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 **March 31, 2025**

☐ **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: **000-21467**

ALTO INGREDIENTS, INC.
(Exact name of registrant as specified in its charter)

Delaware	**41-2170618**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
1300 South Second Street, Pekin, Illinois	**61554**
(Address of principal executive offices)	(zip code)

(833)710-2586
(Registrant's telephone number, including area code)

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

Title of each Class	**Trading Symbol**	**Name of Exchange on Which Registered**
Common Stock, $0.001 par value	ALTO	The Nasdaq Stock Market LLC (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 ☐
Non-accelerated filer ☐
Emerging growth company ☐
Accelerated filer ☒
Smaller reporting company ☒

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

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

As of May 8, 2025, there were 77,210,171 shares of Alto Ingredients, Inc. common stock, $0.001 par value per share, and 896 shares of Alto Ingredients, Inc. non-voting common stock, $0.001 par value per share, outstanding.

		Page
	PART I **FINANCIAL INFORMATION**	
ITEM 1.	FINANCIAL STATEMENTS.	
	Consolidated Balance Sheets as of March 31, 2025 (unaudited) and December 31, 2024	1
	Consolidated Statements of Operations for the Three Months Ended March 31, 2025 and 2024 (unaudited)	3
	Consolidated Statements of Cash Flows for the Three Months Ended March 31, 2025 and 2024 (unaudited)	4

	Consolidated Statements of Stockholders' Equity for the Three Months Ended March 31, 2025 and 2024 (unaudited)	5
	Notes to Consolidated Financial Statements (unaudited)	6
ITEM 2.	MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.	17
ITEM 3.	QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.	29
ITEM 4.	CONTROLS AND PROCEDURES.	30
	PART II OTHER INFORMATION	
ITEM 1.	LEGAL PROCEEDINGS.	32
ITEM 1A.	RISK FACTORS.	32
ITEM 2.	UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS.	46
ITEM 3.	DEFAULTS UPON SENIOR SECURITIES.	46
ITEM 4.	MINE SAFETY DISCLOSURES.	46
ITEM 5.	OTHER INFORMATION.	46
ITEM 6.	EXHIBITS.	47
SIGNATURES		48

PART I - FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS.

ALTO INGREDIENTS, INC.
CONSOLIDATED BALANCE SHEETS
(in thousands)

	March 31, 2025 (unaudited)	December 31, 2024 *
ASSETS		
Current Assets:		
Cash and cash equivalents	$ 26,778	$ 35,469
Restricted cash	393	742
Accounts receivable (net of allowance for credit losses of $38 and $23, respectively)	65,461	58,217
Inventories	50,609	49,914
Derivative instruments	4,071	3,313
Other current assets	6,149	5,463
Total current assets	153,461	153,118
Property and equipment, net	212,624	214,742
Other Assets:		
Right of use operating lease assets, net	19,416	20,553
Intangible assets, net	8,142	4,509
Other assets	8,566	8,516
Total other assets	36,124	33,578
Total Assets	$ 402,209	$ 401,438

* Amounts derived from the audited financial statements for the year ended December 31, 2024.

See accompanying notes to consolidated financial statements.

ALTO INGREDIENTS, INC.
CONSOLIDATED BALANCE SHEETS (CONTINUED)
(in thousands, except par value)

	March 31, 2025	December 31, 2024

	(unaudited)	*
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities:		
Accounts payable	$ 17,029	$ 20,369
Accrued liabilities	23,819	24,214
Current portion – operating leases	4,968	4,851
Derivative instruments	301	1,177
Other current liabilities	6,999	7,193
Total current liabilities	53,116	57,804
Long-term debt	110,664	92,904
Operating leases, net of current portion	15,641	16,913
Other liabilities	8,868	8,754
Total Liabilities	188,289	176,375
Commitments and Contingencies (Note 7)		
Stockholders' Equity:		
Preferred stock, $0.001 par value; 10,000 shares authorized; Series A: 1,684 shares authorized; no shares issued and outstanding as of March 31, 2025 and December 31, 2024; Series B: 1,581 shares authorized; 927 shares issued and outstanding as of March 31, 2025 and December 31, 2024; liquidation preference of $18,075 as of March 31, 2025	1	1
Common stock, $0.001 par value; 300,000 shares authorized; 76,497 and 76,565 shares issued and outstanding as of March 31, 2025 and December 31, 2024, respectively	77	77
Non-voting common stock, $0.001 par value; 3,553 shares authorized; 1 share issued and outstanding as of March 31, 2025 and December 31, 2024	—	—
Additional paid-in capital	1,045,024	1,044,176
Accumulated other comprehensive income	4,975	4,975
Accumulated deficit	(836,157)	(824,166)
Total Stockholders' Equity	213,920	225,063
Total Liabilities and Stockholders' Equity	$ 402,209	$ 401,438

* Amounts derived from the audited financial statements for the year ended December 31, 2024.

See accompanying notes to consolidated financial statements.

ALTO INGREDIENTS, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(unaudited, in thousands, except per share data)

	Three Months Ended March 31,	
	2025	2024
Net sales	$ 226,540	$ 240,629
Cost of goods sold	228,347	243,029
Gross loss	(1,807)	(2,400)
Selling, general and administrative expenses	(7,190)	(7,932)
Loss from operations	(8,997)	(10,332)
Interest expense, net	(2,729)	(1,634)
Other income, net	47	241
Loss before provision for income taxes	(11,679)	(11,725)
Provision for income taxes	—	—
Net loss	$ (11,679)	$ (11,725)
Preferred stock dividends	$ (312)	$ (315)
Net loss attributable to common stockholders	$ (11,991)	$ (12,040)
Net loss per share, basic and diluted	$ (0.16)	$ (0.17)
Weighted-average shares outstanding, basic and diluted	73,836	72,766

See accompanying notes to consolidated financial statements.

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

	Three Months Ended March 31,	
	2025	2024
Operating Activities:		

Net loss	$ (11,679)	$ (11,725)
Adjustments to reconcile net loss to net cash (used in) provided by operating activities:		
Depreciation and amortization of intangibles	6,266	5,728
Gains on derivative instruments	(1,773)	(3,338)
Non-cash compensation	848	1,142
Inventory valuation	1,170	597
Amortization of deferred financing fees	250	252
Amortization of debt discount	197	200
Credit loss (recovery)	15	(27)
Changes in operating assets and liabilities, net of business acquisition:		
Accounts receivable	(7,040)	675
Inventories	(1,711)	9,405
Other assets	417	2,106
Operating leases	(1,575)	(1,415)
Accounts payable and accrued liabilities	(3,616)	(2,171)
Net cash (used in) provided by operating activities	(18,231)	1,429
Investing Activities:		
Additions to property and equipment	(532)	(4,643)
Purchase of Kodiak Carbonic, net of cash acquired	(7,278)	—
Deferred purchase price payments for Eagle Alcohol	—	(1,400)
Net cash used in investing activities	(7,810)	(6,043)
Financing Activities:		
Net proceeds from Kinergy's line of credit	17,313	1,521
Preferred stock dividends paid	(312)	(315)
Net cash provided by financing activities	17,001	1,206
Net decrease in cash, cash equivalents and restricted cash	(9,040)	(3,408)
Cash, cash equivalents and restricted cash at beginning of period	36,211	45,480
Cash, cash equivalents and restricted cash at end of period	$ 27,171	$ 42,072
Reconciliation of total cash, cash equivalents and restricted cash:		
Cash and cash equivalents	$ 26,778	$ 29,310
Restricted cash	393	12,762
Total cash, cash equivalents and restricted cash	$ 27,171	$ 42,072
Supplemental Information:		
Interest paid	$ 2,230	$ 2,042
Interest expense capitalized	$ —	$ 886

See accompanying notes to consolidated financial statements.

ALTO INGREDIENTS, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(unaudited, in thousands)

	Preferred Stock		Common Stock		Additional Paid-In	Accumulated	Accum. Other Comprehensive	
	Shares	Amount	Shares	Amount	Capital	Deficit	Income	Total
Balances, January 1,2025	927	$ 1	76,565	$ 77	$ 1,044,176	$ (824,166)	$ 4,975	$ 225,063
Stock-based compensation	—	—	—	—	848	—	—	848
Restricted stock issued to employees and directors, net of cancellations and tax	—	—	(68)	—	—	—	—	—
Preferred stock dividends	—	—	—	—	—	(312)	—	(312)
Net loss	—	—	—	—	—	(11,679)	—	(11,679)
Balances, March 31, 2025	927	$ 1	76,497	$ 77	$ 1,045,024	$ (836,157)	$ 4,975	$ 213,920
Balances, January 1, 2024	927	$ 1	75,703	$ 76	$ 1,040,912	$ (763,913)	$ 2,481	$ 279,557
Stock-based compensation	—	—	—	—	1,142	—	—	1,142
Restricted stock issued to employees and directors, net of cancellations and tax	—	—	1,315	1	(1)	—	—	—
Preferred stock dividends	—	—	—	—	—	(315)	—	(315)
Net loss	—	—	—	—	—	(11,725)	—	(11,725)
Balances, March 31, 2024	927	$ 1	77,018	$ 77	$ 1,042,053	$ (775,953)	$ 2,481	$ 268,659

See accompanying notes to consolidated financial statements.

ALTO INGREDIENTS, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(UNAUDITED)

1. ORGANIZATION AND BASIS OF PRESENTATION.

Organization and Business – The consolidated financial statements include, for all periods presented, the accounts of Alto Ingredients, Inc., a Delaware corporation ("Alto Ingredients"), and its direct and indirect wholly-owned subsidiaries (collectively, the "Company"), including Kinergy Marketing LLC, an Oregon limited liability company ("Kinergy"), Alto Nutrients, LLC, a California limited liability company ("Alto Nutrients"), Alto Op Co., a Delaware corporation, Alto Pekin, LLC, a Delaware limited liability company ("Alto Pekin") and Alto ICP, LLC, a Delaware limited liability company ("ICP"), and the Company's production facilities in Oregon and Idaho.

As discussed in Note 2, on January 1, 2025, the Company's wholly-owned subsidiary, Alto Carbonic, LLC ("Alto Carbonic"), acquired Kodiak Carbonic, LLC, a beverage-grade liquid CO_2 processor, for $7.6 million. Alto Carbonic's facility is co-located at the Company's Columbia ethanol plant. The Company began reporting the results of Alto Carbonic in the Company's Western Production segment on January 1, 2025.

The Company produces and distributes renewable fuels, essential ingredients and specialty alcohols. The Company also markets fuel-grade ethanol produced by third parties. The Company's production facilities in Pekin, Illinois are located in the heart of the Corn Belt. The Company's two production facilities in Oregon and Idaho are located in close proximity to both feed and fuel-grade ethanol customers.

The Company has a combined alcohol production capacity of 350 million gallons per year and produces, on an annualized basis, over 1.4 million tons of essential ingredients, such as dried yeast, corn protein meal, corn protein feed, corn germ, and distillers grains and liquid feed used in commercial animal feed and pet foods. In addition, the Company markets and distributes fuel-grade ethanol produced by third parties.

The Company focuses on *Health, Home & Beauty*; *Food & Beverage*; *Industry & Agriculture; Essential Ingredients*; and *Renewable Fuels* markets. Products for the Health, Home & Beauty market include specialty alcohols used in mouthwash, cosmetics, pharmaceuticals, hand sanitizers, disinfectants and cleaners. Products for the Food & Beverage markets include grain neutral spirits used in alcoholic beverages and vinegar as well as corn germ used for corn oils. Products for Industry & Agriculture markets include alcohols and other products for paint applications and fertilizers. Products for Essential Ingredients markets include dried yeast, corn protein meal, corn protein feed, corn germ, and distillers grains and liquid feed used in commercial animal feed and pet foods. Products for Renewable Fuels markets include fuel-grade ethanol and distillers corn oil used as a feedstock for renewable diesel and biodiesel fuels.

The Company's production facilities, other than its Magic Valley plant, were operating for all periods presented subject to scheduled and unscheduled downtimes to address facility repair and maintenance. In January 2024, the Company temporarily hot-idled its Magic Valley facility to minimize losses from negative regional crush margins and to expedite the installation of additional equipment to achieve the intended production rate, quality and consistency from the Company's corn oil and high protein system at the facility. The Company restarted its Magic Valley facility in July 2024 and by October 2024, the facility consistently achieved average ethanol production rates at full capacity, the protein content yield from the plant reached 50% or greater, and the Company was able to expand its corn oil yields. Increases in regional corn basis and declining market prices for protein and corn oil resulted in overall margin compression, outweighing the economic benefits of these plant improvements. As a consequence, the Company cold-idled its Magic Valley facility on December 31, 2024 to minimize financial losses. The Company continues to provide terminal services at the plant and intends to resume operations at the facility when the economic environment in the region sustainably improves.

Basis of Presentation–Interim Financial Statements – The accompanying unaudited consolidated financial statements and related notes have been prepared in accordance with accounting principles generally accepted in the United States for interim financial information and the instructions to Form 10-Q and Rule 10-01 of Regulation S-X. Results for interim periods should not be considered indicative of results for a full year. These interim consolidated financial statements should be read in conjunction with the consolidated financial statements and related notes contained in the Company's Annual Report on Form 10-K for the year ended December 31, 2024. The accounting policies used in preparing these consolidated financial statements are the same as those described in Note 1 to the consolidated financial statements in the Company's Annual Report on Form 10-K for the year ended December 31, 2024. In the opinion of management, all adjustments (consisting of normal recurring adjustments) considered necessary for a fair statement of the results for interim periods have been included. All significant intercompany accounts and transactions have been eliminated in consolidation.

Accounts Receivable and Allowance for Credit Losses – Trade accounts receivable is presented at original invoice amount, net of the allowance for credit losses. The Company sells specialty alcohols to large consumer product companies, sells fuel-grade ethanol to gasoline refining and distribution companies, sells essential ingredients such as dried yeast for human and pet food and to animal feed customers, including distillers grains to export markets, sells those same and other feed co-products to dairy operators and animal feedlots and sells corn oil to poultry, renewable diesel and biodiesel customers, in each case generally without requiring collateral.

The carrying amount of accounts receivable is reduced by a valuation allowance that reflects the Company's best estimate of the amounts that will not be collected. The Company regularly reviews accounts receivable and based on assessments of current customer creditworthiness, estimates the portion, if any, of the customer balance that will not be collected.

Of the accounts receivable balance, approximately $52,108,000 and $44,750,000 at March 31, 2025 and December 31, 2024, respectively, were used as collateral under Kinergy's operating line of credit. The allowance for credit losses was $38,000 and $23,000 as of March 31, 2025 and December 31, 2024, respectively. The Company recorded bad debt expense of $15,000 and bad debt recoveries $27,000 for the three months ended March 31, 2025 and 2024, respectively. The Company does not have any off-balance sheet credit exposure related to its customers.

Financial Instruments – The carrying values of cash and cash equivalents, restricted cash, accounts receivable, derivative assets, accounts payable, accrued liabilities and derivative liabilities are reasonable estimates of their fair values because of the short maturity of these items. The Company believes the carrying value of its long-term debt instruments are not considered materially different than fair value.

Estimates and Assumptions – The preparation of the consolidated financial statements in conformity with accounting principles generally accepted in the United States 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. Significant estimates are required as part of determining the allowance for credit losses, net realizable value of inventory, long-lived asset impairments, valuation allowances on deferred income taxes, the

potential outcome of future tax consequences of events recognized in the Company's financial statements or tax returns, and the valuation of assets acquired and liabilities assumed as a result of business combinations. Actual results and outcomes may materially differ from management's estimates and assumptions.

2. ACQUISITION OF KODIAK CARBONIC.

On January 1, 2025, Alto Carbonic purchased 100% of the equity interests in Kodiak Carbonic, LLC, a beverage-grade liquid CO_2 processor, for $7.6 million in cash. Alto Carbonic's facility is co-located at the Company's Columbia ethanol plant. The acquisition will provide the Company further vertical integration and access to new markets in the liquid CO_2 market out of its Columbia plant.

Kodiak Carbonic's unaudited net sales for the three months ended March 31, 2025 and 2024 were $2.1 million and $1.3 million and its unaudited net income was $1.5 million and $0.4 million, respectively. The following table presents the Company's unaudited pro forma combined financial information assuming the acquisition occurred on January 1, 2024 (dollars in thousands except per share amounts):

	Three Months Ended March 31,	
	2025	2024
Revenues – pro forma	$ 226,540	$ 241,954
Net loss attributable to common stockholders – pro forma	$ (11,991)	$ (11,560)
Basic and diluted net loss per share – pro forma	$ (0.16)	$ (0.16)

The following preliminary allocation of the estimated purchase price assumes, with the exception of property and equipment and intangibles, that carrying values approximate fair value. Estimates of uncollectible accounts receivable are not considered material due to the short-term nature and customer collection history. The preliminary estimate of working capital, property and equipment and intangibles are under review by management and are subject to change. Based upon these assumptions, the preliminary purchase price allocation is as follows (in thousands):

Cash and equivalents	$ 290
Accounts receivable	219
Inventories	154
Other assets	16
Total current assets	679
Property and equipment	3,564
Total tangible assets	$ 4,243
Current liabilities	$ 360
Total liabilities	$ 360
Net tangible assets acquired	$ 3,883
Customer relationships	3,685
Total Purchase Price	$ 7,568

For the identifiable intangible assets, the Company has estimated 9 years for useful lives for customer relationships. For the three months ended March 31, 2025, the Company recorded amortization of these intangibles of $102,000. Any changes to the initial estimates of the fair value of the acquired assets and assumed liabilities will be recorded as adjustments to those assets and liabilities and residual amounts will be allocated to goodwill if net assets acquired are less than the purchase price. The Company did not incur any material acquisition costs.

3. SEGMENTS.

A segment is a component of an enterprise whose operating results are regularly reviewed by the enterprise's chief operating decision maker ("CODM") to make decisions about resources to be allocated to the segment and assess its performance, and for which discrete financial information is available. The Company's CODM is the Company's executive committee, which is led by the Company's Chief Executive Officer ("CEO") and includes its Chief Financial Officer, Chief Operating Officer, Chief Commercial Officer and Chief Legal Officer ("Executive Committee"). The Company manages and assesses the performance of its reportable segments by its gross profit (loss). As part of the Executive Committee's review of segment-level performance, each member of the Executive Committee reviews the gross profit of the Company's reportable segments and provides expertise and analysis from their respective areas which drive the evaluation of the performance of the Company's reportable segments and allocation of resources to those segments. Even though the CEO has the authority to override the other members for strategic or other reasons, key decisions are made jointly by the Executive Committee.

The Company reports financial and operating performance in three reportable segments (1) Pekin production, which includes the entire campus in Pekin, Illinois ("Pekin Campus"), (2) marketing and distribution, which includes marketing and merchant trading for Company-produced specialty alcohols, fuel-grade ethanol and essential ingredients, and sales of fuel-grade ethanol sourced from third parties, and (3) Western production, which includes the Company's two western production facilities and, beginning for the three months ended March 31, 2025, its liquid CO_2 plant on an aggregated basis ("Western production").

The following tables set forth certain financial data for the Company's operating segments (in thousands):

Net Sales	Three Months Ended March 31, 2025	2024
Pekin Campus production, recorded as gross:		
Alcohol sales	$ 107,234	$ 108,350
Essential ingredient sales	44,618	46,709
Intersegment sales	297	321
Total Pekin Campus sales	152,149	155,380
Marketing and distribution:		
Alcohol sales, gross	$ 48,997	$ 54,431
Alcohol sales, net	61	34
Intersegment sales	2,506	2,752
Total marketing and distribution sales	51,564	57,217
Western production, recorded as gross:		
Alcohol sales	$ 16,194	$ 20,231
Essential ingredient sales	7,808	7,826
Intersegment sales	264	—
Total Western production sales	24,266	28,057
Corporate and other	1,628	3,048
Intersegment eliminations	(3,067)	(3,073)
Net sales as reported	$ 226,540	$ 240,629
Cost of goods sold:		
Pekin Campus production	$ 155,222	$ 151,112
Marketing and distribution	47,650	53,685
Western production	25,524	36,517
Corporate and other	1,681	2,794
Intersegment eliminations	(1,730)	(1,079)
Cost of goods sold as reported	$ 228,347	$ 243,029
Gross profit (loss):		
Pekin Campus production	$ (3,073)	$ 4,268
Marketing and distribution	3,914	3,532
Western production	(1,258)	(8,460)
Corporate and other	(53)	254
Intersegment eliminations	(1,337)	(1,994)
Gross loss as reported	$ (1,807)	$ (2,400)
Gain (loss) before provision for income taxes:		
Pekin Campus production	$ (7,364)	$ 108
Marketing and distribution	1,563	1,305
Western production	(3,905)	(10,976)
Corporate and other	(1,973)	(2,162)
	$ (11,679)	$ (11,725)
Depreciation and amortization expense:		
Pekin Campus production	$ 5,456	$ 5,035
Western production	640	465
Corporate and other	170	228
	$ 6,266	$ 5,728
Interest expense, net of capitalized interest:		
Pekin Campus production	$ 610	$ 261
Marketing and distribution	83	96
Western production	1,359	630
Corporate and other	677	647
	$ 2,729	$ 1,634

The following table sets forth the Company's total assets by operating segment (in thousands):

Total assets:	March 31, 2025	December 31, 2024
Pekin Campus production	$ 216,152	$ 223,934
Marketing and distribution	118,130	102,895
Western production	46,470	44,992
Corporate and other	21,457	29,617
	$ 402,209	$ 401,438

4. INVENTORIES.

Inventories consisted primarily of bulk ethanol, specialty alcohols, corn, essential ingredients and unleaded fuel, and are valued at the lower of cost or net realizable value, with cost determined on a first-in, first-out basis. Inventory is net of a valuation allowance of $1,170,000 and $2,050,000 as of March 31, 2025 and December 31, 2024, respectively. Inventory balances consisted of the following (in thousands):

	March 31, 2025	December 31, 2024
Finished goods	$ 28,526	$ 31,120
Work in progress	3,788	4,203
Raw materials	12,451	8,989
Other	5,844	5,602
Total	$ 50,609	$ 49,914

5. DERIVATIVES.

The business and activities of the Company expose it to a variety of market risks, including risks related to changes in commodity prices. The Company monitors and manages these financial exposures as an integral part of its risk management program. This program recognizes the unpredictability of financial markets and seeks to reduce the potentially adverse effects that market volatility could have on operating results.

Commodity Risk – Cash Flow Hedges – The Company uses derivative instruments to protect cash flows from fluctuations caused by volatility in commodity prices for periods of up to twelve months in order to protect gross profit margins from potentially adverse effects of market and price volatility on alcohol sales and purchase commitments where the prices are set at a future date and/or if the contracts specify a floating or index-based price. In addition, the Company hedges anticipated sales of alcohol to minimize its exposure to the potentially adverse effects of price volatility. These derivatives may be designated and documented as cash flow hedges and effectiveness is evaluated by assessing the probability of the anticipated transactions and regressing commodity futures prices against the Company's purchase and sales prices. Ineffectiveness, which is defined as the degree to which the derivative does not offset the underlying exposure, is recognized immediately in cost of goods sold. For the three months ended March 31, 2025 and 2024, the Company did not designate any of its derivatives as cash flow hedges.

Commodity Risk – Non-Designated Hedges – The Company uses derivative instruments to lock in prices for certain amounts of corn and alcohols by entering into exchange-traded futures contracts or options for those commodities. These derivatives are not designated for hedge accounting treatment. The changes in fair value of these contracts are recorded on the balance sheet and recognized immediately in cost of goods sold. The Company recognized net gains of $1,773,000 and $3,338,000 as the change in the fair value of these contracts for the three months ended March 31, 2025 and 2024, respectively.

Non – Designated Derivative Instruments – The classification and amounts of the Company's derivatives not designated as hedging instruments, and related cash collateral balances, are as follows (in thousands):

	As of March 31, 2025			
	Assets		Liabilities	
Type of Instrument	Balance Sheet Location	Fair Value	Balance Sheet Location	Fair Value
Cash collateral balance	Restricted cash	$ 393		
Commodity contracts	Derivative instruments	$ 4,071	Derivative instruments	$ 301

	As of December 31, 2024			
	Assets		Liabilities	
Type of Instrument	Balance Sheet Location	Fair Value	Balance Sheet Location	Fair Value
Cash collateral balance	Restricted cash	$ 742		
Commodity contracts	Derivative instruments	$ 3,313	Derivative instruments	$ 1,177

The above amounts represent the gross balances of the contracts; however, the Company does have a right of offset with each of its derivative brokers, but the Company's intent is to close out positions individually, therefore the positions are reported at gross.

The classification and amounts of the Company's realized gains for its derivatives not designated as hedging instruments are as follows (in thousands):

		Realized Gains For the Three Months Ended March 31,	
Type of Instrument	Statements of Operations Location	2025	2024
Commodity contracts	Cost of goods sold	$ 139	$ 148
		$ 139	$ 148

		Unrealized Gains For the Three Months Ended March 31,	
Type of Instrument	Statements of Operations Location	2025	2024

Commodity contracts	Cost of goods sold	$ 1,634	$ 3,190
		$ 1,634	$ 3,190

6. DEBT.

Long-term borrowings are summarized as follows (in thousands):

	March 31, 2025	December 31, 2024
Kinergy line of credit	$ 56,990	$ 39,677
Orion term loan	60,000	60,000
	116,990	99,677
Less unamortized debt discount	(2,892)	(3,089)
Less unamortized debt financing costs	(3,434)	(3,684)
Less current portion	—	—
Long-term debt	$ 110,664	$ 92,904

Excess Availability – As of March 31, 2025, Kinergy had $11.7 million in unused borrowing availability under its line of credit and the Company had $65.0 million that may be available for capital improvement projects under its Orion term loan, subject to certain conditions.

7. COMMITMENTS AND CONTINGENCIES.

Sales Commitments – At March 31, 2025, the Company had entered into sales contracts with its major customers to sell certain quantities of alcohol and essential ingredients. The Company had open indexed-price alcohol sales contracts for 92,716,000 gallons as of March 31, 2025 and open fixed-price alcohol sales contracts totaling $170,436,000 as of March 31, 2025. The Company had open fixed-price sales contracts for essential ingredients totaling $9,085,000 and open indexed-price sales contracts of essential ingredients for 19,000 tons as of March 31, 2025. These sales contracts are scheduled to be completed throughout 2025.

Purchase Commitments – At March 31, 2025, the Company had indexed-price purchase contracts to purchase 11,766,000 gallons of alcohol and fixed-price purchase contracts to purchase $278,000 of alcohol from its suppliers. The Company had fixed-price purchase contracts to purchase $46,233,000 of corn from its suppliers as of March 31, 2025. The Company had indexed-price contracts to purchase 6,743,000 MMBTU of natural gas as of March 31, 2025. The Company also had future commitments for certain capital projects totaling $10,790,000. These purchase commitments are scheduled to be satisfied throughout 2025.

Litigation – General – The Company is subject to various claims and contingencies in the ordinary course of its business, including those related to litigation, business transactions, employee-related matters, environmental regulations, and others. When the Company is aware of a claim or potential claim, it assesses the likelihood of any loss or exposure. If it is probable that a loss will result and the amount of the loss can be reasonably estimated, the Company will record a liability for the loss. If the loss is not probable or the amount of the loss cannot be reasonably estimated, the Company discloses the claim if the likelihood of a potential loss is reasonably possible and the amount involved could be material. While the Company can provide no assurances, the Company does not expect that any of its pending legal proceedings will have a material impact on the Company's financial condition or results of operations.

8. PENSION PLANS.

The Company sponsors a defined benefit pension plan (the "Retirement Plan") and a healthcare and life insurance plan (the "Postretirement Plan").

The Retirement Plan is noncontributory and covers only "grandfathered" unionized employees at the Company's Pekin, Illinois facility who fulfill minimum age and service requirements. Benefits are based on a prescribed formula based upon the employee's years of service. The Retirement Plan, which is part of a collective bargaining agreement, covers only union employees hired prior to November 1, 2010.

The Company uses a December 31 measurement date for its Retirement Plan. The Company's funding policy is to make the minimum annual contribution required by applicable regulations. As of December 31, 2024, the Retirement Plan's accumulated projected benefit obligation was $17.5 million, with a fair value of plan assets of $20.1 million. The overfunded amount of $2.6 million is recorded on the Company's consolidated balance sheet in other assets. For the three months ended March 31, 2025, the Retirement Plan's net periodic benefit was $22,000, comprised of $313,000 in expected return on plan assets, partially offset by $234,000 in interest cost and $57,000 in service cost. For the three months ended March 31, 2024, the Retirement Plan's net periodic expense was $13,000, comprised of $222,000 in interest cost and $67,000 in service cost, partially offset by $276,000 of expected return on plan assets.

The Postretirement Plan provides postretirement medical benefits and life insurance to certain "grandfathered" unionized employees at the Company's Pekin, Illinois facility. Employees hired after December 31, 2000 are not eligible to participate in the Postretirement Plan. The Postretirement Plan is contributory, with contributions required at the same rate as active employees. Benefit eligibility under the plan reduces at age 65 from a defined benefit to a defined dollar cap based upon years of service. As of December 31, 2024, the Postretirement Plan's accumulated projected benefit obligation was $3.8 million and is recorded on the Company's consolidated balance sheet in other liabilities. The Company's funding policy is to make the minimum annual contribution required by applicable regulations. For the three months ended March 31, 2025, the Postretirement Plan's net periodic expense was $25,000, comprised of $48,000 of interest cost and $4,000 of service cost, partially offset by $27,000 in amortization of net gains. For the three months ended March 31, 2024, the Postretirement Plan's net periodic expense was $54,000, comprised of $49,000 of interest cost and $5,000 of service cost.

9. FAIR VALUE MEASUREMENTS.

The fair value hierarchy prioritizes the inputs used in valuation techniques into three levels, as follows:

- Level 1 – Observable inputs – unadjusted quoted prices in active markets for identical assets and liabilities;

- Level 2 – Observable inputs other than quoted prices included in Level 1 that are observable for the asset or liability through corroboration with market data; and

- Level 3 – Unobservable inputs – includes amounts derived from valuation models where one or more significant inputs are unobservable. For fair value measurements using significant unobservable inputs, a description of the inputs and the information used to develop the inputs is required along with a reconciliation of Level 3 values from the prior reporting period.

Pooled separate accounts – Pooled separate accounts invest primarily in domestic and international stocks, commercial paper or single mutual funds. The net asset value is used as a practical expedient to determine fair value for these accounts. Each pooled separate account provides for redemptions by the Retirement Plan at reported net asset values per share, with little to no advance notice requirement, therefore these funds are classified within Level 2 of the valuation hierarchy.

Other Derivative Instruments – The Company's other derivative instruments consist of commodity positions. The fair values of the commodity positions are based on quoted prices on the commodity exchanges and are designated as Level 1 inputs.

Long-Lived Assets – Long-lived assets consist of the Company's estimated fair value associated with its Magic Valley facility. See Note 1 for additional information. The fair value of the long-lived assets are based on present value of estimated future cash flows and are designated as Level 3 inputs.

The following table summarizes recurring and nonrecurring fair value measurements by level at March 31, 2025 (in thousands):

	Fair Value	Level 1	Level 2	Level 3
Assets:				
Derivative financial instruments	$ 4,071	$ 4,071	$ —	$ —
Liabilities:				
Derivative financial instruments	$ 301	$ 301	$ —	$ —

The following table summarizes recurring and nonrecurring fair value measurements by level at December 31, 2024 (in thousands):

	Fair Value	Level 1	Level 2	Level 3	Benefit Plan Percentage Allocation
Assets:					
Derivative financial instruments	$ 3,313	$ 3,313	$ —	$ —	
Long-lived assets – Magic Valley	19,397	—	—	19,397	
Defined benefit plan assets(1) (pooled separate accounts):					
Large U.S. Equity(2)	6,962	—	6,962	—	34%
Small/Mid U.S. Equity(3)	3,636	—	3,636	—	18%
International Equity(4)	2,762	—	2,762	—	14%
Fixed Income(5)	6,807	—	6,807	—	34%
	$ 42,877	$ 3,313	$ 20,167	$ 19,397	
Liabilities:					
Derivative financial instruments	$ 1,177	$ 1,177	$ —	$ —	

(1) Included in other assets in the consolidated balance sheets.
(2) This category includes investments in funds comprised of equity securities of large U.S. companies. The funds are valued using the net asset value method in which an average of the market prices for the underlying investments is used to value the fund.
(3) This category includes investments in funds comprised of equity securities of small- and medium-sized U.S. companies. The funds are valued using the net asset value method in which an average of the market prices for the underlying investments is used to value the fund.
(4) This category includes investments in funds comprised of equity securities of foreign companies including emerging markets. The funds are valued using the net asset value method in which an average of the market prices for the underlying investments is used to value the fund.
(5) This category includes investments in funds comprised of U.S. and foreign investment-grade fixed income securities, high-yield fixed income securities that are rated below investment-grade, U.S. treasury securities, mortgage-backed securities, and other asset-backed securities. The funds are valued using the net asset value method in which an average of the market prices for the underlying investments is used to value the fund.

10. EARNINGS PER SHARE.

The following tables compute basic and diluted earnings per share (in thousands, except per share data):

	Three Months Ended March 31, 2025		
	Loss Numerator	Shares Denominator	Per-Share Amount
Net loss	$ (11,679)		
Less: Preferred stock dividends	(312)		
Basic and diluted loss per share:			
Net loss attributable to common stockholders	$ (11,991)	73,836	$ (0.16)

	Three Months Ended March 31, 2024		
	Loss Numerator	Shares Denominator	Per-Share Amount
Net loss	$ (11,725)		
Less: Preferred stock dividends	(315)		
Basic and diluted loss per share:			
Net loss attributable to common stockholders	$ (12,040)	72,766	$ (0.17)

There were additional aggregate potentially dilutive weighted-average shares of 981,000 from convertible securities outstanding for the three months ended March 31, 2025 and 2024. These securities were not considered in calculating diluted net loss per share for the three months ended March 31, 2025 and 2024, as their effect would have been anti-dilutive.

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

The following discussion and analysis should be read in conjunction with our consolidated financial statements and notes to consolidated financial statements included elsewhere in this report. This report and our consolidated financial statements and notes to consolidated financial statements contain forward-looking statements, which generally include the plans and objectives of management for future operations, including plans and objectives relating to our future economic performance and our current beliefs regarding revenues we might generate and profits we might earn if we are successful in implementing our business and growth strategies. The forward-looking statements and associated risks may include, relate to or be qualified by other important factors, including:

- fluctuations in the market prices of alcohols and essential ingredients;
- fluctuations in the costs of key production input commodities such as corn and natural gas;
- our ability to fund, and the costs, timing and effects of, our plant improvement initiatives and other capital projects, including our carbon capture and storage, or CCS, initiative;
- regulatory developments relating to our initiatives and projects or to our business, including our CCS initiative;
- the projected growth or contraction in the alcohol and essential ingredients markets in which we operate;
- our strategies for expanding, maintaining or contracting our presence in these markets;
- anticipated trends in our financial condition and results of operations; and
- our ability to distinguish ourselves from our current and future competitors.

You are cautioned not to place undue reliance on any forward-looking statements, which speak only as of the date of this report, or in the case of a document incorporated by reference, as of the date of that document. We do not undertake to update, revise or correct any forward-looking statements, except as required by law.

Any of the factors described immediately above or referenced from time to time in our filings with the Securities and Exchange Commission or in the "Risk Factors" section below could cause our financial results, including our net income or loss or growth in net income or loss to differ materially from prior results, which in turn could, among other things, cause the price of our common stock to fluctuate substantially.

Overview

We are a leading producer and distributor of specialty alcohols, renewable fuels and essential ingredients in the United States.

We operate five alcohol production facilities. Three of our production facilities are located in Illinois, one is located in Oregon and another is located in Idaho. We have an annual alcohol production capacity of 350 million gallons, including both renewable fuels and specialty alcohols ranging from industrial-, pharmaceutical-, and high-quality food- and beverage-grade alcohols. Of this amount, we can produce up to 110 million gallons annually of specialty alcohols, depending on our product mix among high-quality beverage-grade alcohol and other quality specification alcohols. We market and distribute all of the alcohols produced at our facilities as well as alcohols produced by third parties. In 2024, we marketed and distributed approximately 386 million gallons combined of our own produced alcohols as well as fuel-grade ethanol produced by third parties, and over 1.4 million tons of essential ingredients on a dry matter basis.

We also own and operate a liquid CO_2 production facility adjacent to our plant in Oregon for the offtake of CO_2 gas from the plant for conversion to liquid CO_2 and subsequent sale. In addition, we break bulk distribute specialty alcohols, produced by us and third parties, through our Eagle Alcohol business.

We report our financial and operating performance in three distinct segments:

- ***Pekin production***, which includes the production and sale of alcohols and essential ingredients produced at our three production facilities located in Pekin, Illinois, which we refer to as our Pekin Campus;
- ***Marketing and distribution***, which includes marketing and merchant trading for company-produced alcohols and essential ingredients on an aggregated basis, and sales of fuel-grade ethanol sourced from third parties; and

- ***Western production***, which includes the production and sale of renewable fuels and essential ingredients and, beginning in 2025, liquid CO_2 produced at our western production facilities, including our liquid CO_2 plant, on an aggregated basis, none of which are individually so significant as to be considered a separately reportable segment.

Our mission is to produce the highest quality, sustainable ingredients that make everyday products better. We intend to accomplish this goal in part by investing in our specialized and higher value specialty alcohol production and distribution infrastructure, expanding production in high-demand essential ingredients, expanding and extending the sale of our products into new regional and international markets, building efficiencies and economies of scale and by capturing a greater portion of the value stream.

Production Segments

We produce specialty alcohols, renewable fuels and essential ingredients, focusing on five key markets: *Health, Home & Beauty*; *Food & Beverage*; *Industry & Agriculture*; *Essential Ingredients*; and *Renewable Fuels*. Products for *Health, Home & Beauty* markets include specialty alcohols used in mouthwash, cosmetics, pharmaceuticals, hand sanitizers, disinfectants and cleaners. Products for *Food & Beverage* markets include grain neutral spirits used in alcoholic beverages and vinegar and corn germ used for corn oils. Products for *Industry & Agriculture* markets include alcohols and other products for paint applications and fertilizers. Products for *Essential Ingredients* markets include dried yeast, corn protein meal, corn protein feed, corn germ, distillers grains, liquid CO_2 and liquid feed used in commercial animal feed and pet foods. We also sell yeast and liquid CO_2 for human consumption. Our products for the *Renewable Fuels* markets include fuel-grade ethanol and distillers corn oil used as a feedstock for renewable diesel and biodiesel fuels.

We produce our alcohols and essential ingredients at our facilities described below. Our production facilities located in Illinois are in the heart of the Corn Belt, benefit from relatively low-cost and abundant feedstock and enjoy logistical advantages that enable us to provide our products to both domestic and international markets via truck, rail or barge. Our production facilities located in Oregon and Idaho are near their respective fuel and feed customers, offering significant timing, product transportation cost and logistical advantages.

All of our production facilities, other than our Magic Valley plant, were operating for all of 2024, subject to scheduled and unscheduled downtimes to address facility repair and maintenance.

In January 2024, we temporarily hot-idled our Magic Valley facility to minimize losses from negative regional crush margins and to expedite the installation of additional equipment to achieve the intended production rate, quality and consistency from our corn oil and high protein system at the facility. We restarted our Magic Valley facility in July 2024 and by October 2024, the facility consistently achieved average ethanol production rates at full capacity, the protein content yield from the plant reached 50% or greater, and we were able to expand our corn oil yields. Increases in regional corn basis and declining market prices for protein and corn oil resulted in overall margin compression, outweighing the economic benefits of our plant improvements. As a consequence, we cold-idled our Magic Valley facility on December 31, 2024 to minimize financial losses. We continue to provide terminal services at the plant and intend to resume operations at the facility when the economic environment in the region sustainably improves. We believe that the cold-idling of our Magic Valley facility will have a positive impact on our overall financial results in 2025 compared to 2024.

As market conditions change, we may increase, decrease or idle production at one or more operating facilities or resume operations at any idled facility.

Marketing and Distribution Segment

We market and distribute all the alcohols and essential ingredients we produce at our facilities. We also market and distribute alcohols produced by third parties.

We have extensive and long-standing customer relationships, both domestic and international, for our specialty alcohols, renewable fuels and essential ingredients. These customers include producers and distributors of ingredients for cosmetics, sanitizers and related products, distilled spirits producers, food products manufacturers, producers of personal health/consumer health and personal care hygiene products, and global trading firms.

Our renewable fuels customers are located throughout the Western and Midwestern United States and consist of integrated oil companies and gasoline marketers who blend fuel-grade ethanol into gasoline. Our customers depend on us to provide a reliable supply of fuel-grade ethanol and manage the logistics and timing of delivery. Our customers collectively require fuel-grade ethanol volumes in excess of the supplies we produce at our facilities. We secure additional fuel-grade ethanol supplies from third-party ethanol producers. We arrange for transportation, storage and delivery of fuel-grade ethanol purchased by our customers through our agreements with third-party service providers in the Western United States as well as in the Midwest from a variety of sources.

We market food-grade essential ingredients to human and pet food markets, our feed products (such as distillers grains) primarily to export markets from our Pekin Campus, and other feed products to dairies and feedlots, in many cases located near our production facilities. These customers use our feed products for livestock as a substitute for corn and other sources of starch and protein. We sell our corn oil to poultry, renewable diesel and biodiesel customers.

See “Note 3 – Segments” to our Notes to Consolidated Financial Statements included elsewhere in this report for financial information about our business segments.

Current Initiatives and Outlook

Our first quarter results for 2025 improved compared to the same period in 2024, as reflected in part by better gross margin and Adjusted EBITDA. Adjusted EBITDA improved to negative $4.4 million for the first quarter from negative $7.1 million for the same period in 2024. Adjusted EBITDA is defined and reconciled against consolidated net loss below. These results include a savings of $4.8 million due to the cold-idling of our Magic Valley plant at the end of the fourth quarter. These results also reflect our operational uptime and our carbon optimization initiative, which was driven by our acquisition on January 1, 2025 of a beverage-grade liquid CO_2 processing plant adjacent to our Columbia facility. The combined ownership of our Columbia assets contributed $2.9 million of improvement to our Adjusted EBITDA for the first quarter and has enabled synergies, allowing for reduced management and staffing costs while enhancing operational coordination and overall productivity across the combined site. We continue to optimize these assets, which should facilitate additional benefits, such as longer-term feed sales commitments and expanded premium liquid CO_2 sales. As anticipated, this acquisition improved our Columbia facility’s economics and increased its asset valuation.

During the first quarter, we continued our efforts to rationalize our business and right size our staffing to better align with our current operational footprint. During the fourth quarter and into the first quarter, we reduced headcount by a total of 16%. As a result, we expect to save approximately $8 million annually, with the financial benefit starting in the second quarter. We have completed our planned reorganization but will continue to evaluate opportunities to reduce expenses. We are prioritizing quick-return projects, including water and energy optimization, that would reduce utility costs and lower our carbon footprint.

Our Pekin Campus's results for the first quarter illustrate our ability to quickly shift production to capitalize on favorable market trends. For example, to diversify our revenue streams, we earned International Sustainability and Carbon Certification, or ISCC, in the third quarter and in the fourth quarter began exporting qualified renewable fuel to European markets. This certification has enabled us to access higher margin sales compared to domestic markets. During the first quarter, we experienced solid demand for ISCC certified renewable fuel priced at a premium to domestic fuel-grade ethanol. In the first quarter, we also grew ISCC sales as a percentage of our total renewable fuel volume sold from our Pekin Campus. As a result, ISCC sales partially offset some domestic market challenges.

Premiums on domestic high quality alcohol for the first quarter were generally lower than in the same period in 2024 due to increased competition in the marketplace. In addition, prices for essential ingredients declined as a result of higher industry supply from increased soy crush to support renewable diesel fuel demand.

In late March and early April, we completed our scheduled seasonal outages at our Pekin Campus facilities. The repairs and maintenance successfully achieved our goal of sustaining the improved plant utilization rates set last year following our biennial outage in the second quarter of 2024. Unfortunately, in early April, during a period of rapidly rising river levels, our Pekin Campus loadout dock was damaged, negatively impacting production, logistics and overall Pekin Campus economics. In response, we implemented temporary solutions and we are now back to full operation. We are assessing our long-term remediation options and we are also working with our insurance carrier to mitigate the financial impact of the damage and the interruption to our business.

Thus far in 2025, we have experienced typical seasonal market patterns with spreads between corn and ethanol prices comparable year over year. These crush margins improved sequentially each month during the first quarter and have further improved in April as a result of lower production rates associated with industry-wide scheduled springtime plant outages. Despite these improvements, margin expansion remains largely restrained due to high industry inventory levels with production outpacing demand. Absent a meaningful reduction in ethanol supply or a relative increase in demand, substantial crush spread improvements may be constrained. Although we remain optimistic that margins will continue to improve with higher demand during the summer driving season, we have concerns over tariffs and restrictions on Chinese vessels, introducing greater uncertainty around the export market. While these factors are largely beyond our control, we will continue our efforts to minimize their impact on our business. Nevertheless, as noted above, we have experienced solid exports in the first quarter from our ISCC sales into European markets.

The Environmental Protection Agency, or EPA, issued a recent E15 fuel waiver allowing higher blending rates for an extended period through May 20th. Although this is a temporary waiver, we expect the EPA to issue new waivers to permit E15 blending through summer. We are also optimistic that pending national legislation will pass later this year resulting in long-sought after permanent year-round E15 adoption nationwide. In addition, there is growing support for E15 adoption in California. The California Assembly recently passed a bill aimed at accelerating the approval process for E15 fuel blends. Moreover, California's Governor Newsom has directed the California Air Resources Board to expedite its review, citing potential benefits such as lower gas prices and reduced emissions. According to the latest Energy Information Administration reports, California's 13.4 billion gallons of annual fuel consumption represents 11.6% of national volume. A five-percentage point increase in ethanol blending from 10% to 15% in California alone could result in an additional 670 million gallons sold annually. Further, national adoption of year-round E15 blending could boost ethanol demand by an estimated 5 to 7 billion gallons. Since the U.S. has approximately 18 billion gallons of ethanol production capacity and domestic demand is approximately 14.4 billion gallons, the national adoption of year-round E15 blending combined with strong exports would utilize, over time, much of the excess production capacity and produce greater margin stability. Beyond supply and demand considerations, we also believe that year-round E15 adoption would have positive economic and environmental impacts, such as reducing greenhouse gas emissions, supporting farmers and lowering fuel costs for consumers.

Senate Bill 1723 in Illinois is under consideration to prevent CO_2 sequestration activity that overlies, underlies or passes through a sole-source aquifer. This would include the Mahomet Aquifer, which underlies multiple counties across Illinois including an area currently contemplated for storage in our Class VI permit application for our CCS initiative. Together with our CCS partner, Vault 44.01, and other potentially affected parties, we are working with elected officials to address concerns to minimize or eliminate the potential legal impact of this legislation on our CCS initiative. We are also developing alternatives to ensure that we optimize the value of our CO_2 production despite the outcome of this legislation, including the potential relocation of our proposed CO_2 storage location. In addition, we are working with leaders in Illinois on Senate Bill 41, named the Clean Transportation Standard Act, to develop clean ground transportation standards to reduce the lifecycle carbon intensity of fuels that are similar to the standards adopted on the West Coast.

We continue to execute our long-term plan to diversify revenue and mitigate the volatility of commodities. We have leveraged our plant flexibility and our efforts are working. New initiatives in beverage-grade CO_2 and ISCC qualified renewable fuel have been economically beneficial. Additionally, our efficiency measures have reduced our expense run rate going forward. Although the regulatory environment remains dynamic, there are encouraging developments, including the increasing state and potential national adoption of year-round E15 blending. Also, as noted above, the Illinois Clean Transportation Standard Act presents exciting possibilities that could further support industry growth and innovation. Our team will continue to proactively evaluate alternatives for new revenue streams and value, leverage our flexible and unique plant assets, and work to drive long-term shareholder value on a sustainable, consistent basis.

Use of Non-GAAP Financial Measures

Management believes that certain financial measures not in accordance with generally accepted accounting principles, or GAAP, are useful measures of operations. Management provides EBITDA and Adjusted EBITDA as non-GAAP financial measures so that investors will have the same financial information that management uses, which may assist investors in properly assessing our performance on a period-over-period basis.

We define EBITDA as unaudited consolidated net income (loss) before interest expense, interest income, provision for income taxes and depreciation and amortization expense. We define Adjusted EBITDA as unaudited consolidated net income (loss) before interest expense, interest income, unrealized derivative gains and losses, acquisition-related expense, asset impairments, provision for income taxes and depreciation and amortization expense.

A table is provided below to reconcile Adjusted EBITDA to its most directly comparable GAAP measure, consolidated net income (loss). EBITDA and Adjusted EBITDA are not measures of financial performance under GAAP and should not be considered as alternatives to consolidated net income (loss) or any other measure of performance under GAAP, or to cash flows from operating, investing or financing activities as an indicator of cash flows or as a measure of liquidity. EBITDA and Adjusted EBITDA have limitations as analytical tools and you should not consider these measures in isolation or as a substitute for analysis of our results as reported under GAAP.

Information reconciling forward-looking EBITDA or Adjusted EBITDA to forward-looking consolidated net income (loss) would require a forward-looking statement of consolidated net income (loss) prepared in accordance with GAAP, which is unavailable to us without unreasonable effort. We are not able to provide a quantitative reconciliation of forward-looking EBITDA or Adjusted EBITDA to forward-looking consolidated net income (loss) because certain items required for reconciliation are uncertain, outside of our control and/or cannot reasonably be predicted, such as net sales, cost of goods sold, unrealized derivative gains and losses, asset impairments and provision (benefit) for income taxes, which we view as the most material components of consolidated net income (loss) that are not presently estimable.

Reconciliation of Adjusted EBITDA to Consolidated Net Loss

	Three Months Ended March 31,	
(in thousands) (unaudited)	2025	2024
Consolidated net loss	$ (11,679)	$ (11,725)
Adjustments:		
Interest expense, net	2,729	1,634
Interest income	(84)	(175)
Unrealized derivative gains	(1,634)	(3,190)
Acquisition-related expense	—	675
Depreciation and amortization expense	6,266	5,728
Total adjustments	7,277	4,672
Adjusted EBITDA	$ (4,402)	$ (7,053)

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these financial statements requires us to make estimates and judgments 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 net sales and expenses for each period. We believe that of our significant accounting policies, the following critical accounting policies and estimates are those policies that we believe are the most important to the portrayal of our financial condition and results of operations and that require management's most difficult, subjective or complex judgments, often as a result of the need to make estimates about the effects of matters that are inherently uncertain: accounting for business combinations; revenue recognition; impairment of long-lived assets; valuation allowance for deferred taxes and derivative instruments. Except as noted below, these significant accounting principles are more fully described in "Management's Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Policies and Estimates" in our Annual Report on Form 10-K for the year ended December 31, 2024.

Results of Operations

Selected Financial Information

The following selected financial information should be read in conjunction with our consolidated financial statements and notes to our consolidated financial statements included elsewhere in this report, and the other sections of "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained in this report.

Certain performance metrics that we believe are important indicators of our results of operations:

	Three Months Ended March 31,	
(unaudited)	2025	2024
Alcohol Sales (gallons in millions)		
Pekin Campus renewable fuel gallons sold	32.6	31.8
Western production renewable fuel gallons sold	8.3	11.2
Third party renewable fuel gallons sold	24.4	29.7
Total renewable fuel gallons sold	65.3	72.7
Specialty alcohol gallons sold	24.3	26.3
Total gallons sold	89.6	99.0
Sales Price per Gallon		
Pekin Campus	$ 1.90	$ 1.90
Western production	$ 1.95	$ 1.80
Marketing and distribution	$ 2.01	$ 1.83
Average sales price per gallon	$ 1.93	$ 1.86
Alcohol Production (gallons in millions)		
Pekin Campus	54.3	53.6
Western production	8.3	9.7
Total	62.6	63.3
Corn Cost per Bushel		
Pekin Campus	$ 4.65	$ 4.73
Western production	$ 5.95	$ 5.89
Average corn cost per bushel	$ 4.81	$ 4.92

Average Market Metrics		
PLATTS Ethanol price per gallon	$ 1.71	$ 1.56
CME Corn cost per bushel	$ 4.72	$ 4.35
Board corn crush per gallons (1)	$ 0.02	$ 0.01
Essential Ingredients Sold (thousand tons)		
Pekin Campus:		
Distillers grains	90.7	87.7
CO2	45.3	39.1
Corn wet feed	34.5	25.6
Corn dry feed	23.8	18.9
Corn oil and germ	19.6	17.8
Syrup and other	8.2	9.5
Corn meal	9.4	8.3
Yeast	6.4	5.7
Total Pekin Campus essential ingredients sold	237.9	212.6
Western production:		
Distillers grains	58.1	71.8
CO2	12.6	13.3
Syrup and other	0.8	14.2
Corn oil	1.4	1.5
Total Western production essential ingredients sold	72.9	100.8
Total Essential Ingredients Sold	310.8	313.4
Essential ingredients return % (2)		
Pekin Campus return	48.0%	52.1%
Western production return	49.0%	39.3%
Consolidated total return	48.2%	49.8%

(1) Assumes corn conversion of 2.80 gallons of alcohol per bushel of corn.
(2) Essential ingredients revenues as a percentage of total corn costs consumed.

Net Sales, Cost of Goods Sold and Gross Loss

The following table presents our net sales, cost of goods sold and gross profit (loss) in dollars and gross profit (loss) as a percentage of net sales (in thousands, except percentages):

	Three Months Ended March 31,		Change in	
	2025	2024	Dollars	Percent
Net sales	$ 226,540	$ 240,629	$ (14,089)	(5.9)%
Cost of goods sold	228,347	243,029	(14,682)	(6.0)%
Gross loss	$ (1,807)	$ (2,400)	$ (593)	(24.7)%
Percentage of net sales	*(0.8)%*	*(1.0)%*		

Net Sales

The decrease in our consolidated net sales for the three months ended March 31, 2025 as compared to the same period in 2024 is attributable to fewer total gallons sold as well as lower volumes and lower average sales prices of essential ingredients due to a lower commodity price environment, partially offset by an increase in our average sales prices per gallon for both specialty alcohols and renewable fuel.

Pekin Campus Production Segment

Net sales of alcohol from our Pekin Campus production segment declined by $1.2 million, or 1%, to $107.2 million for the three months ended March 31, 2025 as compared to $108.4 million for the same period in 2024. Our total volume of production gallons sold decreased by 0.7 million gallons, or 1%, to 56.5 million gallons for the three months ended March 31, 2025 as compared to 57.2 million gallons for the same period in 2024. The segment's average sales price per gallon remained flat for the three months ended March 31, 2025 as compared to the same period in 2024. With the segment's average sales price per gallon of $1.90 for the three months ended March 31, 2025, we generated $1.2 million less in net sales from the 0.7 million fewer gallons of alcohol sold in the three months ended March 31, 2025 as compared to the same period in 2024.

Net sales of essential ingredients from our Pekin Campus production segment declined by $2.1 million, or 4%, to $44.6 million for the three months ended March 31, 2025 as compared to $46.7 million for the same period in 2024. Our total volume of essential ingredients sold increased by 25,300 tons, or 12%, to 237,900 tons for the three months ended March 31, 2025 from 212,600 tons for the same period in 2024. The decrease of $32.15, or 15%, in the segment's average sales price per ton for the three months ended March 31, 2025 as compared to the same period in 2024 reduced our net sales from the segment by $6.8 million. With the segment's average sales price per ton of $187.55 for the three months ended March 31, 2025, we generated $4.7 million more in net sales from the 25,300 additional tons of essential ingredients sold in the three months ended March 31, 2025 as compared to the same period in 2024.

Marketing and Distribution Segment

Net sales of alcohol from our marketing and distribution segment, excluding intersegment sales, declined by $5.4 million, or 10%, to $49.1 million for the three months ended March 31, 2025 as compared to $54.5 million for the same period in 2024.

Our volume of third-party alcohol sold reported gross by the segment declined by 5.3 million gallons, or 18%, to 24.4 million gallons for the three months ended March 31, 2025 as compared to 29.7 million gallons for the same period in 2024. With the segment's average sales price per gallon of $2.01 for the three months ended March 31, 2025, we generated $10.6 million less in net sales from the 5.3 million fewer gallons of third-party alcohol sold gross in the three months ended March 31, 2025 as compared to the same period in 2024.

The $0.18 per gallon, or 10%, increase in the segment's average sales price per gallon for the three months ended March 31, 2025 as compared to the same period in 2024 resulted in a $5.2 million increase in our net sales from third-party fuel-grade ethanol sold by the segment.

Western Production Segment

Net sales of alcohol from our Western production segment declined by $4.0 million, or 20%, to $16.2 million for the three months ended March 31, 2025 as compared to $20.2 million for the same period in 2024. Our total volume of alcohol sold decreased by 2.9 million gallons, or 26%, to 8.3 million gallons for the three months ended March 31, 2025 as compared to 11.2 million gallons for the same period in 2024. With the segment's average sales price per gallon of $1.95 for the three months ended March 31, 2025, we generated $5.6 million less in net sales from the 2.9 million fewer gallons of alcohol sold in the three months ended March 31, 2025 as compared to the same period in 2024. However, the increase of $0.15, or 8%, in the segment's average sales price per gallon for the three months ended March 31, 2025 as compared to the same period in 2024 increased our net sales from the segment by $1.6 million.

Net sales of essential ingredients from our Western production segment remained flat at $7.8 million for the three months ended March 31, 2025 and 2024. Our total volume of essential ingredients sold decreased by 27,900 tons, or 28%, to 72,900 tons for the three months ended March 31, 2025 from 100,800 tons for the same period in 2024. With the segment's average sales price per ton of $107.11 for the three months ended March 31, 2025, we generated $2.9 million less in net sales from the 27,900 fewer tons of essential ingredients sold in the three months ended March 31, 2025 as compared to the same period in 2024. However, the increase of $29.47, or 38%, in our average sales price per ton for the three months ended March 31, 2025 as compared to the same period in 2024 improved our net sales of essential ingredients from the segment by $2.9 million.

Corporate and other

Net sales of alcohol from corporate and other declined by $1.4 million, or 47%, to $1.6 million for the three months ended March 31, 2025 as compared to $3.0 million for the same period in 2024. These sales are from Eagle Alcohol's business.

Cost of Goods Sold and Gross Loss

Our consolidated gross loss improved to a gross loss of $1.8 million for the three months ended March 31, 2025 from a gross loss of $2.4 million for the same period in 2024, representing a gross margin of negative 0.8% and 1.0% for the three months ended March 31, 2025 and 2024, respectively. Our gross loss and gross margin improved due to multiple factors, including the cold-idling of our Magic Valley facility, which reduced cost of goods sold by $10.0 million including cost savings of $4.8 million, over $1.0 million in lower repairs and maintenance expenses, premium liquid CO_2 sales from our newly acquired Alto Carbonic processing facility and other synergistic benefits totaling $2.9 million at our Columbia facility, and a $1.4 million benefit from ISCC certified renewable fuel exports priced at a premium to domestic fuel-grade ethanol, all of which were partially offset by $4.6 million in lower premiums for high quality alcohol, $3.8 million associated with lower returns on our essential ingredients, predominately from our Pekin Campus, and $1.6 million less in unrealized gains on derivatives compared to the prior year's quarter. For the first quarter, we recorded $7.0 million in repairs and maintenance expense, in line with our full-year 2025 estimate of $32 million.

Pekin Campus Production Segment

Our Pekin Campus production segment's gross profit, net of intercompany activity, declined by $7.3 million to a gross loss of $2.2 million for the three months ended March 31, 2025 as compared to a gross profit of $5.1 million for the same period in 2024. All of this decline is attributable to lower ethanol margins.

Marketing and Distribution Segment

Our marketing and distribution segment's gross profit, net of intercompany activity, improved by $1.1 million to a gross profit of $1.7 million for the three months ended March 31, 2025 as compared to a gross profit of $0.6 million for the same period in 2024. Of this improvement, $1.5 million is attributable to higher margins from sales of third-party fuel-grade ethanol, partially offset by $0.4 million attributable to lower sales volumes for the three months ended March 31, 2025 as compared to the same period in 2024.

Western Production Segment

Our Western production segment's gross profit, net of intercompany activity, improved by $7.1 million to a gross loss of $1.3 million for the three months ended March 31, 2025 as compared to a gross loss of $8.4 million for the same period in 2024. Of this improvement, $6.7 million is attributable to improved renewable fuel margins and $0.4 million is attributable to lower sales volumes at negative margins of both renewable fuel and essential ingredients, both of which are primarily due to the cold-idling of our Magic Valley facility.

Corporate and other

Gross profit from corporate and other declined by $0.4 million to a gross loss of less than $0.1 million for the three months ended March 31, 2025 as compared to a gross profit of $0.3 million for the same period in 2024, all of which were from Eagle Alcohol's business.

Selling, General and Administrative Expenses

The following table presents our selling, general and administrative, or SG&A, expenses in dollars and as a percentage of net sales (in thousands, except

percentages):

	Three Months Ended March 31,		Change in	
	2025	2024	Dollars	Percent
Selling, general and administrative expenses	$ 7,190	$ 7,932	$ (742)	(9.4)%
Percentage of net sales	*3.2%*	*3.3%*		

Our SG&A expenses decreased $0.7 million for the three months ended March 31, 2025 as compared to the same period in 2024. The reduction in SG&A expenses primarily reflects the conclusion of our acquisition-related expenses for our acquisition of Eagle Alcohol.

Interest Expense, net

The following table presents our interest expense, net, in dollars and as a percentage of net sales (in thousands, except percentages):

	Three Months Ended March 31,		Change in	
	2025	2024	Dollars	Percent
Interest expense, net	$ 2,729	$ 1,634	$ 1,095	67.0%
Percentage of net sales	*1.2%*	*0.7%*		

Our interest expense, net, increased for the three months ended March 31, 2025 as compared to the same period in 2024, primarily due to higher average debt balances and higher average interest rates compared to the prior year period.

Net Loss Attributable to Common Stockholders

The following table presents our net loss attributable to common stockholders in dollars and as a percentage of net sales (in thousands, except percentages):

	Three Months Ended March 31,		Change in	
	2025	2024	Dollars	Percent
Net loss attributable to Common Stockholders	$ (11,991)	$ (12,040)	$ 49	0.4%
Percentage of net sales	*(5.3)%*	*(5.0)%*		

The slight decrease in net loss attributable to common stockholders is primarily due to lower SG&A expenses and lower net sales at negative margins as well as the other factors affecting gross profit discussed above, partially offset by lower premiums for high quality alcohol, lower unrealized gains on derivatives and higher interest expense, as also discussed above.

Liquidity and Capital Resources

During the three months ended March 31, 2025, we funded our operations primarily from cash on hand and proceeds from Kinergy's operating line of credit. In addition to funding our operations, our capital resources were used to purchase Kodiak Carbonic and for capital expenditures. As of March 31, 2025, we had $27.2 million in cash, cash equivalents and restricted cash, $11.7 million available for borrowing under Kinergy's operating line of credit and $65.0 million that may be available for capital improvement projects under our Orion term loan, subject to certain conditions. We believe we have sufficient liquidity to meet our anticipated working capital, debt service and other liquidity needs for at least the next twelve months from the date of this report.

Quantitative Year-End Liquidity Status

We believe that the following amounts provide insight into our liquidity and capital resources. The following selected financial information should be read in conjunction with our consolidated financial statements and notes to consolidated financial statements included elsewhere in this report, and the other sections of "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained in this report (dollars in thousands).

	March 31, 2025	December 31, 2024	Change
Cash, cash equivalents and restricted cash	$ 27,171	$ 36,211	(25.0)%
Current assets	$ 153,461	$ 153,118	0.2%
Property and equipment, net	$ 212,624	$ 214,742	(1.0)%
Current liabilities	$ 53,116	$ 57,804	(8.1)%
Long-term debt, noncurrent portion	$ 110,664	$ 92,904	19.1%
Working capital	$ 100,345	$ 95,314	5.3%
Working capital ratio	2.89	2.65	9.1%

Restricted Net Assets

At March 31, 2025, we had approximately $55.6 million of net assets at our subsidiaries that were not available to be transferred to Alto Ingredients, Inc. in the form of dividends, distributions, loans or advances due to restrictions contained in our subsidiaries' credit facilities.

Changes in Working Capital and Cash Flows

Working capital improved to $100.3 million at March 31, 2025 from $95.3 million at December 31, 2024 as a result of a decrease of $4.7 million in current liabilities and an increase of $0.3 million in current assets.

Current assets increased primarily due to an increase in accounts receivable, inventories, other current assets and derivative instruments, partially offset by a decrease in cash and cash equivalents and restricted cash.

Our current liabilities decreased primarily due to lower accounts payable and accrued liabilities as a result of timing of payments, and a decrease in derivative liabilities from changes in commodity prices for open contracts.

Our cash, cash equivalents and restricted cash declined by $9.0 million due to $18.2 million in cash used in our operating activities and $7.8 million used in our investing activities, partially offset by $17.0 million in cash provided by our financing activities.

Cash used in our Operating Activities

We used $18.2 million of cash in our operations for the three months ended March 31, 2025 as compared to $1.4 million of cash provided by our operations for the same period in 2024. Significant factors that contributed to the change in cash provided by our operating activities include:

- a decrease of $11.1 million related to lower inventories due to reduced production volumes and the timing of sales;
- a decrease of $7.7 million related to accounts receivable balances due to the timing of collections;
- a decrease of $1.7 million related to other assets, primarily due to the timing of payments on prepaid assets; and
- an increase of $1.4 million related to accounts payable and accrued expenses due to the timing of payments.

These amounts were partially offset by:

- an increase of $1.6 million related to period-end commodity prices applicable to our derivative instruments.

Cash used in our Investing Activities

We used $7.8 million in cash during the quarter for the acquisition of Kodiak Carbonic and other capital expenditures.

Cash provided by our Financing Activities

Cash provided by our financing activities was $17.0 million for the three months ended March 31, 2025, which reflects net proceeds of $17.3 million from Kinergy's operating line of credit, partially offset by $0.3 million in preferred stock dividends paid.

Kinergy's Operating Line of Credit

Kinergy maintains an operating line of credit for an aggregate amount of up to $100.0 million. The credit facility matures on November 7, 2027. Interest accrues under the credit facility at a rate equal to (i) the daily Secured Overnight Financing Rate, plus (ii) a specified applicable margin ranging from 1.25% to 1.75%. The credit facility's monthly unused line fee is 0.25% to 0.375% of the amount by which the maximum credit under the facility exceeds the average daily principal balance during the immediately preceding month. Payments that may be made by Kinergy to Alto Ingredients, Inc. as reimbursement for management and other services provided by Alto Ingredients, Inc. to Kinergy are limited under the terms of the credit facility to $1.5 million per fiscal quarter. The credit facility also includes the accounts receivable of our indirect wholly-owned subsidiary, Alto Nutrients, LLC, or Alto Nutrients, as additional collateral. Payments that may be made by Alto Nutrients to Alto Ingredients, Inc. as reimbursement for management and other services provided by Alto Ingredients, Inc. to Alto Nutrients are limited under the terms of the credit facility to $0.5 million per fiscal quarter. Alto Nutrients markets our essential ingredients and also provides raw material procurement services to our subsidiaries. In addition, the amount of cash distributions that Kinergy or Alto Nutrients may make to us is also limited to up to 75% of excess cash flow.

For all monthly periods in which excess borrowing availability falls below a specified level, Kinergy and Alto Nutrients must collectively maintain a fixed-charge coverage ratio (calculated as a twelve-month rolling earnings before interest, taxes, depreciation and amortization divided by the sum of interest expense, capital expenditures, principal payments of indebtedness, indebtedness from capital leases and taxes paid during such twelve-month rolling period) of at least 1.1 and are prohibited from incurring certain additional indebtedness (other than specific intercompany indebtedness). The obligations of Kinergy and Alto Nutrients under the credit facility are secured by all of our tangible and intangible assets.

We believe Kinergy and Alto Nutrients are in compliance with the fixed-charge coverage ratio financial covenant as of the filing of this report. The following table sets forth the fixed-charge coverage ratio financial covenant and the actual results for the periods presented:

	Three Months Ended March 31,		Years Ended December 31,	
	2025	2024	2024	2023
Fixed-Charge Coverage Ratio Requirement	1.10	1.10	1.10	1.10
Actual	3.49	4.66	3.53	5.22
Excess	2.39	3.56	2.43	4.12

Alto Ingredients, Inc. has guaranteed all of Kinergy's obligations under the credit facility. As of March 31, 2025, Kinergy had an outstanding balance of $57.0 million and $11.7 million of unused borrowing availability under the credit facility.

Orion Term Loan

On November 7, 2022, we entered into a credit agreement with certain funds managed by Orion Infrastructure Capital, or Lenders, under which the Lenders extended a senior secured credit facility in the amount of up to $125.0 million, or Term Loan. The Term Loan is secured by a first priority lien on certain of our assets and a second priority lien on certain assets of Kinergy and Alto Nutrients. Interest accrues on the unpaid principal amount of the Term Loan at a fixed rate of 10% per annum. The Term Loan matures on November 7, 2028, or earlier upon acceleration.

We must prepay amounts outstanding under the Term Loan on a semi-annual basis on each June 30th and December 31st in an amount equal to a percentage of our excess cash flow based on a specified leverage ratio, as follows: (i) if our leverage ratio is greater than or equal to 3.0x, then the mandatory prepayment amount will equal 100% of our excess cash flow, (ii) if our leverage ratio is less than 3.0x and greater than or equal to 1.5x, then the mandatory prepayment amount will equal 50% of our excess cash flow, and (iii) if our leverage ratio is less than 1.5x, then the mandatory prepayment amount will equal 25% of our excess cash flow. No prepayment was made or required to be made for the three months ended March 31, 2025 and 2024.

As of March 31, 2025 and December 31, 2024, the principal amount outstanding under the Term Loan was $60.0 million.

Other Cash Obligations

As of March 31, 2025, we had future commitments for certain capital projects totaling $10.8 million. These commitments are scheduled to be satisfied in 2025.

In connection with our acquisition of Eagle Alcohol, contingent payments of up to $2.7 million in cash and 948,932 shares of common stock are contractually scheduled for the first half of 2025, all of which were accrued for in 2024.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

We are exposed to various market risks, including changes in commodity prices, as discussed below. Market risk is the potential loss arising from adverse changes in market rates and prices. In the ordinary course of business, we may enter into various types of transactions involving financial instruments to manage and reduce the impact of changes in commodity prices. We do not have material exposure to interest rate risk. We do not expect to have any exposure to foreign currency risk as we conduct all of our transactions in U.S. dollars.

We produce and distribute specialty alcohol, fuel-grade ethanol and essential ingredients. Our business is sensitive to changes in the prices of ethanol and corn. In the ordinary course of business, we may enter into various types of transactions involving financial instruments to manage and reduce the impact of changes in ethanol and corn prices. We do not enter into derivatives or other financial instruments for trading or speculative purposes.

We are subject to market risk with respect to ethanol and corn pricing. Ethanol prices are sensitive to global and domestic ethanol supply; crude-oil supply and demand; crude-oil refining capacity; carbon intensity; government regulation; and consumer demand for alternative fuels. Our ethanol sales are priced using contracts that are either based on a fixed price or an indexed price tied to a specific market, such as Chicago Ethanol (Platts) or the Oil Price Information Service. Under these fixed-priced arrangements, we are exposed to risk of a decrease in the market price of ethanol between the time the price is fixed and the time the alcohol is sold.

We satisfy our physical corn needs, the principal raw material used to produce alcohol and essential ingredients, based on purchases from our corn vendors. Generally, we determine the purchase price of our corn at or near the time we begin to grind. Additionally, we also enter into volume contracts with our vendors to fix the purchase price. As such, we are also subject to market risk with respect to the price of corn. The price of corn is subject to wide fluctuations due to unpredictable factors such as weather conditions, farmer planting decisions, governmental policies with respect to agriculture and international trade and global supply and demand. Under the fixed price arrangements, we assume the risk of a decrease in the market price of corn between the time the price is fixed and the time the corn is utilized.

Essential ingredients are sensitive to various demand factors such as numbers of livestock on feed, prices for feed alternatives and supply factors, primarily production of ethanol co-products by ethanol plants and other sources.

As noted above, we may attempt to reduce the market risk associated with fluctuations in the price of ethanol or corn by employing a variety of risk management and hedging strategies. Strategies include the use of derivative financial instruments such as futures and options executed on the Chicago Mercantile Exchange or the New York Mercantile Exchange, as well as the daily management of physical corn.

These derivatives are not designated for special hedge accounting treatment, and as such, the changes in the fair values of these contracts are recorded on the balance sheet and recognized immediately in cost of goods sold. We recognized net gains of $3.3 million and net losses of $1.8 million related to the changes in the fair values of these contracts for the three months ended March 31, 2025 and 2024, respectively.

We prepared a sensitivity analysis as of March 31, 2025 to estimate our exposure to ethanol and corn. Market risk related to these factors was estimated as the potential change in pre-tax income resulting from a hypothetical 10% adverse change in the prices of our expected ethanol and corn volumes. The analysis uses average Chicago Mercantile Exchange prices for the year and does not factor in future contracted volumes. The results of this analysis for the three months ended March 31, 2025, which may differ materially from actual results, are as follows (in millions):

Commodity	Volume	Unit of Measure	Approximate Adverse Change to Pre-Tax Income
Ethanol	65.3	Gallons	$ (7.0)
Corn	14.6	Bushels	$ (6.9)

ITEM 4. CONTROLS AND PROCEDURES.

Evaluation of Disclosure Controls and Procedures

We conducted an evaluation under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures. The term "disclosure controls and procedures," as defined in

Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, or Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by the company in the reports it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Securities and Exchange Commission's rules and forms. Disclosure controls and procedures also include, without limitation, controls and procedures 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 accumulated and communicated to the company's management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate, to allow timely decisions regarding required disclosure. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded as of March 31, 2025 that our disclosure controls and procedures were effective at a reasonable assurance level.

Changes in Internal Control over Financial Reporting

There has been no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the most recently completed fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations on the Effectiveness of Controls

Management does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent or detect all errors and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control systems are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in a cost-effective control system, no evaluation of internal control over financial reporting can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, have been or will be detected.

These inherent limitations include the realities that judgments in decision-making can be faulty and that breakdowns can occur because of a simple error or mistake. Controls can also be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the controls. The design of any system of controls is based in part on certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Projections of any evaluation of controls effectiveness to future periods are subject to risks. Over time, controls may become inadequate because of changes in conditions or deterioration in the degree of compliance with policies or procedures.

PART II - OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS.

We are subject to legal proceedings, claims and litigation arising in the ordinary course of business. While the amounts claimed may be substantial, the ultimate liability cannot presently be determined because of considerable uncertainties that exist. Therefore, it is possible that the outcome of those legal proceedings, claims and litigation could adversely affect our quarterly or annual operating results or cash flows when resolved in a future period. However, based on facts currently available, management believes such matters will not adversely affect in any material respect our financial condition, results of operations or cash flows.

ITEM 1A. RISK FACTORS.

Before deciding to purchase, hold or sell our common stock, you should carefully consider the risks described below in addition to the other information contained in this Report and in our other filings with the Securities and Exchange Commission, including subsequent reports on Forms 10-Q and 8-K. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our business. If any of these known or unknown risks or uncertainties actually occurs with material adverse effects on Alto Ingredients, our business, financial condition, results of operations and/or liquidity could be seriously harmed. In that event, the market price for our common stock will likely decline, and you may lose all or part of your investment.

Risks Related to our Business

Our results of operations and our ability to operate at a profit are largely dependent on our ability to manage the costs of corn, natural gas and other production inputs, with the prices of our alcohols and essential ingredients, all of which are subject to volatility and uncertainty.

Our results of operations are highly impacted by commodity prices, including the cost of corn, natural gas and other production inputs that we must purchase, and the prices of alcohols and essential ingredients that we sell. Prices and supplies are subject to and determined by numerous market and other forces over which we have no control, such as inclement or favorable weather, domestic and global demand, supply excesses or shortages, import and export conditions (including tariffs), inflationary conditions, global geopolitical tensions and various governmental policies in the United States and throughout the world.

Price volatility of corn, natural gas and other production inputs, and alcohols and essential ingredients, may cause our results of operations to fluctuate significantly. We may fail to generate expected levels of net sales and profits even under fixed-price and other contracts for the sale of specialty alcohols used in consumer products. Our customers may not pay us timely or at all, even under longer-term, fixed-price contracts for our specialty alcohols, and may seek to renegotiate prices under those contracts during periods of falling prices or high price volatility.

Historically, the spread between corn and fuel-grade ethanol prices has fluctuated significantly. Fluctuations are likely to continue to occur. A sustained negative or narrow spread, whether as a result of sustained high or increased corn prices or sustained low or decreased alcohol or essential ingredient prices, would adversely affect our results of operations and financial condition. Revenues from sales of alcohols, particularly fuel-grade ethanol, and essential ingredients have in the past and could in the future decline below the marginal cost of production, which have in the past and may again in the future force us to suspend production, particularly fuel-grade ethanol production, at some or all of our facilities. For example, we hot-idled our Magic Valley facility in early 2023 due to unfavorable market conditions and again hot-idled our Magic Valley facility in early 2024 in part due to unfavorable market conditions and to expedite the installation of additional equipment needed to achieve the intended production rate, quality and consistency from the corn oil and high protein system at the facility. We restarted the Magic Valley facility in July 2024, but due to challenging market economics, we cold-idled the plant at the end of 2024.

In addition, some of our fuel-grade ethanol marketing and distribution activities for third-party gallons will likely be unprofitable in a market of generally declining prices due to the nature of our business. For example, to satisfy customer demand, we maintain certain quantities of fuel-grade ethanol inventory for subsequent resale. When quantities in excess of our own production are needed to meet customer demand, we procure fuel-grade ethanol from third parties and therefore must buy fuel-grade ethanol at a price established at the time of purchase and sell fuel-grade ethanol at an index price established later at the time of sale that is generally reflective of movements in the market price of fuel-grade ethanol. As a result, our margins for fuel-grade ethanol sold in these transactions generally decline and may turn negative as the market price of fuel-grade ethanol declines.

We can provide no assurances that corn, natural gas or other production inputs can be purchased at or near current or any specific prices, or that our alcohols or essential ingredients will sell at or near current or any particular prices. Consequently, our results of operations and financial condition may be adversely affected by increases in the prices of corn, natural gas and other production inputs or decreases in the prices of our alcohols and essential ingredients.

The prices of our products are volatile and subject to large fluctuations, which may cause our results of operations to fluctuate significantly.

The prices of our products are volatile and subject to large fluctuations. For example, the market price of fuel-grade ethanol is dependent upon many factors, including the supply of ethanol and the price of gasoline, which is in turn dependent upon the price of petroleum which itself is highly volatile, difficult to forecast and influenced by a wide variety of global economic and geopolitical conditions, including decisions concerning petroleum output by the Organization of Petroleum Exporting Countries (OPEC) and their allies, an intergovernmental organization that seeks to manage the price and supply of oil on the global energy market. Other important factors that impact the price of petroleum include war and threats of war, attacks on or threats to shipping vessels as has recently occurred in the Red Sea, the consequent rerouting of supply lines to less direct or more expensive paths, and other supply chain disruptions.

Our fuel-grade ethanol sales are tied to prevailing spot market prices rather than long-term, fixed-price contracts. Fuel-grade ethanol prices, as reported by the Chicago Mercantile Exchange, ranged from $1.38 to $2.12 per gallon in 2024, from $1.58 to $2.67 per gallon in 2023 and from $2.00 to $2.88 per gallon in 2022. In addition, even under longer-term, fixed-price contracts for our specialty alcohols, our customers may seek to renegotiate prices under those contracts during periods of falling prices or high price volatility. Fluctuations in the prices of our products may cause our results of operations to fluctuate significantly.

We may engage in hedging transactions and other risk mitigation strategies that could harm our results of operations and financial condition.

To partially offset the effects of production input and product price volatility, in particular, corn and natural gas costs and fuel-grade ethanol prices, we may enter into contracts to purchase a portion of our corn or natural gas requirements on a forward basis or to lock in the premium to fuel-grade ethanol market prices on portions of our alcohol production. In addition, we may engage in other hedging transactions involving exchange-traded futures contracts for corn, natural gas and unleaded gasoline from time to time. The financial statement impact of these activities is dependent upon, among other things, the prices involved and our ability to sell sufficient products to use all of the corn and natural gas for which forward commitments have been made. We have recognized losses in the past, and may suffer losses in the future, from our hedging arrangements. For example, for the year ended December 31, 2023, we recognized net losses of $8.0 million related to the change in the fair values of hedging contracts.

Hedging arrangements also expose us to the risk of financial loss in situations where our counterparty to the hedging contract defaults on its contract or, in the case of exchange-traded contracts, where there is a change in the expected differential between the underlying price in the hedging agreement and the actual prices paid or received by us. In addition, our open contract positions may require cash deposits to cover margin calls, negatively impacting our liquidity. As a result, our hedging activities and fluctuations in the price of corn, natural gas, fuel-grade ethanol and unleaded gasoline may adversely affect our results of operations, financial condition and liquidity.

Disruptions in our production or distribution, including from climate change and other weather effects, may adversely affect our business, results of operations and financial condition.

Our business depends on the continuing availability of rail, road, port, storage and distribution infrastructure. In particular, due to limited storage capacity at some of our production facilities and other considerations related to production efficiencies, certain facilities depend on timely delivery of corn. Alcohol production also requires a significant and uninterrupted supply of other raw materials and energy, primarily water, electricity and natural gas. Local water, electricity and gas utilities may fail to reliably supply the water, electricity and natural gas that our production facilities need or may fail to supply those resources on acceptable terms. In the past, poor weather has caused disruptions in rail transportation, which slowed the delivery of fuel-grade ethanol and/or corn by rail to and from our facilities.

For example, in late April 2025, during a period of rapidly rising river levels, our loadout dock at our Pekin Campus was damaged, negatively impacting production and logistics. In addition, in the first quarter of 2024, extreme cold weather conditions in January at our Pekin Campus restricted barge deliveries and increased standby fees. To manage inventory levels, we transported more product by rail, a higher cost mode of transportation. Cold weather conditions also required us to shift to lower margin feed products and reduced our production rates across our Pekin Campus, hindering our ability to produce specialty alcohol at full capacity. In the third quarter of 2023 we experienced unusually high unscheduled production downtime for repairs and maintenance which reduced sales volumes and profits.

Disruptions in production or distribution, whether caused by labor difficulties, unscheduled downtimes and other operational hazards inherent in the alcohol production industry, including equipment failures, fires, explosions, abnormal pressures, blowouts, pipeline ruptures, transportation accidents, climate change and natural disasters such as earthquakes, floods and storms, or other weather effects, or human error or malfeasance or other reasons, could prevent timely deliveries of corn or other raw materials and energy, and could delay transport of our products to market, and may require us to halt production at one or more production facilities, any of which could have a material adverse effect on our business, results of operations and financial condition.

Some of these operational hazards may also cause personal injury or loss of life, severe damage to or destruction of property and equipment or environmental damage, and may result in suspension of operations and the imposition of civil or criminal penalties. Our insurance may not fully cover the potential hazards described above or we may be unable to renew our insurance on commercially reasonable terms or at all.

Increased alcohol or essential ingredient production or higher inventory levels may cause a decline in prices for those products, and may have other negative effects, materially and adversely impacting our results of operations, cash flows and financial condition.

The prices of our alcohols and essential ingredients are highly impacted by competing third-party supplies of those products. In addition, if fuel-grade ethanol production margins improve, we anticipate that owners of production facilities operating at below capacity, or owners of idled production facilities, will increase production levels, thereby resulting in more abundant fuel-grade ethanol supplies and inventories. Increases in the supply of alcohols and essential ingredients may not be commensurate with increases in demand for alcohols and essential ingredients, thus leading to lower prices. Any of these outcomes could have a material adverse effect on our results of operations, cash flows and financial condition.

We may suffer impairments in the value of our long-lived assets which may materially and adversely affect our results of operations.

We evaluate our long-lived assets annually for impairment or when circumstances indicate that the full carrying value of an asset may be unrecoverable. These evaluations rely on financial and other assumptions concerning the assets, any of which may not materialize in the future. For example, we recognized asset impairments of $24.8 million and $6.5 million for the years ended December 31, 2024 and 2023, respectively. We may recognize additional impairments of the values of our long-lived assets in the future based on then-prevailing financial and other circumstances. Impairments of our long-lived assets may materially and adversely affect our results of operations.

Our alcohol production relies on traditional corn-based feedstock and process technologies. New technologies could make corn-based alcohol production and traditional process technologies less competitive or even obsolete, materially and adversely harming our business.

We produce our alcohols from corn. Moreover, our plants are constructed and operate primarily as corn-based alcohol production facilities. Competitors and other third parties have undertaken research to develop competing products to corn-based alcohols, and ethanol in particular, as well as new process technologies. These research efforts seek alternatives to corn-based ethanol and traditional process technologies aimed at improving real or perceived problems with the fuel, such as the carbon and energy intensity of its production, its lower energy content compared to gasoline and its hydrophobic nature resulting in water separation in transit or at other times. Competitors and other third parties may develop new alcohols and processes that improve on any of these or other real or perceived problems with corn-based alcohols, including ethanol. If viable competing products or new process technologies are developed and attract widespread or even modest adoption, we may be forced to modify our production facilities, including our process technologies, if possible, to transition in full or in part to these other products or process technologies to remain competitive. Modifying our production facilities may require expertise that our personnel may not possess and would likely require significant capital expenditures the funding for which we may not have. An inability to remain competitive due to the introduction and adoption of competing products or new process technologies, or significant costs associated with the adoption of new products and process technologies, would materially and adversely affect our business, financial condition and results of operations.

Inflation and sustained higher prices may adversely impact our results of operations and financial condition.

We have experienced adverse inflationary impacts on key production inputs, wages and other costs of labor, equipment, services, and other business expenses. In addition, we have experienced adverse inflationary impacts on our budgets and expenses for many of our in-process and planned capital projects. Inflation, including through tariffs, and its negative impacts could escalate in future periods. Even if inflation stabilizes or abates, the prices of key production inputs, wages and other costs of labor, equipment, services, and other business expenses, and for our capital projects, will likely remain at elevated levels. We may not be able to include these additional costs in the prices of the products we sell. As a result, inflation and sustained higher prices may have a material adverse effect on our results of operations and financial condition.

Climate change, and governmental regulations aimed at addressing climate-related issues, may affect conditions to which our business is highly sensitive, many of which could materially and adversely harm our business, results of operations and financial condition.

Our business is highly sensitive to commodity prices, in particular, the prices of corn and natural gas. Inclement weather from climate change, including extreme temperatures or drought, may adversely affect growing conditions, which may reduce available corn supplies, our primary production input, and other grain substitutes, driving up prices and thereby increasing our production input costs. In addition, governmental regulators may disfavor carbon-based energy sources, such as natural gas, leading to regulations that disincentivize their use or otherwise make their production more difficult and costly, driving up their prices. Higher natural gas prices would likewise increase our production input costs.

Other factors that may result from climate change, or that may result from governmental regulations aimed at addressing climate-related issues, may also adversely affect our business, including the following:

- water is one of our key production inputs; water resource limitations may result from drought and other inclement weather; water resource limitations may also result from rationing and other governmental regulations limiting water use;
- higher water temperatures due to increased global or regional temperatures may negatively affect production efficiencies due to water temperature production requirements given the limited cooling capacities of our older facilities;
- flooding and other inclement weather may negatively affect our river access, other transportation logistics and costs, and storage requirements;
- an overall increase in energy costs will negatively impact our production costs generally and may critically impact certain high energy-intensive production technologies, such as our wet milling and multiple distillation processes for the highest quality specialty alcohols;
- regulatory and market transition away from combustion fuels and fuel-grade ethanol blending may threaten the viability of our renewable fuels business; and
- costs and regulatory burdens associated with governmental regulations that limit or tax greenhouse gas emissions, such as CO_2, from alcohol production and distribution, or from truck transport and packaging associated with Eagle Alcohol's business and use of drums and totes, will negatively impact us.

New legislation in the United States to address climate change issues, especially at the state and local levels, may be passed and implemented, materially and adversely impacting our business.

Any of these factors could materially and adversely harm our business, results of operations and financial condition.

Risks Related to our Finances

We have incurred significant losses and negative operating cash flow in the past and we may incur losses and negative operating cash flow in the future, which may hamper our operations and impede us from expanding our business.

We have incurred significant losses and negative operating cash flow in the past. For example, for the years ended December 31, 2024, 2023 and 2022, we incurred consolidated net losses of approximately $59.0 million, $28.0 million and $41.6 million, respectively. For the year ended December 31, 2024, we incurred negative operating cash flow of $3.5 million. We may incur losses and negative operating cash flow in the future. We expect to rely on cash on hand, cash, if any, generated from our operations, borrowing availability under our lines of credit and proceeds from our future financing activities, if any, to fund all of the cash requirements of our business. Additional losses and negative operating cash flow may hamper our operations and impede us from expanding our business.

We are engaged in multiple capital improvement projects. These projects, and their financing, costs, timing and effects, are based on our plans, expectations and various assumptions that may not eventuate. We may therefore be unable to timely achieve, or achieve at all, the results we expect, including as to projected additional EBITDA and Adjusted EBITDA.

We are engaged in multiple capital improvement projects to diversify and enhance our revenue streams and to expand margins and profitability by reducing costs. These projects have different timelines, returns on investment and risk profiles, including regulatory risks. In addition, we must raise significant additional capital to complete some of our projects, including our CCS project. Our expected financial and other results from these projects are based on assumptions around many factors, including their costs, timing, operation and market prices prevailing at project completion and thereafter, as well as tax and other favorable environmental attributes associated with low carbon alcohol that may accrue to our benefit. For example, our assumptions around the anticipated results of our CCS project rely heavily on the tax benefits that may accrue to us under the Inflation Reduction Act of 2022 as well as other favorable environmental attributes associated with carbon capture and storage and low carbon alcohol production. These tax and other benefits may change, including as a result of new or repealed laws, new administrations and the implementation or interpretation of existing laws, or the exhaustion of funds or benefits available under a particular program. For example, in January 2025, the new administration suspended all Inflation Reduction Act spending for 90 days. In addition, certain provisions of the Inflation Reduction Act lack proposed or final regulations and guidance. Regulators could issue new regulations or guidance that significantly narrows the application of clean energy tax incentives, and could even defer or withdraw regulations, which could materially and adversely affect the economic outcome of our CCS project. We can provide no assurances that any particular benefit will be available to us upon completion of our CCS project, or thereafter, or any other capital improvement project.

Capital improvement projects require significant outlays of capital and are often subject to material execution risks and delays. Our CCS project in particular requires EPA approval but the EPA's own projected timeline for approval has lengthened and may lengthen further. We may have insufficient financial resources, and we may be unable to raise sufficient capital, to complete our projects timely or at all. Although we intend to use reputable third-party contractors with expertise in their fields to implement our projects, adverse conditions and events as well as delays in capital projects are not uncommon. Moreover, the projects' interaction with existing processes may result in the degradation of other plant operations. For example, operation of our corn oil and high protein system at our Magic Valley facility previously resulted in inconsistent product quality and degraded other operations at the plant, including production rates. In the past, we have extended our expected completion dates for various projects and, as circumstances require, may have to do so again.

In addition, our CCS project may be adversely affected by the SAFE CCS Act, proposed legislation in Illinois or the United States Supreme Court's decision in the case of Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc., or any of them, as discussed below. The timing and economics of our CCS project may also be adversely affected by new rules proposed by the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration that impose stronger standards for CO_2 pipelines and establish new standards for transporting CO_2 in a gaseous state via pipeline, adding additional requirements and costs to the project.

We can provide no assurances that our projects will be completed, or if completed, will be completed timely or within budget. We also can provide no assurances that our project assumptions will reflect prevailing future conditions or that our projects will achieve the results we expect, including as to projected additional EBITDA and Adjusted EBITDA. Failure to achieve our expected results may have a material adverse effect on our business, financial condition and results of operations.

We regularly incur significant expenses to repair, maintain and upgrade our production facilities and operating equipment, and any interruption in our operations would harm our operating performance.

We regularly incur significant expenses to repair, maintain and upgrade our production facilities and operating equipment, estimated at an average of $30.0 million per year. We incurred $35.0 million of these expenses for 2024. The machines and equipment we use to produce our alcohols and essential ingredients are complex, have many parts, and some operate on a continuous basis. We must perform routine equipment maintenance and must periodically replace a variety of parts such as motors, pumps, pipes and electrical parts, and engage in other repairs. In addition, our production facilities require periodic shutdowns to perform major maintenance and upgrades. Our production facilities also occasionally require unscheduled shutdowns to perform repairs. For example, we completed our biennial wet mill outage at our Pekin Campus in Spring 2024. The wet mill was offline for ten days, which negatively impacted sales and margins for the second quarter. In the first quarter of 2024, production at our Colombia facility was hampered by equipment issues that extended the facility's regularly scheduled outage. In the third quarter of 2023 we experienced unusually high unscheduled production downtime for repairs and maintenance at our Pekin Campus which reduced sales volumes and increased losses. These scheduled and unscheduled shutdowns result in lower sales and increased costs in the periods during which a shutdown occurs and could result in unexpected operational issues in future periods resulting from changes to equipment and operational and mechanical processes made during shutdown.

Our indebtedness may expose us to risks that could negatively impact our business, prospects, liquidity, cash flows and results of operations.

We have incurred, and anticipate incurring additional, substantial indebtedness for our capital improvement projects. We expect that these projects, when completed, will generate financial returns sufficient to service and ultimately repay or refinance our indebtedness. However, the costs, timing, and effects of our capital improvement projects may not meet our projections. In addition, our indebtedness could:

- make it more difficult to repay or refinance our indebtedness if it becomes due during adverse economic and industry conditions;

- result in adverse consequences due to a breach of our financial or other covenants and obligations in favor of our lenders;
- limit our flexibility to pursue strategic opportunities or react to changes in our business and the industries in which we operate and, consequently, place us at a competitive disadvantage to our competitors who have less debt;
- require a substantial portion of our cash flows from operations for debt service payments, thereby reducing the availability of our cash flows to fund working capital, additional capital expenditures, acquisitions, dividend payments and for other general corporate purposes; or
- limit our ability to procure additional financing for working capital or other purposes.

Our ability to generate operating results and sufficient cash to make all required principal and interest payments when due, and to satisfy our financial covenants and other obligations, depends on our performance, which is subject to a variety of factors beyond our control, including the cost of key production inputs, the supply of and demand for alcohols and essential ingredients, and many other factors related to the industries in which we operate. We cannot provide any assurance that we will be able to timely service or satisfy our debt obligations, including our financial covenants. Our failure to timely service or satisfy our debt obligations, including to meet our financial covenants, could result in our indebtedness being immediately due and payable, and would have a material adverse effect on our business, business prospects, liquidity, financial condition, cash flows and results of operations.

Our ability to utilize net operating loss carryforwards and certain other tax attributes may be limited.

Federal and state income tax laws impose restrictions on our use of net operating loss, or NOL, and tax credit carryforwards in the event that an "ownership change" occurs for tax purposes, as defined by section 382 of the Internal Revenue Code, or Code. In general, an ownership change occurs when stockholders owning 5% or more of a corporation entitled to use NOL or other loss carryforwards have increased their ownership by more than 50 percentage points during any three-year period. The annual base limitation under section 382 of the Code is calculated by multiplying the corporation's value at the time of the ownership change by the greater of the long-term tax-exempt rate determined by the Internal Revenue Service in the month of the ownership change or the two preceding months. Our ability to utilize our NOL and other loss carryforwards may be substantially limited. These limitations could result in increased future tax obligations, which could have a material adverse effect on our financial condition and results of operations.

Risks Related to Legal and Regulatory Matters

We may be adversely affected by environmental, health and safety laws and regulations, as well as related liabilities that may not be adequately covered by insurance.

We are subject to various federal, state and local environmental laws and regulations, including those relating to the discharge of materials into the air, water and ground; the generation, storage, handling, use, transportation and disposal of hazardous materials and wastes; and the health and safety of our employees. In addition, some of these laws and regulations require us to operate under permits that are subject to renewal or modification. These laws, regulations and permits often require expensive pollution control equipment or operational changes to limit actual or potential impacts to the environment. Any violation of these laws and regulations or permit conditions may result in substantial fines, natural resource damages, criminal sanctions, permit revocations and/or production facility shutdowns. In addition, we have made, and expect to make, significant capital expenditures on an ongoing basis to comply with increasingly stringent environmental laws, regulations and permits.

We may be liable for the investigation and cleanup of environmental contamination at each of our production facilities and at off-site locations where we arrange for the disposal of hazardous substances or wastes. If these substances or wastes have been or are disposed of or released at sites that undergo investigation and/or remediation by regulatory agencies, we may be responsible under the Comprehensive Environmental Response, Compensation and Liability Act of 1980, or other environmental laws for all or part of the costs of investigation and/or remediation, and for damages to natural resources. We may also be subject to related claims by private parties alleging property damage and personal injury due to exposure to hazardous or other materials at or from those properties. Some of these matters may require us to expend significant amounts for investigation, cleanup or other costs not covered by insurance.

In addition, new laws, new interpretations of existing laws, increased governmental enforcement of environmental laws or other developments could require us to make significant additional expenditures. Continued government and public emphasis on environmental issues will likely result in increased future investments for environmental controls at our production facilities. Present and future environmental laws and regulations, and interpretations of those laws and regulations, applicable to our operations, more vigorous enforcement policies and discovery of currently unknown conditions may require substantial expenditures that could have a material adverse effect on our results of operations and financial condition.

The hazards and risks associated with producing and transporting our products (including fires, natural disasters, explosions and abnormal pressures and blowouts) may also result in personal injury claims or damage to property and third parties. As protection against operating hazards, we maintain insurance coverage against some, but not all, potential losses. However, we could sustain losses for uninsurable or uninsured risks, or in amounts in excess of existing insurance coverages. Events that result in significant personal injury or damage to our property or third parties or other losses that are not fully covered by insurance could have a material adverse effect on our results of operations and financial condition.

Our CCS project may be adversely affected by the SAFE CCS Act, Illinois Senate Bill 1723 and other Regulations.

The SAFE CCS Act was signed into law in Illinois in July 2024. We are pursuing at our Pekin Campus, located in Illinois, a CCS project that will require significant financial and personnel resources. Our CCS project is our most important ongoing capital improvement initiative. The SAFE CCS Act establishes stringent safety, financial and insurance requirements on CO_2 pipelines and imposes a moratorium on the construction of new CO_2 pipelines until the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration finalizes its new safety rules or July 1, 2026, whichever occur sooner. The SAFE CCS Act will result in increased compliance and other requirements likely adding costs and potentially adding time to complete our CCS project. In January 2025, the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration proposed new rules that impose stronger standards for CO_2 pipelines and

establish new standards for transporting CO_2 in a gaseous state via pipeline, adding additional requirements and costs to the project.

In February 2025, new legislation in Illinois (Senate Bill 1723), was proposed that amends the Illinois Environmental Protection Act to provide that carbon storage activity shall not be conducted within a storage facility that overlies, underlies or passes through a sole-source aquifer. This legislation, if passed, may have a material and adverse impact on our current CCS project plans and may necessitate a more costly, or less profitable, carbon capture and storage solution, such as carbon transportation via barge instead of through pipelines.

We can provide no assurance that our CCS project will not be adversely affected by the SAFE CCS Act, Senate Bill 1723 or other regulations or that it will be financially viable in light of any new requirements and potential delays.

We may be adversely affected by food and drug laws and regulations, as well as related liabilities that may not be adequately covered by insurance.

Some of our products are subject to regulation by the U.S. Food and Drug Administration, or FDA, as well as similar state agencies. The FDA regulates, under the Federal Food, Drug, and Cosmetic Act, or FDCA, the processing, formulation, safety, manufacture, packaging, labeling and distribution of food ingredients, vitamins, cosmetics and pharmaceuticals for active and inactive ingredients. Many of the FDA's and FDCA's rules and regulations apply directly to us as well as indirectly through their application in our customers' products. To be properly marketed and sold in the United States, a relevant product must be generally recognized as safe, approved and not adulterated or misbranded under the FDCA and relevant regulations issued under the FDCA.

If we fail to comply with laws and FDA regulations or those of similar state agencies, we may be prevented from selling certain of our products and may also be subject to government agency enforcement liability. In addition, we may be subject to product liability and other claims by our customers or by individuals alleging personal injury from our products as food and drug additives.

We maintain insurance coverage against some, but not all, potential losses. Some of these matters, if they arise, may require us to expend significant amounts for investigation and defense or other costs not covered by insurance. We could sustain losses for uninsurable or uninsured risks, or in amounts in excess of existing insurance coverages. Events that result in significant personal injury or other losses that are not fully covered by insurance could have a material adverse effect on our results of operations and financial condition.

The United States fuel-grade ethanol industry is highly dependent upon various federal and state laws and regulations and any changes in or reinterpretations of those laws or regulations could have a material adverse effect on our results of operations, cash flows and financial condition.

The domestic market for fuel-grade ethanol is significantly impacted by federal mandates for volumes of renewable fuels (such as ethanol) required to be blended with gasoline. Future demand for fuel-grade ethanol will largely depend on incentives to blend ethanol into motor fuels, including the price of ethanol relative to the price of gasoline, the relative octane value of ethanol, constraints on the ability of vehicles to use higher ethanol blends, and the EPA's, established volumes from time to time, small refinery waivers, and other applicable environmental requirements.

The EPA has implemented the Renewable Fuel Standard under the Energy Policy Act of 2005 and the Energy Independence and Security Act of 2007. The EPA, in coordination with the Secretary of Energy and the Secretary of Agriculture, determines annual quotas for the quantity of renewable fuels (such as fuel-grade ethanol) that must be blended into motor fuels consumed in the United States. The EPA finalized mandatory volumes of 15.0 billion gallons for each of 2023, 2024, and 2025 of conventional renewable fuels, or corn-based fuel-grade ethanol, which could decline in future years.

The EPA may issue small refinery waivers, in full or in part, to reduce or eliminate annual renewable fuel volume requirements for small refineries that process fewer than 75,000 barrels of petroleum daily. In the past, the EPA has issued small refinery waivers that have materially and adversely affected overall demand for and the price of fuel-grade ethanol. The U.S. Court of Appeals for the Fifth Circuit, in the fourth quarter of 2023, struck down the EPA's decision to deny numerous small refinery waivers, finding that the EPA's denials were impermissibly retroactive, contrary to law and counter to evidence in the litigation record. Accordingly, small refinery waivers from the EPA may be more likely in the future and could again materially and adversely affect overall demand for and the price of fuel-grade ethanol.

Various bills in Congress introduced from time to time are also directed at altering existing renewable fuels energy legislation, but none have passed in recent years. Some legislative bills are directed at halting or reversing expansion of, or even eliminating in its entirety, the renewable fuel program.

Our results of operations, cash flows and financial condition could be adversely impacted if the EPA reduces mandatory volumes or issues significant small refinery waivers, or if any legislation is enacted that reduces volume requirements or if existing legislation is reinterpreted to have the same effect.

Future demand for fuel-grade ethanol is uncertain and may be affected by changes to federal mandates, public perception, consumer acceptance and overall consumer demand for transportation fuel, any of which could negatively affect demand for fuel-grade ethanol and our results of operations.

Although many trade groups, academics and governmental agencies support ethanol as a fuel additive that promotes a cleaner environment, others criticize fuel-grade ethanol production and use as consuming considerably more energy and emitting more greenhouse gases than other biofuels and potentially depleting water resources. Some studies suggest that corn-based ethanol is less efficient than ethanol produced from other feedstock and that it negatively impacts consumers by causing increased prices for dairy, meat and other food generated from livestock that consume corn. Additionally, critics of fuel-grade ethanol contend that corn supplies are redirected from international food markets to domestic fuel markets. If negative views of corn-based ethanol production gain broader acceptance, support for existing measures promoting use and domestic production of corn-based ethanol as a fuel additive could decline, leading to a reduction or repeal of federal ethanol usage mandates, which would materially and adversely affect the demand for fuel-grade ethanol. These views could also negatively impact public perception of the fuel-grade ethanol industry and acceptance of ethanol as an alternative fuel.

There are limited markets for fuel-grade ethanol beyond those established by federal mandates. Discretionary blending and E85 blending (i.e., gasoline blended with up to 85% fuel-grade ethanol by volume) are important secondary markets. Discretionary blending is often determined by the price of fuel-grade ethanol relative to the price of gasoline. In periods when discretionary blending is financially unattractive, the demand for fuel-grade ethanol may decline. Also, the demand for fuel-grade ethanol is affected by the overall demand for transportation fuel. Demand for transportation fuel is affected by the number of miles traveled by consumers and vehicle fuel economy. Lower demand for fuel-grade ethanol and essential ingredients, including through the transition by consumers to alternative fuel vehicles such as electric vehicles and hybrid vehicles, would reduce the value of our ethanol and related products, erode our overall margins and diminish our

ability to generate revenue or to operate profitably. In addition, we believe that additional consumer acceptance of E15 and E85 fuels is necessary before fuel-grade ethanol can achieve any significant growth in market share relative to other transportation fuels.

The United States Supreme Court's decision in the case of Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc. may result in less industry-favorable rulemaking and agency interpretations of laws and regulations, which could materially and adversely affect our results of operations, cash flows and financial condition as well as the business and financial prospects of certain capital improvement projects, such as CCS.

The United States Supreme Court, in the landmark case of Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc., recently overturned its prior doctrine of judicial deference to administrative interpretations of laws and regulations. This outcome could materially and adversely affect rulemaking and agencies' interpretations favorable to the renewable fuels industry, such as the EPA's administration of the Renewable Fuel Standard. This outcome could also materially and adversely affect the Treasury Department's ability to promulgate favorable regulations under the Inflation Reduction Act of 2022, including tax credits such as the section 45Q carbon capture and storage tax credits and section 45Z low carbon fuel tax credits, as well as other industry-favorable tax credits. Less industry-favorable rulemaking and agency interpretations of laws and regulations could materially and adversely affect our results of operations, cash flows and financial condition as well as the financial prospects of certain capital improvement projects, such as CCS.

Risks Related to Ownership of our Common Stock

Our stock price is highly volatile, which could result in substantial losses for investors purchasing shares of our common stock and in litigation against us.

The market price of our common stock has fluctuated significantly in the past and may continue to fluctuate significantly in the future. The market price of our common stock may continue to fluctuate in response to one or more of the following factors, or any of the other risks or uncertainties discussed in this report, many of which are beyond our control:

- fluctuations in our quarterly or annual operating results;
- fluctuations in the market prices of our products;
- fluctuations in the costs of key production input commodities such as corn and natural gas;
- the timing, cost and effects of, and our ability to fund, our capital improvement projects, including our CCS initiative;
- regulatory developments or increased enforcement relating to our initiatives and projects or to our business, including our CCS initiative;
- anticipated trends in our financial condition and results of operations;
- our ability to obtain any necessary financing;
- the volume and timing of the receipt of orders for our products from major customers, including annual contracted sales volumes for our specialty alcohols;
- competitive pricing pressures;
- changes in market valuations of companies similar to us;
- stock market price and volume fluctuations generally;
- additions or departures of key personnel;

- environmental, product or other liabilities we may incur;
- our financing activities and future sales of our common stock or other securities; and
- our ability to maintain contracts that are critical to our operations.

The price at which you purchase shares of our common stock may not be indicative of the price that will prevail in the trading market. You may be unable to sell your shares of common stock at or above your purchase price, which may result in substantial losses to you and which may include the complete loss of your investment. In the past, securities class action litigation has often been brought against a company following periods of high stock price volatility. We may be the target of similar litigation in the future. Securities litigation could result in substantial costs and divert management's attention and our resources away from our business.

Any of the risks described above could have a material adverse effect on our results of operations, the price of our common stock, or both.

Because we do not plan to pay any cash dividends on our shares of common stock, our stockholders will not be able to receive a return on their shares unless and until they sell them.

We intend to retain a significant portion of any future earnings to finance the development, operation and expansion of our business. We do not anticipate paying any cash dividends on our common stock in the near future. The declaration, payment, and amount of any future dividends will be made at the discretion of our board of directors, and will depend upon, among other things, our results of operations, cash flows, and financial condition, operating and capital requirements, compliance with any applicable debt covenants, and other factors our board of directors considers relevant. There is no assurance that future dividends will be paid,

and, if dividends are paid, there is no assurance of the amount of any such dividend. Unless our board of directors determines to pay dividends, our stockholders will be required to look solely to appreciation in the value of our common stock to realize any gain on their investment. There can be no assurance that any such appreciation will occur.

Our bylaws contain exclusive forum provisions that could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, employees or agents.

Our bylaws provide that, unless we consent in writing to the selection of an alternative forum, the Delaware Court of Chancery shall be the sole and exclusive forum for (a) any derivative action or proceeding brought on our behalf, (b) any action asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of us to us or our stockholders, (c) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law, or (d) any action asserting a claim governed by the internal affairs doctrine.

Our bylaws also provide that, unless we consent in writing to the selection of an alternative forum, to the fullest extent permitted by applicable law, the federal district courts of the United States of America shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act of 1933, as amended, or the Securities Act, including all causes of action asserted against any defendant named in such complaint, including our officers and directors, underwriters for any offering giving rise to such complaint, and any other professional entity whose profession gives authority to a statement made by that person or entity and who has prepared or certified any part of the documents underlying the offering.

For the avoidance of doubt, the exclusive forum provisions described above do not apply to any claims arising under the Securities Act or the Securities Exchange Act of 1934, as amended, or the Exchange Act, to the extent federal law requires otherwise. Section 27 of the Exchange Act creates exclusive federal jurisdiction over all suits brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder, and Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder.

The choice of forum provisions in our bylaws may limit our stockholders' ability to bring a claim in a judicial forum that they find favorable for disputes with us or our directors, officers, employees, agents or other third parties, which may discourage such lawsuits against us and our directors, officers, employees, agents and other third parties even though an action, if successful, might benefit our stockholders. The applicable courts may also reach different judgments or results than would other courts, including courts where a stockholder considering an action may be located or would otherwise choose to bring the action, and such judgments or results may be more favorable to us than to our stockholders. With respect to the provision making the Delaware Court of Chancery the sole and exclusive forum for certain types of actions, stockholders who do bring a claim in the Delaware Court of Chancery could face additional litigation costs in pursuing any such claim, particularly if they do not reside in or near Delaware. Finally, if a court were to find these provisions of our bylaws inapplicable to, or unenforceable in respect of, one or more of the specified types of actions or proceedings, we may incur additional costs associated with resolving such matters in other jurisdictions, which could have a material adverse effect on us.

General Risk Factors

Cyberattacks through security vulnerabilities could lead to disruption of our business, reduced revenue, increased costs, liability claims, or harm to our reputation or competitive position.

Security vulnerabilities may arise from our hardware, software, employees, contractors or policies we have deployed, which may result in external parties gaining access to our networks, data centers, cloud data centers, corporate computers, manufacturing systems, and/or access to accounts we have at our suppliers, vendors or customers. External parties may gain access to our data or our customers' data, or attack the networks causing denial of service or attempt to hold our data or systems in ransom. The vulnerability could be caused by inadequate account security practices such as the failure to timely remove employee access when terminated. To mitigate these security issues, we have implemented measures throughout our organization, including firewalls, backups, encryption, employee information technology policies and user account policies. However, there can be no assurance that these measures will be sufficient to avoid cyberattacks. If any of these types of security breaches were to occur and we were unable to protect sensitive data, our relationships with our business partners and customers could be materially damaged, our reputation could be materially harmed, and we could be exposed to a risk of litigation and possible significant liability.

Further, if we fail to adequately maintain our information technology infrastructure, we may have outages and data loss. Excessive outages may affect our ability to timely and efficiently deliver products to customers or develop new products. Such disruptions and data loss may adversely impact our ability to fulfill orders and interrupt other processes. Delayed sales or lost customers resulting from these disruptions could adversely affect our financial results, stock price and reputation.

Our and our business partners' or contractors' failure to fully comply with applicable data privacy or similar laws could lead to significant fines and require onerous corrective action. In addition, data security breaches experienced by us or our business partners or contractors could result in the loss of trade secrets or other intellectual property, public disclosure of sensitive commercial data, and the exposure of personally identifiable information (including sensitive personal information) of our employees, customers, suppliers, contractors and others.

Unauthorized use or disclosure of, or access to, any personal information maintained by us or on our behalf, whether through breach of our systems, breach of the systems of our suppliers or vendors by an unauthorized party, or through employee or contractor error, theft or misuse, or otherwise, could harm our business. If any such unauthorized use or disclosure of, or access to, such personal information was to occur, our operations could be seriously disrupted, and we could be subject to demands, claims and litigation by private parties, and investigations, related actions, and penalties by regulatory authorities. In addition, we could incur significant costs in notifying affected persons and entities and otherwise complying with the multitude of foreign, federal, state and local laws and regulations relating to the unauthorized access to, or use or disclosure of, personal information. Finally, any perceived or actual unauthorized access to, or use or disclosure of, such information could harm our reputation, substantially impair our ability to attract and retain customers and have an adverse impact on our business, financial condition and results of operations.

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

Unregistered Sales of Equity Securities

None.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

None.

Dividends

Our current and future debt financing arrangements may limit or prevent cash distributions from our subsidiaries to us, depending upon the achievement of specified financial and other operating conditions and our ability to properly service our debt, thereby limiting or preventing us from paying cash dividends.

For the three months ended March 31, 2025 and 2024, we accrued and paid in cash an aggregate of $0.3 million in dividends on our Series B Cumulative Convertible Preferred Stock, or Series B Preferred Stock.

We have never declared or paid cash dividends on our common stock and do not currently intend to pay cash dividends on our common stock in the foreseeable future. We currently anticipate that we will retain any earnings for use in the continued development of our business.

The holders of our outstanding Series B Preferred Stock are entitled to dividends of 7% per annum, payable quarterly. Accrued and unpaid dividends in respect of our Series B Preferred Stock must be paid prior to the payment of any dividends in respect of shares of our common stock.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES.

Not applicable.

ITEM 4. MINE SAFETY DISCLOSURES.

Not applicable.

ITEM 5. OTHER INFORMATION.

During the three months ended March 31, 2025, none of our directors or officers (as defined in Rule 16a-1(f) of the Securities Exchange Act of 1934, as amended) informed us of the adoption or termination of a Rule 10b5-1 trading arrangement or non-Rule 10b5-1 trading arrangement (as such terms are defined in Item 408 of Regulation S-K of the Securities Act of 1933, as amended).

ITEM 6. EXHIBITS.

Exhibit Number	Description
10.1	Letter Agreement dated March 17, 2025 by and among Alto Ingredients, Inc., Bradley L. Radoff and Michael Torok (**)
31.1	Certifications Required by Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (*)
31.2	Certifications Required by Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (*)
32.1	Certification of Chief Executive Officer and 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 with applicable taxonomy extension information contained in Exhibits 101) (*)

(*) Filed herewith.
(**) Previously filed as an exhibit to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on March 18, 2025.

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.

ALTO INGREDIENTS, INC.

Dated: May 9, 2025

By: /S/ ROBERT R. OLANDER
Robert R. Olander
Chief Financial Officer
(Principal Financial and Accounting Officer)