under current operations.

The following table provides our EBITDA and Adjusted EBITDA for the periods presented, as well as a reconciliation to net income, which is the most directly comparable GAAP measure, for the nine months ended September 30, 2023 and 2022:

	Nine Months Ended September 30,	
	2023	2022
Net income	$ 10,149	$ 29,224
Depreciation, depletion and amortization	15,792	15,453
Interest expense	3,681	339
Income tax expense	2,681	6,847
Consolidated EBITDA	32,303	51,863
Impairment loss (1)	777	2,393
Net loss (gain) of sale of assets	37	(250)
Transaction costs	86	32
Non-cash hedging charges	—	1,440
Adjusted EBITDA	**$ 33,203**	**$ 55,478**

(1) During the nine months ended September 30, 2023, we recorded an impairment loss of $777 for specifically identified RNG machinery and feedstock processing equipment that were no longer in operational use. During the nine months ended September 30, 2022, we recorded an impairment loss of $2,393 related to an REG site wherein the forecasted future cash flows did not exceed the carrying value of the site's long lived assets. Additional impairments were recorded for computer software and hardware no longer being utilized, an amended customer contract, and miscellaneous capital assets no longer in use under current operations.

Liquidity and Capital Resources

Sources of Liquidity

At September 30, 2023 and September 30, 2022, our cash and cash equivalents, net of restricted cash, was $73,304 and $95,619 respectively. We intend to fund near-term development projects using cash flows from operations and borrowings under our revolving credit facility. We believe that we will have sufficient cash flows from operations and borrowing availability under our credit facility to meet our debt service obligations and anticipated required capital expenditures (including for projects under development) for at least the next 12 months. However, we are subject to business and operational risks that could adversely affect our cash flows and liquidity.

Our debt before issuance costs (in thousands) are as follows:

	September 30, 2023	December 31, 2022
Term loan	$ 66,000	72,000
Revolving credit facility	—	—
Debt before debt issuance costs	$ 66,000	$ 72,000

Amended Credit Agreement

On December 21, 2021, the Company entered into the Fourth Amendment with Comerica and certain other financial institutions. The current credit agreement, which is secured by a lien on substantially all of our assets and assets of certain of our subsidiaries, provides for a five-year $80,000 term loan, a five-year $120,000 revolving credit facility, and a $75,000 accordion feature.

As of September 30, 2023, $66,000 was outstanding under the term loan and we had no outstanding borrowings under the revolving credit facility. The term loan amortizes in quarterly installments of $2,000 through 2024, then increases to $3,000 through 2026, with a final payment of $32,000 in late 2026 with an interest rate of 6.38% and 4.12% at September 30, 2023 and December 31, 2022, respectively. The revolving and term loans under the Amended Credit Agreement bear interest at the Bloomberg Short-Term Bank Yield Index Rate plus an applicable margin based on our Total Leverage Ratio (in each case, as those terms are defined in the Amended Credit Agreement).

The Amended Credit Agreement contains customary covenants applicable to us and certain of our subsidiaries, including financial covenants. The Amended Credit Agreement is subject to customary events of default, and contemplates that we would be in default if, for any fiscal quarter (x) the average monthly D3 RIN price (as determined in accordance with the Amended Credit Agreement) is less than $0.80 per RIN and (y) the consolidated EBITDA for such quarter is less than $6,000. Consolidated EBITDA is defined under the Amended Credit Agreement as net income plus (a) income tax expense, (b) interest expense, (c) depreciation, depletion, and amortization expense, (d) non-cash unrealized derivative expense and (e) any other extraordinary, unusual, or non-recurring adjustments to certain components of net income, as agreed upon by Comerica in certain circumstances.

Under the Amended Credit Agreement, we are required to maintain the following ratios:

- a Total Leverage Ratio (as defined in the Amended Credit Agreement) of not more than 3.50 to 1.00 as of the end of any fiscal quarter from December 31, 2021 through June 29, 2023, 3.25 to 1.00 as of the end of any fiscal quarter from June 30, 2023 through June 29, 2024, and 3.00 to 1.00 as of the end of any fiscal quarter from June 30, 2024 and thereafter.; and
- as of the end of each fiscal quarter, a Fixed Charge Coverage Ratio (as defined in the Amended Credit Agreement) of not less than 1.2 to 1.0

As of September 30, 2023, we were in compliance with all applicable financial covenants under the Amended Credit Agreement.

The Amended Credit Agreement replaced our prior credit agreements with Comerica and a portion of the proceeds of the term loan made under the Amended Credit Agreement were used by us to, among other things, fully satisfy an aggregate of $59,197 outstanding principal under such credit agreements. For additional information regarding the Amended Credit Agreement, see Note 12— Debt to our unaudited condensed consolidated financial statements.

Capital Expenditures

We have historically funded our growth and capital expenditures with our working capital, cash flow from operations and debt financing. We expect our non-development 2023 capital expenditures to range between $14,000 and $17,000. Our 2023 capital plans include annual preventative maintenance expenditures, annual wellfield expansion projects, other specific facility improvements, and information technology improvements. Additionally, we currently estimate that our existing 2023 development capital expenditures will range between $65,000 and $85,000. The refinement in 2023 development capital range is primarily related to the first phase of the North Carolina development project. The majority of our 2023 development capital expenditures are related to our Pico digestion capacity increase, the ongoing development of Montauk Ag Renewables, our second Apex facility, the Blue Granite RNG project and the Bowerman RNG project. Our Amended Credit Agreement provides us with a $120,000 revolving credit facility, with a $75,000 accordion option, providing us with access to additional capital to implement our acquisition and development strategy. We are currently in various stages of discussions regarding a variety of strategic growth opportunities. Included amongst these opportunities are: approximately up to eight LFG RNG, ADG RNG, and waste water treatment to RNG opportunities. If we ultimately enter into definitive agreements for any of these opportunities, we expect to incur material capital expenditures related to either acquisition costs or development costs, or both. As we continue to explore strategic growth opportunities and while we have entered into nonbinding letters of intent for certain of these opportunities, we provide no assurances that our plans related to any or all of these strategic opportunities will progress to definitive agreements. We believe that our existing cash and cash equivalents, cash generated from operations, and credit availability under our Amended Credit Agreement would allow us to pursue and close on our identified strategic growth opportunities in addition to the previously discussed non-development and development capital expenditures.

Cash Flow

The following table presents information regarding our cash flows and cash equivalents for the nine months ended September 30, 2023 and 2022:

	Nine Months Ended September 30,	
	2023	2022
Net cash provided by (used in):		
Operating activities	$ 19,587	$ 59,809
Investing activities	(45,404)	(11,270)
Financing activities	(6,054)	(6,106)
Net (decrease) increase in cash and cash equivalents	(31,871)	42,433
Restricted cash, end of the period	431	426
Cash and cash equivalents, end of period	73,735	96,045

For the first nine months of 2023, we generated $19,587 of cash provided by operating activities compared to $59,809 of cash provided by operating activities in the first nine months of 2022. For the first nine months of 2023, income and adjustments to income from operating activities provided $35,915 compared to income and adjustments to income providing $60,141 in first nine months of 2022. Included within income and adjustments to income from operating activities for the first nine months of 2023 was a decrease of $4,216 related to our deferred tax provision adjustments. Working capital and other assets and liabilities used $16,328 in the first nine months of 2023 compared to working capital and other assets and liabilities using $333 in the first nine months of 2022. Included in working capital for the first nine months of 2023 was deferred revenues of approximately $1,500.

Our net cash flows used in investing activities has historically focused on project development and facility maintenance. Our capital expenditures for the first nine months of 2023 were $45,406, of which $12,313, $9,561, $10,092, $2,876, and $2,737 were related to the ongoing development of the Pico facility digestion capacity increase, the Montauk Ag Renewables in North Carolina, second Apex RNG facility, Blue Granite RNG project, and Bowerman RNG project respectively.

Our net cash flows used in financing activities of $6,054 for the first nine months of 2023 decreased by $52 compared to cash used in financing activities in the first nine months of 2022 of $6,106.

Contractual Obligations and Commitments

Off-balance sheet arrangements comprise those arrangements that may potentially impact our liquidity, capital resources and results of operations, even though such arrangements are not recorded as liabilities under GAAP. Our off-balance sheet arrangements are limited to the outstanding letters of credit described below. Although these arrangements serve a variety of our business purposes, we are not dependent on them to maintain our liquidity and capital resources, and we are not aware of any circumstances that are reasonably likely to cause the off-balance sheet arrangements to have a material adverse effect on liquidity and capital resources.

The Company has contractual obligations involving asset retirement obligations. See Note 8 in the unaudited condensed consolidated financial statements for further information regarding the asset retirement obligations.

The Company has contractual obligations under our debt agreement, including interest payments and principal repayments. See Note 12 in the unaudited condensed consolidated financial statements for further discussion of the contractual commitments under our debt agreements, including the timing of principal repayments. During the first nine months of 2023, we had approximately $2,505 of off-balance sheet arrangements of outstanding letters of credit. These letters of credit reduce the borrowing capacity of our revolving credit facility under our Amended Credit Agreement. Certain of our contracts require these letters of credit to be issued to provide additional performance assurances. There have been no draw downs on these outstanding letters of credit. During the first nine months of 2022, we did not have off-balance sheet arrangements other than outstanding letters of credit of approximately $3,905.

The Company has contractual obligations involving operating leases. The Company leases office space and other office equipment under operating lease arrangements, expiring in various years through 2033. See Note 18 in the unaudited condensed consolidated financial statements for further information related to the lease obligations.

The Company has other contractual obligations associated with our fuel supply agreements. The expiration of these agreements range between 3-20 years. The minimum royalty and capital obligation associated with these agreements range from $8 to $1,635.

Critical Accounting Policies and Estimates

Our unaudited condensed consolidated financial statements are prepared in conformity with GAAP and require our management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, costs and expenses and related disclosures. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. Actual results may differ from these estimates, and such estimates may change if the underlying conditions or assumptions change.

Revenue Recognition

Our revenues are comprised of renewable energy and the related Environmental Attribute sales provided under a variety of short-term and medium-term agreements with our customers. All revenue is recognized when we satisfy our performance obligation(s) under the contract (either implicit or explicit) by transferring the promised product to the customer either when (or as) the customer obtains control of the product. A performance obligation is a promise in a contract to transfer a distinct product or service to a customer. A contract's transaction price is allocated to each distinct performance obligation. We allocate the contract's transaction price to each performance obligation using the product's observable market standalone selling price for each distinct product in the contract.

Revenue is measured as the amount of consideration we expect to receive in exchange for transferring our products. As such, revenue is recorded net of allowances and customer discounts as well as net of transportation and gathering costs incurred. To the extent applicable, sales, value add, and other taxes collected from customers and remitted to governmental authorities are accounted for on a net (excluded from revenues) basis.

The nature of the Company's contracts may give rise to several types of variable consideration, such as periodic price increases. This variable consideration is outside of the Company's influence as the variable consideration is dictated by the market. Therefore, the variable consideration associated with the long-term contracts is considered fully constrained.

RINs

We generate D3 RINs through our production and sale of RNG used for transportation purposes as prescribed under the RFS program. Our operating costs are associated with the production of RNG. The RINs are government incentives that are generated through our renewable operating projects and not a result of physical attributes of our RNG production. The RINs that we generate are able to be separated and sold as credits independently from the energy produced. Therefore, no cost is allocated to the RIN when it is generated. Revenue is recognized on these Environmental Attributes when there is an agreement in place to monetize the credits at an agreed upon price with a customer and transfer of control has occurred. We enter into forward commitments to transfer RINs. These forward commitments are based on D3 RIN index prices at the time of the commitment. Realized prices for RINs monetized in a year may not correspond directly to index prices due to the forward selling of commitments.

RECs

We generate RECs through our production and conversion of landfill methane into Renewable Electricity in various states, including California, Oklahoma, and Texas. These states have various laws requiring utilities to purchase a portion of their energy from renewable resources. Our operating costs are associated with the production of Renewable Electricity. The RECs are generated as an output of our renewable operating projects. The RECs that we generate are able to be separated and sold independently from the electricity produced. Therefore, no cost is allocated to the REC when it is generated. Revenue is recognized on these Environmental Attributes when there is an agreement in place to monetize the credits at an agreed upon price with a customer and transfer of control has occurred.

Income Taxes

We are subject to income taxes in the U.S. federal jurisdiction and various state and local jurisdictions. Tax regulations within each jurisdiction are subject to the interpretation of the related tax laws and regulations and require significant judgment to apply.

Our net deferred tax asset position is a result of net operating losses ("NOLs"), fixed assets, intangibles, and tax credit carryforwards. The realization of deferred tax assets is dependent upon our ability to generate sufficient future taxable income during the periods in which those temporary differences become deductible, prior to the expiration of the tax attributes. The evaluation of deferred tax assets requires judgment in assessing the likely future tax consequences of events that have been recognized in our financial statements or tax returns and forecasting future profitability by tax jurisdiction.

We evaluate our deferred tax assets at reporting periods on a jurisdictional basis to determine whether adjustments to the valuation allowance are appropriate considering changes in facts or circumstances. As of each reporting date, management considers new evidence, both positive and negative, when determining the future realization of our deferred tax assets. We account for uncertain tax positions using a "more-likely-than-not" threshold for recognizing and resolving uncertain tax positions. The evaluation of uncertain tax positions is based on factors that include, but are not limited to, changes in tax law, the measurement of tax positions taken or expected to be taken in tax returns, the effective settlement of matters subject to audit, new audit activity and changes in facts or circumstances related to a tax position. Given our current level of pre-tax earnings and forecasted future pre-tax earnings, we expect to generate income before taxes in the United States in future periods at a level that would fully utilize our U.S. federal NOL carryforwards and the majority of its state NOL carryforwards prior to their expiration.

Intangible Assets

Separately identifiable intangible assets are recorded at their fair values upon acquisition. We account for intangible assets in accordance with ASC 350, *Intangibles—Goodwill and Other*. Finite-lived intangible assets include interconnections, customer contracts, and trade names and trademarks. The interconnection intangible asset is the exclusive right to utilize an interconnection line between the operating project and a utility substation to transmit produced electricity. Included in that right is full maintenance provided on this line by the utility. Intangible assets with finite useful lives are amortized on a straight-line basis over their estimated useful life. We evaluate our finite-lived intangible assets for impairment as events or changes in circumstances indicate the carrying value of these assets may not be fully recoverable. Events that could result in an impairment include, among others, a significant decrease in the market price or the decision to close a site.

If finite-lived or indefinite-lived intangible assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the fair value of the assets. The fair value is determined based on the present value of expected future cash flows. We use our best estimates in making these evaluations, however, actual future pricing, operating costs and discount rates could vary from the assumptions used in our estimates and the impact of such variations could be material.

Our assessment of the recoverability of finite-lived and indefinite-lived intangible assets is determined by performing monitoring assessment of the future cash flows associated with the underlying gas rights agreements. The cash flows estimates are performed at the operating unit level and based on the average remaining length of the gas rights agreements. Based on our analysis, we concluded the cashflows generated to be well in excess of the carrying amounts. Changes in market conditions related to the various price indexes used in estimating these cash flows could adversely affect these estimates.

Finite-Lived Asset Impairment

In accordance with FASB ASC Topic 360, Property, Plant and Equipment and intangible assets with finite useful lives are evaluated for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by comparing the carrying amount of an asset or asset group to future undiscounted cash flows expected to be generated by the asset or asset group. Such estimates are based on certain assumptions, which are subject to uncertainty and may materially differ from actual results, including considering project specific assumptions for long-term credit prices, escalated future project operating costs and expected site operations. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the fair value of the assets. Fair value is generally determined by considering (i) internally developed discounted cash flows for the asset group, (ii) third-party valuations, and/or (iii) information available regarding the current market value for such assets. We use our best estimates in making these evaluations and consider various factors, including future pricing and operating costs. However, actual future market prices and project costs could vary from the assumptions used in our estimates and the impact of such variations could be material. We identified discrete events and recorded impairment of $777 and $2,393 for the nine months ended September 30, 2023 and 2022, respectively. See Note 3 in the unaudited condensed consolidated financial statements for further information related to asset impairments.

Emerging Growth Company

We are an emerging growth company, as defined in the JOBS Act. The JOBS Act allows emerging growth companies to delay the adoption of new or revised accounting standards until such time as those standards apply to private companies. We intend to utilize these transition periods, which may make it difficult to compare our financial statements to those of non-emerging growth companies and other emerging growth companies that have opted out of the transition periods afforded under the JOBS Act.

Recent Accounting Pronouncements

For a description of our recently adopted accounting pronouncements and recently issued accounting standards not yet adopted, see Note 2 of our unaudited condensed consolidated financial statements in this report.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

There have been no material changes since our disclosure in Quantitative and Qualitative Disclosures About Market Risk included as Item 7A in our 2022 Annual Report.

ITEM 4. CONTROLS AND PROCEDURES

Management's Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our principal executive officer and principal financial officer, evaluated the effectiveness of our disclosure controls and procedures, as defined in Rules 13a-15(e) or 15d-15(e) under the Exchange Act, as of the end of the period covered by this quarterly report. Disclosure controls and procedures are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Our management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Our management, including our principal executive officer and principal financial officer, after evaluating the effectiveness of our disclosure controls and procedures as of the end of the period covered by this report, concluded that as of such date, our disclosure controls and procedures were effective at a reasonable level of assurance.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting during our most recent fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

From time to time, we and our subsidiaries may be parties to legal proceedings arising in the normal course of our business. We and our subsidiaries are currently not a party, nor is our property subject, to any material pending legal proceedings.

ITEM 1A. RISK FACTORS

We face a number of risks that could materially and adversely affect our business, results of operations, cash flow, liquidity, or financial condition. A discussion of our risk factors can be found in Part I, “Item 1A Risk Factors” in our 2022 Annual Report any of which could have a material effect on us.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

Use of Proceeds from Sale of Registered Securities

On January 21, 2021, our Registration Statement on Form S-1, as amended (File No. 333-251312) (the “Registration Statement”), was declared effective by the SEC in connection with our IPO. The underwriter for the IPO was Roth Capital Partners. A total of 3,399,515 shares of our common stock were sold pursuant to the Registration Statement, which was comprised of (1) 2,702,500 shares of new common stock issued by the Company and (2) 697,015 shares of the Company’s common stock held by MNK. The 3,399,515 shares were sold at an offering price of $8.50 per share and resulting in net proceeds to the Company of approximately $15.0 million, after deducting the underwriting discount of approximately $1.6 million and offering expenses payable by the Company of approximately $6.2 million.

The IPO closed on January 26, 2021. No payments for such expenses were made directly or indirectly to (i) any of our officers or directors or their associates, (ii) any persons owning 10% or more of any class of our equity securities or (iii) any of our affiliates.

From the closing of the IPO through June 30, 2023, approximately $15.0 million of the net proceeds from the IPO have been used by Montauk for the following: the Montauk Ag Asset Acquisition in May 2021, the purchase of the real-estate and property in October 2021 related to Montauk Ag, and subsequent development activities related to Montauk Ag Renewables. An immaterial amount has been used relating to other possible acquisitions and projects. As of March 31, 2023, all net proceeds were used by the Company.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

None.

ITEM 6. EXHIBITS

Exhibit Number	Description
3.3	Amended and Restated Bylaws, as adopted on September 13, 2023 (incorporated by reference to Exhibit 3.1 to Current Report on Form 8-K filed on September 19, 2023)
3.4	Amended and Restated Bylaws, as adopted on October 18, 2023 (incorporated by reference to Exhibit 3.1 to Current Report on Form 8-K filed on October 19, 2023)
31.1	Certification of the Chief Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) of the Securities Exchange Act
31.2	Certification of the Chief Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) of the Securities Exchange Act
32.1	Certification of the Chief Executive Officer Pursuant to 18 U.S.C. Section 1350, as adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2	Certification of the Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS	Inline XBRL Instance Document
101.SCH	Inline XBRL Taxonomy Extension Schema Document
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

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.

November 9, 2023	**MONTAUK RENEWABLES, INC.**
	By: /s/ SEAN F. MCCLAIN
	Sean F. McClain President, Chief Executive Officer and Director (Principal Executive Officer)
	By: /s/ KEVIN A. VAN ASDALAN
	Kevin A. Van Asdalan Chief Financial Officer (Principal Financial and Accounting Officer)

Exhibit 31.1

CERTIFICATION PURSUANT TO RULES 13a-14(a) AND 15d-14(a)
UNDER THE SECURITIES EXCHANGE ACT, AS AMENDED

I, Sean F. McClain, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Montauk Renewables, Inc.;
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 9, 2023

/s/ Sean F. McClain

Sean F. McClain
Chief Executive Officer and President
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION PURSUANT TO RULES 13a-14(a) AND 15d-14(a)
UNDER THE SECURITIES EXCHANGE ACT, AS AMENDED

I, Kevin A. Van Asdalan, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Montauk Renewables, Inc.;
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 9, 2023

/s/ Kevin A. Van Asdalan

Kevin A. Van Asdalan
Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report on Form 10-Q of Montauk Renewables, Inc. (the “Company”) for the period ended September 30, 2023, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), the undersigned hereby certifies, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to his knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of the dates and for the periods expressed in the Report.

Date: November 9, 2023

/s/ Sean F. McClain

Sean F. McClain
Chief Executive Officer and President
(Principal Executive Officer)

Exhibit 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of Montauk Renewables, Inc. (the "Company") for the period ended September 30, 2023, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned hereby certifies, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to his knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of the dates and for the periods expressed in the Report.

Date: November 9, 2023

/s/ Kevin A. Van Asdalan

Kevin A. Van Asdalan
Chief Financial Officer
(Principal Financial Officer)