UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 10-Q

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

For the quarterly period ended March 31, 2025

Commission file number **000-33067**

BIRCHTECH CORP.

(Exact name of Registrant as Specified in its Charter)

Delaware	**87-0398271**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
1810 Jester Drive **Corsicana, Texas**	**75109**
(Address of principal Executive offices)	(Zip Code)

(614) 505-6115
(Registrant's Telephone Number, Including Area Code)

Not applicable
(Former Name, Former Address and Former Fiscal Year, if Changed Since Last Report)

Securities registered pursuant to Section 12(b) of the Act: None.

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 definition of "large accelerated filer", "accelerated filer", "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

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

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

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

State the number of shares outstanding of each of the Issuer's classes of common stock, as of the latest practicable date: Common, $.001 par value per share, 96,228,153 outstanding as of May 15, 2025.

BIRCHTECH CORP.

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FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains “forward-looking statements” that are made pursuant to the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995 or applicable Canadian securities laws (collectively, “forward-looking statements”). Forward-looking statements reflect management’s current expectations regarding our future growth, results of operations, cash flows, performance and business prospects, and opportunities, as well as assumptions made by, and information currently available to, our management. Forward-looking statements are generally identified by using words such as “anticipate,” “believe,” “plan,” “expect,” “intend,” “will,” and similar expressions, but these words are not the exclusive means of identifying forward-looking statements. These statements involve known and unknown risks, uncertainties and other factors that may cause actual results or events to differ materially from those anticipated in such forward-looking statements. Such risks include, without limitation, the following:

- changes in general economic and business conditions;
- risks related to our industry, including regulatory changes and competitive pressures;
- the loss of major customers;
- dependence and availability and retention of key suppliers;
- risks related to advancement in technologies;
- lack of diversification in the Company’s business;
- risks related to intellectual property, including the ability to protect intellectual property and the success of any patent litigation;
- changes in demand for coal as a fuel source for electricity production;
- development and growth of the Company’s new technologies, particularly in the water treatment market;
- ability to retain key personnel;
- share price volatility;
- the potential that dividends may never be declared; and
- other factors described under the caption “*Risk Factors*” in the Company’s Annual Report on Form 10-K for the year ended December 31, 2024 filed on March 31, 2025 with the U.S. Securities and Exchange Commission, and in other filings with the Securities and Exchange Commission or Canadian securities regulators.

Further, any forward-looking statement speaks only as of the date on which it is made, and we undertake no obligation to update any forward-looking statement to reflect events or circumstances after the date on which the statement is made or to reflect the occurrence of unanticipated events. New factors emerge from time to time, and it is not possible for us to predict which factors will arise. In addition, we cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. We qualify all of the information presented in this report, and particularly our forward-looking statements, by these cautionary statements.

Except to the extent required by applicable laws or rules, we undertake no obligation to publicly update or revise any forward-looking statement, whether written or oral, that may be made from time to time, whether as a result of new information, future events, or otherwise.

PART I – FINANCIAL INFORMATION

Item 1. Financial Statements.

BIRCHTECH CORP. AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS

	March 31, 2025 (Unaudited)	December 31, 2024
ASSETS		
Current assets		
Cash	$ 3,187,594	$ 3,456,082
Accounts receivable	1,278,280	1,823,232
Inventory	592,170	621,813
Prepaid expenses and other assets	140,112	198,185
Total current assets	5,198,156	6,099,312
Security deposits	6,615	6,615
Property and equipment, net	2,354,543	2,350,688
Right of use asset - operating lease	294,125	305,142
Intellectual property, net	1,448,313	1,499,463
Total assets	$ 9,301,752	$ 10,261,220
LIABILITIES AND STOCKHOLDERS' (DEFICIT) EQUITY		
Current liabilities		
Accounts payable and accrued expenses (related party $65,378 and $37,500 at March 31, 2025 and December 31, 2024, respectively)	$ 2,006,630	$ 1,702,998
Income tax payable	-	-
Current portion of operating lease liability	44,464	42,733
Customer credits	167,000	167,000
Accrued salaries	51,668	39,280
Profit share liability – related party	7,207,209	6,853,858
Total current liabilities	9,476,971	8,805,869
Operating lease liability, net of current portion	251,613	263,490
Total liabilities	9,728,584	9,069,359
Commitments and contingencies (Note 9)		
Stockholders' (deficit) equity		
Preferred stock, $0.001 par value: 2,000,000 shares authorized, no shares issued	-	-
Common stock, $0.001 par value; 150,000,000 shares authorized 96,228,153 and 96,178,153 shares issued and outstanding as of March 31, 2025 and December 31, 2024 respectively.	96,228	96,178
Additional paid-in capital	73,909,396	73,848,919
Accumulated deficit	(74,432,456)	(72,753,236)
Total stockholders' (deficit) equity	(426,832)	1,191,861
Total liabilities and stockholders' (deficit) equity	$ 9,301,752	$ 10,261,220

See accompanying notes to these condensed consolidated financial statements.

BIRCHTECH CORP. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(UNAUDITED)

	For the Three Months Ended March 31, 2025	For the Three Months Ended March 31, 2024
Product revenue	$ 2,676,984	$ 3,084,088
License revenue	525,000	140,625
Other revenue	19,027	17,053
Revenues	3,221,011	3,241,766
Cost of sales	(1,986,665)	(2,113,482)
Gross profit	1,234,346	1,128,284
Operating expenses:		
Research and development expenses	(406,676)	-
Selling, general and administrative expenses (related party of $112,500 and $142,676)	(2,170,623)	(3,526,776)
Total operating expenses	(2,577,299)	(3,526,776)
Operating loss	(1,342,953)	(2,398,492)
Other income (expense)		
Interest expense (related party of $0 and $245,817)	(54)	(245,817)
Loss on change in fair value of profit share and unsecured note	(353,351)	(265,198)
Interest income	31,273	54,632
Total other expense	(322,132)	(456,383)
Loss before provision for income taxes	(1,665,085)	(2,854,875)
Income tax expense	(14,135)	-
Net loss	$ (1,679,220)	$ (2,854,875)
Net loss per common share – basic and diluted:	$ (0.02)	$ (0.03)
Weighted average common shares outstanding:	96,219,820	94,361,944

See accompanying notes to these condensed consolidated financial statements.

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BIRCHTECH CORP. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY (DEFICIT)
(UNAUDITED)

	Three Months Ended March 31, 2024				
	Common Stock		Additional Paid-in	Accumulated	
	Shares	Par Value	Capital	(Deficit)	Total
Balance - January 1, 2024	94,360,107	$ 94,360	$ 61,917,119	$ (61,951,125)	$ 60,354
Stock issued for cash exercise of options	9,285	9	(9)	-	-
Gain on modification of related party debt	-	-	10,827,195	-	10,827,195
Share based payments	-	-	770,216	-	770,216
Net loss	-	-	-	(2,854,875)	(2,854,875)
Balance - March 31, 2024	94,369,392	$ 94,369	$ 73,514,521	$ (64,806,000)	$ 8,802,890

	Three Months Ended March 31, 2025				
	Common Stock		Additional Paid-in	Accumulated	
	Shares	Par Value	Capital	(Deficit)	Total
Balance - January 1, 2025	96,178,153	$ 96,178	$ 73,848,919	$ (72,753,236)	$ 1,191,861
Stock issued for delivery of RSUs	50,000	50	(50)	-	-
Share based payments	-	-	60,527	-	60,527
Net loss	-	-	-	(1,679,220)	(1,679,220)
Balance - March 31, 2025	96,228,153	$ 96,228	$ 73,909,396	$ (74,432,456)	$ (426,832)

See accompanying notes to these condensed consolidated financial statements.

BIRCHTECH CORP. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(UNAUDITED)

	For the Three Months Ended March 31, 2025	For the Three Months Ended March 31, 2024
Cash flows from operating activities		
Net loss	$ (1,679,220)	$ (2,854,875)
Adjustments to reconcile net loss to net cash (used in) operating activities:		
Stock-based compensation	60,527	770,216
Amortization of discount of notes payable	-	241,444
Amortization of right to use assets	11,017	10,639
Amortization of patent rights	51,150	51,150
Depreciation expense	10,298	535
Non-cash interest income	(13,271)	(19,116)
Loss on change in fair value of profit share	353,351	265,198
Changes in operating assets and liabilities		
Accounts receivable	558,223	880,355
Inventory	29,643	97,443
Prepaid expenses and other assets	58,073	69,528
Accrued salaries	12,388	23,580
Accounts payable and accrued liabilities	303,632	35,840
Operating lease liability	(10,146)	(11,157)
Net cash used in operating activities	(254,335)	(439,220)
Cash flows used in investing activities		
Purchase of property and equipment	(14,153)	-
Net cash used in investing activities	(14,153)	-
Cash flows used in financing activities		
Repayment of secured notes payable	-	(271,686)
Repayment of unsecured notes payable	-	(9,040,000)
Net cash used in financing activities	-	(9,311,686)
Net decrease in cash and cash equivalents	(268,488)	(9,750,906)
Cash and cash equivalents - beginning of period	3,456,082	20,939,762
Cash and cash equivalents - end of period	$ 3,187,594	$ 11,188,856
SUPPLEMENTAL CASH FLOW INFORMATION:		
Cash paid during the period for:		
Interest	$ -	$ 3,939
Income taxes	$ 14,135	$ -
SUPPLEMENTAL DISCLOSURE OF NON-CASH TRANSACTIONS		
Capital from related party debt extinguishments	$ -	$ 10,827,195
Recognition of ROU asset and operating lease liability	$ -	161,728

See accompanying notes to these condensed consolidated financial statements.

BIRCHTECH CORP. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
March 31, 2025

Note 1 - Organization

Birchtech Corp. and MES, Inc.

Birchtech Corp., formerly Midwest Energy Emissions Corp. (together with its consolidated subsidiaries, the "Company"), is organized under the laws of the State of Delaware. Effective on October 17, 2024, Midwest Energy Emissions Corp. changed its corporate name to Birchtech, Inc. pursuant to a certificate of amendment to its certificate of incorporation filed with the State of Delaware. MES, Inc. is incorporated in the State of North Dakota. MES, Inc. is a wholly owned subsidiary of Birchtech Corp. The Company is a provider of specialty activated carbon technologies and provides patented sorbent technologies for mercury emissions capture for the coal-fired utility sector and is developing water purification technologies with a specialization on forever chemicals such as PFAS and PFOS.

ME2C Sponsor LLC and ME2C Acquisition Corp.

ME2C Sponsor LLC is a limited liability company formed in the State of Delaware and is a wholly owned subsidiary of Birchtech Corp. and owns 85% of ME2C Acquisition Corp. A decision was made in January 2023 to liquidate these entities which are inactive.

Note 2 – Going Concern and Financial Condition

Under ASC 205-40, *Presentation of Financial Statements—Going Concern*, the Company has the responsibility to evaluate whether conditions and/or events raise substantial doubt about its ability to meet its future financial obligations as they become due within one year after the date that the financial statements are issued. As required by ASC 205-40, this evaluation shall initially not take into consideration the potential mitigating effects of plans that have not been fully implemented as of the date the financial statements are issued. Management has assessed the Company's ability to continue as a going concern in accordance with the requirements of ASC 205-40.

The accompanying unaudited condensed consolidated financial statements have been prepared on a going concern basis, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. As reflected in the unaudited condensed consolidated financial statements, the Company had a net loss of approximately $1.7 million and cash used in operating activities of $0.3 million for the three months ended March 31, 2025; had cash of approximately $3.2 million at March 31, 2025; and an accumulated deficit of approximately $74.4 million at March 31, 2025. The Company's working capital deficiency at March 31, 2025 was approximately $4.3 million. The aforementioned factors raise substantial doubt about the Company's ability to continue as a going concern within one year from the issuance date of the financial statements.

In addition to maintaining its revenue stream from its legacy mercury emissions control business, the Company's plans and expectations over the next twelve months to mitigate such financial condition include receiving additional cash inflows from the judgment expected in connection with the $57.1 million jury verdict awarded to the Company in March 2024, additional licensing revenues and product sales from the other patent litigation recently commenced, and revenues from the Company's entry into the water treatment business. During 2024, the Company opened two new state of the art laboratories and have added personnel to support our entry into the water business which the Company believes will lead to a vibrant new revenue stream. In addition, management is exploring additional financing opportunities. While management believes these plans will alleviate substantial doubt, there is no assurance that they will be successfully realized or implemented.

The accompanying unaudited condensed consolidated financial statements do not include any adjustments relating to the recoverability and classification of asset amounts or the classification of liabilities that might be necessary should the Company be unable to continue as a going concern within one year after the date the financial statements are issued.

Note 3 - Basis of Presentation and Summary of Significant Accounting Policies

Basis of Presentation

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP") and pursuant to the rules and regulations of Rule 8-03 of Regulation S-X promulgated by the United States Securities and Exchange Commission ("SEC") for interim financial information. Accordingly, these financial statements do not include all of the information and footnotes required for complete financial statements and should be read in conjunction with the audited consolidated financial statements and accompanying notes included in the Company's Annual Report on Form 10-K for the year ended December 31, 2024 filed on March 31, 2025, from which the accompanying condensed consolidated balance sheet dated December 31, 2024 was derived.

In the opinion of the Company's management, the accompanying unaudited condensed consolidated financial statements contain all adjustments (consisting of items of a normal and recurring nature) necessary to present fairly the Company's financial position as of March 31, 2025, and results of operations, changes in stockholders' deficit and cash flows for all periods presented. The interim results presented are not necessarily indicative of results that can be expected for a full year.

Principles of Consolidation

The unaudited condensed consolidated financial statements include the accounts of Birchtech Corp. (formerly Midwest Energy Emissions Corp.) and its wholly-owned subsidiaries, MES, Inc. and ME2C Sponsor LLC, and ME2C Acquisition Corp. which is 85% owned by ME2C Sponsor LLC. Intercompany balances and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of unaudited condensed consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, valuation of equity issuances and disclosures of contingent assets and liabilities at the date of the unaudited condensed consolidated financial statements and the reported amounts of revenue and expenses during the reporting period. The Company uses estimates in accounting for, among other items, profit share liability, revenue recognition, allowance for credit losses, stock-based compensation, income tax provisions, excess and obsolete inventory reserve and impairment of intellectual property. Actual results could differ from those estimates.

Recoverability of Long-Lived and Intangible Assets

Long-lived assets and certain identifiable intangibles held and used by the Company are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Events relating to recoverability may include significant unfavorable changes in business conditions, recurring losses or a forecasted inability to achieve break-even operating results over an extended period. The Company evaluates the recoverability of long-lived assets based upon forecasted undiscounted cash flows. Should impairment in value be indicated, the carrying value of the long-lived and/or intangible assets would be adjusted, based on estimates of future undiscounted cash flows.

The Company has evaluated the recoverability of the carrying value of the Company's property and equipment, right of use asset and intellectual property. No impairment charges were recognized for the three months ended March 31, 2025 and 2024.

Fair Value of Financial Instruments

The fair value hierarchy has three levels based on the inputs used to determine fair value, which are as follows:

☐ *Level 1* — Unadjusted quoted prices available in active markets for the identical assets or liabilities at the measurement date.

☐ *Level 2* — Unadjusted quoted prices in active markets for similar assets or liabilities, or unadjusted quoted prices for identical or similar assets or liabilities in markets that are not active, or inputs other than quoted prices that are observable for the asset or liability.

☐ *Level 3* — Unobservable inputs that cannot be corroborated by observable market data and reflect the use of significant management judgment. These values are generally determined using pricing models for which the assumptions utilize management's estimates of market participant assumptions.

The fair value hierarchy requires the use of observable market data when available. In instances where the inputs used to measure fair value fall into different levels of the fair value hierarchy, the fair value measurement has been determined based on the lowest level input significant to the fair value measurement in its entirety. The Company's assessment of the significance of a particular item to the fair value measurement in its entirety requires judgment, including the consideration of inputs specific to the asset or liability.

The profit share liability is the only item measured at fair value on a recurring basis by the Company at March 31, 2025 and December 31, 2024. The profit share liability is considered to be Level 3 measurements.

Financial instruments include cash, accounts receivable, accounts payable, and short-term debt. The carrying amounts of these financial instruments approximated fair value at March 31, 2025 and December 31, 2024 due to their short-term maturities.

At March 31, 2025, the fair value of the profit share liability is calculated using a discounted cash flow model based on estimated future cash payments. The fair value of the profit share liability at December 31, 2024 was also calculated using a discounted cash flow model based on estimated future cash payments. At March 31, 2025 and December 31, 2024, the fair value of the profit share liability was determined on a Level 3 measurement. These values are determined using pricing models for which the assumptions utilized management's estimates. Significant unobservable inputs include a discount rate of approximately 14.55% and the projection of future cash flows.

The following tables present the Company's liabilities that are measured at fair value on a recurring basis and are categorized using the fair value hierarchy.

		Fair Value Measurement as of March 31, 2025		
	Total	**Level 1**	**Level 2**	**Level 3**
Liabilities:				
Profit share liability – related party (1)	$ 7,207,209	$ -	$ -	$ 7,207,209
Total Liabilities	$ 7,207,209	$ -	$ -	$ 7,207,209

		Fair Value Measurement as of December 31, 2024		
	Total	**Level 1**	**Level 2**	**Level 3**
Liabilities:				
Profit share liability – related party (1)	$ 6,853,858	$ -	$ -	$ 6,853,858
Total Liabilities	$ 6,853,858	$ -	$ -	$ 6,853,858

(1) See Note 7 - Related Party

The following tables present the Company's assets that are measured at fair value on a non-recurring basis and are categorized using the fair value hierarchy.

		Fair Value Measurement as of December 31, 2024		
	Total	**Level 1**	**Level 2**	**Level 3**
Assets:				
Property and equipment (Construction in progress)	$ 1,545,000	$ -	$ -	$ 1,545,000
Total Assets	$ 1,545,000	$ -	$ -	$ 1,545,000

Revenue Recognition

The Company records revenue in accordance with ASC 606, *Revenue from Contracts with Customers.* The core principle of the guidance is that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. To achieve that core principle, an entity should apply the following steps:

Step 1: Identify the contract(s) with a customer.
Step 2: Identify the performance obligations in the contract.
Step 3: Determine the transaction price.
Step 4: Allocate the transaction price to the performance obligations in the contract.
Step 5: Recognize revenue when (or as) the entity satisfies a performance obligation.

Revenue is recognized when the Company satisfies its performance obligation under the contract by transferring the promised product to its customer that obtains control of the product. A performance obligation is a promise in a contract to transfer a distinct product to a customer. Most of the Company's contracts have a single performance obligation, as the promise to transfer products or services is not separately identifiable from other promises in the contract and, therefore, not distinct.

Revenue is measured as the amount of consideration the Company expects to receive in exchange for transferring products. As such, revenue is recorded net of returns, allowances, customer discounts, and incentives. Sales and other taxes are excluded from revenues. Invoiced shipping and handling costs are included in revenue.

Disaggregation of Revenue

The Company generated revenue for the three months ended March 31, 2025 and 2024 by (i) delivering product to its commercial customers, (ii) completing and commissioning equipment projects at commercial customer sites and (iii) performing demonstrations of its technology at customers with the intent of entering into long term supply agreements based on the performance of the Company's products during the demonstrations and (iv) licensing its technology to customers.

Revenue for product sales is recognized at the point of time in which the customer obtains control of the product, at the time title passes to the customer upon shipment or delivery of the product based on the applicable shipping terms.

Licensing revenue includes the licensing of the Company's intellectual property ("IP"). Revenue for IP rights is accounted for based on the nature of the promise to grant the license. In determining whether the Company's promise is to provide a right to access its IP or a right to use its IP, the Company considers the nature of its IP to which the customer will have rights. IP is either functional IP which has significant standalone functionality or symbolic IP which does not have significant standalone functionality. Revenue from functional IP is recognized at the point in time when control of the distinct license is transferred to the customer. Revenue from symbolic IP is recognized over the access period to the Company's IP.

The licenses provide the customer with the right to use the Company's patented technologies as they exist at a point in time when the license is granted, for the duration of the contract term. The patented technology has stand-alone functionality, and the Company has no obligation to provide any future updates. During the three months ended March 31, 2025, the Company recognized $525,000 (2024 - $140,625) of revenue for licenses for which revenue was recognized at a point in time and $0 (2024 - $0) for licenses for which revenue was recognized over time.

When a license arrangement contains payment terms beyond one year, a significant financing component may exist. The significant financing component is calculated as the difference between the stated value and present value of the license fees and is recognized as interest income over the payment period.

Variable consideration is recorded as revenue only to the extent that a significant reversal of cumulative revenue recognized is not probable of occurring when the uncertainty associated with the variable consideration is subsequently resolved. Significant judgment is required in estimating variable consideration for the performance obligation identified in the contract and this judgment involves assessing factors outside of our influence.

Revenue for equipment sales is recognized upon commissioning and customer acceptance of the installed equipment per the terms of the purchase contract.

Revenue for demonstrations and consulting services is recognized when performance obligations contained in the contract have been completed, typically the completion of necessary field work and the delivery of any required analysis per the terms of the agreement.

The following table presents sales by operating segment disaggregated based on the type of revenue for the three months ended March 31, 2025 and 2024. All sales were in the United States.

	March 31, 2025	March 31, 2024
Product revenue	$ 2,676,984	$ 3,084,088
License revenue	525,000	140,625
Demonstrations & Consulting revenue	9,000	6,000
Equipment sales and rental revenue	10,027	11,053
	$ 3,221,011	$ 3,241,766

Accounts receivable and allowance for credit losses

Accounts receivable are presented net of an allowance for credit losses. The Company reviews the accounts receivable on a periodic basis and makes general and specific allowances when there is doubt as to the collectability of individual balances. In evaluating the collectability of individual receivable balances, the Company considers many factors, including the age of the balance, a customer's payment history, its current credit-worthiness and current economic trends. Accounts are written off after exhaustive efforts at collection.

Management believed that the accounts receivable were fully collectable and no allowance for credit losses was deemed to be required on its accounts receivable at March 31, 2025. The Company historically has not experienced significant uncollectible accounts receivable. As of March 31, 2025 and December 31, 2024, the Company's allowance for credit losses was $0, and the Company recorded $0 of bad debt expense for both the three months ended March 31, 2025 and 2024.

Research and Development Costs

Research and development costs are expensed as incurred. Research and development costs consist of costs incurred to discover, research and develop products, and include personnel expenses, facility-related and depreciation expenses, and external costs of outside suppliers.

Income Taxes

The Company follows the asset and liability method of accounting for income taxes under FASB ASC 740, *Income Taxes.* Deferred tax assets and liabilities are recognized for the estimated future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred income tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that included the enactment date. Valuation allowances are established, when necessary, to reduce deferred tax assets to the amount expected to be realized.

FASB ASC 740 prescribes a recognition threshold and a measurement attribute for the financial statement recognition and measurement of tax positions taken or expected to be taken in a tax return. For those benefits to be recognized, a tax position must be more likely than not to be sustained upon examination by taxing authorities. There were no unrecognized tax benefits as of March 31, 2025 and 2024. The Company is currently not aware of any issues under review that could result in significant payments, accruals or material deviation from its position. The Company is no longer subject to tax examinations by tax authorities for the years prior to 2020.

The Company may be subject to potential examination by federal, state, and city taxing authorities in the areas of income taxes.

These potential examinations may include questioning the timing and amount of deductions, the nexus of income among various tax jurisdictions, and compliance with federal, state, and city tax laws. Management does not expect that the total amount of unrecognized tax benefits will materially change over the next twelve months.

Basic and Diluted Income (Loss) Per Common Share

Income (loss) per share – basic is calculated by dividing net income (loss) by the weighted average number of shares of stock outstanding during the year, including shares issuable without additional consideration. Income per share – assuming dilution is calculated by dividing net income by the weighted average number of shares outstanding during the year adjusted for the effect of dilutive potential shares from options and warrants calculated using the treasury stock method and the if-converted method for preferred stock. There were no dilutive potential common shares for periods ended March 31, 2025 and 2024, because the Company incurred a net loss and basic and diluted losses per common share are the same.

Total common stock equivalents excluded from dilutive loss per share are as follows:

	March 31, 2025	March 31, 2024
Stock options	9,650,000	18,018,750
Warrants	-	2,550,000
Restricted stock units	-	50,000
Total common stock equivalents excluded from dilutive loss per share	9,650,000	20,618,750

Concentration of Credit Risk

Financial instruments that subject the Company to credit risk consist of cash and equivalents on deposit with financial institutions and accounts receivable. The Company's cash as of March 31, 2025 and December 31, 2024 is maintained at high-quality financial institutions and has not incurred any losses to date. Accounts are guaranteed by the Federal Deposit Insurance Corporation (FDIC) up to $250,000. At March 31, 2025 and December 31, 2024, the Company had $2,687,594 and $2,956,082, respectively, in excess of FDIC limits.

Customer and Supplier Concentration

For the three months ended March 31, 2025, three customers represented 21%, 17%, and 10% of the Company's revenues, and for the three months ended March 31, 2024, three customers represented 23%, 21%, and 11% of the Company's revenues.

At March 31, 2025, three customers represented 34%, 22%, and 17% of the Company's accounts receivable, and at March 31, 2024, three customers represented 47%, 19%, and 10% of the Company's accounts receivable.

For the three months ended March 31, 2025, 91% of the Company's purchases related to two suppliers. For the three months ended March 31, 2024, 88% of the Company's purchases related to three suppliers. At March 31, 2025, 74% of the Company's accounts payable and accrued expenses related to two vendors. At March 31, 2024, 67% of the Company's accounts payable and accrued expenses related to three vendors. The Company believes there are numerous other suppliers that could be substituted should a supplier become unavailable or non-competitive.

Contingencies

Certain conditions may exist which may result in a loss to the Company, but which will only be resolved when one or more future events occur or fail to occur. The Company's management and its legal counsel assess such contingent liabilities, and such assessment inherently involves an exercise of judgment. In assessing loss contingencies related to legal proceedings that are pending against the Company, or unasserted claims that may result in such proceedings, the Company's legal counsel evaluates the perceived merits of any legal proceedings or unasserted claims as well as the perceived merits of the amount of relief sought or expected to be sought therein.

If the assessment of a contingency indicates that it is probable that a material loss has been incurred and the amount of the liability can be estimated, the estimated liability would be accrued in the Company's unaudited condensed consolidated financial statements. If the assessment indicates that a potentially material loss contingency is not probable but is reasonably possible, or is probable but cannot be estimated, the nature of the contingent liability, together with an estimate of the range of possible loss if determinable and material, would be disclosed.

Loss contingencies considered remote are generally not disclosed unless they arise from guarantees, in which case the guarantees would be disclosed.

Recently Issued Accounting Standards

In December 2023, the FASB issued ASU 2023-09, *Income Taxes (Topic 740): Improvements to Income Tax Disclosures*, which is intended to provide enhancements to annual income tax disclosures. The standard will require more detailed information in the rate reconciliation table and for income taxes paid, among other enhancements. The standard is effective for years beginning after December 15, 2024 and early adoption is permitted. Since ASU 2023-09 addresses only disclosures, the adoption of ASU 2023-09 is not expected to have a significant impact on its unaudited condensed consolidated financial statements.

In November 2024, the FASB issued ASU No. 2024-03, *Income Statement – Reporting Comprehensive Income – Expense Disaggregation Disclosures (Subtopic 220-40): Disaggregation of Income Statement Expenses*. This ASU requires entities to disaggregate expense items in the notes to the financial statements and requires disclosure of specified information related to purchases of inventory, employee compensation, depreciation, and intangible asset amortization. The amendments in this ASU are effective for annual periods beginning after December 15, 2026, and interim periods beginning after December 15, 2027. Companies have the option to apply the guidance either on a retrospective or prospective basis, and early adoption is permitted. The Company is currently evaluating the impact of the ASU on its consolidated financial statements and related disclosures. In January 2025, the FASB issued ASU No. 2025-01, *Income Statement – Reporting Comprehensive Income – Expense Disaggregation Disclosures (Subtopic 220-40): Clarifying the Effective Date*. This ASU amends the effective date of ASU No. 2024-03 to clarify that all public business entities are required to adopt the guidance in annual reporting periods beginning after December 15, 2026, and interim periods within annual reporting periods beginning after December 15, 2027. Early adoption of ASU No. 2024-03 is permitted.

Note 4 - Inventory

Inventory was comprised of the following at March 31, 2025 and December 31, 2024:

	March 31, 2025	December 31, 2024
Raw Materials	$ 155,588	$ 169,527
Finished Goods	436,582	452,286
	$ 592,170	$ 621,813

Note 5 - Property and Equipment, Net

Property and equipment at March 31, 2025 and December 31, 2024 are as follows:

	March 31, 2025	December 31, 2024
Equipment & installation	$ 1,096,979	$ 1,096,979
Leasehold improvements	117,512	117,512
Trucking equipment	911,377	911,377
Lab equipment	739,779	725,626
Office equipment, computer equipment and software	1,874	1,874
Total equipment	2,867,521	2,853,368
Less: accumulated depreciation	(2,057,978)	(2,047,680)
Construction in process	1,545,000	1,545,000
Property and equipment, net	$ 2,354,543	$ 2,350,688

The Company uses the straight-line method of depreciation over estimated useful lives of2 to 5 years. During the three months ended March 31, 2025 and 2024, depreciation expense was $10,298 and $535, respectively. At March 31, 2025, lab equipment included $132,469 of lab equipment not yet placed in service (December 31, 2024 - $725,626).

Note 6 - Intellectual Property

License and patent costs capitalized as of March 31, 2025 and December 31, 2024 are as follows:

	March 31, 2025	December 31, 2024
Licenses and patents	$ 3,068,995	$ 3,068,995
Less: Accumulated amortization	(1,620,682)	(1,569,532)
Intellectual property, net	$ 1,448,313	$ 1,499,463

Amortization expense for the three months ended March 31, 2025 and 2024 was $51,150 and $51,150, respectively. Estimated annual amortization for each of the next 5 years and thereafter is as follows:

Annual amortization for the years ended:	
December 31, 2025 (remaining)	$ 153,450
December 31, 2026	204,600
December 31, 2027	204,600
December 31, 2028	204,600
December 31, 2029	204,600
Thereafter	476,463
Total	$ 1,448,313

Note 7 - Related Party

Secured Note Payable

On November 29, 2016, pursuant to a restated financing agreement entered with AC Midwest Energy, LLC (“AC Midwest”) on November 1, 2016, the Company closed on a secured note with AC Midwest (the “AC Midwest Secured Note”), which was to mature on December 15, 2018. AC Midwest is wholly-owned by a stockholder of the Company. The AC Midwest Secured Note is guaranteed by MES, is non-convertible and bears interest at a rate of 15.0% per annum, payable quarterly in arrears on or before the last day of each fiscal quarter. On February 25, 2019, per Amendment No. 3 to the Amended and Restated Financing Agreement, AC Midwest extended the maturity date from December 15, 2018 to August 25, 2022.

On October 28, 2022, the Company, along with MES, and AC Midwest, executed Amendment No. 4 to the Amended and Restated Financing Agreement pursuant to which the maturity date of the AC Midwest Secured Note was extended to August 25, 2025. In addition, the interest rate on the remaining principal balance was reduced from 15.0% to 9.0% per annum. The Company has accounted for the extension as debt extinguishment with a related party. As such the Company recorded a capital contribution of $54,983 for the year ended December 31, 2022 on this exchange which is related to the difference in fair value of the note on the date of the exchange.

On February 27, 2024, the Company paid AC Midwest $275,625 representing the remaining principal balance under the AC Midwest Secured Note of $271,686 plus interest of $3,939. As a result of the repayment of the remaining principal balance under the AC Midwest Secured Debt, the Company and AC Midwest executed a Satisfaction and Discharge of Secured Debt confirming the cancellation of the AC Midwest Secured Note.

As of March 31, 2025 and December 31, 2024, total principal of $0 and $0, respectively, was outstanding on this note. Interest expense for the three months ended March 31, 2025 and 2024 was $0 and $4,279, respectively.

Amortized discount recorded as interest expense for the three months ended March 31, 2025 and 2024 was $0 and $32,220, respectively. As of March 31, 2025 and December 31, 2024, the unamortized balance of the discount was $0 and $0, respectively.

Unsecured Note Payable

On November 29, 2016, pursuant to a restated financing agreement entered with AC Midwest on November 1, 2016, the Company closed on an unsecured note with AC Midwest (the "AC Midwest Subordinated Note"), which was to mature on December 15, 2020. On February 25, 2019, the Company, entered into an Unsecured Note Financing Agreement (the "Unsecured Note Financing Agreement") with AC Midwest, pursuant to which AC Midwest issued an unsecured note in the principal amount of $ 13,154,931 (the "AC Midwest Unsecured Note"), which represented the outstanding principal and accrued and unpaid interest at closing. The AC Midwest Unsecured Note, which replaced the AC Midwest Subordinated Note, was scheduled to mature on August 25, 2022 and bear a zero cash interest rate.

The Company determined that the rate of interest on the AC Midwest Subordinated Note was a below market rate of interest and determined that a discount of $6,916,687 should be recorded. This discount was based on an applicable market rate for unsecured debt for the Company of 21% and is being amortized as interest expense over the life of the loan.

On August 30, 2022, AC Midwest agreed to an extension of the maturity date of the AC Midwest Unsecured Note (and AC Midwest Secured Note) from August 25, 2022 to September 30, 2022. Such extension was expected to provide the Company sufficient time in which to conclude the process of negotiating certain changes and modifications to such financing arrangements. On September 28, 2022, AC Midwest agreed to an additional short-term extension of such maturity date from September 30, 2022 to October 31, 2022. The Company has accounted for the extension as debt extinguishment with a related party. As such the Company recorded a capital contribution of $ 488,274 on this exchange which is related to the difference in fair value of the note on the date of the exchange.

On October 28, 2022, the Company, along with MES, and AC Midwest, executed Amendment No. 1 to Unsecured Note Financing Agreement pursuant to which the maturity date of the AC Midwest Unsecured Note was extended to August 25, 2025. In addition, the parties agreed that the Profit Share (see "Profit Share" below) be increased by $4,500,000 from $13,154,931 (representing 1.0 times the original principal amount) to $17,654,931. The Company has accounted for the extension as debt extinguishment with a related party. As such the Company recorded a capital contribution of $ 3,234,469 on this exchange which is related to the difference in fair value of the note on the date of the exchange.

On February 27, 2024, the Company entered into an Unsecured Debt Restructuring Agreement (the "Debt Restructuring Agreement") with AC Midwest which replaces and supersedes the Unsecured Note Financing Agreement. Pursuant to the Debt Restructuring Agreement, on February 27, 2024, the Company (i) paid AC Midwest $ 9,040,000 as a reduction in the outstanding principal balance of the AC Midwest Unsecured Note, and (ii) issued to AC Midwest a new unsecured replacement note representing the remaining outstanding principal balance of the Unsecured Note in the principal amount of $4,114,931 (the "New Note"). In addition, within 30 days, the Company would either facilitate the private sale to third parties of certain shares of common stock of the Company held by AC Midwest for a purchase price of no less than $960,000, which amount shall be applied as a credit against the principal balance due on the New Note dollar for dollar, or pay AC Midwest $960,000 toward the principal balance due on the New Note. The private sale of shares for the purchase price of $960,000 was completed on March 11, 2024. Any remaining principal balance on the New Note shall be due August 27, 2024 (the "New Note Maturity Date"), which is six months from February 27, 2024. Until repaid in full, the New Note shall accrue interest at a rate equal to SOFR plus 2.0% per annum. The New Note completely replaced and superseded the AC Midwest Unsecured Note, which shall be of no further force and effect.

On August 26 and 27, 2024, the Company repaid AC Midwest the remaining principal of $3,154,931 on the New Note together with accrued interest of $119,964. As a result, the only remaining debt obligation under the Debt Restructuring Agreement is the profit participation as described below.

The Company has accounted for the February 27, 2024 modification as debt extinguishment with a related party. As such the Company recorded a capital charge of $1,005,984 on this exchange which is related to the difference in fair value of the New Note on the date of the exchange. The New Note represented a hybrid instrument and the Company elected to apply fair value option accounting to the New Note. Cash flows of the hybrid instrument in its entirety are discounted at an appropriate rate for the applicable duration of the instrument. Interest on the interest-bearing portion of the instrument that is held to maturity is aggregated as loss on change in fair value of profit share and unsecured note in the consolidated statements of operations.

Amortized discount recorded as interest expense for the three months ended March 31, 2025 and 2024 was $0 and $209,224, respectively. As of March 31, 2025 and December 31, 2024 the unamortized balance of the discount was $0 and $0, respectively.

Profit Share

Pursuant to the Unsecured Note Financing Agreement, AC Midwest was also entitled to a "non-recourse" profit participation preference equal to 1.0 times the original principal amount of the AC Midwest Unsecured Note which on October 28, 2022 was increased to $17,654,931 (the "Profit Share"). Prior to maturity, the outstanding principal, as well as the Profit Share, were to be paid from Net Litigation Proceeds from claims relating to the Company's intellectual property, Net Revenue Share, Adjusted Free Cash Flow and Equity Offering Net Proceeds (as such terms are defined in the Unsecured Note Financing Agreement). Any remaining principal balance due on the Unsecured Note would be due and payable in full on the maturity date. The Profit Share, however, if not paid in full on or before the maturity date would remain subject to the Unsecured Note Financing Agreement until full and final payment.

Pursuant to the Debt Restructuring Agreement, AC Midwest was granted a profit participation preference equal to $7,900,000 (the "Restructured Profit Share") which replaces and supersedes the terms and conditions of the Profit Share in the amount of $17,654,931 provided for in the Unsecured Note Financing Agreement, which shall be of no further force and effect. The Restructured Profit Share is "non-recourse" and shall only be paid from Net Litigation Proceeds (as defined in the Debt Restructuring Agreement) from claims relating to the Company's intellectual property. Following the receipt of any Net Litigation Proceeds, the Company shall prepay any remaining principal balance of the New Note and pay the Restructured Profit Share in an amount equal to 75.0% of such Net Litigation Proceeds until the New Note and Restructured Profit Share have been paid in full. The Restructured Profit Share, if not paid in full on or before the New Note Maturity Date, shall remain subject to the terms of the Debt Restructuring Agreement.

In addition to facilitating the private sale to third parties as described above, AC Midwest granted the Company the exclusive right until December 31, 2024 to facilitate the sale of all or a portion of the remaining balance of the shares of common stock of the Company held by AC Midwest, which proceeds above a certain amount will be applied as a credit against the Restructured Profit Share dollar for dollar (the "Facilitation Credit"). As of December 31, 2024, the Company had not facilitated the sale of any portion of the remaining shares held by AC Midwest. As a result, no Facilitation Credit has been issued to the Company.

The Company has accounted for the February 27, 2024 modification as debt extinguishment with a related party. As such the Company recorded a capital contribution of $11,833,179 on this exchange which is related to the difference in fair value of the Restructured Profit Share on the date of the exchange.

The Company is utilizing the methodology behind the ASC 815, *Derivatives and Hedging* and ASC 480, *Distinguishing Liabilities from Equity* to determine how to account for the profit-sharing portion of the note payable. Although the transaction is not indexed to MEEC's common stock the profit sharing has the characteristics of a freestanding financial instrument because the profit sharing is not callable by the lender, it will be paid out past the maturity of the Unsecured Note Payable and, the fair value will fluctuate over time based on payment predictions. The Profit Share was determined to have a fair value of $3,389,043 upon grant. The fair value of the Profit Share upon grant included $3,422,400 attributed to the Facilitation Credit which reduced the fair value of the Profit Share liability. At December 31, 2024, the Facilitation Credit had expired and the fair value attributed to the feature was $0. This increased the fair value of the Profit Share at December 31, 2024, and increased the loss on change in fair value of the profit share recorded during the year ended December 31, 2024 by $3,422,400. The discounted cash flow model assumptions used at March 31, 2025 to calculate the Profit Share liability included: the projected full repayment of the profit share liability of $7,900,000 upon the receipt of Net Litigation Proceeds in 2025, and an annual market interest rate of 14.55%.The discounted cash flow model assumptions used at December 31, 2024 to calculate the Profit Share liability included: the projected full repayment of the profit share liability of $7,900,000 upon the receipt of Net Litigation Proceeds in 2025, and an annual market interest rate of 14.55%. The profit share liability will be marked to market every quarter utilizing management's estimates.

The following are the changes in the profit share liability (the only Level 3 financial instrument) during the three months ended March 31, 2025 and the year ended December 31, 2024:

Profit Share as of January 1, 2024	$	14,847,937
Modification		(11,833,179)
Loss on change in fair value of profit share		3,839,100
Profit Share as of December 31, 2024	$	6,853,858
Profit Share as of January 1, 2025	$	6,853,858
Loss on change in fair value of profit share		353,351
Profit Share as of March 31, 2025	$	7,207,209

Related Party Transactions

Kaye Cooper Kay & Rosenberg, LLP provides certain legal services to the Company and was paid $112,500 and $100,694 for the three months ended March 31, 2025 and 2024, respectively, for legal services rendered and disbursement incurred. David M. Kaye, a Director of the Company, is a partner of the law firm. At March 31, 2025 and December 31, 2024, $37,500 and $37,500, respectively, was owed to the firm for services rendered.

On January 31, 2023, the Company entered into a License and Supply Agreement with Dakin Holdings Ltd., a company incorporated in Barbados ("Dakin"), effective as of January 1, 2023 (the "Dakin Agreement"), pursuant to which Dakin has granted to the Company (i) a limited license to manufacture and produce for Dakin products comprising certain intellectual property owned by Dakin (the "Dakin IP"), and (ii) an exclusive license to commercialize the Dakin IP in the United States. In addition, the Company shall pay Dakin a license fee of $12,500 per month for a three-year period commencing as of the effective date and ending December 31, 2025, and pay Dakin a royalty on all sales in the United States of the products comprising the Dakin IP made by the Company. On November 18, 2024, the parties entered into an amendment to the Dakin Agreement which eliminated all further monthly license fees after September 30, 2024. Dakin is a company owned and controlled by the Company's Chief Executive Officer and President. The Dakin Agreement is for a term of ten years unless terminated earlier under certain circumstances as set forth therein. For the three months ended March 31, 2025 and 2024, Dakin incurred $0 and $37,500 license fees. At March 31, 2025 and December 31, 2024, $0 and $0 was owed to Dakin for license fees.

At March 31, 2025, the Company owed $27,878 (December 31, 2024 - $Nil) to the Company's Chief Executive Officer and President for the reimbursement of expenses incurred on behalf of the Company.

Note 8 - Operating Leases

On July 1, 2015, the Company entered into a five-year lease for warehouse space in Corsicana, Texas. The Company is also responsible for the pro rata share of the projected monthly expenses for the property taxes. The current pro rata share is $882. On June 1, 2019, the lease was extended to March 31, 2024, and on March 28, 2024, the lease was further extended for an additional five years from March 31, 2024 to March 31, 2029. Rent is $3,750 monthly until March 31, 2026 and then $3,866 per month until March 31, 2029. The Company recorded a right of use asset and an operating lease liability of $161,728. This amount represents the difference between the value from the remaining lease and the extended lease.

On August 1, 2024, the Company entered into a 3-year lease for laboratory space in Grand Forks, North Dakota. The lease contains an option to extend for a further three years that the Company is reasonably certain to exercise. As a result, the additional three year extension is included as part of the least term. Rent is $1,400 monthly until July 31, 2027, and then effectively $1,540 per month until July 31, 2030. Upon commencement of the lease the Company recorded a right of use asset and an operating lease liability of $69,615.

On November 22, 2024, the Company entered into an approximate3-year lease for laboratory space in State College, Pennsylvania, commencing December 15, 2024 and ending November 30, 2027. The lease contains an option to extend for a further three years that the Company is reasonably certain to exercise. As a result, the additional three year extension is included as part of the lease term. Rent is $1,800 monthly until November 30, 2025, $1,860 monthly thereafter until November 30, 2026, and $1,920 monthly thereafter until November 30, 2027. During the option period, rent is $1,980 monthly from December 1, 2027 to November 30, 2028, $2,040 monthly thereafter through November 30, 2029, and $2,100 monthly thereafter through November 30, 2030. Upon commencement of the lease the Company recorded a right of use asset and an operating lease liability of $94,942.

For the three months ended March 31, 2025 and the year ended December 31, 2024, the Company recorded an operating lease right of use asset and liabilities as follows:

	March 31, 2025	December 31, 2024
Right of use asset - operating lease	$ 294,125	$ 305,142
Current portion of operating lease liability	44,464	42,733
Operating lease liability	296,077	306,223

Future remaining minimum lease payments under these non-cancelable leases are as follows:

For the twelve months ended March 31,	
2026	$ 83,640
2027	85,752
2028	87,592
2029	88,872
2030	43,200
Thereafter	22,961
Total	412,017
Less discount	(115,940)
Total lease liabilities	296,077
Less current portion	(44,464)
Operating lease obligation, net of current portion	$ 251,613

The weighted average remaining lease term for operating leases is4.95 years and the weighted average discount rate used in calculating the operating lease asset and liability is 14.55%. For the three months ended March 31, 2025 and 2024, payments on lease obligations were $32,100 and $11,250, respectively, and amortization of the right of use assets was $11,017 and $10,639, respectively.

For the three months ended March 31, 2025 and 2024, the Company's lease cost consists of the following components, each of which is included in costs and expenses within the Company's unaudited condensed consolidated statements of operations:

	For the Three Months Ended March 31, 2025	For the Three Months Ended March 31, 2024
Operating lease costs	$ 32,614	$ 10,893

Note 9 - Commitments and Contingencies

Fixed Price Contract

The Company's multi-year contracts with its commercial customers contain fixed prices for product. These contracts expire between 2023 and 2025 and expose the Company to the potential risks associated with rising material costs during that same period.

Legal proceedings

On July 17, 2019, the Company initiated patent litigation against certain defendants in the U.S. District Court for the District of Delaware for infringement of certain United States patents owned by the Company. These patents relate to the Company's two-part Sorbent Enhancement Additive (SEA®) process for mercury removal from coal-fired power plants. Named as defendants in the lawsuit were (i) Vistra Energy Corp., AEP Generation Resources Inc., NRG Energy, Inc., Talen Energy Corporation, and certain of their respective affiliated entities, all of which are owners and/or operators of coal-fired power plants in the United States, and (ii) Arthur J. Gallagher & Co., DTE REF Holdings, LLC, CERT Coal Holdings LLC, Chem-Mod LLC, and certain of their respective affiliated entities, and additional named and unnamed defendants, all of which operate or are involved in operations of coal facilities in the United States. In the lawsuit, the Company alleges that each of the defendants has willfully infringed certain of the Company's patents and seeks unspecified damages, attorneys' fees, costs and injunctive relief.

During 2020, each of the four major utility defendants in the above action filed petitions for Inter Partes Review with the United States Patent and Trademark Office, seeking to invalidate certain claims to the patents which are subject to the litigation. Between July 2020 and January 2021, we entered into agreements with each of the four major utility defendants in such action which included certain monetary arrangements and pursuant to which we have dismissed all claims brought against each of them and their affiliates, and such parties have withdrawn from petitions for Inter Partes Review with the United States Patent and Trademark Office. Such agreements entered into with such parties provide each of them and their affiliates with a non-exclusive license to certain Company patents (related to the Company's two-part Sorbent Enhancement Additive (SEA®) process) for use in connection with such parties' coal-fired power plants.

Subsequently, and as a result of certain rulings by the Court, certain defendants were dismissed in the action, certain defendants were added and certain originally named defendants remained in the action. A jury trial was scheduled for November 13, 2023.

On November 9, 2023, the Company entered into a confidential binding term sheet with Arthur J. Gallagher & Co., and various of its affiliated entities (collectively "AJG"), and DTE Energy Resources LLC and various of its affiliated entities (collectively "DTE"), to resolve the patent litigation. Pursuant to the term sheet, all claims and counterclaims asserted by the parties in such patent litigation have been dismissed with prejudice, although such term sheet does not affect any other claim brought against the remaining CERT defendants. The financial aspects of the term sheet remain confidential pursuant to its terms.

In addition, effective November 9, 2023, Alistar Enterprises, LLC ("Alistar"), one of the remaining CERT defendants, entered into a settlement agreement with the Company which provided that all claims and counterclaims asserted in the action between the Company and Alistar be dismissed with prejudice. The financial terms of such settlement remain confidential.

Effective as of December 28, 2023, and in connection with the term sheet described above, the Company, along with its wholly-owned subsidiary, MES, Inc., and (a) Chem-Mod LLC ("Chem-Mod"), (b) Arthur J. Gallagher & Co. and AJG Coal, LLC, and (c) DTE Energy Co. and DTE Energy Resources, LLC, entered into a paid license of U.S. Patent No. 8,168,147, U.S. Patent No. 10,343,114, U.S. Patent No. 10,589,225, U.S. Patent No. 10,596,517 and U.S. Patent No. 10,668,430 and their foreign equivalents and related patent applications and patents, which licenses the use of refined coal or the Chem-Mod Solution in conjunction with activated carbon. This license applies to Chem-Mod and certain of its licensees, sub-licensees, and their customers, for the remaining term of such patents. By its terms, the license does not cover the use of activated carbon with coal that is not either refined coal or coal made by or for use with the Chem-Mod Solution in a manner authorized by the license. The parties to the license have mutually released all claims that any past use of the Chem-Mod Solution in connection with the production or use of refined coal with activated carbon by entities other than the CERT defendants and their customers infringes the asserted patents and related intellectual property, and all claims that could have been brought challenging the validity of such patents.

The remaining CERT defendants and their customers (for activities relating to the CERT defendants) are not included within the scope of the license. The Court rescheduled the trial as to the claims against the remaining CERT defendants to begin on February 26, 2024.

Following a five-day trial, on March 1, 2024, a federal jury in the U.S. District Court for the District of Delaware awarded a $57.1 million patent infringement verdict in favor of the Company against the remaining group of CERT defendants. Such group of affiliated defendants included multiple limited liability companies with refined coal industry operations, including CERT Operations II LLC, CERT Operations IV LLC, CERT Operations V LLC, and CERT Operations RCB LLC. The jury determined that these defendants infringed our patented technologies for mercury emissions and were liable for willful infringement, along with inducing and contributory infringement. Following the trial, various post-trial motions and applications were made by the parties. We are awaiting rulings from the Court.

In July 2024, the Company commenced three patent infringement lawsuits against multiple defendants, including coal-fired power utilities, in three separate U.S. District Courts in Arizona, Iowa and Missouri. Such lawsuits claim infringement of the Company's patent rights related to the Company's mercury emissions reduction technologies. Named as defendants in the action filed in the U.S. District Court for the District of Arizona are Tucson Electric Power Co., San Carlos Resources, Inc., Salt River Project Agricultural Improvement and Power District, Tri-State Generation and Transmission Association, Inc., Springerville Unit 3 Holding LLC, and Springerville Unit 3 Partnership LP. Named as defendants in the action filed in the U.S. District Court for the Southern District of Iowa are Berkshire Hathaway Energy Company, MidAmerican Energy Company, PacifiCorp, Alliant Energy Corporation, Interstate Power and Light Company, and Wisconsin Power and Light Company, and named as defendants in the action filed in the U.S. District Court for the Eastern District of Missouri are Ameren Corp. and Union Electric Co. In each lawsuit, the Company requests a trial by jury against the defendants and seeks damages, costs, and legal expenses, along with a finding of willful infringement by the defendants, and an injunction prohibiting the defendants from further acts of infringement.

Effective as of October 8, 2024, the Company entered into agreement with one of the utilities and an affiliated entity named as defendants in the patent infringement lawsuit commenced by the Company in July 2024 in the U.S. District Court in Arizona (the "Arizona Action"). Such agreement provides such parties and their affiliates with a non-exclusive license to certain Company patents related to the Company's two-part Sorbent Enhancement Additive (SEA®) process for use in connection with a certain designated coal-fired power plant operated by such utility. The agreement includes a one-time license fee which has been received by the Company, and provides the Company with a right of first refusal for certain of such utility's product supply for mercury emissions capture at such designated power plant. Such lawsuit will continue against the other non-affiliated defendants named in the Arizona Action.

On December 17, 2024, a United States Judicial Panel on Multidistrict Litigation ordered that the above three patent infringement lawsuits be consolidated and centralized in the Southern District of Iowa for coordinated or consolidated pretrial proceedings (the "Transfer Order").

Effective as of January 7, 2025, the Company entered into agreement with another one of the utilities named as a defendant in the Arizona Action. Such agreement provides such party and its affiliates with a non-exclusive license to certain Company patents related to the Company's two-part Sorbent Enhancement Additive (SEA®) process for use in connection with a certain designated coal-fired power plant operated by such utility. The agreement includes a one-time license fee which has been received by the Company, and provides the Company with the right to be included in such party's bidding process for certain product supply for mercury emissions capture at such party's designated power plant.

In January 2025, the Company commenced another patent infringement lawsuit against four defendants in the U.S. District Court for the Western District of Missouri. Such lawsuit claims infringement of the Company's patent rights related to the Company's mercury emissions reduction technologies. Named as defendants in the action are Evergy, Inc., Evergy Metro Inc., Evergy Missouri West, Inc. and Evergy Kansas Central, Inc. In the lawsuit, the Company requests a trial by jury against the defendants and seek damages, costs, and legal expenses, along with a finding of willful infringement by the defendants, and an injunction prohibiting the defendants from further acts of infringement. In February 2025, such lawsuit was consolidated with and transferred to the Southern District of Iowa pursuant to the Transfer Order.

In January and February 2025, certain of the defendants in the patent infringement lawsuits which have been consolidated and centralized in the Southern District of Iowa filed petitions for Inter Partes Review with the United States Patent and Trademark Office, seeking to invalidate certain claims to the patents which are subject to the litigation.

Except for the foregoing disclosures, the Company is not presently aware of any other material pending legal proceedings to which the Company is a party or of which any of its property is the subject.

Litigation, including patent litigation, is inherently subject to uncertainties. As such, there can be no assurance that the Company will be successful in litigating and/or settling any of these claims. The Company expenses legal costs relating to patent litigation as incurred.

Note 10 - Stock Based Compensation

Stock Based Compensation

The Company accounts for stock-based compensation awards in accordance with the provisions of ASC 718, which addresses the accounting for employee stock options which requires that the cost of all employee stock options, as well as other equity-based compensation arrangements, be reflected in the unaudited condensed consolidated financial statements over the vesting period based on the estimated fair value of the awards.

Stock based compensation consists of the amortization of common stock, stock options, restricted share units and warrants issued to employees, directors and consultants. For the three months ended March 31, 2025 and 2024, stock-based compensation expense amounted to $60,527 and $770,216, respectively. Such expense is classified in selling, general and administrative expenses.

On July 3, 2023, the Board of Directors of the Company approved and adopted the Company's Amended and Restated 2014 Equity Incentive Plan (the "2014 Plan") and the Company's Amended and Restated 2017 Equity Incentive Plan (the "2017 Plan") which amended the Company's previously adopted 2014 Equity Incentive Plan and 2017 Equity Incentive Plans. Such amendments were made in accordance with the requirements of the TSX Venture Exchange. The 2014 Equity Incentive Plan was first approved by the Board on January 10, 2014. The 2017 Equity Incentive Plan replaced the 2014 Equity Incentive Plan, which was terminated by the Board on April 28, 2017. As a result of such termination, no additional awards may be granted under the 2014 Equity Incentive Plan but previously granted awards shall remain outstanding in accordance with their terms and conditions. The 2017 Plan was adopted by the Board on February 9, 2017. As amended by the Board on July 3, 2023, the maximum number of shares of common stock that may be issued under the 2017 Plan after July 3, 2023 is 14,078,459, and to the extent any award (or portion thereof) outstanding under the 2014 Plan expires, terminates or is cancelled, surrendered or forfeited for any reason on or after July 3, 2023, the shares of common stock subject to such award (or portion thereof) shall be added to and increase the foregoing limit, to a maximum of 4,775,000 additional shares of common stock. (On July 3, 2023, there were4,775,000 options and no other types of awards outstanding under the 2014 Plan.) On October 29, 2024, the Board approved certain non-material amendments to the 2014 Plan and 2017 Plan which amendments were made in connection with the listing of the Company's shares on the Toronto Stock Exchange ("TSX") and graduation from the TSX Venture Exchange to the TSX. As of March 31, 2025, there were 5,391,306 shares remaining available for issuance under the 2017 Plan.

Common Stock

On November 8, 2022, the Company issued a total of3,000,000 shares of common stock to the Chief Executive Officer. These shares of common stock were valued at $960,000 in accordance with FASB ASC Topic 718. The fair value of the shares will be amortized as an expense over the vesting period. The shares became fully vested on November 8, 2024. The expense for the three months ended March 31, 2025 and 2024 was $0 and $121,333, respectively.

On March 19, 2025, the Company announced that its Board of Directors authorized a share repurchase program under which the Company may purchase up to $1.0 million of its common stock. Purchases under the share repurchase program may be made from time to time, in such amounts as management deems appropriate, through a variety of methods, which may include open market purchases, privately negotiated transactions, block trades, accelerated share repurchase transactions, purchases through 10b5-1 trading plans, or by any combination of such methods. The timing and amount of any repurchases pursuant to the share repurchase program will be determined based upon a variety of factors, including general market conditions, share price, corporate and regulatory requirements and limitations, corporate liquidity requirements and priorities, and other factors. The Company anticipates that any repurchases will not occur before the second half of 2025. The share repurchase program does not have an expiration date, does not require the Company to repurchase any specific number of shares of its common stock, if any, and may be modified, suspended or terminated at any time without notice. During the three months ended March 31, 2025, there were no repurchases made under the program.

Stock Options

On January 15, 2024, the Company granted nonqualified stock options to certain directors, executive officers and employees to acquire an aggregate of 1,000,000 shares of the Company's common stock under the 2017 Plan. The options granted are exercisable at $0.88 per share, representing the fair market value of the common stock on the date of grant as determined under the 2017 Plan. The options are fully vested and exercisable as of the date of grant and will expire five years thereafter. Based on a Black-Scholes valuation model, these options were valued at $632,214, in accordance with FASB ASC Topic 718, which was expensed on the issuance date in selling, general and administrative expenses within the Company's consolidated statements of operations. The valuation assumptions included an expected duration of 5 years, volatility of 93%, discount rate of 3.84% and dividends of $0.

On February 27, 2024, the Company issued 9,285 shares of common stock to a former employee upon a cashless exercise of an option to purchase 18,750 shares of common stock covered by an option to purchase a total of 100,000 shares of common stock, with an exercise price of $0.27 per share. Such share issuance was based upon a VWAP of $0.9230 per share as determined under the terms of the option.

On June 24, 2024, the Company issued (i) 886,456 shares of common stock to the Company's Chief Executive Officer upon a cashless exercise of an option to purchase 1,500,000 shares of common stock at an exercise price of $0.27 per share, and (ii) 672,867 shares of common stock to the Company's Senior Vice President and Chief Technology Officer upon a cashless exercise of options to purchase an aggregate of 1,600,000 shares of common stock at exercise prices ranging from $0.27 to $0.45 per share. Such share issuances were based upon a VWAP of $0.6601 per share as determined under the terms of the options.

On June 28, 2024, the Company issued (i) 46,409 shares of common stock to an employee upon a cashless exercise of options to purchase an aggregate of 300,000 shares of common stock at exercise prices ranging from $0.27 to $0.61 per share, (ii) 44,065 shares of common stock to an employee upon a cashless exercise of an option to purchase 75,000 shares of common stock covered by an option to purchase a total of 100,000 shares of common stock with an exercise price of $0.27 per share, and (iii) 15,000 shares of common stock to a former employee upon a cashless exercise of an option to purchase 25,531 shares of common stock covered by an option to purchase a total of 500,000 shares of common stock with an exercise price of $0.27 per share. Such share issuances were based upon a VWAP of $0.6546 per share as determined under the terms of the options.

On August 3, 2024, the Company issued 32,112 shares of common stock to a former consultant upon a cashless exercise of an option to purchase 62,500 shares of common stock, with an exercise price of $0.40 per share. Such share issuance was based upon a VWAP of $0.8227 per share as determined under the terms of the option.

On January 2, 2025, and pursuant to an investor relations consulting agreement effective as of January 1, 2025 with a nonaffiliated third party, the Company granted a nonqualified stock option under the 2017 Plan to such third party to acquire 250,000 shares of the Company's common stock at an exercise price of $0.51 per share, representing the fair market value of the common stock on the date of grant as determined under the 2017 Plan. Twenty-five percent of the option shall vest and become exercisable three months following the grant date and twenty-five percent shall vest every three months thereafter such that the option shall be fully vested one year following the grant date. The option will expire three years after the grant date. Based on a Black-Scholes valuation model, these options were valued at $77,926, in accordance with FASB ASC Topic 718. The fair value of the shares was being amortized to selling, general and administrative expenses within the Company's consolidated statements of operations over twelve months and the Company recorded $18,788 of expenses during the three months ended March 31, 2025. The valuation assumptions included an expected duration of 3 years, volatility of 87%, discount rate of 4.29% and dividends of $0.

On January 9, 2025, the Company granted a nonqualified stock option under the 2017 Plan to a new director, who was elected to the Board on December 30, 2024, to acquire 100,000 shares of the Company's common stock at an exercise price of $0.56 per share, representing the fair market value of the common stock on the date of grant as determined under the 2017 Plan. The option is fully vested and exercisable as of the grant date and will expire five years thereafter.

Based on a Black-Scholes valuation model, these options were valued at $40,071, in accordance with FASB ASC Topic 718, which was expensed on the issuance date in selling, general and administrative expenses within the Company's consolidated statements of operations. The valuation assumptions included an expected duration of 5 years, volatility of 92%, discount rate of 4.46% and dividends of $0.

A summary of stock option activity is presented below:

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (years)	Aggregate Intrinsic Value
December 31, 2024	9,300,000	$ 0.58	1.75	12,500
Grants	350,000	0.52		
March 31, 2025	9,650,000	$ 0.58	1.57	901,750
Options exercisable at:				
March 31, 2025	9,400,000	0.58	1.54	901,750

The aggregate intrinsic value in the table above represents the total intrinsic value, based on the Company's closing stock price of $0.50 as of March 31, 2025, which would have been received by the option holders had all option holders exercised their options as of that date.

There were no stock options exercised during the three months ended March 31, 2025. Stock options exercised during the three months ended March 31, 2024 include none that were exercised for cash and 18,750 which were a cashless exercise.

Restricted Share Units

On January 15, 2024, the Company granted 50,000 restricted share units ("RSUs") to a director pursuant to the 2017 Plan.The RSUs will vest one year from the date of grant on January 15, 2025. Once vested, each RSU represents the right to receive one share of the Company's common stock. These shares of common stock were valued at $43,500 in accordance with FASB ASC Topic 718. The fair value of the shares will be amortized as an expense over the vesting period. The shares become fully vested on January 15, 2025. The expense for the three months ended March 31, 2025 and 2024 was $1,668 and $9,058, respectively.

On January 15, 2025, the Company issued 50,000 shares of common stock to a director due to the vesting on such date of 50,000 RSUs which had previously been granted on January 15, 2024 pursuant to the 2017 Plan and had a one-year vesting period.

Note 11 - Warrants

The Company utilized a Black-Scholes options pricing model to value warrants at the issuance date. This model requires the input of highly subjective assumptions such as the expected stock price volatility and the expected period until the warrants are exercised. When calculating the value of warrants issued, the Company uses a volatility factor, a risk-free interest rate and the life of the warrant for the exercise period.

There were no warrants outstanding as of December 31, 2024 and March 31, 2025, and no warrants were issued or exercised during the three months ended March 31, 2025 and 2024.

Note 12 – Segment and Geographic Information

The Company's chief operating decision maker ("CODM") is the Chief Executive Officer (the "CEO"). The Company is a provider of specialty activated carbon technologies and, at March 31, 2025, had one operating segment, which entails the provision of specialty activated carbon technologies for air and water purification in the United States.

There are no segment managers who are held accountable for operations, operating results or plans for levels or components below the consolidated unit level. Accordingly, management has determined that the Company has a single operating and reportable segment. The accounting policies related to operating and reportable segments are the same as those described in Note 3, "Basis of Presentation and Summary of Significant Accounting Policies". The primary measure of segment profit or loss is consolidated net income as presented below and is used the by CEO for the purpose of evaluating segment performance and allocation of budget to support business expansion, new product development and operational efficiencies.

	Three Months Ended March 31,	
	2025	**2024**
Material sales	$ 2,676,984	$ 3,084,088
License fees	525,000	140,625
Other revenues	19,027	17,053
Total revenues	3,221,011	3,241,766
Material costs	(1,449,157)	(1,532,357)
Blending and milling	(65,378)	(91,709)
Shipping	(205,688)	(228,514)
Other cost of goods sold	(164,610)	(160,706)
Compensation and benefits	(1,067,156)	(1,238,025)
Stock-based compensation	(60,527)	(770,216)
Amortization and depreciation	(72,465)	(62,324)
Consulting fees	(260,458)	(197,730)
Professional fees	(895,715)	(1,031,736)
General and administrative	(322,810)	(326,941)
Change in fair value of profit share	(353,351)	(265,198)
Interest expense	(54)	(245,817)
Income tax benefit (expense)	(14,135)	-
Interest income	31,273	54,632
Segment net loss	(1,679,220)	(2,854,875)
Reconciliation of profit or loss		
Adjustments and reconciling items	-	-
Consolidated net loss	$ (1,679,220)	$ (2,854,875)

The segment assets are not reviewed by the CODM at a different asset level or category and is reviewed at the consolidated level.

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

The following discussion should be read in conjunction with the unaudited condensed consolidated financial statements and the related notes that appear elsewhere within this report. Certain statements we make under this Item 2 constitute "forward-looking statements" under the U.S. Private Securities Litigation Reform Act of 1995 or applicable Canadian securities laws. See "Forward-Looking Statements" in "Part I" preceding "Item 1 – Financial Statements." You should consider our forward-looking statements in light of the risks discussed under the heading "Risk Factors" in Item 1A of Part I of our Annual Report on Form 10-K for the year ended December 31, 2024, as well as our unaudited condensed consolidated financial statements, related notes and other financial information appearing elsewhere in this report and our other filings with the Securities and Exchange Commission or Canadian securities regulators.

Unless indicated otherwise, references in this discussion and analysis to the "Company," "we," "us," or "our" refer collectively to Birchtech Corp. (formerly Midwest Energy Emissions Corp.) and its consolidated subsidiaries.

Overview

Business Operations

We are a provider of specialty activated carbon technologies, delivering innovative solutions for air and water purification. We provide patented and proprietary technologies for mercury emissions capture to the coal-fired utility sector, and are developing disruptive water purification technologies with a specialization on forever chemicals such as PFAS and PFOS.

Mercury Emissions

We provide mercury capture solutions for coal-fired power plants driven by our patented two-part Sorbent Enhancement Additive (SEA®) process using a powerful combination of science and engineering. Our leading-edge services have been shown to achieve mercury emissions removal at a significantly lower cost and with less operational impact to coal-fired power plants than other used methods, while maintaining and/or increasing power plant output and preserving the marketability of byproducts for beneficial use. We design systems and materials tailored and formulated specifically to each customer's coal-fired units. North America is currently the largest market for our emissions technologies.

The market for mercury removal from power plant emissions in the United States have largely been driven by federal regulations. The Mercury and Air Toxics Standards (MATS) rule, proposed by the U.S. Environmental Protection Agency (EPA) in May 2011 and which became effective in April 2012, is intended to reduce air emissions of heavy metals, including mercury (Hg), from all major U.S. power plants burning coal or oil, which are the leading source of non-natural mercury emissions in the U.S. Our mercury removal technologies and systems will achieve mercury removal levels which meet or exceed the MATS requirements with lower cost and plant systems impacts than typical PAC or BAC sorbent injection systems. Our products have been shown to be successful across a myriad of fuel and system types, tunable to any configuration, and environmentally friendly, allowing for the recycling of fly ash for beneficial use.

Our SEA® technology provides total mercury control with solutions that are based on a thorough scientific understanding of actual and probable interactions involved in mercury capture in coal-fired flue gas. A complete understanding of the complexity of mercury-sorbent-flue gas interactions and chemisorption mechanisms allows for optimal control strategy and product formulation, resulting in effective mercury capture. Combined with a thorough proprietary audit of the plant and its configuration and instrumentation, we believe our complete science and engineering approach for mercury-sorbent-flue gas interactions are well-understood, highly predictive, and critical to delivering total mercury control.

We believe that a significant percentage of coal-fired power plants in the United States have adopted and are infringing upon our two-part Sorbent Enhancement Additive (SEA®) process for mercury removal from coal-fired power plants.

Beginning in 2019, we began to actively enforce our patent rights against unauthorized use of our patented technologies, and have since initiated patent litigation in various jurisdictions against multiple infringers, claiming infringement of our patents related to our two-part process for mercury removal from coal-fired power plants. We view such litigation as a last resort. Our goal and overall strategy is to convert infringers to our supply chain of sorbent products for mercury removal, or otherwise license our patents to them on a non-exclusive basis in connection with their respective coal-fired power plants.

In April 2023, the EPA issued a proposal to strengthen and update MATS. Such proposal was finalized and published in May 2024 with an effective date of July 8, 2024 which, among other things, strengthens emissions monitoring and compliance and tightens the emission standard for mercury for existing lignite-fired power plants to a level that is aligned with the mercury standard that other coal-fired power plants have been achieving under MATS.

On March 12, 2025, the newly appointed EPA administrator under the Trump Administration announced plans to roll back dozens of environmental regulations including the reconsideration of the MATS regulation. On April 8, 2025, President Trump signed a Proclamation exempting certain stationary sources, identified in Annex 1 of the Proclamation, from compliance with the 2024 updated MATS Rule. As set out in the Proclamation, the President's exemption lasts for a period of two years beyond the updated Rule's compliance date -- i.e., for the period beginning July 8, 2027, and concluding July 8, 2029. During the two-year period these stationary sources identified in Annex 1 are subject to the compliance obligations that they are currently subject to under MATS as the MATS Rule existed prior to the 2024 update. Annex 1 identifies 47 plant owners and over 60 power plants provided such exemption, which list includes a number of our customers.

Water Treatment

In April 2024, we announced the introduction of our new division to address the potable (drinking) water market with new sorbent technologies under development. These new technologies involve less use of activated carbon and are a much more environmentally friendly approach to water treatment.

AC is a form of carbon that has been processed to have a large surface area and a high degree of porosity. This gives it the ability to adsorb a wide range of substances, making it highly effective at removing particles, toxins and impurities. GAC and similar agglomerated activated carbons (or shaped activated carbons) are a form of activated carbon that is specifically produced in a granular, coarse form, as opposed to powdered or pelletized forms. This granularity allows for better flow through filtration systems, which makes it ideal for use in applications that require a continuous flow of air, water or liquids. GAC is commonly used in water filtration systems, including municipal water treatment plants. It is particularly effective at removing chlorine, organic compounds, pesticides, heavy metals, and other contaminants. Reactivated GAC is spent GAC that has been restored for reuse, making it more sustainable and cost-effective.

Utilizing renewal raw materials allows us to develop and provide shaped activated carbon that can compete with other commercially available GAC options, and provide a superior activated carbon technology to remove contaminants (including PFAS) from potable water. While pending PFAS regulations are projected to significantly increase overall GAC demand, our products are expected to be successfully applied regardless of PFAS regulations reflecting significant competitive advantages (i.e., renewable raw material sources, low arsenic content, and overall performance) to presently available GAC products for the water market. In addition, our product(s) may provide inherent performance advantages such as lower pressure drop relative to existing carbon products in the marketplace today.

Our efforts are supported by two new state of the art laboratories which we opened in 2024, one located in Pennsylvania and the other located in North Dakota. In addition to supporting the development of new technologies, the laboratories will also offer other services such as carbon activation, thermal reactivation and regeneration, contaminant analysis, as well as carbon evaluations and recommendations. These labs will enable us to tailor and optimize products for our customers' needs and assist water utilities in implementing strategies to lower compliance costs, as well as provide a continued path to commercialization of our technologies.

While the initial focus for our water treatment technologies will be on the potable water market, we expect that our technologies will also be valuable for industrial wastewater remediation. Industrial wastewater is the liquid waste generated by industrial activities, including manufacturing, processing, and production facilities. It often contains pollutants such as organic matter, heavy metals, chemicals, oils, and other contaminants that must be treated before being discharged into the environment or reused. We believe our water treatment technologies will be well suited to treat such industrial wastewater in an optimal and cost-effective manner.

Other Recent Developments

On February 27, 2024, and pursuant to a Debt Restructuring Agreement entered into on such date with AC Midwest Energy LLC ("AC Midwest"), we made an approximate $9.0 million principal payment against an approximate $13.2 million unsecured note held by AC Midwest Energy LLC ("AC Midwest") and repaid in full the remaining principal balance of approximately $272,000 due on a secured note held by AC Midwest. As part of the restructuring, we negotiated a reduction in the profit participation preference held by AC Midwest from approximately $17.7 million to $7.9 million (the "Restructured Profit Share"). Such Restructured Profit Share is "non-recourse" and shall only be paid from net litigation proceeds from claims relating to our intellectual property. In addition, pursuant to the Debt Restructuring Agreement, in March 2024, we were able to facilitate the private sale of certain shares of common stock held by AC Midwest and received a $960,000 credit toward the remaining balance due on the unsecured note. In August 2024, we repaid in full the remaining principal balance of approximately $3.2 million due on the unsecured note held by AC Midwest. As a result, the only remaining debt obligation to AC Midwest is the "non-recourse" Restructured Profit Share.

Following a five-day trial, on March 1, 2024, we were awarded a $57.1 million patent infringement verdict by a federal jury in the U.S. District Court for the District of Delaware against a remaining group of defendants in the lawsuit commenced by us in 2019. Such group of affiliated defendants included multiple limited liability companies with refined coal industry operations, including CERT Operations II LLC, CERT Operations IV LLC, CERT Operations V LLC, and CERT Operations RCB LLC. The jury determined that these defendants infringed our patented technologies for mercury emissions and were liable for willful infringement, along with inducing and contributory infringement. Following the trial, various post-trial motions and applications were made by the parties. We are awaiting rulings from the Court.

In April 2024, the EPA issued the first-ever national, enforceable drinking water standard to protect communities from exposure to harmful per-and polyfluoroalkyl substances ("PFAS"), also known as "forever chemicals". The Rule sets limits for five individual PFAS: PFOA, PFOS, PFNA, PFHxS, and HFPO-DA (known as GenX Chemicals). The Rule also sets a hazard index level for two or more of four PFAS as a mixture: PFNA, PFHxS, HFPO-DA, and PFBS. Under the Rule, public water systems must monitor these PFAS and will have three years to complete initial monitoring (by 2027), followed by ongoing compliance monitoring. Water systems must also provide the public with information on the levels of these PFAS in their drinking water beginning in 2027.

In May 2024, we announced the appointment of David Mazyck to head our new division to address the potable (drinking) water market with new sorbent technologies under development.

In addition, in May 2024, we announced the appointment of Dennis Baranik as Director of National Sales. Mr. Baranik will oversee product sales and IP licensing in the Company's core business for mercury emissions capture as well as support both product and business development for the water market.

In July 2024, we commenced three patent infringement lawsuits against 14 defendants, including coal-fired power utilities, in three separate U.S. District Courts in Arizona, Iowa and Missouri. In January 2025, we commenced another patent infringement lawsuit against four defendants in the U.S. District Court for the Western District of Missouri. Such lawsuit claims infringement of the Company's patent rights related to the Company's mercury emissions reduction technologies. The United States Judicial Panel on Multidistrict Litigation has ordered that such patent infringement lawsuits be consolidated and centralized in the Southern District of Iowa.

Effective as of October 8, 2024, we entered into agreement with one of the utilities and an affiliated entity named as defendants in the patent infringement lawsuit commenced by the Company in July 2024 in Arizona. Such agreement provides such parties and their affiliates with a non-exclusive license to certain Company patents for use in connection with a certain designated coal-fired power plant operated by such utility. The agreement includes a one-time license fee and provides the Company with a right of first refusal for certain of such utility's product supply for mercury emissions capture at such designated power plant.

Effective as of January 7, 2025, we entered into agreement with another one of the utilities named as a defendant in the Arizona action. Such agreement provides such party and its affiliates with a non-exclusive license to certain Company patents for use in connection with a certain designated coal-fired power plant operated by such utility. The agreement includes a one-time license fee and provides the Company with the right to be included in such party's bidding process for certain product supply for mercury emissions capture at such party's designated power plant.

In January 2025, we commenced another patent infringement lawsuit against four defendants in the U.S. District Court for the Western District of Missouri. Such lawsuit claims infringement of the Company's patent rights related to the Company's mercury emissions reduction technologies. Named as defendants in the action are Evergy, Inc., Evergy Metro Inc., Evergy Missouri West, Inc. and Evergy Kansas Central, Inc. In the lawsuit, we request a trial by jury against the defendants and seek damages, costs, and legal expenses, along with a finding of willful infringement by the defendants, and an injunction prohibiting the defendants from further acts of infringement. In February 2025, such lawsuit was consolidated with and transferred to the Southern District of Iowa.

Effective on October 17, 2024, as part of our rebranding, we changed our corporate name from Midwest Energy Emissions Corp. to Birchtech Corp. pursuant to a certificate of amendment to our certificate of incorporation filed with the State of Delaware, and on October 17, 2024 our common stock commenced trading under the ticker symbol "BCHT".

On October 9, 2024, we received conditional approval to list our shares of common stock on the Toronto Stock Exchange ("TSX") and graduate from the TSX Venture Exchange ("TSXV") to the TSX. On November 12, 2024, our shares commenced trading on the TSX under the ticker symbol "BCHT".

Effective as of January 1, 2025, Birchtech Corp. entered into an investor relations consulting agreement with MZHCI, LLC.

On March 19, 2025, we announced that our Board of Directors authorized a share repurchase program under which the Company may purchase up to $5.0 million of its common stock. Purchases under the share repurchase program may be made from time to time, in such amounts as management deems appropriate, through a variety of methods, which may include open market purchases, privately negotiated transactions, block trades, accelerated share repurchase transactions, purchases through 10b5-1 trading plans, or by any combination of such methods. The timing and amount of any repurchases pursuant to the share repurchase program will be determined based upon a variety of factors, including general market conditions, share price, corporate and regulatory requirements and limitations, corporate liquidity requirements and priorities, and other factors. We anticipate that any repurchases will not occur before the second half of 2025. The share repurchase program does not have an expiration date, does not require the Company to repurchase any specific number of shares of its common stock, if any, and may be modified, suspended or terminated at any time without notice. During the three months ended March 31, 2025, there were no repurchases made under the program.

Results of Operations

Revenues

We generated revenues of approximately $3,221,000 and $3,242,000 for the three months ended March 31, 2025 and 2024, respectively. Such revenues were primarily derived from sorbent product sales which were approximately $2,677,000 and $3,084,000 for three months ended March 31, 2025 and 2024, respectively. Revenues can be dependent on natural gas prices, extreme weather, and the maintenance and downtime requirements of customer plants. The decrease in revenues from the prior year was primarily due to the mix of plants running and products sold in the first three months of 2025 resulting in decreased product revenues for the quarter ended March 31, 2025 compared to the prior year period, offset by an increase in licensing revenues for the three months ended March 31, 2025 compared to March 31, 2024.

Licensing revenues were approximately $525,000 and $141,000 for the three months ended March 31, 2025 and 2024, respectively. Such increase was primarily due to a new licensing agreement which was entered into during the three months ended March 31, 2025 with a utility.

Equipment sales and other revenues for the three months ended March 31, 2025 and 2024 were approximately $19,000 and $17,000, respectively. Other revenues were comparable for the periods ended March 31, 2025 and 2024.

Cost of Sales

Cost of sales were approximately $1,987,000 and $2,113,000 for the three months ended March 31, 2025 and 2024, respectively. The decrease in cost of sales of approximately $127,000 was primarily attributable to decreased product sales in the first three months of 2025 compared to the prior year period, together with a change in the mix of products sold in the first quarter of 2025 compared to the first quarter of 2024.

Gross Profit

Gross profit was approximately $1,234,000 and $1,128,000 for the three months ended March 31, 2025 and 2024, respectively. This increase in gross profit of approximately $106,000 was primarily due to higher licensing revenues in 2025 compared to 2024, which typically carry higher margins than product sales, thus contributing to the overall improvement in gross profit.

Operating Expenses

Operating expenses consisted of selling, general and administrative expenses (“SG&A”) and research and development expenses (“R&D”) in 2025 and SG&A and in 2024. SG&A expenses were approximately $2,171,000 and $3,527,000 for the three months ended March 31, 2025 and 2024, respectively. Total SG&A expenses decreased in the first three months of 2025 compared to the prior year period, as a result of variances in individual categories. Decreases in salaries and wages, and professional fees were partially offset by increases in consulting fees. The decrease in salaries and wages was primarily due to the payment of bonus compensation in the first quarter of 2024 for which there were no comparable expenses in the first quarter of 2025, along with greater stock-based compensation in the first quarter of 2024 compared to first quarter of 2025. The decrease in professional fees was primarily due to lower legal fees in the first quarter of 2025 in connection with the Company’s patent litigation compared to the prior year period which had greater legal fees due to trial preparation and the jury trial in the U.S. District Court for the District of Delaware.

Total R&D expenses were approximately $407,000 and $0 for the three months ended March 31, 2025 and 2024, respectively. R&D expenses relate to research conducted to develop water treatment products utilizing new sorbent technologies, and increased in the first three months of 2025 compared to the prior year period as the Company had not incurred any research related costs during the first three months of 2024. The Company began incurring research and development costs when the lab equipment at the Company’s labs was placed into service.

Operating Loss

Our operating loss was approximately $1,343,000 and $2,398,000 for the three months ended March 31, 2025 and 2024, respectively. Such decrease in operating loss was primarily due to our increased gross profit in 2025 compared to 2024 coupled with a decrease in total operating expenses during the current period.

Other Income (Expense)

Interest expense related to the financing of capital was approximately $54 and $246,000 for the three months ended March 31, 2025 and 2024, respectively. The approximate breakdown of interest expense for the three months ended March 31, 2025 and 2024 is as follows:

	Three Months Ended March 31, 2025	Three Months Ended March 31, 2024
Interest expense on notes payable	$ -	$ 4,000
Amortization of discount of notes payable	-	242,000
	$ -	$ 246,000

Loss on change in fair value of profit share liability were approximately $353,000 and $265,000 for the three months ended March 31, 2025 and 2024, respectively. The change is primarily attributed to the modification of the terms of the profit share liability (see Note 7 to the consolidated financial statements).

Net Loss

For the three months ended March 31, 2025 we had a net loss of approximately $1,679,000 compared to net loss of approximately $2,855,000 for the three months ended March 31, 2024. Such change was primarily due an increase in gross profit in 2025 compared to 2024, and a decrease in SG&A.

Liquidity and Capital Resource

We had approximately $3,188,000 in cash on our balance sheet at March 31, 2025 compared to approximately $3,456,000 at December 31, 2024. Total current assets were approximately $5,198,000 and total current liabilities were approximately $9,477,000 at March 31, 2025, resulting in a working capital deficiency of approximately $4,279,000. This compares to total current assets of approximately $6,099,000 and total current liabilities of approximately $8,806,000 at December 31, 2024, resulting in a working capital deficiency of approximately $2,707,000. Our accumulated deficit was approximately $74.4 million at March 31, 2025 compared to $72.8 million at December 31, 2024. Additionally, we had a net loss in the amount of approximately $1,679,000 and cash used in operating activities of approximately $254,000 for the three months ended March 31, 2025.

Based on the Company's current cash levels and burn rate, discussed above, the Company believes its cash and financial resources may be insufficient to meet the Company's anticipated needs for the twelve months following the date of issuance of the financial statements for the three months ended March 31, 2025, included elsewhere in this Form 10-Q, which raises substantial doubt about the Company's ability to continue as a going concern within one year from the issuance date of the financial statements.

In addition to maintaining the revenue stream from our legacy mercury emissions control business, our plans and expectations over the next twelve months to mitigate such financial condition include receiving additional cash inflows from the judgment expected in connection with the $57.1 million jury verdict awarded to us in March 2024, additional licensing revenues and product sales from the other patent litigation recently commenced, and revenues from our entry into the water treatment business. During 2024, we opened two new state of the art laboratories and have added personnel to support our entry into the water business which we believe will lead to a vibrant new revenue stream. In addition, management is exploring additional financing opportunities. While management believes these plans will alleviate substantial doubt, there is no assurance that they will be successfully realized or implemented.

Total Assets

Total assets were approximately $9,302,000 at March 31, 2025 versus approximately $10,261,000 at December 31, 2024. The change in total assets is primarily attributable to an approximate $268,000 decrease in cash and an approximate $545,000 decrease in accounts receivable.

Total Liabilities

Total liabilities were approximately $9,729,000 at March 31, 2025 versus approximately $9,069,000 at December 31, 2024. The increase is primarily attributable to an increase in accounts payable and accrued liabilities and an increase in the fair value of the non-recourse profit share liability.

Operating Activities

Net cash used in operating activities consists of net loss, adjusted by certain non-cash items, and changes in operating assets and liabilities.

Net cash used in operating activities was approximately $254,000 for the three months ended March 31, 2025 compared to net cash used in operating activities of approximately $439,000 for the three months ended March 31, 2024. The decrease in net cash provided by operating activities was primarily due to the following: (i) a net loss of $1.7 million for the three months ended March 31, 2025 compared to net loss of $2.9 million for the three months ended March 31, 2024; and (ii) certain other changes in operating assets and liabilities including accounts receivable, inventory, prepaid expenses and other assets, accrued salaries, and accounts payable and accrued liabilities.

Investing Activities

The Company had net cash used in investing activities of approximately $14,000 for the three months ended March 31, 2025 for the purchase of lab equipment compared to no cash used in investing activities for the three months ended March 31, 2024.

Financing Activities

Net cash used in financing activities was approximately $0 for the three months ended March 31, 2025 compared to approximately $9,312,000 used in financing activities for the three months ended March 31, 2024. During the three months ended March 31, 2024, we repaid the remaining principal of approximately $272,000 on the AC Midwest secured note and approximately $9,040,000 of the principal remaining on the AC Midwest unsecured note.

Critical Accounting Policies and Estimates

Our critical accounting policies and estimated are discussed in our Annual Report on Form 10-K for the year ended December 31, 2024, and there have been no material changes to such policies or estimates during the three months ended March 31, 2025.

Non-GAAP Financial Measures

Adjusted EBITDA

To supplement our consolidated financial statements presented in accordance with GAAP and to provide investors with additional information regarding our financial results, we consider and are including herein Adjusted EBITDA, a Non-GAAP financial measure. We view Adjusted EBITDA as an operating performance measure and, as such, we believe that the GAAP financial measure most directly comparable to it is net income (loss). We define Adjusted EBITDA as net income adjusted for interest and financing fees, income taxes, depreciation, amortization, stock-based compensation, and other non-cash income and expenses. We believe that Adjusted EBITDA provides us an important measure of operating performance because it allows management, investors, debtholders and others to evaluate and compare ongoing operating results from period to period by removing the impact of our asset base, any asset disposals or impairments, stock based compensation and other non-cash income and expense items associated with our reliance on issuing equity-linked debt securities to fund our working capital.

Our use of Adjusted EBITDA has limitations as an analytical tool, and this measure should not be considered in isolation or as a substitute for an analysis of our results as reported under GAAP, as the excluded items may have significant effects on our operating results and financial condition. Additionally, our measure of Adjusted EBITDA may differ from other companies' measure of Adjusted EBITDA. When evaluating our performance, Adjusted EBITDA should be considered with other financial performance measures, including various cash flow metrics, net income and other GAAP results. In the future, we may disclose different non-GAAP financial measures in order to help our investors and others more meaningfully evaluate and compare our future results of operations to our previously reported results of operations.

The following table shows our reconciliation of net income (loss) to adjusted EBITDA for the three months ended March 31, 2025 and 2024, respectively:

	For the Three Months Ended	
	March 31, 2025	March 31, 2024
	(In thousands)	
Net loss	$ (1,679)	$ (2,855)
Non-GAAP adjustments:		
Depreciation and amortization	72	62
Interest	-	246
Change in fair value of profit share	353	265
Income Taxes	14	-
Stock based compensation	61	770
Adjusted EBITDA	$ (1,179)	$ (1,512)

Item 3. Quantitative and Qualitative Disclosures about Market Risk.

We are a smaller reporting company as defined by Rule 12b-2 of the Securities Exchange Act of 1934 and are not required to provide the information under this item.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we have evaluated the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) and Rule 15d-15(e) of the Exchange Act) as of the end of the period covered by this report. Disclosure controls and procedures are designed to ensure that information required to be disclosed in reports filed or submitted 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, and that such information is accumulated and communicated to management, including our principal executive officer and principal financial officer, to allow timely decisions regarding required disclosure. Based on that evaluation, our principal executive officer and principal financial officer concluded, as of the end of the period covered by this report, that the Company's disclosure controls and procedures were not effective as a result of material weaknesses in our internal control over financial reporting. The ineffectiveness of our disclosure controls and procedures was due to the following material weaknesses in our internal control over financial reporting: (i) lack of a sufficient complement of personnel commensurate with the Company's reporting requirements; and (ii) insufficient written documentation or training of our internal control policies and procedures which provide staff with guidance or framework for accounting and disclosing financial transactions.

Despite the existence of the material weaknesses above, we believe that the consolidated financial statements contained in this Form 10-Q fairly present our financial position, results of operations and cash flows as of and for the periods presented in all material respects.

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting (as such term is defined in Rules 13a-15(f) and 15d-15 (f) under the Exchange Act) during the fiscal quarter covered by this report that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II – OTHER INFORMATION

Item 1. Legal Proceedings.

See Note 9 "Commitments and Contingencies" to our unaudited condensed consolidated financial statements included in Part I, Item 1 of this report for a summary of our legal proceedings, which is incorporated by reference herein.

Item 1A. Risk Factors.

We are a smaller reporting company as defined by Rule 12b-2 of the Securities Exchange Act of 1934 and are not required to provide the information under this item.

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

On January 15, 2025, the Company issued 50,000 shares of common stock to a director due to the vesting on such date of 50,000 restricted share units ("RSUs") which had previously been granted on January 15, 2024 and had a one-year vesting period.

The foregoing securities were issued in reliance upon the exemption from registration pursuant to Section 4(a)(2) of the Securities Act of 1933, as amended (the "1933 Act"), and where applicable, under Section 3(a)(9) of the 1933 Act.

Item 3. Default Upon Senior Securities.

Not applicable.

Item 4. Mine Safety Disclosures.

Not applicable.

Item 5. Other Information.

Rule 10b5-1 Trading Arrangements

During the three months ended March 31, 2025, no director or officer of the Companyadopted or terminated a "Rule 10b5-1 trading arrangement" or "non-Rule 10b5-1 trading arrangement," as each term is defined in Item 408(a) of Regulation S-K.

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Item 6. Exhibits.

Exhibit Number	Description
31.1*	Certification by Principal Executive Officer, required by Rule 13a-14(a) or Rule 15d-14(a) of the Exchange Act
31.2*	Certification by Principal Financial Officer, required by Rule 13a-14(a) or Rule 15d-14(a) of the Exchange Act
32.1*	Certification by Principal Executive Officer, required by Rule 13a-14(b) or Rule 15d-14(b) of the Exchange Act and Section 1350 of Chapter 63 of Title 18 of the United States Code
32.2*	Certification by Principal Financial Officer, required by Rule 13a-14(b) or Rule 15d-14(b) of the Exchange Act and Section 1350 of Chapter 63 of Title 18 of the United States Code
101.INS*	Inline XBRL Instance Document
101.SCH*	Inline XBRL Taxonomy Extension Schema Document
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104*	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)

* Filed herewith.

SIGNATURES

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

BIRCHTECH CORP.

Dated: May 15, 2025	By: */s/ Richard MacPherson* Richard MacPherson President and Chief Executive Officer (Principal Executive Officer)
Dated: May 15, 2025	By: */s/ Fiona Fitzmaurice* Fiona Fitzmaurice Chief Financial Officer (Principal Financial Officer)

EXHIBIT 31.1

CERTIFICATION

I, Richard MacPherson, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Birchtech Corp.;

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

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

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

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

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

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

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

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

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

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

Dated: May 15, 2025

By: */s/ Richard MacPherson*
Richard MacPherson,
President and Chief Executive Officer
(Principal Executive Officer)

EXHIBIT 31.2

CERTIFICATION

I, Fiona Fitzmaurice, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Birchtech Corp.;

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

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

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

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

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

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

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

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

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

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

Dated: May 15, 2025

By: */s/ Fiona Fitzmaurice*
Fiona Fitzmaurice
Chief Financial Officer
(Principal Financial Officer)

EXHIBIT 32.1

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

In connection with the Quarterly Report of Birchtech Corp. (the "Company") on Form 10-Q for the period ended March 31, 2025, as filed with the Securities and Exchange Commission (the "Report"), the undersigned certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to the best of the undersigned's knowledge, that:

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

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

Dated: May 15, 2025

By: */s/ Richard MacPherson*
Richard MacPherson,
President and Chief Executive Officer
(Principal Executive Officer)

EXHIBIT 32.2

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

In connection with the Quarterly Report of Birchtech Corp. (the “Company”) on Form 10-Q for the period ended March 31, 2025, as filed with the Securities and Exchange Commission (the “Report”), the undersigned certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to the best of the undersigned’s knowledge, that:

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

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

Dated: May 15, 2025

By: */s/ Fiona Fitzmaurice*
Fiona Fitzmaurice
Chief Financial Officer
(Principal Financial Officer)